

**PUBLIC REVIEW DRAFT
REMEDIAL INVESTIGATION REPORT
NEWMAN'S CHEVRON
2021 6th Street
Bremerton, Washington**

May 26, 2023

**Prepared for:
Washington State Department of Ecology – NW Region Office
15700 Dayton Ave. N.
Shoreline, Washington 98133**

**Prepared by:
Leidos Inc.
11824 North Creek Parkway N, Suite 101
Bothell, Washington 98011**

**On Behalf of:
Chevron Environmental Management Company
6001 Bollinger Canyon Road
San Ramon, California 94583**

**Nordic Properties, Inc.
P.O. Box 84
Port Orchard, Washington 98366**

and

**Victory Business Park LLC
1503 Lower Marine Drive
Bremerton, Washington 98312**

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5-26-2023

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LIST OF ACRONYMS

| | |
|-------------------|--|
| ARAR | Applicable or Relevant and Appropriate Requirement |
| ASTM | American Society for Testing and Materials |
| bgs | below ground surface |
| CEMC | Chevron Environmental Management Company |
| COC | contaminant of concern |
| CSM | conceptual site model |
| DRO | diesel-range organics |
| Ecology | Washington State Department of Ecology |
| FS | feasibility study |
| GPR | ground penetrating radar |
| GRO | gasoline-range organics |
| HRO | heavy-range organics |
| mg/kg | milligrams per kilogram |
| MTCA | Model Toxics Control Act |
| ND | non-detect |
| NFA | No Further Action |
| PAH | polycyclic aromatic hydrocarbon |
| PID | photoionization detector |
| PLP | Potentially Liable Person |
| ppm | parts per million |
| QA | quality assurance |
| QC | quality control |
| RI | remedial investigation |
| RIWP | remedial investigation work plan |
| SB | soil boring |
| SIM | selected ion monitoring |
| SVP | soil vapor probe |
| SSVP | sub-slab vapor point |
| TPH | total petroleum hydrocarbons |
| µg/L | micrograms per liter |
| µg/m ³ | micrograms per cubic meter |
| USEPA | United States Environmental Protection Agency |
| UST | underground storage tank |
| VI | vapor intrusion |
| VOC | volatile organic compound |
| WAC | Washington Administrative Code |

**PUBLIC REVIEW DRAFT
REMEDIAL INVESTIGATION REPORT
NEWMAN'S CHEVRON**

1 INTRODUCTION

Leidos, Inc. (Leidos), has prepared this draft Remedial Investigation (RI) report, on behalf of Chevron Environmental Management Company (CEMC), Nordic Properties, Inc. (Nordic), and Victory Business Park, LLC (Victory), collectively (the Parties), for the Newman's Chevron site (the Site), located at 2021 6th Street in Bremerton, Washington. A Site vicinity map is included as Figure 1.

The RI was performed as required per Section VII of Agreed Order No. DE 14246 (the Agreed Order), which was entered into by the State of Washington, Department of Ecology (Ecology) and the Parties, and fully executed on February 6, 2018.

This draft RI Report summarizes information and conclusions generated from implementation of the RI activities, as well as from available pre-RI information.

1.1 GENERAL SITE INFORMATION

- **Site Name:** Newman's Chevron
- **Alternate Names:** 6th Street Fuel
- **Address:** 2021 6th Street, Bremerton, WA 98337
- **Assessor Parcel Number:** Kitsap County 3717-002-015-0106
- **Ecology Cleanup Site ID:** 5252
- **Ecology Facility/Site ID:** 1436359
- **Ecology UST ID:** 7972
- **Ecology Agreed Order No.:** DE14246
- **Latitude/Longitude:** 47.56707/-122.64572
- **Township/Range/Section:** 24N 1E 14
- **Current Owner/Operator:** Victory Business Park, LLC
- **Potentially Liable Persons (PLPs):**
 - CEMC
 - Nordic Properties Inc. (formerly known as Wilkins Distributing Company)
 - Victory Business Park, LLC
 - Karin Newman
- **Designated Project Coordinators:**
 - Washington Department of Ecology – Mr. Dale Myers
 - CEMC – Mr. James Kiernan
 - Nordic Properties Inc. – Mr. Roger Jensen
 - Victory Business Park, LLC – Mr. Jim Reed
 - Primary Project Coordinator for the PLPs – Mr. James Kiernan
- **Project Consultant:** Leidos, Project Manager – Mr. Russ Shropshire, PE

1.2 SITE DESCRIPTION AND SETTING

For the purposes of this document, the following terminology will apply:

- “Property” refers to the property located at 2021 6th Street, which was previously determined to be impacted by one or more petroleum releases from past operations of a service station on the Property.
- “Site” refers to the area where petroleum contamination, originating from the Property, has come to be located. A Site may include both on-Property and off-Property areas. The Site area is defined by the findings of the RI.

The Property is located at the southeast corner of the intersection of Naval Avenue and 6th Street in Bremerton, Washington, as shown on Figure 2. The Property is identified by the Kitsap County Assessor as Parcel No. 3717-002-015-0106 and is approximately 0.39 acre in size. Title records for the Property indicate that the current parcel was formerly three separate parcels (Parcels I, II, and III). Legal descriptions of the Property still retain references to these former parcel numbers. A map showing the current and former parcel boundaries is included as Figure 3.

The Property is currently occupied by a closed gasoline service station and convenience store. The retail building has an area of approximately 2,500 square feet and the canopy has an area of approximately 1,200 square feet. Three regulated underground storage tanks (USTs) are present in the northeastern portion of the Property (Figure 2). Current Ecology UST records indicate their status is “Temporarily Closed”.

1.2.1 Adjacent Properties

The Property is bounded by 6th Street to the north followed by commercial businesses across 6th street (a bank and store with parking lot); private residences to the east and southeast; a paved alley to the south followed by a tire shop and private residences; and Naval Avenue to the west. An ARCO service station is located to the west of the Property across Naval Avenue at 2101 6th Street. This ARCO station (former Budget Rent-a-Car) is identified as Ecology Facility/Site ID No. 53813326 and received a No Further Action (NFA) determination in September 2013 (Ecology, 2013a).

1.2.2 Topography

The Property lies at an elevation between approximately 106 and 110 feet above sea level (NAVD88). The property surface is generally level, but the western half slopes gently to the west. It is a paved, rectangular lot located in the West Bremerton neighborhood. Concrete retaining walls border the Property on the east and south sides, and the walls are several feet in height. The alley and parcels south of the Property range in elevation from approximately 103 to 107 feet. The residential parcel to the east of the Property ranges from approximately 107 to 114 feet.

1.2.3 Surface Water

The Property is located approximately 4,900 feet south of Anderson Cove. Oyster Bay is located approximately 5,600 feet to the northwest, and Sinclair Inlet is approximately 3,700 feet to the south and 5,600 feet to the east of the Property. No surface water bodies are located in the nearby vicinity of the Site.

1.2.4 Climate

The Bremerton climate is characterized by mild temperatures and an extended rainy season, with an average annual rainfall of 56 inches. Average temperatures vary between 34°F and 45°F in the winter and 53°F to 75°F in the summer. The driest month of the year is typically July, with the rainy season extending from October to March.

1.3 SITE OPERATING HISTORY

As discussed in Section 1.2, the current tax parcel associated with the Property formerly consisted of three separate parcels (Parcels I, II and III; Figure 3). The Agreed Order alleges that CEMC's affiliate, Texaco Inc. (Texaco), began leasing Parcel III (the westernmost parcel) in 1928, and that Texaco purchased Parcel III in 1943.

The Agreed Order alleges that Texaco began leasing Parcels I and II in 1961, and that a gasoline service station was reconfigured to occupy all three parcels. Kitsap County Assessor's records indicate that the current service station building and canopy were constructed at that time. The Agreed Order alleges that in 1981, Texaco sold Parcel III and assigned its interest in the leases of Parcels I and II to Wilkins Distributing Company (Wilkins), known now as Nordic. Wilkins subsequently sublet Parcels I and II to Robert and Karin Newman in 1981. Wilkins then purchased Parcels I and II in 1985.

The Newmans operated the service station beginning in 1981. The Newmans purchased Parcels I, II, and III from Wilkins in 1990 and continued to operate the service station as Newman's Chevron until 2004, when the Property was sold to SJ-N-SJ Corporation (SJ-N-SJ). The deed from this sale, and all subsequent property transfers, reference the current tax parcel number (3717-002-015-0106).

SJ-N-SJ owned the Property and operated the service station from 2004 to 2006. In 2006, Chang S. Choe purchased the Property and continued to operate the service station until it was closed in 2008.

1.4 SITE USE

1.4.1 Current Site Use

The current owner, Victory, acquired the Property in December 2012. Service station infrastructure, including a convenience store building, three regulated USTs, and dispenser islands remain on the Property. However, they are believed to have been unused since the service station closed in 2008. The convenience store building is currently vacant and Ecology UST records indicate that the status of the regulated USTs is "Temporarily Closed".

1.4.2 Land Use/Zoning

The Site is located in the incorporated Bremerton city limits within Kitsap County, Washington. The Property is zoned General Commercial (GC), which allows for high intensity commercial uses. The off-Property areas of the Site are zoned Low Density Residential (R-10), which are adjacent to the GC zone, located to the east and southeast of the Property (Figure 2).

1.4.3 Future Use Plans

Leidos is not aware of specific future use plans for the Property. However, based on its location and zoning, it is expected that the Property will either be reopened as a service station and convenience store location or redeveloped for other commercial use.

2 PREVIOUS ENVIRONMENTAL INVESTIGATIONS

This section provides a summary of environmental investigation activities performed on the Property prior to initiation of RI field activities in 2018. Pre-RI sampling locations are shown on Figure 4 and pre-RI analytical data tables are presented in Appendix A.

2.1 PRE-RI ENVIRONMENTAL ACTIONS/INVESTIGATIONS PERFORMED BY APPLIED GEOTECHNOLOGY INC. (1990)

Petroleum-hydrocarbon impacts were first encountered on the eastern portion of the Property in August 1990 during UST removal operations being performed by Pacific Environmental Services Company (PESCO) for Wilkins. Applied Geotechnology Inc. (AGI) observed and documented the UST removals and collected soil samples for laboratory analysis.

Five gasoline USTs and one waste oil UST were reported removed from the Site. This included four 4,000-gallon steel tanks and one 6,000-gallon steel tank (gasoline), and one 550-gallon steel tank (waste oil). The gasoline USTs were removed from one excavation east of the dispenser islands and northeast of the store building, and the waste oil UST was removed from a separate excavation adjacent to the north side of the store building (Figure 4). The excavations were completed to maximum depths of approximately 10 and 14 feet below ground surface (bgs). Groundwater was not encountered during the excavation activities. Several holes were observed in the waste oil UST upon removal. In addition, an apparent piping leak was observed in the southeast corner of the gasoline USTs excavation. The volume and disposition of the excavated soil are unknown.

Nine soil samples were collected from the gasoline USTs excavation and analyzed for total petroleum hydrocarbons (TPH) using United States Environmental Protection Agency (USEPA) Method 8015 Modified. Gasoline-range TPH was detected in six of the samples, with a maximum concentration of 10,230 milligrams per kilogram (mg/kg) at a depth of 10.5 feet bgs at the east end of the excavation. TPH was not detected in the one soil sample collected from the bottom of the used oil UST excavation (10 feet bgs). A composite soil sample was also collected from the four sides of the waste oil UST excavation and analyzed for TPH, pesticides, polychlorinated biphenyls (PCBs), halogenated volatile organic compounds (HVOCs), and metals. TPH (40.4 mg/kg), metals (chromium, copper, and lead), and several pesticide compounds were detected. Prior to the gasoline UST excavation being backfilled, a series of horizontal vapor extraction pipes were installed at depths between 10 and 12 feet bgs to be used for a potential future vapor extraction system. However, a remedial system was reportedly never installed (AGI, 1990a, 1990c).

Later in August 1990, AGI excavated two test pits to the south (Pit-1) and to the east (Pit-2) of the eastern end of the former 6,000-gallon gasoline UST. The work was reportedly performed to further assess the extent of hydrocarbon impacts in the general area where gasoline-range TPH had been detected over 10,000 mg/kg. Gasoline-range TPH was detected at concentrations of 634 mg/kg in Pit-1 and 4 mg/kg in Pit-2, at approximately 13.8 and 13.0 feet bgs, respectively (AGI, 1990b, 1990c).

2.2 PRE-RI ENVIRONMENTAL INVESTIGATIONS PERFORMED BY GEOSCIENCE MANAGEMENT, INC. (2000)

In September 2000, GeoScience Management, Inc. (GSM) performed additional subsurface assessment on the Property, on behalf of Nordic. Seven direct push borings (B-1 through B-7) were advanced to depths of approximately 15 feet bgs outside the limits of the 1990 excavation (Figure 4). Nine soil samples were collected at depths between 10.5 and 14 feet bgs and analyzed for gasoline-range organics (GRO), BTEX, methyl tertiary butyl ether (MTBE), naphthalene, and lead. Two samples from soil boring B-5 were also analyzed for volatile petroleum hydrocarbons (VPH). Concentrations of GRO, BTEX, and naphthalene were reported above their respective Model Toxics Control Act (MTCA) Method A cleanup levels in samples collected from boring B-5 at depths of 10.5 and 12.5 feet bgs. This boring was completed near the southeastern corner of the former UST basin. In addition, GRO was reported at a concentration just above the MTCA Method A cleanup level in a sample from boring B-7 (completed southeast of the gasoline USTs excavation near Pit-1) at a depth of approximately 14 feet bgs (GSM, 2001).

In December 2000, GSM removed approximately 20 cubic yards of impacted soil from the southeast corner of the 1990 gasoline UST excavation, in the area of boring B-5. Two soil samples were collected from the walls (at depths of approximately 11.5 feet bgs) and one soil sample was collected from the bottom (at a depth of approximately 14.5 feet bgs) of the excavation. The samples were analyzed for GRO and BTEX. GRO was detected above the MTCA Method A cleanup level in the sample collected from the bottom of the excavation. Soils removed from the excavation were transported to Olympic View Landfill for disposal (GSM, 2001).

2.3 PRE-RI ENVIRONMENTAL INVESTIGATIONS PERFORMED BY PINNACLE ENVIRONMENTAL, INC. (2009)

In April 2009, Pinnacle Environmental, Inc. (PEI) completed a Phase I Environmental Site Assessment on the Property, on behalf of First Citizens Bank & Trust (Phase I assessments for the Site were also reportedly completed in 2000 by AdaPT Engineering, Inc. and in 2006 by Associated Environmental Group). Based on the results of the Phase I assessment, PEI recommended the following additional investigation work:

- A subsurface investigation of the USTs and dispensers to evaluate the Property for possible unknown or unreported leakage;
- A subsurface investigation in the western portion of the Property to evaluate possible impact from operations of previous historical service stations on the Property;
- Investigation of a 1,000-gallon capacity fuel oil UST (west of station building) noted on a 1961 plan of the Property; and
- A subsurface investigation of the former auto repair areas (east end of station building).

In July 2009, PEI returned to the Property to perform a Limited Phase II Environmental Site Assessment. The scope of work for the Limited Phase II included a geophysical survey using ground penetrating radar (GPR) to evaluate possible additional historical USTs and advancement of 14 direct-push soil borings. Results of the geophysical survey indicated that three large anomalies were detected in the westernmost portion of the Property, adjacent to Naval Avenue.

PEI reported that the geophysical survey contractor (Underground Detection Services, Inc.) believed these anomalies to be buried USTs. However, a magnetic locator used in conjunction with the radar did not respond with a strong signal. The geophysical survey did not find direct evidence of the reported 1,000-gallon fuel oil UST to the west of the service station building (PEI 2009).

PEI advanced 14 direct-push soil borings (BM-1 through BM-9, BM-9A, and BM-10 through BM-13) on the Property to depths between approximately 20 to 28 feet bgs (Figure 4). Selected soil samples related to the existing gas station USTs and dispenser islands were analyzed for GRO, volatile organic compounds (VOCs), and total lead. Selected soil samples related to the former fuel oil and waste oil USTs, and the exterior oil/water separator, were analyzed for diesel-range organics (DRO) and heavy-range organics (HRO), select polycyclic aromatic hydrocarbons (PAHs), polychlorinated biphenyls (PCBs), and total lead. GRO, BTEX and naphthalene were detected at concentrations exceeding their respective MTCA Method A cleanup levels in borings located in the vicinity of fuel dispensers (BM-4 through BM-7), and northeast of the former waste oil UST (BM-8). BTEX were also detected above Method A cleanup levels in boring BM-12, east of the gasoline USTs excavation (PEI, 2009).

Due to an inability to access the interior of the service station building, PEI was unable to complete their proposed investigation of the former auto repair area (PEI, 2009).

2.4 PRE-RI SITE HAZARD ASSESSMENT BY ECOLOGY (2010)

In February 2010, Ecology completed a site hazard assessment (SHA), which assigns a rank to sites based on their estimated potential threat to human health and the environment relative to all other cleanup sites in Washington State. The Site was ranked a 5, where 1 represents the highest relative risk and 5 the lowest (Ecology, 2010).

3 REMEDIAL INVESTIGATION ACTIVITIES AND RESULTS

This section provides a summary of the work performed and results of RI activities conducted under Agreed Order No. DE 14246. As proposed in the RI Work Plan (RIWP), the scope of work for the RI included the following investigation components:

- A soil investigation to delineate the lateral and vertical extents of petroleum impacts to soil (Section 3.2);
- Investigation of suspected orphaned USTs in the western portion of the Property (Section 3.3);
- Investigation of potential petroleum impacts to groundwater (Section 3.4); and
- Investigation of the potential for petroleum vapor intrusion to existing or future buildings at the Site (Section 3.5).

Section 3.6 includes a discussion of RI data validation and management.

3.1 CHRONOLOGY OF RI FIELD ACTIVITIES

Completion of the RI was carried out in a step-wise fashion that included the following six major phases of field activities. RI sampling locations referenced in this Section are shown on Figures 5 and 6. Additional details regarding the methods utilized and results of these activities are presented in Sections 3.2 through 3.5.

3.1.1 Initial Field Activities – August/September 2018

The first phase of RI field activities at the Site were completed in August and September 2018, following Ecology approval of the RIWP (Leidos, 2018) on July 10, 2018. The objective of these activities was to characterize the nature and extent of petroleum-range constituents within the boundaries of the Property. This phase of the RI included the following investigation components:

- A visual inspection of the Property and building interior was completed, as well as a utility-locate survey and geophysical investigation to look for evidence of undocumented USTs or other former service station infrastructure below the ground surface. Geophysical survey and utility location reports are presented in Appendix B.
- The presence of three undocumented USTs was confirmed by shallow air-vacuum excavation borings in the southwest portion of the Property, and ten shallow soil borings (UST-1 through UST-10) were advanced by hand-auger/air-vacuum excavation to assess potential petroleum hydrocarbon impacts to soil in the vicinity of these USTs.
- Nine soil borings (SB-1 through SB-9) were completed to further delineate the extents of petroleum-hydrocarbon impacts to soil previously detected in the vicinity of the current (eastern) UST basin and dispenser islands. One of these borings, SB-1, was advanced to a depth of approximately 51.5 feet bgs to evaluate the presence of groundwater at the Site.
- Three soil borings were completed for installation of permanent shallow soil vapor sampling probes SVP-1 through SVP-3. SVP-1 and SVP-2 were located inside the station building and SVP-3 was located on the eastern Property boundary. Soil vapor samples were collected from these locations in September 2018.

Results of the August/September 2018 RI field activities indicated that additional investigation was necessary to delineate the lateral extents of petroleum impacts to soil both on, and beyond, the boundaries of the Property.

3.1.2 Addendum 1 Field Activities – July/August 2019

Based on the results of the August/September 2018 RI field activities, Leidos prepared Addendum 1 (Leidos, 2019a) to the RIWP in June 2019 to further delineate the extent of petroleum impacts to soil in the southern and western portions of the Property, and on the residential property immediately to the east (2005/2007 6th Street). Planning for the implementation of this work was contingent upon coordination of access to the 2005/2007 6th Street property. The Addendum 1 field activities included the following investigation components:

- Eleven soil borings (SB-10 through SB-20) were completed to further delineate the extents of petroleum-hydrocarbon impacts in soil.
- Each of the three undocumented USTs present in the southwest portion of the Property were opened to confirm their contents (see Section 3.3 for additional details).

Results of the Addendum 1 field activities confirmed the presence of petroleum-related impacts in soil in areas beyond the Property boundaries.

3.1.3 Addendum 2 Field Activities – February/March 2020

In November 2019, Leidos submitted Addendum 2 (Leidos, 2019b) to the RIWP to Ecology, which identified additional work necessary to complete the RI. The proposed scope of work included further investigation to delineate the lateral extents of petroleum impacts to soil at the Site, and to assess the potential for petroleum vapor intrusion (VI) to three residential properties in the vicinity of the Property. Addendum 2 field activities included the following:

- Five soil borings (SB-21, SB-23, SB-24, SB-26, and SB-29) were completed in the western portion of the Site in order to further delineate the northern and western extents of petroleum impacts to soil from the abandoned UST basin in that area.
- Two soil borings (SB-27 and SB-28) were completed to further delineate the eastern extent of petroleum impacts to soil on the property at 2005/2007 6th Street.
- Three soil borings (SB-22, SB-25, and SB-30) were completed to delineate the southern extent of petroleum impacts to soil to the south of the Property.
- Three soil borings were completed as permanent shallow soil vapor sampling probes (SVP-4 through SVP-6) to evaluate the potential for petroleum VI to residences located east and south of the Property. Soil vapor samples were collected from these locations in March 2020.

3.1.4 Pre-RI Check-In and Supplemental Petroleum Vapor Intrusion Assessment Activities

A summary of the results of the Addendum 2 field activities was submitted to Ecology on May 29, 2020, and these results were reviewed and discussed during a Pre-RI Check-in meeting with Ecology on June 10, 2020. Following further review, Ecology provided comments on June 16, 2020, which included a request for additional VI assessment, including analysis of soil vapor samples utilizing the Massachusetts Department of Environmental Protection Air-Phase

Hydrocarbons (MADEP APH) method. In response to Ecology's comments, Leidos proposed modifications to the Ecology-approved Sampling and Analysis Plan (SAP) for the project, which were communicated to Ecology by email on July 10, 2020. Ecology approved the modifications to the SAP on July 16, 2020. The following two VI assessment sampling events were subsequently conducted utilizing the modified SAP:

- In August 2020, soil vapor samples were collected from three shallow soil vapor sampling probes (SVP-4 through SVP-6).
- In December 2020, soil vapor samples were collected from all six shallow soil vapor sampling probes at the Site (SVP-1 through SVP-6).

Results of these sampling events indicated that naphthalene was detected in shallow soil gas at the Site at concentrations near or above the MTCA Method B screening level for soil gas.

3.1.5 Addendum 3 Field Activities

In May 2021, Leidos submitted Addendum 3 (Leidos, 2021) to the RIWP to Ecology in order to conduct additional petroleum VI assessment at the Site, utilizing USEPA Method TO-17 (Method TO-17). This work was proposed in an attempt to more accurately quantify low levels of naphthalene detected in shallow soil vapor at the Site. The Addendum 3 field activities included:

- In June 2021, soil vapor samples were collected for analysis by Method TO-17 from each of the six shallow soil vapor sampling probes then present at the Site (SVP-1 through SVP-6).

Results of the June 2021 sampling event indicated that naphthalene was detected in all six sampling locations at concentrations exceeding the MTCA Method B screening level for soil gas. Leidos provided notification to Ecology of these results by email on August 25, 2021 and proposed to conduct Tier 2 VI assessment activities at the Site, in order to evaluate potential VI concerns for indoor air in the service station building and nearby residences. Ecology approved this proposal for further VI assessment by email on September 8, 2021.

3.1.6 Tier 2 VI Assessment

Following Ecology approval of the proposal to conduct Tier 2 VI assessment activities at the Site, the Parties began efforts to obtain property access to conduct VI sampling inside the residences on the properties at 2005/2007 6th Street and 1936 5th Street. The Tier 2 VI assessment included the following components:

- In November 2021, one new shallow soil vapor sampling probe (SVP-7) was installed at 1932 5th Street in order to evaluate the potential need for Tier 2 sampling at this property.
- In February 2022, a soil vapor sample was collected from SVP-7 for analysis by Method TO-17. Naphthalene was not detected in this sample; therefore, no further VI assessment was proposed for the property at 1932 5th Street.
- In April 2022, Leidos conducted pre-sampling inspections of the residences at 1936 5th Street and 2005/2007 6th Street in order to facilitate planning of Tier 2 sampling activities on these properties.
- On July 14, 2022, Leidos submitted an Agency review draft copy of Addendum 4 of the RIWP to Ecology. Ecology approved the draft of Addendum 4 on July 28, 2022.

- In August 2022, Leidos completed installation of the VI assessment sampling locations specified by Addendum 4 at 1936 5th Street and 2005/2007 6th Street (soil vapor sampling probe SVP-8, and sub-slab points SSV-1 through SSV-3).
- Tier 2 VI assessment sampling activities were completed at the Site in October 2022. This work represents the final field sampling event performed for the RI.

3.2 RI SOIL INVESTIGATION

This section presents a summary of the procedures, field events performed, and results of sampling activities to delineate the extent of petroleum impacts to soil at the Site. The delineation of petroleum impacts to soil completed for the RI was based on field screening and analysis of soil samples collected from the following 46 soil boring locations (Figure 5):

- SB-1 through SB-30;
- UST-1 through UST-8; and
- SVP-1 through SVP-8.

3.2.1 Soil Boring and Sampling Procedures

Soil boring and sampling activities were conducted according to the procedures specified in Section 3 of the SAP, which was appended to the RIWP, and which are briefly summarized in the following subsections.

3.2.1.1 Borehole Clearance

Prior to the start of any subsurface work, Leidos contacted the Utilities Underground Location Center and conducted a private utility location survey. In order to comply with CEMC safety requirements, each boring was initially cleared to a depth of at least 8 feet bgs using a compressed air and vacuum excavation system (air-knife) and/or manual hand tools such as a hand-auger. Where soil samples were collected above 8 feet bgs, use of compressed air was terminated at least 6 inches above the sample interval, and the hand auger was then used to collect fresh, unoxidized samples. Within this interval, soil samples were collected approximately every 2 feet for soil classification, field screening, and potential selection for laboratory analysis.

3.2.1.2 Drilling and Sampling Methods

For those borings that went below 8 feet bgs, borings were advanced using hollow-stem auger (HSA) drilling equipment (August 2018 field event) or direct-push sampling equipment (July 2019 and February 2020 field events). For the HSA borings, soil sampling was conducted on a continuous basis from 8 to 25 feet bgs, and every 5 feet thereafter if field screening results suggested that the lower extent of petroleum impacts had been defined. For the direct-push borings, all soil sampling below 8 feet bgs was performed on a continuous basis. Drilling services were provided by Cascade Drilling.

3.2.1.3 Soil Classification and Field Screening

Soil samples were logged in the field in accordance with the Unified Soil Classification System and field screened for the presence of VOCs by visual and olfactory observations, headspace vapor measurements using a photoionization detector (PID) calibrated with isobutylene gas at a concentration of 100 parts per million (ppm), and sheen testing.

3.2.1.4 Sample Selection and Laboratory Analysis

Soil logging and field screening results were used to select samples to be submitted for laboratory analysis. These samples typically included those with field screening indicators of petroleum-hydrocarbon impact and the bottom-most sample from each boring, which were analyzed to confirm that the lower vertical extent of hydrocarbon impact had been delineated. As a result, the extent of soil impacts was defined using a combination of field screening parameters and analytical sampling results.

Soil samples selected for laboratory analysis were submitted to Eurofins Lancaster Laboratories Environmental (Eurofins Lancaster), of Lancaster, Pennsylvania for the following analyses:

- GRO by Ecology method 97-602 NWTPH-Gx;
- DRO and HRO by Ecology method 97-602 NWTPH-Dx;
- BTEX by USEPA method 8260B;
- Naphthalenes by USEPA method 8270; and
- Total lead by USEPA method 6010B.

Select soil samples (those displaying strong indications of petroleum hydrocarbon impact based on field screening results, or those collected from specific areas of interest) were also analyzed for one or more of the following additional analytes:

- MTBE, ethylene dibromide (EDB), and ethylene dichloride (EDC) by USEPA method 8260B;
- Carcinogenic polycyclic aromatic hydrocarbons (cPAHs) by USEPA method 8270 SIM;
- Halogenated volatile organic compounds (HVOCs) by USEPA 8260B;
- PCBs by USEPA method 8082;
- Extractable petroleum hydrocarbons (EPH) by Ecology method 97-602 WA EPH; and
- Volatile petroleum hydrocarbons (VPH) by Ecology method 97-602 WA VPH.

Duplicate soil samples were collected at a rate of approximately one per 20 soil samples and submitted for the same analyses as the primary sample to ensure QA/QC. Additional QA/QC samples included one trip blank to accompany each sample cooler, and equipment rinse samples to verify equipment decontamination procedures. Equipment rinse sampling was performed by collecting laboratory-supplied distilled water that was used as the final rinse following equipment decontamination procedures. Equipment rinse samples were collected at a rate of one per sample collection method. Trip blank and equipment rinse QA/QC samples were submitted for the following analyses:

- GRO by Ecology method 97-602 NWTPH-Gx; and
- BTEX by USEPA method 8260B.

3.2.2 Soil Sample Field Screening and Laboratory Analytical Results

Field screening results for the 46 soil borings completed for the RI are included on the boring logs, which are presented in Appendix C. A discussion of the geologic conditions encountered at the Site is provided in Section 4.1. Laboratory analytical results for soil samples collected for the RI are presented in Tables 1 through 3. Laboratory analytical reports are included in Appendix D and third-party data validation reports are presented in Appendix E.

Based on these results, the following constituents were detected in RI soil samples at concentrations exceeding MTCA Method A cleanup levels¹.

- GRO at 14 boring locations (34 mg/kg to 3,500 mg/kg)
- DRO at 3 boring locations (2,100 mg/kg to 3,500 mg/kg)
- Benzene at one location (SB-7, 0.18 mg/kg to 0.46 mg/kg)
- Ethylbenzene at one location (SB-11, 12 mg/kg)
- Total xylenes at one location (SB-11, 100 mg/kg)
- Naphthalene at one location (SB-11, 11 mg/kg)

3.2.3 RI Soil Investigation Conclusions

Results of the soil investigation activities performed for the RI indicate that sufficient data has been collected to adequately characterize petroleum impacts to soil at the Site for the purpose of developing and evaluating cleanup action alternatives in the future feasibility study (FS). Further discussion regarding the nature and extent of petroleum impacts to soil at the Site is presented in Section 4.4.

3.3 INVESTIGATION OF ORPHANED UST BASIN

This section presents a summary of RI activities performed to investigate the orphaned USTs in the western portion of the Property, which had previously been identified during a GPR survey performed by PEI in 2009.

3.3.1 Orphaned UST Confirmation and Soil Sampling Activities

In August 2018, the locations of three suspected USTs were re-located using GPR and marked by Geophysical Survey LLC. A copy of Geophysical Survey LLC's Ground Penetrating Radar Investigation report is included in Appendix B.

Later in August 2018, Cascade Drilling used an air-knife rig to advance shallow "pothole" borings in the central portion of each suspected UST. The presence of an abandoned steel UST was confirmed at a depth of 3 feet bgs, or less, at each of the three suspected locations. Based on the GPR survey results, the northern and southern USTs are estimated to be approximately 1,000 gallons each, and the central UST is estimated to be approximately 500 gallons. The approximate locations and sizes of the USTs are shown on Figure 5.

In association with the orphaned UST investigation activities, shallow soil samples were collected using air-knife and hand-auger equipment at eight locations (UST-1 through UST-8) along the sides and ends of the three USTs (using the procedures described in Section 3.2.1.1). Soil sampling methods and the results of this sampling effort were previously presented in Section 3.2 as part of the RI soil investigation. Two additional borings (UST-9 and UST-10) were attempted on the western side of the USTs; however, these borings could not be completed due to the proximity of the sidewalk and utilities immediately west of the Property.

¹ The use of MTCA Method A cleanup levels in this Section is for screening-level purposes only. Further discussion regarding the selection of appropriate cleanup levels for the Site is presented in Section 5.1.

3.3.2 Orphaned UST Contents Confirmation and Sampling

Work proposed within the original RIWP to sample the contents of the orphaned USTs was delayed by discussions of a possible interim remedial action to remove the tanks. However, an interim remedial action was ultimately not performed at the time. Therefore, investigation activities to confirm the contents of the USTs was performed in July and August 2019, in association with the Addendum 1 field activities.

In July 2019, Leidos was able to obtain a liquid sample from the southernmost of the three abandoned USTs. The UST was accessed through an opening present at the top of the tank. Liquid in the UST had the appearance of water, with no petroleum odor and no visual indications of the presence of separate-phase hydrocarbons. A peristaltic pump was used to collect a sample of the liquid (sample I.D.: USTSOUTH-CONTENTS-W-190725 Grab Water) that was submitted to Eurofins Lancaster for analysis. Laboratory results for the sample indicated that it contained DRO at a concentration of 1,400 micrograms per liter ($\mu\text{g/L}$), which exceeded the MTCA Method A cleanup level (500 $\mu\text{g/L}$). GRO, HRO, and barium were also detected; however, at concentrations less than applicable MTCA cleanup levels. Complete analytical results for this sample are presented in Appendix D.

In August 2019, Leidos returned to the Site to evaluate the contents of the two other orphaned USTs. Clearcreek Contractors Inc. of Everett, Washington provided access to these USTs by limited-area excavations to expose the top of each tank. The tanks were then accessed, under the supervision of a marine chemist and after providing notice to the Bremerton Fire Department, in order to determine their contents. Both tanks were found to have been previously filled with sand. As such, no samples were collected of the contents of either UST.

3.3.3 Orphaned UST Investigation Conclusions

Results of the orphaned UST investigation activities performed for the RI have confirmed the presence of three undocumented USTs in the southwest portion of the Property. One (the southernmost) of the three USTs was determined to contain liquid that included DRO at a concentration exceeding the MTCA Method A cleanup level for groundwater. Results of shallow soil sampling in this area at locations UST-1 through UST-8 also confirmed petroleum releases resulting in GRO and DRO concentrations in soil in this area that exceed MTCA Method A cleanup levels. Additional discussion regarding the nature and extent of petroleum impacts to soil at the Site is presented in Section 4.

3.4 RI GROUNDWATER INVESTIGATION

This section presents a summary of work performed for the RI to evaluate the potential for petroleum impacts to groundwater at the Site.

3.4.1 RI Groundwater Investigation Field Activities

Pre-RI field investigations did not encounter groundwater to the maximum depth explored, 28 feet bgs, and results of nearby investigations suggested that groundwater may be present in the vicinity of the Site at depths of approximately 70 to 75 feet bgs (AGI, 1990a). Based on discussions with Ecology during the RI planning and scoping meeting on February 28, 2018, it was agreed that the RI scope of work would contain completion of at least one soil boring to at least 50 feet bgs to evaluate the presence of groundwater at the Site.

Soil boring SB-1 was completed in August 2018 to its maximum depth of 51.5 feet bgs. Groundwater was not observed during advancement of the boring, or within a 2-hour monitoring period after the boring was completed to its maximum depth.

3.4.2 Review of Existing Hydrogeologic Data for the Site Vicinity

To further assess hydrogeological conditions in the vicinity of the Site, Leidos also completed a review of existing data collected from previous investigations in the area. The following results were identified:

- At a site located approximately 0.25 mile west of the Site (2513 6th Street), 17 soil borings were advanced and 4 monitoring wells were installed to approximately 10 feet bgs. Groundwater was not encountered in any of the borings.
- At the ARCO service station (Figure 2), located west of the Site (2102 6th Street), four monitoring wells were installed at this property to depths of approximately 35 feet bgs. Groundwater was not encountered in any of the wells. In addition, one well was installed to approximately 80 feet bgs. At the time of installation static water level was at a depth of 69 feet bgs, and at the time of decommissioning the static water level was at 71 feet bgs in this well. Six soil borings were advanced at this property to depths of approximately 50 feet bgs, and groundwater was not encountered in any of the borings.
- The Bremerton Naval Base site is located approximately 0.4 mile to the southwest of the Site (120 Dewey Street). Two monitoring wells were installed at this facility to depths of approximately 29 and 65 feet bgs. Groundwater was not encountered in the shallower well, and the static water level was 51 feet bgs in the deeper well.
- Several soil borings were advanced at a property located approximately 0.1 mile to the southwest of the Site (301 Naval Avenue). The borings were advanced to depths of approximately 21 feet bgs, and groundwater was not encountered in any of the borings.
- Several soil borings were advanced at a property located approximately 0.15 mile to the southwest of the Site (2101 Burwell Place). The borings were advanced to depths of approximately 15 to 20 feet bgs, and groundwater was not encountered in any of the borings.

3.4.3 Conclusions Regarding Potential Petroleum Impacts to Groundwater

Based on the results of the RI soil and groundwater investigation field activities, and review of existing hydrogeological data for the Site vicinity, Leidos concludes that groundwater is not a media of concern for the Site. Throughout the Site, no petroleum impacts in soil that exceed MTCA Method A cleanup levels were detected at depths greater than 26 feet bgs (deepest in SB-27). As stated above, the extent of hydrocarbon impacts to soil is based on a combination of field screening and analytical sampling results. MTCA Method A cleanup levels are based on the protection of groundwater. Therefore, based on the vertical extent of petroleum impacts to soil at the Site, there appears to be a sufficient interval of non-impacted to minimally impacted soil (40+ feet), such that soil impacts leaching to groundwater is not a contaminant transport pathway of concern. Additional discussion regarding the nature and extent of petroleum impacts to the Site is presented in Section 4.

3.5 EVALUATION OF POTENTIAL FOR VAPOR INTRUSION

Vapor intrusion (VI) is the process by which chemical vapors can potentially migrate from the subsurface through soil and into indoor air, which may result in human exposure to hazardous substances. As a result, Ecology expects that all site investigations include an assessment of the VI pathway whenever volatile hazardous substances are present in the subsurface.

Ecology has established a multi-tiered process for evaluating the potential for VI to occur at a site, which includes the following major steps (Ecology, 2022):

- Preliminary Assessments;
- Tier 1 Evaluations; and
- Tier 2 Evaluations.

A preliminary assessment of VI potential at the Site was presented in the RIWP (Leidos, 2018). The preliminary assessment was based on the pre-RI investigations at the Site, the results of which indicated that benzene and naphthalene were detected in vadose zone soils within close proximity to the former service station building present on the Property. Based on these results, the Parties determined that additional investigation, in the form of a Tier 1 evaluation, was warranted.

3.5.1 Tier 1 Evaluation Activities

A Tier 1 evaluation is completed during site investigation activities to evaluate whether the concentrations of volatile contaminants in the subsurface are high enough to potentially result in unacceptable levels of hazardous substances in indoor air. Tier 1 evaluation activities for the Site consisted of the following five sampling events. The results of these activities are presented in Tables 4 through 7 and sampling locations are shown on Figure 6.

1. **September 2018** – The first round of VI assessment sampling was conducted, as specified by the RIWP. This sampling event utilized three shallow soil vapor sampling probes (SVP-1, SVP-2, and SVP-3) that were installed on the Property during the August 2018 RI field activities. Soil vapor samples were collected in 1-liter Summa canisters, which were analyzed by ALS Laboratory of Simi Valley, California using USEPA Method TO-15 (Method TO-15) with selected ion monitoring (SIM), ASTM D1946, and USEPA Method 3C modified.
2. **March 2020** – As part of the Addendum 2 RI field activities, three additional shallow soil vapor sampling probes (SVP-4, SVP-5, and SVP-6) were installed in February 2020 to assess soil vapor conditions to the south and east of the former service station property. Soil vapor samples were collected at these locations using 1-liter Summa canisters, which were analyzed by H&P Mobile Geochemistry, Inc. of Carlsbad, California using Method TO-15, ASTM D1945, and ASTM D1945 modified.
3. **August 2020** – In June 2020, Ecology requested that another round of soil vapor sampling be conducted at SVP-4 through SVP-6, including laboratory analysis for petroleum fractions using the MADEP APH method, and use of a modified sample collection method to achieve a lower reporting limit for quantification of naphthalene by Method TO-15. Samples were analyzed by Eurofins Air Toxics of Folsom, California. Results of this sampling event indicated that naphthalene was detected in the samples collected from SVP-5 ($4.4 \text{ J } \mu\text{g}/\text{m}^3$) and SVP-6 ($4.7 \text{ J } \mu\text{g}/\text{m}^3$) at concentrations exceeding

the MTCA Method B soil gas screening level ($2.5 \mu\text{g}/\text{m}^3$). The laboratory J-flag indicates an estimated concentration that is less than the laboratory reporting limit (or practical quantitation limit), but above the method detection limit.

4. **December 2020** – Based on the results of the August 2020 sampling event, another round of soil vapor sampling was performed that included all then-existing soil vapor sampling probes (SVP-1 through SVP-6). This round of sampling also included collection of ambient air samples at three outdoor locations (OA-1 through OA-3). Samples were analyzed by Method TO-15, ASTM D-1946, and MADEP APH by Eurofins Air Toxics. Results of this sampling event indicated that naphthalene was present at all sampling locations at concentrations near (SVP-3 through SVP-6) or above (SVP-1 and SVP-2) the Method B soil gas screening level. These analytical results also indicated that benzene was detected at concentrations exceeding the MTCA Method B cleanup level for indoor air ($0.321 \mu\text{g}/\text{m}^3$) in all of the outdoor air samples (see Tables 4 and 6). Benzene concentrations in the outdoor air samples ranged from 1.5 to $1.7 \mu\text{g}/\text{m}^3$, while benzene results for the shallow soil vapor samples were non-detect at laboratory reporting limits of 0.21 to $0.22 \mu\text{g}/\text{m}^3$. The presence of benzene in outdoor air at concentrations exceeding the Method B cleanup level for indoor air is not unusual in urban settings.
5. **June 2021** – Based on the results of the previous sampling events, an additional round of sampling was conducted to focus specifically on quantification of low-levels of naphthalene previously detected in each of the then-existing soil vapor sampling probes (SVP-1 through SVP-6). Samples were analyzed by Eurofins Air Toxics for naphthalene only by Method TO-17, which is better suited than Method TO-15 to accurately quantify low levels of naphthalene. Results of this sampling event indicated that naphthalene was detected at all six sampling locations at concentrations (ranging from 2.9 to $14 \mu\text{g}/\text{m}^3$) exceeding the Method B soil gas screening level.

3.5.2 Tier 2 Evaluation Activities

Based on the results of the Tier 1 VI assessment, the Parties proposed further investigation at the Site, in the form of a Tier 2 VI assessment, to Ecology via e-mail on August 25, 2021. This proposal was accepted by Ecology on September 8, 2021.

The Tier 2 VI assessment was proposed to evaluate potential VI concerns for indoor air in the service station building and nearby residences on the properties located at 1936 5th Street and 2005/2007 6th Street (Figure 6). However, further investigation was also conducted to determine whether Tier 2 sampling was also warranted for the property at 1932 5th Street.

3.5.2.1 Evaluation of Need for Tier 2 Sampling at 1932 5th Street Property

As part of the Tier 2 VI assessment, additional Tier 1 soil vapor sampling was conducted to determine whether the Tier 2 VI assessment should be extended to include the property at 1932 5th Street. One shallow soil vapor sampling probe (SVP-7) was installed near the northwest corner of this property in November 2021. Analytical results for the soil sample collected in conjunction with installation of SVP-7 are presented in Table 1 and a boring log for this location is included in Appendix C.

Due to wet weather conditions, vapor sample collection at SVP-7 did not occur until February 2022. A single soil vapor sample (SVP-7-021822) was collected and analyzed by Eurofins Air Toxics for naphthalene by Method TO-17. Naphthalene was not detected above the laboratory

reporting limit ($1.2 \mu\text{g}/\text{m}^3$) in this sample (see Table 7). Based on this result, no further VI assessment activities were proposed for the 1932 5th Street property.

3.5.2.2 Property Inspections

Following access coordination, Leidos conducted pre-sampling inspections in April 2022 of the residences on the properties at 1936 5th Street and 2005/2007 6th Street. The pre-sampling inspections were conducted to understand the layout, use, and construction of the existing residential structures. Results of the pre-sampling inspections were presented in Addendum 4 to the RIWP (Leidos, 2022).

3.5.2.3 Tier 2 VI Assessment Scope of Work

Results of the property inspections described above were used to develop the sampling strategy and scope of work for the Tier 2 VI assessment that was proposed by Addendum 4 to the RIWP. The proposed scope of work included one round of sampling for naphthalene by Method TO-17 at the following sampling locations:

- Indoor air sampling at three locations;
 - Two in the former service station building (IA-1 and IA-2)
 - One in the 2005 6th Street residence (IA-3)
- Crawlspace air sampling at two locations;
 - 2007 6th Street residence (CSA-1)
 - 1936-½ 5th Street residence (CSA-2)
- Outdoor air sample collection at three locations;
 - 2021 6th Street property (former service station building) (OA-1)
 - 2005/2007 6th Street property (OA-2)
 - 1936 5th Street property (OA-3)
- Sub-slab soil vapor sampling at three locations;
 - Two in the former service station building (SSVP-1 and SSVP-2)
 - One in the 2005 6th Street residence (SSVP-3)
- Shallow soil vapor sample collection at one location.
 - 1936 5th Street (SVP-8)

3.5.2.4 Installation of Tier 2 VI Assessment Sampling Locations

Installation of the Tier 2 VI assessment sampling locations was performed on August 25-26, 2022.

Sub-slab soil vapor sampling points (SSVP-1, SSVP-2, and SSVP-3) were installed using a rotary hammer to drill through the concrete floor slab at each location. A threaded Swagelok stainless steel fitting was then cemented in-place within the floor slab and sealed with a stainless-steel male-threaded cap wrapped with Teflon thread sealing tape. Additional details regarding installation of the sub-slab soil vapor sampling points were presented in Addendum 4 to the RIWP.

Shallow soil vapor sampling probe SVP-8 was installed on August 26, 2022, in the backyard of the residence at 1936 5th Street, approximately 1 foot from the foundation of the residence. Analytical results for the soil sample collected in conjunction with installation of SVP-8 are presented in Table 1 and a boring log for this location is included in Appendix C.

3.5.2.5 Tier 2 VI Assessment Sampling Event

Tier 2 VI assessment sampling was completed on October 6, 2022.

One day prior to the sampling event, lengths of Teflon tubing were placed into the crawlspace areas of the residences at 1936-½ 5th Street and 2007 6th Street. This was performed in order to allow connection of sample collection equipment on the following day without entering or otherwise disturbing the air space within these crawlspace areas. The tubing was attached to a length of 2x4 inch dimensional lumber in order to keep the tubing straight and allow it to be pushed into the crawlspace areas without the need for personnel to completely enter these spaces.

Indoor air, outdoor air, and crawlspace air samples were all collected using laboratory-grade low-flow air sampling pumps (SKC Pocket Pump Touch) provided by SKC. Use of these pumps allowed collection of a relatively large sample volume (approximately 14 liters) over an approximate 8-hour sampling duration. The flowrate of each pump was set prior to the start of sample collection and checked at the end of the sample collection using an SKC Chek-Mate calibrator. The initial and final flowrate values were used to calculate an average air flowrate for each sample collected, which is used to determine the sample volume. An equipment blank sample (CSA-B-100622) was also collected using the same inlet tubing setup that was used for collection of the crawlspace air samples. This sample was collected in the lawn area west of the 2005 6th Street residence.

Soil vapor samples collected at the sub-slab vapor points (SSVP-1 through SSVP-3) and shallow soil vapor sampling probe (SVP-8) were 0.8-liter samples that were collected using sampling syringes. Samples were collected at the sub-slab vapor points after completing collection of the indoor air samples, in order to minimize the presence of Leidos personnel in the interior spaces while indoor air samples were being collected.

The Tier 2 sampling event also included collection of two field blank samples. Field blank samples for Method TO-17 were collected by removing the endcaps of a TO-17 sorbent sampling tube momentarily and then resealing the endcaps without actively drawing any air through the tube.

All air and vapor samples collected for the Tier 2 VI assessment were submitted to Eurofins Air Toxics for analysis of naphthalene by Method TO-17.

3.5.2.6 Tier 2 VI Assessment Results

Laboratory analytical results for the shallow soil vapor sample collected at location SVP-8, and the sub-slab soil vapor samples collected at locations SSVP-1, SSVP-2, and SSVP-3, are included in Table 7. Results for indoor air, outdoor air, and crawlspace air samples are presented in Table 8. The laboratory analytical report and third-party data validation results for this sampling event are included in Appendices D and E, respectively.

As shown in Table 7, naphthalene was not detected above the laboratory reporting limit (1.2 µg/m³) in the shallow soil vapor sample collected at SVP-8, or in any of the samples collected from the sub-slab soil vapor sampling locations (SSVP-1, SSVP-2, and SSVP-3). This reporting limit is less than the MTCA Method B screening level for soil gas (2.5 µg/m³).

As shown in Table 8, naphthalene was not detected above the laboratory reporting limit (0.056-0.058 µg/m³) in any of the outdoor air samples. However, naphthalene was detected at

concentrations exceeding the MTCA Method B indoor air cleanup level ($0.0735 \mu\text{g}/\text{m}^3$) in samples from each of the indoor air sampling locations (IA-1, IA-2, and IA-3; ranging from 0.099 to $0.48 \mu\text{g}/\text{m}^3$) and in the crawlspace air sample collected at the 1936 5th Street property (CSA-2; $0.12 \mu\text{g}/\text{m}^3$). Naphthalene was also detected in the crawlspace air sample collected at location CSA-1 (2007 5th Street property) and in the crawlspace air equipment blank sample (CSA-B), but at concentrations below the MTCA Method B indoor air cleanup level.

3.5.3 Evaluation of VI Assessment Results

Results of the Tier 1 VI assessment work completed for the RI indicate that TPH and BTEX are not COCs in soil vapor at the Site. Naphthalene has been detected in shallow soil vapor at concentrations that exceed the MTCA Method B screening level for soil gas, and in indoor air and crawlspace air samples at concentrations that exceed the MTCA Method B cleanup level for indoor air. However, multiple lines of evidence suggest that naphthalene detected in the indoor and crawlspace air samples appears to be due to background sources and not vapor intrusion. These lines of evidence include:

- Sub-slab soil vapor sampling results for sampling locations SSVP-1 through SSVP-3, which indicate that naphthalene is not present in sub-slab soil vapor at concentrations high enough to result in naphthalene concentrations in indoor air that would exceed the MTCA Method B cleanup level for indoor air;
- Findings of recent petroleum VI studies that have documented how readily petroleum vapors degrade in well oxygenated near-surface soils;
- Findings of numerous studies by government agencies and others that have documented the ubiquitous presence of naphthalene in residential indoor air at concentrations that exceed the MTCA Method B cleanup level for naphthalene in indoor air; and
- Results of modeling using the United States Environmental Protection Agency (USEPA) Johnson and Ettinger Model Spreadsheet Tool, Version 6.0 (J&E Model) to predict the concentration of naphthalene that would be expected in a crawlspace, based on the laboratory results of shallow soil vapor samples.

Further discussion of these lines of evidence are provided below.

Although naphthalene was detected above the MTCA Method B screening level at shallow soil vapor sampling locations SVP-1 through SVP-6, naphthalene was not detected in any samples collected from the sub-slab soil vapor sampling locations, SSVP-1 through SSVP-3. These results, which are presented in Table 7, are consistent with recent petroleum VI science, which has demonstrated that petroleum vapors, including naphthalene (Lahvis, 2018), readily degrade in well-oxygenated soils, such as those typically found at shallow depths. Results of the initial Tier 1 sampling events, which included analyses of oxygen levels, indicated relatively high levels of oxygen in the shallow soil gas samples collected at SVP-1 through SVP-6, ranging from 11 to 20 percent (Table 5). Therefore, in combination with soil gas diffusion, biodegradation appears to be contributing to these reductions of naphthalene in shallow soil gas.

The lack of naphthalene detections in the sub-slab soil vapor samples provides another line of evidence that VI is not occurring at the Site. Assuming a conservative attenuation factor of 0.03, which is consistent with Ecology VI guidance, naphthalene concentrations in sub-slab soil vapor would need to exceed $2.5 \mu\text{g}/\text{m}^3$ to result in naphthalene concentrations in indoor air exceeding the Method B cleanup level for indoor air. As stated above, naphthalene was not detected above

the laboratory reporting limit ($1.2 \mu\text{g}/\text{m}^3$) in any of the sub-slab samples. Therefore, naphthalene was not present at high enough concentrations in the sub-slab samples to result in naphthalene concentrations in indoor air that would exceed the MTCA Method B cleanup level for indoor air.

As was previously discussed in Addendum 4 to the RIWP, the presence of naphthalene in indoor air in residential homes and other buildings is ubiquitous due to its use/presence in many consumer and building products. Common sources of naphthalene in indoor air include woodstoves and fireplaces, cooking, cigarette smoke, home furnishings, and exhaust from vehicles and other gas-powered equipment. Consumer and building products containing naphthalene include moth and pest repellents, air fresheners, caulking, carpet pads, flooring materials, and wall coverings. Numerous studies conducted by state agencies [(Montana DEQ, 2012), (Maine DEP, 2014)], the Canadian government (Health Canada, 2013) and others [(Batterman, S. et al., 2012), (Jia, C. et al., 2010), (Hammond, K. et al., 2006)] have determined that naphthalene can be expected to be found in the indoor air of residential homes at concentrations ranging from approximately 0.3 to $6 \mu\text{g}/\text{m}^3$. These typical "background" levels of naphthalene exceed the MTCA Method B cleanup level for naphthalene in indoor air, which is $0.0735 \mu\text{g}/\text{m}^3$. The concentrations of naphthalene detected in indoor air samples IA-1 through IA-3 and crawlspace air sample CSA-2, which ranged from 0.099 to $0.48 \mu\text{g}/\text{m}^3$, are less than or within this range of typical background concentrations for naphthalene in indoor air demonstrated by those studies. Therefore, the presence of naphthalene above the cleanup level in the indoor air samples and crawlspace air sample CSA-2 is not a conclusive indicator that VI is occurring at these structures.

Appendix F presents a figure adapted from an invited presentation (Luo, 2023) to the 32nd Association for Environmental Health and Sciences (AEHS) Foundation that depicts a typical VI conceptual site model (CSM) for buildings with a crawlspace where there is a VOC source beneath the building. As shown in the figure, constant air exchange between indoor air, outdoor air and crawlspace is expected for these types of buildings. Therefore, the naphthalene sources impacting indoor air quality will also impact crawlspace air.

To further assess the results of the crawlspace air sample collected at 1936-½ 5th Street (sample location CSA-2), modeling was conducted using the United States Environmental Protection Agency (USEPA) Johnson and Ettinger Model Spreadsheet Tool, Version 6.0 (J&E Model). The J&E Model was used to predict the crawlspace naphthalene concentration that could be reasonably expected to be generated by the presence of naphthalene in shallow soil vapor at sampling location SVP-6, which is located in the alley immediately north of the 1936-½ 5th Street residence. Using location-specific data for the soil gas concentration in SVP-6 ($4.7 \mu\text{g}/\text{m}^3$, which represents the maximum naphthalene concentration detected at this location), sample depth (5 feet), soil stratum type (silt), enclosed space floor area (550 square feet), and enclosed space mixing height (2 feet), and a default value for the residential indoor air exchange rate, the model predicted a soil gas to indoor air attenuation coefficient of 0.0051 and an indoor air concentration of naphthalene due to VI of $0.025 \mu\text{g}/\text{m}^3$. These results further demonstrate that levels of naphthalene detected in shallow soil gas near the 1936-½ 5th Street residence are not high enough to result in naphthalene concentrations in crawlspace or indoor air that exceed the Method B indoor air cleanup level ($0.0735 \mu\text{g}/\text{m}^3$).

Based on the results of the sub-slab vapor sampling conducted at locations SSVP-1 through SSVP-3, as well as J&E Model evaluation of the shallow soil vapor results for sampling location

SVP-6, Leidos concludes that naphthalene exceedances of the Method B indoor air cleanup level at sampling locations IA-1 through IA-3 and CSA-2 are the result of naphthalene contributions from indoor and/or crawlspace sources. These findings are consistent with the VI CSM for buildings with a crawlspace and the findings of multiple studies documenting typical background naphthalene concentrations in residential homes. Collectively, this data and information provide multiple lines of evidence indicating that VI is not adversely impacting indoor air quality within the existing buildings at the Site.

Based on the results of the VI assessment work completed for the RI and the above evaluation, VI does not appear to be impacting indoor air in the existing service station building, or in nearby residences. However, if the land-use scenario changes, potential VI may need to be re-evaluated.

3.6 REMEDIAL INVESTIGATION DATA VALIDATION AND MANAGEMENT

As required per the Scope of Work (Exhibit B) of the Agreed Order, all environmental data collected in association with the RI field activities was validated by a third-party review performed at Quality Assurance Level 2 (EAP2). Third-party data validation was performed by EcoChem, Inc. of Seattle, Washington.

Following completion of third-party data validation, all sampling data generated under the RIWP was entered into Ecology's Environmental Information Management System (EIM) in accordance with WAC 173-340-840(5) and Ecology's Toxics Cleanup Program Policy 840: Data Submittal Requirements.

4 CURRENT CONCEPTUAL SITE MODEL

A CSM is a written and/or illustrative representation of the collective information that is known or suspected regarding the presence of contamination at a site, and the physical, chemical, or biological processes that may impact contaminant migration, transport to other media, or exposure by human and/or ecological receptors. Development and refinement of a CSM is an iterative process, in which the CSM is updated when new investigation data or other information is available for a site. Preparation and updates of a CSM are beneficial within the RI process to identify data gaps and to provide a comprehensive understanding of the potential risks associated with a site.

To initiate the RI process for the Site, Leidos developed a preliminary CSM that was presented in the RIWP, which summarized our understanding of known and potential environmental impacts to the Site, and the potential risks to human health or the environment that could be associated with those impacts. The preliminary CSM relied on information collected from previous site investigations and site history information, site plans, aerial photographs, and utility information provided by the City of Bremerton.

This section presents an updated version of the CSM, which incorporates additional information gathered through completion of the RI.

4.1 GEOLOGY AND HYDROGEOLOGY

4.1.1 Geology

This section summarizes the geologic setting of the Site, based on the soil boring and sampling activities during the RI, as well as available soil descriptions from pre-RI activities. The lithologic units vary across the Site and are depicted in a cross section that extends east-west through the Site. The location of this section line (A-A') is shown on a map on Figure 7, and the cross section is presented on Figure 8. The section extends from Naval Avenue on the west, through the western UST basin, to between the southern dispensers and the station building, extending south of the eastern UST basin, and into the adjacent residential property east of the Property.

The four lithologic units identified at the Site include the following (youngest to oldest):

- Unit A: Fill and recent deposits
- Unit B: Glacial lacustrine silt with clay
- Unit C: Glacial till and related material
- Unit D: Glacial advance outwash sand

Unit A

The uppermost lithologic unit throughout the Site consists of fill material, other disturbed or redistributed soils, and possibly some other recent (Holocene) post-glacial deposits. This unit consists of sand, silt, silty sand, and gravel in varying proportions. The thickness typically ranges from 2 to 8 feet; however, in areas of tank basins and excavation pits, the fill thickness may extend up to 13 feet. The fill is depicted as approximately 13 feet thick in the UST basin on the west side of the Site (Figure 8). The fill material at most of the Site is not always readily distinguishable from the native material beneath it, so its presence and thickness while drilling/sampling are inferred in many places.

Unit B

The lithologic unit below Unit A is a silt layer with variable amounts of clay, minor fine-grained sand, and up to several percent gravel. The clay-rich silt is commonly finely laminated and varies from low to high plasticity; its consistency is typically soft to firm. This unit everywhere is underlain by Unit C (glacial till), and in places this unit may grade coarser downward into the till. Unit B is up to 13 feet thick and is only present in the eastern two-thirds of the Site; it pinches out to the west of borings SB-7 and SB-8 (Figure 8). This unit also pinches out north of SB-7 and was not identified in borings SB-1 and SB-2. Unit B was found in all seven borings drilled in 2000 outside the periphery of the eastern tank basin (B-1 to B-7). Unit B contains widely scattered fine gravel suspended within the fine-grained laminated matrix, and it appears to be gradational with Unit C. Thus, Unit B is believed to be a glacial-lacustrine deposit.

Note that another silt-rich unit is also present in borings under Naval Avenue and in the northwestern portion of the Site (SB-21 and SB-29), up to 10 feet thick. However, this is a coarser silt unit without clay, and with a greater amount of gravel, and is considered to be part of Unit A.

Unit C

Below Units A and B is a lithologic unit that includes a heterogeneous mix of silt, sand, gravel, and minor clay, often with a fine matrix of silty sand. This unit includes some layers of medium-grained sand and gravelly sand. Unit C includes glacial till and related till-like material, which is marked by a greater hardness and a wide range of grain sizes, including significant but variable amounts of gravel. This unit, known as the Vashon till, is present across the Site and varies in thickness from approximately 8 feet to at least 17 feet (Figure 8). Within the western UST basin, the top of Unit C appears to be present at a depth of approximately 8 to 9 feet bgs. In the area immediately south of the eastern UST basin, the top of the till is present at approximately 15 to 16 feet bgs. The consistency of the till material is generally described as dense to very dense or firm to hard. The upper few feet of this unit is locally less dense and grades upward into silty sand and then into the silt of Unit B. The till was rarely observed to perch small seams of water (a few inches thick) on top of it.

Unit D

Below the glacial till is a unit of fine sand that has been observed wherever drilling extended beyond the base of the till. The sand typically ranges from very fine to medium-grained, and includes trace coarse silt ranging up to 10 percent, with up to several percent gravel. The top of this sand was identified in 15 RI borings at depths ranging from 17 to 25 feet. In RI borings that did not penetrate through Unit C, the top of Unit D would range to greater than 31.5 feet bgs. This Unit D sand was found to be greater than 28 feet thick in boring SB-1, to a drilled depth of 51.5 feet bgs. Drilling at the ARCO station to the west of the Site revealed that this unit extends to a depth of at least 80 feet bgs (Ecology 2013a). Based on the lithology of this unit and its thick presence below glacial till, Unit D likely represents Vashon glacial advance outwash material.

Lithology in Eastern UST Basin

The geology within the area of the former eastern UST basin is somewhat different than that shown on the cross section (Figure 8) located just south of the basin. Pre-RI reports indicated

that native shallow soils surrounding the former UST basin consisted of medium dense sandy silt (Units A and B). Within the tank basin, the former backfill material (sandy gravel) extended from near the surface to approximately 10 feet bgs, with medium dense sand from 10 to 12 feet bgs, and sandy silt (Unit B) from 12 to at least 14 feet bgs (the maximum excavation depth). As noted above, the seven B-borings also identified the silt-rich Unit B around the outside periphery of the tank basin. The 2-foot thick sand layer (10 to 12 feet bgs) was identified on the north, west, and south walls of the tank-pit excavation completed in 1990, but not in the two test pits excavated to 13 feet bgs near the southeast corner of the main tank basin (AGI, 1990c). Based on the differing geology outside the tank basin, the sand layer at a depth of 10 to 12 feet bgs appears to be tank-bed material placed on top of excavated silt at the time of the UST installation (possibly 1961). Therefore, this tank-basin sand would laterally terminate against the silty soil of Unit B.

4.1.2 Hydrogeology

Groundwater was not encountered during drilling at the Site, except for a few thin seams of water perched in small pockets overlying glacial till. As stated in Section 3.4, the water table within the upper aquifer in this area is expected to be situated at approximately 70 feet bgs. This aquifer appears to be present within the lower portion of Unit D, the Vashon advance outwash sand. At the adjacent ARCO station, only one monitoring well was installed to the water table, and thus the direction of groundwater flow could not be determined (AGI, 1990c; Ecology, 2013a).

4.2 CONTAMINANT RELEASE

A review of available historical data indicates that no releases have been documented by Ecology for the Site. In addition, no documented off-site releases were identified in the available historical data. Therefore, Leidos is currently not aware of any details regarding specific contaminant release events at or affecting the Site.

Based on data from the RI and previous environmental investigations, as well as information that is known or suspected regarding service station operations at the Site between approximately 1928 and 2008, Leidos has identified the following as likely potential sources for the petroleum hydrocarbon impacts at the Site:

- Past releases to the subsurface associated with leaking petroleum USTs;
- Past releases to soil associated with leaking product conveyance piping associated with the former service station configurations;
- Past releases to the ground surface or near-surface soils from UST overfills in the current or former UST basin areas; and
- Past releases to the ground surface associated with vehicle refueling or pump maintenance operations at the current or former dispenser island locations.

4.3 CONTAMINANTS OF CONCERN

MTCA defines a contaminant as “any hazardous substance that does not occur naturally or occurs at greater than natural background levels.” Contaminants of concern (COCs) are those hazardous substances that are known to be present at a site and those which may be present based on information regarding the nature of a known release or past operations at a site. Based

on the results of the RI, and previous environmental investigations performed at the Site, the following hazardous substances have been identified as COCs:

- GRO
- DRO/HRO
- Benzene
- Ethylbenzene
- Xylenes
- Naphthalene

4.4 EXTENT OF PETROLEUM IMPACTS

Petroleum impacts to soil, consisting of the COCs identified above in Section 4.3, have been determined to be present in vadose zone soils at the Site. The approximate extent of these impacts, based on MTCA Method A cleanup level exceedances for Site soil sample results, is depicted on Figures 8 and 9. As previously discussed in Section 3.2.2, the use of MTCA Method A cleanup levels on these figures is for screening-level purposes only, and further discussion regarding the selection of appropriate cleanup levels for the Site is presented in Section 5.1.

As shown on Figure 9, soil sampling results from the RI indicate that two distinct areas of petroleum impacted soil are present at the Site:

- (1) MTCA Method A cleanup level exceedances for GRO and related constituents are present in the large area that comprises the eastern UST basin, the station building, pump islands, and extending to the east and southeast of the station.
- (2) MTCA Method A cleanup level exceedances for DRO, GRO and related constituents are present in the smaller area of the western UST basin near Naval Avenue and extending to the northeast and west/southwest of the basin.

The first of these two areas appears to have originated from multiple release locations on the eastern portion of the Property, including the former regulated UST basin removed in 1990 and the service station pump islands, and it extends a short distance off-Property to the east and a shorter distance to the southeast. This impacted zone does not appear to reach the residential structure at 2005 6th Street; however, it may reach the western portion of the structure at 2007 6th Street. Petroleum contamination (exceeding Method A cleanup levels) in this zone has been identified at depths as shallow as 10 feet bgs in RI soil boring SB-7, near the southern pump island. Shallow impacts to soil at the former station were also detected in pre-RI soil sampling locations B, C, N, and W (AGI, 1990c) and pre-RI soil borings BM-4 through BM-8 and BM-12, with impacts as shallow as 7 feet bgs (PEI, 2009; Appendix A). The contamination generally is deeper to the east and reaches its deepest level in boring SB-27, at a maximum sample depth of 26.5 feet bgs (Figure 8). In SB-27, a deeper sample at 29 feet bgs, within Unit C, showed all results as non-detect.

The second of these two areas likely originated from the western former tank basin on the Property, and it extends a short distance off-Property to the west/southwest under Naval Avenue. For RI soil samples, the petroleum contamination in this zone was identified at depths as shallow as 8 feet bgs in borings UST-2, UST-4, SB-20, and SB-24. This widespread area of shallow petroleum impact implies that contamination was able to be transported in an approximately

horizontal direction, likely migrating on top of the till layer (Figure 8). The contamination was identified as being deepest at SB-17 at a maximum depth of 24.5 feet bgs. Figure 9 shows the area between SB-17, SB-24, and borings around the northern UST, where petroleum impacts to soil include both GRO and DRO.

The vertical extent of contamination in Site soil is identified within the fine-grained material of Units B and C in the eastern area, and Units A and C in the western area. The sample at 24-24.5 feet bgs in SB-17 is the only contaminated soil identified within Unit D, situated 3 feet below the upper contact and with uncontaminated soil below (results for the sample at 29.5 feet bgs are all at or below reporting limits). Aside from this single sample, the low-permeability lithologies of Unit C appear to significantly retard the downward transport of infiltrating water, and in all but this one location act to keep the petroleum hydrocarbons from reaching Unit D. The very fine to medium sand with minor silt of Unit D appears to further impede the downward transport of hydrocarbon contamination (maximum depth of 24.5 feet bgs) and protect the deep underlying aquifer situated at approximately 70 feet bgs.

As previously discussed in Section 3.4, based on the vertical extent of petroleum impacts to soil at the Site that exceed MTCA Method A cleanup levels (which are intended to be protective of groundwater), there appears to be a sufficient interval of non-impacted soil (40+ feet), such that residual soil impacts leaching to groundwater is not a contaminant transport pathway of concern.

4.5 ENVIRONMENTAL MEDIA OF CONCERN

The RI evaluated the following environmental media that were identified as potential media of concern by the RIWP:

| Evaluation of Potential Media of Concern | | |
|--|---------------------------------|--|
| Potential Media of Concern Evaluated by the RI | Retained as a Media of Concern? | Justification |
| Soil | Yes | One or more hazardous substances have been detected in soil above naturally occurring background conditions. Therefore, soil is considered a media of concern for the Site. |
| Groundwater | No | Groundwater has not been encountered at the Site within the maximum depth explored (51.5 feet bgs). As described in Sections 3.4 and 4.4, groundwater at the Site is expected to be first encountered at a depth of approximately 70 feet bgs. This deep groundwater is separated from any Site contamination by 40+ feet of intervening relatively low-permeability soil of Units C and/or D. Therefore, groundwater is not considered a media of concern for the Site. |
| Soil Vapor | Yes | As previously discussed in Section 3.5, results of recent Tier 2 VI assessment activities indicate that the presence of petroleum contamination at the Site is not resulting in VI to existing buildings on the former service station property or nearby properties. However, Tier 1 results indicate that naphthalene has been detected in shallow soil vapor at concentrations that exceed current MTCA Method B screening levels for soil gas. Therefore, soil vapor is considered a media of concern for potential future land use scenarios. |

| Evaluation of Potential Media of Concern | | |
|--|---------------------------------|---|
| Potential Media of Concern Evaluated by the RI | Retained as a Media of Concern? | Justification |
| Surface Water | No | The RIWP identified surface water as a media of potential concern due to groundwater's ability to infiltrate subgrade stormwater conveyance piping that may drain to surface water. However, based on the results of the RI, this potential contaminant transport pathway has been determined to be incomplete because groundwater is not present at the shallow depths where stormwater piping is present near the Site (generally less than 10 feet bgs). |

4.6 POTENTIAL RECEPTOR AND TRANSPORT/EXPOSURE PATHWAY EVALUATION

4.6.1 Potential Receptors

Receptors are individuals or populations that are at risk of being exposed to hazardous substances at or originating from a contaminated site. Based on the location and setting of the Site, the RI evaluated the following potential receptors:

| Evaluation of Potential Receptors | | |
|---|------------------------------------|---|
| Potential Receptors Evaluated by the RI | Retained as a Receptor of Concern? | Justification |
| Humans | Yes | The Site is located in a commercial and residential area in the City of Bremerton, Washington. Based on current and future expected land use on and in the vicinity of the Site, humans are considered receptors of concern for the hazardous substances present at the Site. |
| Terrestrial Ecological Organisms | No | Based on the exclusion criteria established by WAC 173-340-7491(1), terrestrial ecological organisms are not considered as receptors of concern for the Site. See Section 4.6.1.1 for additional details. |
| Aquatic Ecological Organisms | No | Based on results of the RI, surface water is not considered an environmental media of concern. Therefore, aquatic ecological organisms are not considered receptors of concern for the Site. |

4.6.1.1 Terrestrial Ecological Evaluation

For sites impacted by releases of hazardous substances to soil, WAC chapters 173-340-7490 through 173-340-7494 establish the requirement, and define the procedures, for conducting a terrestrial ecological evaluation (TEE) to determine whether conditions at the site may pose a threat to the terrestrial environment.

Within the TEE procedure, WAC 173-340-7491(1) provides an exclusion from the requirement to complete a TEE, for sites where there is less than 1.5 acres of contiguous undeveloped land on

the site or within 500 feet of any area of the site.²

Based on the urban setting, and land use in the area within 500 feet of any portion of the Site, this exclusion from the requirement to complete a TEE is applicable to the Site. Therefore, terrestrial ecological organisms are not considered receptors of concern for the Site.

4.6.2 Exposure Pathway Analysis

Exposure pathways are the paths that hazardous substances may take from a source to a receptor. Exposure pathways include transport pathways (how a hazardous substance moves through and across different environmental media) and an exposure route (the path by which receptors may be exposed to hazardous substances). Examples of exposure routes include:

- Direct contact – Ingestion and/or dermal contact with hazardous substances
- Inhalation – Breathing hazardous substances in air (dust, vapor, or gases)

This section presents an analysis of potential exposure pathways for the two media of concern that have been identified for the Site: soil and soil vapor.

4.6.2.1 Potential Transport Pathways and Exposure Routes for Soil

The following tables provide an evaluation of potential transport pathways and exposure routes that may be associated with the presence of petroleum impacted soil at the Site.

| Evaluation of Potential Transport Pathways – Soil | | |
|---|---|---|
| Potential Transport Pathways | Retained as a Transport Pathway of Concern? | Justification |
| Migration | No | Based on the Site operating history and results of pre-RI investigations, most petroleum impacts to soil are expected to have occurred prior to 1990. Based on the expected age of these releases, petroleum impacts to soil would be expected to have reached stable conditions with no significant further migration. |
| Leaching to groundwater | No | The bottom-most extents of petroleum impacts to soil that exceed cleanup levels based on protection of groundwater (MTCA Method A) have been delineated well above the level of groundwater (at least 40 feet) at the Site; the water table is situated at approximately 70 feet bgs. Surface water infiltration through soils at the Site are limited due to the urban nature of the Site, which is predominantly covered by impermeable surfaces, and due to fine-grained soils at depth. |
| Volatilization to soil vapor | Yes | Petroleum-range hydrocarbon impacts to soil vapor have been confirmed by soil vapor sampling. However, the results of this work indicate that petroleum constituents in soil vapor are readily attenuated in shallow soils, which is likely due to the presence of sufficient oxygen to facilitate aerobic degradation. |

² This exclusion applies only for sites contaminated with hazardous substances other than those specified in WAC 173-340-7491(1)(c)(ii)

| Evaluation of Potential Exposure Routes – Soil | |
|---|---|
| Potential Exposure Routes | Applicability |
| Ingestion of, or dermal contact with, contaminated soil | Exposure route of concern for future subsurface work – The areas of soil impacted by petroleum-range hydrocarbons at the Site are mostly covered by buildings and pavement and are generally present at depths that would not be encountered by routine construction activities. Therefore, the potential for ingestion or dermal contact by human receptors is considered limited. However, potential ingestion or dermal contact exposures may be possible for workers or the public if impacted soils are exposed during future subsurface construction activities. |
| Inhalation of hazardous vapors and/or airborne particulates (i.e., dust) in outdoor air | Exposure route of concern for future subsurface work – Similar to above, under typical conditions the potential for exposure by inhalation of hazard vapors or dust in outdoor air from contaminated soil is limited. However, potential for exposure by inhalation may exist for workers or the public if impacted soils are exposed during future subsurface construction activities. |

4.6.2.2 Potential Transport Pathways and Exposure Routes for Soil Vapor

The following tables provide an evaluation of potential transport pathways and exposure routes that may be associated with the presence of petroleum impacted soil vapor at the Site.

| Evaluation of Potential Transport Pathways – Soil Vapor | | |
|---|---|---|
| Potential Transport Pathways | Retained as a Transport Pathway of Concern? | Justification |
| Migration to indoor air | Yes | VI assessment results for work performed to date indicate that petroleum impacted soil vapor is not impacting indoor air quality in existing buildings on or near the Site. However, Tier 1 VIA sampling results indicate that naphthalene has been detected in shallow soil vapor at concentrations exceeding current MTCA Method B screening levels for sub-slab soil gas. Therefore, migration of impacted soil vapor to indoor air has been retained as a pathway of concern for future buildings or changes in land use at, or near, the Site. |

| Evaluation of Potential Exposure Routes – Soil Vapor | |
|--|--|
| Potential Exposure Routes | Applicability |
| Inhalation | Exposure route of potential future concern - Not an exposure route of concern under current land use. However, may need re-evaluation under future building construction or other land use changes. |

5 CLEANUP STANDARDS

Cleanup standards define the requirements that must be achieved by a cleanup action. As defined in WAC 173-340-700, cleanup standards consist of the following three components:

- Cleanup levels for the hazardous substances present;
- The location(s) where these cleanup levels must be met, i.e., the point(s) of compliance; and
- Other regulatory requirements that apply to the site because of the type of action and/or location of the site. These requirements are specified in applicable state and federal laws and are generally established in conjunction with the selection of a specific cleanup action.

5.1 DEVELOPMENT OF CLEANUP LEVELS

A cleanup level defines the concentration of a hazardous substance above which a contaminated medium (e.g., soil or groundwater) must be remediated in some manner (Ecology, 2013b). The MTCA Cleanup Regulation provides the following three options for establishing cleanup levels:

- **Method A** - Method A cleanup levels are intended to provide conservative cleanup levels for relatively simple sites undergoing routine cleanup actions or for sites with relatively few hazardous substances. Most petroleum-contaminated sites can use this method. Method A provides tables of cleanup levels that are protective of human health for a number of the most common hazardous substances found in soil and groundwater at contaminated sites. For soil, the Method A cleanup level must also be at least as stringent as a concentration that will not result in significant adverse effects on the protection and propagation of terrestrial ecological receptors, unless it can be demonstrated that such impacts are not a concern at the site.
- **Method B** - Method B is the universal method to establish cleanup levels under MTCA. It can be used at any site to develop site-specific cleanup levels for all of the hazardous substances present.
- **Method C** - Method C can only be used under limited circumstances for cleanup at industrial facilities. Based on the Site setting and land use, Method C cleanup levels cannot be used for this Site.

WAC 173-340-700 provides specific procedures for setting cleanup levels at petroleum contaminated sites.

5.1.1 Proposed Cleanup Levels for Soil

As described above, Method B is the universal method to establish cleanup levels under MTCA that can be used at any site. WAC chapters 173-340-700(8)(ii) and 173-340-740 address development of Method B cleanup levels for petroleum contaminated sites. Leidos recommends use of Method B to develop cleanup levels for this Site, because Method B allows cleanup levels to be based on the presence or absence of exposure pathways, as determined through the CSM.

As previously discussed in Section 4.6.2.1, for petroleum impacted soil, the leaching pathway has been eliminated as a transport pathway of concern. Previous sections discuss the lack of groundwater in RI borings to a maximum explored depth of 51.5 feet bgs, and the estimated

depth of Site groundwater at 70 feet bgs. Therefore, cleanup levels for soil will be based on the direct contact pathway.

For petroleum contaminated sites, Method B allows the use of site-specific petroleum compositional data to calculate a site-specific cleanup level for TPH that is representative of the TPH mixture as a whole, as opposed to Method A, which specifies individual cleanup levels for common petroleum product constituents such as BTEX. Ecology, in their June 16, 2020 response to the Newman's Chevron Pre-RI Check-in Meeting, determined that the proposed use of site-specific soil cleanup levels at the Site is appropriate.

In accordance with Ecology guidance, Leidos utilized the MTCA TPH 11.1 Workbook Tool to develop site-specific cleanup levels for total petroleum hydrocarbons (TPH) that would be protective of a direct contact exposure pathway at the Site. Because the Site appears to have been impacted by two discrete petroleum sources: 1) the eastern UST basin and pump islands; and 2) the orphaned UST basin in the western portion of the Property, Leidos calculated site-specific Method B TPH cleanup values for each source area, in order to account for potential compositional differences in the petroleum products that were historically stored/used in these areas. Worksheets from the MTCA TPH 11.1 Workbook Tool are presented in Appendix F and the results are presented in the following table:

| Proposed Cleanup Levels for TPH in Soil | |
|--|--|
| Method B TPH Cleanup Level for Soil (mg/kg) | Applicable Site Area |
| 3,353 | Soils impacted by petroleum releases from the dispenser islands and eastern UST basin. |
| 2,477 | Soils impacted by petroleum releases from the undocumented UST basin in the western portion of the Site. |

5.1.2 Cleanup Levels for Soil Vapor

Although soil vapor has been identified as a media of concern, due to the potential to impact indoor air under a future land-use change, petroleum impacts to soil vapor will not drive the development of cleanup standards for the Site. At this time, MTCA does not include development of cleanup levels for soil vapor.

In the event of a future land-use change that may increase the potential for VI to indoor air, Leidos expects that MTCA Method B screening levels for soil gas, or Method B indoor air cleanup levels, will be used to evaluate the need for future VI mitigation measures.

5.2 POINTS OF COMPLIANCE

Points of Compliance (POCs) are the locations on a site where cleanup levels must be met. MTCA defines the standard POC for each environmental media (soil, groundwater, air, and surface water).

5.2.1 POCs for Soil

The standard POCs for the exposure pathways of concern for petroleum impacted soil at the Site are limited to:

- Direct contact – Soils from the ground surface to a depth of 15 feet bgs.

5.3 OTHER REGULATORY REQUIREMENTS

WAC 173-340-710 requires that all cleanup actions conducted under MTCA comply with applicable state and federal laws. Applicable state and federal laws include those that are legally applicable requirements, as well as those requirements that Ecology determines are relevant and appropriate. Applicable, relevant, and appropriate requirements are collectively referred to as ARARs.

For the purpose of this document, detailed analysis and discussion of potential ARARs are not intended. Potential ARARs that may be associated with specific cleanup actions will be addressed in the future FS for the Site.

5.4 PROPOSED CLEANUP STANDARDS AND KNOWN POINTS OF EXCEEDENCES

The following table presents a summary of the proposed cleanup standards for the Site. As previously discussed, additional components of these cleanup standards, in the form of ARARs, will be integrated, as necessary, during the FS process for the Site.

| Proposed Cleanup Standards | | | | |
|------------------------------------|-------|--|-----------------------------|--|
| Method B TPH Cleanup Level (mg/kg) | Media | Point of Compliance | ARARs | Applicable Site Area |
| 3,353 | Soil | Ground surface to a depth of 15 feet bgs | To be identified in the FS. | Soils impacted by petroleum releases from the dispenser islands and eastern UST basin. |
| 2,477 | Soil | Ground surface to a depth of 15 feet bgs | To be identified in the FS. | Soils impacted by petroleum releases from the undocumented UST basin in the western portion of the Site. |

Based on review of the RI and pre-RI soil sampling results, petroleum impacts to soil have been detected above the proposed cleanup standards at the following sampling locations (Figure 10):

| Soil Sample Location ID | Sample Depth (feet bgs) | Investigation | Sample Date | Results |
|---|-------------------------|----------------------|-------------|--|
| Eastern Portion of Site, TPH Cleanup Level = 3,353 mg/kg | | | | |
| B | 10.5 | Pre-RI AGI (1990) | 8/1990 | TPH detected at 4,875 mg/kg |
| BM-5 | 11-12 | Pre-RI PEI (2009) | 7/20/2009 | GRO detected at 4,100 mg/kg and 4,400 mg/kg in duplicate sample |
| Western Portion of Site, TPH Cleanup Level = 2,477 mg/kg | | | | |
| UST-2 | 8 | RI Leidos (2018) | 8/28/2018 | GRO detected at 670 mg/kg DRO detected at 2,800 mg/kg (combined TPH = 3,470 mg/kg) |

6 SUMMARY AND CONCLUSIONS

RI field activities conducted at the Site between July 2018 and October 2022 were sufficient to collect the data necessary to adequately characterize the Site for the purpose of developing and evaluating cleanup action alternatives. The results of this work indicate that petroleum contamination, which appears to have originated from past operations of service stations at two discrete locations on the Site, is present in soils at concentration exceeding natural background levels. Petroleum contamination in soil has also resulted in the presence of naphthalene in soil vapor at concentrations exceeding MTCA Method B screening levels for soil gas. However, based on the vertical extent of petroleum impacts to soil and local hydrogeological conditions, contamination at the Site does not appear to be a risk to local groundwater quality.

Based on the results of the RI, the CSM was updated, including an evaluation of potential receptors, and transport and exposure pathways. In conjunction with this work, Leidos has developed proposed cleanup levels for the Site using MTCA Method B that would be protective of a direct contact exposure pathway for soil. Petroleum VI to indoor air is not considered a complete exposure pathway for the Site under current land use conditions. However, the presence of naphthalene in shallow soil vapor at the Site would warrant further consideration in the event of a land use change or redevelopment which could create conditions that may result in potential VI.

7 REFERENCES

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LIMITATIONS

This technical document was prepared on behalf of the Parties and is intended for their sole use and for use by the local, state, or federal regulatory agency that the technical document was sent to by Leidos. Any other person or entity obtaining, using, or relying on this technical document hereby acknowledges that they do so at their own risk, and Leidos shall have no responsibility or liability for the consequences thereof.

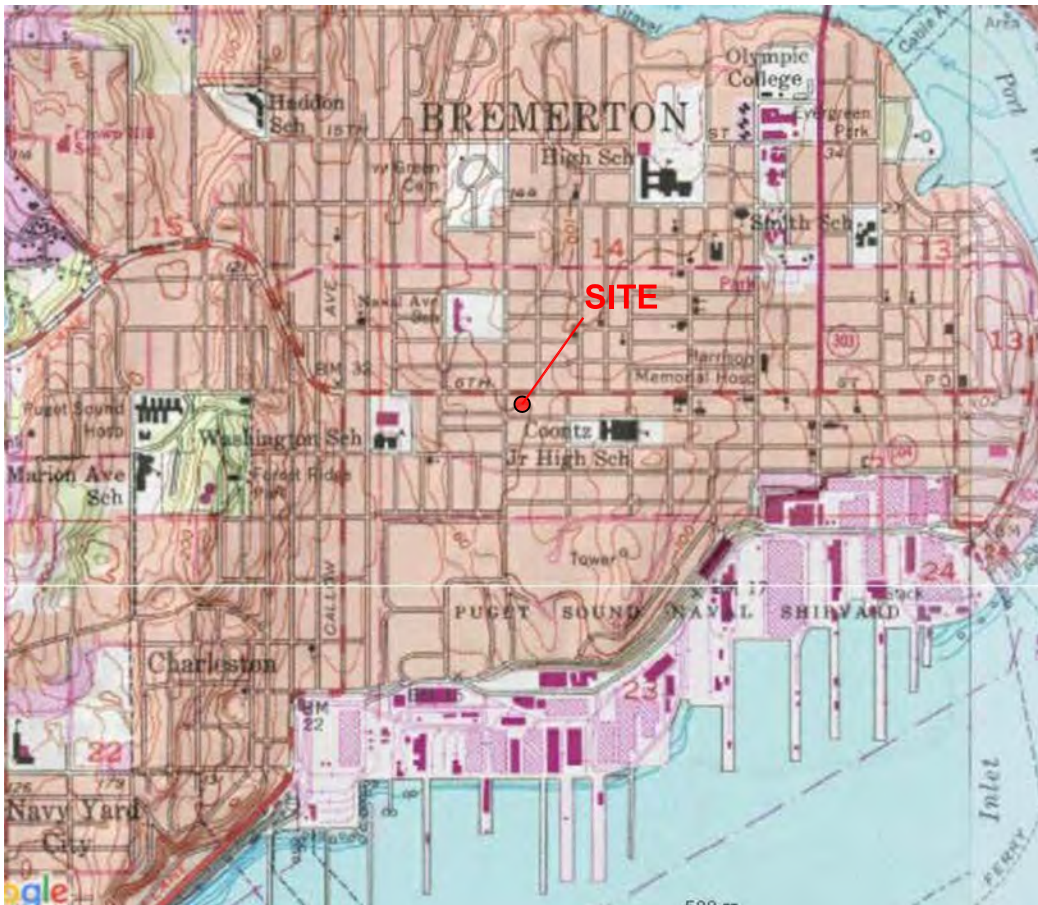
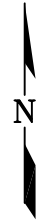
Site history and background information provided in this technical document are based on sources that may include interviews with environmental regulatory agencies and property management personnel and a review of acquired environmental regulatory agency documents and property information obtained from the Parties and others. Leidos has not made, nor has it been asked to make, any independent investigation concerning the accuracy, reliability, or completeness of such information beyond that described in this technical document.

Recognizing reasonable limits of time and cost, this technical document cannot wholly eliminate uncertainty regarding the vertical and lateral extent of impacted environmental media.

Opinions and recommendations presented in this technical document apply only to site conditions and features as they existed at the time of Leidos site visits or site work and cannot be applied to conditions and features of which Leidos is unaware and has not had the opportunity to evaluate.

All sources of information on which Leidos has relied in making its conclusions (including direct field observations) are identified by reference in this technical document or in appendices attached to this technical document. Any information not listed by reference or in appendices has not been evaluated or relied on by Leidos in the context of this technical document. The conclusions, therefore, represent our professional opinion based on the identified sources of information.

Figures



Newman's Chevron
2021 6th Street
Bremerton, Washington

FIGURE 1
Site Vicinity Map

DATE: 1/12/2023

DRAWING: 204177_Bremerton_Vicinity_Map.dwg



Approximate Property Boundary

Newman's Chevron
2021 6th Street
Bremerton, WA 98337
Ecology Facility/Site ID No. 1436359
Kitsap County Parcel No. 3717-002-015-0106

PUMP ISLAND

10,000 gal. UST

8,000 gal. UST

PUMP ISLAND

6,000 gal. UST

2005 6th Street

2007 6th Street

Active ARCO Service Station
2101 6th Street
Ecology Facility/Site ID No. 53813326

Naval Avenue

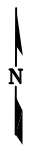
Alley

1936-1/2 5th Street

1932 5th Street

1936 5th Street

IMAGE SOURCE: GOOGLE EARTH, 2017.



Newman's Chevron
2021 6th Street
Bremerton, Washington

FIGURE 2
Site Map

LEGEND:

- Approximate Current Parcel Boundary
- Approximate Former Parcel Boundaries
- - - - - Approximate Lot Boundaries
- 15 Kitsap County Assessor's Tax Lot Identification Number

Approximate Parcel Boundary
Kitsap County Parcel No. 3717-002=015-0106



Tax Description for Kitsap County Parcel # 3717-002-015-0106

Parcel I: Lots 15 and 16, and the East 5 feet of Lot 17, Block 2, Wm. Bremer's First Addition of the Cities of Bremerton and Charleston, as per plat recorded in Volume 3 of Plats, Page 4, records of Kitsap County, Washington.

Parcel II: The West 25 feet of Lot 17, and all of Lot 18, Block 2, Wm. Bremer's First Addition of the Cities of Bremerton and Charleston, as per plat recorded in Volume 3 of Plats, Page 4, records of Kitsap County, Washington.


Parcel III: The North 75 feet of Lots 19 and 20, Block 2, Wm. Bremer's First Addition of the Cities of Bremerton and Charleston, as per plat recorded in Volume 3 of Plats, Page 4, records of Kitsap County, Washington.

IMAGE SOURCE: GOOGLE EARTH, 2017.



Newman's Chevron
2021 6th Street
Bremerton, Washington

FIGURE 3
Current and Former
Property Boundaries

- LEGEND:**
- BM-1 ● Approximate Soil Boring Location (PEI, 2009)
 - B-3 ⊕ Approximate Soil Boring Location (Geoscience Management, 2000)
 -  Approximate Location of Test Excavation and Confirmation Samples (Geoscience Management, 2000)





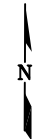
-  Approximate Location of Confirmation Soil Sample (AGI, 1990)
-  Approximate Location of Test Pit (AGI, 1990)
-  Approximate Location of Former Service Bay Hoist



IMAGE SOURCE: GOOGLE EARTH, 2017.

 **SCALE**








0 20 40 60ft







Newman's Chevron
2021 6th Street
Bremerton, Washington

FIGURE 4
Pre-RI Sampling Locations

DATE: 1/12/2023 DRAWING: 204177 RI Summary Report Figures.dwg

- LEGEND:**
- SB-9  RI Soil Boring Location (August 2018)
 - SB-20  RI Soil Boring Location (July 2019)
 - SB-30  RI Soil Boring Location (February 2020)
 - SVP-1  RI Soil Vapor Sampling Probe Location
 -  Approximate Location of Undocumented UST
 - BM-1  Pre-RI Soil Boring Location (PEI, 2009)
 - B-2  Pre-RI Soil Boring Location (Geoscience Management, 2000)

-  Pre-RI Test Excavation and Confirmation Samples (Geoscience Management, 2000)
-  Pre-RI Confirmation Soil Sample (AGI, 1990)
-  Pre-RI Test Pit (AGI, 1990)
-  Approximate Location of Former Service Bay Hoist

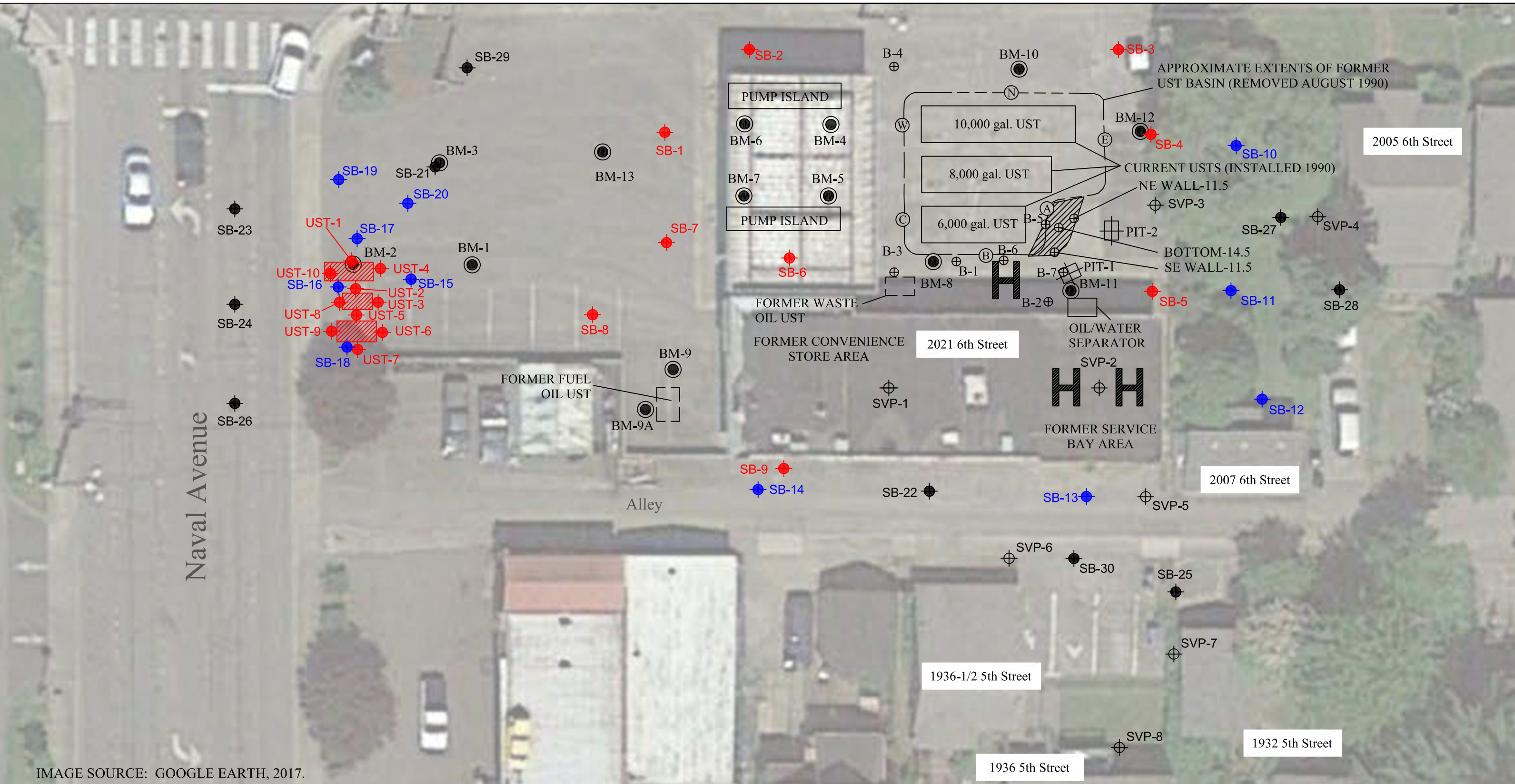
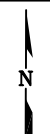


IMAGE SOURCE: GOOGLE EARTH, 2017.



Newman's Chevron
2021 6th Street
Bremerton, Washington

FIGURE 5
Pre-RI and RI Soil Sampling Locations

LEGEND:

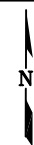
SVP-1 ⊕ Location of Permanent Soil Vapor Sampling Probe

SSVP-1 △ Location of Permanent Sub-Slab Soil Vapor Sampling Point

OA-1-100622 ● Sample ID and Approximate Location for Collection of Air Samples from Temporary Sampling Location










IMAGE SOURCE: GOOGLE EARTH, 2017.



Newman's Chevron
2021 6th Street
Bremerton, Washington

FIGURE 6
RI VI Assessment Sampling Locations

LEGEND:

- SB-9  RI Soil Boring Location (August 2018)
- SB-20  RI Soil Boring Location (July 2019)
- SB-30  RI Soil Boring Location (February 2020)
- SVP-1  RI Soil Vapor Sampling Probe Location
-  Approximate Location of Undocumented UST
- BM-1  Pre-RI Soil Boring Location (PEI, 2009)
- B-2  Pre-RI Soil Boring Location (Geoscience Management, 2000)

-  Pre-RI Test Excavation and Confirmation Samples (Geoscience Management, 2000)
-  Pre-RI Confirmation Soil Sample (AGI, 1990)
-  Pre-RI Test Pit (AGI, 1990)
-  Approximate Location of Former Service Bay Hoist
- AHA'  Geologic Cross-Section Location Line

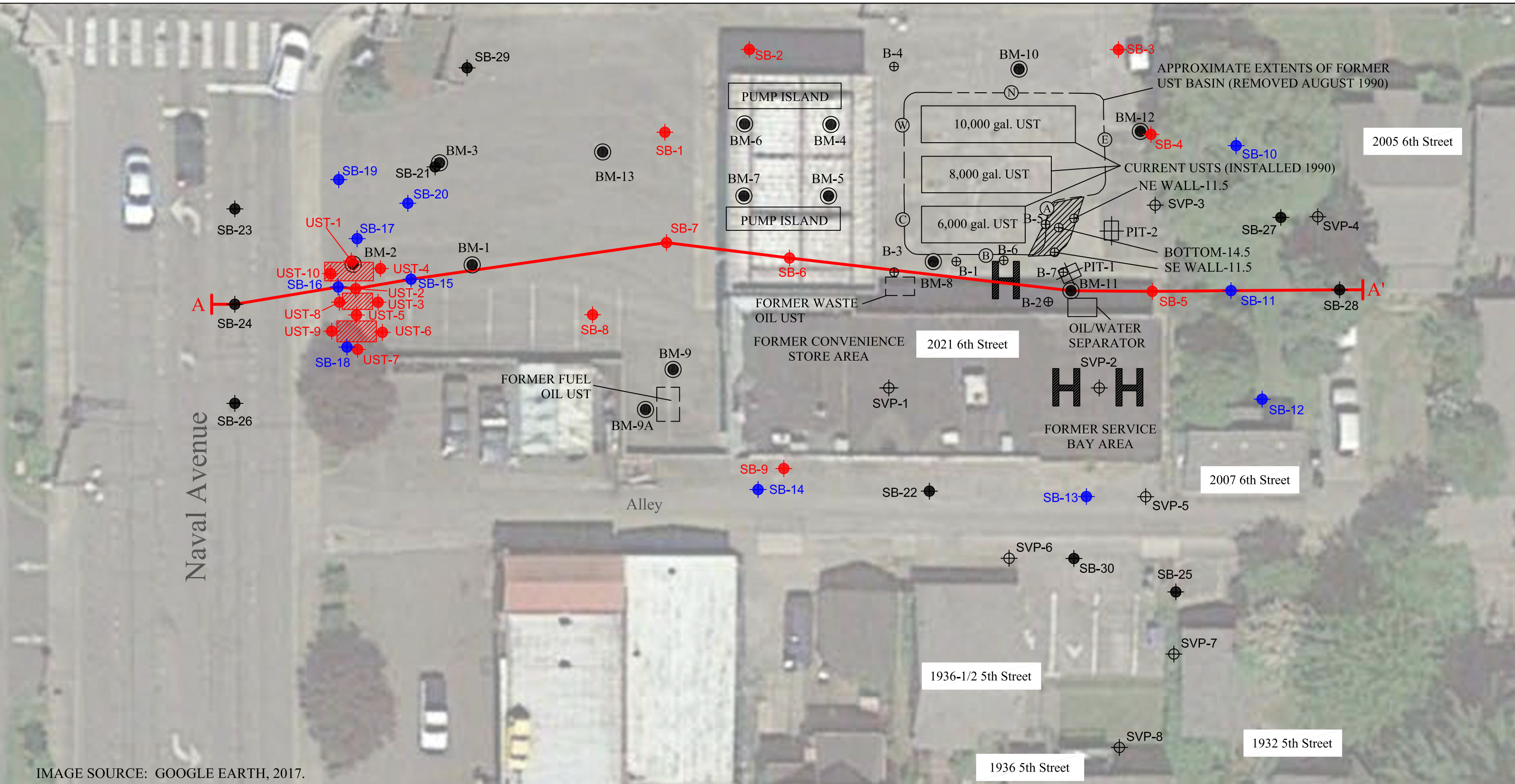







IMAGE SOURCE: GOOGLE EARTH, 2017.







Newman's Chevron
2021 6th Street
Bremerton, Washington

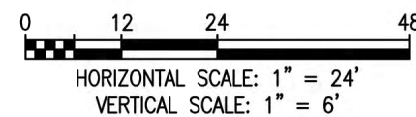
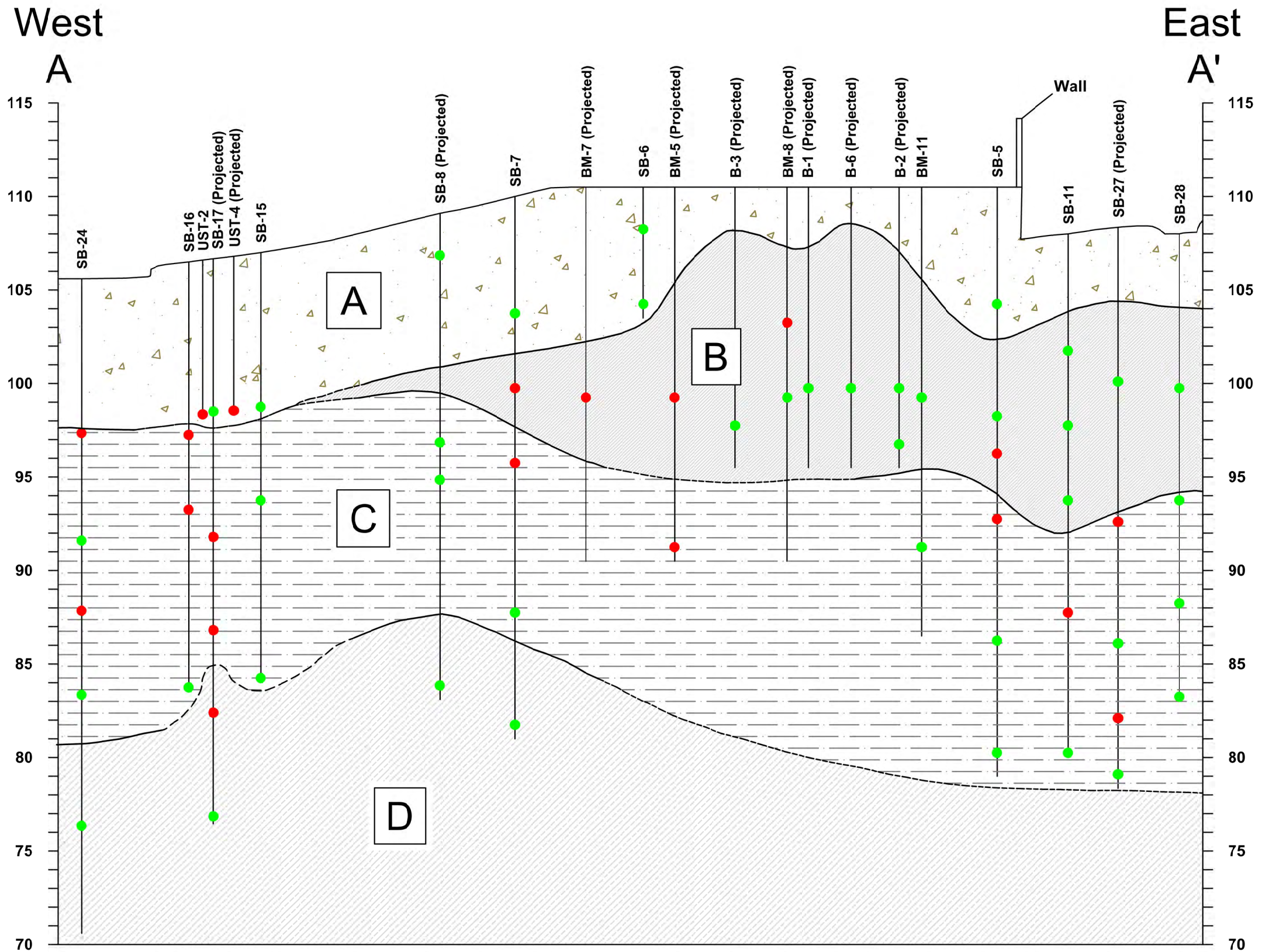
FIGURE 7
Location of Cross-Section Line A-A'

LEGEND:

-  Soil Boring
-  Contact line between soil types
-  Contact line between soil types (inferred)
-  Location of soil sample with laboratory results exceeding MTCA Method A cleanup levels for one or more analytes
-  Location of soil sample with laboratory results less than MTCA Method A cleanup levels for all analytes

SOIL LITHOLOGY LEGEND:

-  Unit A: Fill and recent deposits
-  Unit B: Glacial lacustrine silt with clay
-  Unit C: Glacial till and related material
-  Unit D: Glacial advance outwash sand



Newman's Chevron
2021 6th Street
Bremerton, Washington

FIGURE 8
Geologic Cross-Section A-A'

DATE: 4/10/2023

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LEGEND:

- SB-9 RI Soil Boring Location (August 2018)
- SB-20 RI Soil Boring Location (July 2019)
- SB-30 RI Soil Boring Location (February 2020)

- ⊕ SVP-1 RI Soil Vapor Sampling Probe Location
- ▨ Approximate Location of Undocumented UST
- ⊕ BM-1 Pre-RI Soil Boring Location (PEI, 2009)
- ⊕ B-2 Pre-RI Soil Boring Location (Geoscience Management, 2000)

- ▨ Pre-RI Test Excavation and Confirmation Samples (Geoscience Management, 2000)
- ⊕ Pre-RI Confirmation Soil Sample (AGI, 1990)
- ⊕ Pre-RI Test Pit (AGI, 1990)

- ▨ Approximate Location of Former Service Bay Hoist
- ▭ Approximate Extent of Soil Containing Gasoline-Range Petroleum Impacts (GRO and/or BTEX) at Concentrations Greater than MTCA Method A Cleanup Levels
- ▭ Approximate Extent of Soil Containing GRO and DRO at Concentrations Greater than MTCA Method A Cleanup Levels

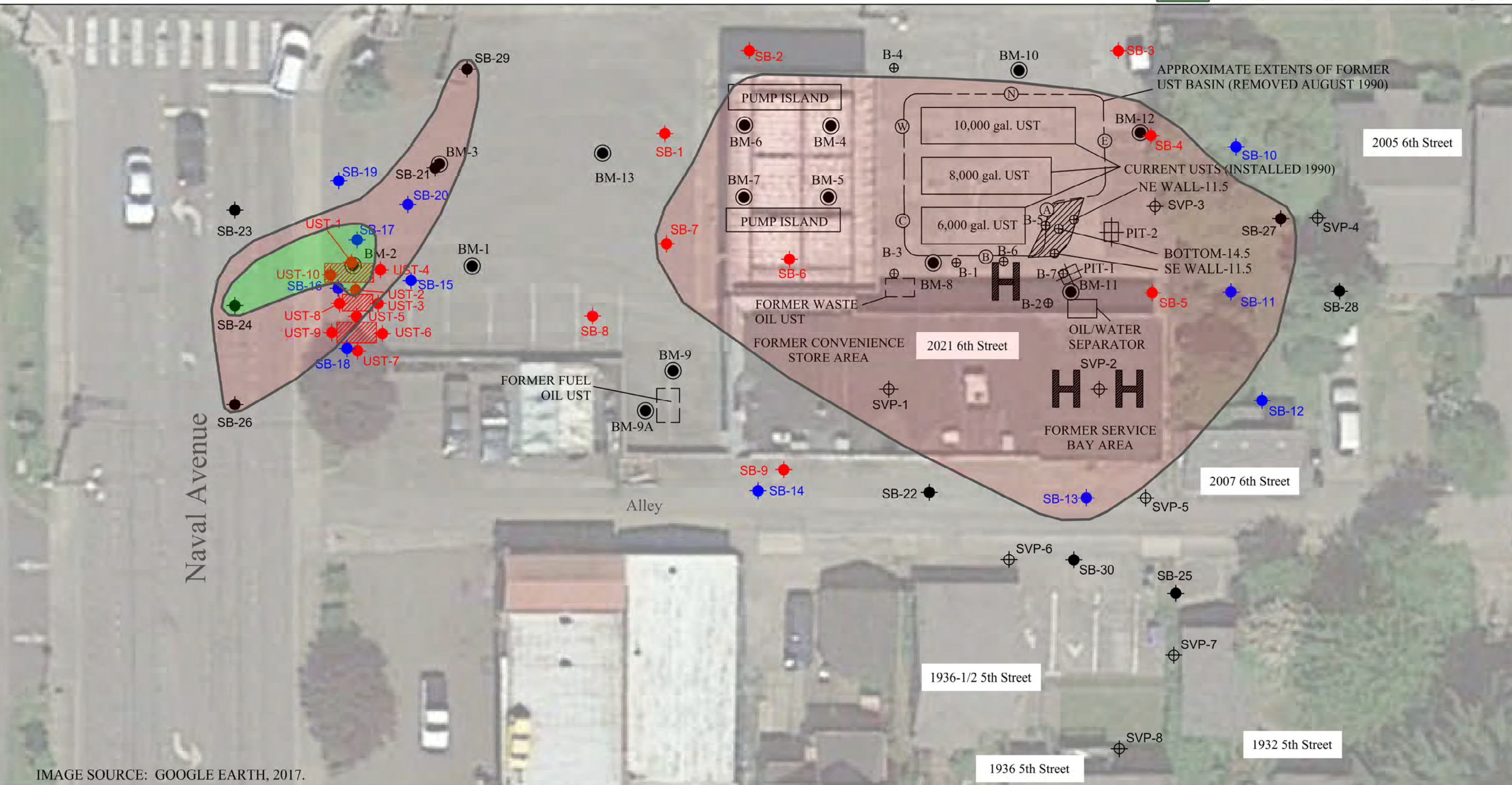


IMAGE SOURCE: GOOGLE EARTH, 2017.



Newman's Chevron
2021 6th Street
Bremerton, Washington

FIGURE 9
Approximate Extents of
Petroleum Impacted Soil

LEGEND:

- SB-9 RI Soil Boring Location (August 2018)
- SB-20 RI Soil Boring Location (July 2019)
- SB-30 RI Soil Boring Location (February 2020)
- ⊕ SVP-1 RI Soil Vapor Sampling Probe Location
- Approximate Location of Undocumented UST
- BM-1 Pre-RI Soil Boring Location (PEI, 2009)
- B-2 Pre-RI Soil Boring Location (Geoscience Management, 2000)

- Pre-RI Test Excavation and Confirmation Samples (Geoscience Management, 2000)
- Pre-RI Confirmation Soil Sample (AGI, 1990)
- Pre-RI Test Pit (AGI, 1990)

- Approximate Location of Former Service Bay Hoist
- | Depth (feet) | Date | Results |
|--------------|--------|-------------------|
| 10.5 | 8/1990 | TPH @ 4,875 mg/kg |

 Soil Sampling Data for Soil Samples Exceeding Site-Specific Method B Cleanup Levels Above the Standard Point of Compliance for Direct-Contact (15 feet bgs)

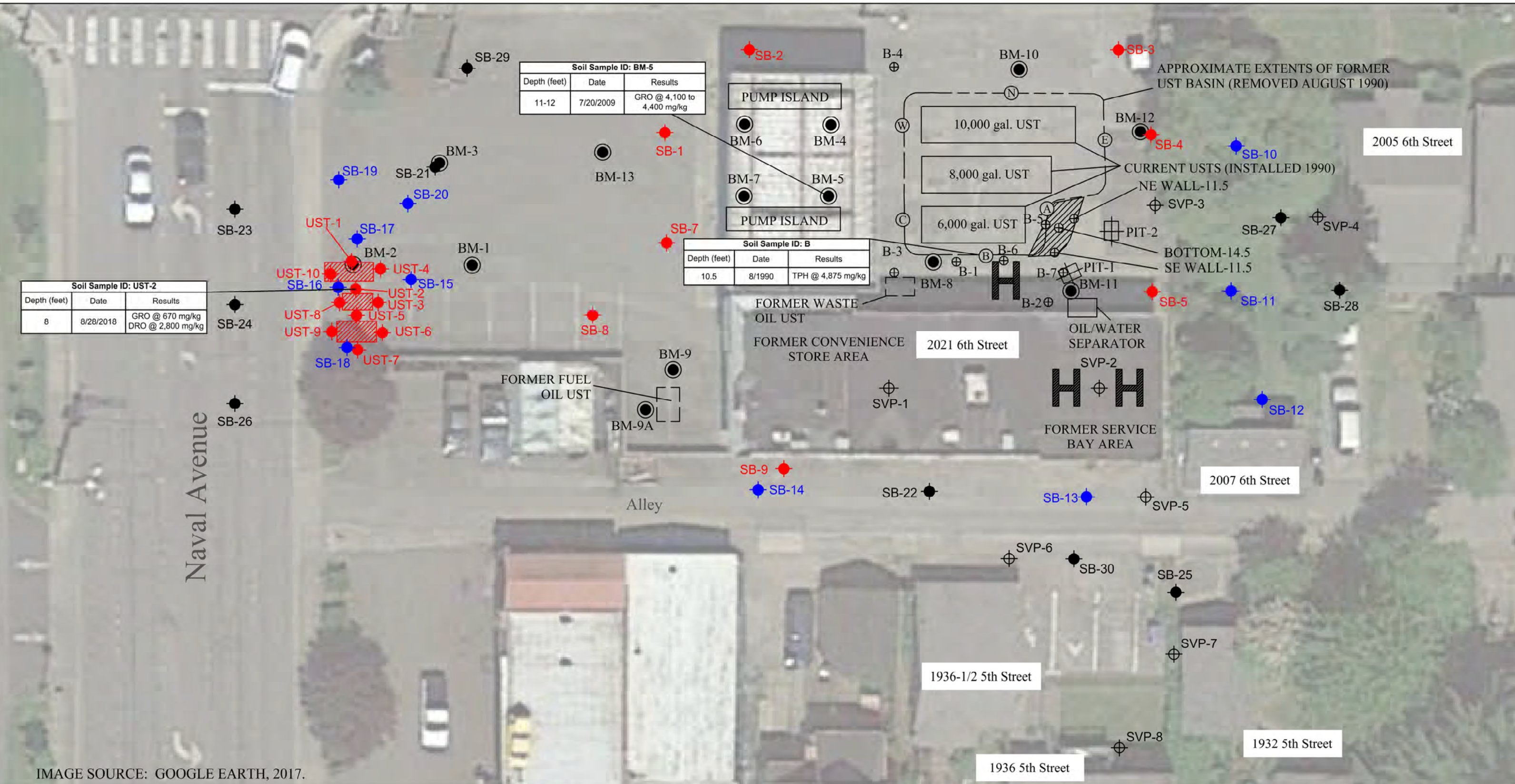


IMAGE SOURCE: GOOGLE EARTH, 2017.

leidos

SCALE

0 20 40 60ft

N

Newman's Chevron
2021 6th Street
Bremerton, Washington

FIGURE 10
Exceedances of Method B Soil
Cleanup Levels

DATE: 1/12/2023 DRAWING: 204177 RI Summary Report Figures.dwg

Tables

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS - PETROLEUM CONSTITUENTS
NEWMAN'S CHEVRON
2021 6th Street
Bremerton, Washington
Concentrations reported in milligrams per kilogram (mg/kg)

| Boring ID | Depth (feet) | Sample Date | GRO | DRO | HRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | Naphthalene | MTBE | EDB | EDC | Lead | | |
|-----------|--------------|-------------|--------------|------|-----|-------------|---------|--------------|---------------|-------------|--------|--------|---------|---------|---------|------|
| SB-1 | 6 | 08/23/18 | 0.4 | <3.2 | <11 | 0.002 | 0.004 | 0.0008 | 0.006 | <0.007 | -- | -- | -- | 5.35 | | |
| | 12 | 08/27/18 | <0.2 | <3.3 | <11 | <0.0005 | 0.001 | <0.0004 | <0.001 | <0.007 | -- | -- | -- | 2.40 | | |
| | 14 | 08/27/18 | 0.3 | <3.3 | <11 | <0.0004 | 0.001 | <0.0004 | <0.0009 | <0.007 | -- | -- | -- | <2.35 | | |
| | 16 | 08/27/18 | 0.3 | <3.2 | <11 | <0.0005 | 0.001 | <0.0004 | <0.0009 | <0.007 | -- | -- | -- | 1.35 | | |
| | 51 | 08/27/18 | <0.2 | <3.1 | <10 | <0.0005 | 0.0007 | <0.0004 | <0.0009 | <0.007 | -- | -- | -- | 1.93 | | |
| SB-2 | 6 | 08/24/18 | 1.4 | <3.3 | <11 | 0.0009 | 0.003 | 0.0004 | 0.009 | <0.007 | -- | -- | -- | 4.02 | | |
| | 8 | 08/28/18 | <0.2 | 13 | 49 | <0.0005 | 0.0009 | U | <0.0004 | <0.0009 | <0.007 | -- | -- | 1.48 | | |
| | 11 | 08/28/18 | 6.3 | <3.3 | <11 | <0.0004 | 0.001 | U | <0.0003 | 0.001 | <0.007 | -- | -- | 2.66 | | |
| | 15 | 08/28/18 | 0.3 | <3.3 | <11 | <0.0005 | 0.0006 | U | <0.0004 | <0.001 | <0.007 | -- | -- | 5.29 | | |
| SB-3 | 20 | 08/28/18 | 0.2 | <3.2 | <11 | <0.0005 | <0.0006 | | <0.0004 | <0.0009 | <0.007 | -- | -- | 4.14 | | |
| | 10 | 08/28/18 | <0.3 | <3.8 | <13 | <0.0005 | <0.0006 | | <0.0004 | <0.0009 | <0.009 | -- | -- | 5.42 | | |
| | 12 | 08/28/18 | <0.2 | <3.3 | <11 | <0.0004 | <0.0005 | | <0.0003 | <0.0008 | <0.007 | -- | -- | 2.50 | | |
| | 16 | 08/28/18 | <0.2 | <3.3 | <11 | <0.0004 | <0.0005 | | <0.0003 | <0.0009 | <0.007 | -- | -- | 2.06 | | |
| SB-4 | 24 | 08/28/18 | <0.2 | <3.2 | <11 | <0.0005 | <0.0006 | | <0.0004 | <0.0009 | <0.007 | -- | -- | 3.41 | | |
| | 6 | 08/23/18 | <0.2 | 3.2 | <11 | <0.0004 | <0.0005 | | <0.0003 | <0.0008 | <0.007 | -- | -- | 4.72 | | |
| | 12 | 08/29/18 | 550 | <3.7 | <12 | <0.0005 | 0.001 | 0.002 | J | <0.0009 | <0.007 | -- | -- | 2.37 | | |
| | 12 (D) | 08/29/18 | 410 | 6.7 | <12 | <0.0005 | 0.001 | 0.0005 | J | <0.001 | <0.008 | -- | -- | 2.67 | | |
| | 14 | 08/29/18 | <0.2 | <3.2 | <11 | <0.0005 | 0.0008 | | <0.0004 | <0.0009 | <0.007 | -- | -- | 1.40 | | |
| SB-5 | 25 | 08/29/18 | 0.8 | <3.1 | <10 | 0.0005 | 0.001 | | <0.0004 | <0.001 | <0.007 | -- | -- | 1.27 | | |
| | 6 | 08/23/18 | <0.1 | <3.2 | <11 | <0.0004 | <0.0005 | | <0.0004 | <0.0009 | <0.007 | -- | -- | 4.51 | | |
| | 12 | 08/28/18 | 0.5 | <3.9 | <13 | <0.0005 | <0.0006 | | <0.0004 | <0.0009 | <0.009 | -- | -- | 3.50 | | |
| | 14 | 08/28/18 | 420 | <3.7 | <12 | <0.029 | <0.035 | | <0.023 | <0.058 | 0.020 | <0.029 | <0.023 | <0.035 | 2.36 | |
| | 17.5 | 08/28/18 | 1,100 | 23 | <11 | <0.023 | 0.042 | | 0.67 | 9.8 | 0.34 | <0.023 | <0.018 | <0.027 | 1.70 | |
| | 24 | 08/28/18 | 0.7 | <3.3 | <11 | <0.0005 | 0.001 | U | <0.0004 | 0.004 | 0.012 | -- | -- | -- | 1.76 | |
| SB-6 | 30 | 08/29/18 | 0.3 | <3.2 | <11 | 0.0006 | 0.002 | | <0.0004 | 0.002 | <0.007 | -- | -- | 1.54 | | |
| | 2 | 08/24/18 | <0.2 | <3.2 | <11 | <0.0005 | <0.0005 | | <0.0004 | <0.0009 | <0.007 | -- | -- | 2.20 | | |
| SB-7 | 6 | 08/24/18 | <0.2 | <3.1 | <10 | <0.0004 | <0.0004 | | <0.0003 | <0.0007 | <0.007 | -- | -- | 2.20 | | |
| | 6 | 08/23/18 | 0.3 | <3.1 | 14 | <0.0005 | <0.0006 | | <0.0004 | <0.001 | <0.007 | -- | -- | 16.2 | | |
| | 10 | 08/27/18 | 2.5 | <3.8 | <13 | 0.46 | 0.15 | 0.16 | J | 0.38 | J | 0.034 | <0.0005 | <0.0004 | <0.0006 | 5.51 |
| | 14 | 08/27/18 | 3.0 | <3.4 | <11 | 0.18 | 0.38 | 0.056 | | 0.28 | | 0.015 | -- | -- | -- | 2.18 |
| | 22 | 08/27/18 | <0.2 | <3.2 | <11 | 0.001 | 0.002 | <0.0003 | | <0.0008 | <0.007 | -- | -- | -- | 2.62 | |
| SB-8 | 28 | 08/27/18 | <0.2 | <3.2 | <11 | <0.0005 | 0.001 | <0.0004 | | <0.001 | <0.007 | -- | -- | -- | 2.73 | |
| | 2 | 08/29/18 | 2.1 | <3.4 | 45 | <0.0005 | 0.0006 | <0.0004 | | <0.001 | 0.033 | -- | -- | -- | 22.8 | |
| | 12 | 08/29/18 | 0.4 | <3.3 | <11 | <0.0005 | 0.001 | <0.0004 | | <0.0009 | <0.007 | -- | -- | -- | <2.34 | UJ |
| | 14 | 08/29/18 | <0.2 | <3.1 | <10 | <0.0005 | <0.0006 | <0.0004 | | <0.001 | 0.011 | -- | -- | -- | <12.5 | UJ |
| SB-9 | 25 | 08/29/18 | <0.2 | <3.3 | <11 | <0.0005 | <0.0006 | <0.0004 | | <0.001 | <0.007 | -- | -- | -- | <0.542 | UJ |
| | 7 | 08/31/18 | 0.8 | <3.5 | 13 | <0.0005 | <0.0006 | <0.0004 | | <0.001 | 0.040 | -- | -- | -- | 27.3 | |
| | 11.5 | 08/31/18 | <0.3 | <3.5 | 14 | <0.0005 | <0.0006 | <0.0004 | | <0.001 | 0.009 | -- | -- | -- | 25.4 | |
| SB-10 | 8 | 07/24/19 | <0.3 | <5.2 | 21 | <0.0005 | 0.001 | U | <0.0004 | <0.001 | <0.009 | -- | -- | -- | 1.95 | |
| | 14 | 07/24/19 | <0.3 | <4.7 | <12 | <0.0005 | 0.001 | U | <0.0004 | <0.0009 | <0.008 | -- | -- | -- | 4.05 | |
| | 20 | 07/24/19 | <0.3 | <4.3 | <11 | <0.0004 | 0.001 | U | <0.0004 | <0.0009 | <0.007 | -- | -- | -- | 1.83 | |
| | 27.5 | 07/24/19 | <0.3 | <4.4 | <11 | <0.0005 | 0.002 | U | <0.0004 | <0.001 | <0.007 | -- | -- | -- | <0.614 | |

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS - PETROLEUM CONSTITUENTS
NEWMAN'S CHEVRON
2021 6th Street
Bremerton, Washington
Concentrations reported in milligrams per kilogram (mg/kg)

| Boring ID | Depth (feet) | Sample Date | GRO | DRO | HRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | Naphthalene | MTBE | EDB | EDC | Lead |
|-----------|--------------|-------------|--------------|--------------|--------|---------|----------|--------------|---------------|-------------|--------|--------|--------|--------|
| SB-11 | 6 | 07/23/19 | <0.3 | <4.9 | <12 | <0.0006 | <0.0007 | <0.0005 | <0.001 | <0.008 | -- | -- | -- | 8.75 |
| | 10 | 07/24/19 | 1.0 | <5.1 | <13 | <0.0005 | <0.0006 | <0.0004 | <0.001 | <0.009 | -- | -- | -- | 7.28 |
| | 14 | 07/24/19 | 1.5 | <5.1 | <13 | <0.0005 | <0.0006 | 0.001 | 0.011 | <0.008 | -- | -- | -- | 11.2 |
| | 20 | 07/24/19 | 3,200 | 55 | J 24 | <0.047 | UJ 0.58 | J 12 | J 100 | J 11 | -- | -- | -- | 2.36 |
| | 27.5 | 07/24/19 | 0.6 | <4.3 | <11 | 0.0005 | 0.004 | U 0.001 | 0.009 | <0.007 | -- | -- | -- | 2.06 |
| SB-12 | 6 | 07/23/19 | <0.3 | <5.1 | <13 | <0.0005 | <0.0006 | <0.0004 | <0.001 | <0.009 | -- | -- | -- | 16.9 |
| | 14.5 | 07/24/19 | <0.3 | <5.1 | <13 | <0.0005 | 0.002 | U <0.0004 | <0.001 | <0.008 | -- | -- | -- | 18.8 |
| | 20 | 07/24/19 | <0.2 | <4.3 | <11 | <0.0004 | 0.001 | U <0.0003 | <0.0008 | <0.007 | -- | -- | -- | 2.42 |
| | 27.5 | 07/24/19 | <0.2 | <4.3 | <11 | <0.0005 | 0.001 | U <0.0004 | <0.0009 | 3.2 | -- | -- | -- | 2.58 |
| SB-13 | 12 | 07/24/19 | 460 | <4.5 | <11 | <0.022 | <0.027 | <0.018 | <0.044 | <0.007 | -- | -- | -- | <0.544 |
| | 16 | 07/24/19 | <0.4 | <4.3 | <11 | <0.0005 | <0.0005 | <0.0004 | <0.0009 | <0.007 | -- | -- | -- | 1.79 |
| | 27.5 | 07/24/19 | <0.2 | <4.1 | <10 | <0.0004 | <0.0005 | <0.0003 | <0.0009 | <0.007 | -- | -- | -- | 1.78 |
| SB-14 | 12 | 07/24/19 | <0.2 | <4.3 | <11 | <0.0004 | <0.0005 | <0.0003 | <0.0008 | 0.051 | -- | -- | -- | 2.03 |
| | 20 | 07/24/19 | 29 | 130 | J 120 | <0.0004 | 0.001 | U 0.0005 | 0.003 | <0.007 | -- | -- | -- | 6.65 |
| | 27.5 | 07/24/19 | <0.2 | <4.2 | <10 | <0.0005 | 0.002 | U <0.0004 | <0.0009 | <0.007 | -- | -- | -- | 1.74 |
| SB-15 | 8 | 07/23/19 | 3.1 | 290 | <100 | <0.0004 | UJ 0.001 | J <0.0004 | UJ <0.0009 | UJ <0.007 | -- | -- | -- | 1.25 |
| | 13 | 07/23/19 | 3.2 | 1,100 | <210 | <0.0004 | 0.0007 | <0.0003 | <0.0008 | <0.007 | -- | -- | -- | 3.36 |
| | 22.5 | 07/23/19 | 1.2 | 18 | <10 | <0.0005 | <0.0006 | <0.0004 | <0.0009 | 0.021 | -- | -- | -- | 1.77 |
| SB-16 | 9 | 07/23/19 | 1,500 | 46 | <11 | <0.023 | <0.028 | <0.019 | <0.047 | <0.007 | -- | -- | -- | 1.80 |
| | 13 | 07/23/19 | 78 | 760 | <110 | 0.0005 | 0.001 | <0.0003 | 0.002 | <0.007 | -- | -- | -- | 11.7 |
| | 22.5 | 07/23/19 | <0.2 | <4.2 | <10 | <0.0004 | <0.0005 | <0.0003 | <0.0008 | <0.007 | -- | -- | -- | 1.56 |
| SB-17 | 8 | 07/23/19 | <0.2 | <4.4 | <11 | <0.0004 | <0.0005 | <0.0003 | <0.0008 | <0.007 | -- | -- | -- | 2.18 |
| | 14.5 | 07/23/19 | 210 | 610 | 25 | <0.024 | <0.028 | <0.019 | <0.047 | 0.003 | <0.024 | <0.019 | <0.028 | 6.76 |
| | 19.5 | 07/23/19 | 1,400 | 3,500 | J <110 | <0.023 | <0.027 | <0.018 | <0.046 | <0.007 | -- | -- | -- | 5.06 |
| | 19.5 (D) | 07/23/19 | 1,100 | 730 | J 140 | <0.024 | <0.029 | <0.019 | <0.048 | <0.007 | -- | -- | -- | 4.46 |
| | 24 | 07/23/19 | 140 | 2,800 | 110 | <0.025 | <0.030 | <0.020 | <0.050 | <0.07 | -- | -- | -- | 2.19 |
| SB-18 | 29.5 | 07/23/19 | 0.2 | <4.1 | <10 | <0.0004 | <0.0005 | <0.0003 | <0.0009 | <0.007 | -- | -- | -- | 1.92 |
| | 8 | 07/23/19 | 0.3 | 85 | <11 | <0.0004 | 0.0008 | <0.0003 | <0.0007 | <0.007 | -- | -- | -- | 1.91 |
| | 18 | 07/23/19 | <0.2 | 8.1 | 41 | <0.0004 | <0.0005 | <0.0003 | <0.0008 | <0.007 | -- | -- | -- | 4.32 |
| SB-19 | 22.5 | 07/23/19 | <0.2 | <4.4 | <11 | <0.0004 | <0.0005 | <0.0003 | <0.0008 | <0.007 | -- | -- | -- | 2.09 |
| | 8 | 07/25/19 | <0.2 | <4.2 | <11 | <0.0005 | <0.0006 | <0.0004 | <0.0009 | <0.007 | -- | -- | -- | 1.72 |
| | 8 (D) | 07/25/19 | <0.2 | 11 | 43 | <0.0004 | 0.0009 | <0.0003 | <0.0008 | <0.007 | -- | -- | -- | 3.89 |
| | 14 | 07/25/19 | <0.2 | <4.3 | <11 | <0.0004 | 0.0005 | <0.0003 | <0.0008 | <0.007 | -- | -- | -- | 2.37 |
| SB-20 | 22.5 | 07/25/19 | <0.4 | 120 | 20 | <0.0007 | <0.0008 | <0.0005 | <0.001 | <0.007 | -- | -- | -- | <0.539 |
| | 27.5 | 07/25/19 | <2.4 | 340 | 35 | <0.0004 | 0.001 | <0.0004 | <0.0009 | <0.007 | -- | -- | -- | <0.542 |
| | 8 | 07/25/19 | 46 | <4.3 | <11 | 0.001 | 0.007 | 0.005 | 0.037 | <0.007 | -- | -- | -- | 10.2 |
| | 14 | 07/25/19 | 170 | 23 | 53 | <0.034 | <0.041 | <0.027 | <0.068 | <0.007 | -- | -- | -- | 8.23 |
| SB-21 | 22.5 | 07/25/19 | <0.2 | <4.1 | <10 | <0.0005 | 0.0007 | <0.0004 | <0.0009 | <0.007 | -- | -- | -- | 3.98 |
| | 27.5 | 07/25/19 | <2.4 | 210 | 32 | <0.0004 | 0.0007 | <0.0003 | <0.0008 | <0.007 | -- | -- | -- | 1.56 |
| | 8 | 02/24/20 | 0.8 | <4.4 | 12 | <0.0004 | <0.0005 | <0.0003 | <0.001 | <0.007 | -- | -- | -- | 2.03 |
| | 16 | 02/25/20 | 150 | 29 | <11 | <0.025 | <0.030 | <0.020 | <0.069 | <0.001 | <0.025 | <0.025 | <0.020 | 2.00 |
| SB-21 | 18 | 02/25/20 | 3.0 | <4.3 | <11 | <0.0006 | 0.0008 | <0.0005 | <0.002 | <0.007 | -- | -- | -- | <2.37 |
| | 20.5 | 02/25/20 | 5.3 | 82 | 160 | 0.0004 | <0.0004 | <0.0003 | <0.001 | <0.036 | -- | -- | -- | 6.53 |

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS - PETROLEUM CONSTITUENTS
NEWMAN'S CHEVRON
2021 6th Street
Bremerton, Washington
Concentrations reported in milligrams per kilogram (mg/kg)

| Boring ID | Depth (feet) | Sample Date | GRO | DRO | HRO | Benzene | Toluene | Ethylbenzene | Total Xylenes | Naphthalene | MTBE | EDB | EDC | Lead |
|-----------|--------------|-------------|------------|--------------|--------------|---------|---------|--------------|---------------|-------------|---------|---------|---------|---------|
| SB-22 | 8 | 02/24/20 | <0.3 | <5.4 | <13 | <0.0005 | <0.0006 | <0.0004 | <0.001 | <0.009 | -- | -- | -- | 6.02 J |
| | 16 | 02/26/20 | <2.3 | 180 | 280 | <0.0004 | <0.0005 | <0.0003 | <0.001 | 0.027 | -- | -- | -- | 4.11 J |
| SB-23 | 8 | 02/25/20 | <0.2 | <4.5 | <11 | <0.0004 | <0.0005 | <0.0003 | <0.001 | <0.007 | -- | -- | -- | 2.59 J |
| | 16 | 02/25/20 | 6.7 | 110 | 1,300 | 0.0005 | 0.002 | 0.0007 | 0.004 | <0.007 | -- | -- | -- | 2.35 J |
| | 19.5 | 02/25/20 | 0.3 | <4.4 | <11 | <0.0005 | <0.0005 | <0.0004 | <0.001 | <0.007 | -- | -- | -- | 1.96 J |
| | 23 | 02/25/20 | 0.4 | 4.6 | 54 | <0.0004 | <0.0005 | <0.0003 | <0.001 | <0.007 | -- | -- | -- | 1.98 J |
| SB-24 | 8 | 02/25/20 | <0.2 | 2,100 | 75 | <0.0004 | <0.0005 | <0.0003 | <0.001 | <0.007 | -- | -- | -- | 2.81 J |
| | 14 | 02/25/20 | <0.2 | <4.7 | <12 | <0.0004 | <0.0005 | <0.0003 | <0.001 | <0.008 | -- | -- | -- | 1.93 J |
| | 17.5 | 02/25/20 | 930 | 6.0 | <11 | <0.023 | <0.028 | <0.018 | <0.065 | <0.015 | <0.023 | <0.018 | <0.028 | 1.81 J |
| | 22 | 02/25/20 | <0.3 | 430 | 96 | <0.0004 | <0.0005 | <0.0003 | <0.001 | <0.007 | <0.0004 | <0.0003 | <0.0005 | 3.00 J |
| SB-25 | 29 | 02/25/20 | <0.3 | <4.2 | <10 | <0.0006 | <0.0007 | <0.0004 | <0.002 | <0.007 | -- | -- | -- | 1.79 J |
| | 8.5 | 02/26/20 | <0.3 | 10 | 43 | <0.0005 | <0.0006 | <0.0004 | <0.001 | <0.009 | -- | -- | -- | 18.5 J |
| | 12 | 02/26/20 | 0.3 | <4.5 | <11 | <0.0004 | <0.0004 | <0.0003 | <0.001 | <0.007 | -- | -- | -- | 0.836 J |
| SB-26 | 19 | 02/26/20 | <0.2 | <4.3 | <11 | <0.0004 | <0.0005 | <0.0003 | <0.001 | <0.007 | -- | -- | -- | 2.34 J |
| | 8 | 02/26/20 | <0.3 | <4.6 | <11 | <0.0004 | <0.0005 | <0.0003 | <0.001 | <0.008 | -- | -- | -- | 1.23 J |
| | 15.5 | 02/26/20 | <0.3 | <4.3 | <11 | <0.0004 | <0.0005 | <0.0003 | <0.001 | <0.007 | -- | -- | -- | 1.74 J |
| SB-27 | 20 | 02/26/20 | 34 | 340 | 760 | 0.0005 | 0.003 | 0.001 | 0.010 | 0.082 | -- | -- | -- | 14.2 J |
| | 8 | 02/26/20 | <0.3 | <5.2 | <13 | <0.0005 | <0.0006 | <0.0004 | <0.001 | <0.009 | -- | -- | -- | 6.36 J |
| | 15.5 | 02/26/20 | 96 | 590 | 2,000 | <0.034 | <0.040 | <0.027 | <0.094 | <0.031 | <0.034 | <0.027 | <0.040 | 19.7 J |
| | 22 | 02/26/20 | 4.6 | 570 | 1,000 | 0.0009 | 0.003 | 0.0009 | 0.007 | 0.048 | -- | -- | -- | 16.1 J |
| SB-28 | 26 | 02/26/20 | 210 | 210 | 440 | <0.033 | <0.040 | <0.027 | <0.094 | 0.077 | -- | -- | -- | 27.1 J |
| | 29 | 02/26/20 | <0.3 | <4.2 | <10 | <0.0004 | <0.0005 | <0.0003 | <0.001 | <0.007 | -- | -- | -- | 1.64 J |
| | 8 | 02/27/20 | <0.3 | <5.4 | <13 | <0.0005 | <0.0006 | <0.0004 | <0.001 | <0.009 | -- | -- | -- | 5.63 J |
| | 8 (D) | 02/27/20 | <0.4 | <5.7 | <14 | <0.0005 | <0.0006 | <0.0004 | <0.001 | <0.01 | -- | -- | -- | 5.73 J |
| SB-29 | 14 | 02/27/20 | 4.3 | 13 | <11 | <0.0004 | 0.0007 | <0.0003 | <0.001 | 0.18 | -- | -- | -- | 2.37 J |
| | 19.5 | 02/27/20 | <0.2 | <4.4 | <11 | <0.0004 | <0.0005 | <0.0003 | <0.001 | <0.007 | -- | -- | -- | 1.55 J |
| | 24.5 | 02/27/20 | <0.2 | <4.2 | <10 | <0.0004 | <0.0005 | <0.0003 | <0.001 | <0.007 | -- | -- | -- | <3.08 |
| SB-30 | 8 | 02/26/20 | <0.3 | <4.8 | <12 | <0.0004 | <0.0005 | <0.0003 | <0.001 | <0.008 | -- | -- | -- | 3.83 |
| | 16 | 02/27/20 | 37 | 350 | 700 | <0.0004 | <0.0004 | <0.0003 | <0.001 | 0.009 | -- | -- | -- | 2.59 J |
| | 18 | 02/27/20 | <0.3 | <4.5 | <11 | <0.0004 | <0.0005 | <0.0003 | <0.001 | 0.014 | -- | -- | -- | 1.68 J |
| | 18 (D) | 02/27/20 | <0.2 | <4.4 | <11 | <0.0004 | <0.0005 | <0.0003 | <0.001 | <0.007 | -- | -- | -- | 1.92 J |
| UST-1 | 22 | 02/27/20 | <0.3 | <4.2 | <11 | <0.0004 | <0.0005 | <0.0003 | <0.001 | <0.007 | -- | -- | -- | 2.03 J |
| | 8 | 02/28/20 | <0.3 | <5.1 | <13 | <0.0005 | <0.0006 | <0.0004 | <0.001 | 0.35 | -- | -- | -- | 2.35 J |
| | 11.5 | 02/28/30 | <0.2 | <4.5 | <11 | <0.0004 | <0.0005 | <0.0003 | <0.001 | <0.007 | -- | -- | -- | 2.01 J |
| UST-2 | 15.5 | 02/28/20 | <0.2 | 4.3 | 25 | <0.0005 | <0.0006 | <0.0004 | <0.001 | <0.007 | -- | -- | -- | 3.88 J |
| | 8 | 08/28/18 | <0.2 | 5.7 | 59 | <0.0004 | <0.0005 | <0.0003 | <0.0009 | <0.007 | -- | -- | -- | 4.19 |
| UST-3 | 8 | 08/28/18 | 670 | 2,800 | <110 | <0.026 | <0.031 | <0.021 | <0.051 | <0.007 | -- | -- | -- | 2.51 |
| | 8 (D) | 08/28/18 | 530 | 2,500 | <220 | <0.026 | <0.031 | <0.020 | <0.051 | 0.1 | -- | -- | -- | 1.98 |
| UST-4 | 8 | 08/29/18 | 0.5 | 480 | <21 | <0.0004 | <0.0005 | <0.0004 | <0.0009 | <0.007 | -- | -- | -- | 4.47 |
| UST-5 | 8 | 08/29/18 | 130 | 1,700 | 140 | <0.025 | <0.030 | <0.020 | <0.050 | <0.007 | -- | -- | -- | 11.9 |
| UST-6 | 8 | 08/29/18 | 0.8 | 230 | 73 | <0.0005 | 0.001 | <0.0004 | <0.001 | <0.007 | -- | -- | -- | 8.24 |
| UST-7 | 8 | 08/29/18 | 0.2 | 160 | J 47 J | 0.0008 | 0.002 | <0.0004 | 0.001 | <0.007 | -- | -- | -- | 2.64 |
| UST-8 | 8 | 08/29/18 | <0.2 | 4.1 | 39 | <0.0005 | <0.0005 | <0.0004 | <0.0009 | <0.007 | -- | -- | -- | 9.51 |
| UST-9 | 8 | 08/29/18 | <0.3 | 60 | 14 | <0.0005 | 0.002 | <0.0004 | <0.001 | <0.007 | -- | -- | -- | 3.21 |

TABLE 1
SUMMARY OF SOIL ANALYTICAL RESULTS - PETROLEUM CONSTITUENTS
NEWMAN'S CHEVRON
2021 6th Street
Bremerton, Washington
Concentrations reported in milligrams per kilogram (mg/kg)

| Boring ID | Depth (feet) | Sample Date | GRO | | DRO | | HRO | | Benzene | Toluene | Ethylbenzene | Total Xylenes | Naphthalene | MTBE | EDB | EDC | Lead | | | | | | | |
|--|--------------|-------------|-----------|---|--------------------------------|--|-------------|--|--------------|---------|--------------|---------------|---------------|------|--------------|-----|------------|--|--------------|--|------------------------|--|------------------------|--|
| SVP-1 | 8 | 08/30/18 | 0.3 | | 11 | | 35 | | 0.0008 | 0.0006 | <0.0004 | <0.0009 | <0.007 | -- | -- | -- | 41.3 | | | | | | | |
| | 10 | 08/30/18 | <0.3 | | <3.8 | | <13 | | 0.0006 | 0.001 | <0.0004 | <0.001 | 0.011 | -- | -- | -- | 9.82 | | | | | | | |
| SVP-2 | 8 | 08/30/18 | 0.4 | | <3.7 | | <12 | | <0.0005 | 0.0007 | <0.0004 | <0.001 | 0.017 | -- | -- | -- | 11.8 | | | | | | | |
| | 10 | 08/30/18 | <0.3 | | <0.8 | | <13 | | <0.0005 | <0.0006 | <0.0004 | <0.001 | <0.008 | -- | -- | -- | 7.53 | | | | | | | |
| SVP-3 | 8 | 08/30/18 | <0.3 | | 4.9 | | 13 | | <0.0005 | <0.0006 | <0.0004 | <0.001 | 0.64 | -- | -- | -- | 10.9 | | | | | | | |
| | 10 | 08/30/18 | <0.3 | | <4.0 | | <13 | | <0.0005 | <0.0006 | <0.0004 | <0.001 | <0.009 | -- | -- | -- | 7.11 | | | | | | | |
| SVP-4 | 5 | 02/27/20 | <0.4 | | <5.3 | | <13 | | <0.0005 | <0.0006 | <0.0004 | <0.001 | <0.009 | -- | -- | -- | 7.22 J | | | | | | | |
| SVP-5 | 5 | 02/27/20 | <0.4 | | <5.3 | | <13 | | <0.0007 | <0.0008 | <0.0005 | <0.002 | 0.016 | -- | -- | -- | 5.18 J | | | | | | | |
| SVP-6 | 5 | 02/28/20 | <0.3 | | <4.9 | | <12 | | 0.0006 | 0.0007 | <0.0004 | <0.001 | 0.033 | -- | -- | -- | 3.56 J | | | | | | | |
| SVP-7 | 6.5 | 11/01/21 | 0.52 | | <5.2 | | <13 | | <0.00058 | 0.00079 | <0.00046 | <0.0016 | 0.017 | -- | -- | -- | 4.6 | | | | | | | |
| SVP-8 | 5 | 08/26/22 | 1.0 | J | <5.0 | | <13 | | <0.00051 | 0.001 | <0.00041 | <0.0014 | <0.0083 | -- | -- | -- | 4.1 | | | | | | | |
| MTCA Method A Cleanup Level: | | | 30 | | 2,000 | | 0.03 | | 7 | | 6 | | 9 | | 5 | | 0.1 | | 0.005 | | Not Established | | 250 | |
| MTCA Method B Cleanup Level for Direct-Contact: | | | | | 2,477/3,353¹ | | 18 | | 6,400 | | 8,000 | | 16,000 | | 1,600 | | 560 | | 0.5 | | 11 | | Not Established | |

NOTES:

1 - See Section 5.1.1 of RI report text for additional details regarding development and applicability of site-specific cleanup levels for total petroleum hydrocarbons (TPH)

Bold values indicate results exceeding MTCA Method A Cleanup Levels

Bold and highlighted values indicate results exceeding MTCA Method B Cleanup Levels for direct-contact in soil samples collected above the standard point of compliance (15 feet bgs)

D = Duplicate sample

GRO = Gasoline-range organics

DRO = Diesel-range organics

HRO = Heavy oil-range organics

EDB = Ethylene dibromide

EDC = Ethylene dichloride

MTBE = Methyl tertiary-butyl ether

MTCA = Model Toxics Control Act

USEPA = United States Environmental Protection Agency

< = Analyte not detected at or above method detection limit; value represents limit.

-- = not analyzed

THIRD-PARTY DATA VALIDATION QUALIFIERS:

Third-party data validation performed, and data validation qualifiers assigned, by Ecochem, Inc.

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

ANALYTICAL METHODS:

TPH-GRO analyzed by NWTPH-Gx

TPH-DRO and TPH-HRO analyzed by NWTPH-Dx

BTEX, MTBE, EDB, and EDC analyzed by USEPA 8260C

Naphthalene analyzed by USEPA 8270D

Lead analyzed by USEPA 6010D

TABLE 2
SUMMARY OF SOIL ANALYTICAL RESULTS - CPAHs, HALOGENATED VOCs, and PCBs
NEWMAN'S CHEVRON
2021 6th Street
Bremerton, Washington
Concentrations reported in milligrams per kilogram (mg/kg)

| Boring ID | Depth (feet) | Sample Date | Carcinogenic PAHs | | | | | | | | Halogenated VOCs | | | | PCBs | | | | | | | |
|-----------|--------------|-------------|--------------------|----------------|----------------------|----------------------|----------|-----------------------|-------------------------|-------------|--------------------|-----|-----------|-----|----------|----------|----------|----------|----------|----------|----------|------------|
| | | | Benzo(a)anthracene | Benzo(a)pyrene | Benzo(b)fluoranthene | Benzo(k)fluoranthene | Chrysene | Dibenz(a,h)anthracene | Indeno (1,2,3-cd)pyrene | Total cPAHs | Methylene Chloride | PCE | 1,1,1-TCA | TCE | PCB-1016 | PCB-1221 | PCB-1232 | PCB-1242 | PCB-1248 | PCB-1254 | PCB-1260 | Total PCBs |
| SB-1 | 6 | 08/23/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12 | 08/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 14 | 08/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 16 | 08/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 51 | 08/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-2 | 6 | 08/24/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 8 | 08/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 11 | 08/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 15 | 08/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-3 | 10 | 08/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12 | 08/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 16 | 08/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 24 | 08/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-4 | 6 | 08/23/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12 (D) | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 14 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 25 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-5 | 6 | 08/23/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12 | 08/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 14 | 08/28/18 | <0.0008 | <0.0008 | <0.0008 | <0.0008 | 0.0005 | <0.0008 | <0.0008 | 0.000045 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 17.5 | 08/28/18 | 0.0008 | <0.0007 | <0.0007 | <0.0007 | 0.002 | <0.0007 | <0.0007 | 0.0001 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 24 | 08/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-6 | 2 | 08/24/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 6 | 08/24/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-7 | 6 | 08/23/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 10 | 08/27/18 | <0.0009 | <0.0009 | <0.0009 | <0.0009 | <0.0004 | <0.0009 | <0.0009 | 0.000047 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 14 | 08/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 22 | 08/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-8 | 28 | 08/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 2 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-9 | 14 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 25 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-10 | 7 | 08/31/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 11.5 | 08/31/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-10 | 8 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 14 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 20 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 27.5 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

TABLE 2
SUMMARY OF SOIL ANALYTICAL RESULTS - CPAHs, HALOGENATED VOCs, and PCBs
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Bremerton, Washington
Concentrations reported in milligrams per kilogram (mg/kg)

| Boring ID | Depth (feet) | Sample Date | Carcinogenic PAHs | | | | | | | | Halogenated VOCs | | | | PCBs | | | | | | | |
|-----------|--------------|-------------|--------------------|----------------|----------------------|----------------------|----------|-----------------------|------------------------|-------------|--------------------|-----|-----------|-----|----------|----------|----------|----------|----------|----------|----------|------------|
| | | | Benzo(a)anthracene | Benzo(a)pyrene | Benzo(b)fluoranthene | Benzo(k)fluoranthene | Chrysene | Dibenz(a,h)anthracene | Indeno(1,2,3-cd)pyrene | Total cPAHs | Methylene Chloride | PCE | 1,1,1-TCA | TCE | PCB-1016 | PCB-1221 | PCB-1232 | PCB-1242 | PCB-1248 | PCB-1254 | PCB-1260 | Total PCBs |
| SB-11 | 6 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 10 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 14 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 20 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 27.5 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-12 | 6 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 14.5 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 20 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 27.5 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-13 | 12 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 16 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 27.5 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-14 | 12 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 20 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 27.5 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-15 | 8 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 13 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 22.5 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-16 | 9 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 13 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 22.5 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-17 | 8 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 14.5 | 07/23/19 | <0.0007 | <0.0007 | <0.0007 | <0.0007 | <0.0004 | <0.0007 | <0.0007 | 0.000037 | -- | -- | -- | -- | <0.0038 | <0.0049 | <0.0085 | <0.0035 | <0.0035 | <0.0035 | <0.0052 | <0.0085 |
| | 19.5 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 19.5 (D) | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 24 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-18 | 8 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 18 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 22.5 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 27.5 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-19 | 8 | 07/25/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 8 (D) | 07/25/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 14 | 07/25/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 22.5 | 07/25/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-20 | 8 | 07/25/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 14 | 07/25/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 22.5 | 07/25/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 27.5 | 07/25/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

TABLE 2
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| Boring ID | Depth (feet) | Sample Date | Carcinogenic PAHs | | | | | | | | Halogenated VOCs | | | | PCBs | | | | | | | |
|-----------|--------------|-------------|--------------------|----------------|----------------------|----------------------|----------|-----------------------|-------------------------|-------------|--------------------|-----|-----------|-----|----------|----------|----------|----------|----------|----------|----------|------------|
| | | | Benzo(a)anthracene | Benzo(a)pyrene | Benzo(b)fluoranthene | Benzo(k)fluoranthene | Chrysene | Dibenz(a,h)anthracene | Indeno (1,2,3-cd)pyrene | Total cPAHs | Methylene Chloride | PCE | 1,1,1-TCA | TCE | PCB-1016 | PCB-1221 | PCB-1232 | PCB-1242 | PCB-1248 | PCB-1254 | PCB-1260 | Total PCBs |
| SB-21 | 8 | 02/24/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 16 | 02/25/20 | <0.0007 | <0.0007 | <0.0007 | <0.0007 | 0.0004 | <0.0007 | <0.0007 | 0.000004 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 18 | 02/25/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 20.5 | 02/25/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-22 | 8 | 02/24/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 16 | 02/26/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-23 | 8 | 02/25/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 16 | 02/25/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 19.5 | 02/25/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-24 | 23 | 02/25/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 8 | 02/25/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 14 | 02/25/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 17.5 | 02/25/20 | <0.007 | <0.007 | <0.007 | <0.007 | 0.019 | <0.007 | <0.007 | 0.00019 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-25 | 22 | 02/25/20 | <0.004 | <0.004 | <0.004 | <0.004 | 0.005 | <0.004 | <0.004 | 0.00005 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 29 | 02/25/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 8.5 | 02/26/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12 | 02/26/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-26 | 19 | 02/26/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 8 | 02/26/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 15.5 | 02/26/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-27 | 20 | 02/26/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 8 | 02/26/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 15.5 | 02/26/20 | <0.016 | 0.024 | <0.016 | <0.016 | 0.047 | <0.016 | <0.016 | 0.02447 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 22 | 02/26/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-28 | 26 | 02/26/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 29 | 02/26/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 8 | 02/27/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 14 | 02/27/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-29 | 19.5 | 02/27/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 24.5 | 02/27/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 8 | 02/26/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-30 | 16 | 02/27/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 18 | 02/27/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 22 | 02/27/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 8 | 02/28/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| UST-1 | 11.5 | 02/28/30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 15.5 | 02/28/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| UST-2 | 8 | 08/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| UST-3 | 8 | 08/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 8 (D) | 08/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| UST-4 | 8 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| UST-5 | 8 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| UST-6 | 8 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| UST-7 | 8 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| UST-8 | 8 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

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|-------------------------------------|--------------|-------------|--|----------------|----------------------|----------------------|----------|-----------------------|------------------------|-------------|--------------------|-------------|-------------|----------|-------------|-----------------------|----------|----------|----------|----------|----------|------------|----------|
| | | | Benzo(a)anthracene | Benzo(a)pyrene | Benzo(b)fluoranthene | Benzo(k)fluoranthene | Chrysene | Dibenz(a,h)anthracene | Indeno(1,2,3-cd)pyrene | Total cPAHs | Methylene Chloride | PCE | 1,1,1-TCA | TCE | PCB-1016 | PCB-1221 | PCB-1232 | PCB-1242 | PCB-1248 | PCB-1254 | PCB-1260 | Total PCBs | |
| SVP-1 | 8 | 08/30/18 | -- | -- | -- | -- | -- | -- | -- | -- | <0.002 | 0.0005 | <0.0006 | <0.0005 | <0.020 | <0.025 | <0.043 | <0.018 | <0.018 | <0.018 | <0.027 | <0.043 | |
| | 10 | 08/30/18 | -- | -- | -- | -- | -- | -- | -- | -- | <0.002 | 0.0006 | <0.0006 | <0.0005 | <0.0045 | <0.0057 | <0.010 | <0.0041 | <0.0041 | <0.0041 | <0.0061 | <0.010 | |
| SVP-2 | 8 | 08/30/18 | -- | -- | -- | -- | -- | -- | -- | -- | <0.002 | <0.0005 | <0.0006 | <0.0005 | <0.0044 | <0.0057 | <0.0099 | <0.0041 | <0.0041 | <0.0041 | <0.0061 | <0.0099 | |
| | 10 | 08/30/18 | -- | -- | -- | -- | -- | -- | -- | -- | <0.002 | <0.0005 | <0.0006 | <0.0005 | <0.0045 | <0.0058 | <0.010 | <0.0041 | <0.0041 | <0.0041 | <0.0061 | <0.010 | |
| SVP-3 | 8 | 08/30/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| | 10 | 08/30/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| SVP-4 | 5 | 02/27/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| SVP-5 | 5 | 02/27/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| SVP-6 | 5 | 02/28/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| SVP-7 | 6.5 | 11/01/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| SVP-8 | 5 | 08/26/22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MTCA Method A Cleanup Level: | | | See Total Carcinogenic PAHs (Total cPAHs) | | | | | | | | 0.1 | 0.02 | 0.05 | 2 | 0.03 | See Total PCBs | | | | | | | 1 |

NOTES:

D = Duplicate sample
 MTCA = Model Toxics Control Act
 PAHs = Polycyclic aromatic hydrocarbons
 PCBs = polychlorinated biphenyls
 PCE = Tetrachloroethylene
 TCA = Trichloroethane
 TCE = Trichloroethylene
 VOCs = Volatile organic compounds
 USEPA = United States Environmental Protection Agency
 < = Analyte not detected at or above method detection limit; value represents limit.
 -- = not analyzed
 Total cPAHs is the total toxicity equivalent of benzo(a)pyrene.

ANALYTICAL METHODS:

PAHs analyzed by USEPA 8270D SIM
 VOCs analyzed by USEPA 8260C
 PCBs analyzed by USEPA 8082A

TABLE 3
SUMMARY OF SOIL ANALYTICAL RESULTS - EPH and VPH
NEWMAN'S CHEVRON
2021 6th Street
Bremerton, Washington
Concentrations reported in milligrams per kilogram (mg/kg)

| Boring ID | Depth (feet) | Sample Date | EPH | | | | | | | | VPH | | | | | | | | | | |
|-----------|--------------|-------------|--------------------|-------------------|--------------------|-------------------|--------------------|-------------------|--------------------|-------------------|-----------------|-----------------|------------------|-----------------|--------------|--------------|---------|---------|----------|-------------|----|
| | | | >C10-C12 Aliphatic | >C10-C12 Aromatic | >C12-C16 Aliphatic | >C12-C16 Aromatic | >C16-C21 Aliphatic | >C16-C21 Aromatic | >C21-C34 Aliphatic | >C21-C34 Aromatic | C5-C6 Aliphatic | C6-C8 Aliphatic | C8-C10 Aliphatic | C8-C10 Aromatic | Benzene | Ethylbenzene | MTBE | Toluene | o-Xylene | m,p-Xylenes | |
| SB-1 | 6 | 08/23/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12 | 08/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 14 | 08/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 16 | 08/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 51 | 08/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-2 | 6 | 08/24/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 8 | 08/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 11 | 08/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 15 | 08/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-3 | 10 | 08/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12 | 08/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 16 | 08/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 24 | 08/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-4 | 6 | 08/23/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12 (D) | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 14 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-5 | 25 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 6 | 08/23/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12 | 08/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 14 | 08/28/18 | 6.4 | <1.2 | <1.2 | <1.2 | <3.7 | <2.5 | <7.5 | <2.5 | <2.97 | 52.8 | 32.7 | 10.9 | <0.0594 | <0.0594 | <0.0594 | <0.0594 | 0.155 | <0.119 | |
| | 17.5 | 08/28/18 | 8.3 | 3 | 2.1 | 4.4 | <3.2 | <2.1 | <6.3 | <2.1 | <2.49 | 9.67 | 108 | 93.0 | <0.0498 | 0.751 | <0.0498 | <0.0498 | 2.57 | 5.45 | |
| SB-6 | 24 | 08/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 30 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-7 | 2 | 08/24/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 6 | 08/24/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-8 | 6 | 08/23/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 10 | 08/27/18 | <1.3 | <1.3 | <1.3 | <1.3 | <3.9 | <2.6 | <7.7 | <2.6 | <3.16 | <3.16 | <3.16 | <3.16 | 0.654 | 0.177 | <0.0632 | 0.214 | 0.0997 | 0.449 | |
| | 14 | 08/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 22 | 08/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-9 | 28 | 08/27/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 2 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-9 | 14 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 25 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-9 | 7 | 08/31/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 11.5 | 08/31/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

TABLE 3
SUMMARY OF SOIL ANALYTICAL RESULTS - EPH and VPH
NEWMAN'S CHEVRON
2021 6th Street
Bremerton, Washington
Concentrations reported in milligrams per kilogram (mg/kg)

| Boring ID | Depth (feet) | Sample Date | EPH | | | | | | | | VPH | | | | | | | | | | |
|-----------|--------------|-------------|--------------------|-------------------|--------------------|-------------------|--------------------|-------------------|--------------------|-------------------|-----------------|-----------------|------------------|-----------------|---------|--------------|------|---------|----------|-------------|----|
| | | | >C10-C12 Aliphatic | >C10-C12 Aromatic | >C12-C16 Aliphatic | >C12-C16 Aromatic | >C16-C21 Aliphatic | >C16-C21 Aromatic | >C21-C34 Aliphatic | >C21-C34 Aromatic | C5-C6 Aliphatic | C6-C8 Aliphatic | C8-C10 Aliphatic | C8-C10 Aromatic | Benzene | Ethylbenzene | MTBE | Toluene | o-Xylene | m,p-Xylenes | |
| SB-10 | 8 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 14 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 20 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 27.5 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-11 | 6 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 10 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 14 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 20 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-12 | 27.5 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 6 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 14.5 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 20 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-13 | 27.5 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 16 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-14 | 27.5 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 20 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-15 | 27.5 | 07/24/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 8 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 13 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-16 | 22.5 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 9 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 13 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-17 | 22.5 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 8 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 14.5 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 19.5 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 19.5 (D) | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 24 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-18 | 29.5 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 8 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 18 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-19 | 22.5 | 07/23/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 8 | 07/25/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 8 (D) | 07/25/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 14 | 07/25/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SB-19 | 22.5 | 07/25/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 27.5 | 07/25/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

TABLE 3
SUMMARY OF SOIL ANALYTICAL RESULTS - EPH and VPH
NEWMAN'S CHEVRON
2021 6th Street
Bremerton, Washington
Concentrations reported in milligrams per kilogram (mg/kg)

| Boring ID | Depth (feet) | Sample Date | EPH | | | | | | | | VPH | | | | | | | | | | |
|-------------------------------------|--------------|-------------|------------------------|-------------------|--------------------|-------------------|--------------------|-------------------|--------------------|-------------------|-----------------|-----------------|------------------|-----------------|-------------|--------------|------------|----------|----------|-------------|----|
| | | | >C10-C12 Aliphatic | >C10-C12 Aromatic | >C12-C16 Aliphatic | >C12-C16 Aromatic | >C16-C21 Aliphatic | >C16-C21 Aromatic | >C21-C34 Aliphatic | >C21-C34 Aromatic | C5-C6 Aliphatic | C6-C8 Aliphatic | C8-C10 Aliphatic | C8-C10 Aromatic | Benzene | Ethylbenzene | MTBE | Toluene | o-Xylene | m,p-Xylenes | |
| SB-20 | 8 | 07/25/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 14 | 07/25/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 22.5 | 07/25/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 27.5 | 07/25/19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| UST-1 | 8 | 08/28/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| UST-2 | 8 | 08/28/18 | 69 | 3.5 | 550 | 96 | 340 | 210 | 32 | 16 | <2.76 | <2.76 | 12.7 | 9.74 | <0.0552 | <0.0552 | <0.0552 | <0.0552 | <0.0552 | <0.110 | |
| | 8 (D) | 08/28/18 | | | | | | | | | | | | | | | | | | | |
| UST-3 | 8 | 08/29/18 | <1.1 | <1.1 | 29 | 1.1 | 130 | 37 | 15 | 6.3 | <2.60 | <2.60 | <2.60 | <2.60 | <0.0519 | <0.0519 | <0.0519 | <0.0519 | <0.0519 | <0.104 | |
| UST-4 | 8 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| UST-5 | 8 | 08/29/18 | <1.1 | <1.1 | 5.0 | <1.1 | 66 | 13 | 29 | 14 | <2.89 | <2.89 | <2.89 | <2.89 | <0.0578 | <0.0578 | <0.0578 | <0.0578 | <0.0578 | <0.116 | |
| UST-6 | 8 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| UST-7 | 8 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| UST-8 | 8 | 08/29/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SVP-1 | 8 | 08/30/18 | <1.1 | <1.1 | <1.1 | <1.1 | <3.2 | <2.1 | 7.1 | 6.1 | <2.48 | <2.48 | <2.48 | <2.48 | <0.00496 | <0.0496 | <0.0496 | <0.0496 | <0.0496 | <0.0993 | |
| | 10 | 08/30/18 | <1.2 | <1.2 | <1.2 | <1.2 | <3.7 | <2.5 | <7.4 | <2.5 | <3.06 | <3.06 | <3.06 | <3.06 | <0.0613 | <0.0613 | <0.0613 | <0.0613 | <0.0613 | <0.123 | |
| SVP-2 | 8 | 08/30/18 | <1.2 | <1.2 | <1.2 | <1.2 | <3.6 | <2.4 | <7.2 | <2.4 | <3.85 | <3.85 | <3.85 | <3.85 | <0.0770 | <0.0770 | <0.0770 | <0.0770 | <0.0770 | <0.154 | |
| | 10 | 08/30/18 | <1.2 | <1.2 | <1.2 | <1.2 | <3.7 | <2.4 | <7.3 | <2.4 | <3.23 | <3.23 | <3.23 | <3.23 | <0.0647 | <0.0647 | <0.0647 | <0.0647 | <0.0647 | <0.129 | |
| SVP-3 | 8 | 08/30/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| | 10 | 08/30/18 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SVP-4 | 5 | 02/27/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SVP-5 | 5 | 02/27/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SVP-6 | 5 | 02/28/20 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SVP-7 | 6.5 | 11/01/21 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| SVP-8 | 5 | 08/26/22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MTCA Method A Cleanup Level: | | | Not Established | | | | | | | | | | | | 0.03 | 6 | 0.1 | 7 | 9 | | |

For EPH analyses all samples were re-extracted outside the method required holding time. Results for the first trial are included in the table. For the results of the second trial refer to the laboratory report.

NOTES:

Bold values indicate results exceeding MTCA Method A Cleanup Levels

BTEX = Benzene, Toluene, Ethylbenzene, and Total Xylenes

D = Duplicate sample

EPH = Extractable Petroleum Hydrocarbons

MTBE = Methyl t-butyl ether

VPH = Volatile Petroleum Hydrocarbons

< = Analyte is not detected at or above the method detection limit; value represents limit.

-- = not analyzed

ANALYTICAL METHODS:

EPHs analyzed by NWEPH Method

VPHs analyzed by NWVPH Method

TABLE 4
SUMMARY OF SOIL GAS SAMPLING ANALYTICAL RESULTS BY USEPA METHOD TO-15
NEWMAN'S CHEVRON
2021 6th Street
Bremerton, Washington
Concentrations in micrograms per cubic meter (µg/m³)

| Sample Location | Sample Date | Sample ID | MTBE | Benzene | Toluene | Ethylbenzene | m,p-Xylenes | o-Xylenes | Naphthalene | |
|---|-------------|--------------|-------------|--------------|---------------|---------------|--------------|-----------|--------------|----|
| SVP-1 | 09/27/18 | SVP-1-092718 | <0.033 | 0.46 J | 1.8 J | 0.12 J | 0.35 J | 0.34 J | 0.23 J | |
| | 12/04/20 | SVP-1-120420 | <0.49 | <0.22 | <0.26 | <0.12 | <0.24 | <0.12 | 5.8 | |
| SVP-2 | 09/27/18 | SVP-2-092718 | <0.031 | 0.26 J | 0.26 J | 0.096 J | 0.15 J | 0.083 J | <0.054 | |
| | 9/27/18* | DUP-1-092718 | <0.031 | 0.58 J | 0.8 J | 0.26 J | 0.7 J | 0.52 J | 0.16 J | |
| | 12/04/20 | SVP-2-120420 | <0.49 | <0.22 | <0.26 | <0.12 | <0.24 | <0.12 | 6.6 | |
| SVP-3 | 09/27/18 | SVP-3-092718 | <0.03 | 0.18 J | 1.7 J | 0.3 J | 0.66 J | 0.47 J | 1.4 J | |
| | 12/04/20 | SVP-3-120420 | <0.47 | <0.21 | <0.24 | <0.11 | <0.22 | <0.11 | 2.4 | |
| SVP-4 | 03/25/20 | SVP-4-032520 | <0.3 | 4.9 | 50 | 13 | 67 | J 26 | 1.4 J | UJ |
| | 08/19/20 | SVP-4-081920 | <0.55 | <0.24 | <0.29 | <0.13 | <0.26 | <0.13 | 1.9 | J |
| | 12/04/20 | SVP-4-120420 | <0.48 | <0.21 | 0.74 | J 0.34 | J 6.2 | J 2.0 | J 1.0 | |
| | 12/4/20* | DUP-1-120420 | <0.48 | <0.21 | 1.60 | J 0.62 | J 12 | J 3.5 | J 1.1 | |
| SVP-5 | 03/25/20 | SVP-5-032520 | <0.3 | 0.3 J | UJ 1.6 J | UJ 0.3 J | UJ 0.9 J | UJ 0.3 J | UJ <0.2 | UJ |
| | 3/25/20* | DUP-1--32520 | <0.3 | 4.6 | J 50 | J 16 | J 79 | J 33 | J 3.1 | UJ |
| | 08/19/20 | SVP-5-081920 | <0.57 | <0.25 | 0.34 | U 0.19 | U <0.27 | <0.14 | 4.4 | J |
| | 8/19/20* | DUP-1-081920 | <0.57 | 0.27 | <0.30 | 0.15 | U <0.27 | <0.14 | 4.4 | J |
| | 12/04/20 | SVP-5-120420 | <0.48 | <0.21 | <0.25 | <0.12 | <0.23 | <0.12 | 0.93 | |
| SVP-6 | 03/25/20 | SVP-6-032520 | <0.3 | 0.9 | UJ 4.6 | U 1.0 J | U 2.0 | UJ 0.9 J | U 0.3 J | UJ |
| | 08/19/20 | SVP-6-081920 | <0.54 | <0.24 | 0.31 | U 0.91 | U <0.26 | <0.13 | 4.7 | J |
| | 12/04/20 | SVP-6-120420 | <0.49 | <0.22 | <0.26 | 0.19 | <0.24 | <0.12 | 1.2 | |
| Equipment Blank | 09/26/18 | EB-1-092618 | <0.048 | 0.38 J | 5.7 | 0.46 J | 1.5 J | 0.33 J | <0.082 | |
| | 09/28/18 | EB-1-092818 | <0.044 | 0.36 J | 14 | 0.58 J | 2.1 J | 0.47 J | 1.1 J | |
| | 03/24/20 | EB-1-032420 | <0.3 | 0.6 J | 8.3 | 1.4 J | 7.1 | J 2.5 | 0.9 J | J |
| | 08/19/20 | EB-1-081920 | <0.55 | <0.24 | 1.2 | 0.23 | 0.77 | 0.27 | <0.40 | |
| Outdoor Air | 08/19/20 | AMB-1-081920 | <0.56 | <0.25 | 0.96 | U 0.20 | U 0.68 | U 0.23 | U <0.41 | |
| | 12/04/20 | OA-1-120420 | <0.50 | 1.7 | 3.6 | 0.55 | 1.9 | 0.63 | <0.36 | |
| | 12/04/20 | OA-2-120420 | <0.56 | 1.5 | 3.2 | 0.53 | 1.8 | 0.60 | <0.41 | |
| | 12/04/20 | OA-3-120420 | <0.50 | 1.6 | 3.3 | 0.52 | 1.8 | 0.60 | <0.36 | |
| MTCA Method B Screening Levels for Sub-Slab Soil Gas | | | 320 | 10.7 | 76,200 | 15,200 | 1,500 | | 2.5 | |
| MTCA Method B Cleanup Levels for Indoor Air | | | 9.62 | 0.321 | 2,290 | 457 | 45.7 | | 0.074 | |

NOTES:

Bold highlighted value indicate results exceeding MTCA Method B Screening Levels for Sub-Slab Soil Gas

* = Duplicate sample

J = Laboratory assigned sata validation qualifier - Estimated Value

MTCA = Model Toxics Control Act

MTBE = Methyl Tertiary Butyl Ether

< = Analyte not detected above laboratory method detection limits

THIRD-PARTY DATA VALIDATION QUALIFIERS (in bold):

Third-party data validation performed, and data validation qualifiers assigned, by Ecochem, Inc.

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

TABLE 5
SUMMARY OF SOIL GAS SAMPLING ANALYTICAL RESULTS BY ASTM D-1946
NEWMAN'S CHEVRON
2021 6th Street
Bremerton, Washington
Concentrations listed as percentage (unless otherwise noted)

| Sample Location | Sample Date | Sample ID | Hydrogen | Nitrogen | Oxygen | Carbon Monoxide | Methane | Carbon Dioxide | Helium |
|-----------------|-------------|--------------|----------|----------|--------|-----------------|----------|----------------|-------------|
| SVP-1 | 09/27/18 | SVP-1-092718 | <0.14 | NA | 14.6 | <0.14 | <0.14 | 5.79 | 69 (ppm) |
| | 12/04/20 | SVP-1-120420 | <0.014 | 82 | 11 | NA | <0.00014 | 7.5 | <0.068 |
| SVP-2 | 09/27/18 | SVP-2-092718 | <0.14 | NA | 13.8 | <0.14 | <0.14 | 5.71 | 250 (ppm) |
| | 9/27/18* | DUP-1-092718 | <0.14 | NA | 13.8 | <0.14 | <0.14 | 5.68 | 250 (ppm) |
| | 12/04/20 | SVP-2-120420 | <0.014 | 79 | 14 | NA | <0.00014 | 7.3 | <0.068 |
| SVP-3 | 09/27/18 | SVP-3-092718 | <0.13 | NA | 17.9 | <0.13 | <0.13 | 3.63 | 140 (ppm) |
| | 12/04/20 | SVP-3-120420 | <0.013 | 80 | 16 | NA | <0.00013 | 4.4 | <0.065 |
| SVP-4 | 03/25/20 | SVP-4-032520 | NA | 82 | 16 | NA | <1.0 | 1.8 | <0.10 |
| | 08/19/20 | SVP-4-081920 | <0.015 | 79 | 18 | NA | <0.00015 | 2.7 | <0.076 |
| | 12/04/20 | SVP-4-120420 | <0.013 | 79 | 19 | NA | <0.00013 | 2.3 | <0.067 |
| | 12/4/20* | DUP-1-120420 | <0.013 | 79 | 19 | NA | <0.00013 | 2.3 | <0.067 |
| SVP-5 | 03/25/20 | SVP-5-032520 | NA | 80 | 19 | NA | <1.0 | 1.2 | <0.10 |
| | 3/25/20* | DUP-1--32520 | NA | 79 | 20 | NA | <1.0 | 1.1 | <0.10 |
| | 08/19/20 | SVP-5-081920 | <0.016 | 80 | 17 | NA | <0.00016 | 3.2 | <0.079 |
| | 8/19/20* | DUP-1-081920 | <0.016 | 80 | 17 | NA | <0.00016 | 3.2 | <0.079 |
| | 12/04/20 | SVP-5-120420 | <0.013 | 80 | 18 | NA | <0.00013 | 2.3 | <0.067 |
| SVP-6 | 03/25/20 | SVP-6-032520 | NA | 80 | 19 | NA | <1.0 | 1.4 | <0.10 |
| | 08/19/20 | SVP-6-081920 | <0.015 | 79 | 16 | NA | <0.00015 | 5.4 | <0.074 |
| | 12/04/20 | SVP-6-120420 | <0.014 | 80 | 17 | NA | <0.00014 | 3.0 | <0.068 |
| Equipment Blank | 09/26/18 | EB-1-092618 | <0.21 | NA | 12.5 | <0.21 | <0.21 | <0.21 | 3,700 (ppm) |
| | 09/28/18 | EB-1-092818 | <0.19 | NA | 19.9 | <0.19 | <0.19 | <0.19 | 850 (ppm) |
| | 03/24/20 | EB-1-032420 | NA | 89 | 11 | NA | <1.0 | <0.20 | <0.10 |
| | 08/19/20 | EB-1-081920 | <0.015 | 79 | 21 | NA | 0.00019 | 0.044 | <0.076 |
| Outdoor Air | 08/19/20 | AMB-1-081920 | <0.016 | 79 | 21 | NA | 0.00019 | 0.044 | <0.078 |
| | 12/04/20 | OA-1-120420 | <0.014 | 79 | 21 | NA | 0.00021 | 0.051 | <0.070 |
| | 12/04/20 | OA-2-120420 | <0.016 | 78 | 22 | NA | 0.00020 | 0.052 | <0.078 |
| | 12/04/20 | OA-3-120420 | <0.014 | 79 | 21 | NA | 0.00022 | 0.052 | <0.070 |

NOTES:

ASTM = American Society for Testing and Materials

* = Duplicate sample

NA = Not analyzed

Helium results reported in ppm concentration were analyzed by Method 3C Modified

ppm = parts per million

<= Analyte not detected above laboratory method reporting limits

TABLE 6
SUMMARY OF SOIL GAS SAMPLING ANALYTICAL RESULTS BY MADEP - APH
NEWMAN'S CHEVRON
2021 6th Street
Bremerton, Washington
Concentrations in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

| Sample Location | Sample Date | Sample ID | MTBE | Benzene | Toluene | Ethylbenzene | m,p-Xylenes | o-Xylenes | Naphthalene | C9-C10 Aromatics | C5-C8 Aliphatics | C9-C12 Aliphatics | Total TPH Concentration |
|---|-------------|--------------|------------|-------------|---------------|----------------|--------------|--------------|-------------------------|-----------------------|------------------|-------------------|-------------------------|
| SVP-1 | 12/04/20 | SVP-1-120420 | <0.53 | <0.47 | <0.55 | <0.64 | <0.64 | <0.64 | 4.2 B U | <3.7 | 73 | <5.2 | 83.7 |
| SVP-2 | 12/04/20 | SVP-2-120420 | <0.53 | <0.47 | <0.55 | <0.64 | <0.64 | <0.64 | 5.6 B U | <3.7 | 30 | <5.2 | 41.5 |
| SVP-3 | 12/04/20 | SVP-3-120420 | <0.53 | <0.47 | <0.55 | <0.64 | <0.64 | <0.64 | 2.5 B U | <3.7 | 68 | <5.2 | 75.2 |
| SVP-4 | 08/19/20 | SVP-4-081920 | <1.1 | <0.97 | <1.1 | <1.3 | <1.3 | <1.3 | 2.7 | <7.6 | 18 | 11 | 36.0 |
| | 12/04/20 | SVP-4-120420 | <0.54 | <0.48 | 0.59 | J <0.65 | 6.0 | J 2.1 | J 2.0 B U | 9.6 | J 11 | <5.3 | 33.6 |
| | 12/4/20* | DUP-1-120420 | <0.54 | <0.48 | 1.2 | J <0.65 | 11 | J 3.6 | J 5.0 B U | 15 | J 12 | 7.9 | 53.8 |
| SVP-5 | 08/19/20 | SVP-5-081920 | <1.1 | <1.0 | <1.2 | <1.4 | <1.4 | <1.4 | 4.1 | <7.9 | 99 | 15 | 123.1 |
| | 8/19/20* | DUP-1-081920 | <1.1 | <1.0 | <1.2 | <1.4 | <1.4 | <1.4 | 3.9 | <7.9 | 95 | 13 | 117.1 |
| | 12/04/20 | SVP-5-120420 | <0.54 | <0.48 | <0.56 | <0.65 | <0.65 | <0.65 | 1.4 B U | <3.8 | 58 | <5.3 | 63.9 |
| SVP-6 | 08/19/20 | SVP-6-081920 | <1.1 | <0.95 | <1.1 | <1.3 | <1.3 | <1.3 | 4.3 | <7.5 | 410 | 39 | 458.9 |
| | 12/04/20 | SVP-6-120420 | <0.53 | <0.47 | <0.55 | <0.64 | <0.64 | <0.64 | 1.9 B U | <3.7 | 170 | 35 | 208.6 |
| Equipment Blank | 08/19/20 | EB-1-081920 | <1.1 | <0.97 | <1.1 | <1.3 | <1.3 | <1.3 | <1.6 | <7.6 | 25 | <11 | --- |
| Field Blank | 08/19/20 | AMB-1-081920 | <1.1 | <0.94 | <1.1 | <1.3 | <1.3 | <1.3 | <1.5 | <7.4 | 22 | <10 | --- |
| Outdoor Air | 12/04/20 | OA-1-120420 | <0.52 | 1.0 | 2.6 | <0.63 | 1.8 | 0.67 | 1.1 B U | <3.6 | 24 | <5.1 | --- |
| | 12/04/20 | OA-2-120420 | <0.46 | 0.84 | 2.1 | <0.56 | 1.6 | 0.58 | 1.0 B U | <3.2 | 18 | <4.6 | --- |
| | 12/04/20 | OA-3-120420 | <0.52 | 0.97 | 2.4 | <0.63 | 1.7 | 0.63 | 1.2 B U | <3.6 | 22 | <5.1 | --- |
| MTCA Method B Screening Levels for Sub-Slab Soil Gas | | | 320 | 10.7 | 76,200 | 15,200 | 1,500 | | 2.5 | Not Applicable | | | 4,700 |

NOTES:

Bold highlighted value indicates result exceeding applicable regulatory screening level

* = Duplicate sample

B = Laboratory assigned data validation qualifier - Analyte detected in laboratory QA/QC blank sample

J = Laboratory assigned data validation qualifier - Estimated Value

MTCA = Model Toxics Control Act

MTBE = Methyl Tertiary Butyl Ether

< = Analyte not detected above laboratory method detection limits

THIRD-PARTY DATA VALIDATION QUALIFIERS (in bold):

Third-party data validation performed, and data validation qualifiers assigned, by Ecochem, Inc.

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

TABLE 7
SUMMARY OF SOIL GAS SAMPLING ANALYTICAL RESULTS BY USEPA METHOD TO-17
NEWMAN'S CHEVRON
2021 6th Street
Bremerton, Washington
Concentrations in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

| Sample Location | Sample Type | Sample Date | Sample ID | Naphthalene | |
|--|----------------------|-------------|---------------|-------------|--|
| SVP-1 | Shallow Soil Vapor | 06/22/21 | SVP-1-062221 | 14 | |
| SVP-2 | | 06/22/21 | SVP-2-062221 | 23 | |
| SVP-3 | | 06/22/21 | SVP-3-062221 | 9.0 | |
| SVP-4 | | 06/22/21 | SVP-4-062221 | 2.9 | |
| SVP-5 | | 06/22/21 | SVP-5-062221 | 4.9 | |
| SVP-6 | | 06/22/21 | SVP-6-062221 | 3.9 | |
| SVP-7 | | 02/18/22 | SVP-7-021822 | <1.2 | |
| SVP-8 | | 10/06/22 | SVP-8-100622 | <1.2 | |
| SSVP-1 | Sub-Slab Soil Vapor | 10/06/22 | SSVP-1-100622 | <1.2 | |
| SSVP-2 | | 10/06/22 | SSVP-2-100622 | <1.2 | |
| SSVP-3 | | 10/06/22 | SSVP-3-100622 | <1.2 | |
| Field Blank | TO-17 Field Blank | 06/22/21 | FB-1-062221 | <1.2 | |
| | | 02/18/22 | FB-1-021822 | <1.2 | |
| | | 10/06/22 | FB-2-100622 | <0.056 | |
| MTCA Method B Screening Level for Sub-Slab Soil Gas | | | | 2.5 | |

NOTES:

Bold highlighted value indicates result exceeding applicable regulatory screening level

MTCA = Model Toxics Control Act

< = Analyte not detected above laboratory reporting limit

THIRD-PARTY DATA VALIDATION QUALIFIERS (in bold):

Third-party data validation performed, and data validation qualifiers assigned, by Ecochem, Inc.

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

TABLE 8
SUMMARY OF AIR SAMPLING ANALYTICAL RESULTS BY USEPA METHOD TO-17
NEWMAN'S CHEVRON
2021 6th Street
Bremerton, Washington
Concentrations in micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)

| Sample Location | Sample Type | Sample Date | Sample ID | Naphthalene | |
|---|-------------------|-------------|--------------|---------------|--|
| OA-1 | Outdoor Air | 10/06/22 | OA-1-100622 | <0.057 | |
| OA-2 | | 10/06/22 | OA-2-100622 | <0.056 | |
| OA-3 | | 10/06/22 | OA-3-100622 | <0.058 | |
| IA-1 | Indoor Air | 10/06/22 | IA-1-100622 | 0.099 | |
| IA-2 | | 10/06/22 | IA-2-100622 | 0.10 | |
| IA-3 | | 10/06/22 | IA-3-100622 | 0.48 | |
| CSA-1 | Crawlspace Air | 02/18/22 | CSA-1-100622 | 0.072 | |
| CSA-2 | | 10/06/22 | CSA-2-100622 | 0.12 | |
| CSA-B | Equipment Blank | 10/06/22 | CSA-B-100622 | 0.064 | |
| Field Blank | TO-17 Field Blank | 10/06/22 | FB-1-100622 | <0.056 | |
| MTCA Method B Cleanup Level for Indoor Air | | | | 0.0735 | |

NOTES:

Bold highlighted value indicates result exceeding applicable cleanup level

MTCA = Model Toxics Control Act

< = Analyte not detected above laboratory reporting limit

THIRD-PARTY DATA VALIDATION QUALIFIERS (in bold):

Third-party data validation performed, and data validation qualifiers assigned, by Ecochem, Inc.

J = The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample.

U = The analyte was analyzed for, but was not detected above the reported sample quantitation limit.

UJ = The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample.

**Appendix A:
Pre-RI Analytical Data**

1.4 Analytical Results and Conclusions

Modified EPA Method 8015 provides both a concentration value and a description of the predominant petroleum product based upon the detected carbon range. The analytical results for soil samples collected from the main tank cavity and the base of the waste oil tank cavity are presented in Table 1. Reports of the analytical testing results from the laboratory are attached.

TABLE 1
 Soil Analytical Results

| <u>Sample ID</u> | <u>Sample Locations</u> | <u>Sample Depth (ft)</u> | <u>TPH (ppm)</u> | <u>Product</u> |
|---------------------------|-------------------------------------|--------------------------|------------------|-----------------------------------|
| A | South 1/2 of pit, east wall | 10.5 | 10,230 | Gas |
| B | South 1/2 of pit, south wall | 10.5 | 4,875 | Gas |
| C | South 1/2 of pit, west wall | 10.0 | 245 | Aged Gas |
| N | North 1/2 of pit, north wall | 10 - 11.0 | 346 | Gas |
| W | North 1/2 of pit, west wall | 10 - 11.0 | 1,550 | Aged Gas, Mineral Spirits, Diesel |
| E | North 1/2 of pit, east wall | 10 - 11.0 | <10 | |
| 1 | Under Tank No. 4, north 1/2 of pit | 13.5 | <10 | |
| 2 | Under Tank No. 2, north 1/2 of pit | 13.5 | 57 | Gas |
| 3 | Under Tank No. 5, north 1/2 of pit | 14.0 | <10 | |
| 5 | Base of Waste Oil Pit | 10.0 | <10 | |
| 6 | Composite of Walls of Waste Oil Pit | 7 to 7.5 | 40.4 | |
| Pit 1 | Test Pit No. 1 (south) | 13.8 | 634 | Gas |
| Pit 2 | Test Pit No. 2 (east) | 13.0 | 4 | Gas |
| Ecology Cleanup Guideline | | | 200 | Waste Oil and Diesel |
| | | | 100 | Gas |

Testing results indicate hydrocarbon levels in subsurface soil exceed Washington State Department of Ecology (Ecology) cleanup guidelines along the west and north walls, and in the southeast corner of the main tank cavity. This soil contamination likely originated from overflow spillage and/or small tank or line leaks over an extended period of time.

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All the analyses presented in Table 1 are representative of soil remaining in-place. This Work Plan outlines procedures to remediate the remaining contamination around the gasoline tank cavity.

A single composite soil sample of the four sides of the waste oil tank cavity was analyzed for pesticides, PCBs, and halogenated volatiles and heavy metals; copies of the analytical laboratory reports are attached. Analytical results indicate no detectable PCBs or halogenated volatiles, but show the presence of chromium, copper, lead, and pesticides. The metals and pesticides detected were below their respective cleanup guidelines or accepted tolerance levels as shown in Table 2 below, and, in our opinion, do not pose a risk to human health or the environment. We believe no further action is necessary with regard to the soil around the waste oil tank cavity.

TABLE 2
Metals and Pesticides in Soil

| <u>Contaminant</u> | <u>Concentration (ppm)</u> | <u>Cleanup Guideline (ppm)</u> |
|---------------------------|----------------------------|--------------------------------|
| Total Chromium | 16.3 | 100 |
| Total Copper | 25.1 | 500 |
| Total Lead | 69.8 | 250 |
| Aldrin | 0.03 | 0.1 |
| | | (tolerance level) |
| g-BHC (isomer of Lindane) | 0.15 | 1.0 |
| 4,4'-DDD | 1.16 | Insecticidally inert |
| 4,4'-DDE | 0.37 | Insecticidally inert |
| 4,4'-DDT | 0.06 | 1.0 |
| Endosulfan I | 0.13 | 2.0 |
| | | (tolerance level) |

Notes: Tolerance levels were taken from Pesticide Manufacturing and Toxic Materials Control Encyclopedia, edited by Marshall Sittig, Noyes Data Corporation, Park Ridge, New Jersey, 1989, 810 pp.

Cleanup guidelines derived from interim draft Method A Cleanup Levels for Soil, Washington Department of Ecology.

1.5 Recommendations

Hydrocarbon contamination levels in the vicinity of the tank cavity are above Ecology action guidelines. We believe the most cost effective way to remediate this remaining contamination is by installation of a VES. Sections 2 and 3 of this Work Plan describe installation, operation, and demobilization of the proposed VES.

Because contamination was above Ecology guidelines at the greatest depth penetrated in the test pits, AGI recommends drilling a well in the vicinity of test pit TP1, as discussed between you and AGI in a telephone conversation on September 14, 1990. This well would evaluate the maximum depth of contamination, and would be available if remediation at greater depths than the tank cavity were necessary.

Table 1
Summary of AGI's Analytical Data from 1999
Newman's Texaco (Formerly Newman's Chevron)
2021 6th Street, Bremerton, Washington

| Soil Samples | Depth (Feet) | Collection Date | TPH ⁽¹⁾ (mg/kg) | Product ⁽²⁾ |
|---------------|--------------|-----------------|--------------------------------|-----------------------------------|
| A | 10.5 | August 1999 | 10,230 | Gas |
| B | 10.5 | August 1999 | 4,875 | Gas |
| C | 10.0 | August 1999 | 245 | Aged Gas |
| N | 10-11.0 | August 1999 | 346 | Gas |
| W | 10-11.0 | August 1999 | 1,550 | Aged Gas, Mineral Spirits, Diesel |
| E | 10-11.0 | August 1999 | <10 | |
| 1 | 13.5 | August 1999 | <10 | |
| 2 | 13.5 | August 1999 | 57 | Gas |
| 3 | 14.0 | August 1999 | <10 | |
| 4 | 10.0 | August 1999 | <10 (TPH by EPA Method 418.1) | |
| 5 | 7-7.5 | August 1999 | 40.4 (TPH by EPA Method 418.1) | |
| Pit 1 (South) | 13.8 | August 1999 | 634 | Gas |
| Pit 2 (East) | 13.8 | August 1999 | 4 | Gas |

Notes:

⁽¹⁾ Total Petroleum Hydrocarbons, EPA Method 8015, Modified, unless otherwise noted.

⁽²⁾ Product as identified by Sound Analytical Services, Inc.

Soil analytical data reported in mg/kg which approximates parts per million (ppm) concentrations.

Table 2
Summary of Assessment Analytical Data from 2000
Newman's Texaco (Formerly Newman's Chevron)
2021 6th Street, Bremerton, Washington

| Soil Samples | Depth (feet) | Date | TPH-G ⁽¹⁾ | | Benzene ⁽²⁾ | | Toluene | | Ethylbenzene | | Xylenes | | Naphthalene (ug/kg) | MTBE (ug/kg) | Total ⁽³⁾ Lead (mg/kg) |
|-----------------------------|-----------------|----------|----------------------|-------|------------------------|-------|---------|---------|--------------|--------|---------|---------|------------------------|-----------------|---|
| | | | (mg/kg) | | (ug/kg) | | (ug/kg) | | (ug/kg) | | (ug/kg) | | | | |
| | | | TEG | NCA | 8021b | 8260b | 8021b | 8260b | 8021b | 8260b | 8021b | 8260b | | | |
| Soil Borings | | | | | | | | | | | | | | | |
| B1-S4 | 10.5 | 9/15/00 | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- | -- | -- | -- |
| B2-S4 | 10.5 | 9/15/00 | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- | -- | -- | -- |
| B2-S5 | 13.5 | 9/15/00 | 7.1 | -- | ND | -- | ND | -- | ND | -- | 120 | -- | -- | -- | -- |
| B3-S4 | 12.5 | 9/15/00 | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- | -- | -- | -- |
| B4-S4 | 12.5 | 9/15/00 | 11 | -- | ND | -- | ND | -- | ND | -- | 1,100 | -- | -- | -- | -- |
| <i>B5-S1</i> | 10.5 | 9/15/00 | 8,700 | 4,750 | 24,000 | ND | 19,000 | 40,800 | 42,000 | 64,100 | 500,000 | 711,000 | 25,600 | ND | 13 |
| <i>B5-S2</i> | 12.5 | 9/15/00 | 160 | 5,300 | 260 | ND | 3,200 | 152,000 | 1,200 | 83,000 | 15,000 | 709,000 | 56,800 | ND | -- |
| B6-S4 | 10.5 | 9/15/00 | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- | -- | -- | -- |
| B7-S1 | 14.0 | 9/15/00 | -- | 130 | -- | ND | -- | ND | -- | ND | -- | ND | -- | ND | -- |
| Excavation Samples | | | | | | | | | | | | | | | |
| Bottom-14.5 | 14.5 | 12/27/00 | -- | 179 | -- | 178 | -- | 4,180 | -- | 1,680 | -- | 12,300 | -- | -- | -- |
| NE Wall-11.5 | 11.5 | 12/27/00 | -- | 19.4 | -- | ND | -- | 337 | -- | 79.9 | -- | 465 | -- | -- | -- |
| SE Wall-11.5 | 11.5 | 12/27/00 | -- | 18.7 | -- | ND | -- | 137 | -- | 79 | -- | 257 | -- | -- | -- |
| MTCA Method A Cleanup Level | | | 100 | | 500 | | 40,000 | | 20,000 | | 20,000 | | 250 | | |
| MTCA Method B Cleanup Level | | | 2,000 ⁽⁴⁾ | | | | | | | | | | | | |

Notes:

⁽¹⁾ Total Petroleum Hydrocarbons as Gasoline, WDOE Method WTPH-G, by TEG Northwest, Inc. and NorthCreek Analytical, Inc.

⁽²⁾ BTEX by EPA Methods 8021b, (gas chromatography by TEG Northwest, Inc.) and EPA Method 8260b (gas chromatography with confirmation by mass spectrometer by NCA).

⁽³⁾ Total lead by EPA Method 7420.

-- Indicates analysis not performed on specified sample.

Soil analytical data reported in mg/kg, and ug/kg which approximate parts per million (ppm) and parts per billion (ppb) concentrations, respectively.

Italics denotes samples which were later excavated.

⁽⁴⁾ Method B cleanup level for gasoline in soil proposed for this site.

Table 3
Results of Volatile Petroleum Hydrocarbons Analyses
Newman's Texaco (Formerly Newman's Chevron)
2021 6th Street, Bremerton, Washington

| Analyte | Soil Sample B-5, S-1 VPH Results in mg/kg | Soil Sample B-5, S-1 VPH Results in mg/kg |
|--------------------|--|--|
| C5-C6 Aliphatics | ND | 318 |
| C6-C8 Aliphatics | 936.0 | 809 |
| C8-C10 Aliphatics | 482.0 | 453 |
| C10-C12 Aliphatics | 309.0 | 437 |
| C8-C10 Aromatics | 326.0 | 334 |
| C10-C12 Aromatics | 599.0 | 368 |
| C12-C13 Aromatics | 501.0 | 392 |
| Total VPH (TVPH) | 3150.0 | 3110 |

Notes:

VPH mean Volatile Petroleum Hydrocarbons by WDOE Interim TPH Policy Method.

Soil analytical data reported in mg/kg which approximates parts per million (ppm) concentrations.

Gasoline-range organics (TPH and BTEX) were detected at elevated levels, especially at 12-foot bgs, in the soil samples analyzed from the dispenser area of the Site (BM-4, -5, -6, and -7). The results are shown below in Table 1. A laboratory report is provided in the Laboratory Results, Appendix D.

TABLE 1
Soil Sample Analytical Results

| Soil Sample # | TPH (8015M) (Gasoline Range) C4-C10 (mg/kg) | Benzene (8260B) (ug/kg) | Toluene (8260B) (ug/kg) | Ethylbenzene (8260B) (ug/kg) | Xylenes (8260B) (ug/kg) | Isopropylbenzene (8260B) (ug/kg) | n-Propylbenzene (8260B) (ug/kg) | 1,3,5-Trimethylbenzene (8260B) (ug/kg) | 1,2,4-Trimethylbenzene (8260B) (ug/kg) | Isopropyltoluene (8260B) (ug/kg) | Naphthalene (8260B) (ug/kg) |
|-----------------------------|---|-------------------------|-------------------------|------------------------------|-------------------------|----------------------------------|---------------------------------|--|--|----------------------------------|-----------------------------|
| BM-1 10-11 | 12 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BM-1 15-16 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BM-2 11-12 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BM-2 23-24 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BM-3 11-12 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BM-3 25-26 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BM-4 11-12 | 1600 | 1800 | 39000 | 14000 | 110000 | ND | 6900 | 12000 | 39000 | 1700 | 5900 |
| BM-4 15-16 | 1800 | 1800 | 83000 | 39000 | 310000 | 4300 | 21000 | 32000 | 100000 | 3600 | 13000 |
| BM-4 15-16 d | 1600 | 1000 | 48000 | 23000 | 190000 | 2600 | 13000 | 20000 | 66000 | 2500 | 9300 |
| BM-5 11-12 | 4100 | 9500 | 198000 | 105000 | 770000 | 9700 | 43000 | 63000 | 204000 | 7100 | 21000 |
| BM-5 11-12 d | 4400 | 10000 | 200000 | 11000 | 790000 | 11000 | 48000 | 84000 | 220000 | 8500 | 22000 |
| BM-5 19-20 | 160 | 99 | 950 | 650 | 5100 | 110 | 530 | 610 | 2000 | ND | 390 |
| BM-6 11-12 | 2200 | 1900 | 74000 | 29000 | 220000 | 2700 | 520000 | 20000 | 64000 | 2400 | 7200 |
| BM-7 11-12 | 39 | 3100 | 3700 | 930 | 4800 | ND | 180 | 230 | 810 | ND | ND |
| BM-8 7-8 | 190 | 230 | 300 | 370 | 2600 | ND | ND | 200 | 230 | ND | 65 |
| BM-8 11-12 | 12 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BM-9 9-10 | NS | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BM-10 15-16 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BM-10 23-24 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BM-11 11-12 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BM-11 19-20 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BM-12 11-12 | ND | 110 | 120 | 64 | 560 | ND | ND | ND | 110 | ND | ND |
| BM-12 23-24 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BM-13 15-16 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| BM-13 27-28 | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND | ND |
| MTCA Method A cleanup level | 100 mg/kg* | 30 ug/kg | 7,000 ug/kg | 6,000 ug/kg | 9,000 ug/kg | NL | NL | NL | NL | NL | 5,000 ug/kg |

mg/kg = milligrams per kilogram (parts per million)

ug/kg = micrograms per kilogram (parts per billion)

NS = Not Sampled

NA = Not Analyzed

ND = Not Detected above laboratory detection limits (PQL)

NL = Not listed in the MTCA guide

* where no benzene is present and toluene, ethylbenzene, and xylene concentrations do not exceed 1% of TPH concentration

Appendix B:
RI Geophysical Survey and Utility Location Reports

Geophysical Survey LLC
711 S Tacoma Street
Kennewick, Washington 99336

September 1, 2018

Russell Shropshire
Leidos
18912 North Creek Parkway, Suite 101
Bothell, WA 98011

Re: *Ground Penetrating Radar Investigation*
Project #326971.00.18.W.182F.0706.0100
Bremerton, WA

Mr. Shropshire:

Geophysical Survey LLC conducted a ground penetrating radar (GPR) investigation at the Chevron site 204117 in Bremerton, Washington on August 22, 2018. The objectives of the investigation were to delineate underground storage tanks (USTs) and clear boring locations.

Methodology

Ground-Penetrating Radar

Ground-penetrating radar (GPR) uses a transducer to transmit FM frequency electromagnetic energy into the ground. Interfaces in the subsurface, defined by contrasts in dielectric constants, magnetic susceptibility, and to some extent, electrical conductivity, reflect the transmitted energy. The GPR system then measures the travel time between transmitted pulses and arrival of reflected energy. Buried objects such as pipes, barrels, foundations, and buried wires can cause all or a portion of the transmitted energy to be reflected back towards a receiving antenna. Geologic features such as cross-bedding, lateral and vertical changes in soil properties, and rock interfaces can also cause reflections of a portion of the EM energy.

The dielectric constant and magnetic susceptibility of the medium primarily control the velocity of the EM energy. Values of EM velocities, for depth calculations, are determined by measurement, experience in an area, by ties to known buried reflectors, and from knowledge of the subsurface medium.

The depth of investigation is a function of the transmit power, receiver sensitivity, frequency of the antenna, and attenuation of the transmitted energy due to the geologic medium. The maximum depth of investigation may vary significantly as a result of the changing soil conditions. High attenuation, and consequent smaller penetration depths, of the EM energy typically occurs where the soil conductivity is greater than 25 milli-siemens per meter and/or in areas with numerous reflective interfaces. Depth of

investigation is also affected by highly conductive material, such as metal drums and pipes that essentially reflect all the energy. The method cannot “see” directly below areas of highly reflective material because all of the energy is reflected.

Electromagnetic Line Locating

Utility line locating equipment operates through the principles of electromagnetics (EM), designed to detect underground utilities constructed of electrically conductive materials. An active signal is applied to the underground utility by means of a radio frequency (RF) transmitter and then traced with a receiver. With direct coupling, an RF signal is applied to a cable or pipe where there is access to a contact point. With no access to the utility, the indirect mode is used. A transmitter is placed on the ground surface above the conductor and the signal is induced through earth onto the pipe or cable.

The active signal is created from current flowing from the transmitter, along the conductor (utility line), and back to the transmitter thru the ground. The signal can also return thru other utility lines. This type of return can distort the electromagnetic field and cause erroneous locations.

Passive signals include power transmission (60Hz) and radio transmission (15kHz-27kHz). 60Hz signals are present in conductors carrying electric current and from utilities carrying return current (indirect induction). Radio signals are created by high power, low frequency communication transmitters. Conductive utilities re-radiate the signal. A receiver is used to trace power and radio transmissions.

FIELD SURVEY

Mapping Control

A Trimble Pro6H GPS with sub-foot level accuracy was used for mapping of surface features and boring locations.

GPR Data Acquisition

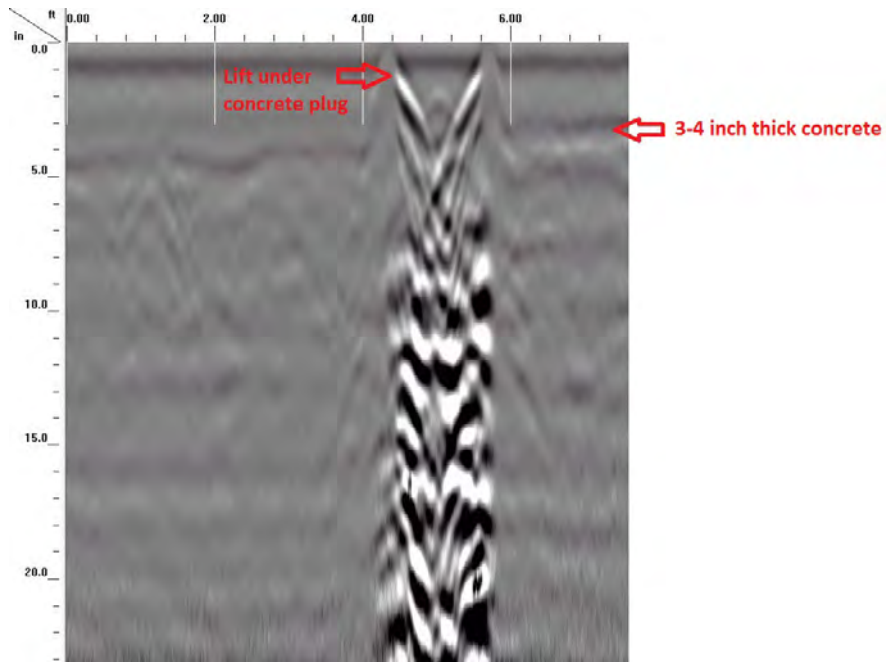
GPR data were acquired with a Geophysical Survey Systems, Inc. (GSSI) G1 control unit a 350 MHz antenna on exterior locations and a SIR3000 control unit with a 1.6 GHz antenna for interior locations. GPR data were collected at 18 scans/foot with a 60 nanoSecond window (approximately 9 feet with a dielectric constant of 8) on exterior locations. Interior locations were collected at 90 scans per foot with a 14 nanoSecond window (approximately 2 feet with a dielectric constant of 9).

RESULTS AND INTERPRETATION

Three USTs were delineated at the west extent of the site. The tanks measured, from south to north; 8 x 5 feet, 6 x 3 feet and 10 x 4 feet. Piping was detected above the tanks as shown in the attached figure.

Eight exterior and two interior locations were cleared for subsurface utilities. The exterior locations were mapped with GPS, the accuracy of location SB-6 was affected by the canopy.

The interior of the store had a 6 ½ to 7 inch thick concrete slab with a 6 x 6 reinforcing mesh. The concrete slab in the attached garage area was not reinforced. The lift cylinder was detected under the concrete plug.



CLOSURE

Geophysical surveys performed as part of this survey may or may not successfully detect or delineate any or all subsurface objects or features present. Locations, depths and scale of buried objects or subsurface features mapped as a result of this survey are a result of geophysical interpretation, and should be considered as confirmed, actual, or accurate only where recovered by excavation or drilling.

Geophysical Survey LLC performed this work in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practicing under similar conditions. No warranty, express or implied, beyond exercise of reasonable care and professional diligence, is made. This report is intended for use only in accordance with the purposes of the study described within.

Respectfully,

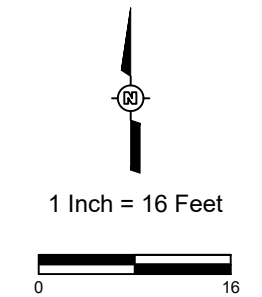
Geophysical Survey LLC

Mark Villa L.G.
Geophysicist

**GPR Investigation
Chevron 204117
Bremerton, WA**

LIST OF FIGURES

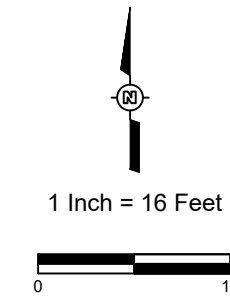
Figure 1 Utility Map



Legend

- 2.0 Depth to top in feet
- Unidentified utility
- E Electric line
- COM Communication line
- W Water line
- SAN Sanitary sewer
- GAS Gas line
- UST

FIGURE 1
Utility Map
Chevron 204117
Bremerton, WA



- ### Legend
- 2.0 Depth to top in feet
 - Unidentified utility
 - E Electric line
 - COM Communication line
 - W Water line
 - SAN Sanitary sewer
 - GAS Gas line
 - UST

FIGURE 1
Utility Map
Chevron 204117
Bremerton, WA

Geophysical Survey LLC
711 S Tacoma Street
Kennewick, Washington 99336

March 1, 2020

Russell Shropshire
Leidos
18912 North Creek Parkway, Suite 101
Bothell, WA 98011

Re: *Utility Locate
2021 6th Street
Bremerton, WA*

Mr. Shropshire:

Geophysical Survey LLC conducted a utility locate at 2021 6th Street Bremerton, Washington on February 22 & 23, 2020. The objectives of the investigation were to detect and delineate subsurface utility lines and other subsurface interferences prior to drilling.

Methodology

Ground-Penetrating Radar

Ground-penetrating radar (GPR) uses a transducer to transmit FM frequency electromagnetic energy into the ground. Interfaces in the subsurface, defined by contrasts in dielectric constants, magnetic susceptibility, and to some extent, electrical conductivity, reflect the transmitted energy. The GPR system then measures the travel time between transmitted pulses and arrival of reflected energy. Buried objects such as pipes, barrels, foundations, and buried wires can cause all or a portion of the transmitted energy to be reflected back towards a receiving antenna. Geologic features such as cross-bedding, lateral and vertical changes in soil properties, and rock interfaces can also cause reflections of a portion of the EM energy.

The dielectric constant and magnetic susceptibility of the medium primarily control the velocity of the EM energy. Values of EM velocities, for depth calculations, are determined by measurement, experience in an area, by ties to known buried reflectors, and from knowledge of the subsurface medium.

The depth of investigation is a function of the transmit power, receiver sensitivity, frequency of the antenna, and attenuation of the transmitted energy due to the geologic medium. The maximum depth of investigation may vary significantly as a result of the changing soil conditions. High attenuation, and consequent smaller penetration depths, of the EM energy typically occurs where the soil conductivity is greater than 25 milli-siemens per meter and/or in areas with numerous reflective interfaces. Depth of

investigation is also affected by highly conductive material, such as metal drums and pipes that essentially reflect all the energy. The method cannot “see” directly below areas of highly reflective material because all of the energy is reflected.

Electromagnetic Line Locating

Utility line locating equipment operates through the principles of electromagnetics (EM), designed to detect underground utilities constructed of electrically conductive materials. An active signal is applied to the underground utility by means of a radio frequency (RF) transmitter and then traced with a receiver. With direct coupling, an RF signal is applied to a cable or pipe where there is access to a contact point. With no access to the utility, the indirect mode is used. A transmitter is placed on the ground surface above the conductor and the signal is induced through earth onto the pipe or cable.

The active signal is created from current flowing from the transmitter, along the conductor (utility line), and back to the transmitter thru the ground. The signal can also return thru other utility lines. This type of return can distort the electromagnetic field and cause erroneous locations.

Passive signals include power transmission (60Hz) and radio transmission (15kHz-27kHz). 60Hz signals are present in conductors carrying electric current and from utilities carrying return current (indirect induction). Radio signals are created by high power, low frequency communication transmitters. Conductive utilities re-radiate the signal. A receiver is used to trace power and radio transmissions.

FIELD SURVEY

Mapping Control

A Trimble Pro6H GPS with sub-foot level accuracy was used for mapping.

GPR Data Acquisition

GPR data were acquired with a Geophysical Survey Systems, Inc. (GSSI) SIR4000 control unit a 350 MHz antenna. GPR data were collected at 18 scans/foot with a 60 nanoSecond window (approximately 9 feet with a dielectric constant of 8) on transects in two orthogonal directions across the survey area.

Electromagnetic Line Locating

A passive radio frequency search was conducted across the area for conductive piping and utilities. Indirect induction was used on passive radio frequency targets and GPR targets. Induction and conduction were used on accessible utilities.

RESULTS AND INTERPRETATION

Lines were painted in the field, marked lines were mapped and are shown on Figure 1.

Utility locate
Bremerton, WA
March 1, 2020

Page 3

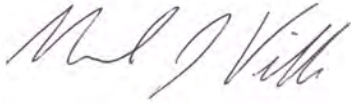
CLOSURE

Geophysical surveys performed as part of this survey may or may not successfully detect or delineate any or all subsurface objects or features present. Locations, depths and scale of buried objects or subsurface features mapped as a result of this survey are a result of geophysical interpretation, and should be considered as confirmed, actual, or accurate only where recovered by excavation or drilling.

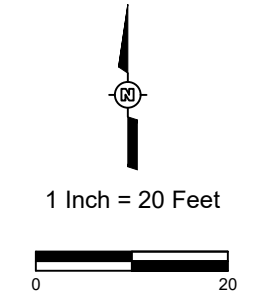
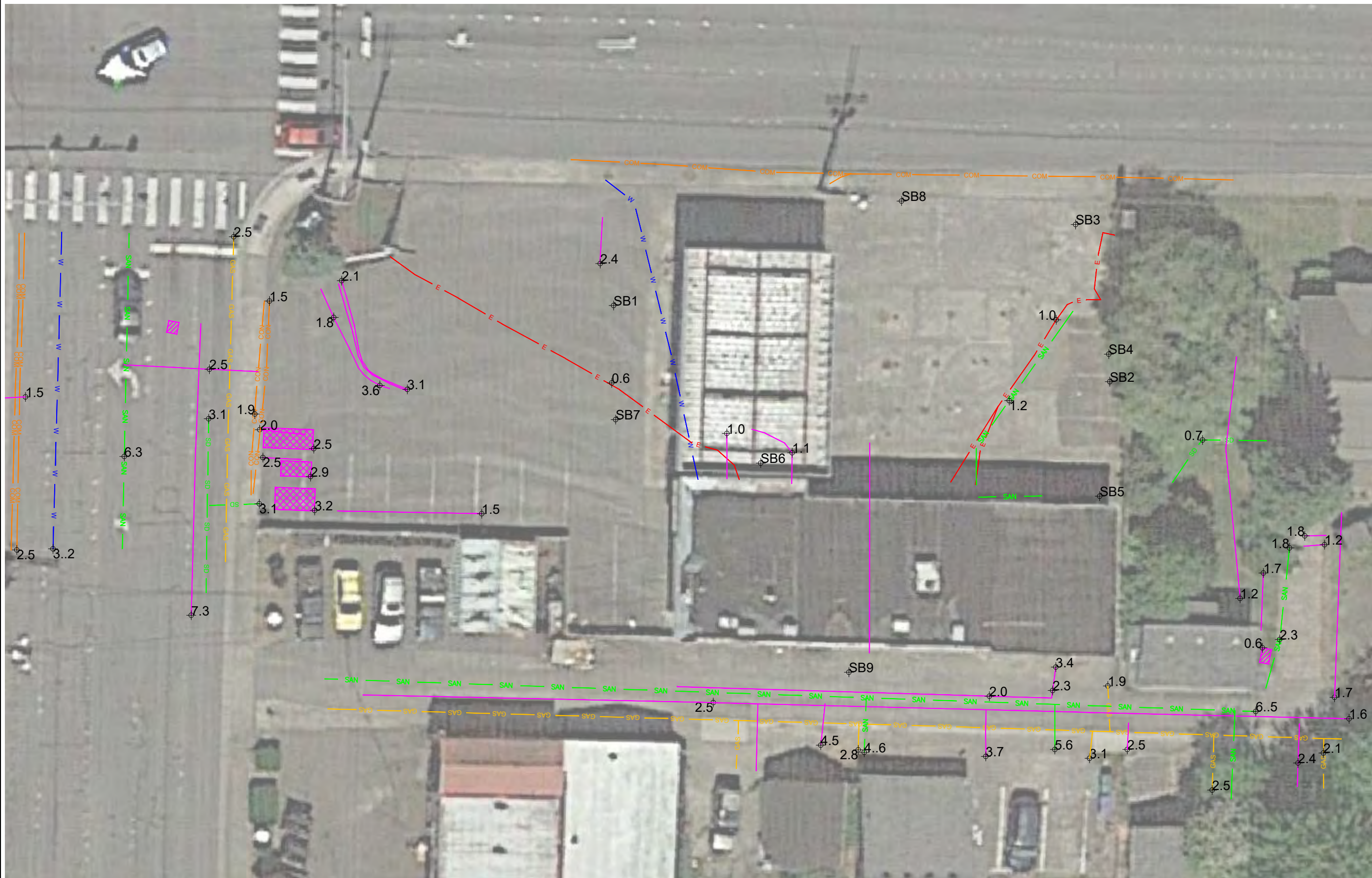
Geophysical Survey LLC performed this work in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practicing under similar conditions. No warranty, express or implied, beyond exercise of reasonable care and professional diligence, is made. This report is intended for use only in accordance with the purposes of the study described within.

Respectfully,

Geophysical Survey LLC

A handwritten signature in cursive script, appearing to read "Mark Villa".

Mark Villa L.G.



Legend

- 2.0 Depth to top in feet
- Unidentified utility
- E Electric line
- COM Communication line
- W Water line
- SAN Sanitary sewer
- SD Storm drain
- GAS Gas line
- UST
- GPR anomaly

FIGURE 1
Utility Map
Chevron 204117
Bremerton, WA

Geophysical Survey LLC
711 S Tacoma Street
Kennewick, Washington 99336

September 21, 2022

Russell Shropshire
Leidos
11824 North Creek Parkway, Suite 101
Bothell, WA 98011

Re: *Utility Locate
Chevron 204117
Bremerton, Washington*

Mr. Shropshire:

Geophysical Survey LLC conducted utility locating at four locations in Bremerton, Washington on August 25, 2022. The objectives of the survey were to detect and delineate subsurface utilities for boring clearance. Three locations were inside on concrete slabs and one location was outside south of the former Chevron station.

Methodology

Ground-Penetrating Radar

Ground-penetrating radar (GPR) uses a transducer to transmit FM frequency electromagnetic energy into the ground. Interfaces in the subsurface, defined by contrasts in dielectric constants, magnetic susceptibility, and to some extent, electrical conductivity, reflect the transmitted energy. The GPR system then measures the travel time between transmitted pulses and arrival of reflected energy. Buried objects such as pipes, barrels, foundations, and buried wires can cause all or a portion of the transmitted energy to be reflected back towards a receiving antenna. Geologic features such as cross-bedding, lateral and vertical changes in soil properties, and rock interfaces can also cause reflections of a portion of the EM energy.

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investigation is also affected by highly conductive material, such as metal drums and pipes that essentially reflect all the energy. The method cannot “see” directly below areas of highly reflective material because all of the energy is reflected.

Electromagnetic Line Locating

Utility line locating equipment operates through the principles of electromagnetics (EM), designed to detect underground utilities constructed of electrically conductive materials. An active signal is applied to the underground utility by means of a radio frequency (RF) transmitter and then traced with a receiver. With direct coupling, an RF signal is applied to a cable or pipe where there is access to a contact point. With no access to the utility, the indirect mode is used. A transmitter is placed on the ground surface above the conductor and the signal is induced through earth onto the pipe or cable.

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Passive signals include power transmission (60Hz) and radio transmission (15kHz-27kHz). 60Hz signals are present in conductors carrying electric current and from utilities carrying return current (indirect induction). Radio signals are created by high power, low frequency communication transmitters. Conductive utilities re-radiate the signal. A receiver is used to trace power and radio transmissions.

FIELD SURVEY

GPR Data Acquisition

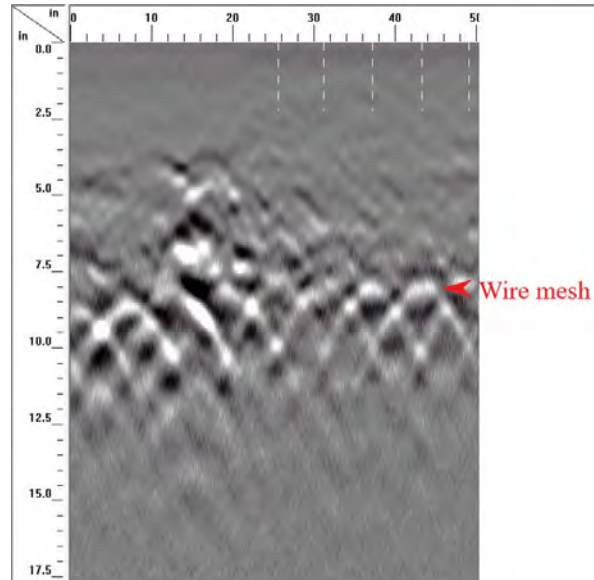
Exterior GPR data were acquired with a Geophysical Survey Systems, Inc. (GSSI) SIR G1 control unit and a 350 MHz Hyperstacking antenna. GPR data were collected at 18 scans/foot with a 60 nano-Second window (approximately 9 feet with a dielectric constant of 9).

Interior GPR data were acquired with a Geophysical Survey Systems, Inc. (GSSI) MiniXT control unit with a 2.7 GHz antenna. GPR data were collected at 10 scans per inch with a 10 nano-Second window (approximately 20 inches with a dielectric constant of 9).

RESULTS AND INTERPRETATION

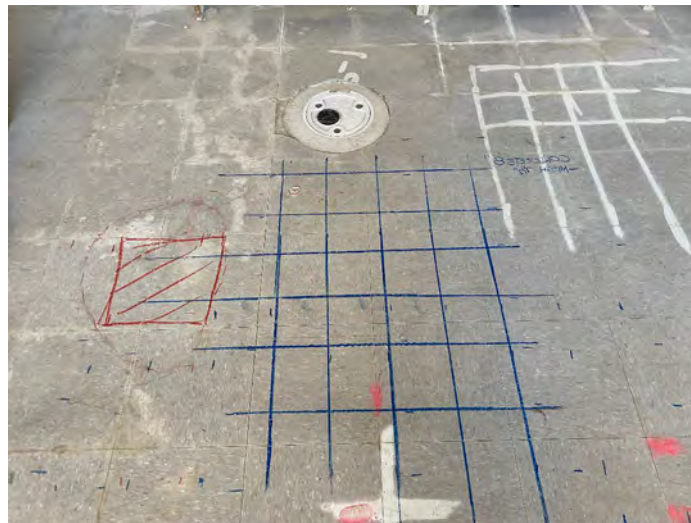
At 1936 5th Street utilities were painted in the fenced in back yard. Utility lines are shown on Figure 1.

Two interior locations were cleared at 2017 6th Street. The location on the west side of the building is shown below in image GPR Data 1.



GPR Data 1

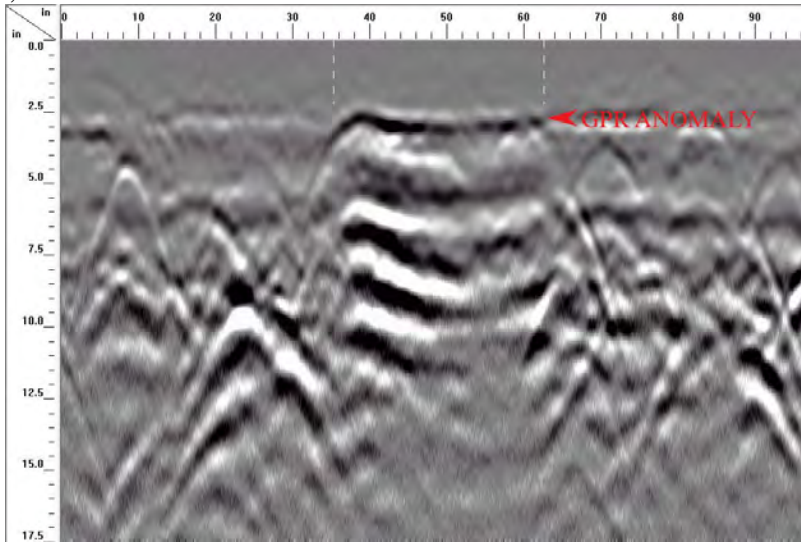
Reinforcement is a 6 by 6 inch mesh, concrete is approximately 7 ½ inches thick. The scanned area is shown below in image Location 1. Reinforcement was marked with a blue grease pencil. The red hatched area is interpreted as a floor drain.



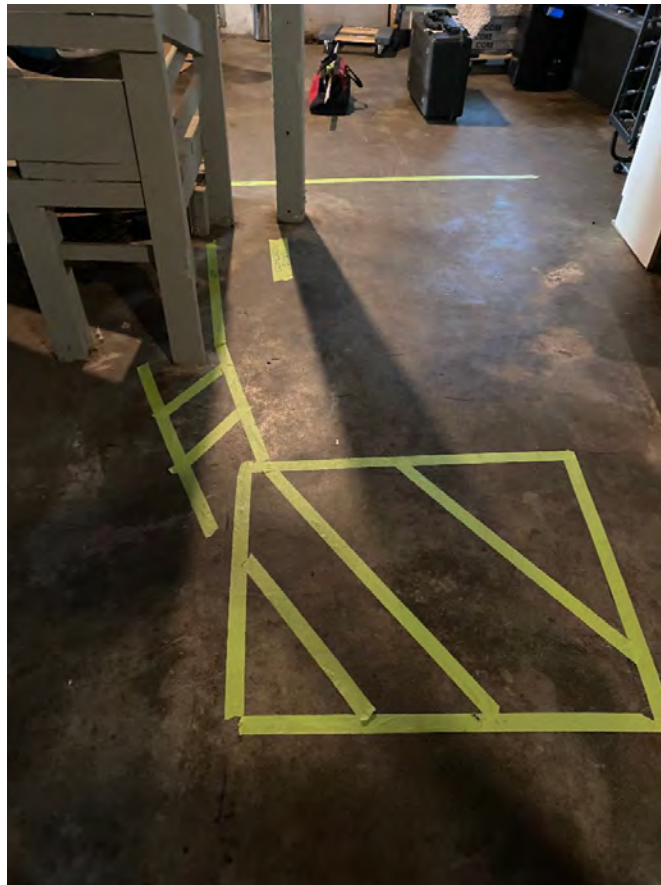
Location 1

The inside location on the east side of the building did not have reinforcement or subsurface utilities associated with the location.

An interior location was cleared at 2005 6th Street in the basement. The basement area had a GPR anomaly, approximately 24 inches by 24 inches, at a depth of 2.5 inches. The anomaly had associated piping. The anomaly is shown below in image GPR Data 2. The anomaly and piping were marked with green tape.



GPR Data 2



Location 2

CLOSURE

Geophysical surveys performed as part of this survey may or may not successfully detect or delineate any or all subsurface objects or features present. Locations, depths and scale of buried objects or subsurface features mapped as a result of this survey are a result of geophysical interpretation, and should be considered as confirmed, actual, or accurate only where recovered by excavation or drilling.

Geophysical Survey LLC performed this work in a manner consistent with the level of skill ordinarily exercised by members of the profession currently practicing under similar conditions. No warranty, express or implied, beyond exercise of reasonable care and professional diligence, is made. This report is intended for use only in accordance with the purposes of the study described within.

Respectfully,

Geophysical Survey LLC

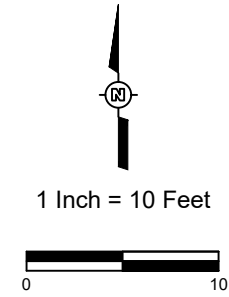
A handwritten signature in black ink, appearing to read "Mark Villa L.G.", is written over a light blue rectangular background.

Mark Villa L.G.

**Utility Locate
Chevron 204117**

LIST OF FIGURES

Figure 1 Utility Map



- Legend**
- 2.0 Depth to top in feet
 - Unidentified utility
 - E Electric line
 - COM Communication line
 - W Water line
 - SAN Sanitary sewer
 - SD Storm drain
 - GAS Gas line
 - UST UST
 - GPR anomaly

FIGURE 1
Utility Map
Chevron 204117
Bremerton, WA

**Appendix C:
RI Boring Logs**



Soil Boring: SB-1

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 8/23/2018
 Date Completed: 8/27/2018

Driller: Cascade
 Drill Method: Air Knife/HSA
 Total Boring Depth: 51.5 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | BLOWS/6" | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|----------------|-------------------|-----------------|-------------|------------|--|
| | | | | | | | | asphalt (3 inches) |
| | | | | | | | | FILL brown, silty SAND |
| dry | 0.0 | | | | SM | | 1 | |
| | | | | | | | 2 | (SM) SAA, no odor, no sheen |
| dry | 0.0 | | | | SM | | 3 | |
| | | | | | | | 4 | (SM) SAA, no odor, no sheen |
| dry | 0.0 | | | | SM | | 5 | |
| | | | | SB-1-6.0 | | | 6 | (SM) SAA, no odor, no sheen |
| | | | | | SM | | 7 | |
| damp | 5.0 | | | | | | 8 | light brown, silty SAND, 5% well graded gravel, 10% silt |
| | | 6 10 10 | | | | | 9 | |
| damp | 0.2 | | | | SW | | 10 | (SW) SAA, no odor, no sheen |
| | | 10 14 25 | | | | | 11 | |



Soil Boring: SB-1

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 8/23/2018
 Date Completed: 8/27/2018

Driller: Cascade
 Drill Method: Air Knife/HSA
 Total Boring Depth: 51.5 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | BLOWS/6" | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|----------------|-------------------|-----------------|-------------|------------|--|
| dry | 0.2 | | | | SW | | | light brown, silty SAND, 5% well graded gravel, 10% silt (<i>continued</i>) (SW) SAA, no odor, no sheen |
| dry | 0.2 | 15 19 20 | | SB-1-12.0 | SW | | 12 | (SW) SAA, 15% gravel, no odor, slight sheen |
| moist | | 8 12 13 | | | SW | | 13 | (SW) SAA, 25% gravel, no odor, no sheen |
| | 0.2 | | | SB-1-14.0 | SW | | 14 | |
| dry | | 18 22 25 | | | | | 15 | light brown, well graded gravelly SAND, 20% gravel, trace to no fines, no odor, slight sheen |
| dry | 5.2 | 18 23 14 | | SB-1-16.0 | GW | | 16 | (GW) SAA, <5% silt, no odor, no sheen |
| damp | 5.3 | 18 19 23 | | | GW | | 18 | (GW) light brown, gravelly SAND, 5% silt, 5% clay, 20-25% gravel, no odor, no sheen |
| damp | | 13 14 15 | | | GW | | 19 | (GW) SAA, well graded, gravelly SAND, no odor, no sheen |
| damp | 0.3 | | | | GW | | 20 | (GW) light brown, gravelly SAND, 10% silt, 5% clay, rare cobbles, no odor, no sheen |
| | | 18 20 22 | | | GW | | 21 | |
| | | | | | GW | | 22 | (GW) light brown, well graded, gravelly SAND, 5% silt, 10-15% gravel, no odor, slight sheen |



Soil Boring: SB-1

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 8/23/2018
 Date Completed: 8/27/2018

Driller: Cascade
 Drill Method: Air Knife/HSA
 Total Boring Depth: 51.5 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | BLOWS/6" | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|----------------|-------------------|-----------------|-------------|----------------------------|--|
| damp | 0.4 | 15 20 23 | | | SP | | 34 35 36 | (SP) SAA, light brown, medium to fine SAND, poorly graded, trace silt, no odor, no sheen |
| damp to dry | 5.2 | 20 30 32 | | | SP | | 40 41 42 43 44 | (SP) SAA, trace silt, no gravel, no odor, no sheen |

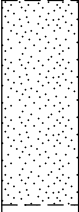
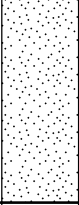


Soil Boring: SB-1

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 8/23/2018
 Date Completed: 8/27/2018

Driller: Cascade
 Drill Method: Air Knife/HSA
 Total Boring Depth: 51.5 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | BLOWS/6" SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|-------------------------|-------------------|-----------------|---|----------------------|---|
| damp | 0.0 | 15 20 25 | | SP |  | 45 46 | (SP) SAA, poorly graded SAND, no odor, no sheen |
| damp | 0.0 | 15 15 20 | SB-1-51.0 | SP |  | 50 51 | (SP) SAA, no odor, no sheen |
| | | | | | | 52 53 54 55 | Bottom of borehole at 51.5 feet. |



Soil Boring: SB-2

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 8/24/2018
 Date Completed: 8/28/2018

Driller: Cascade
 Drill Method: Air Knife/Hand Auger/HSA
 Total Boring Depth: 21.5 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | BLOWS/6" | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------|----------------|-------------------|-----------------|-------------|------------|--|
| | | | | | | | 0 | concrete (6 inches) |
| damp | 3.9 | | | | SW | | 1 | |
| | | | | | SW | | 2 | (SW) light brown, well graded, silty SAND, 10% silt, 5% gravel, 85% coarse to fine sand, no sheen, no odor |
| damp | 3.0 | | | | SW | | 4 | (SW) SAA, no odor, no sheen |
| damp | 3.9 | | | SB-2-6.0 | SW | | 6 | (SW) SAA, no odor, slight sheen |
| damp | 4.8 | 50/6" | | SB-2-8.0 | SP | | 8 | grey-brown to light brown, poorly graded, medium to fine, very dense SAND, 5% gravel, 5% silt, slight odor, slight sheen |
| damp | 3.0 | | | | SP | | 10 | (SP) SAA, no odor, no sheen |



Soil Boring: SB-3

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 8/24/2018
 Date Completed: 8/28/2018

Driller: Cascade
 Drill Method: Air Knife/HSA
 Total Boring Depth: 24.5 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | BLOWS/6" | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|----------------|-------------------|-----------------|-------------|------------|--|
| | | | | | | | 0 | concrete |
| damp | 4.1 | | | | SW | | 1 | |
| | | | | | | | 2 | (SW) light brown, well graded, gravelly SAND (FILL), 5% silt, 10% gravel, 85% coarse to fine sand, no odor, no sheen |
| damp | 0.8 | | | | SW | | 4 | (SW) SAA, no odor, no sheen cobbles at 4 feet ~4 inches long, well rounded, some wood fragments |
| | | | | | | | 5 | |
| damp | 2.0 | | | | SW | | 6 | (SW) SAA, no odor, no sheen |
| | | | | | | | 7 | |
| damp | 4.1 | | | | SW | | 8 | light brown, sandy SILT, 5% clay, 20% fine sand, mottling and lamination, sand content increasing with depth to approximately 40%, no odor, no sheen |
| | | 10 15 16 | | | | | 9 | |
| damp | 18.0 | | | | SM | | 10 | (SM) light brown, silty SAND, laminated, some stratification, no odor, no sheen |
| | | 10 8 14 | | SB-3-10.0 | | | 11 | |



Soil Boring: SB-4

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 8/23/2018
 Date Completed: 8/29/2018

Driller: Cascade
 Drill Method: Air Knife/HSA
 Total Boring Depth: 26 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | BLOWS/6" | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|---------------|----------------|-------------------|-----------------|-------------|------------|---|
| | | | | | | | | asphalt (3 inches) |
| damp | 1.0 | | | | SW | | 1 | |
| | | | | | | | 2 | (SW) light brown, well graded, gravelly SAND, trace to no fines, no odor, no sheen (Fill) |
| | | | | | | | 3 | |
| damp | 1.0 | | | | SW | | 4 | (SW) lighth brown, well graded SAND, 85% coarse to fine sand, 10% coarse to fine rounded gravel, 5% silt, no odor, no sheen |
| | | | | | | | 5 | |
| | | | | | | | 5.5 | cobbles at 5.5 feet, 5% cobbles |
| damp | 1.2 | | | SB-4-6.0 | SW | | 6 | (SW) light brown, well graded, gravelly SAND, rounded gravel up to 2 inches, no odor, slight globular sheen |
| | | | | | | | 7 | |
| damp | 8.3 | 8 12 15 | | | | | 8 | light brown-grey SILT (mottled and laminated), 5% sand, 5% clay, 90% silt, no odor, no sheen |
| | | | | | | | 9 | |
| moist | 7.2 | 7 7 11 | | | ML | | 10 | (ML) SAA, no odor, no sheen |



Soil Boring: SB-4

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 8/23/2018
 Date Completed: 8/29/2018

Driller: Cascade
 Drill Method: Air Knife/HSA
 Total Boring Depth: 26 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | BLOWS/6" | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|----------------|-------------------|-----------------|-------------|------------|--|
| | | | | | ML | | 11 | (ML) SAA, no odor, no sheen <i>(continued)</i> |
| moist | 784 | 6 7 10 | | SB-4-12.0 | SM | | 12 | (SM) light brown, silty SAND, poorly graded, 30-40% silt, well laminated, 60% fine sand, slight odor, no sheen |
| | | | | | CL | | 12 | (CL) 2 inch CLAY layer |
| moist | | 7 20 20 | | | SW-SM | | 13 | (SW-SM) light brown, poorly graded, silty SAND, 10% silt, 5% coarse gravel, no odor, no sheen |
| damp | 3.6 | | | SB-4-14.0 | SW-SM | | 14 | (SW-SM) light brown, well graded SAND, 5% silt, 5% gravel, 90% coarse to fine sand |
| | | 20 20 25 | | | | | 15 | |
| damp | 5.6 | | | | SW-SM | | 16 | (SW-SM) SAA, no odor, no sheen |
| | | 25 50/6" | | | | | 17 | |
| damp | 6.5 | | | | SW-SM | | 17 | (SW-SM) SAA, no odor, no sheen |
| | | 25 50/6" | | | | | 18 | |
| | | | | | SW-SM | | 19 | (SW-SM) SAA, no odor, no sheen |
| | | 50/6" | | | | | 20 | |
| | 6.3 | | | | SW-SM | | 20 | (SW-SM) SAA, no odor, no sheen |
| | | 50/6" | | | | | 21 | |



Soil Boring: SB-5

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 8/23/2018
 Date Completed: 8/29/2018

Driller: Cascade
 Drill Method: Air Knife/Hand Auger/HSA
 Total Boring Depth: 31.5 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | BLOWS/6" | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|---------------|----------------|-------------------|-----------------|-------------|------------|--|
| | | | | | ML | | 12 | (ML) light brown SILT (laminated), no odor, no sheen |
| damp to moist | 2.6 | | | SB-5-12.0 | ML | | 13 | (ML) SAA, no odor, no sheen |
| damp to moist | 565.0 | 12 8 8 | | | | | 14 | (ML) light brown SILT, 5% sand, HC odor, no sheen |
| | | 8 4 4 | | SB-5-14.0 | ML | | 15 | |
| damp | 1285 | 4 18 26 | | | | | 16 | |
| | | | | | | | 17 | poorly graded SAND, 5% silt, no odor, slight sheen |
| damp | 2395 | 23 50/6" | | SB-5-17.5 | SP | | 18 | (SP) SAA, strong HC odor, no sheen |
| damp | 1132 | 20 50/6" | | | SP | | 19 | (SP) SAA, strong HC odor, medium sheen |
| damp | 49.0 | 25 50/6" | | | SP | | 20 | (SP) SAA, slight odor, no sheen |
| | | | | | SM | | 21 | |
| | | | | | | | 22 | (SM) ligh brown, silty SAND with gravel |



Soil Boring: SB-5

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 8/23/2018
 Date Completed: 8/29/2018

Driller: Cascade
 Drill Method: Air Knife/Hand Auger/HSA
 Total Boring Depth: 31.5 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | BLOWS/6" SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|-------------------------|-------------------|-----------------|-------------|------------|---|
| damp | 7.6 | 25 50/5" | | SW | | 23 | well graded SAND, 20% coarse to fine gravel, slight odor, no sheen (SW) SAA, no odor, no sheen |
| damp | 10.3 | 24 50 | SB-5-24.0 | SW | | 24 | (SW) SAA, no odor, no sheen |
| damp | | 30 50 | | SW | | 25 | cobble, <1 inch recovery |
| damp | 13.3 | 60 | | GM | | 26 | (GM) well graded, brown-grey, gravelly SAND, 5% clay, trace silt, 20% gravel, 75% coarse to fine sand, slight HC odor, no sheen |
| | | | | | | 28 | no recovery |
| damp | 2.6 | 100 100/5" | SB-5-30.0 | GM | | 30 | (GM) SAA, well graded, brown, gravelly SAND, no odor, no sheen |
| | | | | | | 32 | Bottom of borehole at 31.5 feet. |



Soil Boring: SB-7

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 8/27/2018
 Date Completed: 8/27/2018

Driller: Cascade
 Drill Method: Air Knife/HSA
 Total Boring Depth: 29 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | BLOWS/6" SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|-------------------------|-------------------|-----------------|-------------|------------|---|
| damp | 409 | 2 2 2 | | ML | | 12 | (ML) SAA, mottled SILT |
| damp | | 11 11 11 | | SM | | 13 | (SM) grey, silty SAND, slight HC odor, no sheen |
| damp | 501 | 7 8 9 | SB-7-14.0 | | | 14 | grey, poorly graded SAND, 10% silt, no odor, no sheen |
| damp | | 50/6" | | SP-SM | | 15 | perched water seam at ~15.25 feet, few pockets of coarse sand (SP-SM) SAA, no odor, no sheen |
| damp | 220.1 | 25 50/6" | | SP | | 16 | (SP) grey-brown, gravelly SAND, 5% silt, 5% clay, 15-20% gravel, slight HC odor, no sheen |
| damp to wet | 225.1 | 12 14 15 | | SP | | 17 | (SP) grey-brown, gravelly SAND with pockets of well graded sand, slight HC odor, no sheen |
| damp | | 15 17 18 | | SP-SC | | 18 | (SP-SC) brown to gray-brown, gravelly SAND, 5% clay, 5% silt, slight HC odor |
| | | | | SP-SM | | 19 | (SP-SM) light brown, gravelly SAND, 5% silt, slight HC odor, no sheen |



Soil Boring: SB-8

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 8/29/2018
 Date Completed: 8/29/2018

Driller: Cascade
 Drill Method: Air Knife/HSA
 Total Boring Depth: 26 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | BLOWS/6" | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------|----------------|-------------------|-----------------|-------------|------------|--|
| damp | 4.9 | 17 | 50/6" | SB-8-12.0 | GW | | 12 | (GW) well graded, brown, gravelly SAND, 10% silt, no odor, slight sheen |
| damp | 4.4 | 50/6" | | | SW | | 13 | (SW) well graded SAND, 5-10% gravel, 5% silt, 85% coarse to fine sand, no odor, slight sheen |
| damp | 4.4 | 50/6" | | SB-8-14.0 | | | 14 | well graded, gravelly SAND, 5-10% clay, coarse to fine, well graded gravel, coarse to fine sand, no odor, slight sheen |
| damp | 4.7 | 50/6" | | | GW | | 15 | (GW) SAA, no odor, slight sheen |
| damp | 4.9 | 50/6" | | | | | 16 | |
| damp | 4.9 | 75/6" | | | | | 17 | brown, well graded, silty SAND, 15% gravel, 20% silt, 65% coarse to fine SAND, no odor, no sheen |
| damp | 4.9 | 50/6" | | | | | 18 | cobbles at 17.5 feet |
| damp | 4.9 | 50/6" | | | SM | | 19 | (SM) orange-brown, well graded, silty SAND, 15% gravel, 5% clay, no odor, no sheen |
| damp | 4.9 | 50/6" | | | | | 20 | (GM) brown, well graded, silty GRAVEL, 5% clay, 15% silt, 5% sand, 75% gravel, no odor, no sheen |
| damp | 4.2 | 50/6" | | | GM | | 21 | |
| | | | | | SP | | 22 | (SP) brown, poorly graded SAND, 5% gravel, 5% silt, no odor, no sheen |



Soil Boring: SB-9

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 8/31/2018
 Date Completed: 8/31/2018

Driller: Cascade
 Drill Method: Air Knife
 Total Boring Depth: 11.8 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | BLOWS/6" | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------|----------------|-------------------|-----------------|-------------|------------|--|
| | | | | | | | 0 | asphalt (5 inches) |
| damp | 2.1 | | | | SM | | 1 | |
| | | | | | SM | | 2 | (SM) brown, silty, fine SAND, trace bricks, 5% fine gravel, well graded, no odor, no sheen |
| damp | 2.0 | | | | SM | | 3 | |
| | | | | | SM | | 4 | (SM) SAA, no odor, no sheen |
| damp | 3.1 | | | | SM | | 5 | |
| | | | | | SM | | 6 | (SM) SAA, no odor, no sheen |
| damp | 2.4 | | | | ML | | 7 | (ML) brown, fine, sandy SILT, trace clay, no odor, slight globular sheen |
| | | | | | CL | | 8 | (CL) brown, silty CLAY, trace fine sand and fine gravel, no odor, no sheen |



SB-9-7.0



Soil Boring: SB-10

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 7/24/2019
 Date Completed: 7/24/2019

Driller: AEC
 Drill Method: Direct Push
 Total Boring Depth: 28 ft
 Elevation: ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|---|-----------------|-------------|------------|--|
| | | | | | | | 0 | ivy/dirt |
| dry | 0.0 | | | | SM | | 1 | |
| | | | | | | | 2 | (SM) orange-brown sandy SILT / silty SAND, 5-10% gravel, no odor, no sheen |
| | | | | | | | 3 | |
| dry | 0.0 | | | | SM | | 4 | |
| | | | | | | | 5 | (SM) SAA, no odor, no sheen |
| | | | | | | | 6 | |
| damp | 0.0 | | | | ML | | 7 | |
| | | | | | | | 8 | (ML) gray-brown, mottled SILT, 5% sand, 5% clay, no odor, no sheen |
| | | | | | | | 9 | |
| damp | 0.0 | | | | ML | | 10 | |
| | | | | G < 0.3 D < 5.2 HO = 21 B < 0.0005 | | | | (ML) SAA, no odor, no sheen |



Soil Boring: SB-11

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 7/23/2019
 Date Completed: 7/24/2019

Driller: AEC
 Drill Method: Direct Push
 Total Boring Depth: 28 ft
 Elevation: ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|---|-----------------|-------------|------------|--|
| damp | 7.3 | | SB-11-10 | G = 1.0 D < 5.1 HO < 13 B < 0.0005 | ML | | 11 | (ML) brown SILT, no odor, no sheen |
| damp | 1.3 | | | | ML | | 12 | (ML) SAA, no odor, no sheen |
| | | | | | ML | | 13 | (ML) SAA except color change to orange |
| | | | | | ML | | 13 | (ML) SAA except color change to brown |
| damp | 276 | | SB-11-14 | G = 1.5 D < 5.1 HO < 13 B < 0.0005 | ML | | 14 | (ML) orange-brown SILT, no odor, slight sheen |
| | | | | | | | 15 | |
| damp | 324 | | | | SM | | 16 | (SM) gray-brown silty SAND, 15% silt, 1% gravel, HC odor, no sheen |
| | | | | | | | 17 | |
| damp | 280 | | | | SM | | 18 | (SM) SAA, HC odor, slight sheen |
| damp | 402 | | | | SM | | 18 | (SM) SAA, strong HC odor, slight sheen |
| | | | | | | | 19 | |
| | | | | | SP- | | 20 | |



Soil Boring: SB-12

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 7/23/2019
 Date Completed: 7/24/2019

Driller: AEC
 Drill Method: Direct Push
 Total Boring Depth: 28 ft
 Elevation: ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|---|-----------------|-------------|------------|---|
| | | | | | | | 0 | grass |
| dry | 3.9 | | | | SM | | 1 | |
| | | | | | SM | | 2 | (SM) orange-brown, sandy SILT / silty SAND, no odor, no sheen |
| | | | | | | | 3 | |
| dry | 3.9 | | | | SM | | 4 | (SM) SAA, no odor, no sheen |
| | | | | | | | 5 | |
| dry | 6.6 | | SB-12-6 | G <0.3 D <5.1 HO <13 B <0.0005 | SM | | 6 | (SM) brown and gray, mottled, sandy SILT, no odor, no sheen |
| | | | | | | | 7 | |
| | 1.7 | | | | SM | | 8 | (SM) SAA |
| | | | | | ML | | 9 | (ML) orange-gray SILT, 5% clay, 5% sand, no odor, no sheen |
| moist | | | | | | | 10 | |



Soil Boring: SB-12

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 7/23/2019
 Date Completed: 7/24/2019

Driller: AEC
 Drill Method: Direct Push
 Total Boring Depth: 28 ft
 Elevation: ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|---|-----------------|-------------|------------|--|
| | 0.0 | | | | ML | | 11 | (ML) light brown SILT, no odor, no sheen |
| damp | 0.0 | | | | ML | | 12 | (ML) SAA, no odor, no sheen |
| damp | 0.0 | | | | ML | | 14 | (ML) SAA, no odor, no sheen |
| | | | SB-12-14.5 | G < 0.3 D < 5.1 HO < 13 B < 0.0005 | | | 15 | |
| damp | 0.0 | | | | SM | | 16 | (SM) brown-gray silty SAND / gravelly SAND, 15-20% gravel, 15-20% silt, 60% coarse to fine sand, no odor, no sheen |
| | | | | | SM | | 17 | |
| damp | 0.0 | | | | ML | | 18 | (ML) brown SILT, no odor, no sheen |
| | | | | | SM | | 19 | (SM) brown silty SAND / gravelly SAND, 15-20% gravel, 15-20% silt, well graded sand, no odor, no sheen |
| | | | | | SM | | 20 | |



Soil Boring: SB-15

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 7/22/2019
 Date Completed: 7/23/2019

Driller: AEC
 Drill Method: Direct Push
 Total Boring Depth: 23 ft
 Elevation: ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|--|-----------------|-------------|------------|---|
| | | | | | | | 0 | asphalt (3 inches) |
| damp | 4.6 | | | | SM | | 1 | |
| | | | | | | | 2 | (SM) brown silty SAND, well graded, 10% silt, 5% gravel, no odor, no sheen |
| | | | | | | | 3 | |
| damp | 4.4 | | | | SM | | 4 | (SM) orangish-brown silty SAND, well graded, no gravel, 5-10% silt, no odor, no sheen |
| | | | | | | | 5 | |
| damp | 4.3 | | | | SM | | 6 | (SM) light brown silty SAND, well graded, 5% gravel, no odor, no sheen |
| | | | | | | | 7 | |
| damp | 13.9 | | | G = 3.1 D = 290 HO <100 B <0.0004 | SM | | 8 | (SM) orange-brown silty SAND, no odor, no sheen |
| | | | | | | | 9 | |
| | | | | | | | 10 | |

SB-15-8



Soil Boring: SB-15

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 7/22/2019
 Date Completed: 7/23/2019

Driller: AEC
 Drill Method: Direct Push
 Total Boring Depth: 23 ft
 Elevation: ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|----------------------------|-----------------|-------------|-----------------------------|--|
| damp | 13.1 | | | | SM | | 10 | (SM) SAA, no odor, no sheen at 10 ft |
| | | | | | | | 11 | |
| damp | 7.5 | | | | SM | | 12 | (SM) SAA, no odor, no sheen |
| damp | 20.7 | | | | SM | | 13 | (SM) light brown-gray silty SAND, slight odor, slight sheen |
| damp | 0.6 | | | | SM | | 14 | (SM) SAA, slight odor, slight sheen |
| | | | | | SM | | 15 | (SM) light brown-gray silty SAND, 5% gravel, no odor, no sheen |
| damp | 0.6 | | | | SM | | 16 | (SM) SAA, no odor, no sheen |
| | | | | | | | 17 | |
| damp | 8.6 | | | | SM | 18 | (SM) SAA, no odor, no sheen | |
| | | | | | | 19 | | |
| | | | | | | 20 | | |

SB-15-13
 G = 3.2
 D = 1100
 HO < 210
 B < 0.0004



Soil Boring: SB-15

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 7/22/2019
 Date Completed: 7/23/2019

Driller: AEC
 Drill Method: Direct Push
 Total Boring Depth: 23 ft
 Elevation: ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|--|-----------------|-------------|------------|----------------------------------|
| damp | 3.2 | | | | SM | | 21 | (SM) SAA, no odor, no sheen |
| | 5.1 | | SB-15-22.5 | G = 1.2 D = 18 HO < 10 B < 0.0005 | SM | | 22 | |
| | | | | | | | 23 | (SM) SAA, no odor, no sheen |
| | | | | | | | 23 | Bottom of borehole at 23.0 feet. |
| | | | | | | | 24 | |
| | | | | | | | 25 | |
| | | | | | | | 26 | |
| | | | | | | | 27 | |
| | | | | | | | 28 | |
| | | | | | | | 29 | |
| | | | | | | | 30 | |



Soil Boring: SB-16

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 7/22/2019
 Date Completed: 7/23/2019

Driller: AEC
 Drill Method: Direct Push
 Total Boring Depth: 23 ft
 Elevation: ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|--|-----------------|-------------|------------|--|
| | | | | | | | 0 | asphalt (3 inches) |
| damp | 3.0 | | | | SM | | 1 | |
| | | | | | | | 2 | (SM) light orangish-brown silty SAND, 5% gravel (up to 2 inches), rounded gravel, no odor, slight globular (organic) sheen |
| | | | | | | | 3 | |
| damp | 2.0 | | | | SM | | 4 | (SM) SAA, no odor, no sheen |
| | | | | | | | 5 | |
| damp | 2.0 | | | | SM | | 6 | (SM) SAA, 10% gravel, 15% silt, no odor, no sheen |
| | | | | | | | 7 | |
| damp | 91.0 | | | | SM | | 8 | (SM) light brown silty SAND, 15% silt, <5% gravel, no odor, no sheen |
| | | | | | SP | | 9 | (SP) |
| damp | 303 | | | G = 1500 D = 46 HO <11 B <0.023 | SP | | 9 | (SP) gray, medium SAND, 5% silt, strong HC odor, heavy sheen |
| | | | | | | | 10 | |

SB-16-9



Soil Boring: SB-16

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 7/22/2019
 Date Completed: 7/23/2019

Driller: AEC
 Drill Method: Direct Push
 Total Boring Depth: 23 ft
 Elevation: ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|----------------------------|-----------------|-------------|------------|--|
| damp | 41.2 | | | | SP | | | (SP) gray, medium SAND, HC odor, no sheen |
| | | | | | SP | | 11 | (SP) SAA |
| damp | 21.2 | | | | SP | | 12 | (SP) SAA, no odor, no sheen |
| damp | 88.8 | | | | SM | | 13 | (SM) gray silty SAND, 5-10% gravel, HC odor, moderate to heavy sheen |
| damp | 7.1 | | | | | | 14 | |
| | | | | | | | 15 | |
| damp | 12.1 | | | | SM | | 16 | (SM) SAA, 10% gravel, HC odor, moderate sheen |
| damp | 4.5 | | | | SM | | 17 | (SM) SAA, no odor, no sheen |
| damp | 34.9 | | | | | 18 | | |
| | | | | | | 19 | | |
| | | | | | | 20 | | |

SB-16-13
 G = 78
 D = 760
 HO < 110
 B = 0.0005



Soil Boring: SB-16

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 7/22/2019
 Date Completed: 7/23/2019

Driller: AEC
 Drill Method: Direct Push
 Total Boring Depth: 23 ft
 Elevation: ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|---|-----------------|--------------------|------------|----------------------------------|
| damp | 12.1 | | | | SM | [Stippled pattern] | 21 | (SM) SAA, no odor, no sheen |
| damp | 4.0 | | | | SM | | 22 | (SM) SAA, no odor, no sheen |
| damp | 4.0 | | SB-16-22.5 | G <0.2 D <4.2 HO <10 B <0.0004 | | | 23 | Bottom of borehole at 23.0 feet. |
| | | | | | | | 24 | |
| | | | | | | | 25 | |
| | | | | | | | 26 | |
| | | | | | | | 27 | |
| | | | | | | | 28 | |
| | | | | | | | 29 | |
| | | | | | | | 30 | |



Soil Boring: SB-17

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 7/22/2019
 Date Completed: 7/23/2019

Driller: AEC
 Drill Method: Direct Push
 Total Boring Depth: 30 ft
 Elevation: ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|---|-----------------|-------------|------------|--|
| | | | | | | | 0 | asphalt (3 inches) |
| damp | 4.0 | | | | SM | | 1 | |
| | | | | | | | 2 | (SM) brown silty SAND, 10% silt, 5% gravel, no odor, no sheen |
| | | | | | | | 3 | |
| damp | 4.2 | | | | SM | | 4 | (SM) orangish-brown silty SAND, 5% gravel, 10% silt, no odor, no sheen |
| | | | | | | | 5 | |
| damp | 4.6 | | | | SM | | 6 | (SM) light brown silty SAND, 5% gravel, no odor, no sheen |
| | | | | | | | 7 | |
| damp | 4.4 | | | G <0.2 D <4.4 HO <11 B <0.0004 | SM | | 8 | (SM) gray-brown silty SAND, 5% gravel, no odor, slight globular sheen |
| | | | | | SM | | 9 | (SM) gray-brown silty SAND, 15% gravel |
| | | | | | | | 10 | |

SB-17-8



Soil Boring: SB-17

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 7/22/2019
 Date Completed: 7/23/2019

Driller: AEC
 Drill Method: Direct Push
 Total Boring Depth: 30 ft
 Elevation: ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|---|-----------------|-------------|------------|---|
| damp | 24.0 | | | | SM | | | (SM) orangish-brown silty SAND, 15% silt at 10 ft |
| | | | | | SP | | | (SP) gray, medium SAND, poorly graded |
| | | | | | SP | | 11 | (SP) gray, medium SAND, 10% gravel |
| | | | | | SM | | | (SM) |
| damp | 12.6 | | | | SM | | 12 | (SM) gray silty SAND, HC odor, moderate sheen |
| damp | 70.5 | | | | SM | | 13 | (SM) orangish-brown silty SAND, 15% gravel, HC odor, moderate sheen |
| damp | 130.5 | | | | SM | | 14 | (SM) SAA, HC odor, moderate sheen |
| damp | 169.5 | | SB-17-14.5 | G = 210 D = 610 HO = 25 B < 0.024 | SM | | 15 | (SM) light brown silty SAND, 5% gravel, HC odor, moderate sheen |
| damp | 41.5 | | | | SM | | 16 | (SM) SAA, 10-15% gravel, HC odor, moderate sheen |
| | | | | | SM | | 17 | (SM) SAA, HC odor, moderate sheen |
| damp | 68.5 | | | | SM | | 18 | (SM) SAA, HC odor, moderate sheen |
| damp | 331 | | SB-17-19.5 | G = 1400 D = 3500 HO < 110 B < 0.023 G = 1100 (D) D = 730 (D) HO = 140 (D) B < 0.024 (D) | SP-SM | | 19 | (SP-SM) brown, medium SAND, 5% silt, 5% gravel, HC odor, moderate sheen |
| | | | | | | | 20 | HC odor, moderate to heavy sheen |



Soil Boring: SB-17

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 7/22/2019
 Date Completed: 7/23/2019

Driller: AEC
 Drill Method: Direct Push
 Total Boring Depth: 30 ft
 Elevation: ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|---|-----------------|-------------|------------|--|
| | | | | | SM | | | (SM) light brown silty SAND, 15% silt, 5% gravel, HC odor, moderate sheen |
| damp | 104.7 | | | | SM | | 21 | (SM) SAA, HC odor, moderate sheen |
| | | | | | SP | | | (SP) |
| damp | 56.1 | | | | SP | | 22 | (SP) brown, medium SAND, 5% gravel, HC odor, moderate sheen |
| | | | | | SP | | 23 | (SP) gray, medium SAND, <5% silt, HC odor, moderate sheen |
| damp | 80.1 | | | G = 140 D = 2800 HO = 110 B <0.025 | | | 24 | |
| damp | 31.7 | | | | SP | | 25 | (SP) gray-light brown, medium SAND, <5% silt, no gravel, HC odor, moderate sheen |
| damp | 3.7 | | | | SP | | 26 | (SP) SAA, HC odor, moderate sheen |
| | | | | | SP | | 27 | (SP) SAA |
| damp | 4.5 | | | | SP | | 28 | (SP) SAA, HC odor, slight sheen |
| | | | | | | | 29 | |
| damp | 5.3 | | | G = 0.2 D <4.1 HO <10 B <0.0004 | SP | | 30 | (SP) SAA, no odor, no sheen |

Bottom of borehole at 30.0 feet.



Soil Boring: SB-18

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 7/22/2019
 Date Completed: 7/23/2019

Driller: AEC
 Drill Method: Direct Push
 Total Boring Depth: 23 ft
 Elevation: ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|---|-----------------|-------------|------------|--|
| damp | 2.1 | | | | SM | | 11 | (SM) SAA, no odor, no sheen |
| damp | 2.0 | | | | SM | | 12 | (SM) SAA, no odor, no sheen |
| | | | | | SP | | 13 | (SP) brown, medium SAND, 5% silt, 5% gravel |
| damp | 2.1 | | | | SM | | 14 | (SM) brown silty SAND, no odor, no sheen |
| | | | | | SM | | 15 | (SM) SAA, no odor, no sheen |
| damp | 3.9 | | | | SM | | 16 | (SM) SAA, 10% silt, no odor, no sheen |
| | | | | | | | 17 | |
| damp | 4.2 | | | G < 0.2 D = 8.1 HO = 41 B < 0.0004 | SM | | 18 | (SM) brown silty SAND, no odor, slight sheen |
| | | | | | | | 19 | |
| | | | | | | | 20 | |

SB-18-18



Soil Boring: SB-18

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 7/22/2019
 Date Completed: 7/23/2019

Driller: AEC
 Drill Method: Direct Push
 Total Boring Depth: 23 ft
 Elevation: ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|---|-----------------|-------------|------------|----------------------------------|
| damp | 3.8 | | | | SM | | 21 | (SM) SAA, no odor, no sheen |
| | | | | | SM | | 22 | (SM) SAA, no odor, no sheen |
| damp | 3.2 | | SB-18-22.5 | G <0.2 D <4.4 HO <11 B <0.0004 | SM | | 23 | (SM) SAA, no odor, no sheen |
| | | | | | | | 23 | Bottom of borehole at 23.0 feet. |
| | | | | | | | 24 | |
| | | | | | | | 25 | |
| | | | | | | | 26 | |
| | | | | | | | 27 | |
| | | | | | | | 28 | |
| | | | | | | | 29 | |
| | | | | | | | 30 | |



Soil Boring: SB-19

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 7/25/2019
 Date Completed: 7/25/2019

Driller: AEC
 Drill Method: Direct Push
 Total Boring Depth: 28 ft
 Elevation: ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|---|-----------------|-------------|------------|---|
| | | | | | | | 0 | asphalt (3 inches) |
| damp | 6.3 | | | | SM | | 1 | |
| | | | | | | | 2 | (SM) orangish-brown sandy SILT, 10-15% sand, 5% gravel, no odor, no sheen |
| | | | | | | | 3 | |
| damp | 6.4 | | | | SM | | 4 | (SM) orangish-brown silty SAND, 5% rounded gravel, 10-15% silt, no odor, no sheen |
| | | | | | | | 5 | |
| damp | 6.7 | | | | SM | | 6 | (SM) SAA except larger rounded gravel up to 5 inches, no odor, no sheen |
| | | | | | | | 7 | |
| damp | 0.0 | | | G <0.2 D <4.2 HO <11 B <0.0005 G <0.2 (D) D = 11 (D) HO = 43 (D) B <0.0004 (D) | SM | | 8 | (SM) orangish-brown silty SAND, 5-10% gravel, well graded sand, 15% silt, no odor, no sheen |
| | | | | | | | 9 | |
| | | | | | | | 10 | |

SB-19-8



Soil Boring: SB-20

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: R. Otteman
 Date Started: 7/25/2019
 Date Completed: 7/25/2019

Driller: AEC
 Drill Method: Direct Push
 Total Boring Depth: 28 ft
 Elevation: ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|----------------------------|-----------------|-------------|------------|--|
| damp | 20.6 | | | | SM | | 11 | (SM) SAA, orange-light brown silty SAND, no odor, no sheen |
| damp | 18.6 | | | | SM | | 12 | (SM) SAA, no odor, no sheen |
| | | | | | | | 13 | large gravel, >2 inches at 12.5 ft |
| damp | 49.0 | | | | SM | | 14 | (SM) SAA, no odor, no sheen |
| | | | | | | | 15 | |
| damp | 3.2 | | | | SP | | 16 | |
| | | | | | | | 17 | (SP) light brown, medium SAND, poorly graded, 5% gravel, <5% silt, no odor, no sheen |
| damp | 19.0 | | | | SP | | 18 | (SP) SAA, no odor, no sheen |
| | | | | | | | 19 | |
| | | | | | | | 20 | |

SB-20-14

G = 170
 D = 23
 HO = 53
 B < 0.034



Soil Boring: SB-22

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: TD
 Date Started: 2/24/2020
 Date Completed: 2/26/2020

Driller: AEC Drilling
 Drill Method: Air Knife/Direct Push
 Total Boring Depth: 25 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|-----------------|-------------|------------|---|
| | | | | | | | asphalt (3 inches) |
| moist | | | | | | 0 | (ML) 3 in - 2 ft: brown SILT with some gravel |
| moist | 0.0 | | | ML | | 2 | 2 - 2.5 ft: medium dark brown SILT with ~20% gravel and fill debris (up to 1.5 inches), trace very fine sand, soft; no odor, no sheen |
| wet | 0.0 | | | ML-CL | | 4 | (ML-CL) 4 - 4.5 ft: light brown, clayey SILT, soft, medium plastic (rolls to 3 inches); no odor, no sheen |
| moist to damp | 1.4 | | | ML | | 6 | (ML) 6 - 6.5 ft: light gray-brown, laminated SILT with some clay (less clayey than above), slightly plastic (rolls to <2 inches), stiff; no odor, no sheen |
| wet | 1.3 | | SB-22-8 | ML-CL | | 8 | (ML-CL) 8 - 8.5 ft: light brown, laminated, clayey SILT (more clayey than above), medium plastic (rolls to 4 inches), firm; no odor, no sheen 8.5 - 10 ft: SAA; no odor, no sheen |
| moist | 0.0 | | | ML-CL | | 9 | |
| | 0.0 | | | | | 10 | 10 - 11 ft: no recovery, slough |



Soil Boring: SB-22

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: TD
 Date Started: 2/24/2020
 Date Completed: 2/26/2020

Driller: AEC Drilling
 Drill Method: Air Knife/Direct Push
 Total Boring Depth: 25 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|-----------------|-------------|------------|---|
| wet to moist | 2.3 | | | ML-CL | | 11 - 12 ft | (ML-CL) 11 - 12 ft: SAA, laminated, clayey SILT; no odor, no sheen |
| moist | 4.9 | | | ML | | 12 - 15 ft | (ML) 12 - 15 ft: gray-brown SILT with ~15-20% gravel up to 1 inch, with ~2-5% very fine sand, hard; probable till; no odor, no sheen |
| | 3.6 | | | ML | | 13 - 14 ft | |
| | 1.1 | | | ML | | 14 - 15 ft | |
| | 3.7 | | | | | 15 - 16 ft | 15 - 16 ft: no recovery |
| moist | 5.5 | | SB-22-16 | ML | | 16 - 20 ft | (ML) 16 - 20 ft: SAA; probable till; no odor, no sheen |
| | 6.7 | | | ML | | 17 - 18 ft | |
| | 5.5 | | | ML | | 18 - 19 ft | |
| | 3.4 | | | ML | | 19 - 20 ft | |
| moist | 2.0 | | | | | 20 - 21 ft | 20 - 21 ft: SAA; probable till |
| moist | 1.8 | | | SM | | 21 - 22 ft | (SM) 21 - 22 ft: medium brown-gray, silty, very fine to medium SAND with ~35% gravel up to 2 cm, very dense; no odor, no sheen |



Soil Boring: SB-23

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: TD
 Date Started: 2/25/2020
 Date Completed: 2/25/2020

Driller: AEC Drilling
 Drill Method: Air Knife/Direct Push
 Total Boring Depth: 25 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|-----------------|-------------|------------|--|
| | | | | | | 1 | asphalt (6 inches) concrete (7 inches) |
| moist | 5.2 | | | | | 2 | (ML) 2 - 2.5 ft: medium yellow-brown SILT with ~10% gravel to 2 cm, firm; no odor, no sheen |
| moist | 7.0 | | | | | 4 | 4 - 4.5 ft: light brown-gray, coarse SILT with ~7% very fine sand, with ~10% gravel up to 1 inch, soft; no odor, no sheen |
| moist | 6.6 | | | ML | | 6 | 6 - 6.5 ft: medium brown-gray SILT with sand, similar to above, gravel up to 1.5 inches, soft; no odor, medium organic sheen |
| moist | 5.6 | | | | | 8 | 8 - 8.5 ft: medium gray-brown SILT, SAA; no odor, no sheen |
| moist to wet | 6.5 | | | | | 9 | 8.5 - 10 ft: light brown SILT with ~15% gravel up to 1 inch, stiff; no odor, no sheen |
| moist | 6.9 | | | | | 10 | 10 - 10.5 ft: slough, no recovery |
| | | | | | | 11 | 10.5 - 11.5 ft: light brown SILT with ~20% gravel up to 1 inch, stiff; probable till; no odor, no sheen |

SB-23-8



Soil Boring: SB-24

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: TD
 Date Started: 2/25/2020
 Date Completed: 2/25/2020

Driller: AEC Drilling
 Drill Method: Air Knife/Direct Push
 Total Boring Depth: 35 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|-----------------|-------------|------------|---|
| | | | | | | 1 | asphalt (5 inches) concrete (10 inches) |
| moist | 0.8 | | | | | 2 | (ML) 2 - 2.5 ft: medium red-brown SILT with ~15% gravel up to 0.5 inch, soft; no odor, no sheen |
| moist | 2.0 | | | | | 4 | 4 - 4.5 ft: medium gray-brown, coarse SILT with 10-15% gravel, with ~2% very fine sand, firm; no odor, no sheen |
| moist | 2.8 | | | ML | | 6 | 5 - 8 ft: large cobbles up to 10 inches 6 - 6.5 ft: SAA |
| moist | 4.1 | | | | SB-24-8 | 8 | 8 - 8.5 ft: SAA with ~20-25% gravel up to 1.5 inch, stiff; no odor, no sheen |
| moist | 0.0 | | | | | 9 | 8.5 - 10 ft: medium dark brown SILT with 25% gravel up to 1 inch, stiff; no odor, no sheen |
| | 0.0 | | | | | 10 | 10 - 11 ft: poor recovery |



Soil Boring: SB-24

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: TD
 Date Started: 2/25/2020
 Date Completed: 2/25/2020

Driller: AEC Drilling
 Drill Method: Air Knife/Direct Push
 Total Boring Depth: 35 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|-----------------|-------------|--|-----------------------|
| moist | 1.1 | | | | | (GM) 11 - 13 ft: medium dark brown, silty GRAVEL up to 1.5 inches, very dense; no odor, no sheen | |
| | 0.8 | | | GM | | 12 | |
| moist to wet | 2.1 | | | | | (ML) 13 - 15 ft: medium light brown SILT with ~8% gravel up to 1 inch, stiff to hard; no odor, no sheen | |
| | 1.7 | | SB-24-14 | ML | | 14 | |
| moist | 1.4 | | | | | (GM) 15 - 16.5 ft: medium brown, silty GRAVEL up to 1 inch, very dense; no to very weak odor, no sheen | |
| | 6.5 | | | GM | | 16 | |
| moist to wet | 107 | | | | | (ML) 16.5 - 17 ft: medium light brown SILT with ~5% gravel up to 0.5 inch; weak HC odor, no sheen 17 - 18 ft: SAA, but green-gray; strong HC odor, heavy sheen | |
| | 44.6 | | SB-24-17.5 | ML | | 18 | |
| moist | 2.5 | | | | | 19 | |
| | 6.4 | | | | | 20 - 21.5 ft: no recovery, slough | |
| | | | | | | 21 | |
| moist | | | | | | (GM) 21.5 - 22 ft: medium yellow-brown, silty GRAVEL up to 1 inch, very dense; weak odor, light to medium sheen | |
| | | | | GM | | 22 | |



Soil Boring: SB-26

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: TD
 Date Started: 2/26/2020
 Date Completed: 2/26/2020

Driller: AEC Drilling
 Drill Method: Air Knife/Direct Push
 Total Boring Depth: 25 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|-----------------|-------------|------------|---|
| | | | | | | 1 | asphalt (6 inches) concrete (7 inches) |
| damp | 0.1 | | | | | 2 | (ML) 2 - 2.5 ft: yellow-brown SILT with ~20% gravel up to 2 inches, soft; no odor, no sheen |
| damp | 0.0 | | | | | 4 | 4 - 4.5 ft: medium brown SILT with ~25% gravel up to 2.5 inches, firm; no odor, no sheen |
| moist | 3.8 | | | ML | | 6 | 6 - 6.5 ft: medium light brown-gray SILT with ~5% gravel/rock up to 0.5 inch, firm; no odor, no sheen |
| moist | 4.2 | | | | | 8 | 8 - 8.5 ft: SAA, gravel up to 1 inch |
| moist | 4.9 | | | | | 9 | 8.5 - 9 ft: medium brown SILT with ~8% gravel up to 1.5 inches, firm; no odor, no sheen 9 - 10 ft: medium brown SILT with some layers of very fine to medium sand (~20% overall), with ~3% gravel, firm; no odor, no sheen |
| moist | 4.7 | | | | | 10 | 10 - 10.75 ft: no recovery |
| | | | | ML | | 11 | (ML) |

SB-26-8



Soil Boring: SB-27

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: TD
 Date Started: 2/26/2020
 Date Completed: 2/26/2020

Driller: AEC Drilling
 Drill Method: Air Knife/Direct Push
 Total Boring Depth: 30 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|---------------------|---------------------|----------------|-------------------|-----------------|-------------|------------|--|
| | | | | | | 0 | grass at surface |
| moist | 4.0 | | | ML | | 1 | (ML) |
| | | | | | | 2 | 2 - 2.5 ft: medium dark orange-brown SILT with ~5% gravel up to 2 cm, roots, soft; no odor, no sheen |
| moist | 0.0 | | | ML-CL | | 4 | (ML-CL) |
| | | | | | | 5 | 4 - 4.5 ft: medium yellow-brown, clayey SILT, soft to firm, very plastic (rolls to >5 inches); no odor, no sheen |
| moist | 0.0 | | | ML | | 6 | (ML) |
| | | | | | | 7 | 6 - 6.5 ft: medium yellow-brown SILT, not plastic, firm; no odor, no sheen |
| moist to wet | 0.9 | | SB-27-8 | ML-CL | | 8 | (ML-CL) |
| | | | | | | 9 | 8 - 8.5 ft: medium dark brown, clayey SILT, very plastic (rolls to >6 inches), firm; no odor, no sheen |
| moist to very moist | 4.3 | | | | | 10 | 8.5 - 10 ft: SAA, medium light yellow-brown clayey SILT, laminated, firm, very plastic (rolls to 5-6 inches); no odor, no sheen (lowest couple inches have slight organic sheen) |
| | | | | | | 11 | 10 - 13 ft: assumed upper 3 feet (10-13 ft) was the unrecovered interval |



Soil Boring: SB-27

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: TD
 Date Started: 2/26/2020
 Date Completed: 2/26/2020

Driller: AEC Drilling
 Drill Method: Air Knife/Direct Push
 Total Boring Depth: 30 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|-----------------|-------------|-------------|---|
| | | | | | | 10 - 13 ft: | assumed upper 3 feet (10-13 ft) was the unrecovered interval (<i>continued</i>) |
| | 8.6 | | | | | 12 | |
| moist | 6.4 | | | | | 13 | (ML) 13 - 14 ft (approx): SAA, but less clayey SILT, less plastic |
| moist | 3.3 | | | | | 14 | 14 - 15 ft (approx): light to dark brown to red-brown SILT with ~15% very fine to fine sand, with ~15% gravel up to 1 inch, stiff; no odor, no sheen |
| | 77.6 | | | | | 15 | 15 - 15.5 ft: possible slough; PID reading (77.6) is thus questionable |
| | 19.2 | | | | | 16 | 15.5 - 17 ft: light to medium brown SILT with ~10% gravel up to 0.5 inch, firm; no odor, no sheen (slight sheen, possibly organic, at 15.5-16 ft) |
| | 7.8 | | SB-27-15.5 | | | 17 | 17 - 20 ft: medium gray-brown SILT with ~20% very fine sand, with ~15% gravel up to 1 inch, stiff to hard; probable till; no odor, no sheen |
| moist | 17.3 | | | ML | | 18 | |
| | 16.9 | | | | | 19 | |
| | 11.3 | | | | | 20 | |
| moist | 4.4 | | | | | 21 | 20 - 21.5 ft: medium brown SILT, soft to firm; no odor, no sheen likely slough at 20 - 21 ft |
| moist | 5.1 | | | | | 22 | 21.5 - 25 ft: medium gray-brown SILT with ~15% very fine to fine sand, with ~20% gravel up to 1.5 inches, hard; probable till; no odor, slight sheen at 22-22.5 ft (possibly organic) |



Soil Boring: SB-28

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: TD
 Date Started: 2/27/2020
 Date Completed: 2/27/2020

Driller: AEC Drilling
 Drill Method: Air Knife/Direct Push
 Total Boring Depth: 25 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|-----------------|-------------|------------|--|
| | | | | | | | concrete (3 inches, in driveway) |
| moist | 1.6 | | | SW | | 1 | (SW) |
| | | | | | | 2 | 2 - 2.5 ft: medium gray-brown, gravelly, very fine to coarse SAND, gravel up to 1.5 inches, loose; no odor, no sheen |
| moist | 1.7 | | | | | 4 | (ML) 4 - 4.5 ft: medium brown-gray and orange-brown SILT with ~8% gravel up to 1 inch, soft; no odor, no sheen |
| moist | 1.8 | | | ML | | 6 | 6 - 6.5 ft: medium gray-brown SILT, soft; no odor, no sheen |
| moist to wet | 2.3 | | SB-28-8 | ML-CL | | 8 | (ML-CL) 8 - 8.5 ft: medium yellow-brown, clayey SILT, soft, medium plastic (rolls to ~4 inches); no odor, no sheen 8.5 - 10 ft: medium yellow-brown to orange-brown, clayey SILT, laminated, very plastic (rolls to 6 inches), firm; no odor, no sheen |



Soil Boring: SB-28

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: TD
 Date Started: 2/27/2020
 Date Completed: 2/27/2020

Driller: AEC Drilling
 Drill Method: Air Knife/Direct Push
 Total Boring Depth: 25 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|-----------------|-------------|------------|---|
| | | | | ML-CL | | | (ML-CL) <i>(continued)</i> |
| | | | | | | 12 | 11.5 - 13.5 ft: assumed 2 ft (11.5-13.5 ft) was the unrecovered interval |
| moist | 0.0 | | SB-28-14 | ML-CL | | 14 | (ML-CL) 13.5 - 14 ft (approx): SAA, gray-brown, laminated SILT, firm; no odor, no sheen |
| moist | 2.9 | | | ML | | 15 | (ML) 14 - 15 ft (approx): gray-brown SILT with ~15% gravel up to 0.5 inch, stiff; probable till; no odor, no sheen |
| | | | | | | 16 | 15 - 16.5 ft: assumed 1.5 ft (15-16.5 ft) was the unrecovered interval |
| damp | 3.7 | | | | | 17 | (ML) 16.5 - 20 ft (approx): medium gray-brown SILT with 20% gravel up to 1 inch, with ~4% very fine to fine sand, hard; probable till; no odor, no sheen |
| | 3.7 | | | ML | | 18 | |
| | 2.5 | | SB-28-19.5 | | | 19 | |
| | | | | | | 20 | 20 - 21.5 ft: assumed 1.5 ft (20-21.5 ft) was the unrecovered interval and slough |
| | | | | | | 21 | |
| | | | | ML | | 22 | (ML) |



Soil Boring: SB-29

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: TD
 Date Started: 2/26/2020
 Date Completed: 2/27/2020

Driller: AEC Drilling
 Drill Method: Air Knife/Direct Push
 Total Boring Depth: 25 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|-----------------|-------------|------------|---|
| | 1.9 | | | | | | (ML) 11 - 15 ft (approx): medium orange-brown to medium gray-brown SILT with ~3% very fine sand, with ~30% gravel up to 1.5 inches, hard; probable till; no odor, no sheen |
| damp to wet | 1.0 | | | | | 12 | |
| | 2.0 | | | | | 13 | |
| | 1.9 | | | ML | | 14 | |
| | | | | | | 15 | |
| moist | 1.7 | | SB-29-16 | | | 16 | 15.5 - 16.5 ft: medium brown-gray (slightly greenish hue) SILT with ~8% gravel up to 1 cm, firm; no odor, slight sheen (possible organic sheen) |
| | 1.5 | | | | | 17 | 16.5 - 17.5 ft: medium yellow-brown, gravelly, sandy SILT, very fine to coarse sand, gravel up to 1 inch |
| moist | 1.6 | | SB-29-18 | SP-SM | | 18 | (SP-SM) 17.5 - 19 ft: medium brown, very fine to medium SAND with ~7% silt and ~5% gravel up to 1 cm, dense; no odor, no sheen |
| moist | 1.1 | | | | | 19 | (ML) 19 - 20 ft: medium yellow-brown SILT with ~10% very fine to medium sand, with ~20% gravel up to 1 inch, hard; probable till; no odor, no sheen |
| moist | 0.4 | | | ML | | 20 | 20 - 21 ft: medium brown SILT with ~20% gravel up to 0.5 inch, firm to stiff; probable till; no odor, no sheen |
| moist to wet | 0.4 | | | | | 21 | 21 - 21.5 ft: orange-brown, coarse SILT with ~10% very fine sand, stiff; no odor, no sheen (grades coarser into layer below) |
| moist | | | | SP | | 22 | (SP) |



Soil Boring: SB-30

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: TD
 Date Started: 2/28/2020
 Date Completed: 2/28/2020

Driller: AEC Drilling
 Drill Method: Air Knife/Direct Push
 Total Boring Depth: 25 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|-----------------|-------------|-------------|--|
| | | | | | | 0 - 0.5 | concrete (5.5 inches) |
| | | | | | | 0.5 - 1.0 | (ML) |
| moist | 3.2 | | | ML | | 1.0 - 2.0 | 2 - 2.5 ft: medium orange-brown SILT, soft; no odor, no sheen |
| moist | 3.4 | | | ML | | 2.0 - 4.0 | 4 - 4.5 ft: medium yellow-brown SILT, firm; no odor, no sheen |
| | | | | | | 4.0 - 5.0 | (ML-CL) |
| moist to wet | 3.0 | | | ML-CL | | 5.0 - 8.0 | 6 - 6.5 ft: light gray-brown to orange-brown; clayey SILT, laminated, firm, very plastic (rolls to >5 inches); no odor, no sheen |
| moist to wet | 2.9 | | | ML-CL | | 8.0 - 8.5 | 8 - 8.5 ft: medium gray-brown, clayey SILT, laminated, firm, very plastic (rolls to 4-5 inches); no odor, no sheen |
| | 2.3 | | SB-30-8 | ML-CL | | 8.5 - 9.25 | 8.5 - 9.25 ft: SAA laminated SILT; no odor, no sheen |
| moist | 2.3 | | | ML-CL | | 9.25 - 10.0 | (ML) 9.25 - 10 ft: medium gray-brown SILT with ~10% very fine sand, with ~15% gravel up to 1 cm, stiff; probable till; no odor, no sheen |
| moist | 2.5 | | | ML | | 10.0 - 11.0 | 10 - 15 ft: SAA SILT, stiff to hard, 15% gravel up to 1.5 inches (2 inch zone in lower part of very fine to medium sand); probable till; no odor, no sheen |



Soil Boring: SB-30

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA

Logged By: TD
 Date Started: 2/28/2020
 Date Completed: 2/28/2020

Driller: AEC Drilling
 Drill Method: Air Knife/Direct Push
 Total Boring Depth: 25 ft

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION |
|------------------|---------------------|----------------|-------------------|-----------------|-------------|------------|--|
| | 2.2 | | | | | | (ML) (continued) |
| | 3.5 | | SB-30-11.5 | | | 12 | |
| | 2.5 | | | | | 13 | |
| | 2.7 | | | | | 14 | |
| moist | | | | | | 15 | 15 - 18.5 ft: SAA, no odor, no sheen |
| | 2.8 | | SB-30-15.5 | | | 16 | |
| | | | | ML | | 17 | |
| | 2.8 | | | | | 18 | |
| moist | | | | | | 19 | 18.5 - 20 ft: medium gray-brown, gravelly SILT with ~45% gravel up to 1.5 inches, hard; probable till; no odor, no sheen |
| | 3.2 | | | | | 20 | |
| moist | | | | | | 21 | 20 - 22.5 ft: SAA gravelly SILT; no odor, no sheen |
| | 3.1 | | | | | 22 | |



Soil Vapor Well: SVP-1

Project: 204114 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA
 Logged By: BRG

Date Started: 8/30/2018
 Date Completed: 8/30/2018
 Driller: Cascade
 Drill Method: Hand Auger

Total Boring Depth: 10.5 ft
 Hole Diameter: 3.25 in
 Well Depth: 5.5 ft
 Well Diameter: 0.25 in

Well Screen: 0.75 in
 Filter Pack: 2/12 Colorado Sand
 Well Casing: Teflon

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION | WELL DIAGRAM |
|------------------|---------------------|----------------|-------------------|---|-----------------|-------------|------------|---|--|
| | | | | | | | 0 | two layers of concrete (6 and 4 inches deep). | Well Box |
| damp | 2.1 | | | | SP | | 1 | | Cement Seal |
| damp | 2.5 | | | | SM | | 2 | (SP) light brown, poorly graded medium to fine SAND with silt, no odor, no sheen | Pre-hydrated granular bentonite slurry |
| damp to moist | 2.7 | | | | SW | | 3 | | 0.25 inch teflon tubing |
| damp to moist | 5.2 | | SVP-1-8.0 | G = 0.3 D = 11 HO = 35 B = 0.0008 | SW | | 4 | (SM) light brown to brown silty, coarse to fine SAND with 5-10% fine to coarse gravel, no odor, no sheen | Dry granular bentonite |
| moist | 5.2 | | SVP-1-10.0 | G < 0.3 D < 3.8 HO < 13 B = 0.0006 | SM | | 5 | gravel seam at 5 feet, small cobbles present in boring | 2/12 Monterey Sand |
| | | | | | | | 6 | (SW) brown coarse to fine gravelly, coarse to fine SAND with 10% silt, no odor, no sheen | 0.75 inch diameter stainless steel screen with 0.0057 inch pore diameter |
| | | | | | | | 7 | large cobble at 7 feet | |
| | | | | | | | 8 | SAA, no odor, slight sheen | 2/12 Monterey Sand Pack |
| | | | | | | | 9 | | |
| | | | | | | | 10 | (SM) brown, well graded gravelly SAND with 10% clay, 5% silt, 25% coarse to fine gravel, 60% coarse to fine sand, no odor, no sheen | |
| | | | | | | | 10.5 | Bottom of borehole at 10.5 feet. | |



Soil Vapor Well: SVP-2

Project: 204114 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA
 Logged By: BRG

Date Started: 8/30/2018
 Date Completed: 8/30/2018
 Driller: Cascade
 Drill Method: Hand Auger

Total Boring Depth: 10.5 ft
 Hole Diameter: 3.25 in
 Well Depth: 5.5 ft
 Well Diameter: 0.25 in

Well Screen: 0.75 in
 Filter Pack: 2/12 Colorado Sand
 Well Casing: Teflon

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION | WELL DIAGRAM |
|------------------|---------------------|----------------|-------------------|---|-----------------|-------------|------------|---|--|
| | | | | | | | 0 | concrete (5 inches) | Well Box |
| | | | | | | | 1 | brown SAND with gravel | Cement Seal |
| damp | 11.8 | | | | SW | | 2 | intact, buried asphalt (SW) dark brown, gravelly, coarse to fine SAND with 15% silt, asphalt fragments, no odor, faint sheen (sheen likely associated with above pavement) | -0.25 inch teflon tubing |
| | | | | | | | 3 | | Pre-hydrated granular bentonite slurry |
| damp | 4.1 | | | | SM | | 4 | (SM) brown SAND with 5% gravel, poorly graded silty sand with 10% silt, no odor, no sheen | Dry granular bentonite |
| | | | | | | | 5 | | 2/12 Monterey Sand |
| | | | | | | | 6 | | 0.75 inch diameter stainless steel screen with 0.0057 inch pore diameter |
| damp | 4.9 | | | | | | 7 | orange-brown, silty (15-20%) fine SAND with 5-10% fine gravel, no odor, no sheen | |
| | | | | | | | 8 | | 2/12 Monterey Sand Pack |
| damp | 2.5 | | SVP-2-8.0 | G = 0.4 D < 3.7 HO < 12 B < 0.0005 | ML | | 9 | (ML) orange-brown and olive-brown SILT with 10% medium to fine sand and 5% clay, some mottling, no odor, no sheen | |
| | | | | | | | 10 | SAA, no odor, no sheen | |
| damp | 2.1 | | SVP-2-10.0 | G < 0.3 D < 0.8 HO < 13 B < 0.0005 | | | 10.5 | Bottom of borehole at 10.5 feet. | |



Soil Vapor Well: SVP-3

Project: 204114 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA
 Logged By: BRG

Date Started: 8/30/2018
 Date Completed: 8/30/2018
 Driller: Cascade
 Drill Method: Hand Auger

Total Boring Depth: 10.5 ft
 Hole Diameter: 3.25 in
 Well Depth: 8.75 ft
 Well Diameter: 0.25 in

Well Screen: 0.75 in
 Filter Pack: 2/12 Colorado Sand
 Well Casing: Teflon

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION | WELL DIAGRAM |
|------------------|---------------------|----------------|-------------------|---|-----------------|-------------|------------|--|--|
| damp | 3.2 | | | | | | 1 | | Well Box |
| | | | | | | | 2 | (SP-SM) brown to gray-brown, poorly graded, medium to fine SAND with 10% silt and 10% coarse to fine, rounded gravel, trace roots, no odor, no sheen | Cement Seal |
| damp | 2.9 | | | | SP-SM | | 3 | | -0.25 inch teflon tubing |
| damp | 2.6 | | | | SM | | 4 | (SM) dark brown, silty (15%), coarse to fine SAND with 15% coarse to fine gravel, containing charcoal fragments, no odor, no sheen | Pre-hydrated granular bentonite slurry |
| damp | 2.8 | | SVP-3-8.0 | G <0.3 D = 4.9 HO = 13 B <0.0005 | | | 5 | | |
| | | | | | | | 6 | SAA, increase in coarse sand, no odor, no sheen | |
| | | | | | | | 7 | gravel seam | |
| damp | 2.0 | | SVP-3-10.0 | G <0.3 D <4.0 HO <13 B <0.0005 | ML | | 8 | light brown silty, medium to fine SAND with 10% coarse to fine gravel, some mottling, no odor, no sheen | Dry granular bentonite |
| | | | | | | | 9 | | 2/12 Monterey Sand |
| | | | | | | | 10 | cobbles | 0.75 inch diameter stainless steel screen with 0.0057 inch pore diameter |
| | | | | | | | 10 | (ML) light brown, clayey SILT, 10% clay, no gravel, occasional sand seams, no odor, no sheen | 2/12 Monterey Sand Pack |
| | | | | | | | 11 | Bottom of borehole at 10.5 feet. | |



Soil Vapor Well: SVP-4

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA
 Logged By: TD

Date Started: 2/27/2020
 Date Completed: 2/27/2020
 Driller: AEC Drilling
 Drill Method: Hand Auger

Total Boring Depth: 6 ft
 Hole Diameter: 3.25 in
 Well Depth: 5.5 ft
 Well Diameter: 0.25 in

Well Screen: 0.75 in
 Filter Pack: 2/12 Monterey Sand
 Well Casing: Teflon

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION | WELL DIAGRAM |
|------------------|---------------------|----------------|-------------------|----------------------------|-----------------|-------------|------------|---|--|
| | | | | | | | 0 | grass at surface | |
| moist | 1.2 | | | | ML | | 1 | (ML) | Well Box |
| | | | | | | | 2 | 2 - 2.5 ft: medium orange-brown SILT with roots, soft; no odor, no sheen | Ecology Well ID BLY329 |
| | | | | | | | 3 | | - Cement Seal |
| moist | 0.2 | | | | | | 4 | 3.5 - 4 ft: medium yellow-brown SILT, firm; no odor, no sheen | - 0.25 inch teflon tubing |
| | | | | | | | 5 | (ML-CL) | - Pre-hydrated granular bentonite slurry |
| moist | 1.1 | | SVP-4-5 | | ML-CL | | 6 | 5 - 5.5 ft: medium brown, clayey SILT, very plastic (rolls to >5 inches), soft to firm; no odor, no sheen | - Dry granular bentonite |
| | | | | | | | 7 | | - Sand |
| | | | | | | | 8 | | - 0.75 inch diameter stainless steel screen with 0.0057 inch pore diameter |
| | | | | | | | 9 | | Sand |
| | | | | | | | 10 | | |
| | | | | | | | 11 | Bottom of borehole at 6.0 feet. | |



Soil Vapor Well: SVP-5

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA
 Logged By: TD

Date Started: 2/27/2020
 Date Completed: 2/27/2020
 Driller: AEC Drilling
 Drill Method: Hand Auger

Total Boring Depth: 6 ft
 Hole Diameter: 3.25 in
 Well Depth: 5.5 ft
 Well Diameter: 0.25 in

Well Screen: 0.75 in
 Filter Pack: 2/12 Monterey Sand
 Well Casing: Teflon

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION | WELL DIAGRAM |
|------------------|---------------------|----------------|-------------------|----------------------------|-----------------|-------------|------------|--|--|
| moist | 0.0 | | | | ML | | 0 | 1.5-inch asphalt (ML) | Well Box |
| moist | 0.0 | | | | ML | | 1 | 1.5 - 2 ft: medium red-brown SILT with ~3% gravel up to 2 cm, soft; no odor, no sheen | Ecology Well ID BLY330 |
| moist | 0.0 | | | | ML | | 2 | | - Cement Seal |
| moist | 0.0 | | | | ML | | 3 | 3 - 3.5 ft: medium yellow-brown SILT with ~ 5% gravel to 0.5 inch, soft; no odor, no sheen | - 0.25 inch teflon tubing |
| moist | 0.0 | | SVP-5-5 | | ML | | 4 | | - Pre-hydrated granular bentonite slurry |
| moist | 0.0 | | SVP-5-5 | | ML | | 5 | 5 - 5.5 ft: light gray-brown SILT, laminated, firm, moist; no odor, no sheen | - Dry granular bentonite |
| | | | | | | | 6 | Bottom of borehole at 6.0 feet. | - Sand |
| | | | | | | | 7 | | - 0.75 inch diameter stainless steel screen with 0.0057 inch pore diameter |
| | | | | | | | 8 | | Sand |
| | | | | | | | 9 | | |
| | | | | | | | 10 | | |
| | | | | | | | 11 | | |



Soil Vapor Well: SVP-6

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA
 Logged By: TD

Date Started: 2/28/2020
 Date Completed: 2/28/2020
 Driller: AEC Drilling
 Drill Method: Hand Auger

Total Boring Depth: 6.5 ft
 Hole Diameter: 3.25 in
 Well Depth: 5.5 ft
 Well Diameter: 0.25 in

Well Screen: 0.75 in
 Filter Pack: 2/12 Monterey Sand
 Well Casing: Teflon

| MOISTURE CONTENT | ORGANIC VAPOR (ppm) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S. SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION | WELL DIAGRAM |
|------------------|---------------------|----------------|-------------------|----------------------------|-----------------|-------------|------------|---|--|
| moist | 2.6 | | | | ML | | 0 - 0.5 | concrete (3.5 inches) | Well Box |
| moist | 3.7 | | | | ML | | 1 - 2 | 1.5 - 2 ft: medium red-brown SILT with ~8% gravel up to 1 cm, soft; no odor, no sheen | Ecology Well ID BLY331 |
| moist | 4.4 | | SVP-6-5 | | ML-CL | | 2 - 3 | 3 - 3.5 ft: medium orange-brown SILT, firm; no odor, no sheen | - Cement Seal |
| | | | | | | | 3 - 4 | | - 0.25 inch teflon tubing |
| | | | | | | | 4 - 5 | | - Pre-hydrated granular bentonite slurry |
| | | | | | | | 5 - 5.5 | 5 - 5.5 ft: light gray-brown to orange-brown (localized oxidation) clayey SILT, laminated, high plasticity (rolls to > 5 inches); no odor, no sheen | - Dry granular bentonite |
| | | | | | | | 5.5 - 6.5 | | - Sand |
| | | | | | | | 6.5 | Bottom of borehole at 6.5 feet. | - 0.75 inch diameter stainless steel screen with 0.0057 inch pore diameter |
| | | | | | | | 7 - 11 | | - Sand |



Soil Vapor Well: SVP-7

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA
 Logged By: TD

Date Started: 11/1/2021
 Date Completed: 11/1/2021
 Driller: Leidos
 Drill Method: Hand Auger

Total Boring Depth: 7.5 ft
 Hole Diameter: 3.25 in
 Well Depth: 7 ft
 Well Diameter: 0.25 in

Well Screen: 0.75 in
 Filter Pack: 2/12 Monterey Sand
 Well Casing: Teflon

| MOISTURE CONTENT | ORGANIC VAPOR (PPM) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION | WELL DIAGRAM |
|------------------|---------------------|----------------|-------------------|----------------------------|----------------|-------------|------------|--|--|
| | | | | | | | | Rock at surface (~2" thick) | |
| damp | | | | | ML | | 1 | 2 -15 inch: medium brown SILT with root material, ~8-10% gravel, soft, no odor, no sheen | - Well Box - Cement Seal |
| damp | 1.5 | Hand icon | | | ML | | 2 | 15 inch - 3.5 ft: medium-light yellow-brown SILT, soft, no odor, no sheen | - 0.25-inch Teflon tubing |
| | 1.8 | Hand icon | | | ML | | 3 | | |
| moist | 2.0 | Hand icon | | | ML | | 4 | 3.5 - 4.5 ft: medium-light yellow-brown SILT (finer than above), possibly with thin clay-rich layers near the top (more gray colored than straight silt), ~2% fine gravel (up to 0.3 inch), firm to stiff, no odor, no sheen | - Pre-hydrated granular bentonite slurry |
| | 2.2 | Hand icon | | | ML | | 5 | | |
| moist | 2.1 | Hand icon | | | ML | | 6 | 4.5 - 5.75 ft: medium-light brown-gray, coarse SILT, firm, no odor, no sheen | - Dry granular bentonite |
| | 2.3 | Hand icon | | | ML | | 7 | | |
| moist | 2.4 | Hand icon | | | ML | | 8 | 5.75 - 7.0 ft: medium-light brown to reddish brown (oxidized) and light gray, laminated SILT and clay-rich SILT, moderately plastic (rolls to 3.5 inches), firm, no odor, no sheen | - Sand |
| | 2.4 | Hand icon | | | ML | | 9 | | |
| moist | 2.4 | Hand icon | | | ML | | 10 | 7.0 - 7.5 ft: similar to above, with less clay, silt is overall coarser (rolls out to ~ 1 inch), firm, no odor, no sheen | - 0.75-inch diameter stainless steel screen with 0.0057 inch pore diameter |
| | | | | | | | 11 | Bottom of borehole at 7.5 feet | |

SVP-7-S-6.5-211101



Soil Vapor Well: SVP-8

Project: 204117 Bremerton
 Client: Chevron EMC
 Location: 2021 6th Street, Bremerton, WA
 Logged By: TD

Date Started: 8/26/2022
 Date Completed: 8/26/2022
 Driller: Leidos
 Drill Method: Hand Auger

Total Boring Depth: 6.0 ft
 Hole Diameter: 3.25 in
 Well Depth: 5.5 ft
 Well Diameter: 0.25 in

Well Screen: 0.75 in
 Filter Pack: 2/12 Monterey Sand
 Well Casing: Teflon

| MOISTURE CONTENT | ORGANIC VAPOR (PPM) | SAMP. INTERVAL | ANALYTICAL SAMPLE | ANALYTICAL RESULTS (mg/kg) | U.S.C.S SYMBOL | GRAPHIC LOG | DEPTH (ft) | LITHOLOGY/DESCRIPTION | WELL DIAGRAM |
|------------------|---------------------|----------------|-------------------|----------------------------|----------------|---|-----------------------------------|-----------------------|--------------|
| moist | | | | | ML | | 0 - 0.5 ft: Grass/soil at surface | | |
| moist | | | | | | 0.5 - 1 ft: medium brown gravelly SILT with roots; soft, no odor | | | |
| moist | 5.0 | Hand icon | | | | 1 1 - 1.5 ft: same as above, with anthropogenic debris (plastic, metal) | | | |
| moist | | Hand icon | | | | 1.5 - 2 ft: medium brown SILT with clots of harder silt; no gravel, minor roots, firm, no odor, no sheen | | | |
| moist | 5.4 | Hand icon | | | | 2 2 - 2.5 ft: light to medium brown SILT | | | |
| moist | | Hand icon | | | | 2.5 - 3 ft: medium brown SILT with ~5% fine gravel; firm, no odor, no sheen | | | |
| moist | 5.0 | Hand icon | | | ML | 3 3 - 3.5 ft: pale to orange-brown (varying iron oxidation) SILT with minor clay (rolls to 1 inch); firm, no odor | | | |
| moist | | Hand icon | | | | 3.5 - 4 ft: same as above; no odor, no sheen | | | |
| moist | 5.7 | Hand icon | | | | 4 4 - 4.5 ft: same as above, with abundant brown-red (oxidized) silt | | | |
| very moist | | Hand icon | | | | 4.5 - 4.8 ft: same as 3 - 3.5 ft | | | |
| moist | 5.0 | Hand icon | SVP-8-S-5-220826 | | | 5 4.8 - 5 ft: medium brown SILT with some clay (rolls to 2.5 inches); firm, no odor | | | |
| moist | | Hand icon | | | | 5.5 - 5.5 ft: similar to 4.5 - 5 ft interval, SILT with some clay; mixed color, no odor, no sheen | | | |
| moist | | Hand icon | | | | 5.5 - 6 ft: same as above | | | |
| | | | | | | 6 Bottom of borehole at 6.0 feet | | | |
| | | | | | | 7 | | | |
| | | | | | | 8 | | | |
| | | | | | | 9 | | | |
| | | | | | | 10 | | | |
| | | | | | | 11 | | | |

Appendix D:
RI Laboratory Analytical Reports



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron c/o Leidos, Inc.
6310 Allentown Blvd.
Suite 110
Harrisburg PA 17112

Report Date: October 08, 2018 18:37

Project: 204117

Account #: 13271
Group Number: 1982153
SDG: LDC01
PO Number: P010215249
Release Number: HETRICK
State of Sample Origin: WA

Electronic Copy To Leidos
Electronic Copy To EcoChem

Attn: Russ Shropshire
Attn: Christine Ransom

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

To view our laboratory's current scopes of accreditation please go to <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>. Historical copies may be requested through your project manager.



SAMPLE INFORMATION

| <u>Client Sample Description</u> | <u>Sample Collection Date/Time</u> | <u>ELLE#</u> |
|----------------------------------|------------------------------------|--------------|
| SB-4-S-6.0-180823 Grab Soil | 08/23/2018 14:50 | 9780531 |
| SB-1-S-6.0-180823 Grab Soil | 08/23/2018 11:30 | 9780532 |
| SB-7-S-6.0-180823 Grab Soil | 08/23/2018 12:20 | 9780533 |
| SB-2-S-6.0-180824 Grab Soil | 08/24/2018 11:00 | 9780534 |
| SB-6-S-2.0-180824 Grab Soil | 08/24/2018 08:50 | 9780535 |
| SB-6-S-6.0-180824 Grab Soil | 08/24/2018 09:30 | 9780536 |
| SB-1-S-12.0-180827 Grab Soil | 08/27/2018 10:10 | 9780537 |
| SB-1-S-51.0-180827 Grab Soil | 08/27/2018 11:30 | 9780538 |
| SB-7-S-10.0-180827 Grab Soil | 08/27/2018 15:30 | 9780539 |
| SB-7-S-14.0-180827 Grab Soil | 08/27/2018 15:45 | 9780540 |
| SB-7-S-22.0-180827 Grab Soil | 08/27/2018 16:15 | 9780541 |
| SB-7-S-28.0-180827 Grab Soil | 08/27/2018 16:30 | 9780542 |
| SB-3-S-10.0-180828 Grab Soil | 08/28/2018 11:20 | 9780543 |
| SB-3-S-12.0-180828 Grab Soil | 08/28/2018 11:45 | 9780544 |
| SB-3-S-16.0-180828 Grab Soil | 08/28/2018 12:15 | 9780545 |
| SB-3-S-24.0-180828 Grab Soil | 08/28/2018 12:25 | 9780546 |
| UST-1-S-8.0-180828 Grab Soil | 08/28/2018 14:30 | 9780547 |
| SB-2-S-11.0-180828 Grab Soil | 08/28/2018 14:10 | 9780548 |
| SB-2-S-15.0-180828 Grab Soil | 08/28/2018 14:40 | 9780549 |
| SB-2-S-20.0-180828 Grab Soil | 08/28/2018 14:50 | 9780550 |
| SB-2-S-8.0-180828 Grab Soil | 08/28/2018 13:55 | 9780551 |
| QA-1-O-180828 Grab Water | 08/28/2018 15:20 | 9780552 |
| UST-2-S-8.0-180828 Grab Soil | 08/28/2018 16:00 | 9780553 |
| SB-5-S-12.0-180828 Grab Soil | 08/28/2018 16:40 | 9780554 |
| SB-5-S-17.5-180828 Grab Soil | 08/28/2018 17:20 | 9780555 |
| SB-1-S-14.0-180827 Grab Soil | 08/27/2018 10:20 | 9780556 |
| SB-1-S-16.0-180827 Grab Soil | 08/27/2018 10:40 | 9780557 |
| DUP-1-SD-180828 Grab Soil | 08/28/2018 16:20 | 9780558 |
| SB-5-S-24.0-180828 Grab Soil | 08/28/2018 17:35 | 9780559 |
| SB-5-S-6.0-180823 Grab Soil | 08/23/2018 16:57 | 9780560 |
| SB-5-S-14.0-180828 Grab Soil | 08/28/2018 16:50 | 9780561 |
| QA-1-T-180829 Water | 08/29/2018 09:00 | 9780562 |
| QA-2-T-180829 Water | 08/29/2018 12:40 | 9780563 |
| QA-3-T-180829 Water | 08/29/2018 12:50 | 9780564 |
| QA-4-T-180829 Water | 08/29/2018 13:00 | 9780565 |
| QA-5-T-180829 Water | 08/29/2018 13:05 | 9780566 |
| UST-1-S-4.0-180828 Grab Soil | 08/28/2018 11:55 | 9780567 |
| SB-8-S-2.0-180829 Grab Soil | 08/29/2018 09:20 | 9780568 |
| SB-5-S-30.0-180829 Grab Soil | 08/29/2018 09:30 | 9780569 |
| UST-3-S-8.0-180829 Grab Soil | 08/29/2018 10:25 | 9780570 |
| SB-4-S-12.0-180829 Grab Soil | 08/29/2018 11:20 | 9780571 |
| DUP-2-SD-180829 Grab Soil | 08/29/2018 11:30 | 9780572 |
| SB-4-S-14.0-180829 Grab Soil | 08/29/2018 11:40 | 9780573 |
| UST-4-S-8.0-180829 Grab Soil | 08/29/2018 11:45 | 9780574 |
| SB-4-S-25.0-180829 Grab Soil | 08/29/2018 11:55 | 9780575 |
| UST-5-S-8.0-180829 Grab Soil | 08/29/2018 13:25 | 9780576 |
| UST-6-S-8.0-180829 Grab Soil | 08/29/2018 14:10 | 9780577 |
| SB-8-S-12.0-180829 Grab Soil | 08/29/2018 14:20 | 9780578 |
| SB-8-S-14.0-180829 Grab Soil | 08/29/2018 14:25 | 9780579 |



Client Sample Description

Sample Collection
Date/Time

ELLE#

SB-8-S-25.0-180829 Grab Soil

08/29/2018 14:50

9780580

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: SB-4-S-6.0-180823 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780531
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/23/2018 14:50
SDG#: LDC01-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.75 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.75 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.75 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0008 | 0.75 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 19.36 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 3.2 | 3.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 4.72 | 0.542 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 6.2 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182492AA | 09/06/2018 13:53 | Linda C Pape | 0.75 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/23/2018 14:50 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/23/2018 14:50 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/23/2018 14:50 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18248SLA026 | 09/07/2018 06:11 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18248SLA026 | 09/05/2018 18:00 | Sally L Appleyard | 1 |

Sample Description: SB-4-S-6.0-180823 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780531
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/23/2018 14:50
SDG#: LDC01-01

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247A31A | 09/05/2018 19:17 | Jeremy C Giffin | 19.36 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/23/2018 14:50 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182470023A | 09/07/2018 19:36 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182470023A | 09/05/2018 09:00 | Olivia Arosemena | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404901 | 09/10/2018 13:58 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404901 | 09/06/2018 07:20 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18247820004A | 09/04/2018 10:23 | William C Schwebel | 1 |

Sample Description: SB-1-S-6.0-180823 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780532
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/23/2018 11:30
SDG#: LDC01-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | 0.002 | 0.0005 | 0.94 |
| 11995 | Ethylbenzene | 100-41-4 | 0.0008 | 0.0004 | 0.94 |
| 11995 | Toluene | 108-88-3 | 0.004 | 0.0006 | 0.94 |
| 11995 | Xylene (Total) | 1330-20-7 | 0.006 | 0.001 | 0.94 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 0.4 | 0.3 | 25.67 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 5.35 | 0.529 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 8.5 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182492AA | 09/06/2018 14:15 | Linda C Pape | 0.94 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/23/2018 11:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/23/2018 11:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/23/2018 11:30 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18248SLA026 | 09/07/2018 06:36 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18248SLA026 | 09/05/2018 18:00 | Sally L Appleyard | 1 |

Sample Description: SB-1-S-6.0-180823 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780532
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/23/2018 11:30
SDG#: LDC01-02

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247A31A | 09/05/2018 19:53 | Jeremy C Giffin | 25.67 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/23/2018 11:30 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182470023A | 09/07/2018 19:56 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182470023A | 09/05/2018 09:00 | Olivia Arosemena | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404901 | 09/10/2018 14:14 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404901 | 09/06/2018 07:20 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18247820004A | 09/04/2018 10:23 | William C Schwebel | 1 |

Sample Description: SB-7-S-6.0-180823 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780533
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/23/2018 12:20
SDG#: LDC01-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.93 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.93 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.93 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.93 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 0.3 | 0.2 | 19.73 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.1 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 14 | 10 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 16.2 | 0.419 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 3.8 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182492AA | 09/06/2018 14:38 | Linda C Pape | 0.93 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/23/2018 12:20 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/23/2018 12:20 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/23/2018 12:20 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18248SLA026 | 09/07/2018 13:31 | William H Saadeh | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18248SLA026 | 09/05/2018 18:00 | Sally L Appleyard | 1 |

Sample Description: SB-7-S-6.0-180823 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780533
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/23/2018 12:20
SDG#: LDC01-03

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247A31A | 09/05/2018 20:29 | Jeremy C Giffin | 19.73 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/23/2018 12:20 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182470023A | 09/07/2018 20:16 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182470023A | 09/05/2018 09:00 | Olivia Arosemena | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404901 | 09/10/2018 14:17 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404901 | 09/06/2018 07:20 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18247820004A | 09/04/2018 10:23 | William C Schwebel | 1 |

Sample Description: SB-2-S-6.0-180824 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780534
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/24/2018 11:00
SDG#: LDC01-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | 0.0009 | 0.0005 | 0.84 |
| 11995 | Ethylbenzene | 100-41-4 | 0.0004 | 0.0004 | 0.84 |
| 11995 | Toluene | 108-88-3 | 0.003 | 0.0006 | 0.84 |
| 11995 | Xylene (Total) | 1330-20-7 | 0.009 | 0.0009 | 0.84 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 1.4 | 0.2 | 21.24 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 4.02 | 0.614 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 10.4 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182492AA | 09/06/2018 15:23 | Linda C Pape | 0.84 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/24/2018 11:00 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/24/2018 11:00 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/24/2018 11:00 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18248SLA026 | 09/07/2018 14:31 | William H Saadeh | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18248SLA026 | 09/05/2018 18:00 | Sally L Appleyard | 1 |

Sample Description: SB-2-S-6.0-180824 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780534
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/24/2018 11:00
SDG#: LDC01-04

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247A31A | 09/05/2018 21:42 | Jeremy C Giffin | 21.24 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/24/2018 11:00 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182470023A | 09/07/2018 21:16 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182470023A | 09/05/2018 09:00 | Olivia Arosemena | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404901 | 09/10/2018 14:25 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404901 | 09/06/2018 07:20 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18247820004A | 09/04/2018 10:23 | William C Schwebel | 1 |

Sample Description: SB-6-S-2.0-180824 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780535
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/24/2018 08:50
SDG#: LDC01-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.83 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.83 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.83 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.83 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 23.05 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.20 | 0.455 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 7.8 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182492AA | 09/06/2018 15:46 | Linda C Pape | 0.83 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/24/2018 08:50 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/24/2018 08:50 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/24/2018 08:50 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18249SLA026 | 09/07/2018 18:31 | William H Saadeh | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18249SLA026 | 09/06/2018 17:00 | Osvaldo R Sanchez | 1 |

Sample Description: SB-6-S-2.0-180824 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780535
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/24/2018 08:50
SDG#: LDC01-05

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247A31A | 09/05/2018 22:25 | Jeremy C Giffin | 23.05 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/24/2018 08:50 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182470023A | 09/07/2018 21:36 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182470023A | 09/05/2018 09:00 | Olivia Arosemena | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404901 | 09/10/2018 14:27 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404901 | 09/06/2018 07:20 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18247820004A | 09/04/2018 10:23 | William C Schwebel | 1 |

Sample Description: SB-6-S-6.0-180824 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780536
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/24/2018 09:30
SDG#: LDC01-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.72 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.72 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0004 | 0.72 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0007 | 0.72 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 20.14 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.1 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 10 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.20 | 0.604 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 3.6 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182492AA | 09/06/2018 16:09 | Linda C Pape | 0.72 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/24/2018 09:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/24/2018 09:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/24/2018 09:30 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18249SLA026 | 09/07/2018 18:55 | William H Saadeh | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18249SLA026 | 09/06/2018 17:00 | Osvaldo R Sanchez | 1 |

Sample Description: SB-6-S-6.0-180824 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780536
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/24/2018 09:30
SDG#: LDC01-06

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247A31A | 09/05/2018 23:01 | Jeremy C Giffin | 20.14 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/24/2018 09:30 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182470023A | 09/07/2018 21:55 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182470023A | 09/05/2018 09:00 | Olivia Arosemena | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404901 | 09/10/2018 14:30 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404901 | 09/06/2018 07:20 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18247820004A | 09/04/2018 10:23 | William C Schwebel | 1 |

Sample Description: SB-1-S-12.0-180827 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780537
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/27/2018 10:10
SDG#: LDC01-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.96 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.96 |
| 11995 | Toluene | 108-88-3 | 0.001 | 0.0006 | 0.96 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.96 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 21.98 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.40 | 0.561 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 9.3 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182493AA | 09/07/2018 04:41 | Patrick T Herres | 0.96 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/27/2018 10:10 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/27/2018 10:10 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/27/2018 10:10 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18249SLA026 | 09/07/2018 19:18 | William H Saadeh | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18249SLA026 | 09/06/2018 17:00 | Osvaldo R Sanchez | 1 |

Sample Description: SB-1-S-12.0-180827 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780537
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/27/2018 10:10
SDG#: LDC01-07

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247A31A | 09/06/2018 00:13 | Jeremy C Giffin | 21.98 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/27/2018 10:10 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182470023A | 09/07/2018 22:15 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182470023A | 09/05/2018 09:00 | Olivia Arosemena | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404901 | 09/10/2018 14:32 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404901 | 09/06/2018 07:20 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18247820004A | 09/04/2018 10:23 | William C Schwebel | 1 |

Sample Description: SB-1-S-51.0-180827 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780538
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/27/2018 11:30
SDG#: LDC01-08

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.86 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.86 |
| 11995 | Toluene | 108-88-3 | 0.0007 | 0.0005 | 0.86 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.86 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 22.93 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.1 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 10 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.93 | 0.529 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 4.6 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182493AA | 09/07/2018 05:04 | Patrick T Herres | 0.86 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/27/2018 11:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/27/2018 11:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/27/2018 11:30 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18249SLA026 | 09/07/2018 19:42 | William H Saadeh | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18249SLA026 | 09/06/2018 17:00 | Osvaldo R Sanchez | 1 |

Sample Description: SB-1-S-51.0-180827 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780538
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/27/2018 11:30
SDG#: LDC01-08

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247A31A | 09/06/2018 00:49 | Jeremy C Giffin | 22.93 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/27/2018 11:30 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182470023A | 09/07/2018 22:35 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182470023A | 09/05/2018 09:00 | Olivia Arosemena | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404901 | 09/10/2018 14:35 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404901 | 09/06/2018 07:20 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18247820004A | 09/04/2018 10:23 | William C Schwebel | 1 |

Sample Description: SB-7-S-10.0-180827 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780539
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/27/2018 15:30
SDG#: LDC01-09

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|-------------------------------|-------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | 0.46 | 0.030 | 47.11 |
| 11995 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.0004 | 0.76 |
| 11995 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.0006 | 0.76 |
| 11995 | Ethylbenzene | 100-41-4 | 0.15 | 0.0004 | 0.76 |
| 11995 | n-Hexane | 110-54-3 | 0.074 | 0.0005 | 0.76 |
| 11995 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.0005 | 0.76 |
| 11995 | Toluene | 108-88-3 | 0.16 | 0.0006 | 0.76 |
| 11995 | Xylene (Total) | 1330-20-7 | 0.38 | 0.001 | 0.76 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D SIM | mg/kg | mg/kg | |
| 12969 | Benzo(a)anthracene | 56-55-3 | N.D. | 0.0009 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | N.D. | 0.0009 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | N.D. | 0.0009 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | N.D. | 0.0009 | 1 |
| 12969 | Chrysene | 218-01-9 | N.D. | 0.0004 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | N.D. | 0.0009 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | N.D. | 0.0009 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.034 | 0.002 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 2.5 | 0.3 | 24.03 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.8 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 13 | 1 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 WA EPH | mg/kg | mg/kg | |
| 05970 | >C10-C12 Aliphatic | n.a. | N.D. | 1.3 | 1 |
| 05970 | >C10-C12 Aromatic | n.a. | N.D. | 1.3 | 1 |
| 05970 | >C12-C16 Aliphatic | n.a. | N.D. | 1.3 | 1 |
| 05970 | >C12-C16 Aromatic | n.a. | N.D. | 1.3 | 1 |
| 05970 | >C16-C21 Aliphatic | n.a. | N.D. | 3.9 | 1 |
| 05970 | >C16-C21 Aromatic | n.a. | N.D. | 2.6 | 1 |
| 05970 | >C21-C34 Aliphatic | n.a. | N.D. | 7.7 | 1 |
| 05970 | >C21-C34 Aromatic | n.a. | N.D. | 2.6 | 1 |
| Trial ID: RE | | | | | |
| 05970 | >C10-C12 Aliphatic | n.a. | N.D. | 1.3 | 1 |
| 05970 | >C10-C12 Aromatic | n.a. | N.D. | 1.3 | 1 |
| 05970 | >C12-C16 Aliphatic | n.a. | N.D. | 1.3 | 1 |
| 05970 | >C12-C16 Aromatic | n.a. | N.D. | 1.3 | 1 |
| 05970 | >C16-C21 Aliphatic | n.a. | N.D. | 3.8 | 1 |
| 05970 | >C16-C21 Aromatic | n.a. | N.D. | 2.5 | 1 |
| 05970 | >C21-C34 Aliphatic | n.a. | N.D. | 7.6 | 1 |
| 05970 | >C21-C34 Aromatic | n.a. | N.D. | 2.5 | 1 |

Sample Description: SB-7-S-10.0-180827 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780539
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/27/2018 15:30
SDG#: LDC01-09

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---------|---------------|------------|------------|----------------------------|-----------------|
|---------|---------------|------------|------------|----------------------------|-----------------|

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:

The sample was re-extracted outside the method required holding time and the QC is compliant. Results are reported from both trials.

| GC Petroleum Hydrocarbons | | ECY 97-602 WA VPH | mg/kg | mg/kg | |
|---------------------------|-------------------------------|-------------------|--------|--------|-------|
| 05666 | Benzene | 71-43-2 | 0.654 | 0.0632 | 49.14 |
| 05666 | C5-C6 Aliphatic Hydrocarbons | n.a. | N.D. | 3.16 | 49.14 |
| 05666 | C6-C8 Aliphatic Hydrocarbons | n.a. | N.D. | 3.16 | 49.14 |
| 05666 | C8-C10 Aliphatic Hydrocarbons | n.a. | N.D. | 3.16 | 49.14 |
| 05666 | C8-C10 Aromatic Hydrocarbons | n.a. | N.D. | 3.16 | 49.14 |
| 05666 | Ethylbenzene | 100-41-4 | 0.177 | 0.0632 | 49.14 |
| 05666 | Methyl t-butyl ether | 1634-04-4 | N.D. | 0.0632 | 49.14 |
| 05666 | Toluene | 108-88-3 | 0.214 | 0.0632 | 49.14 |
| 05666 | o-Xylene | 95-47-6 | 0.0997 | 0.0632 | 49.14 |
| 05666 | m,p-Xylenes | 179601-23-1 | 0.449 | 0.126 | 49.14 |

| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
|--------|------|-------------------------------|-------|-------|---|
| 06955 | Lead | 7439-92-1 | 5.51 | 0.728 | 1 |

| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
|---|----------|-------------------------------|------|------|---|
| 00111 | Moisture | n.a. | 22.2 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|------------------|-----------------|
| 11995 | BTEX/MTBE/EDB/EDC/n-hexane | SW-846 8260C | 1 | R182502AA | 09/07/2018 23:07 | Patrick T Herres | 47.11 |
| 11995 | BTEX/MTBE/EDB/EDC/n-hexane | SW-846 8260C | 1 | A182521AA | 09/09/2018 12:48 | Stephen C Nolte | 0.76 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/27/2018 15:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/27/2018 15:30 | Client Supplied | 1 |

Sample Description: SB-7-S-10.0-180827 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780539
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/27/2018 15:30
SDG#: LDC01-09

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 3 | 201824351084 | 08/27/2018 15:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 4 | 201824351084 | 08/27/2018 15:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/27/2018 15:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 2 | 201824351084 | 08/27/2018 15:30 | Client Supplied | 1 |
| 12969 | SIM SVOAs 8270D (microwave) | SW-846 8270D SIM | 1 | 18250SLA026 | 09/11/2018 08:31 | Joseph M Gambler | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 18250SLA026 | 09/07/2018 18:15 | Sally L Appleyard | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247A31A | 09/06/2018 01:32 | Jeremy C Giffin | 24.03 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/27/2018 15:30 | Client Supplied | n.a. |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 2 | 201824351084 | 08/27/2018 15:30 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182490010A | 09/08/2018 00:14 | Heather E Williams | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 1 | 182500003A | 09/19/2018 04:45 | Heather E Williams | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 1 | 182500003A | 09/19/2018 05:26 | Heather E Williams | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 2-RE | 182700031A | 10/03/2018 09:51 | Amy Lehr | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 2-RE | 182700031A | 10/03/2018 10:31 | Amy Lehr | 1 |
| 05666 | WA- VPH soils | ECY 97-602 WA VPH | 1 | 18253A08A | 09/10/2018 16:26 | Thomas C Wildermuth | 49.14 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182490010A | 09/06/2018 17:50 | Elizabeth E Donovan | 1 |
| 11213 | WA EPH Soils Extraction | ECY 97-602 WA EPH | 1 | 182500003A | 09/08/2018 11:20 | Sally L Appleyard | 1 |
| 11213 | WA EPH Soils Extraction | ECY 97-602 WA EPH | 2 | 182700031A | 09/28/2018 09:00 | Michelle A Newswanger | 1 |
| 00388 | GC - Field Preserved (MA-VPH) | MA DEP VPH modified | 1 | 201824351081 | 08/27/2018 15:30 | Client Supplied | 1 |
| 00497 | Silica Gel Fractionation | SW-846 3630C modified | 1 | 182500003A | 09/18/2018 08:00 | David S Schrum | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404901 | 09/10/2018 14:38 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404901 | 09/06/2018 07:20 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18247820004A | 09/04/2018 10:23 | William C Schwebel | 1 |

Sample Description: SB-7-S-14.0-180827 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780540
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/27/2018 15:45
SDG#: LDC01-10

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | 0.18 | 0.0004 | 0.74 |
| 11995 | Ethylbenzene | 100-41-4 | 0.056 | 0.0003 | 0.74 |
| 11995 | Toluene | 108-88-3 | 0.38 | 0.029 | 43.67 |
| 11995 | Xylene (Total) | 1330-20-7 | 0.28 | 0.0008 | 0.74 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | 0.015 | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 3.0 | 0.2 | 22.85 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.4 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.18 | 0.482 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 11.1 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | R182502AA | 09/07/2018 23:32 | Patrick T Herres | 43.67 |
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182521AA | 09/09/2018 13:56 | Stephen C Nolte | 0.74 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/27/2018 15:45 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/27/2018 15:45 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/27/2018 15:45 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18249SLA026 | 09/07/2018 20:05 | William H Saadeh | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18249SLA026 | 09/06/2018 17:00 | Oswaldo R Sanchez | 1 |

Sample Description: SB-7-S-14.0-180827 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780540
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/27/2018 15:45
SDG#: LDC01-10

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|----------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247A31A | 09/06/2018 02:08 | Jeremy C Giffin | 22.85 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/27/2018 15:45 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182490010A | 09/08/2018 00:34 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182490010A | 09/06/2018 17:50 | Elizabeth E Donovan | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404901 | 09/10/2018 14:41 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404901 | 09/06/2018 07:20 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18247820004A | 09/04/2018 10:23 | William C Schwebel | 1 |

Sample Description: SB-7-S-22.0-180827 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780541
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/27/2018 16:15
SDG#: LDC01-11

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | SW-846 8260C | | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | 0.001 | 0.0004 | 0.78 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.78 |
| 11995 | Toluene | 108-88-3 | 0.002 | 0.0005 | 0.78 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0008 | 0.78 |
| GC/MS Semivolatiles | | | | | |
| | SW-846 8270D | | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | ECY 97-602 NWTPH-Gx | | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 20.64 |
| GC Petroleum Hydrocarbons | | | | | |
| | ECY 97-602 NWTPH-Dx modified | | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | SW-846 6010D Rev.4, July 2014 | | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.62 | 0.467 | 1 |
| Wet Chemistry | | | | | |
| | SM 2540 G-2011 %Moisture Calc | | % | % | |
| 00111 | Moisture | n.a. | 6.2 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182493AA | 09/07/2018 05:27 | Patrick T Herres | 0.78 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/27/2018 16:15 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/27/2018 16:15 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/27/2018 16:15 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18249SLA026 | 09/07/2018 20:28 | William H Saadeh | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18249SLA026 | 09/06/2018 17:00 | Osvaldo R Sanchez | 1 |

Sample Description: SB-7-S-22.0-180827 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780541
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/27/2018 16:15
SDG#: LDC01-11

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247A31A | 09/06/2018 02:44 | Jeremy C Giffin | 20.64 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/27/2018 16:15 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182490010A | 09/08/2018 00:54 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182490010A | 09/06/2018 17:50 | Elizabeth E Donovan | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404901 | 09/10/2018 14:43 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404901 | 09/06/2018 07:20 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18247820004B | 09/04/2018 10:23 | William C Schwebel | 1 |

Sample Description: SB-7-S-28.0-180827 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780542
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/27/2018 16:30
SDG#: LDC01-12

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.9 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.9 |
| 11995 | Toluene | 108-88-3 | 0.001 | 0.0006 | 0.9 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.9 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 24.14 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.73 | 0.626 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 7.0 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182493AA | 09/07/2018 05:49 | Patrick T Herres | 0.9 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/27/2018 16:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/27/2018 16:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/27/2018 16:30 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18249SLA026 | 09/07/2018 20:52 | William H Saadeh | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18249SLA026 | 09/06/2018 17:00 | Osvaldo R Sanchez | 1 |

Sample Description: SB-7-S-28.0-180827 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780542
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/27/2018 16:30
SDG#: LDC01-12

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247A31A | 09/06/2018 03:20 | Jeremy C Giffin | 24.14 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/27/2018 16:30 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182490010A | 09/08/2018 01:14 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182490010A | 09/06/2018 17:50 | Elizabeth E Donovan | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404901 | 09/10/2018 14:46 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404901 | 09/06/2018 07:20 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18247820004B | 09/04/2018 10:23 | William C Schwebel | 1 |

Sample Description: SB-3-S-10.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780543
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 11:20
SDG#: LDC01-13

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.72 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.72 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.72 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.72 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.009 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 24.44 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.8 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 13 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 5.42 | 0.586 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 22.4 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182493AA | 09/07/2018 06:12 | Patrick T Herres | 0.72 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/28/2018 11:20 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/28/2018 11:20 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/28/2018 11:20 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18249SLA026 | 09/07/2018 21:15 | William H Saadeh | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18249SLA026 | 09/06/2018 17:00 | Osvaldo R Sanchez | 1 |

Sample Description: SB-3-S-10.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780543
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 11:20
SDG#: LDC01-13

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247A31A | 09/06/2018 03:57 | Jeremy C Giffin | 24.44 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/28/2018 11:20 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182490010A | 09/08/2018 01:34 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182490010A | 09/06/2018 17:50 | Elizabeth E Donovan | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404901 | 09/10/2018 14:49 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404901 | 09/06/2018 07:20 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18247820004B | 09/04/2018 10:23 | William C Schwebel | 1 |

Sample Description: SB-3-S-12.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780544
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 11:45
SDG#: LDC01-14

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.71 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.71 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.71 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0008 | 0.71 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 19.42 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.50 | 0.622 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 9.9 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182501AA | 09/07/2018 10:27 | Jennifer K Howe | 0.71 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/28/2018 11:45 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/28/2018 11:45 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/28/2018 11:45 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18249SLA026 | 09/07/2018 21:39 | William H Saadeh | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18249SLA026 | 09/06/2018 17:00 | Osvaldo R Sanchez | 1 |

Sample Description: SB-3-S-12.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780544
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 11:45
SDG#: LDC01-14

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247A31A | 09/06/2018 04:39 | Jeremy C Giffin | 19.42 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/28/2018 11:45 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182490010A | 09/08/2018 01:53 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182490010A | 09/06/2018 17:50 | Elizabeth E Donovan | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404901 | 09/10/2018 14:57 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404901 | 09/06/2018 07:20 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18247820004B | 09/04/2018 10:23 | William C Schwebel | 1 |

Sample Description: SB-3-S-16.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780545
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 12:15
SDG#: LDC01-15

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.79 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.79 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.79 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.79 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 21.49 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.06 | 0.507 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 8.9 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182501AA | 09/07/2018 10:50 | Jennifer K Howe | 0.79 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/28/2018 12:15 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/28/2018 12:15 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/28/2018 12:15 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18249SLA026 | 09/07/2018 22:03 | William H Saadeh | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18249SLA026 | 09/06/2018 17:00 | Osvaldo R Sanchez | 1 |

Sample Description: SB-3-S-16.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780545
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 12:15
SDG#: LDC01-15

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247A31A | 09/06/2018 05:16 | Jeremy C Giffin | 21.49 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/28/2018 12:15 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182490010A | 09/08/2018 02:53 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182490010A | 09/06/2018 17:50 | Elizabeth E Donovan | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404901 | 09/10/2018 14:59 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404901 | 09/06/2018 07:20 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18247820004B | 09/04/2018 10:23 | William C Schwebel | 1 |

Sample Description: SB-3-S-24.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780546
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 12:25
SDG#: LDC01-16

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.87 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.87 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.87 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.87 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 20.5 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 3.41 | 0.574 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 6.6 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182501AA | 09/07/2018 11:13 | Jennifer K Howe | 0.87 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/28/2018 12:25 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/28/2018 12:25 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/28/2018 12:25 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18249SLA026 | 09/07/2018 22:26 | William H Saadeh | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18249SLA026 | 09/06/2018 17:00 | Osvaldo R Sanchez | 1 |

Sample Description: SB-3-S-24.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780546
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 12:25
SDG#: LDC01-16

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|----------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247A31A | 09/06/2018 05:52 | Jeremy C Giffin | 20.5 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/28/2018 12:25 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182490010A | 09/08/2018 03:13 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182490010A | 09/06/2018 17:50 | Elizabeth E Donovan | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404901 | 09/10/2018 15:02 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404901 | 09/06/2018 07:20 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 2 | 18248820002A | 09/05/2018 15:04 | Larry E Bevins | 1 |

Sample Description: UST-1-S-8.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780547
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 14:30
SDG#: LDC01-17

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.81 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.81 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.81 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.81 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 22.97 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 5.7 | 3.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 59 | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 4.19 | 0.528 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 6.8 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182501AA | 09/07/2018 11:36 | Jennifer K Howe | 0.81 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/28/2018 14:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/28/2018 14:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/28/2018 14:30 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18249SLA026 | 09/07/2018 22:49 | William H Saadeh | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18249SLA026 | 09/06/2018 17:00 | Osvaldo R Sanchez | 1 |

Sample Description: UST-1-S-8.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780547
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 14:30
SDG#: LDC01-17

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247A31A | 09/06/2018 07:04 | Jeremy C Giffin | 22.97 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/28/2018 14:30 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182490010A | 09/08/2018 03:52 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182490010A | 09/06/2018 17:50 | Elizabeth E Donovan | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404901 | 09/10/2018 15:05 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404901 | 09/06/2018 07:20 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18247820004B | 09/04/2018 10:23 | William C Schwebel | 1 |

Sample Description: SB-2-S-11.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780548
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 14:10
SDG#: LDC01-18

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.72 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.72 |
| 11995 | Toluene | 108-88-3 | 0.001 | 0.0005 | 0.72 |
| 11995 | Xylene (Total) | 1330-20-7 | 0.001 | 0.0008 | 0.72 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 6.3 | 0.2 | 21.86 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.66 | 0.483 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 10.6 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182501AA | 09/07/2018 18:25 | Jennifer K Howe | 0.72 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/28/2018 14:10 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/28/2018 14:10 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/28/2018 14:10 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18249SLA026 | 09/07/2018 23:13 | William H Saadeh | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18249SLA026 | 09/06/2018 17:00 | Osvaldo R Sanchez | 1 |

Sample Description: SB-2-S-11.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780548
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 14:10
SDG#: LDC01-18

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247D34A | 09/05/2018 20:46 | Jeremy C Giffin | 21.86 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/28/2018 14:10 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500015A | 09/12/2018 02:01 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500015A | 09/08/2018 09:00 | Michelle A Newswanger | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404901 | 09/10/2018 15:07 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404901 | 09/06/2018 07:20 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18247820004B | 09/04/2018 10:23 | William C Schwebel | 1 |

Sample Description: SB-2-S-15.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780549
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 14:40
SDG#: LDC01-19

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.86 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.86 |
| 11995 | Toluene | 108-88-3 | 0.0006 | 0.0006 | 0.86 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.86 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 0.3 | 0.3 | 26.4 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 5.29 | 0.657 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 10.5 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182501AA | 09/07/2018 11:58 | Jennifer K Howe | 0.86 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/28/2018 14:40 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/28/2018 14:40 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/28/2018 14:40 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18249SLA026 | 09/07/2018 23:37 | William H Saadeh | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18249SLA026 | 09/06/2018 17:00 | Osvaldo R Sanchez | 1 |

Sample Description: SB-2-S-15.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780549
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 14:40
SDG#: LDC01-19

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247D34A | 09/05/2018 21:21 | Jeremy C Giffin | 26.4 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/28/2018 14:40 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500015A | 09/12/2018 03:00 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500015A | 09/08/2018 09:00 | Michelle A Newswanger | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404901 | 09/10/2018 15:10 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404901 | 09/06/2018 07:20 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18247820004B | 09/04/2018 10:23 | William C Schwebel | 1 |

Sample Description: SB-2-S-20.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780550
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 14:50
SDG#: LDC01-20

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.85 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.85 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.85 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.85 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 0.2 | 0.2 | 20.61 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 4.14 | 0.527 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 7.4 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182501AA | 09/07/2018 12:21 | Jennifer K Howe | 0.85 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/28/2018 14:50 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/28/2018 14:50 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/28/2018 14:50 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18249SLA026 | 09/08/2018 00:00 | William H Saadeh | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18249SLA026 | 09/06/2018 17:00 | Osvaldo R Sanchez | 1 |

Sample Description: SB-2-S-20.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780550
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 14:50
SDG#: LDC01-20

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247D34A | 09/05/2018 21:56 | Jeremy C Giffin | 20.61 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/28/2018 14:50 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500015A | 09/12/2018 03:20 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500015A | 09/08/2018 09:00 | Michelle A Newswanger | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404901 | 09/10/2018 15:12 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404901 | 09/06/2018 07:20 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18247820004B | 09/04/2018 10:23 | William C Schwebel | 1 |

Sample Description: SB-2-S-8.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780551
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 13:55
SDG#: LDC01-21

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.82 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.82 |
| 11995 | Toluene | 108-88-3 | 0.0009 | 0.0005 | 0.82 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.82 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 23.49 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 13 | 3.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 49 | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.48 | 0.603 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 9.6 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182501AA | 09/07/2018 12:44 | Jennifer K Howe | 0.82 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/28/2018 13:55 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/28/2018 13:55 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/28/2018 13:55 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18249SLA026 | 09/10/2018 05:27 | Anthony P Bauer | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18249SLA026 | 09/06/2018 17:00 | Osvaldo R Sanchez | 1 |

Sample Description: SB-2-S-8.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780551
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 13:55
SDG#: LDC01-21

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247D34A | 09/05/2018 22:31 | Jeremy C Giffin | 23.49 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/28/2018 13:55 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500015A | 09/12/2018 05:58 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500015A | 09/08/2018 09:00 | Michelle A Newswanger | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404902 | 09/10/2018 15:03 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404902 | 09/06/2018 07:10 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820008A | 09/03/2018 06:15 | William C Schwebel | 1 |

Sample Description: QA-1-O-180828 Grab Water
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 9780552
ELLE Group #: 1982153
Matrix: Water

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 15:20
SDG#: LDC01-22EB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | 0.7 | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|----------------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | Z182472AA | 09/04/2018 19:34 | Hu Yang | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | Z182472AA | 09/04/2018 19:34 | Hu Yang | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18253A20A | 09/10/2018 22:51 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 18253A20A | 09/10/2018 22:51 | Marie D Beamenderfer | 1 |

Sample Description: UST-2-S-8.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780553
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 16:00
SDG#: LDC01-23

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|------------------------|---------------------------|---------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.026 | 45.35 |
| 11995 | Bromodichloromethane | 75-27-4 | N.D. | 0.021 | 45.35 |
| 11995 | Bromoform | 75-25-2 | N.D. | 0.26 | 45.35 |
| 11995 | Bromomethane | 74-83-9 | N.D. | 0.036 | 45.35 |
| 11995 | Carbon Tetrachloride | 56-23-5 | N.D. | 0.026 | 45.35 |
| 11995 | Chlorobenzene | 108-90-7 | N.D. | 0.026 | 45.35 |
| 11995 | Chloroethane | 75-00-3 | N.D. | 0.051 | 45.35 |
| 11995 | Chloroform | 67-66-3 | N.D. | 0.031 | 45.35 |
| 11995 | Chloromethane | 74-87-3 | N.D. | 0.031 | 45.35 |
| 11995 | Dibromochloromethane | 124-48-1 | N.D. | 0.021 | 45.35 |
| 11995 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 0.026 | 45.35 |
| 11995 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 0.026 | 45.35 |
| 11995 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 0.021 | 45.35 |
| 11995 | 1,1-Dichloroethane | 75-34-3 | N.D. | 0.026 | 45.35 |
| 11995 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.031 | 45.35 |
| 11995 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.026 | 45.35 |
| 11995 | cis-1,2-Dichloroethene | 156-59-2 | N.D. | 0.026 | 45.35 |
| 11995 | trans-1,2-Dichloroethene | 156-60-5 | N.D. | 0.026 | 45.35 |
| 11995 | 1,2-Dichloropropane | 78-87-5 | N.D. | 0.026 | 45.35 |
| 11995 | cis-1,3-Dichloropropene | 10061-01-5 | N.D. | 0.021 | 45.35 |
| 11995 | trans-1,3-Dichloropropene | 10061-02-6 | N.D. | 0.015 | 45.35 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.021 | 45.35 |
| 11995 | Freon 113 | 76-13-1 | N.D. | 0.031 | 45.35 |
| 11995 | Methylene Chloride | 75-09-2 | N.D. | 0.10 | 45.35 |
| 11995 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 0.021 | 45.35 |
| 11995 | Tetrachloroethene | 127-18-4 | N.D. | 0.026 | 45.35 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.031 | 45.35 |
| 11995 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.031 | 45.35 |
| 11995 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.026 | 45.35 |
| 11995 | Trichloroethene | 79-01-6 | N.D. | 0.026 | 45.35 |
| 11995 | Trichlorofluoromethane | 75-69-4 | N.D. | 0.036 | 45.35 |
| 11995 | Vinyl Chloride | 75-01-4 | N.D. | 0.031 | 45.35 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.051 | 45.35 |

Reporting limits were raised due to interference from the sample matrix.

| | | | | | |
|----------------------------|----------------------|------------------------------|--------------|--------------|--------|
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 670 | 9.1 | 873.71 |
| PCBs | | SW-846 8082A Feb 2007 | mg/kg | mg/kg | |
| | | Rev 1 | | | |
| 10885 | PCB-1016 | 12674-11-2 | N.D. D1 | 0.0041 | 1 |
| 10885 | PCB-1221 | 11104-28-2 | N.D. D1 | 0.0052 | 1 |
| 10885 | PCB-1232 | 11141-16-5 | N.D. D1 | 0.0090 | 1 |
| 10885 | PCB-1242 | 53469-21-9 | N.D. D1 | 0.0037 | 1 |

Sample Description: UST-2-S-8.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780553
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 16:00
SDG#: LDC01-23

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|-------------|---------------|------------------------------------|--------------|----------------------------|-----------------|
| PCBs | | SW-846 8082A Feb 2007 Rev 1 | mg/kg | mg/kg | |
| 10885 | PCB-1248 | 12672-29-6 | N.D. D1 | 0.0037 | 1 |
| 10885 | PCB-1254 | 11097-69-1 | N.D. D1 | 0.0037 | 1 |
| 10885 | PCB-1260 | 11096-82-5 | N.D. D1 | 0.0055 | 1 |

The response for a target analyte(s) in the ending calibration verification standard is outside the upper QC acceptance limits.

The following action was taken:

The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
|----------------------------------|-------------------------------|-------------------------------------|--------------|--------------|----|
| 08272 | Diesel Range Organics C12-C24 | n.a. | 2,800 | 34 | 10 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 110 | 10 |

| GC Petroleum Hydrocarbons | | ECY 97-602 WA EPH | mg/kg | mg/kg | |
|----------------------------------|--------------------|--------------------------|--------------|--------------|---|
| 05970 | >C10-C12 Aliphatic | n.a. | 69 | 2.2 | 2 |
| 05970 | >C10-C12 Aromatic | n.a. | 3.5 | 1.1 | 1 |
| 05970 | >C12-C16 Aliphatic | n.a. | 550 | 2.2 | 2 |
| 05970 | >C12-C16 Aromatic | n.a. | 96 | 1.1 | 1 |
| 05970 | >C16-C21 Aliphatic | n.a. | 340 | 6.5 | 2 |
| 05970 | >C16-C21 Aromatic | n.a. | 210 | 2.2 | 1 |
| 05970 | >C21-C34 Aliphatic | n.a. | 32 | 13 | 2 |
| 05970 | >C21-C34 Aromatic | n.a. | 16 | 2.2 | 1 |

Trial ID: RE

| | | | | | |
|-------|--------------------|------|-----|-----|---|
| 05970 | >C10-C12 Aliphatic | n.a. | 100 | 5.4 | 5 |
| 05970 | >C10-C12 Aromatic | n.a. | 7.5 | 1.1 | 1 |
| 05970 | >C12-C16 Aliphatic | n.a. | 750 | 5.4 | 5 |
| 05970 | >C12-C16 Aromatic | n.a. | 120 | 1.1 | 1 |
| 05970 | >C16-C21 Aliphatic | n.a. | 460 | 16 | 5 |
| 05970 | >C16-C21 Aromatic | n.a. | 290 | 2.2 | 1 |
| 05970 | >C21-C34 Aliphatic | n.a. | 35 | 32 | 5 |
| 05970 | >C21-C34 Aromatic | n.a. | 29 | 2.2 | 1 |

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:

The sample was re-extracted outside the method required holding time and the QC is compliant. Results are reported from both trials.

| GC Petroleum Hydrocarbons | | ECY 97-602 WA VPH | mg/kg | mg/kg | |
|----------------------------------|------------------------------|--------------------------|--------------|--------------|------|
| 05666 | Benzene | 71-43-2 | N.D. | 0.0552 | 48.7 |
| 05666 | C5-C6 Aliphatic Hydrocarbons | n.a. | N.D. | 2.76 | 48.7 |

Sample Description: UST-2-S-8.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780553
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 16:00
SDG#: LDC01-23

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC Petroleum Hydrocarbons | | ECY 97-602 WA VPH | mg/kg | mg/kg | |
| 05666 | C6-C8 Aliphatic Hydrocarbons | n.a. | N.D. | 2.76 | 48.7 |
| 05666 | C8-C10 Aliphatic Hydrocarbons | n.a. | 12.7 | 2.76 | 48.7 |
| 05666 | C8-C10 Aromatic Hydrocarbons | n.a. | 9.74 | 2.76 | 48.7 |
| 05666 | Ethylbenzene | 100-41-4 | N.D. | 0.0552 | 48.7 |
| 05666 | Methyl t-butyl ether | 1634-04-4 | N.D. | 0.0552 | 48.7 |
| 05666 | Toluene | 108-88-3 | N.D. | 0.0552 | 48.7 |
| 05666 | o-Xylene | 95-47-6 | N.D. | 0.0552 | 48.7 |
| 05666 | m,p-Xylenes | 179601-23-1 | N.D. | 0.110 | 48.7 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.51 | 0.602 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 11.8 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|---------------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | HVOCs + BTEX | SW-846 8260C | 1 | Q182521AA | 09/09/2018 12:34 | Stephen C Nolte | 45.35 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/28/2018 16:00 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/28/2018 16:00 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 3 | 201824351084 | 08/28/2018 16:00 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 4 | 201824351084 | 08/28/2018 16:00 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/28/2018 16:00 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 2 | 201824351084 | 08/28/2018 16:00 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18249SLA026 | 09/10/2018 05:51 | Anthony P Bauer | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18249SLA026 | 09/06/2018 17:00 | Oswaldo R Sanchez | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18248A34A | 09/06/2018 22:01 | Jeremy C Giffin | 873.71 |

Sample Description: UST-2-S-8.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780553
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 16:00
SDG#: LDC01-23

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-------------------------------|-------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/28/2018 16:00 | Client Supplied | n.a. |
| 10885 | PCBs 8082A/3546 | SW-846 8082A Feb 2007 Rev 1 | 1 | 182480026A | 09/07/2018 01:34 | Kirby B Turner | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 182480026A | 09/06/2018 07:00 | Joshua S Ruth | 1 |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500015A | 09/12/2018 03:40 | Thomas C Wildermuth | 10 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 1 | 182500003A | 09/19/2018 06:06 | Heather E Williams | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 1 | 182500003A | 09/20/2018 11:16 | Heather E Williams | 2 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 2-RE | 182700031A | 10/03/2018 11:11 | Amy Lehr | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 2-RE | 182700031A | 10/04/2018 00:55 | Amy Lehr | 5 |
| 05666 | WA- VPH soils | ECY 97-602 WA VPH | 1 | 18253A08A | 09/10/2018 18:32 | Thomas C Wildermuth | 48.7 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500015A | 09/08/2018 09:00 | Michelle A Newswanger | 1 |
| 11213 | WA EPH Soils Extraction | ECY 97-602 WA EPH | 1 | 182500003A | 09/08/2018 11:20 | Sally L Appleyard | 1 |
| 11213 | WA EPH Soils Extraction | ECY 97-602 WA EPH | 2 | 182700031A | 09/28/2018 09:00 | Michelle A Newswanger | 1 |
| 00388 | GC - Field Preserved (MA-VPH) | MA DEP VPH modified | 1 | 201824351081 | 08/28/2018 16:00 | Client Supplied | 1 |
| 00497 | Silica Gel Fractionation | SW-846 3630C modified | 1 | 182500003A | 09/18/2018 08:00 | David S Schrum | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404902 | 09/10/2018 15:19 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404902 | 09/06/2018 07:10 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820008A | 09/03/2018 06:15 | William C Schwebel | 1 |

Sample Description: SB-5-S-12.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780554
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 16:40
SDG#: LDC01-24

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.71 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.71 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.71 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.71 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.009 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 0.5 | 0.3 | 26.29 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.9 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 13 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 3.50 | 3.46 | 5 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 24.5 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182501AA | 09/07/2018 18:02 | Jennifer K Howe | 0.71 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/28/2018 16:40 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/28/2018 16:40 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/28/2018 16:40 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18249SLA026 | 09/10/2018 06:14 | Anthony P Bauer | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18249SLA026 | 09/06/2018 17:00 | Osvaldo R Sanchez | 1 |

Sample Description: SB-5-S-12.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780554
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 16:40
SDG#: LDC01-24

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247D34A | 09/05/2018 19:35 | Jeremy C Giffin | 26.29 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/28/2018 16:40 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500015A | 09/12/2018 03:59 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500015A | 09/08/2018 09:00 | Michelle A Newswanger | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404902 | 09/10/2018 16:57 | Cindy M Gehman | 5 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404902 | 09/06/2018 07:10 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820007B | 09/03/2018 05:44 | William C Schwebel | 1 |

Sample Description: SB-5-S-17.5-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780555
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 17:20
SDG#: LDC01-25

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|-------------------------------|-------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.023 | 42.65 |
| 11995 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.018 | 42.65 |
| 11995 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.027 | 42.65 |
| 11995 | Ethylbenzene | 100-41-4 | 0.67 | 0.018 | 42.65 |
| 11995 | n-Hexane | 110-54-3 | N.D. | 0.023 | 42.65 |
| 11995 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.023 | 42.65 |
| 11995 | Toluene | 108-88-3 | 0.042 | 0.027 | 42.65 |
| 11995 | Xylene (Total) | 1330-20-7 | 9.8 | 0.046 | 42.65 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D SIM | mg/kg | mg/kg | |
| 12969 | Benzo(a)anthracene | 56-55-3 | 0.0008 | 0.0007 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | N.D. | 0.0007 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | N.D. | 0.0007 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | N.D. | 0.0007 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.002 | 0.0004 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | N.D. | 0.0007 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | N.D. | 0.0007 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.34 | 0.001 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 1,100 | 22 | 2258.55 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 23 | 3.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 WA EPH | mg/kg | mg/kg | |
| 05970 | >C10-C12 Aliphatic | n.a. | 8.3 | 1.1 | 1 |
| 05970 | >C10-C12 Aromatic | n.a. | 3.0 | 1.1 | 1 |
| 05970 | >C12-C16 Aliphatic | n.a. | 2.1 | 1.1 | 1 |
| 05970 | >C12-C16 Aromatic | n.a. | 4.4 | 1.1 | 1 |
| 05970 | >C16-C21 Aliphatic | n.a. | N.D. | 3.2 | 1 |
| 05970 | >C16-C21 Aromatic | n.a. | N.D. | 2.1 | 1 |
| 05970 | >C21-C34 Aliphatic | n.a. | N.D. | 6.3 | 1 |
| 05970 | >C21-C34 Aromatic | n.a. | N.D. | 2.1 | 1 |
| Trial ID: RE | | | | | |
| 05970 | >C10-C12 Aliphatic | n.a. | 10 | 1.0 | 1 |
| 05970 | >C10-C12 Aromatic | n.a. | 5.1 | 1.0 | 1 |
| 05970 | >C12-C16 Aliphatic | n.a. | 6.0 | 1.0 | 1 |
| 05970 | >C12-C16 Aromatic | n.a. | 6.6 | 1.0 | 1 |
| 05970 | >C16-C21 Aliphatic | n.a. | N.D. | 3.1 | 1 |
| 05970 | >C16-C21 Aromatic | n.a. | 2.8 | 2.1 | 1 |
| 05970 | >C21-C34 Aliphatic | n.a. | N.D. | 6.3 | 1 |
| 05970 | >C21-C34 Aromatic | n.a. | N.D. | 2.1 | 1 |

Sample Description: SB-5-S-17.5-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780555
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 17:20
SDG#: LDC01-25

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---------|---------------|------------|------------|----------------------------|-----------------|
|---------|---------------|------------|------------|----------------------------|-----------------|

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:

The sample was re-extracted outside the method required holding time and the QC is compliant. Results are reported from both trials.

| GC Petroleum Hydrocarbons | | ECY 97-602 WA VPH | mg/kg | mg/kg | |
|---------------------------|-------------------------------|-------------------|-------|--------|-------|
| 05666 | Benzene | 71-43-2 | N.D. | 0.0498 | 46.68 |
| 05666 | C5-C6 Aliphatic Hydrocarbons | n.a. | N.D. | 2.49 | 46.68 |
| 05666 | C6-C8 Aliphatic Hydrocarbons | n.a. | 9.67 | 2.49 | 46.68 |
| 05666 | C8-C10 Aliphatic Hydrocarbons | n.a. | 108 | 13.3 | 250 |
| 05666 | C8-C10 Aromatic Hydrocarbons | n.a. | 93.0 | 13.3 | 250 |
| 05666 | Ethylbenzene | 100-41-4 | 0.751 | 0.0498 | 46.68 |
| 05666 | Methyl t-butyl ether | 1634-04-4 | N.D. | 0.0498 | 46.68 |
| 05666 | Toluene | 108-88-3 | N.D. | 0.0498 | 46.68 |
| 05666 | o-Xylene | 95-47-6 | 2.57 | 0.0498 | 46.68 |
| 05666 | m,p-Xylenes | 179601-23-1 | 5.45 | 0.0996 | 46.68 |

| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
|--------|------|-------------------------------|-------|-------|---|
| 06955 | Lead | 7439-92-1 | 1.70 | 0.427 | 1 |

| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
|---|----------|-------------------------------|-----|------|---|
| 00111 | Moisture | n.a. | 6.3 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX/MTBE/EDB/EDC/n-hexane | SW-846 8260C | 1 | Q182521AA | 09/09/2018 12:57 | Stephen C Nolte | 42.65 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/28/2018 17:20 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/28/2018 17:20 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 3 | 201824351084 | 08/28/2018 17:20 | Client Supplied | 1 |

Sample Description: SB-5-S-17.5-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780555
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 17:20
SDG#: LDC01-25

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 4 | 201824351084 | 08/28/2018 17:20 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/28/2018 17:20 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 2 | 201824351084 | 08/28/2018 17:20 | Client Supplied | 1 |
| 12969 | SIM SVOAs 8270D (microwave) | SW-846 8270D SIM | 1 | 18250SLA026 | 09/11/2018 09:02 | Joseph M Gambler | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 18250SLA026 | 09/07/2018 18:15 | Sally L Appleyard | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247D34A | 09/06/2018 07:16 | Jeremy C Giffin | 2258.55 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/28/2018 17:20 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500015A | 09/12/2018 04:19 | Thomas C Wildermuth | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 1 | 182500003A | 09/19/2018 07:27 | Heather E Williams | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 1 | 182500003A | 09/19/2018 08:08 | Heather E Williams | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 2-RE | 182700031A | 10/03/2018 12:33 | Amy Lehr | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 2-RE | 182700031A | 10/03/2018 13:13 | Amy Lehr | 1 |
| 05666 | WA- VPH soils | ECY 97-602 WA VPH | 1 | 18253A08A | 09/10/2018 19:13 | Thomas C Wildermuth | 46.68 |
| 05666 | WA- VPH soils | ECY 97-602 WA VPH | 1 | 18253A08A | 09/11/2018 13:43 | Thomas C Wildermuth | 250 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500015A | 09/08/2018 09:00 | Michelle A Newswanger | 1 |
| 11213 | WA EPH Soils Extraction | ECY 97-602 WA EPH | 1 | 182500003A | 09/08/2018 11:20 | Sally L Appleyard | 1 |
| 11213 | WA EPH Soils Extraction | ECY 97-602 WA EPH | 2 | 182700031A | 09/28/2018 09:00 | Michelle A Newswanger | 1 |
| 00388 | GC - Field Preserved (MA-VPH) | MA DEP VPH modified | 1 | 201824351081 | 08/28/2018 17:20 | Client Supplied | 1 |
| 00497 | Silica Gel Fractionation | SW-846 3630C modified | 1 | 182500003A | 09/18/2018 08:00 | David S Schrum | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404902 | 09/10/2018 15:30 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404902 | 09/06/2018 07:10 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820007B | 09/03/2018 05:44 | William C Schwebel | 1 |

Sample Description: SB-1-S-14.0-180827 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780556
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/27/2018 10:20
SDG#: LDC01-26

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.8 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.8 |
| 11995 | Toluene | 108-88-3 | 0.001 | 0.0005 | 0.8 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.8 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 0.3 | 0.2 | 23.55 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | N.D. | 2.35 | 5 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 10.6 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182501AA | 09/07/2018 13:07 | Jennifer K Howe | 0.8 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/27/2018 10:20 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/27/2018 10:20 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/27/2018 10:20 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18249SLA026 | 09/10/2018 06:38 | Anthony P Bauer | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18249SLA026 | 09/06/2018 17:00 | Oswaldo R Sanchez | 1 |

Sample Description: SB-1-S-14.0-180827 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780556
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/27/2018 10:20
SDG#: LDC01-26

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247A31A | 09/06/2018 07:47 | Jeremy C Giffin | 23.55 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/27/2018 10:20 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500015A | 09/12/2018 05:19 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500015A | 09/08/2018 09:00 | Michelle A Newswanger | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404902 | 09/10/2018 17:00 | Cindy M Gehman | 5 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404902 | 09/06/2018 07:10 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820007B | 09/03/2018 05:44 | William C Schwebel | 1 |

Sample Description: SB-1-S-16.0-180827 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780557
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/27/2018 10:40
SDG#: LDC01-27

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.86 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.86 |
| 11995 | Toluene | 108-88-3 | 0.001 | 0.0006 | 0.86 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.86 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 0.3 | 0.2 | 23.05 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.35 | 0.623 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 7.4 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182501AA | 09/07/2018 13:29 | Jennifer K Howe | 0.86 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/27/2018 10:40 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/27/2018 10:40 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/27/2018 10:40 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18249SLA026 | 09/10/2018 07:01 | Anthony P Bauer | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18249SLA026 | 09/06/2018 17:00 | Osvaldo R Sanchez | 1 |

Sample Description: SB-1-S-16.0-180827 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780557
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/27/2018 10:40
SDG#: LDC01-27

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247A31A | 09/06/2018 08:23 | Jeremy C Giffin | 23.05 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/27/2018 10:40 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500015A | 09/12/2018 05:38 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500015A | 09/08/2018 09:00 | Michelle A Newswanger | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404902 | 09/10/2018 15:36 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404902 | 09/06/2018 07:10 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820007B | 09/03/2018 05:44 | William C Schwebel | 1 |

Sample Description: DUP-1-SD-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780558
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 16:20
SDG#: LDC01-28FD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|------------------------|---------------------------|---------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.026 | 45.92 |
| 11995 | Bromodichloromethane | 75-27-4 | N.D. | 0.020 | 45.92 |
| 11995 | Bromoform | 75-25-2 | N.D. | 0.26 | 45.92 |
| 11995 | Bromomethane | 74-83-9 | N.D. | 0.036 | 45.92 |
| 11995 | Carbon Tetrachloride | 56-23-5 | N.D. | 0.026 | 45.92 |
| 11995 | Chlorobenzene | 108-90-7 | N.D. | 0.026 | 45.92 |
| 11995 | Chloroethane | 75-00-3 | N.D. | 0.051 | 45.92 |
| 11995 | Chloroform | 67-66-3 | N.D. | 0.031 | 45.92 |
| 11995 | Chloromethane | 74-87-3 | N.D. | 0.031 | 45.92 |
| 11995 | Dibromochloromethane | 124-48-1 | N.D. | 0.020 | 45.92 |
| 11995 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 0.026 | 45.92 |
| 11995 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 0.026 | 45.92 |
| 11995 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 0.020 | 45.92 |
| 11995 | 1,1-Dichloroethane | 75-34-3 | N.D. | 0.026 | 45.92 |
| 11995 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.031 | 45.92 |
| 11995 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.026 | 45.92 |
| 11995 | cis-1,2-Dichloroethene | 156-59-2 | N.D. | 0.026 | 45.92 |
| 11995 | trans-1,2-Dichloroethene | 156-60-5 | N.D. | 0.026 | 45.92 |
| 11995 | 1,2-Dichloropropane | 78-87-5 | N.D. | 0.026 | 45.92 |
| 11995 | cis-1,3-Dichloropropene | 10061-01-5 | N.D. | 0.020 | 45.92 |
| 11995 | trans-1,3-Dichloropropene | 10061-02-6 | N.D. | 0.015 | 45.92 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.020 | 45.92 |
| 11995 | Freon 113 | 76-13-1 | N.D. | 0.031 | 45.92 |
| 11995 | Methylene Chloride | 75-09-2 | N.D. | 0.10 | 45.92 |
| 11995 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 0.020 | 45.92 |
| 11995 | Tetrachloroethene | 127-18-4 | N.D. | 0.026 | 45.92 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.031 | 45.92 |
| 11995 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.031 | 45.92 |
| 11995 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.026 | 45.92 |
| 11995 | Trichloroethene | 79-01-6 | N.D. | 0.026 | 45.92 |
| 11995 | Trichlorofluoromethane | 75-69-4 | N.D. | 0.036 | 45.92 |
| 11995 | Vinyl Chloride | 75-01-4 | N.D. | 0.031 | 45.92 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.051 | 45.92 |

Reporting limits were raised due to interference from the sample matrix.

| | | | | | |
|----------------------------|----------------------|------------------------------------|--------------|--------------|--------|
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | 0.10 | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 530 | 9.2 | 901.33 |
| PCBs | | SW-846 8082A Feb 2007 Rev 1 | mg/kg | mg/kg | |
| 10885 | PCB-1016 | 12674-11-2 | N.D. D1 | 0.0039 | 1 |
| 10885 | PCB-1221 | 11104-28-2 | N.D. D1 | 0.0050 | 1 |
| 10885 | PCB-1232 | 11141-16-5 | N.D. D1 | 0.0087 | 1 |
| 10885 | PCB-1242 | 53469-21-9 | N.D. D1 | 0.0036 | 1 |

Sample Description: DUP-1-SD-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780558
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 16:20
SDG#: LDC01-28FD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|-------------|---------------|------------------------------------|--------------|----------------------------|-----------------|
| PCBs | | SW-846 8082A Feb 2007 Rev 1 | mg/kg | mg/kg | |
| 10885 | PCB-1248 | 12672-29-6 | N.D. D1 | 0.0036 | 1 |
| 10885 | PCB-1254 | 11097-69-1 | N.D. D1 | 0.0036 | 1 |
| 10885 | PCB-1260 | 11096-82-5 | N.D. D1 | 0.0054 | 1 |

The response for a target analyte(s) in the ending calibration verification standard is outside the upper QC acceptance limits.

The following action was taken:

The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
|----------------------------------|-------------------------------|-------------------------------------|--------------|--------------|----|
| 08272 | Diesel Range Organics C12-C24 | n.a. | 2,500 | 66 | 20 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 220 | 20 |

| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
|---------------|------|--------------------------------------|--------------|--------------|---|
| 06955 | Lead | 7439-92-1 | 1.98 | 0.580 | 1 |

| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
|----------------------|----------|--------------------------------------|----------|----------|---|
| 00111 | Moisture | n.a. | 10.0 | 0.50 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | HVOCs + BTEX | SW-846 8260C | 1 | Q182521AA | 09/09/2018 13:20 | Stephen C Nolte | 45.92 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/28/2018 16:20 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/28/2018 16:20 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/28/2018 16:20 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18250SLB026 | 09/10/2018 14:32 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18250SLB026 | 09/07/2018 18:00 | Sally L Appleyard | 1 |

Sample Description: DUP-1-SD-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780558
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 16:20
SDG#: LDC01-28FD

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-------------------------------|-------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18248A34A | 09/06/2018 22:36 | Jeremy C Giffin | 901.33 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/28/2018 16:20 | Client Supplied | n.a. |
| 10885 | PCBs 8082A/3546 | SW-846 8082A Feb 2007 Rev 1 | 1 | 182480026A | 09/07/2018 01:45 | Kirby B Turner | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 182480026A | 09/06/2018 07:00 | Joshua S Ruth | 1 |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500017A | 09/12/2018 10:56 | Thomas C Wildermuth | 20 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500017A | 09/09/2018 10:30 | Michelle A Newswanger | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404902 | 09/10/2018 15:39 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404902 | 09/06/2018 07:10 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820007B | 09/03/2018 05:44 | William C Schwebel | 1 |

Sample Description: SB-5-S-24.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780559
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 17:35
SDG#: LDC01-29

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.89 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.89 |
| 11995 | Toluene | 108-88-3 | 0.001 | 0.0006 | 0.89 |
| 11995 | Xylene (Total) | 1330-20-7 | 0.004 | 0.001 | 0.89 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | 0.012 | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 0.7 | 0.2 | 22.52 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.76 | 0.521 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 9.4 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182501AA | 09/07/2018 13:52 | Jennifer K Howe | 0.89 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/28/2018 17:35 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/28/2018 17:35 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/28/2018 17:35 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18250SLB026 | 09/10/2018 14:57 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18250SLB026 | 09/07/2018 18:00 | Sally L Appleyard | 1 |

Sample Description: SB-5-S-24.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780559
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 17:35
SDG#: LDC01-29

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247D34A | 09/05/2018 23:06 | Jeremy C Giffin | 22.52 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/28/2018 17:35 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500017A | 09/12/2018 07:37 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500017A | 09/09/2018 10:30 | Michelle A Newswanger | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404902 | 09/10/2018 15:41 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404902 | 09/06/2018 07:10 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820007B | 09/03/2018 05:44 | William C Schwebel | 1 |

Sample Description: SB-5-S-6.0-180823 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780560
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/23/2018 16:57
SDG#: LDC01-30

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.84 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.84 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.84 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.84 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.1 | 12.11 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 4.51 | 2.65 | 5 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 5.8 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182492AA | 09/06/2018 15:01 | Linda C Pape | 0.84 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/23/2018 16:57 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/23/2018 16:57 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/23/2018 16:57 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18248SLA026 | 09/07/2018 15:22 | William H Saadeh | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18248SLA026 | 09/05/2018 18:00 | Sally L Appleyard | 1 |

Sample Description: SB-5-S-6.0-180823 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780560
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/23/2018 16:57
SDG#: LDC01-30

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247A31A | 09/05/2018 21:06 | Jeremy C Giffin | 12.11 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/23/2018 16:57 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182490010A | 09/08/2018 03:33 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182490010A | 09/06/2018 17:50 | Elizabeth E Donovan | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404902 | 09/10/2018 17:02 | Cindy M Gehman | 5 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404902 | 09/06/2018 07:10 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820007B | 09/03/2018 05:44 | William C Schwebel | 1 |

Sample Description: SB-5-S-14.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780561
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 16:50
SDG#: LDC01-31

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|------------------------|-----------------------------|---------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.029 | 46.13 |
| 11995 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.023 | 46.13 |
| 11995 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.035 | 46.13 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.023 | 46.13 |
| 11995 | n-Hexane | 110-54-3 | 1.2 | 0.029 | 46.13 |
| 11995 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.029 | 46.13 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.035 | 46.13 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.058 | 46.13 |

Reporting limits were raised due to interference from the sample matrix.

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------|------------------------|-------------------------|--------------|----------------------------|-----------------|
| GC/MS Semivolatiles | | SW-846 8270D SIM | mg/kg | mg/kg | |
| 12969 | Benzo(a)anthracene | 56-55-3 | N.D. | 0.0008 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | N.D. | 0.0008 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | N.D. | 0.0008 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | N.D. | 0.0008 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.0005 | 0.0004 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | N.D. | 0.0008 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | N.D. | 0.0008 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.020 | 0.002 | 1 |

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---------------------|----------------------|----------------------------|--------------|----------------------------|-----------------|
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 420 | 5.6 | 483.35 |

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|-------------------------------|-------------------------------------|--------------|----------------------------|-----------------|
| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.7 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 12 | 1 |

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|--------------------|--------------------------|--------------|----------------------------|-----------------|
| GC Petroleum Hydrocarbons | | ECY 97-602 WA EPH | mg/kg | mg/kg | |
| 05970 | >C10-C12 Aliphatic | n.a. | 6.4 | 1.2 | 1 |
| 05970 | >C10-C12 Aromatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C12-C16 Aliphatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C12-C16 Aromatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C16-C21 Aliphatic | n.a. | N.D. | 3.7 | 1 |
| 05970 | >C16-C21 Aromatic | n.a. | N.D. | 2.5 | 1 |
| 05970 | >C21-C34 Aliphatic | n.a. | N.D. | 7.5 | 1 |
| 05970 | >C21-C34 Aromatic | n.a. | N.D. | 2.5 | 1 |

Trial ID: RE

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---------|--------------------|------------|------------|----------------------------|-----------------|
| 05970 | >C10-C12 Aliphatic | n.a. | 5.3 | 1.2 | 1 |
| 05970 | >C10-C12 Aromatic | n.a. | 1.6 | 1.2 | 1 |
| 05970 | >C12-C16 Aliphatic | n.a. | 1.4 | 1.2 | 1 |
| 05970 | >C12-C16 Aromatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C16-C21 Aliphatic | n.a. | N.D. | 3.6 | 1 |
| 05970 | >C16-C21 Aromatic | n.a. | N.D. | 2.4 | 1 |
| 05970 | >C21-C34 Aliphatic | n.a. | N.D. | 7.2 | 1 |

Sample Description: SB-5-S-14.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780561
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 16:50
SDG#: LDC01-31

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|--------------------------------------|-------------|--------------|----------------------------|-----------------|
| GC Petroleum Hydrocarbons | | | | | |
| | ECY 97-602 WA EPH | | mg/kg | mg/kg | |
| 05970 | >C21-C34 Aromatic | n.a. | N.D. | 2.4 | 1 |
| The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken: The sample was re-extracted outside the method required holding time and the QC is compliant. Results are reported from both trials. | | | | | |
| GC Petroleum Hydrocarbons | | | | | |
| | ECY 97-602 WA VPH | | mg/kg | mg/kg | |
| 05666 | Benzene | 71-43-2 | N.D. | 0.0594 | 46.92 |
| 05666 | C5-C6 Aliphatic Hydrocarbons | n.a. | N.D. | 2.97 | 46.92 |
| 05666 | C6-C8 Aliphatic Hydrocarbons | n.a. | 52.8 | 2.97 | 46.92 |
| 05666 | C8-C10 Aliphatic Hydrocarbons | n.a. | 32.7 | 2.97 | 46.92 |
| 05666 | C8-C10 Aromatic Hydrocarbons | n.a. | 10.9 | 2.97 | 46.92 |
| 05666 | Ethylbenzene | 100-41-4 | N.D. | 0.0594 | 46.92 |
| 05666 | Methyl t-butyl ether | 1634-04-4 | N.D. | 0.0594 | 46.92 |
| 05666 | Toluene | 108-88-3 | N.D. | 0.0594 | 46.92 |
| 05666 | o-Xylene | 95-47-6 | 0.155 | 0.0594 | 46.92 |
| 05666 | m,p-Xylenes | 179601-23-1 | N.D. | 0.119 | 46.92 |
| Metals | | | | | |
| | SW-846 6010D Rev.4, July 2014 | | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.36 | 0.612 | 1 |
| Wet Chemistry | | | | | |
| | SM 2540 G-2011 %Moisture Calc | | % | % | |
| 00111 | Moisture | n.a. | 21.0 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX/MTBE/EDB/EDC/n-hexane | SW-846 8260C | 1 | Q182521AA | 09/09/2018 13:42 | Stephen C Nolte | 46.13 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/28/2018 16:50 | Client Supplied | 1 |

Sample Description: SB-5-S-14.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780561
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 16:50
SDG#: LDC01-31

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/28/2018 16:50 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 3 | 201824351084 | 08/28/2018 16:50 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 4 | 201824351084 | 08/28/2018 16:50 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/28/2018 16:50 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 2 | 201824351084 | 08/28/2018 16:50 | Client Supplied | 1 |
| 12969 | SIM SVOAs 8270D (microwave) | SW-846 8270D SIM | 1 | 18250SLA026 | 09/11/2018 09:32 | Joseph M Gambler | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 18250SLA026 | 09/07/2018 18:15 | Sally L Appleyard | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18248A34A | 09/06/2018 21:26 | Jeremy C Giffin | 483.35 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/28/2018 16:50 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500017A | 09/12/2018 08:37 | Thomas C Wildermuth | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 1 | 182500003A | 09/19/2018 08:48 | Heather E Williams | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 1 | 182500003A | 09/19/2018 09:29 | Heather E Williams | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 2-RE | 182700031A | 10/03/2018 13:54 | Amy Lehr | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 2-RE | 182700031A | 10/03/2018 14:34 | Amy Lehr | 1 |
| 05666 | WA- VPH soils | ECY 97-602 WA VPH | 1 | 18253A08A | 09/10/2018 19:55 | Thomas C Wildermuth | 46.92 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500017A | 09/09/2018 10:30 | Michelle A Newswanger | 1 |
| 11213 | WA EPH Soils Extraction | ECY 97-602 WA EPH | 1 | 182500003A | 09/08/2018 11:20 | Sally L Appleyard | 1 |
| 11213 | WA EPH Soils Extraction | ECY 97-602 WA EPH | 2 | 182700031A | 09/28/2018 09:00 | Michelle A Newswanger | 1 |
| 00388 | GC - Field Preserved (MA-VPH) | MA DEP VPH modified | 1 | 201824351081 | 08/28/2018 16:50 | Client Supplied | 1 |
| 00497 | Silica Gel Fractionation | SW-846 3630C modified | 1 | 182500003A | 09/18/2018 08:00 | David S Schrum | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404902 | 09/10/2018 15:47 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404902 | 09/06/2018 07:10 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820007B | 09/03/2018 05:44 | William C Schwebel | 1 |

Sample Description: QA-1-T-180829 Water
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 9780562
ELLE Group #: 1982153
Matrix: Water

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 09:00
SDG#: LDC01-32TB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|----------------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | Z182472AA | 09/04/2018 19:59 | Hu Yang | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | Z182472AA | 09/04/2018 19:59 | Hu Yang | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18253A20A | 09/10/2018 23:19 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 18253A20A | 09/10/2018 23:19 | Marie D Beamenderfer | 1 |

Sample Description: QA-2-T-180829 Water
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 9780563
ELLE Group #: 1982153
Matrix: Water

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 12:40
SDG#: LDC01-33TB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|-----------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | Z182502AA | 09/07/2018 19:18 | Hu Yang | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | Z182502AA | 09/07/2018 19:18 | Hu Yang | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18249A53A | 09/09/2018 01:41 | Jeremy C Giffin | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 18249A53A | 09/09/2018 01:41 | Jeremy C Giffin | 1 |

Sample Description: QA-3-T-180829 Water
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 9780564
ELLE Group #: 1982153
Matrix: Water

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 12:50
SDG#: LDC01-34TB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|-----------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | Z182502AA | 09/07/2018 19:42 | Hu Yang | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | Z182502AA | 09/07/2018 19:42 | Hu Yang | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18249A53A | 09/09/2018 02:09 | Jeremy C Giffin | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 18249A53A | 09/09/2018 02:09 | Jeremy C Giffin | 1 |

Sample Description: QA-4-T-180829 Water
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 9780565
ELLE Group #: 1982153
Matrix: Water

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 13:00
SDG#: LDC01-35TB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|-----------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | Z182502AA | 09/07/2018 20:07 | Hu Yang | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | Z182502AA | 09/07/2018 20:07 | Hu Yang | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18249A53A | 09/09/2018 02:37 | Jeremy C Giffin | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 18249A53A | 09/09/2018 02:37 | Jeremy C Giffin | 1 |

Sample Description: QA-5-T-180829 Water
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 9780566
ELLE Group #: 1982153
Matrix: Water

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 13:05
SDG#: LDC01-36TB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|-----------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | Z182502AA | 09/07/2018 20:31 | Hu Yang | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | Z182502AA | 09/07/2018 20:31 | Hu Yang | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18249A53A | 09/09/2018 03:05 | Jeremy C Giffin | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 18249A53A | 09/09/2018 03:05 | Jeremy C Giffin | 1 |

Sample Description: UST-1-S-4.0-180828 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780567
ELLE Group #: 1982153

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/28/2018 11:55
SDG#: LDC01-37

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-------------------------------|------------------------------|--------|-------------|------------------------|-----------------------|-----------------|
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18251SLC026 | 09/10/2018 18:50 | Sally L Appleyard | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 182510002A | 09/11/2018 07:00 | Joshua S Ruth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500069A | 09/11/2018 09:00 | Michelle A Newswanger | 1 |
| 11213 | WA EPH Soils Extraction | ECY 97-602 WA EPH | 1 | 182510005A | 09/11/2018 01:15 | Sherry L Morrow | 1 |
| 00497 | Silica Gel Fractionation | SW-846 3630C modified | 1 | 182510005A | 09/13/2018 08:00 | David S Schrum | 1 |

Sample Description: SB-8-S-2.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780568
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 09:20
SDG#: LDC01-38

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.87 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.87 |
| 11995 | Toluene | 108-88-3 | 0.0006 | 0.0006 | 0.87 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.87 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | 0.033 | 0.008 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 2.1 | 0.2 | 23.05 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.4 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 45 | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 22.8 | 0.551 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 12.2 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182501AA | 09/07/2018 14:15 | Jennifer K Howe | 0.87 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/29/2018 09:20 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/29/2018 09:20 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/29/2018 09:20 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18250SLB026 | 09/10/2018 17:04 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18250SLB026 | 09/07/2018 18:00 | Sally L Appleyard | 1 |

Sample Description: SB-8-S-2.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780568
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 09:20
SDG#: LDC01-38

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247D34A | 09/05/2018 20:11 | Jeremy C Giffin | 23.05 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/29/2018 09:20 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500017A | 09/12/2018 11:16 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500017A | 09/09/2018 10:30 | Michelle A Newswanger | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404902 | 09/10/2018 15:50 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404902 | 09/06/2018 07:10 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820007B | 09/03/2018 05:44 | William C Schwebel | 1 |

Sample Description: SB-5-S-30.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780569
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 09:30
SDG#: LDC01-39

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | 0.0006 | 0.0004 | 0.83 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.83 |
| 11995 | Toluene | 108-88-3 | 0.002 | 0.0005 | 0.83 |
| 11995 | Xylene (Total) | 1330-20-7 | 0.002 | 0.0009 | 0.83 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 0.3 | 0.2 | 24.75 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.54 | 0.581 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 6.9 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182501AA | 09/07/2018 14:37 | Jennifer K Howe | 0.83 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/29/2018 09:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/29/2018 09:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/29/2018 09:30 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18250SLB026 | 09/10/2018 17:29 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18250SLB026 | 09/07/2018 18:00 | Sally L Appleyard | 1 |

Sample Description: SB-5-S-30.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780569
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 09:30
SDG#: LDC01-39

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|----------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247D34A | 09/05/2018 23:41 | Jeremy C Giffin | 24.75 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/29/2018 09:30 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500017A | 09/12/2018 08:57 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500017A | 09/09/2018 10:30 | Michelle A Newswanger | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404902 | 09/10/2018 15:52 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404902 | 09/06/2018 07:10 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820007B | 09/03/2018 05:44 | William C Schwebel | 1 |

Sample Description: UST-3-S-8.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780570
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 10:25
SDG#: LDC01-40

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|------------------------|---------------------------|------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | mg/kg | mg/kg | |
| SW-846 8260C | | | | | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.81 |
| 11995 | Bromodichloromethane | 75-27-4 | N.D. | 0.0004 | 0.81 |
| 11995 | Bromoform | 75-25-2 | N.D. | 0.004 | 0.81 |
| 11995 | Bromomethane | 74-83-9 | N.D. | 0.0006 | 0.81 |
| 11995 | Carbon Tetrachloride | 56-23-5 | N.D. | 0.0004 | 0.81 |
| 11995 | Chlorobenzene | 108-90-7 | N.D. | 0.0004 | 0.81 |
| 11995 | Chloroethane | 75-00-3 | N.D. | 0.0009 | 0.81 |
| 11995 | Chloroform | 67-66-3 | N.D. | 0.0005 | 0.81 |
| 11995 | Chloromethane | 74-87-3 | N.D. | 0.0005 | 0.81 |
| 11995 | Dibromochloromethane | 124-48-1 | N.D. | 0.0004 | 0.81 |
| 11995 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 0.0004 | 0.81 |
| 11995 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 0.0004 | 0.81 |
| 11995 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 0.0004 | 0.81 |
| 11995 | 1,1-Dichloroethane | 75-34-3 | N.D. | 0.0004 | 0.81 |
| 11995 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.0005 | 0.81 |
| 11995 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.0004 | 0.81 |
| 11995 | cis-1,2-Dichloroethene | 156-59-2 | N.D. | 0.0004 | 0.81 |
| 11995 | trans-1,2-Dichloroethene | 156-60-5 | N.D. | 0.0004 | 0.81 |
| 11995 | 1,2-Dichloropropane | 78-87-5 | N.D. | 0.0004 | 0.81 |
| 11995 | cis-1,3-Dichloropropene | 10061-01-5 | N.D. | 0.0004 | 0.81 |
| 11995 | trans-1,3-Dichloropropene | 10061-02-6 | N.D. | 0.0003 | 0.81 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.81 |
| 11995 | Freon 113 | 76-13-1 | N.D. | 0.0005 | 0.81 |
| 11995 | Methylene Chloride | 75-09-2 | N.D. | 0.002 | 0.81 |
| 11995 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 0.0004 | 0.81 |
| 11995 | Tetrachloroethene | 127-18-4 | N.D. | 0.0004 | 0.81 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.81 |
| 11995 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.0005 | 0.81 |
| 11995 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.0004 | 0.81 |
| 11995 | Trichloroethene | 79-01-6 | N.D. | 0.0004 | 0.81 |
| 11995 | Trichlorofluoromethane | 75-69-4 | N.D. | 0.0006 | 0.81 |
| 11995 | Vinyl Chloride | 75-01-4 | N.D. | 0.0005 | 0.81 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.81 |

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|---------------|------------|--------------|----------------------------|-----------------|
| GC/MS Semivolatiles | | | mg/kg | mg/kg | |
| SW-846 8270D | | | | | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| The recovery for the sample surrogate(s) is outside the QC acceptance limits as noted on the QC Summary. Since the recovery is high and no target analytes were detected, the data is reported. | | | | | |

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|-----------------------------|-----------------------|------------|--------------|----------------------------|-----------------|
| GC Volatiles | | | mg/kg | mg/kg | |
| ECY 97-602 NWT PH-Gx | | | | | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | 0.5 | 0.2 | 21.2 |

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|------------------------------------|---------------|------------|--------------|----------------------------|-----------------|
| PCBs | | | mg/kg | mg/kg | |
| SW-846 8082A Feb 2007 Rev 1 | | | | | |
| 10885 | PCB-1016 | 12674-11-2 | N.D. D1 | 0.0039 | 1 |

Sample Description: UST-3-S-8.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780570
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 10:25
SDG#: LDC01-40

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|-------------|---------------|------------------------------------|--------------|----------------------------|-----------------|
| PCBs | | SW-846 8082A Feb 2007 Rev 1 | mg/kg | mg/kg | |
| 10885 | PCB-1221 | 11104-28-2 | N.D. D1 | 0.0049 | 1 |
| 10885 | PCB-1232 | 11141-16-5 | N.D. D1 | 0.0086 | 1 |
| 10885 | PCB-1242 | 53469-21-9 | N.D. D1 | 0.0035 | 1 |
| 10885 | PCB-1248 | 12672-29-6 | N.D. D1 | 0.0035 | 1 |
| 10885 | PCB-1254 | 11097-69-1 | N.D. D1 | 0.0035 | 1 |
| 10885 | PCB-1260 | 11096-82-5 | N.D. D1 | 0.0053 | 1 |

The response for a target analyte(s) in the ending calibration verification standard is outside the upper QC acceptance limits.

The following action was taken:

The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
|----------------------------------|-------------------------------|-------------------------------------|--------------|--------------|---|
| 08272 | Diesel Range Organics C12-C24 | n.a. | 480 | 6.4 | 2 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 21 | 2 |

| GC Petroleum Hydrocarbons | | ECY 97-602 WA EPH | mg/kg | mg/kg | |
|----------------------------------|--------------------|--------------------------|--------------|--------------|---|
| 05970 | >C10-C12 Aliphatic | n.a. | N.D. | 1.1 | 1 |
| 05970 | >C10-C12 Aromatic | n.a. | N.D. | 1.1 | 1 |
| 05970 | >C12-C16 Aliphatic | n.a. | 29 | 1.1 | 1 |
| 05970 | >C12-C16 Aromatic | n.a. | 1.1 | 1.1 | 1 |
| 05970 | >C16-C21 Aliphatic | n.a. | 130 | 3.2 | 1 |
| 05970 | >C16-C21 Aromatic | n.a. | 37 | 2.2 | 1 |
| 05970 | >C21-C34 Aliphatic | n.a. | 15 | 6.5 | 1 |
| 05970 | >C21-C34 Aromatic | n.a. | 6.3 | 2.2 | 1 |

Trial ID: RE

| | | | | | |
|-------|--------------------|------|------|-----|---|
| 05970 | >C10-C12 Aliphatic | n.a. | N.D. | 1.1 | 1 |
| 05970 | >C10-C12 Aromatic | n.a. | N.D. | 1.1 | 1 |
| 05970 | >C12-C16 Aliphatic | n.a. | 77 | 1.1 | 1 |
| 05970 | >C12-C16 Aromatic | n.a. | 1.7 | 1.1 | 1 |
| 05970 | >C16-C21 Aliphatic | n.a. | 170 | 3.2 | 1 |
| 05970 | >C16-C21 Aromatic | n.a. | 58 | 2.1 | 1 |
| 05970 | >C21-C34 Aliphatic | n.a. | 22 | 6.4 | 1 |
| 05970 | >C21-C34 Aromatic | n.a. | 9.0 | 2.1 | 1 |

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:

The sample was re-extracted outside the method required holding time and the QC is compliant. Results are reported from both trials.

Sample Description: UST-3-S-8.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780570
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 10:25
SDG#: LDC01-40

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|-------------------------------|--------------------------|--------------|----------------------------|-----------------|
| GC Petroleum Hydrocarbons | | ECY 97-602 WA VPH | mg/kg | mg/kg | |
| 05666 | Benzene | 71-43-2 | N.D. | 0.0519 | 48.1 |
| 05666 | C5-C6 Aliphatic Hydrocarbons | n.a. | N.D. | 2.60 | 48.1 |
| 05666 | C6-C8 Aliphatic Hydrocarbons | n.a. | N.D. | 2.60 | 48.1 |
| 05666 | C8-C10 Aliphatic Hydrocarbons | n.a. | N.D. | 2.60 | 48.1 |
| 05666 | C8-C10 Aromatic Hydrocarbons | n.a. | N.D. | 2.60 | 48.1 |
| 05666 | Ethylbenzene | 100-41-4 | N.D. | 0.0519 | 48.1 |
| 05666 | Methyl t-butyl ether | 1634-04-4 | N.D. | 0.0519 | 48.1 |
| 05666 | Toluene | 108-88-3 | N.D. | 0.0519 | 48.1 |
| 05666 | o-Xylene | 95-47-6 | N.D. | 0.0519 | 48.1 |
| 05666 | m,p-Xylenes | 179601-23-1 | N.D. | 0.104 | 48.1 |

| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
|---------------|------|--------------------------------------|--------------|--------------|---|
| 06955 | Lead | 7439-92-1 | 4.74 | 0.554 | 1 |

| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
|---|----------|--------------------------------------|----------|----------|---|
| 00111 | Moisture | n.a. | 7.4 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | HVOCs + BTEX | SW-846 8260C | 1 | A182501AA | 09/07/2018 15:00 | Jennifer K Howe | 0.81 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/29/2018 10:25 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/29/2018 10:25 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 3 | 201824351084 | 08/29/2018 10:25 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 4 | 201824351084 | 08/29/2018 10:25 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/29/2018 10:25 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 2 | 201824351084 | 08/29/2018 10:25 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18250SLB026 | 09/10/2018 18:44 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18250SLB026 | 09/07/2018 18:00 | Sally L Appleyard | 1 |

Sample Description: UST-3-S-8.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780570
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 10:25
SDG#: LDC01-40

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-------------------------------|-------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247D34A | 09/06/2018 00:16 | Jeremy C Giffin | 21.2 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/29/2018 10:25 | Client Supplied | n.a. |
| 10885 | PCBs 8082A/3546 | SW-846 8082A Feb 2007 Rev 1 | 1 | 182480026A | 09/07/2018 01:55 | Kirby B Turner | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 182480026A | 09/06/2018 07:00 | Joshua S Ruth | 1 |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500017A | 09/12/2018 15:43 | Thomas C Wildermuth | 2 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 1 | 182500003A | 09/19/2018 11:30 | Heather E Williams | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 1 | 182500003A | 09/19/2018 12:10 | Heather E Williams | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 2-RE | 182700031A | 10/03/2018 04:26 | Amy Lehr | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 2-RE | 182700031A | 10/03/2018 05:07 | Amy Lehr | 1 |
| 05666 | WA- VPH soils | ECY 97-602 WA VPH | 1 | 18253A08A | 09/10/2018 20:36 | Thomas C Wildermuth | 48.1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500017A | 09/09/2018 10:30 | Michelle A Newswanger | 1 |
| 11213 | WA EPH Soils Extraction | ECY 97-602 WA EPH | 1 | 182500003A | 09/08/2018 11:20 | Sally L Appleyard | 1 |
| 11213 | WA EPH Soils Extraction | ECY 97-602 WA EPH | 2 | 182700031A | 09/28/2018 09:00 | Michelle A Newswanger | 1 |
| 00388 | GC - Field Preserved (MA-VPH) | MA DEP VPH modified | 1 | 201824351081 | 08/29/2018 10:25 | Client Supplied | 1 |
| 00497 | Silica Gel Fractionation | SW-846 3630C modified | 1 | 182500003A | 09/18/2018 08:00 | David S Schrum | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404902 | 09/10/2018 15:55 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404902 | 09/06/2018 07:10 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820007B | 09/03/2018 05:44 | William C Schwebel | 1 |

Sample Description: SB-4-S-12.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780571
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 11:20
SDG#: LDC01-41

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.75 |
| 11995 | Ethylbenzene | 100-41-4 | 0.002 | 0.0004 | 0.75 |
| 11995 | Toluene | 108-88-3 | 0.001 | 0.0006 | 0.75 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.75 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.008 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 550 | 21 | 1854.3 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.7 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 12 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.37 | 0.647 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 19.4 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182541AA | 09/11/2018 10:58 | Linda C Pape | 0.75 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/29/2018 11:20 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/29/2018 11:20 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/29/2018 11:20 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18250SLB026 | 09/10/2018 19:09 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18250SLB026 | 09/07/2018 18:00 | Sally L Appleyard | 1 |

Sample Description: SB-4-S-12.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780571
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 11:20
SDG#: LDC01-41

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247D34A | 09/06/2018 07:51 | Jeremy C Giffin | 1854.3 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/29/2018 11:20 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500017A | 09/12/2018 09:17 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500017A | 09/09/2018 10:30 | Michelle A Newswanger | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404902 | 09/10/2018 16:03 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404902 | 09/06/2018 07:10 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820004B | 08/31/2018 09:33 | William C Schwebel | 1 |

Sample Description: DUP-2-SD-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780572
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 11:30
SDG#: LDC01-42FD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.78 |
| 11995 | Ethylbenzene | 100-41-4 | 0.0005 | 0.0004 | 0.78 |
| 11995 | Toluene | 108-88-3 | 0.001 | 0.0006 | 0.78 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.78 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.008 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 410 | 6.0 | 517.11 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 6.7 | 3.7 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 12 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.67 | 0.594 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 20.5 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182541AA | 09/11/2018 13:38 | Linda C Pape | 0.78 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/29/2018 11:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/29/2018 11:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/29/2018 11:30 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18250SLB026 | 09/11/2018 12:38 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18250SLB026 | 09/07/2018 18:00 | Sally L Appleyard | 1 |

Sample Description: DUP-2-SD-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780572
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 11:30
SDG#: LDC01-42FD

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247D34A | 09/06/2018 06:41 | Jeremy C Giffin | 517.11 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/29/2018 11:30 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500017A | 09/12/2018 09:36 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500017A | 09/09/2018 10:30 | Michelle A Newswanger | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404902 | 09/10/2018 16:06 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404902 | 09/06/2018 07:10 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820004B | 08/31/2018 09:33 | William C Schwebel | 1 |

Sample Description: SB-4-S-14.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780573
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 11:40
SDG#: LDC01-43

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.87 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.87 |
| 11995 | Toluene | 108-88-3 | 0.0008 | 0.0006 | 0.87 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.87 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 23.26 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.40 | 0.492 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 7.7 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182501AA | 09/07/2018 16:08 | Jennifer K Howe | 0.87 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/29/2018 11:40 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/29/2018 11:40 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/29/2018 11:40 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18250SLB026 | 09/10/2018 13:17 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18250SLB026 | 09/07/2018 18:00 | Sally L Appleyard | 1 |

Sample Description: SB-4-S-14.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780573
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 11:40
SDG#: LDC01-43

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247D34A | 09/06/2018 00:51 | Jeremy C Giffin | 23.26 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/29/2018 11:40 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500017A | 09/12/2018 09:56 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500017A | 09/09/2018 10:30 | Michelle A Newswanger | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404902 | 09/10/2018 16:09 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404902 | 09/06/2018 07:10 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820004B | 08/31/2018 09:33 | William C Schwebel | 1 |

Sample Description: UST-4-S-8.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780574
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 11:45
SDG#: LDC01-44

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.025 | 46.11 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.020 | 46.11 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.030 | 46.11 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.050 | 46.11 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | 130 | 2.3 | 233.4 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 1,700 | 16 | 5 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 140 | 54 | 5 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 11.9 | 0.464 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 8.2 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | Q182521AA | 09/09/2018 15:58 | Stephen C Nolte | 46.11 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/29/2018 11:45 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/29/2018 11:45 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/29/2018 11:45 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18250SLB026 | 09/11/2018 00:28 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18250SLB026 | 09/07/2018 18:00 | Sally L Appleyard | 1 |

Sample Description: UST-4-S-8.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780574
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 11:45
SDG#: LDC01-44

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|----------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18248A34A | 09/06/2018 20:51 | Jeremy C Giffin | 233.4 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/29/2018 11:45 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500017A | 09/12/2018 11:55 | Thomas C Wildermuth | 5 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500017A | 09/09/2018 10:30 | Michelle A Newswanger | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404902 | 09/10/2018 16:11 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404902 | 09/06/2018 07:10 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820004B | 08/31/2018 09:33 | William C Schwebel | 1 |

Sample Description: SB-4-S-25.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780575
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 11:55
SDG#: LDC01-45

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | 0.0005 | 0.0005 | 0.96 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.96 |
| 11995 | Toluene | 108-88-3 | 0.001 | 0.0006 | 0.96 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.96 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 0.8 | 0.3 | 29.18 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.1 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 10 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.27 | 0.605 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 5.6 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182501AA | 09/07/2018 16:31 | Jennifer K Howe | 0.96 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/29/2018 11:55 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/29/2018 11:55 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/29/2018 11:55 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18250SLB026 | 09/11/2018 00:53 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18250SLB026 | 09/07/2018 18:00 | Sally L Appleyard | 1 |

Sample Description: SB-4-S-25.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780575
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 11:55
SDG#: LDC01-45

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247D34A | 09/06/2018 02:01 | Jeremy C Giffin | 29.18 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/29/2018 11:55 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500053A | 09/13/2018 10:33 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500053A | 09/10/2018 16:15 | Ryan J Dowdy | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404902 | 09/10/2018 16:14 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404902 | 09/06/2018 07:10 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820004B | 08/31/2018 09:33 | William C Schwebel | 1 |

Sample Description: UST-5-S-8.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780576
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 13:25
SDG#: LDC01-46

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------|---------------------------|------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.91 |
| 11995 | Bromodichloromethane | 75-27-4 | N.D. | 0.0004 | 0.91 |
| 11995 | Bromoform | 75-25-2 | N.D. | 0.005 | 0.91 |
| 11995 | Bromomethane | 74-83-9 | N.D. | 0.0007 | 0.91 |
| 11995 | Carbon Tetrachloride | 56-23-5 | N.D. | 0.0005 | 0.91 |
| 11995 | Chlorobenzene | 108-90-7 | N.D. | 0.0005 | 0.91 |
| 11995 | Chloroethane | 75-00-3 | N.D. | 0.001 | 0.91 |
| 11995 | Chloroform | 67-66-3 | N.D. | 0.0006 | 0.91 |
| 11995 | Chloromethane | 74-87-3 | N.D. | 0.0006 | 0.91 |
| 11995 | Dibromochloromethane | 124-48-1 | N.D. | 0.0004 | 0.91 |
| 11995 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 0.0005 | 0.91 |
| 11995 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 0.0005 | 0.91 |
| 11995 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 0.0004 | 0.91 |
| 11995 | 1,1-Dichloroethane | 75-34-3 | N.D. | 0.0005 | 0.91 |
| 11995 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.0006 | 0.91 |
| 11995 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.0005 | 0.91 |
| 11995 | cis-1,2-Dichloroethene | 156-59-2 | N.D. | 0.0005 | 0.91 |
| 11995 | trans-1,2-Dichloroethene | 156-60-5 | N.D. | 0.0005 | 0.91 |
| 11995 | 1,2-Dichloropropane | 78-87-5 | N.D. | 0.0005 | 0.91 |
| 11995 | cis-1,3-Dichloropropene | 10061-01-5 | N.D. | 0.0004 | 0.91 |
| 11995 | trans-1,3-Dichloropropene | 10061-02-6 | N.D. | 0.0003 | 0.91 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.91 |
| 11995 | Freon 113 | 76-13-1 | N.D. | 0.0006 | 0.91 |
| 11995 | Methylene Chloride | 75-09-2 | N.D. | 0.002 | 0.91 |
| 11995 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 0.0004 | 0.91 |
| 11995 | Tetrachloroethene | 127-18-4 | N.D. | 0.0005 | 0.91 |
| 11995 | Toluene | 108-88-3 | 0.001 | 0.0006 | 0.91 |
| 11995 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.0006 | 0.91 |
| 11995 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.0005 | 0.91 |
| 11995 | Trichloroethene | 79-01-6 | N.D. | 0.0005 | 0.91 |
| 11995 | Trichlorofluoromethane | 75-69-4 | N.D. | 0.0007 | 0.91 |
| 11995 | Vinyl Chloride | 75-01-4 | N.D. | 0.0006 | 0.91 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.91 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 0.8 | 0.3 | 25.37 |
| PCBs | | SW-846 8082A Feb 2007 Rev 1 | mg/kg | mg/kg | |
| 10885 | PCB-1016 | 12674-11-2 | N.D. D1 | 0.0040 | 1 |
| 10885 | PCB-1221 | 11104-28-2 | N.D. D1 | 0.0051 | 1 |
| 10885 | PCB-1232 | 11141-16-5 | N.D. D1 | 0.0089 | 1 |
| 10885 | PCB-1242 | 53469-21-9 | N.D. D1 | 0.0037 | 1 |
| 10885 | PCB-1248 | 12672-29-6 | N.D. D1 | 0.0037 | 1 |

Sample Description: UST-5-S-8.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780576
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 13:25
SDG#: LDC01-46

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|-------------|---------------|------------------------------------|--------------|----------------------------|-----------------|
| PCBs | | SW-846 8082A Feb 2007 Rev 1 | mg/kg | mg/kg | |
| 10885 | PCB-1254 | 11097-69-1 | N.D. D1 | 0.0037 | 1 |
| 10885 | PCB-1260 | 11096-82-5 | N.D. D1 | 0.0054 | 1 |

The response for a target analyte(s) in the ending calibration verification standard is outside the upper QC acceptance limits. The following action was taken:
The analysis was repeated and the continuing calibration verification standard bracketing the sample on the second trial is also outside the acceptance limits. This effect is attributed to the sample matrix and the data is reported.

| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
|----------------------------------|-------------------------------|-------------------------------------|--------------|--------------|---|
| 08272 | Diesel Range Organics C12-C24 | n.a. | 230 | 3.4 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 73 | 11 | 1 |

| GC Petroleum Hydrocarbons | | ECY 97-602 WA EPH | mg/kg | mg/kg | |
|----------------------------------|--------------------|--------------------------|--------------|--------------|---|
| 05970 | >C10-C12 Aliphatic | n.a. | N.D. | 1.1 | 1 |
| 05970 | >C10-C12 Aromatic | n.a. | N.D. | 1.1 | 1 |
| 05970 | >C12-C16 Aliphatic | n.a. | 5.0 | 1.1 | 1 |
| 05970 | >C12-C16 Aromatic | n.a. | N.D. | 1.1 | 1 |
| 05970 | >C16-C21 Aliphatic | n.a. | 66 | 3.3 | 1 |
| 05970 | >C16-C21 Aromatic | n.a. | 13 | 2.2 | 1 |
| 05970 | >C21-C34 Aliphatic | n.a. | 29 | 6.6 | 1 |
| 05970 | >C21-C34 Aromatic | n.a. | 14 | 2.2 | 1 |

Trial ID: RE

| | | | | | |
|-------|--------------------|------|------|-----|---|
| 05970 | >C10-C12 Aliphatic | n.a. | N.D. | 1.1 | 1 |
| 05970 | >C10-C12 Aromatic | n.a. | N.D. | 1.1 | 1 |
| 05970 | >C12-C16 Aliphatic | n.a. | 16 | 1.1 | 1 |
| 05970 | >C12-C16 Aromatic | n.a. | N.D. | 1.1 | 1 |
| 05970 | >C16-C21 Aliphatic | n.a. | 79 | 3.2 | 1 |
| 05970 | >C16-C21 Aromatic | n.a. | 27 | 2.1 | 1 |
| 05970 | >C21-C34 Aliphatic | n.a. | 260 | 6.4 | 1 |
| 05970 | >C21-C34 Aromatic | n.a. | 210 | 2.1 | 1 |

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:

The sample was re-extracted outside the method required holding time and the QC is compliant. Results are reported from both trials.

| GC Petroleum Hydrocarbons | | ECY 97-602 WA VPH | mg/kg | mg/kg | |
|----------------------------------|------------------------------|--------------------------|--------------|--------------|-------|
| 05666 | Benzene | 71-43-2 | N.D. | 0.0578 | 51.34 |
| 05666 | C5-C6 Aliphatic Hydrocarbons | n.a. | N.D. | 2.89 | 51.34 |
| 05666 | C6-C8 Aliphatic Hydrocarbons | n.a. | N.D. | 2.89 | 51.34 |

Sample Description: UST-5-S-8.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780576
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 13:25
SDG#: LDC01-46

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|-------------|--------------|----------------------------|-----------------|
| GC Petroleum Hydrocarbons | | | mg/kg | mg/kg | |
| ECY 97-602 WA VPH | | | | | |
| 05666 | C8-C10 Aliphatic Hydrocarbons | n.a. | N.D. | 2.89 | 51.34 |
| 05666 | C8-C10 Aromatic Hydrocarbons | n.a. | N.D. | 2.89 | 51.34 |
| 05666 | Ethylbenzene | 100-41-4 | N.D. | 0.0578 | 51.34 |
| 05666 | Methyl t-butyl ether | 1634-04-4 | N.D. | 0.0578 | 51.34 |
| 05666 | Toluene | 108-88-3 | N.D. | 0.0578 | 51.34 |
| 05666 | o-Xylene | 95-47-6 | N.D. | 0.0578 | 51.34 |
| 05666 | m,p-Xylenes | 179601-23-1 | N.D. | 0.116 | 51.34 |
| Metals | | | mg/kg | mg/kg | |
| SW-846 6010D Rev.4, July 2014 | | | | | |
| 06955 | Lead | 7439-92-1 | 8.24 | 0.608 | 1 |
| Wet Chemistry | | | % | % | |
| SM 2540 G-2011 %Moisture Calc | | | | | |
| 00111 | Moisture | n.a. | 11.1 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|---------------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | HVOCs + BTEX | SW-846 8260C | 1 | A182501AA | 09/07/2018 16:54 | Jennifer K Howe | 0.91 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/29/2018 13:25 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/29/2018 13:25 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 3 | 201824351084 | 08/29/2018 13:25 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 4 | 201824351084 | 08/29/2018 13:25 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/29/2018 13:25 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 2 | 201824351084 | 08/29/2018 13:25 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18250SLB026 | 09/11/2018 01:18 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18250SLB026 | 09/07/2018 18:00 | Sally L Appleyard | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247D34A | 09/06/2018 02:36 | Jeremy C Giffin | 25.37 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/29/2018 13:25 | Client Supplied | n.a. |

Sample Description: UST-5-S-8.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780576
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 13:25
SDG#: LDC01-46

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-------------------------------|-------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 10885 | PCBs 8082A/3546 | SW-846 8082A Feb 2007 Rev 1 | 1 | 182480026A | 09/07/2018 02:06 | Kirby B Turner | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 182480026A | 09/06/2018 07:00 | Joshua S Ruth | 1 |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500053A | 09/13/2018 13:14 | Thomas C Wildermuth | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 1 | 182500003A | 09/18/2018 23:22 | Heather E Williams | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 1 | 182500003A | 09/19/2018 00:02 | Heather E Williams | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 2-RE | 182700031A | 10/03/2018 23:34 | Amy Lehr | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 2-RE | 182700031A | 10/04/2018 00:15 | Amy Lehr | 1 |
| 05666 | WA- VPH soils | ECY 97-602 WA VPH | 1 | 18253A08A | 09/10/2018 21:18 | Thomas C Wildermuth | 51.34 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500053A | 09/10/2018 16:15 | Ryan J Dowdy | 1 |
| 11213 | WA EPH Soils Extraction | ECY 97-602 WA EPH | 1 | 182500003A | 09/08/2018 11:20 | Sally L Appleyard | 1 |
| 11213 | WA EPH Soils Extraction | ECY 97-602 WA EPH | 2 | 182700031A | 09/28/2018 09:00 | Michelle A Newswanger | 1 |
| 00388 | GC - Field Preserved (MA-VPH) | MA DEP VPH modified | 1 | 201824351081 | 08/29/2018 13:25 | Client Supplied | 1 |
| 00497 | Silica Gel Fractionation | SW-846 3630C modified | 1 | 182500003A | 09/18/2018 08:00 | David S Schrum | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404902 | 09/10/2018 16:17 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404902 | 09/06/2018 07:10 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820004B | 08/31/2018 09:33 | William C Schwebel | 1 |

Sample Description: UST-6-S-8.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780577
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 14:10
SDG#: LDC01-47

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | 0.0008 | 0.0005 | 0.84 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.84 |
| 11995 | Toluene | 108-88-3 | 0.002 | 0.0005 | 0.84 |
| 11995 | Xylene (Total) | 1330-20-7 | 0.001 | 0.0009 | 0.84 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 0.2 | 0.2 | 22.29 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 160 | 3.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 47 | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.64 | 0.488 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 6.8 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182501AA | 09/07/2018 17:17 | Jennifer K Howe | 0.84 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/29/2018 14:10 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/29/2018 14:10 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/29/2018 14:10 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18250SLB026 | 09/11/2018 01:43 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18250SLB026 | 09/07/2018 18:00 | Sally L Appleyard | 1 |

Sample Description: UST-6-S-8.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780577
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 14:10
SDG#: LDC01-47

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18247D34A | 09/06/2018 03:11 | Jeremy C Giffin | 22.29 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/29/2018 14:10 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500053A | 09/13/2018 12:34 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500053A | 09/10/2018 16:15 | Ryan J Dowdy | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404902 | 09/10/2018 16:20 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404902 | 09/06/2018 07:10 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820004B | 08/31/2018 09:33 | William C Schwebel | 1 |

Sample Description: SB-8-S-12.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780578
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 14:20
SDG#: LDC01-48

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.82 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.82 |
| 11995 | Toluene | 108-88-3 | 0.001 | 0.0005 | 0.82 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.82 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 0.4 | 0.2 | 21.35 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | N.D. | 2.34 | 5 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 9.8 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182501AA | 09/07/2018 17:39 | Jennifer K Howe | 0.82 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/29/2018 14:20 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/29/2018 14:20 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/29/2018 14:20 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18250SLB026 | 09/11/2018 02:09 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18250SLB026 | 09/07/2018 18:00 | Sally L Appleyard | 1 |

Sample Description: SB-8-S-12.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780578
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 14:20
SDG#: LDC01-48

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18248A34A | 09/06/2018 19:06 | Jeremy C Giffin | 21.35 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/29/2018 14:20 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500053A | 09/13/2018 10:53 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500053A | 09/10/2018 16:15 | Ryan J Dowdy | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404903 | 09/06/2018 08:16 | Eric L Eby | 5 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404903 | 09/05/2018 07:45 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820004B | 08/31/2018 09:33 | William C Schwebel | 1 |

Sample Description: SB-8-S-14.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780579
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 14:25
SDG#: LDC01-49

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.97 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.97 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.97 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.97 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | 0.011 | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 25.72 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.1 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 10 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead An interfering analyte exceeded the linear range of the instrument, and all affected analytes were analyzed at a higher dilution. The reporting limits were raised accordingly. | 7439-92-1 | N.D. | 12.5 | 20 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 5.2 | 0.50 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182521AA | 09/09/2018 16:58 | Stephen C Nolte | 0.97 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/29/2018 14:25 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/29/2018 14:25 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/29/2018 14:25 | Client Supplied | 1 |

Sample Description: SB-8-S-14.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780579
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 14:25
SDG#: LDC01-49

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18250SLB026 | 09/11/2018 02:34 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18250SLB026 | 09/07/2018 18:00 | Sally L Appleyard | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18248A34A | 09/06/2018 19:41 | Jeremy C Giffin | 25.72 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/29/2018 14:25 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500053A | 09/13/2018 11:14 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500053A | 09/10/2018 16:15 | Ryan J Dowdy | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404903 | 09/09/2018 23:26 | Elaine F Stoltzfus | 20 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404903 | 09/05/2018 07:45 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820004B | 08/31/2018 09:33 | William C Schwebel | 1 |

Sample Description: SB-8-S-25.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780580
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submission Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 14:50
SDG#: LDC01-50

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.91 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.91 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.91 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.91 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 24.73 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | N.D. | 0.542 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 8.5 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182521AA | 09/09/2018 17:21 | Stephen C Nolte | 0.91 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201824351084 | 08/29/2018 15:00 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201824351084 | 08/29/2018 15:00 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201824351084 | 08/29/2018 15:00 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18250SLB026 | 09/11/2018 02:59 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18250SLB026 | 09/07/2018 18:00 | Sally L Appleyard | 1 |

Sample Description: SB-8-S-25.0-180829 Grab Soil
Facility# 204117
2021 6th Street - Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9780580
ELLE Group #: 1982153
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 08/30/2018 09:40
Collection Date/Time: 08/29/2018 14:50
SDG#: LDC01-50

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18248A34A | 09/06/2018 20:16 | Jeremy C Giffin | 24.73 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201824351084 | 08/29/2018 15:00 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500053A | 09/13/2018 11:34 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500053A | 09/10/2018 16:15 | Ryan J Dowdy | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182471404903 | 09/05/2018 19:24 | Elaine F Stoltzfus | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182471404903 | 09/05/2018 07:45 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18243820004B | 08/31/2018 09:33 | William C Schwebel | 1 |

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

| Analysis Name | Result | MDL |
|---------------------------|---|--------|
| | mg/kg | mg/kg |
| Batch number: A182492AA | Sample number(s): 9780531-9780536,9780560 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| Batch number: A182493AA | Sample number(s): 9780537-9780538,9780541-9780543 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| Batch number: A182501AA | Sample number(s): 9780544-9780551,9780554,9780556-9780557,9780559,9780568-9780570,9780573,9780575-9780578 | |
| Benzene | N.D. | 0.0005 |
| Bromodichloromethane | N.D. | 0.0004 |
| Bromoform | N.D. | 0.005 |
| Bromomethane | N.D. | 0.0007 |
| Carbon Tetrachloride | N.D. | 0.0005 |
| Chlorobenzene | N.D. | 0.0005 |
| Chloroethane | N.D. | 0.001 |
| Chloroform | N.D. | 0.0006 |
| Chloromethane | N.D. | 0.0006 |
| Dibromochloromethane | N.D. | 0.0004 |
| 1,2-Dichlorobenzene | N.D. | 0.0005 |
| 1,3-Dichlorobenzene | N.D. | 0.0005 |
| 1,4-Dichlorobenzene | N.D. | 0.0004 |
| 1,1-Dichloroethane | N.D. | 0.0005 |
| 1,2-Dichloroethane | N.D. | 0.0006 |
| 1,1-Dichloroethene | N.D. | 0.0005 |
| cis-1,2-Dichloroethene | N.D. | 0.0005 |
| trans-1,2-Dichloroethene | N.D. | 0.0005 |
| 1,2-Dichloropropane | N.D. | 0.0005 |
| cis-1,3-Dichloropropene | N.D. | 0.0004 |
| trans-1,3-Dichloropropene | N.D. | 0.0003 |
| Ethylbenzene | N.D. | 0.0004 |
| Freon 113 | N.D. | 0.0006 |
| Methylene Chloride | N.D. | 0.002 |
| 1,1,2,2-Tetrachloroethane | N.D. | 0.0004 |
| Tetrachloroethene | N.D. | 0.0005 |
| Toluene | N.D. | 0.0006 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

Method Blank (continued)

| Analysis Name | Result | MDL |
|-----------------------------|---|--------|
| | mg/kg | mg/kg |
| 1,1,1-Trichloroethane | N.D. | 0.0006 |
| 1,1,2-Trichloroethane | N.D. | 0.0005 |
| Trichloroethene | N.D. | 0.0005 |
| Trichlorofluoromethane | N.D. | 0.0007 |
| Vinyl Chloride | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| Batch number: A182521AA | Sample number(s): 9780539-9780540,9780579-9780580 | |
| Benzene | N.D. | 0.0005 |
| 1,2-Dibromoethane | N.D. | 0.0004 |
| 1,2-Dichloroethane | N.D. | 0.0006 |
| Ethylbenzene | N.D. | 0.0004 |
| n-Hexane | N.D. | 0.0005 |
| Methyl Tertiary Butyl Ether | N.D. | 0.0005 |
| Toluene | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| Batch number: A182541AA | Sample number(s): 9780571-9780572 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| Batch number: Q182521AA | Sample number(s): 9780553,9780555,9780558,9780561,9780574 | |
| Benzene | N.D. | 0.025 |
| Bromodichloromethane | N.D. | 0.020 |
| Bromoform | N.D. | 0.25 |
| Bromomethane | N.D. | 0.035 |
| Carbon Tetrachloride | N.D. | 0.025 |
| Chlorobenzene | N.D. | 0.025 |
| Chloroethane | N.D. | 0.050 |
| Chloroform | N.D. | 0.030 |
| Chloromethane | N.D. | 0.030 |
| Dibromochloromethane | N.D. | 0.020 |
| 1,2-Dibromoethane | N.D. | 0.020 |
| 1,2-Dichlorobenzene | N.D. | 0.025 |
| 1,3-Dichlorobenzene | N.D. | 0.025 |
| 1,4-Dichlorobenzene | N.D. | 0.020 |
| 1,1-Dichloroethane | N.D. | 0.025 |
| 1,2-Dichloroethane | N.D. | 0.030 |
| 1,1-Dichloroethene | N.D. | 0.025 |
| cis-1,2-Dichloroethene | N.D. | 0.025 |
| trans-1,2-Dichloroethene | N.D. | 0.025 |
| 1,2-Dichloropropane | N.D. | 0.025 |
| cis-1,3-Dichloropropene | N.D. | 0.020 |
| trans-1,3-Dichloropropene | N.D. | 0.015 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

Method Blank (continued)

| Analysis Name | Result | MDL |
|-----------------------------|---|--------|
| | mg/kg | mg/kg |
| Ethylbenzene | N.D. | 0.020 |
| Freon 113 | N.D. | 0.030 |
| n-Hexane | N.D. | 0.025 |
| Methyl Tertiary Butyl Ether | N.D. | 0.025 |
| Methylene Chloride | N.D. | 0.10 |
| 1,1,2,2-Tetrachloroethane | N.D. | 0.020 |
| Tetrachloroethene | N.D. | 0.025 |
| Toluene | N.D. | 0.030 |
| 1,1,1-Trichloroethane | N.D. | 0.030 |
| 1,1,2-Trichloroethane | N.D. | 0.025 |
| Trichloroethene | N.D. | 0.025 |
| Trichlorofluoromethane | N.D. | 0.035 |
| Vinyl Chloride | N.D. | 0.030 |
| Xylene (Total) | N.D. | 0.050 |
| Batch number: R182502AA | Sample number(s): 9780539-9780540 | |
| Benzene | N.D. | 0.025 |
| Toluene | N.D. | 0.030 |
| | ug/l | ug/l |
| Batch number: Z182472AA | Sample number(s): 9780552,9780562 | |
| Benzene | N.D. | 0.2 |
| Ethylbenzene | N.D. | 0.4 |
| Toluene | N.D. | 0.2 |
| Xylene (Total) | N.D. | 1 |
| Batch number: Z182502AA | Sample number(s): 9780563-9780566 | |
| Benzene | N.D. | 0.2 |
| Ethylbenzene | N.D. | 0.4 |
| Toluene | N.D. | 0.2 |
| Xylene (Total) | N.D. | 1 |
| | mg/kg | mg/kg |
| Batch number: 18248SLA026 | Sample number(s): 9780531-9780534,9780560 | |
| Naphthalene | N.D. | 0.007 |
| Batch number: 18249SLA026 | Sample number(s): 9780535-9780538,9780540-9780551,9780553-9780554,9780556-9780557 | |
| Naphthalene | N.D. | 0.007 |
| Batch number: 18250SLA026 | Sample number(s): 9780539,9780555,9780561 | |
| Benzo(a)anthracene | N.D. | 0.0007 |
| Benzo(a)pyrene | N.D. | 0.0007 |
| Benzo(b)fluoranthene | N.D. | 0.0007 |
| Benzo(k)fluoranthene | N.D. | 0.0007 |
| Chrysene | N.D. | 0.0003 |
| Dibenz(a,h)anthracene | N.D. | 0.0007 |
| Indeno(1,2,3-cd)pyrene | N.D. | 0.0007 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

Method Blank (continued)

| Analysis Name | Result | MDL |
|-------------------------------|---|--------------|
| | mg/kg | mg/kg |
| Naphthalene | N.D. | 0.001 |
| Batch number: 18250SLB026 | Sample number(s): 9780558-9780559,9780568-9780580 | |
| Naphthalene | N.D. | 0.007 |
| Batch number: 18247A31A | Sample number(s): 9780531-9780547,9780556-9780557,9780560 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |
| Batch number: 18247D34A | Sample number(s): 9780548-9780551,9780554-9780555,9780559,9780568-9780573,9780575-9780577 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |
| Batch number: 18248A34A | Sample number(s): 9780553,9780558,9780561,9780574,9780578-9780580 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |
| | ug/l | ug/l |
| Batch number: 18249A53A | Sample number(s): 9780563-9780566 | |
| NWTPH-Gx water C7-C12 | 25 | 19 |
| Batch number: 18253A20A | Sample number(s): 9780552,9780562 | |
| NWTPH-Gx water C7-C12 | N.D. | 19 |
| | mg/kg | mg/kg |
| Batch number: 182480026A | Sample number(s): 9780553,9780558,9780570,9780576 | |
| PCB-1016 | N.D. | 0.0036 |
| PCB-1221 | N.D. | 0.0046 |
| PCB-1232 | N.D. | 0.0080 |
| PCB-1242 | N.D. | 0.0033 |
| PCB-1248 | N.D. | 0.0033 |
| PCB-1254 | N.D. | 0.0033 |
| PCB-1260 | N.D. | 0.0049 |
| Batch number: 182470023A | Sample number(s): 9780531-9780538 | |
| Diesel Range Organics C12-C24 | N.D. | 3.0 |
| Heavy Range Organics C24-C40 | N.D. | 10 |
| Batch number: 182490010A | Sample number(s): 9780539-9780547,9780560 | |
| Diesel Range Organics C12-C24 | N.D. | 3.0 |
| Heavy Range Organics C24-C40 | N.D. | 10 |
| Batch number: 182500003A | Sample number(s): 9780539,9780553,9780555,9780561,9780570,9780576 | |
| >C10-C12 Aliphatic | N.D. | 1.0 |
| >C10-C12 Aromatic | N.D. | 1.0 |
| >C12-C16 Aliphatic | N.D. | 1.0 |
| >C12-C16 Aromatic | N.D. | 1.0 |
| >C16-C21 Aliphatic | N.D. | 3.0 |
| >C16-C21 Aromatic | N.D. | 2.0 |
| >C21-C34 Aliphatic | N.D. | 6.0 |
| >C21-C34 Aromatic | N.D. | 2.0 |
| Batch number: 182500015A | Sample number(s): 9780548-9780551,9780553-9780557 | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

Method Blank (continued)

| Analysis Name | Result | MDL |
|-------------------------------|---|--------|
| | mg/kg | mg/kg |
| Diesel Range Organics C12-C24 | N.D. | 3.0 |
| Heavy Range Organics C24-C40 | N.D. | 10 |
| Batch number: 182500017A | Sample number(s): 9780558-9780559,9780561,9780568-9780574 | |
| Diesel Range Organics C12-C24 | N.D. | 3.0 |
| Heavy Range Organics C24-C40 | N.D. | 10 |
| Batch number: 182500053A | Sample number(s): 9780575-9780580 | |
| Diesel Range Organics C12-C24 | N.D. | 3.0 |
| Heavy Range Organics C24-C40 | N.D. | 10 |
| Batch number: 18253A08A | Sample number(s): 9780539,9780553,9780555,9780561,9780570,9780576 | |
| Benzene | N.D. | 0.0500 |
| C5-C6 Aliphatic Hydrocarbons | N.D. | 2.50 |
| C6-C8 Aliphatic Hydrocarbons | N.D. | 2.50 |
| C8-C10 Aliphatic Hydrocarbons | N.D. | 2.50 |
| C8-C10 Aromatic Hydrocarbons | N.D. | 2.50 |
| Ethylbenzene | N.D. | 0.0500 |
| Methyl t-butyl ether | N.D. | 0.0500 |
| Toluene | N.D. | 0.0500 |
| o-Xylene | N.D. | 0.0500 |
| m,p-Xylenes | N.D. | 0.100 |
| Batch number: 182700031A | Sample number(s): 9780539,9780553,9780555,9780561,9780570,9780576 | |
| >C10-C12 Aliphatic | N.D. | 1.0 |
| >C10-C12 Aromatic | N.D. | 1.0 |
| >C12-C16 Aliphatic | N.D. | 1.0 |
| >C12-C16 Aromatic | N.D. | 1.0 |
| >C16-C21 Aliphatic | N.D. | 3.0 |
| >C16-C21 Aromatic | N.D. | 2.0 |
| >C21-C34 Aliphatic | N.D. | 6.0 |
| >C21-C34 Aromatic | N.D. | 2.0 |
| Batch number: 182471404901 | Sample number(s): 9780531-9780550 | |
| Lead | N.D. | 0.600 |
| Batch number: 182471404902 | Sample number(s): 9780551,9780553-9780561,9780568-9780577 | |
| Lead | N.D. | 0.600 |
| Batch number: 182471404903 | Sample number(s): 9780578-9780580 | |
| Lead | N.D. | 0.600 |

LCS/LCSD

| Analysis Name | LCS Spike Added | LCS Conc | LCSD Spike Added | LCSD Conc | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---------------|-----------------|----------|------------------|-----------|----------|-----------|-----------------|-----|---------|
|---------------|-----------------|----------|------------------|-----------|----------|-----------|-----------------|-----|---------|

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

LCS/LCSD

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---------------------------|---|----------------|------------------------|-----------------|----------|-----------|-----------------|-----|---------|
| Batch number: A182492AA | Sample number(s): 9780531-9780536,9780560 | | | | | | | | |
| Benzene | 0.0200 | 0.0184 | 0.0200 | 0.0161 | 92 | 80 | 80-120 | 13 | 30 |
| Ethylbenzene | 0.0200 | 0.0181 | 0.0200 | 0.0155 | 91 | 78 | 78-120 | 15 | 30 |
| Toluene | 0.0200 | 0.0185 | 0.0200 | 0.0160 | 93 | 80 | 80-120 | 15 | 30 |
| Xylene (Total) | 0.0600 | 0.0551 | 0.0600 | 0.0472 | 92 | 79 | 75-120 | 16 | 30 |
| Batch number: A182493AA | Sample number(s): 9780537-9780538,9780541-9780543 | | | | | | | | |
| Benzene | 0.0200 | 0.0186 | 0.0200 | 0.0188 | 93 | 94 | 80-120 | 1 | 30 |
| Ethylbenzene | 0.0200 | 0.0185 | 0.0200 | 0.0185 | 92 | 92 | 78-120 | 0 | 30 |
| Toluene | 0.0200 | 0.0189 | 0.0200 | 0.0190 | 95 | 95 | 80-120 | 0 | 30 |
| Xylene (Total) | 0.0600 | 0.0565 | 0.0600 | 0.0569 | 94 | 95 | 75-120 | 1 | 30 |
| Batch number: A182501AA | Sample number(s): 9780544-9780551,9780554,9780556-9780557,9780559,9780568-9780570,9780573,9780575-9780578 | | | | | | | | |
| Benzene | 0.0200 | 0.0190 | 0.0200 | 0.0186 | 95 | 93 | 80-120 | 2 | 30 |
| Bromodichloromethane | 0.0200 | 0.0176 | 0.0200 | 0.0173 | 88 | 87 | 70-120 | 1 | 30 |
| Bromoform | 0.0200 | 0.0158 | 0.0200 | 0.0155 | 79 | 78 | 51-127 | 2 | 30 |
| Bromomethane | 0.0200 | 0.0183 | 0.0200 | 0.0178 | 91 | 89 | 45-140 | 3 | 30 |
| Carbon Tetrachloride | 0.0200 | 0.0184 | 0.0200 | 0.0176 | 92 | 88 | 64-134 | 4 | 30 |
| Chlorobenzene | 0.0200 | 0.0194 | 0.0200 | 0.0190 | 97 | 95 | 80-120 | 2 | 30 |
| Chloroethane | 0.0200 | 0.0161 | 0.0200 | 0.0156 | 81 | 78 | 43-135 | 3 | 30 |
| Chloroform | 0.0200 | 0.0192 | 0.0200 | 0.0188 | 96 | 94 | 80-120 | 2 | 30 |
| Chloromethane | 0.0200 | 0.0154 | 0.0200 | 0.0148 | 77 | 74 | 56-120 | 4 | 30 |
| Dibromochloromethane | 0.0200 | 0.0175 | 0.0200 | 0.0171 | 88 | 85 | 69-125 | 3 | 30 |
| 1,2-Dichlorobenzene | 0.0200 | 0.0184 | 0.0200 | 0.0182 | 92 | 91 | 76-120 | 1 | 30 |
| 1,3-Dichlorobenzene | 0.0200 | 0.0182 | 0.0200 | 0.0178 | 91 | 89 | 75-120 | 2 | 30 |
| 1,4-Dichlorobenzene | 0.0200 | 0.0184 | 0.0200 | 0.0182 | 92 | 91 | 80-120 | 1 | 30 |
| 1,1-Dichloroethane | 0.0200 | 0.0189 | 0.0200 | 0.0184 | 94 | 92 | 79-120 | 2 | 30 |
| 1,2-Dichloroethane | 0.0200 | 0.0185 | 0.0200 | 0.0183 | 93 | 91 | 71-128 | 1 | 30 |
| 1,1-Dichloroethene | 0.0200 | 0.0209 | 0.0200 | 0.0203 | 105 | 102 | 73-129 | 3 | 30 |
| cis-1,2-Dichloroethene | 0.0200 | 0.0202 | 0.0200 | 0.0196 | 101 | 98 | 80-123 | 3 | 30 |
| trans-1,2-Dichloroethene | 0.0200 | 0.0204 | 0.0200 | 0.0198 | 102 | 99 | 80-125 | 3 | 30 |
| 1,2-Dichloropropane | 0.0200 | 0.0188 | 0.0200 | 0.0184 | 94 | 92 | 80-120 | 2 | 30 |
| cis-1,3-Dichloropropene | 0.0200 | 0.0162 | 0.0200 | 0.0163 | 81 | 81 | 66-120 | 0 | 30 |
| trans-1,3-Dichloropropene | 0.0200 | 0.0167 | 0.0200 | 0.0167 | 83 | 84 | 68-122 | 0 | 30 |
| Ethylbenzene | 0.0200 | 0.0190 | 0.0200 | 0.0185 | 95 | 93 | 78-120 | 2 | 30 |
| Freon 113 | 0.0200 | 0.0187 | 0.0200 | 0.0179 | 93 | 90 | 64-135 | 4 | 30 |
| Methylene Chloride | 0.0200 | 0.0205 | 0.0200 | 0.0197 | 102 | 99 | 76-122 | 4 | 30 |
| 1,1,2,2-Tetrachloroethane | 0.0200 | 0.0164 | 0.0200 | 0.0165 | 82 | 83 | 69-125 | 1 | 30 |
| Tetrachloroethene | 0.0200 | 0.0197 | 0.0200 | 0.0188 | 98 | 94 | 73-120 | 5 | 30 |
| Toluene | 0.0200 | 0.0192 | 0.0200 | 0.0187 | 96 | 93 | 80-120 | 3 | 30 |
| 1,1,1-Trichloroethane | 0.0200 | 0.0174 | 0.0200 | 0.0170 | 87 | 85 | 69-123 | 2 | 30 |
| 1,1,2-Trichloroethane | 0.0200 | 0.0194 | 0.0200 | 0.0194 | 97 | 97 | 80-120 | 0 | 30 |
| Trichloroethene | 0.0200 | 0.0185 | 0.0200 | 0.0181 | 93 | 90 | 80-120 | 2 | 30 |
| Trichlorofluoromethane | 0.0200 | 0.0188 | 0.0200 | 0.0180 | 94 | 90 | 55-134 | 5 | 30 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|-----------------------------|---|----------------|------------------------|-----------------|----------|-----------|-----------------|-----|---------|
| Vinyl Chloride | 0.0200 | 0.0165 | 0.0200 | 0.0158 | 83 | 79 | 52-120 | 4 | 30 |
| Xylene (Total) | 0.0600 | 0.0576 | 0.0600 | 0.0564 | 96 | 94 | 75-120 | 2 | 30 |
| Batch number: A182521AA | Sample number(s): 9780539-9780540,9780579-9780580 | | | | | | | | |
| Benzene | 0.0200 | 0.0189 | 0.0200 | 0.0185 | 94 | 92 | 80-120 | 2 | 30 |
| 1,2-Dibromoethane | 0.0200 | 0.0178 | 0.0200 | 0.0189 | 89 | 95 | 76-120 | 6 | 30 |
| 1,2-Dichloroethane | 0.0200 | 0.0183 | 0.0200 | 0.0188 | 91 | 94 | 71-128 | 3 | 30 |
| Ethylbenzene | 0.0200 | 0.0186 | 0.0200 | 0.0181 | 93 | 90 | 78-120 | 3 | 30 |
| n-Hexane | 0.0200 | 0.0139 | 0.0200 | 0.0131 | 70 | 65 | 50-132 | 6 | 30 |
| Methyl Tertiary Butyl Ether | 0.0200 | 0.0158 | 0.0200 | 0.0171 | 79 | 86 | 72-120 | 8 | 30 |
| Toluene | 0.0200 | 0.0190 | 0.0200 | 0.0183 | 95 | 92 | 80-120 | 3 | 30 |
| Xylene (Total) | 0.0600 | 0.0569 | 0.0600 | 0.0552 | 95 | 92 | 75-120 | 3 | 30 |
| Batch number: A182541AA | Sample number(s): 9780571-9780572 | | | | | | | | |
| Benzene | 0.0200 | 0.0190 | 0.0200 | 0.0191 | 95 | 96 | 80-120 | 1 | 30 |
| Ethylbenzene | 0.0200 | 0.0187 | 0.0200 | 0.0190 | 94 | 95 | 78-120 | 2 | 30 |
| Toluene | 0.0200 | 0.0185 | 0.0200 | 0.0188 | 93 | 94 | 80-120 | 2 | 30 |
| Xylene (Total) | 0.0600 | 0.0565 | 0.0600 | 0.0576 | 94 | 96 | 75-120 | 2 | 30 |
| Batch number: Q182521AA | Sample number(s): 9780553,9780555,9780558,9780561,9780574 | | | | | | | | |
| Benzene | 1.00 | 1.02 | 1.00 | 1.00 | 102 | 100 | 80-120 | 2 | 30 |
| Bromodichloromethane | 1.00 | 1.01 | 1.00 | 0.954 | 101 | 95 | 70-120 | 5 | 30 |
| Bromoform | 1.00 | 0.921 | 1.00 | 0.935 | 92 | 93 | 51-127 | 1 | 30 |
| Bromomethane | 1.00 | 1.33 | 1.00 | 1.36 | 133 | 136 | 45-140 | 2 | 30 |
| Carbon Tetrachloride | 1.00 | 1.01 | 1.00 | 0.964 | 101 | 96 | 64-134 | 5 | 30 |
| Chlorobenzene | 1.00 | 0.953 | 1.00 | 0.944 | 95 | 94 | 80-120 | 1 | 30 |
| Chloroethane | 1.00 | 1.20 | 1.00 | 1.25 | 120 | 125 | 43-135 | 4 | 30 |
| Chloroform | 1.00 | 1.06 | 1.00 | 1.00 | 106 | 100 | 80-120 | 6 | 30 |
| Chloromethane | 1.00 | 1.02 | 1.00 | 1.03 | 102 | 103 | 56-120 | 1 | 30 |
| Dibromochloromethane | 1.00 | 0.984 | 1.00 | 0.977 | 98 | 98 | 69-125 | 1 | 30 |
| 1,2-Dibromoethane | 1.00 | 0.964 | 1.00 | 0.969 | 96 | 97 | 76-120 | 1 | 30 |
| 1,2-Dichlorobenzene | 1.00 | 0.988 | 1.00 | 0.966 | 99 | 97 | 76-120 | 2 | 30 |
| 1,3-Dichlorobenzene | 1.00 | 0.946 | 1.00 | 0.939 | 95 | 94 | 75-120 | 1 | 30 |
| 1,4-Dichlorobenzene | 1.00 | 0.950 | 1.00 | 0.953 | 95 | 95 | 80-120 | 0 | 30 |
| 1,1-Dichloroethane | 1.00 | 1.05 | 1.00 | 1.00 | 105 | 100 | 79-120 | 4 | 30 |
| 1,2-Dichloroethane | 1.00 | 1.08 | 1.00 | 1.05 | 108 | 105 | 71-128 | 2 | 30 |
| 1,1-Dichloroethene | 1.00 | 1.11 | 1.00 | 1.07 | 111 | 107 | 73-129 | 4 | 30 |
| cis-1,2-Dichloroethene | 1.00 | 1.06 | 1.00 | 0.997 | 106 | 100 | 80-123 | 6 | 30 |
| trans-1,2-Dichloroethene | 1.00 | 1.06 | 1.00 | 1.01 | 106 | 101 | 80-125 | 5 | 30 |
| 1,2-Dichloropropane | 1.00 | 1.04 | 1.00 | 0.996 | 104 | 100 | 80-120 | 4 | 30 |
| cis-1,3-Dichloropropene | 1.00 | 0.975 | 1.00 | 0.957 | 97 | 96 | 66-120 | 2 | 30 |
| trans-1,3-Dichloropropene | 1.00 | 0.965 | 1.00 | 0.967 | 97 | 97 | 68-122 | 0 | 30 |
| Ethylbenzene | 1.00 | 0.917 | 1.00 | 0.927 | 92 | 93 | 78-120 | 1 | 30 |
| Freon 113 | 1.00 | 1.10 | 1.00 | 1.07 | 110 | 107 | 64-135 | 3 | 30 |
| n-Hexane | 1.00 | 1.01 | 1.00 | 0.969 | 101 | 97 | 50-132 | 4 | 30 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|-----------------------------|---|----------------|------------------------|-----------------|----------|-----------|-----------------|-----|---------|
| Methyl Tertiary Butyl Ether | 1.00 | 0.945 | 1.00 | 0.933 | 94 | 93 | 72-120 | 1 | 30 |
| Methylene Chloride | 1.00 | 1.05 | 1.00 | 0.994 | 105 | 99 | 76-122 | 5 | 30 |
| 1,1,2,2-Tetrachloroethane | 1.00 | 0.924 | 1.00 | 0.911 | 92 | 91 | 69-125 | 1 | 30 |
| Tetrachloroethene | 1.00 | 0.949 | 1.00 | 0.971 | 95 | 97 | 73-120 | 2 | 30 |
| Toluene | 1.00 | 0.956 | 1.00 | 0.949 | 96 | 95 | 80-120 | 1 | 30 |
| 1,1,1-Trichloroethane | 1.00 | 0.995 | 1.00 | 0.950 | 100 | 95 | 69-123 | 5 | 30 |
| 1,1,2-Trichloroethane | 1.00 | 0.961 | 1.00 | 0.971 | 96 | 97 | 80-120 | 1 | 30 |
| Trichloroethene | 1.00 | 0.960 | 1.00 | 0.936 | 96 | 94 | 80-120 | 3 | 30 |
| Trichlorofluoromethane | 1.00 | 1.04 | 1.00 | 1.05 | 104 | 105 | 55-134 | 1 | 30 |
| Vinyl Chloride | 1.00 | 1.03 | 1.00 | 1.02 | 103 | 102 | 52-120 | 2 | 30 |
| Xylene (Total) | 3.00 | 2.73 | 3.00 | 2.75 | 91 | 92 | 75-120 | 1 | 30 |
| Batch number: R182502AA | Sample number(s): 9780539-9780540 | | | | | | | | |
| Benzene | 1.00 | 1.05 | 1.00 | 0.971 | 105 | 97 | 80-120 | 8 | 30 |
| Toluene | 1.00 | 1.06 | 1.00 | 0.954 | 106 | 95 | 80-120 | 10 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: Z182472AA | Sample number(s): 9780552,9780562 | | | | | | | | |
| Benzene | 20 | 21.09 | | | 105 | | 80-120 | | |
| Ethylbenzene | 20 | 20.34 | | | 102 | | 80-120 | | |
| Toluene | 20 | 21.95 | | | 110 | | 80-120 | | |
| Xylene (Total) | 60 | 62.44 | | | 104 | | 80-120 | | |
| Batch number: Z182502AA | Sample number(s): 9780563-9780566 | | | | | | | | |
| Benzene | 20 | 21.07 | | | 105 | | 80-120 | | |
| Ethylbenzene | 20 | 20.53 | | | 103 | | 80-120 | | |
| Toluene | 20 | 22.01 | | | 110 | | 80-120 | | |
| Xylene (Total) | 60 | 62.98 | | | 105 | | 80-120 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 18248SLA026 | Sample number(s): 9780531-9780534,9780560 | | | | | | | | |
| Naphthalene | 1.67 | 1.63 | | | 98 | | 81-111 | | |
| Batch number: 18249SLA026 | Sample number(s): 9780535-9780538,9780540-9780551,9780553-9780554,9780556-9780557 | | | | | | | | |
| Naphthalene | 1.67 | 1.51 | | | 90 | | 81-111 | | |
| Batch number: 18250SLA026 | Sample number(s): 9780539,9780555,9780561 | | | | | | | | |
| Benzo(a)anthracene | 0.0333 | 0.0315 | | | 95 | | 76-109 | | |
| Benzo(a)pyrene | 0.0333 | 0.0340 | | | 102 | | 69-111 | | |
| Benzo(b)fluoranthene | 0.0333 | 0.0336 | | | 101 | | 69-122 | | |
| Benzo(k)fluoranthene | 0.0333 | 0.0329 | | | 99 | | 64-117 | | |
| Chrysene | 0.0333 | 0.0315 | | | 95 | | 75-106 | | |
| Dibenz(a,h)anthracene | 0.0333 | 0.0338 | | | 101 | | 66-119 | | |
| Indeno(1,2,3-cd)pyrene | 0.0333 | 0.0335 | | | 101 | | 65-114 | | |
| Naphthalene | 0.0333 | 0.0337 | | | 101 | | 72-103 | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|--|--|---|---|---|---|---|--|--|--|
| Batch number: 18250SLB026 Naphthalene | Sample number(s): 9780558-9780559,9780568-9780580 1.67 | 1.64 | | | 99 | | 81-111 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 18247A31A NWTPH-GX Soil C7-C12 | Sample number(s): 9780531-9780547,9780556-9780557,9780560 11 | 9.42 | 11 | 9.43 | 86 | 86 | 55-145 | 0 | 30 |
| Batch number: 18247D34A NWTPH-GX Soil C7-C12 | Sample number(s): 9780548-9780551,9780554-9780555,9780559,9780568-9780573,9780575-9780577 11 | 10.24 | 11 | 10.29 | 93 | 94 | 55-145 | 1 | 30 |
| Batch number: 18248A34A NWTPH-GX Soil C7-C12 | Sample number(s): 9780553,9780558,9780561,9780574,9780578-9780580 11 | 9.93 | 11 | 9.90 | 90 | 90 | 55-145 | 0 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: 18249A53A NWTPH-Gx water C7-C12 | Sample number(s): 9780563-9780566 1100 | 1054.53 | 1100 | 1063.1 | 96 | 97 | 64-131 | 1 | 30 |
| Batch number: 18253A20A NWTPH-Gx water C7-C12 | Sample number(s): 9780552,9780562 1100 | 1112.9 | 1100 | 1110.35 | 101 | 101 | 64-131 | 0 | 30 |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 182480026A PCB-1016 PCB-1260 | Sample number(s): 9780553,9780558,9780570,9780576 0.167 0.167 | 0.148 0.166 | | | 89 100 | | 76-121 79-130 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 182470023A Diesel Range Organics C12-C24 | Sample number(s): 9780531-9780538 133.83 | 92.33 | | | 69 | | 61-115 | | |
| Batch number: 182490010A Diesel Range Organics C12-C24 | Sample number(s): 9780539-9780547,9780560 133.83 | 88.61 | | | 66 | | 61-115 | | |
| Batch number: 182500003A >C10-C12 Aliphatic >C10-C12 Aromatic >C12-C16 Aliphatic >C12-C16 Aromatic >C16-C21 Aliphatic >C16-C21 Aromatic >C21-C34 Aliphatic >C21-C34 Aromatic | Sample number(s): 9780539,9780553,9780555,9780561,9780570,9780576 4.01 4.01 8.02 12.02 12.03 20.06 20.06 32.08 | 2.41 2.28 2.52 7.29 8.33 13.42 13.65 20.05 | 4.01 4.01 8.02 12.02 12.03 20.06 20.06 32.08 | 1.82 1.91 2.09 6.31 7.42 13.31 12.22 20.63 | 60 57 31* 61 69 67 68 62 | 45 48 26* 52 62 66 61 64 | 31-137 22-119 42-146 24-136 57-111 34-143 50-124 44-134 | 28 18 18 14 11 1 11 3 | 50 50 50 50 50 50 50 50 |
| Batch number: 182500015A Diesel Range Organics C12-C24 | Sample number(s): 9780548-9780551,9780553-9780557 133.83 | 96.73 | | | 72 | | 61-115 | | |
| Batch number: 182500017A | Sample number(s): 9780558-9780559,9780561,9780568-9780574 | | | | | | | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|-------------------------------|---|----------------|------------------------|-----------------|----------|-----------|-----------------|-----|---------|
| Diesel Range Organics C12-C24 | 133.83 | 108.23 | | | 81 | | 61-115 | | |
| Batch number: 182500053A | Sample number(s): 9780575-9780580 | | | | | | | | |
| Diesel Range Organics C12-C24 | 133.83 | 103.72 | | | 77 | | 61-115 | | |
| Batch number: 18253A08A | Sample number(s): 9780539,9780553,9780555,9780561,9780570,9780576 | | | | | | | | |
| Benzene | 2.53 | 2.31 | 2.53 | 2.31 | 91 | 91 | 70-130 | 0 | 50 |
| C5-C6 Aliphatic Hydrocarbons | 5.08 | 4.05 | 5.08 | 3.97 | 80 | 78 | 70-130 | 2 | 50 |
| C6-C8 Aliphatic Hydrocarbons | 2.55 | 2.09 | 2.55 | 2.11 | 82 | 83 | 70-130 | 1 | 50 |
| C8-C10 Aliphatic Hydrocarbons | 2.55 | 2.27 | 2.55 | 2.36 | 89 | 93 | 70-130 | 4 | 50 |
| C8-C10 Aromatic Hydrocarbons | 2.57 | 2.32 | 2.57 | 2.34 | 91 | 91 | 70-130 | 1 | 50 |
| Ethylbenzene | 2.54 | 2.37 | 2.54 | 2.38 | 93 | 94 | 70-130 | 0 | 50 |
| Methyl t-butyl ether | 2.55 | 2.42 | 2.55 | 2.40 | 95 | 94 | 70-130 | 1 | 50 |
| Toluene | 2.54 | 2.33 | 2.54 | 2.34 | 92 | 92 | 70-130 | 0 | 50 |
| o-Xylene | 2.50 | 2.37 | 2.50 | 2.38 | 95 | 95 | 70-130 | 0 | 50 |
| m,p-Xylenes | 5.10 | 4.72 | 5.10 | 4.72 | 93 | 93 | 70-130 | 0 | 50 |
| Batch number: 182700031A | Sample number(s): 9780539,9780553,9780555,9780561,9780570,9780576 | | | | | | | | |
| >C10-C12 Aliphatic | 4.01 | 2.50 | | | 62 | | 31-137 | | |
| >C10-C12 Aromatic | 4.01 | 4.07 | | | 101 | | 22-119 | | |
| >C12-C16 Aliphatic | 8.02 | 5.70 | | | 71 | | 42-146 | | |
| >C12-C16 Aromatic | 12.02 | 13.33 | | | 111 | | 24-136 | | |
| >C16-C21 Aliphatic | 12.03 | 9.38 | | | 78 | | 57-111 | | |
| >C16-C21 Aromatic | 20.06 | 24.87 | | | 124 | | 34-143 | | |
| >C21-C34 Aliphatic | 20.06 | 15.15 | | | 76 | | 50-124 | | |
| >C21-C34 Aromatic | 32.08 | 40.46 | | | 126 | | 44-134 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 182471404901 | Sample number(s): 9780531-9780550 | | | | | | | | |
| Lead | 15 | 14.88 | | | 99 | | 80-120 | | |
| Batch number: 182471404902 | Sample number(s): 9780551,9780553-9780561,9780568-9780577 | | | | | | | | |
| Lead | 15 | 15.29 | | | 102 | | 80-120 | | |
| Batch number: 182471404903 | Sample number(s): 9780578-9780580 | | | | | | | | |
| Lead | 15 | 14.12 | | | 94 | | 80-120 | | |
| | % | % | % | % | | | | | |
| Batch number: 18243820004B | Sample number(s): 9780571-9780580 | | | | | | | | |
| Moisture | 89.5 | 89.43 | | | 100 | | 99-101 | | |
| Batch number: 18243820007B | Sample number(s): 9780554-9780561,9780568-9780570 | | | | | | | | |
| Moisture | 89.5 | 89.35 | | | 100 | | 99-101 | | |
| Batch number: 18243820008A | Sample number(s): 9780551,9780553 | | | | | | | | |
| Moisture | 89.5 | 89.4 | | | 100 | | 99-101 | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added % | LCS Conc % | LCSD Spike Added % | LCSD Conc % | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|--|---|------------|--------------------|-------------|----------|-----------|-----------------|-----|---------|
| Batch number: 18247820004A Moisture | Sample number(s): 9780531-9780540 | | | | 100 | | 99-101 | | |
| | 89.5 | 89.43 | | | | | | | |
| Batch number: 18247820004B Moisture | Sample number(s): 9780541-9780545,9780547-9780550 | | | | 100 | | 99-101 | | |
| | 89.5 | 89.43 | | | | | | | |
| Batch number: 18248820002A Moisture | Sample number(s): 9780546 | | | | 100 | | 99-101 | | |
| | 89.5 | 89.42 | | | | | | | |

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

| Analysis Name | Unspiked Conc mg/kg | MS Spike Added mg/kg | MS Conc mg/kg | MSD Spike Added mg/kg | MSD Conc mg/kg | MS %Rec | MSD %Rec | MS/MSD Limits | RPD | RPD Max |
|---------------------------|--|----------------------|---------------|-----------------------|----------------|---------|----------|---------------|-----|---------|
| Batch number: A182501AA | Sample number(s): 9780544-9780551,9780554,9780556-9780557,9780559,9780568-9780570,9780573,9780575-9780578 UNSPK: 9780570 | | | | | | | | | |
| Benzene | N.D. | 0.0164 | 0.0170 | 0.0162 | 0.0166 | 103 | 102 | 80-120 | 2 | 30 |
| Bromodichloromethane | N.D. | 0.0164 | 0.0155 | 0.0162 | 0.0149 | 95 | 92 | 70-120 | 4 | 30 |
| Bromoform | N.D. | 0.0164 | 0.0144 | 0.0162 | 0.0138 | 88 | 85 | 51-127 | 5 | 30 |
| Bromomethane | N.D. | 0.0164 | 0.0163 | 0.0162 | 0.0159 | 99 | 98 | 45-140 | 2 | 30 |
| Carbon Tetrachloride | N.D. | 0.0164 | 0.0168 | 0.0162 | 0.0158 | 102 | 98 | 64-134 | 6 | 30 |
| Chlorobenzene | N.D. | 0.0164 | 0.0169 | 0.0162 | 0.0162 | 103 | 100 | 80-120 | 4 | 30 |
| Chloroethane | N.D. | 0.0164 | 0.0144 | 0.0162 | 0.0141 | 88 | 87 | 43-135 | 2 | 30 |
| Chloroform | N.D. | 0.0164 | 0.0171 | 0.0162 | 0.0165 | 104 | 102 | 80-120 | 3 | 30 |
| Chloromethane | N.D. | 0.0164 | 0.0139 | 0.0162 | 0.0137 | 84 | 85 | 56-120 | 1 | 30 |
| Dibromochloromethane | N.D. | 0.0164 | 0.0161 | 0.0162 | 0.0156 | 98 | 96 | 69-125 | 4 | 30 |
| 1,2-Dichlorobenzene | N.D. | 0.0164 | 0.0151 | 0.0162 | 0.0147 | 92 | 91 | 76-120 | 3 | 30 |
| 1,3-Dichlorobenzene | N.D. | 0.0164 | 0.0151 | 0.0162 | 0.0144 | 92 | 89 | 75-120 | 5 | 30 |
| 1,4-Dichlorobenzene | N.D. | 0.0164 | 0.0155 | 0.0162 | 0.0148 | 94 | 91 | 80-120 | 5 | 30 |
| 1,1-Dichloroethane | N.D. | 0.0164 | 0.0166 | 0.0162 | 0.0163 | 101 | 101 | 79-120 | 2 | 30 |
| 1,2-Dichloroethane | N.D. | 0.0164 | 0.0169 | 0.0162 | 0.0160 | 103 | 99 | 71-128 | 6 | 30 |
| 1,1-Dichloroethene | N.D. | 0.0164 | 0.0191 | 0.0162 | 0.0186 | 117 | 115 | 73-129 | 3 | 30 |
| cis-1,2-Dichloroethene | N.D. | 0.0164 | 0.0175 | 0.0162 | 0.0172 | 107 | 106 | 80-123 | 2 | 30 |
| trans-1,2-Dichloroethene | N.D. | 0.0164 | 0.0183 | 0.0162 | 0.0177 | 111 | 109 | 80-125 | 3 | 30 |
| 1,2-Dichloropropane | N.D. | 0.0164 | 0.0159 | 0.0162 | 0.0159 | 97 | 98 | 80-120 | 0 | 30 |
| cis-1,3-Dichloropropene | N.D. | 0.0164 | 0.0137 | 0.0162 | 0.0137 | 83 | 84 | 66-120 | 0 | 30 |
| trans-1,3-Dichloropropene | N.D. | 0.0164 | 0.0154 | 0.0162 | 0.0155 | 94 | 96 | 68-122 | 1 | 30 |
| Ethylbenzene | N.D. | 0.0164 | 0.0158 | 0.0162 | 0.0150 | 96 | 93 | 78-120 | 5 | 30 |
| Freon 113 | N.D. | 0.0164 | 0.0162 | 0.0162 | 0.0159 | 99 | 98 | 64-135 | 2 | 30 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

| Analysis Name | Unspiked Conc mg/kg | MS Spike Added mg/kg | MS Conc mg/kg | MSD Spike Added mg/kg | MSD Conc mg/kg | MS %Rec | MSD %Rec | MS/MSD Limits | RPD | RPD Max |
|--|------------------------|-------------------------|------------------|--------------------------|-------------------|----------|----------|---------------|------|---------|
| Methylene Chloride | N.D. | 0.0164 | 0.0177 | 0.0162 | 0.0174 | 108 | 108 | 76-122 | 1 | 30 |
| 1,1,2,2-Tetrachloroethane | N.D. | 0.0164 | 0.0198 | 0.0162 | 0.0193 | 120 | 119 | 69-125 | 2 | 30 |
| Tetrachloroethene | N.D. | 0.0164 | 0.0166 | 0.0162 | 0.0157 | 101 | 97 | 73-120 | 5 | 30 |
| Toluene | N.D. | 0.0164 | 0.0180 | 0.0162 | 0.0177 | 110 | 109 | 80-120 | 2 | 30 |
| 1,1,1-Trichloroethane | N.D. | 0.0164 | 0.0159 | 0.0162 | 0.0154 | 97 | 95 | 69-123 | 3 | 30 |
| 1,1,2-Trichloroethane | N.D. | 0.0164 | 0.0186 | 0.0162 | 0.0178 | 113 | 110 | 80-120 | 5 | 30 |
| Trichloroethene | N.D. | 0.0164 | 0.0164 | 0.0162 | 0.0159 | 100 | 98 | 80-120 | 3 | 30 |
| Trichlorofluoromethane | N.D. | 0.0164 | 0.0173 | 0.0162 | 0.0168 | 105 | 104 | 55-134 | 3 | 30 |
| Vinyl Chloride | N.D. | 0.0164 | 0.0146 | 0.0162 | 0.0148 | 89 | 92 | 52-120 | 2 | 30 |
| Xylene (Total) | N.D. | 0.0493 | 0.0469 | 0.0485 | 0.0452 | 95 | 93 | 75-120 | 4 | 30 |
| Batch number: A182521AA Sample number(s): 9780539-9780540,9780579-9780580 UNSPK: 9780539 | | | | | | | | | | |
| Benzene | 0.432 | 0.0147 | 0.457 | 0.0142 | 0.395 | 168 (2) | -258 (2) | 80-120 | 14 | 30 |
| 1,2-Dibromoethane | N.D. | 0.0147 | 0.0172 | 0.0142 | 0.0163 | 117 | 115 | 76-120 | 5 | 30 |
| 1,2-Dichloroethane | N.D. | 0.0147 | 0.0171 | 0.0142 | 0.0160 | 116 | 113 | 71-128 | 7 | 30 |
| Ethylbenzene | 0.113 | 0.0147 | 0.0924 | 0.0142 | 0.0973 | -141 (2) | -112 (2) | 78-120 | 5 | 30 |
| n-Hexane | 0.0577 | 0.0147 | 0.0911 | 0.0142 | 0.0576 | 227* | 0 (2) | 50-132 | 45* | 30 |
| Methyl Tertiary Butyl Ether | N.D. | 0.0147 | 0.0153 | 0.0142 | 0.0148 | 104 | 104 | 72-120 | 4 | 30 |
| Toluene | 0.121 | 0.0147 | 0.0428 | 0.0142 | 0.184 | -533 (2) | 442 (2) | 80-120 | 125* | 30 |
| Xylene (Total) | 0.295 | 0.0442 | 0.166 | 0.0426 | 0.313 | -291 (2) | 43 (2) | 75-120 | 61* | 30 |
| Batch number: 18249SLA026 Sample number(s): 9780535-9780538,9780540-9780551,9780553-9780554,9780556-9780557 UNSPK: 9780550 | | | | | | | | | | |
| Naphthalene | N.D. | 1.64 | 1.48 | 1.65 | 1.44 | 90 | 87 | 81-111 | 3 | 30 |
| Batch number: 18250SLB026 Sample number(s): 9780558-9780559,9780568-9780580 UNSPK: 9780573 | | | | | | | | | | |
| Naphthalene | N.D. | 1.66 | 1.58 | 1.66 | 1.56 | 95 | 94 | 81-111 | 1 | 30 |
| Batch number: 182480026A Sample number(s): 9780553,9780558,9780570,9780576 UNSPK: 9780576 | | | | | | | | | | |
| PCB-1016 | N.D. | 0.167 | 0.157 | 0.166 | 0.149 | 94 | 90 | 76-121 | 5 | 50 |
| PCB-1260 | N.D. | 0.167 | 0.181 | 0.166 | 0.172 | 109 | 104 | 79-130 | 5 | 50 |
| Batch number: 182470023A Sample number(s): 9780531-9780538 UNSPK: 9780533 | | | | | | | | | | |
| Diesel Range Organics C12-C24 | N.D. | 133.39 | 85.54 | | | 64 | | 61-115 | | |
| Batch number: 182490010A Sample number(s): 9780539-9780547,9780560 UNSPK: 9780544 | | | | | | | | | | |
| Diesel Range Organics C12-C24 | N.D. | 132.03 | 234.99 | | | 178* | | 61-115 | | |
| Batch number: 182500003A Sample number(s): 9780539,9780553,9780555,9780561,9780570,9780576 UNSPK: 9780576 | | | | | | | | | | |
| >C10-C12 Aliphatic | N.D. | 3.88 | 1.94 | 3.89 | 2.02 | 50 | 52 | 31-137 | 4 | 50 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

| Analysis Name | Unspiked Conc mg/kg | MS Spike Added mg/kg | MS Conc mg/kg | MSD Spike Added mg/kg | MSD Conc mg/kg | MS %Rec | MSD %Rec | MS/MSD Limits | RPD | RPD Max |
|---|---|-------------------------|------------------|--------------------------|-------------------|---------|----------|---------------|-----|---------|
| >C10-C12 Aromatic | N.D. | 3.88 | 1.95 | 3.89 | 2.08 | 50 | 53 | 22-119 | 6 | 50 |
| >C12-C16 Aliphatic | 4.45 | 7.75 | 14.14 | 7.77 | 6.76 | 125 | 30* | 42-146 | 71* | 50 |
| >C12-C16 Aromatic | N.D. | 11.62 | 6.73 | 11.66 | 7.15 | 58 | 61 | 24-136 | 6 | 50 |
| >C16-C21 Aliphatic | 58.25 | 11.64 | 69.9 | 11.67 | 65.06 | 100 (2) | 58 (2) | 57-111 | 7 | 50 |
| >C16-C21 Aromatic | 11.49 | 19.4 | 27.09 | 19.46 | 24.99 | 80 | 69 | 34-143 | 8 | 50 |
| >C21-C34 Aliphatic | 25.56 | 19.4 | 44.42 | 19.45 | 41.34 | 97 | 81 | 50-124 | 7 | 50 |
| >C21-C34 Aromatic | 12.09 | 31.03 | 38.21 | 31.12 | 34.14 | 84 | 71 | 44-134 | 11 | 50 |
| Batch number: 182500015A Diesel Range Organics C12-C24 | Sample number(s): 9780548-9780551,9780553-9780557 UNSPK: 9780548 N.D. 132.07 100.98 76 61-115 | | | | | | | | | |
| Batch number: 182500017A Diesel Range Organics C12-C24 | Sample number(s): 9780558-9780559,9780561,9780568-9780574 UNSPK: 9780559 N.D. 132.03 99.06 75 61-115 | | | | | | | | | |
| Batch number: 182500053A Diesel Range Organics C12-C24 | Sample number(s): 9780575-9780580 UNSPK: 9780577 150.11 132.37 288.1 104 61-115 | | | | | | | | | |
| Batch number: 182700031A | Sample number(s): 9780539,9780553,9780555,9780561,9780570,9780576 UNSPK: 9780570 | | | | | | | | | |
| >C10-C12 Aliphatic | N.D. | 3.97 | 2.67 | | | 67 | | 31-137 | | |
| >C10-C12 Aromatic | N.D. | 3.97 | 3.99 | | | 101 | | 22-119 | | |
| >C12-C16 Aliphatic | 71.19 | 7.94 | 70.2 | | | -11 (2) | | 42-146 | | |
| >C12-C16 Aromatic | 1.54 | 11.9 | 15 | | | 113 | | 24-136 | | |
| >C16-C21 Aliphatic | 153.42 | 11.91 | 145.27 | | | -67 (2) | | 57-111 | | |
| >C16-C21 Aromatic | 53.65 | 19.86 | 81.43 | | | 140 | | 34-143 | | |
| >C21-C34 Aliphatic | 20.32 | 19.86 | 28.25 | | | 40* | | 50-124 | | |
| >C21-C34 Aromatic | 8.29 | 31.76 | 48.09 | | | 125 | | 44-134 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 182471404901 Lead | Sample number(s): 9780531-9780550 UNSPK: 9780531 4.42 12.82 17.21 12.82 18.05 100 106 75-125 5 20 | | | | | | | | | |
| Batch number: 182471404902 Lead | Sample number(s): 9780551,9780553-9780561,9780568-9780577 UNSPK: 9780551 1.33 14.29 15.4 14.29 15.32 98 98 75-125 1 20 | | | | | | | | | |

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | BKG Conc mg/kg | DUP Conc mg/kg | DUP RPD | DUP RPD Max |
|--------------------------|--|-------------------|---------|-------------|
| Batch number: 182470023A | Sample number(s): 9780531-9780538 BKG: 9780533 | | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | BKG Conc mg/kg | DUP Conc mg/kg | DUP RPD | DUP RPD Max |
|-------------------------------|--|-------------------|----------|-------------|
| Diesel Range Organics C12-C24 | N.D. | N.D. | 0 (1) | 20 |
| Heavy Range Organics C24-C40 | 13.47 | 16.27 | 19 (1) | 20 |
| Batch number: 182490010A | Sample number(s): 9780539-9780547,9780560 BKG: 9780544 | | | |
| Diesel Range Organics C12-C24 | N.D. | 121.07 | 200* (1) | 20 |
| Heavy Range Organics C24-C40 | N.D. | N.D. | 0 (1) | 20 |
| Batch number: 182500015A | Sample number(s): 9780548-9780551,9780553-9780557 BKG: 9780548 | | | |
| Diesel Range Organics C12-C24 | N.D. | N.D. | 0 (1) | 20 |
| Heavy Range Organics C24-C40 | N.D. | N.D. | 0 (1) | 20 |
| Batch number: 182500017A | Sample number(s): 9780558-9780559,9780561,9780568-9780574 BKG: 9780559 | | | |
| Diesel Range Organics C12-C24 | N.D. | N.D. | 0 (1) | 20 |
| Heavy Range Organics C24-C40 | N.D. | N.D. | 0 (1) | 20 |
| Batch number: 182500053A | Sample number(s): 9780575-9780580 BKG: 9780577 | | | |
| Diesel Range Organics C12-C24 | 150.11 | 190.23 | 24* | 20 |
| Heavy Range Organics C24-C40 | 44.03 | 29.48 | 40* (1) | 20 |
| Batch number: 182700031A | Sample number(s): 9780539,9780553,9780555,9780561,9780570,9780576 BKG: 9780570 | | | |
| >C10-C12 Aliphatic | N.D. | N.D. | 0 (1) | 25 |
| >C10-C12 Aromatic | N.D. | N.D. | 0 (1) | 25 |
| >C12-C16 Aliphatic | 71.19 | 77.27 | 8 | 25 |
| >C12-C16 Aromatic | 1.54 | 1.75 | 13 (1) | 25 |
| >C16-C21 Aliphatic | 153.42 | 164.87 | 7 | 25 |
| >C16-C21 Aromatic | 53.65 | 61.72 | 14 | 25 |
| >C21-C34 Aliphatic | 20.32 | 18.13 | 11 (1) | 25 |
| >C21-C34 Aromatic | 8.29 | 12.41 | 40* (1) | 25 |
| | mg/kg | mg/kg | | |
| Batch number: 182471404901 | Sample number(s): 9780531-9780550 BKG: 9780531 | | | |
| Lead | 4.42 | 7.72 | 54* (1) | 20 |
| Batch number: 182471404902 | Sample number(s): 9780551,9780553-9780561,9780568-9780577 BKG: 9780551 | | | |
| Lead | 1.33 | 1.78 | 28* (1) | 20 |
| | % | % | | |
| Batch number: 18243820004B | Sample number(s): 9780571-9780580 BKG: 9780573 | | | |
| Moisture | 7.72 | 8.09 | 5 | 5 |
| Batch number: 18247820004A | Sample number(s): 9780531-9780540 BKG: 9780534 | | | |
| Moisture | 10.45 | 10.8 | 3 | 5 |
| Batch number: 18247820004B | Sample number(s): 9780541-9780545,9780547-9780550 BKG: 9780546 | | | |
| Moisture | 8.23 | 6.95 | 17* | 5 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

Laboratory Duplicate (continued)

Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | BKG Conc % | DUP Conc % | DUP RPD | DUP RPD Max |
|----------------------------|--|---------------|---------|-------------|
| Batch number: 18248820002A | Sample number(s): 9780546 BKG: 9780546 | | | |
| Moisture | 6.56 | 7.14 | 8* | 5 |

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260 Soil
Batch number: A182492AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 9780531 | 106 | 110 | 101 | 87 |
| 9780532 | 106 | 111 | 103 | 89 |
| 9780533 | 106 | 111 | 99 | 91 |
| 9780534 | 105 | 111 | 102 | 90 |
| 9780535 | 107 | 108 | 98 | 91 |
| 9780536 | 106 | 111 | 95 | 93 |
| 9780560 | 106 | 109 | 98 | 92 |
| Blank | 104 | 109 | 97 | 93 |
| LCS | 103 | 102 | 103 | 99 |
| LCSD | 102 | 107 | 101 | 101 |

Limits: 50-141 54-135 52-141 50-131

Analysis Name: BTEX 8260 Soil
Batch number: A182493AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 9780537 | 106 | 109 | 96 | 92 |
| 9780538 | 106 | 109 | 97 | 91 |
| 9780541 | 105 | 108 | 97 | 94 |
| 9780542 | 107 | 107 | 96 | 93 |
| 9780543 | 108 | 109 | 95 | 93 |
| Blank | 102 | 106 | 98 | 94 |
| LCS | 101 | 97 | 102 | 98 |
| LCSD | 101 | 99 | 102 | 99 |

Limits: 50-141 54-135 52-141 50-131

Analysis Name: BTEX 8260 Soil
Batch number: A182501AA

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260 Soil
Batch number: A182501AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 9780544 | 105 | 107 | 97 | 93 |
| 9780545 | 106 | 102 | 97 | 86 |
| 9780546 | 108 | 112 | 96 | 93 |
| 9780547 | 108 | 109 | 98 | 93 |
| 9780548 | 103 | 103 | 98 | 101 |
| 9780549 | 107 | 104 | 96 | 91 |
| 9780550 | 106 | 106 | 95 | 92 |
| 9780551 | 108 | 108 | 97 | 92 |
| 9780554 | 104 | 103 | 98 | 92 |
| 9780556 | 106 | 107 | 97 | 92 |
| 9780557 | 107 | 109 | 97 | 92 |
| 9780559 | 104 | 108 | 97 | 99 |
| 9780568 | 109 | 108 | 102 | 92 |
| 9780569 | 106 | 107 | 97 | 93 |
| 9780570 | 108 | 109 | 102 | 87 |
| 9780573 | 103 | 108 | 98 | 95 |
| 9780575 | 101 | 103 | 98 | 94 |
| 9780576 | 105 | 107 | 101 | 87 |
| 9780577 | 104 | 104 | 103 | 86 |
| 9780578 | 104 | 106 | 97 | 93 |
| Blank | 106 | 106 | 98 | 92 |
| LCS | 101 | 102 | 102 | 100 |
| LCSD | 102 | 103 | 102 | 100 |
| MS | 103 | 105 | 107 | 93 |
| MSD | 103 | 105 | 105 | 93 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260 Soil
Batch number: A182521AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 9780539 | 102 | 105 | 100 | 99 |
| 9780540 | 100 | 107 | 100 | 99 |
| 9780579 | 106 | 109 | 96 | 93 |
| 9780580 | 105 | 109 | 96 | 92 |
| Blank | 105 | 106 | 98 | 94 |
| LCS | 101 | 102 | 102 | 100 |
| LCSD | 102 | 105 | 101 | 100 |
| MS | 101 | 106 | 102 | 98 |
| MSD | 100 | 102 | 103 | 98 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260 Soil
Batch number: A182521AA

Limits: 50-141 54-135 52-141 50-131

Analysis Name: BTEX 8260 Soil
Batch number: A182541AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 9780571 | 104 | 113 | 96 | 94 |
| 9780572 | 95 | 102 | 131 | 129 |
| Blank | 110 | 107 | 96 | 93 |
| LCS | 105 | 102 | 100 | 103 |
| LCSD | 103 | 104 | 100 | 102 |

Limits: 50-141 54-135 52-141 50-131

Analysis Name: HVOCs + BTEX
Batch number: Q182521AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 9780553 | 90 | 94 | 92 | 92 |
| 9780555 | 95 | 97 | 94 | 97 |
| 9780558 | 87 | 91 | 88 | 89 |
| 9780561 | 82 | 83 | 88 | 86 |
| 9780574 | 93 | 96 | 92 | 93 |
| Blank | 96 | 99 | 96 | 91 |
| LCS | 102 | 99 | 97 | 94 |
| LCSD | 98 | 100 | 97 | 95 |

Limits: 50-141 54-135 52-141 50-131

Analysis Name: BTEX 8260C
Batch number: Z182472AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 9780552 | 103 | 102 | 102 | 93 |
| 9780562 | 101 | 101 | 102 | 93 |
| Blank | 101 | 103 | 103 | 95 |
| LCS | 98 | 103 | 103 | 98 |

Limits: 80-120 80-120 80-120 80-120

Analysis Name: BTEX 8260C
Batch number: Z182502AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 9780563 | 101 | 101 | 103 | 94 |
| 9780564 | 100 | 103 | 102 | 92 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260C
Batch number: Z182502AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 9780565 | 103 | 103 | 102 | 94 |
| 9780566 | 103 | 103 | 102 | 93 |
| Blank | 102 | 104 | 102 | 95 |
| LCS | 98 | 105 | 104 | 100 |
| Limits: | 80-120 | 80-120 | 80-120 | 80-120 |

Analysis Name: Naphthalene 8270D
Batch number: 18248SLA026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 9780531 | 89 | 93 | 100 |
| 9780532 | 102 | 97 | 101 |
| 9780533 | 95 | 89 | 97 |
| 9780534 | 88 | 87 | 96 |
| 9780560 | 90 | 93 | 100 |
| Blank | 115 | 95 | 109 |
| LCS | 88 | 95 | 104 |
| Limits: | 49-118 | 57-116 | 55-118 |

Analysis Name: Naphthalene 8270D
Batch number: 18249SLA026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 9780535 | 79 | 92 | 86 |
| 9780536 | 84 | 92 | 88 |
| 9780537 | 80 | 93 | 89 |
| 9780538 | 80 | 97 | 87 |
| 9780540 | 83 | 95 | 89 |
| 9780541 | 88 | 97 | 94 |
| 9780542 | 81 | 90 | 91 |
| 9780543 | 75 | 87 | 82 |
| 9780544 | 78 | 91 | 87 |
| 9780545 | 87 | 95 | 93 |
| 9780546 | 77 | 86 | 87 |
| 9780547 | 79 | 94 | 86 |
| 9780548 | 80 | 86 | 89 |
| 9780549 | 84 | 91 | 93 |
| 9780550 | 80 | 90 | 86 |
| 9780551 | 70 | 93 | 85 |
| 9780553 | 90 | 73 | 83 |
| 9780554 | 74 | 92 | 85 |
| 9780556 | 70 | 98 | 88 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Naphthalene 8270D
Batch number: 18249SLA026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 9780557 | 66 | 83 | 79 |
| Blank | 85 | 100 | 93 |
| LCS | 88 | 96 | 92 |
| MS | 87 | 92 | 89 |
| MSD | 86 | 92 | 92 |
| Limits: | 49-118 | 57-116 | 55-118 |

Analysis Name: SIM SVOAs 8270D (microwave)
Batch number: 18250SLA026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---------|------------------|--------------------|-------------------------|
| 9780539 | 83 | 76 | 85 |
| 9780555 | 76 | 71 | 79 |
| 9780561 | 79 | 76 | 85 |
| Blank | 70 | 65 | 73 |
| LCS | 89 | 81 | 91 |
| Limits: | 54-122 | 54-122 | 61-111 |

Analysis Name: Naphthalene 8270D
Batch number: 18250SLB026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 9780558 | 74 | 80 | 86 |
| 9780559 | 79 | 94 | 94 |
| 9780568 | 77 | 100 | 96 |
| 9780569 | 80 | 99 | 104 |
| 9780570 | 160* | 102 | 122* |
| 9780571 | 77 | 91 | 96 |
| 9780572 | 88 | 110 | 100 |
| 9780573 | 74 | 90 | 92 |
| 9780574 | 90 | 96 | 105 |
| 9780575 | 80 | 91 | 94 |
| 9780576 | 86 | 89 | 97 |
| 9780577 | 83 | 87 | 92 |
| 9780578 | 79 | 92 | 97 |
| 9780579 | 76 | 86 | 93 |
| 9780580 | 80 | 92 | 95 |
| Blank | 85 | 104 | 105 |
| LCS | 82 | 97 | 98 |
| MS | 79 | 95 | 95 |
| MSD | 80 | 92 | 97 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Naphthalene 8270D
Batch number: 18250SLB026

Limits: 49-118 57-116 55-118

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 18247A31A

| | Trifluorotoluene-F |
|---------|--------------------|
| 9780531 | 108 |
| 9780532 | 90 |
| 9780533 | 98 |
| 9780534 | 83 |
| 9780535 | 96 |
| 9780536 | 105 |
| 9780537 | 95 |
| 9780538 | 89 |
| 9780539 | 81 |
| 9780540 | 85 |
| 9780541 | 99 |
| 9780542 | 89 |
| 9780543 | 96 |
| 9780544 | 90 |
| 9780545 | 102 |
| 9780546 | 88 |
| 9780547 | 82 |
| 9780556 | 88 |
| 9780557 | 93 |
| 9780560 | 100 |
| Blank | 98 |
| LCS | 103 |
| LCSD | 104 |

Limits: 50-150

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 18247D34A

| | Trifluorotoluene-F |
|---------|--------------------|
| 9780548 | 100 |
| 9780549 | 94 |
| 9780550 | 86 |
| 9780551 | 97 |
| 9780554 | 89 |
| 9780555 | 124 |
| 9780559 | 90 |
| 9780568 | 109 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-GX Soil C7-C12

Batch number: 18247D34A

| | Trifluorotoluene-F |
|---------|--------------------|
| 9780569 | 97 |
| 9780570 | 98 |
| 9780571 | 112 |
| 9780572 | 93 |
| 9780573 | 88 |
| 9780575 | 103 |
| 9780576 | 110 |
| 9780577 | 96 |
| Blank | 97 |
| LCS | 101 |
| LCSD | 100 |

Limits: 50-150

Analysis Name: NWTPH-GX Soil C7-C12

Batch number: 18248A34A

| | Trifluorotoluene-F |
|---------|--------------------|
| 9780553 | 97 |
| 9780558 | 115 |
| 9780561 | 70 |
| 9780574 | 103 |
| 9780578 | 108 |
| 9780579 | 100 |
| 9780580 | 91 |
| Blank | 94 |
| LCS | 101 |
| LCSD | 98 |

Limits: 50-150

Analysis Name: NWTPH-Gx water C7-C12

Batch number: 18249A53A

| | Trifluorotoluene-F |
|---------|--------------------|
| 9780563 | 87 |
| 9780564 | 87 |
| 9780565 | 87 |
| 9780566 | 87 |
| Blank | 88 |
| LCS | 97 |
| LCSD | 97 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 18249A53A

Limits: 50-150

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 18253A20A

Trifluorotoluene-F

| | |
|---------|-----|
| 9780552 | 88 |
| 9780562 | 82 |
| Blank | 89 |
| LCS | 102 |
| LCS D | 102 |

Limits: 50-150

Analysis Name: PCBs 8082A/3546
Batch number: 182480026A

| | Tetrachloro-m-xylene-D1 | Decachlorobiphenyl-D1 | Tetrachloro-m-xylene-D2 | Decachlorobiphenyl-D2 |
|---------|-------------------------|-----------------------|-------------------------|-----------------------|
| 9780553 | 70 | 97 | 98 | 110 |
| 9780558 | 74 | 102 | 102 | 111 |
| 9780570 | 70 | 104 | 100 | 102 |
| 9780576 | 73 | 95 | 97 | 102 |
| Blank | 108 | 100 | 109 | 93 |
| LCS | 99 | 102 | 104 | 94 |
| MS | 77 | 95 | 101 | 105 |
| MSD | 74 | 97 | 98 | 103 |

Limits: 53-140 45-143 53-140 45-143

Analysis Name: NWTPH-Dx soil
Batch number: 182470023A

Orthoterphenyl

| | |
|---------|-----|
| 9780531 | 97 |
| 9780532 | 95 |
| 9780533 | 98 |
| 9780534 | 89 |
| 9780535 | 93 |
| 9780536 | 102 |
| 9780537 | 96 |
| 9780538 | 95 |
| Blank | 94 |
| DUP | 100 |
| LCS | 95 |
| MS | 103 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Dx soil
Batch number: 182470023A

Limits: 50-150

Analysis Name: NWTPH-Dx soil
Batch number: 182490010A

| | Orthoterphenyl |
|---------|----------------|
| 9780539 | 84 |
| 9780540 | 90 |
| 9780541 | 87 |
| 9780542 | 88 |
| 9780543 | 84 |
| 9780544 | 85 |
| 9780545 | 89 |
| 9780546 | 85 |
| 9780547 | 87 |
| 9780560 | 91 |
| Blank | 87 |
| DUP | 86 |
| LCS | 90 |
| MS | 91 |

Limits: 50-150

Analysis Name: WA EPH in Soil
Batch number: 182500003A

| | Orthoterphenyl | 1-chlorooctadecane |
|---------|----------------|--------------------|
| 9780539 | 74 | 50 |
| 9780553 | 64 | 36 |
| 9780555 | 80 | 58 |
| 9780561 | 75 | 52 |
| 9780570 | 49 | 36 |
| 9780576 | 66 | 37 |
| Blank | 72 | 52 |
| LCS | 61 | 49 |
| LCSD | 62 | 45 |
| MS | 60 | 35 |
| MSD | 43 | 33 |

Limits: 42-115 33-122

Analysis Name: NWTPH-Dx soil
Batch number: 182500015A

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Dx soil
Batch number: 182500015A

| | Orthoterphenyl |
|---------|----------------|
| 9780548 | 106 |
| 9780549 | 104 |
| 9780550 | 99 |
| 9780551 | 105 |
| 9780553 | 77 |
| 9780554 | 96 |
| 9780555 | 106 |
| 9780556 | 102 |
| 9780557 | 102 |
| Blank | 105 |
| DUP | 102 |
| LCS | 104 |
| MS | 106 |

Limits: 50-150

Analysis Name: NWTPH-Dx soil
Batch number: 182500017A

| | Orthoterphenyl |
|---------|----------------|
| 9780558 | 75 |
| 9780559 | 105 |
| 9780561 | 99 |
| 9780568 | 100 |
| 9780569 | 95 |
| 9780570 | 88 |
| 9780571 | 103 |
| 9780572 | 102 |
| 9780573 | 101 |
| 9780574 | 58 |
| Blank | 105 |
| DUP | 105 |
| LCS | 112 |
| MS | 104 |

Limits: 50-150

Analysis Name: NWTPH-Dx soil
Batch number: 182500053A

| | Orthoterphenyl |
|---------|----------------|
| 9780575 | 106 |
| 9780576 | 98 |
| 9780577 | 97 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/08/2018 18:37

Group Number: 1982153

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Dx soil
Batch number: 182500053A

| | Orthoterphenyl |
|---------|----------------|
| 9780578 | 103 |
| 9780579 | 106 |
| 9780580 | 103 |
| Blank | 103 |
| DUP | 91 |
| LCS | 105 |
| MS | 93 |

Limits: 50-150

Analysis Name: WA- VPH soils
Batch number: 18253A08A

| | Trifluorotoluene-P | Trifluorotoluene-F |
|---------|--------------------|--------------------|
| 9780539 | 79 | 80 |
| 9780553 | 94 | 94 |
| 9780555 | 107 | 121 |
| 9780561 | 107 | 122 |
| 9780570 | 91 | 94 |
| 9780576 | 93 | 94 |
| Blank | 83 | 85 |
| LCS | 93 | 94 |
| LCSD | 93 | 94 |

Limits: 60-140 60-140

Analysis Name: WA EPH in Soil
Batch number: 182700031A

| | Orthoterphenyl | 1-chlorooctadecane |
|-----------|----------------|--------------------|
| 9780539RE | 89 | 64 |
| 9780553RE | 74 | 61 |
| 9780555RE | 97 | 63 |
| 9780561RE | 107 | 58 |
| 9780570RE | 79 | 48 |
| 9780576RE | 95 | 52 |
| Blank | 93 | 44 |
| DUP | 83 | 54 |
| LCS | 111 | 56 |
| MS | 78 | 49 |

Limits: 42-115 33-122

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody



**Lancaster Laboratories
Environmental**

Acct. # 13271

For Eurofins Lancaster Laboratories Environmental use only
Group # 1982153 Sample # 9780331-80
Instructions on reverse side correspond with circled numbers.

| 1 Client Information | | | | 4 Matrix | | | | 5 Analyses Requested | | | | | | | | | | | | 6 Remarks | |
|---|--|--|-----------|--|--|--|--|---|--|--|--|---|--|--|--|---|--|--|--|---|--|
| Facility # <u>204117</u> WBS <u>PO10215249</u> Site Address <u>2021 6th Street, Bremerton, WA</u> Chevron PM <u>Eric Hetrick</u> Lead Consultant <u>Leidos</u> Consultant/Office <u>Leidos / Bothell, WA</u> Consultant Project Mgr. <u>Russ Shropshire</u> Consultant Phone # <u>425-482-3323</u> Sampler <u>Ruth Ottman</u> | | | | <input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> Air | | | | Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input checked="" type="checkbox"/> WA EPH <input checked="" type="checkbox"/> 97-600WA Lead Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method Naphthalenes EPA 8270 MTBE, EPB, EOL, n-hexane SVOCs CPAHs 8270 SIM | | | | | | | | | | | | SCR #: <u>229929</u> <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ____ oxy's on highest hit <input type="checkbox"/> Run ____ oxy's on all hits | |
| 2 Sample Identification | | | 3 | | | | | | | | | | | | | | | | | | |
| | | | Collected | | | | | | | | | | | | | | | | | | |
| | | | Date | Time | | | | | | | | | | | | | | | | | |
| SB-4-6.0-S-082318 | | | 8/23/18 | 1455 | | | | | | | | | | | | | | | | | |
| SB-1-6.0-S-082318 | | | | 1130 | | | | | | | | | | | | | | | | | |
| SB-7-6.0-S-082318 | | | | 1220 | | | | | | | | | | | | | | | | | |
| SB-2-6.0-S-082418 | | | 8/27/18 | 1100 | | | | | | | | | | | | | | | | | |
| SB-6-2.0-S-082418 | | | | 0850 | | | | | | | | | | | | | | | | | |
| SB-6-2-SB-6-6.0-S-082418 | | | | 0930 | | | | | | | | | | | | | | | | | |
| SB-1-12.0-S-082718 | | | 8/27/18 | 1010 | | | | | | | | | | | | | | | | | |
| SB-1-51.0-S-082718 | | | 8/27/18 | 1130 | | | | | | | | | | | | | | | | | |
| SB-7-10.0-S-082718 | | | | 1530 | | | | | | | | | | | | | | | | | |
| SB-7-14.0-S-082718 | | | | 1545 | | | | | | | | | | | | | | | | | |
| SB-7-22.0-S-082718 | | | | 1615 | | | | | | | | | | | | | | | | | |
| SB-7-28.0-S-082718 | | | | 1630 | | | | | | | | | | | | | | | | | |
| SB-3-10.0-S-082818 | | | 8/28/18 | 1120 | | | | | | | | | | | | | | | | | |
| 7 Turnaround Time Requested (TAT) (please circle) | | | | Relinquished by <u>Chelsea West</u> Date <u>8-16-18</u> Time <u>15:39</u> | | | | Received by _____ Date _____ Time _____ | | | | Relinquished by <u>Ruth Ott</u> Date <u>8/29/18</u> Time <u>1600</u> | | | | Received by _____ Date _____ Time _____ | | | | | |
| <input checked="" type="radio"/> Standard 5 day 4 day <input type="radio"/> 72 hour 48 hour 24 hour | | | | Relinquished by Commercial Carrier: | | | | UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ | | | | Received by _____ Date <u>8/30/18</u> Time <u>940</u> | | | | | | | | | |
| 8 Data Package (circle if required) | | | | EDD (circle if required) | | | | Temperature Upon Receipt <u>14-5.8</u> °C | | | | Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | |
| <input checked="" type="radio"/> Type I - Full <input type="radio"/> Type VI (Raw Data) | | | | <input type="radio"/> CVX-RTBU-FI_05 (default) Other: _____ | | | | | | | | | | | | | | | | | |

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

Acct. # 13271

For Eurofins Lancaster Laboratories Environmental use only
 Group # 1982153 Sample # 9780531-80
 Instructions on reverse side correspond with circled numbers.

| 1 Client Information | | | | 4 Matrix | | | | 5 Analyses Requested | | | | | | | | | | 6 Remarks | | | | |
|---|----------------|------------------------------------|--|---|---|---|--|---|--|--|--|--|--|--|--|--|--|--|---|--|--|-------------------------------------|
| Facility # <u>204177</u> | | WBS <u>P010215249</u> | | <input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Oil <input type="checkbox"/> Air | <input type="checkbox"/> Ground <input type="checkbox"/> Surface | <input type="checkbox"/> Total Number of Containers | BTEX <input type="checkbox"/> MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan <u>HVOCs by 8260B</u> Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input checked="" type="checkbox"/> WA EPH <input checked="" type="checkbox"/> Lead <input type="checkbox"/> Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>6000B</u> Naphthalenes EPA 8270 MTBE, EOB, EDC, n-hexane 8260B C-PATHs 8270 SIM PCBs EPA 8082 | | | | | | | | | | SCR #: _____ | | | | | |
| Site Address <u>2021 6th Street, Burmerton, WA</u> | | | | | | | Composite <input type="checkbox"/> Grab <input type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> Oil | | | | | | | | | | | | <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits | | | |
| Chevron PM <u>Eric Hetrick</u> | | Lead Consultant <u>Leidos Inc.</u> | | | | | | | | | | | | | | | | | | | | |
| Consultant/Office <u>Leidos / Bothell, WA</u> | | | | | | | | | | | | | | | | | | | | | | |
| Consultant Project Mgr. <u>Russ Shropshire</u> | | | | | | | | | | | | | | | | | | | | | | |
| Consultant Phone # <u>425-482-3323</u> | | | | | | | | | | | | | | | | | | | | | | |
| Sampler <u>R. Otteman and B. Govoni</u> | | | | | | | | | | | | | | | | | | | | | | |
| 2 Sample Identification | | Collected | | | | | | | | | | | | | | | | | | | | |
| Date | Time | Grab | Composite | | | | | | | | | | | | | | | | | | | |
| <u>SB-3-12.0-S-082818</u> | <u>8/28/18</u> | <u>1145</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Bill to Leidos Inc P010215249 |
| <u>SB-3-16.0-S-082818</u> | | <u>1215</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| <u>SB-3-24.0-S-082818</u> | | <u>1225</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| <u>UST-1-4.0-S-082818</u> | | <u>1155</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| <u>UST-1-8.0-S-082818</u> | | <u>1430</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| <u>SB-2-11.0-S-082818</u> | | <u>1410</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| <u>SB-2-15.0-S-082818</u> | | <u>1440</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| <u>SB-2-20.0-S-082818</u> | | <u>1450</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| <u>SB-2-8.0-S-082818</u> | | <u>1355</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | |
| | | | | | | | | | | | | | | | | | | | | | | |
| 7 Turnaround Time Requested (TAT) (please circle) | | | | Relinquished by <u>Muti dt</u> | | | | Date <u>8/29/18</u> | | Time <u>1600</u> | | Received by _____ | | | | Date _____ | | Time _____ | | | | |
| Standard <input checked="" type="radio"/> 5 day 4 day 72 hour 48 hour 24 hour | | | | | | | | | | | | | | | | | | | | | | |
| 8 Data Package (circle if required) | | | | Relinquished by Commercial Carrier: | | | | Date _____ | | Time _____ | | Received by _____ | | | | Date <u>8/30/18</u> | | Time <u>940</u> | | | | |
| Type I - Full <input checked="" type="radio"/> Type VI (Raw Data) | | | | EDD (circle if required) CVX-RTBU-FI_05 (default) Other: _____ | | | | UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ | | | | Temperature Upon Receipt <u>14-5.5°C</u> | | | | Custody Seals Intact? <input checked="" type="checkbox"/> Yes _____ No | | | | | | |

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

Acct. # 13271 For Eurofins Lancaster Laboratories Environmental use only
 Group # 1982153 Sample # 9780531-80
Instructions on reverse side correspond with circled numbers.

| 1 Client Information | | | 4 Matrix | | | 5 Analyses Requested | | | | | | | | | | 6 Remarks | | | | | | | | | |
|---|----------------|-------------|--|------|-----------|--|-------|-----|--|-----------|------|--|--------|------------|----------|---|-------------------------------------|--------|--------|------|-------|-------|--------|------------------------------|--|
| Facility # <u>204117</u> WBS <u>PO10215249</u> Site Address <u>2021 6th Street, Bremerton, WA</u> Chevron PM <u>Eric Hetrick</u> Lead Consultant <u>Leidos Inc</u> Consultant/Office <u>Leidos / Bothell, WA</u> Consultant Project Mgr. <u>Russ Shropshire</u> Consultant Phone # <u>425-482-3323</u> | | | Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> | | | Total Number of Containers BTEX+MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan <u>AVOCs by 8260B</u> Oxygenates _____ NWTPH-Gx _____ NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input checked="" type="checkbox"/> WA EPH <input checked="" type="checkbox"/> Lead Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>6010B</u> <u>Naphthalenes EPA 8270</u> <u>MTBE, EDB, EDC, n-hexane 8260R</u> <u>CPAHs 8270 SEM</u> <u>PCBs EPA 8082</u> | | | | | | | | | | SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits | | | | | | | | | |
| 2 Sample Identification | | 3 Collected | | Grab | Composite | Soil | Water | Oil | Total Number of Containers | BTEX+MTBE | 8021 | 8260 | Naphth | Oxygenates | NWTPH-Gx | NWTPH-Dx with Silica Gel Cleanup | NWTPH-Dx without Silica Gel Cleanup | WA VPH | WA EPH | Lead | Total | Diss. | Method | Remarks | |
| Date | Time | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>EP-1-082818</u> | <u>8/28/18</u> | <u>1520</u> | <input checked="" type="checkbox"/> | | | | | | <u>6</u> | | | | | | | | | | | | | | | Bill to Leidos PO10215249 | |
| <u>UST-2-8.0-5-082818</u> | | <u>1600</u> | <input checked="" type="checkbox"/> | | | | | | <u>14</u> | | | | | | | | | | | | | | | | |
| <u>SB-5-12.0-5-082818</u> | | <u>1640</u> | <input checked="" type="checkbox"/> | | | | | | <u>7</u> | | | | | | | | | | | | | | | | |
| <u>SB-5-17.5-5-082818</u> | | <u>1720</u> | <input checked="" type="checkbox"/> | | | | | | <u>14</u> | | | | | | | | | | | | | | | | |
| <u>SB-5-24.0-5-082818</u> | | <u>1725</u> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | |
| <u>SB-1-14.0-5-082718</u> | <u>8/27/18</u> | <u>1020</u> | <input checked="" type="checkbox"/> | | | | | | <u>7</u> | | | | | | | | | | | | | | | | |
| <u>SB-1-16.0-5-082718</u> | | <u>1040</u> | <input checked="" type="checkbox"/> | | | | | | <u>7</u> | | | | | | | | | | | | | | | | |
| <u>DUP-1-082818</u> | <u>8/28/18</u> | <u>1620</u> | <input checked="" type="checkbox"/> | | | | | | <u>7</u> | | | | | | | | | | | | | | | | |
| <u>SB-5-24.0-5-082818</u> | <u>8/28/18</u> | <u>1735</u> | <input checked="" type="checkbox"/> | | | | | | <u>7</u> | | | | | | | | | | | | | | | | |
| <u>SB-5-6.0-5-082318</u> | <u>8/23/18</u> | <u>1657</u> | <input checked="" type="checkbox"/> | | | | | | <u>7</u> | | | | | | | | | | | | | | | | |
| <u>SB-5-14.0-5-082818</u> | <u>8/28/18</u> | <u>1650</u> | <input checked="" type="checkbox"/> | | | | | | <u>14</u> | | | | | | | | | | | | | | | | |
| 7 Turnaround Time Requested (TAT) (please circle) Standard <u>5 day</u> 4 day 72 hour 48 hour 24 hour | | | Relinquished by <u>Muth dk</u> Date <u>8/29/18</u> Time <u>1600</u> | | | Received by _____ Date _____ Time _____ | | | Relinquished by _____ Date _____ Time _____ | | | Received by _____ Date _____ Time _____ | | | | | | | | | | | | | |
| 8 Data Package (circle if required) Type I - Full <u>Type VI (Raw Data)</u> | | | EDD (circle if required) CVX-RTBU-FI_05 (default) Other: _____ | | | Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ | | | Received by _____ Date <u>8/30/18</u> Time <u>140</u> | | | Temperature Upon Receipt <u>4-5.8°C</u> Custody Seals Intact? <u>Yes</u> No | | | | | | | | | | | | | |

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

Acct. # 13271 For Eurofins Lancaster Laboratories Environmental use only
 Group # 1952153 Sample # 918053180
Instructions on reverse side correspond with circled numbers.

| 1 Client Information | | | | 4 Matrix | | | 5 Analyses Requested | | | | | | | | | | 6 Remarks | |
|--|--|----------------------------------|-------------|--|-----------|--|--|--|---|--|---------------------|--|-----------------|--|------------|--|---|--|
| Facility # <u>204177</u> WBS | | PO10215249 | | <input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Oil <input type="checkbox"/> Air <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Water <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Oil | | | Total Number of Containers BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan <u>HVOCs 8260B</u> Oxygenates <u>PCBs EPA 808</u> NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input checked="" type="checkbox"/> WA EPH <input checked="" type="checkbox"/> Lead Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>6010B</u> Naphthalenes EPA 8270 MTBE, EDB, EPC, N-hexane 8260B cPATS 8270 SEM hold | | | | | | | | | | SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits | |
| Site Address <u>2021 6th Street, Bremerton, WA</u> | | | | | | | | | | | | | | | | | | |
| Chevron PM <u>Eric Hatrick</u> | | Lead Consultant <u>Leidos</u> | | | | | | | | | | | | | | | | |
| Consultant/Office <u>Leidos / Bothell, WA</u> | | | | | | | | | | | | | | | | | | |
| Consultant Project Mgr. <u>Russ Sharpshire</u> | | | | | | | | | | | | | | | | | | |
| Consultant Phone # <u>425-482-3328</u> | | | | | | | | | | | | | | | | | | |
| Sampler <u>R. Otteman and B. Geroni</u> | | | | 3 Composite | | | | | | | | | | | | | | |
| 2 Sample Identification | | Collected | | Grab | Composite | | | | | | | | | | | | | |
| | | Date | Time | | | | | | | | | | | | | | | |
| <u>TB-1-082918</u> | | <u>8/31/18</u> | <u>0900</u> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | |
| <u>TB-2-082918</u> | | | <u>1240</u> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | |
| <u>TB-3-082918</u> | | | <u>1250</u> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | |
| <u>TB-4-082918</u> | | | <u>1300</u> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | |
| <u>TB-5-082918</u> | | | <u>1305</u> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | |
| <u>UST-1-4.0-S-082918</u> | | <u>8/28/18</u> | <u>1155</u> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | |
| <u>SB-8-2.0-S-082918</u> | | <u>9/29/18</u> | <u>0920</u> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | |
| <u>SB-5-30.0-S-082918</u> | | | <u>0930</u> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | |
| <u>UST-3-8.0-S-082918</u> | | | <u>1025</u> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | |
| <u>SB-4-12.0-S-082918</u> | | | <u>1120</u> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | |
| <u>DUP-2-082918</u> | | | <u>1130</u> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | |
| <u>SB-4-14.0-S-082918</u> | | | <u>1140</u> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | |
| <u>UST-4-8.0-S-082918</u> | | | <u>1145</u> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | |
| 7 Turnaround Time Requested (TAT) (please circle) | | | | Relinquished by <u>Mitchell</u> | | | Date <u>8/29/18</u> | | Time <u>1600</u> | | Received by _____ | | Date _____ | | Time _____ | | | |
| <input checked="" type="radio"/> Standard 5 day 4 day <input type="radio"/> 72 hour 48 hour 24 hour | | | | Relinquished by _____ | | | Date _____ | | Time _____ | | Received by _____ | | Date _____ | | Time _____ | | | |
| 8 Data Package (circle if required) | | | | Relinquished by Commercial Carrier: | | | Date _____ | | Time _____ | | Received by _____ | | Date _____ | | Time _____ | | | |
| <input checked="" type="radio"/> Type I - Full <input type="radio"/> Type VI (Raw Data) | | | | <input type="radio"/> UPS <input checked="" type="checkbox"/> FedEx <input type="checkbox"/> Other _____ | | | Temperature Upon Receipt <u>14-5.8 °C</u> | | Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | Date <u>8/31/18</u> | | Time <u>940</u> | | | | | |
| <input type="radio"/> EDD (circle if required) CVX-RTBU-FI_05 (default) Other: _____ | | | | | | | | | | | | | | | | | | |

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

Acct. # 13271

For Eurofins Lancaster Laboratories Environmental use only
 Group # 1982153 Sample # 9780531-80
Instructions on reverse side correspond with circled numbers.

| 1 Client Information | | | | 4 Matrix | | | | 5 Analyses Requested | | | | | | | | | | 6 Remarks | | | | | | | | | | | | | | | | | |
|--|--|---|--|--|--|----------------------------|--|--|--|---|--|---|--|--------------------------------------|--|---|--|-----------|--|-------|--|-----|--|---|--|---|--|---|--|---|--|---|--|---|--|
| Facility # <u>204177</u> | | WBS <u>PO10215249</u> | | <input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Oil | | Total Number of Containers | | <input type="checkbox"/> BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full screen <input type="checkbox"/> Oxygenates <input type="checkbox"/> NWTPH-Gx <input type="checkbox"/> NWTPH-Dx with Silica Gel Cleanup <input checked="" type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input checked="" type="checkbox"/> WA EPH <input checked="" type="checkbox"/> 97-603 WA <input type="checkbox"/> Lead <input type="checkbox"/> Total <input type="checkbox"/> Diss. <input type="checkbox"/> Method <input type="checkbox"/> GADBS | | Naphthalenes EPA 8270 MTBE, EPH, EOX, n-heptane, SAGS CPAHs, 8270, SEM PCBs EPA 8082 | | SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits | | Bill to Leidos Inc. PO10215249 | | | | | | | | | | | | | | | | | | | | | |
| Site Address <u>2021 6th Street, Bremerton, WA</u> | | Chevron PM <u>Eric Hetrick</u> | | | | | | | | | | | | | | Lead Consultant <u>Leidos</u> | | | | | | | | | | | | | | | | | | | |
| Consultant/Office <u>Leidos / Bothell, WA</u> | | Consultant Project Mgr. <u>Russ Shropshire</u> | | | | | | | | | | | | | | Consultant Phone # <u>425-482-3323</u> | | | | | | | | | | | | | | | | | | | |
| Sampler <u>R. Otteman and B. Gwoni</u> | | Collected Date <u>8/29/18</u> | | | | | | | | | | | | | | Time <u>1155</u> | | | | | | | | | | | | | | | | | | | |
| Sample Identification | | Grab | | | | | | | | | | | | | | Composite | | Soil | | Water | | Oil | | 7 | | 7 | | 7 | | 7 | | 7 | | 7 | |
| <u>SB-4-25.0-S-082918</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>UST-5-8.0-S-082918</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>UST-6-8.0-S-082918</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>SB-8-12.0-S-082918</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>SB-8-14.0-S-082918</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>SB-8-25.0-S-082918</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>UST-7-8.0-S-082918</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 Turnaround Time Requested (TAT) (please circle) | | | | Relinquished by | | | | Date | | Time | | Received by | | | | Date | | Time | | | | | | | | | | | | | | | | | |
| <input checked="" type="radio"/> Standard <input type="radio"/> 72 hour <input type="radio"/> 48 hour <input type="radio"/> 24 hour | | | | <u>Walt dh</u> 8/29/18 1600 | | | | | | | | [Signature] 8/31/18 940 | | | | | | | | | | | | | | | | | | | | | | | |
| 8 Data Package (circle if required) | | | | EDD (circle if required) | | | | Relinquished by Commercial Carrier: | | | | Received by | | | | Date | | Time | | | | | | | | | | | | | | | | | |
| <input checked="" type="radio"/> Type I - Full <input type="radio"/> Type VI (Raw Data) | | | | <input type="radio"/> CVX-RTBU-FI_05 (default) Other: _____ | | | | <input checked="" type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other _____ | | | | [Signature] | | | | 8/31/18 | | 940 | | | | | | | | | | | | | | | | | |
| | | | | Temperature Upon Receipt | | | | Custody Seals Intact? | | | | Yes | | No | | | | | | | | | | | | | | | | | | | | | |
| | | | | <u>14-5.8 °C</u> | | | | <input checked="" type="checkbox"/> Yes | | | | <input type="checkbox"/> No | | | | | | | | | | | | | | | | | | | | | | | |

Lancaster Laboratories Pre-Job Notification Form

Submit to Lancaster coordinator at least 2 days prior to start of sampling (preferably before their weekly Thursday morning meeting).
Contact Lancaster coordinator prior to submission regarding sampling & analysis objectives.

| | | | |
|--------------|--------------------------------|---------------|--|
| Site Number: | 204117 | Site Address: | 2021 6 th Street, Bremerton, WA |
| WBS Number: | | Chevron PM: | Mark Horne |
| S.O. Number: | Service Order with Leidos Inc. | Supplier/PM: | Leidos/Russell Shropshire |

| Matrix | Estimated Total No. of Samples Sent to Lab (including archives) | Estimated Numbers and Types of Lab Analyses (fill in analytical method name, with numbers below it for each matrix) | | | | | | | | | | | | | Requested Rushed TAT (<10 days) |
|-------------------------|---|--|---------------------------------|--------------|---------------------|--------------------|----------------------------------|-------------------|-------------------|------------------|-------------|---------------|-------------------|-------------------|---------------------------------|
| | | 97-602 NWTPH-Gx (GRO) | 97-602 NWTPH-Dx (DRO) and (ORO) | BTEX (8260B) | Naphthalenes (8270) | Total Lead (6010B) | MTBE, EDB, EDC, n-hexane (8260B) | EPH 97-602 WA EPH | VPH 97-602 WA VPH | cPAHs (8270 SIM) | PCBs (8082) | HVOCs (8260B) | EPH 97-602 WA EPH | VPH 97-602 WA VPH | |
| oil | 50 | 50 | 50 | 50 | 50 | 50 | 15 | 15 | 15 | 15 | 4 | 4 | 4 | 4 | STAT |
| C (Trip) | 12 | 12 | | 12 | | | | | | | | | | | STAT |
| Water (equipment rinse) | 3 | 3 | | 3 | | | | | | | | | | | STAT |
| DI Water | 3 | 3 | | 3 | | | | | | | | | | | STAT |

Notes:
3 liters of laboratory grade DI water, enough for 3 equipment rinse samples

| |
|--|
| Dates when samples are expected to arrive at lab (full range of dates, including any Saturday): |
| Soil samples expected to arrive at lab between August 24 th and September 5 th , 2018. |
| Special requests (QC data package, raw data, special detection limits, etc.): |
| Detection limits per at or below attached Table B-1. Level IV data package. |
| Supplies needed now (sample containers, trip blanks, labels, airbills, custody seals, etc.): |
| Send sample containers for all parameters, including trip blanks, T-handle syringe (5035 collection method), laboratory distilled water , and air bills by 8/20/2018 . Send equipment to Ruth Otteman, Leidos Inc., 18939 120th Avenue NE, Suite 112, Bothell, WA 98011 |

8/15/2018



Client: Leidos

Delivery and Receipt Information

Delivery Method: UPS Arrival Timestamp: 08/30/2018 9:40
 Number of Packages: 5 Number of Projects: 1
 State/Province of Origin: WA

Arrival Condition Summary

| | | | |
|--------------------------------------|-----|-------------------------------------|-----------|
| Shipping Container Sealed: | No | Sample IDs on COC match Containers: | No |
| Custody Seal Present: | Yes | Sample Date/Times match COC: | Yes |
| Custody Seal Intact: | Yes | VOA Vial Headspace \geq 6mm: | Yes |
| Samples Chilled: | Yes | VOA IDs (\geq 6mm): | See Below |
| Paperwork Enclosed: | Yes | Total Trip Blank Qty: | 20 |
| Samples Intact: | Yes | Trip Blank Type: | HCl |
| Missing Samples: | Yes | Air Quality Samples Present: | No |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |

VOA Vial IDs (Headspace \geq 6mm): TB-4: All vials

Unpacked by Wesley Miller (2308) at 20:14 on 08/30/2018

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Elevated Temp? |
|----------|----------------|----------------|-------------|----------|--------------|---------------|----------------|
| 1 | DT146 | 2.1 | DT | Wet | Y | Bagged | N |
| 2 | DT146 | 1.8 | DT | Wet | Y | Bagged | N |
| 3 | DT146 | 3.5 | DT | Wet | Y | Bagged | N |
| 4 | DT146 | 5.8 | DT | Wet | Y | Bagged | N |
| 5 | DT146 | 1.4 | DT | Wet | Y | Bagged | N |

Missing Sample Details

| | |
|-------------------------|-----------------|
| <u>Sample ID on COC</u> | <u>Comments</u> |
| UST-7-8.0-S-082918 | |

Sample ID Discrepancy Details

| | | |
|-------------------------|---------------------------|-----------------|
| <u>Sample ID on COC</u> | <u>Sample ID on Label</u> | <u>Comments</u> |
| SB-2-15.0-S-082818 | SB-2-15.5-S-082818 | |

General Comments: Cooler #5 received not sealed

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

| | | | |
|-------------------------|--|-----------------|-------------------------------|
| BMQL | Below Minimum Quantitation Level | mL | milliliter(s) |
| C | degrees Celsius | MPN | Most Probable Number |
| cfu | colony forming units | N.D. | non-detect |
| CP Units | cobalt-chloroplatinate units | ng | nanogram(s) |
| F | degrees Fahrenheit | NTU | nephelometric turbidity units |
| g | gram(s) | pg/L | picogram/liter |
| IU | International Units | RL | Reporting Limit |
| kg | kilogram(s) | TNTC | Too Numerous To Count |
| L | liter(s) | µg | microgram(s) |
| lb. | pound(s) | µL | microliter(s) |
| m3 | cubic meter(s) | umhos/cm | micromhos/cm |
| meq | milliequivalents | MCL | Maximum Contamination Limit |
| mg | milligram(s) | | |
| < | less than | | |
| > | greater than | | |
| ppm | parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas. | | |
| ppb | parts per billion | | |
| Dry weight basis | Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis. | | |

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

| Qualifier | Definition |
|----------------|---|
| C | Result confirmed by reanalysis |
| D1 | Indicates for dual column analyses that the result is reported from column 1 |
| D2 | Indicates for dual column analyses that the result is reported from column 2 |
| E | Concentration exceeds the calibration range |
| K1 | Initial Calibration Blank is above the QC limit and the sample result is ND |
| K2 | Continuing Calibration Blank is above the QC limit and the sample result is ND |
| K3 | Initial Calibration Verification is above the QC limit and the sample result is ND |
| K4 | Continuing Calibration Verification is above the QC limit and the sample result is ND |
| J (or G, I, X) | Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL) |
| P | Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported. |
| P^ | Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported. |
| U | Analyte was not detected at the value indicated |
| V | Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference. |
| W | The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L. |
| Z | Laboratory Defined - see analysis report |

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron c/o Leidos, Inc.
6310 Allentown Blvd.
Suite 110
Harrisburg PA 17112

Report Date: October 05, 2018 10:16

Project: 204117

Account #: 13271
Group Number: 1984163
SDG: LDC03
PO Number: P010215249
Release Number: HETRICK
State of Sample Origin: WA

Electronic Copy To Leidos
Electronic Copy To EcoChem

Attn: Russ Shropshire
Attn: Christine Ransom

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

To view our laboratory's current scopes of accreditation please go to <http://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/resources/certifications/>. Historical copies may be requested through your project manager.



SAMPLE INFORMATION

| <u>Client Sample Description</u> | <u>Sample Collection Date/Time</u> | <u>ELLE#</u> |
|----------------------------------|--|--------------|
| SVP-1-S-10.0-180830 Grab Soil | 08/30/2018 10:15 | 9789519 |
| SVP-1-S-8.0-180830 Grab Soil | 08/30/2018 10:05 | 9789520 |
| UST-8-S-8.0-180829 Grab Soil | 08/29/2018 15:45 | 9789521 |
| UST-7-S-8.0-180829 Grab Soil | 08/29/2018 15:00 | 9789522 |
| SVP-2-S-8.0-180830 Grab Soil | 08/30/2018 13:20 | 9789523 |
| SVP-2-S-10.0-180830 Grab Soil | 08/30/2018 13:30 | 9789524 |
| SVP-3-S-8.0-180830 Grab Soil | 08/30/2018 14:45 | 9789525 |
| SVP-3-S-10.0-180830 Grab Soil | 08/30/2018 15:20 | 9789526 |
| SB-9-S-7.0-180831 Grab Soil | 08/31/2018 10:40 | 9789527 |
| SB-9-S-11.5-180831 Grab Soil | 08/31/2018 11:50 | 9789528 |
| QA-2-O-180831 NA Water | 08/31/2018 12:00 | 9789529 |
| QA-6-T-180831 NA Water | 08/31/2018 15:00 | 9789530 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: SVP-1-S-10.0-180830 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789519
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submission Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/30/2018 10:15
SDG#: LDC03-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------|---------------------------|------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | 0.0006 | 0.0005 | 0.83 |
| 11995 | Bromodichloromethane | 75-27-4 | N.D. | 0.0004 | 0.83 |
| 11995 | Bromoform | 75-25-2 | N.D. | 0.005 | 0.83 |
| 11995 | Bromomethane | 74-83-9 | N.D. | 0.0007 | 0.83 |
| 11995 | Carbon Tetrachloride | 56-23-5 | N.D. | 0.0005 | 0.83 |
| 11995 | Chlorobenzene | 108-90-7 | N.D. | 0.0005 | 0.83 |
| 11995 | Chloroethane | 75-00-3 | N.D. | 0.001 | 0.83 |
| 11995 | Chloroform | 67-66-3 | N.D. | 0.0006 | 0.83 |
| 11995 | Chloromethane | 74-87-3 | N.D. | 0.0006 | 0.83 |
| 11995 | Dibromochloromethane | 124-48-1 | N.D. | 0.0004 | 0.83 |
| 11995 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 0.0005 | 0.83 |
| 11995 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 0.0005 | 0.83 |
| 11995 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 0.0004 | 0.83 |
| 11995 | 1,1-Dichloroethane | 75-34-3 | N.D. | 0.0005 | 0.83 |
| 11995 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.0006 | 0.83 |
| 11995 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.0005 | 0.83 |
| 11995 | cis-1,2-Dichloroethene | 156-59-2 | N.D. | 0.0005 | 0.83 |
| 11995 | trans-1,2-Dichloroethene | 156-60-5 | N.D. | 0.0005 | 0.83 |
| 11995 | 1,2-Dichloropropane | 78-87-5 | N.D. | 0.0005 | 0.83 |
| 11995 | cis-1,3-Dichloropropene | 10061-01-5 | N.D. | 0.0004 | 0.83 |
| 11995 | trans-1,3-Dichloropropene | 10061-02-6 | N.D. | 0.0003 | 0.83 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.83 |
| 11995 | Freon 113 | 76-13-1 | N.D. | 0.0006 | 0.83 |
| 11995 | Methylene Chloride | 75-09-2 | N.D. | 0.002 | 0.83 |
| 11995 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 0.0004 | 0.83 |
| 11995 | Tetrachloroethene | 127-18-4 | 0.0006 | 0.0005 | 0.83 |
| 11995 | Toluene | 108-88-3 | 0.001 | 0.0006 | 0.83 |
| 11995 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.0006 | 0.83 |
| 11995 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.0005 | 0.83 |
| 11995 | Trichloroethene | 79-01-6 | N.D. | 0.0005 | 0.83 |
| 11995 | Trichlorofluoromethane | 75-69-4 | N.D. | 0.0007 | 0.83 |
| 11995 | Vinyl Chloride | 75-01-4 | N.D. | 0.0006 | 0.83 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.83 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | 0.011 | 0.008 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 26.79 |
| PCBs | | SW-846 8082A Feb 2007 Rev 1 | mg/kg | mg/kg | |
| 10885 | PCB-1016 | 12674-11-2 | N.D. D1 | 0.0045 | 1 |
| 10885 | PCB-1221 | 11104-28-2 | N.D. D1 | 0.0057 | 1 |
| 10885 | PCB-1232 | 11141-16-5 | N.D. D1 | 0.010 | 1 |
| 10885 | PCB-1242 | 53469-21-9 | N.D. D1 | 0.0041 | 1 |
| 10885 | PCB-1248 | 12672-29-6 | N.D. D1 | 0.0041 | 1 |

Sample Description: SVP-1-S-10.0-180830 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789519
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submission Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/30/2018 10:15
SDG#: LDC03-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|-------------------------------------|--------------|----------------------------|-----------------|
| PCBs | | SW-846 8082A Feb 2007 Rev 1 | mg/kg | mg/kg | |
| 10885 | PCB-1254 | 11097-69-1 | N.D. D1 | 0.0041 | 1 |
| 10885 | PCB-1260 | 11096-82-5 | N.D. D1 | 0.0061 | 1 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.8 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 13 | 1 |
| GC Petroleum Hydrocarbons | | ECY 97-602 WA EPH | mg/kg | mg/kg | |
| 05970 | >C10-C12 Aliphatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C10-C12 Aromatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C12-C16 Aliphatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C12-C16 Aromatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C16-C21 Aliphatic | n.a. | N.D. | 3.7 | 1 |
| 05970 | >C16-C21 Aromatic | n.a. | N.D. | 2.5 | 1 |
| 05970 | >C21-C34 Aliphatic | n.a. | N.D. | 7.4 | 1 |
| 05970 | >C21-C34 Aromatic | n.a. | N.D. | 2.5 | 1 |
| Trial ID: RE | | | | | |
| 05970 | >C10-C12 Aliphatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C10-C12 Aromatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C12-C16 Aliphatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C12-C16 Aromatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C16-C21 Aliphatic | n.a. | N.D. | 3.7 | 1 |
| 05970 | >C16-C21 Aromatic | n.a. | N.D. | 2.4 | 1 |
| 05970 | >C21-C34 Aliphatic | n.a. | N.D. | 7.3 | 1 |
| 05970 | >C21-C34 Aromatic | n.a. | N.D. | 2.4 | 1 |
| The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken: The sample was re-extracted outside the method required holding time and the QC is compliant. Results are reported from both trials. | | | | | |
| GC Petroleum Hydrocarbons | | ECY 97-602 WA VPH | mg/kg | mg/kg | |
| 05666 | Benzene | 71-43-2 | N.D. | 0.0613 | 48.41 |
| 05666 | C5-C6 Aliphatic Hydrocarbons | n.a. | N.D. | 3.06 | 48.41 |
| 05666 | C6-C8 Aliphatic Hydrocarbons | n.a. | N.D. | 3.06 | 48.41 |
| 05666 | C8-C10 Aliphatic Hydrocarbons | n.a. | N.D. | 3.06 | 48.41 |
| 05666 | C8-C10 Aromatic Hydrocarbons | n.a. | N.D. | 3.06 | 48.41 |
| 05666 | Ethylbenzene | 100-41-4 | N.D. | 0.0613 | 48.41 |
| 05666 | Methyl t-butyl ether | 1634-04-4 | N.D. | 0.0613 | 48.41 |
| 05666 | Toluene | 108-88-3 | N.D. | 0.0613 | 48.41 |
| 05666 | o-Xylene | 95-47-6 | N.D. | 0.0613 | 48.41 |
| 05666 | m,p-Xylenes | 179601-23-1 | N.D. | 0.123 | 48.41 |

Sample Description: SVP-1-S-10.0-180830 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789519
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submission Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/30/2018 10:15
SDG#: LDC03-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|---------------|------------|--------------------------------------|----------------------------|-----------------|
| Metals | | | SW-846 6010D Rev.4, July 2014 | mg/kg | |
| 06955 | Lead | 7439-92-1 | 9.82 | 0.575 | 1 |
| Wet Chemistry | | | SM 2540 G-2011 %Moisture Calc | % | |
| 00111 | Moisture | n.a. | 21.0 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.
The temperature of the temperature blank bottle(s) upon receipt at the lab was 6.3 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 14.3-19.0 C.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 11995 | HVOCs + BTEX | SW-846 8260C | 1 | A182521AA | 09/09/2018 18:29 | Stephen C Nolte | 0.83 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201825051158 | 08/30/2018 10:15 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201825051158 | 08/30/2018 10:15 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 3 | 201825051158 | 08/30/2018 10:15 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 4 | 201825051158 | 08/30/2018 10:15 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201825051158 | 08/30/2018 10:15 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 2 | 201825051158 | 08/30/2018 10:15 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18251SLD026 | 09/14/2018 11:58 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18251SLD026 | 09/11/2018 16:45 | Kate E Lutte | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18253B16A | 09/11/2018 03:32 | Jeremy C Giffin | 26.79 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201825051158 | 08/30/2018 10:15 | Client Supplied | n.a. |
| 10885 | PCBs 8082A/3546 | SW-846 8082A Feb 2007 Rev 1 | 1 | 182540003A | 09/13/2018 00:48 | Kirby B Turner | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 182540003A | 09/12/2018 09:00 | Michelle A Newswanger | 1 |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182500053A | 09/13/2018 11:54 | Thomas C Wildermuth | 1 |

Sample Description: SVP-1-S-10.0-180830 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789519
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submission Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/30/2018 10:15
SDG#: LDC03-01

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-------------------------------|----------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 1 | 182500003A | 09/19/2018 12:51 | Heather E Williams | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 1 | 182500003A | 09/19/2018 13:31 | Heather E Williams | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 2-RE | 182700031A | 10/03/2018 15:15 | Amy Lehr | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 2-RE | 182700031A | 10/03/2018 15:55 | Amy Lehr | 1 |
| 05666 | WA- VPH soils | ECY 97-602 WA VPH | 1 | 18253A08A | 09/10/2018 22:00 | Thomas C Wildermuth | 48.41 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182500053A | 09/10/2018 16:15 | Ryan J Dowdy | 1 |
| 11213 | WA EPH Soils Extraction | ECY 97-602 WA EPH | 1 | 182500003A | 09/08/2018 11:20 | Sally L Appleyard | 1 |
| 11213 | WA EPH Soils Extraction | ECY 97-602 WA EPH | 2 | 182700031A | 09/28/2018 09:00 | Michelle A Newswanger | 1 |
| 00388 | GC - Field Preserved (MA-VPH) | MA DEP VPH modified | 1 | 201825151160 | 08/30/2018 10:15 | Client Supplied | 1 |
| 00497 | Silica Gel Fractionation | SW-846 3630C modified | 1 | 182500003A | 09/18/2018 08:00 | David S Schrum | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182501404903 | 09/12/2018 08:21 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182501404903 | 09/10/2018 07:25 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18250820004B | 09/07/2018 11:22 | Larry E Bevins | 1 |

Sample Description: SVP-1-S-8.0-180830 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789520
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/30/2018 10:05
SDG#: LDC03-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------|---------------------------|------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | 0.0008 | 0.0005 | 0.86 |
| 11995 | Bromodichloromethane | 75-27-4 | N.D. | 0.0004 | 0.86 |
| 11995 | Bromoform | 75-25-2 | N.D. | 0.005 | 0.86 |
| 11995 | Bromomethane | 74-83-9 | N.D. | 0.0007 | 0.86 |
| 11995 | Carbon Tetrachloride | 56-23-5 | N.D. | 0.0005 | 0.86 |
| 11995 | Chlorobenzene | 108-90-7 | N.D. | 0.0005 | 0.86 |
| 11995 | Chloroethane | 75-00-3 | N.D. | 0.0009 | 0.86 |
| 11995 | Chloroform | 67-66-3 | N.D. | 0.0006 | 0.86 |
| 11995 | Chloromethane | 74-87-3 | N.D. | 0.0006 | 0.86 |
| 11995 | Dibromochloromethane | 124-48-1 | N.D. | 0.0004 | 0.86 |
| 11995 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 0.0005 | 0.86 |
| 11995 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 0.0005 | 0.86 |
| 11995 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 0.0004 | 0.86 |
| 11995 | 1,1-Dichloroethane | 75-34-3 | N.D. | 0.0005 | 0.86 |
| 11995 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.0006 | 0.86 |
| 11995 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.0005 | 0.86 |
| 11995 | cis-1,2-Dichloroethene | 156-59-2 | N.D. | 0.0005 | 0.86 |
| 11995 | trans-1,2-Dichloroethene | 156-60-5 | N.D. | 0.0005 | 0.86 |
| 11995 | 1,2-Dichloropropane | 78-87-5 | N.D. | 0.0005 | 0.86 |
| 11995 | cis-1,3-Dichloropropene | 10061-01-5 | N.D. | 0.0004 | 0.86 |
| 11995 | trans-1,3-Dichloropropene | 10061-02-6 | N.D. | 0.0003 | 0.86 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.86 |
| 11995 | Freon 113 | 76-13-1 | N.D. | 0.0006 | 0.86 |
| 11995 | Methylene Chloride | 75-09-2 | N.D. | 0.002 | 0.86 |
| 11995 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 0.0004 | 0.86 |
| 11995 | Tetrachloroethene | 127-18-4 | 0.0005 | 0.0005 | 0.86 |
| 11995 | Toluene | 108-88-3 | 0.0006 | 0.0006 | 0.86 |
| 11995 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.0006 | 0.86 |
| 11995 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.0005 | 0.86 |
| 11995 | Trichloroethene | 79-01-6 | N.D. | 0.0005 | 0.86 |
| 11995 | Trichlorofluoromethane | 75-69-4 | N.D. | 0.0007 | 0.86 |
| 11995 | Vinyl Chloride | 75-01-4 | N.D. | 0.0006 | 0.86 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.86 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 0.3 | 0.2 | 23.33 |
| PCBs | | SW-846 8082A Feb 2007 Rev 1 | mg/kg | mg/kg | |
| 10885 | PCB-1016 | 12674-11-2 | N.D. D1 | 0.020 | 5 |
| 10885 | PCB-1221 | 11104-28-2 | N.D. D1 | 0.025 | 5 |
| 10885 | PCB-1232 | 11141-16-5 | N.D. D1 | 0.043 | 5 |
| 10885 | PCB-1242 | 53469-21-9 | N.D. D1 | 0.018 | 5 |
| 10885 | PCB-1248 | 12672-29-6 | N.D. D1 | 0.018 | 5 |

Sample Description: SVP-1-S-8.0-180830 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789520
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submission Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/30/2018 10:05
SDG#: LDC03-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---------|---------------|------------|------------|----------------------------|-----------------|
|---------|---------------|------------|------------|----------------------------|-----------------|

| PCBs | | SW-846 8082A Feb 2007 Rev 1 | mg/kg | mg/kg | |
|-------|----------|-----------------------------|---------|-------|---|
| 10885 | PCB-1254 | 11097-69-1 | N.D. D1 | 0.018 | 5 |
| 10885 | PCB-1260 | 11096-82-5 | N.D. D1 | 0.027 | 5 |

| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
|---------------------------|-------------------------------|------------------------------|-------|-------|---|
| 08272 | Diesel Range Organics C12-C24 | n.a. | 11 | 3.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 35 | 11 | 1 |

| GC Petroleum Hydrocarbons | | ECY 97-602 WA EPH | mg/kg | mg/kg | |
|---------------------------|--------------------|-------------------|-------|-------|---|
| 05970 | >C10-C12 Aliphatic | n.a. | N.D. | 1.1 | 1 |
| 05970 | >C10-C12 Aromatic | n.a. | N.D. | 1.1 | 1 |
| 05970 | >C12-C16 Aliphatic | n.a. | N.D. | 1.1 | 1 |
| 05970 | >C12-C16 Aromatic | n.a. | N.D. | 1.1 | 1 |
| 05970 | >C16-C21 Aliphatic | n.a. | N.D. | 3.2 | 1 |
| 05970 | >C16-C21 Aromatic | n.a. | N.D. | 2.1 | 1 |
| 05970 | >C21-C34 Aliphatic | n.a. | 7.1 | 6.4 | 1 |
| 05970 | >C21-C34 Aromatic | n.a. | 6.1 | 2.1 | 1 |

Trial ID: RE

| | | | | | |
|-------|--------------------|------|------|-----|---|
| 05970 | >C10-C12 Aliphatic | n.a. | N.D. | 1.1 | 1 |
| 05970 | >C10-C12 Aromatic | n.a. | N.D. | 1.1 | 1 |
| 05970 | >C12-C16 Aliphatic | n.a. | N.D. | 1.1 | 1 |
| 05970 | >C12-C16 Aromatic | n.a. | N.D. | 1.1 | 1 |
| 05970 | >C16-C21 Aliphatic | n.a. | N.D. | 3.2 | 1 |
| 05970 | >C16-C21 Aromatic | n.a. | N.D. | 2.2 | 1 |
| 05970 | >C21-C34 Aliphatic | n.a. | 9.7 | 6.5 | 1 |
| 05970 | >C21-C34 Aromatic | n.a. | 11 | 2.2 | 1 |

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:

The sample was re-extracted outside the method required holding time and the QC is compliant. Results are reported from both trials.

| GC Petroleum Hydrocarbons | | ECY 97-602 WA VPH | mg/kg | mg/kg | |
|---------------------------|-------------------------------|-------------------|-------|--------|-------|
| 05666 | Benzene | 71-43-2 | N.D. | 0.0496 | 45.46 |
| 05666 | C5-C6 Aliphatic Hydrocarbons | n.a. | N.D. | 2.48 | 45.46 |
| 05666 | C6-C8 Aliphatic Hydrocarbons | n.a. | N.D. | 2.48 | 45.46 |
| 05666 | C8-C10 Aliphatic Hydrocarbons | n.a. | N.D. | 2.48 | 45.46 |
| 05666 | C8-C10 Aromatic Hydrocarbons | n.a. | N.D. | 2.48 | 45.46 |
| 05666 | Ethylbenzene | 100-41-4 | N.D. | 0.0496 | 45.46 |
| 05666 | Methyl t-butyl ether | 1634-04-4 | N.D. | 0.0496 | 45.46 |
| 05666 | Toluene | 108-88-3 | N.D. | 0.0496 | 45.46 |
| 05666 | o-Xylene | 95-47-6 | N.D. | 0.0496 | 45.46 |
| 05666 | m,p-Xylenes | 179601-23-1 | N.D. | 0.0993 | 45.46 |

Sample Description: SVP-1-S-8.0-180830 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789520
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/30/2018 10:05
SDG#: LDC03-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 41.3 | 0.478 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | n.a. | 8.4 | 0.50 | 1 |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.
The temperature of the temperature blank bottle(s) upon receipt at the lab was 6.3 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 14.3-19.0 C.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 11995 | HVOCs + BTEX | SW-846 8260C | 1 | A182521AA | 09/09/2018 18:52 | Stephen C Nolte | 0.86 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201825051158 | 08/30/2018 10:05 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201825051158 | 08/30/2018 10:05 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 3 | 201825051158 | 08/30/2018 10:05 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 4 | 201825051158 | 08/30/2018 10:05 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201825051158 | 08/30/2018 10:05 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 2 | 201825051158 | 08/30/2018 10:05 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18251SLD026 | 09/14/2018 13:07 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18251SLD026 | 09/11/2018 16:45 | Kate E Lutte | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18253B16A | 09/11/2018 04:10 | Jeremy C Giffin | 23.33 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201825051158 | 08/30/2018 10:05 | Client Supplied | n.a. |
| 10885 | PCBs 8082A/3546 | SW-846 8082A Feb 2007 Rev 1 | 1 | 182540003A | 09/13/2018 01:10 | Kirby B Turner | 5 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 182540003A | 09/12/2018 09:00 | Michelle A Newswanger | 1 |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182550017A | 09/15/2018 00:32 | Thomas C Wildermuth | 1 |

Sample Description: SVP-1-S-8.0-180830 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789520
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submission Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/30/2018 10:05
SDG#: LDC03-02

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-------------------------------|----------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 1 | 182500003A | 09/19/2018 14:11 | Heather E Williams | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 1 | 182500003A | 09/19/2018 14:51 | Heather E Williams | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 2-RE | 182700031A | 10/03/2018 22:13 | Amy Lehr | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 2-RE | 182700031A | 10/03/2018 22:54 | Amy Lehr | 1 |
| 05666 | WA- VPH soils | ECY 97-602 WA VPH | 1 | 18253A08A | 09/10/2018 22:41 | Thomas C Wildermuth | 45.46 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182550017A | 09/12/2018 17:50 | Elizabeth E Donovan | 1 |
| 11213 | WA EPH Soils Extraction | ECY 97-602 WA EPH | 1 | 182500003A | 09/08/2018 11:20 | Sally L Appleyard | 1 |
| 11213 | WA EPH Soils Extraction | ECY 97-602 WA EPH | 2 | 182700031A | 09/28/2018 09:00 | Michelle A Newswanger | 1 |
| 00388 | GC - Field Preserved (MA-VPH) | MA DEP VPH modified | 1 | 201825151160 | 08/30/2018 10:05 | Client Supplied | 1 |
| 00497 | Silica Gel Fractionation | SW-846 3630C modified | 1 | 182500003A | 09/18/2018 08:00 | David S Schrum | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182501404903 | 09/12/2018 09:05 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182501404903 | 09/10/2018 07:25 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18250820004B | 09/07/2018 11:22 | Larry E Bevins | 1 |

Sample Description: UST-8-S-8.0-180829 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789521
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submission Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/29/2018 15:45
SDG#: LDC03-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.9 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.9 |
| 11995 | Toluene | 108-88-3 | 0.002 | 0.0006 | 0.9 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.9 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 26.79 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 60 | 3.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 14 | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 3.21 | 0.486 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 7.2 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.
The temperature of the temperature blank bottle(s) upon receipt at the lab was 6.3 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 14.3-19.0 C.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182521AA | 09/09/2018 19:14 | Stephen C Nolte | 0.9 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201825051158 | 08/29/2018 15:45 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201825051158 | 08/29/2018 15:45 | Client Supplied | 1 |

Sample Description: UST-8-S-8.0-180829 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789521
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submission Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/29/2018 15:45
SDG#: LDC03-03

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201825051158 | 08/29/2018 15:45 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18251SLD026 | 09/14/2018 13:30 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18251SLD026 | 09/11/2018 16:45 | Kate E Lutte | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18253B16A | 09/11/2018 04:47 | Jeremy C Giffin | 26.79 |
| 01150 | GC - Bulk Soil Prep | SW-846 5030A | 1 | 201825051149 | 09/07/2018 11:02 | Anastasia K Jaynes | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182550017A | 09/14/2018 22:13 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182550017A | 09/12/2018 17:50 | Elizabeth E Donovan | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182501404903 | 09/12/2018 09:07 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182501404903 | 09/10/2018 07:25 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18250820004B | 09/07/2018 11:22 | Larry E Bevins | 1 |

Sample Description: UST-7-S-8.0-180829 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789522
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submission Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/29/2018 15:00
SDG#: LDC03-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.81 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.81 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.81 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.81 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 24.06 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 4.1 | 3.4 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 39 | 11 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 9.51 | 0.461 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 10.9 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.
The temperature of the temperature blank bottle(s) upon receipt at the lab was 6.3 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 14.3-19.0 C.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182521AA | 09/09/2018 19:37 | Stephen C Nolte | 0.81 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201825051158 | 08/29/2018 15:00 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201825051158 | 08/29/2018 15:00 | Client Supplied | 1 |

Sample Description: UST-7-S-8.0-180829 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789522
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submission Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/29/2018 15:00
SDG#: LDC03-04

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201825051158 | 08/29/2018 15:00 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18251SLD026 | 09/14/2018 13:54 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18251SLD026 | 09/11/2018 16:45 | Kate E Lutte | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18253B16A | 09/11/2018 05:25 | Jeremy C Giffin | 24.06 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201825051158 | 08/29/2018 15:00 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182550017A | 09/15/2018 00:52 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182550017A | 09/12/2018 17:50 | Elizabeth E Donovan | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182501404903 | 09/12/2018 09:10 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182501404903 | 09/10/2018 07:25 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18250820004B | 09/07/2018 11:22 | Larry E Bevins | 1 |

Sample Description: SVP-2-S-8.0-180830 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789523
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submission Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/30/2018 13:20
SDG#: LDC03-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------|---------------------------|------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.85 |
| 11995 | Bromodichloromethane | 75-27-4 | N.D. | 0.0004 | 0.85 |
| 11995 | Bromoform | 75-25-2 | N.D. | 0.005 | 0.85 |
| 11995 | Bromomethane | 74-83-9 | N.D. | 0.0007 | 0.85 |
| 11995 | Carbon Tetrachloride | 56-23-5 | N.D. | 0.0005 | 0.85 |
| 11995 | Chlorobenzene | 108-90-7 | N.D. | 0.0005 | 0.85 |
| 11995 | Chloroethane | 75-00-3 | N.D. | 0.001 | 0.85 |
| 11995 | Chloroform | 67-66-3 | N.D. | 0.0006 | 0.85 |
| 11995 | Chloromethane | 74-87-3 | N.D. | 0.0006 | 0.85 |
| 11995 | Dibromochloromethane | 124-48-1 | N.D. | 0.0004 | 0.85 |
| 11995 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 0.0005 | 0.85 |
| 11995 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 0.0005 | 0.85 |
| 11995 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 0.0004 | 0.85 |
| 11995 | 1,1-Dichloroethane | 75-34-3 | N.D. | 0.0005 | 0.85 |
| 11995 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.0006 | 0.85 |
| 11995 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.0005 | 0.85 |
| 11995 | cis-1,2-Dichloroethene | 156-59-2 | N.D. | 0.0005 | 0.85 |
| 11995 | trans-1,2-Dichloroethene | 156-60-5 | N.D. | 0.0005 | 0.85 |
| 11995 | 1,2-Dichloropropane | 78-87-5 | N.D. | 0.0005 | 0.85 |
| 11995 | cis-1,3-Dichloropropene | 10061-01-5 | N.D. | 0.0004 | 0.85 |
| 11995 | trans-1,3-Dichloropropene | 10061-02-6 | N.D. | 0.0003 | 0.85 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.85 |
| 11995 | Freon 113 | 76-13-1 | N.D. | 0.0006 | 0.85 |
| 11995 | Methylene Chloride | 75-09-2 | N.D. | 0.002 | 0.85 |
| 11995 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 0.0004 | 0.85 |
| 11995 | Tetrachloroethene | 127-18-4 | N.D. | 0.0005 | 0.85 |
| 11995 | Toluene | 108-88-3 | 0.0007 | 0.0006 | 0.85 |
| 11995 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.0006 | 0.85 |
| 11995 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.0005 | 0.85 |
| 11995 | Trichloroethene | 79-01-6 | N.D. | 0.0005 | 0.85 |
| 11995 | Trichlorofluoromethane | 75-69-4 | N.D. | 0.0007 | 0.85 |
| 11995 | Vinyl Chloride | 75-01-4 | N.D. | 0.0006 | 0.85 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.85 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | 0.017 | 0.008 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 0.4 | 0.3 | 26.59 |
| PCBs | | SW-846 8082A Feb 2007 Rev 1 | mg/kg | mg/kg | |
| 10885 | PCB-1016 | 12674-11-2 | N.D. D1 | 0.0044 | 1 |
| 10885 | PCB-1221 | 11104-28-2 | N.D. D1 | 0.0057 | 1 |
| 10885 | PCB-1232 | 11141-16-5 | N.D. D1 | 0.0099 | 1 |
| 10885 | PCB-1242 | 53469-21-9 | N.D. D1 | 0.0041 | 1 |
| 10885 | PCB-1248 | 12672-29-6 | N.D. D1 | 0.0041 | 1 |

Sample Description: SVP-2-S-8.0-180830 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789523
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submission Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/30/2018 13:20
SDG#: LDC03-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---------|---------------|------------|------------|----------------------------|-----------------|
|---------|---------------|------------|------------|----------------------------|-----------------|

| PCBs | | SW-846 8082A Feb 2007 Rev 1 | mg/kg | mg/kg | |
|-------|----------|-----------------------------|---------|--------|---|
| 10885 | PCB-1254 | 11097-69-1 | N.D. D1 | 0.0041 | 1 |
| 10885 | PCB-1260 | 11096-82-5 | N.D. D1 | 0.0061 | 1 |

| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
|---------------------------|-------------------------------|------------------------------|-------|-------|---|
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.7 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 12 | 1 |

| GC Petroleum Hydrocarbons | | ECY 97-602 WA EPH | mg/kg | mg/kg | |
|---------------------------|--------------------|-------------------|-------|-------|---|
| 05970 | >C10-C12 Aliphatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C10-C12 Aromatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C12-C16 Aliphatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C12-C16 Aromatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C16-C21 Aliphatic | n.a. | N.D. | 3.6 | 1 |
| 05970 | >C16-C21 Aromatic | n.a. | N.D. | 2.4 | 1 |
| 05970 | >C21-C34 Aliphatic | n.a. | N.D. | 7.2 | 1 |
| 05970 | >C21-C34 Aromatic | n.a. | N.D. | 2.4 | 1 |

Trial ID: RE

| | | | | | |
|-------|--------------------|------|------|-----|---|
| 05970 | >C10-C12 Aliphatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C10-C12 Aromatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C12-C16 Aliphatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C12-C16 Aromatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C16-C21 Aliphatic | n.a. | N.D. | 3.7 | 1 |
| 05970 | >C16-C21 Aromatic | n.a. | N.D. | 2.5 | 1 |
| 05970 | >C21-C34 Aliphatic | n.a. | N.D. | 7.4 | 1 |
| 05970 | >C21-C34 Aromatic | n.a. | N.D. | 2.5 | 1 |

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken:

The sample was re-extracted outside the method required holding time and the QC is compliant. Results are reported from both trials.

| GC Petroleum Hydrocarbons | | ECY 97-602 WA VPH | mg/kg | mg/kg | |
|---------------------------|-------------------------------|-------------------|-------|--------|-------|
| 05666 | Benzene | 71-43-2 | N.D. | 0.0770 | 61.94 |
| 05666 | C5-C6 Aliphatic Hydrocarbons | n.a. | N.D. | 3.85 | 61.94 |
| 05666 | C6-C8 Aliphatic Hydrocarbons | n.a. | N.D. | 3.85 | 61.94 |
| 05666 | C8-C10 Aliphatic Hydrocarbons | n.a. | N.D. | 3.85 | 61.94 |
| 05666 | C8-C10 Aromatic Hydrocarbons | n.a. | N.D. | 3.85 | 61.94 |
| 05666 | Ethylbenzene | 100-41-4 | N.D. | 0.0770 | 61.94 |
| 05666 | Methyl t-butyl ether | 1634-04-4 | N.D. | 0.0770 | 61.94 |
| 05666 | Toluene | 108-88-3 | N.D. | 0.0770 | 61.94 |
| 05666 | o-Xylene | 95-47-6 | N.D. | 0.0770 | 61.94 |
| 05666 | m,p-Xylenes | 179601-23-1 | N.D. | 0.154 | 61.94 |

Sample Description: SVP-2-S-8.0-180830 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789523
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/30/2018 13:20
SDG#: LDC03-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|---------------|------------|--------------------------------------|----------------------------|-----------------|
| Metals | | | SW-846 6010D Rev.4, July 2014 | mg/kg | |
| 06955 | Lead | 7439-92-1 | 11.8 | 0.526 | 1 |
| Wet Chemistry | | | SM 2540 G-2011 %Moisture Calc | % | |
| 00111 | Moisture | n.a. | 19.6 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.
The temperature of the temperature blank bottle(s) upon receipt at the lab was 6.3 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 14.3-19.0 C.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 11995 | HVOCs + BTEX | SW-846 8260C | 1 | A182521AA | 09/09/2018 20:00 | Stephen C Nolte | 0.85 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201825051158 | 08/30/2018 13:20 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201825051158 | 08/30/2018 13:20 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 3 | 201825051158 | 08/30/2018 13:20 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 4 | 201825051158 | 08/30/2018 13:20 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201825051158 | 08/30/2018 13:20 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 2 | 201825051158 | 08/30/2018 13:20 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18251SLD026 | 09/14/2018 14:17 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18251SLD026 | 09/11/2018 16:45 | Kate E Lutte | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18253B16A | 09/11/2018 06:03 | Jeremy C Giffin | 26.59 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201825051158 | 08/30/2018 13:20 | Client Supplied | n.a. |
| 10885 | PCBs 8082A/3546 | SW-846 8082A Feb 2007 Rev 1 | 1 | 182540003A | 09/13/2018 01:22 | Kirby B Turner | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 182540003A | 09/12/2018 09:00 | Michelle A Newswanger | 1 |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182550017A | 09/14/2018 22:33 | Thomas C Wildermuth | 1 |

Sample Description: SVP-2-S-8.0-180830 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789523
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submission Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/30/2018 13:20
SDG#: LDC03-05

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-------------------------------|----------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 1 | 182500003A | 09/19/2018 15:32 | Heather E Williams | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 1 | 182500003A | 09/19/2018 16:12 | Heather E Williams | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 2-RE | 182700031A | 10/03/2018 17:57 | Amy Lehr | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 2-RE | 182700031A | 10/03/2018 19:52 | Amy Lehr | 1 |
| 05666 | WA- VPH soils | ECY 97-602 WA VPH | 1 | 18253A08A | 09/10/2018 23:23 | Thomas C Wildermuth | 61.94 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182550017A | 09/12/2018 17:50 | Elizabeth E Donovan | 1 |
| 11213 | WA EPH Soils Extraction | ECY 97-602 WA EPH | 1 | 182500003A | 09/08/2018 11:20 | Sally L Appleyard | 1 |
| 11213 | WA EPH Soils Extraction | ECY 97-602 WA EPH | 2 | 182700031A | 09/28/2018 09:00 | Michelle A Newswanger | 1 |
| 00388 | GC - Field Preserved (MA-VPH) | MA DEP VPH modified | 1 | 201825151160 | 08/30/2018 13:20 | Client Supplied | 1 |
| 00497 | Silica Gel Fractionation | SW-846 3630C modified | 1 | 182500003A | 09/18/2018 08:00 | David S Schrum | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182501404903 | 09/12/2018 09:18 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182501404903 | 09/10/2018 07:25 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18250820004B | 09/07/2018 11:22 | Larry E Bevins | 1 |

Sample Description: SVP-2-S-10.0-180830 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789524
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/30/2018 13:30
SDG#: LDC03-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------|---------------------------|------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.8 |
| 11995 | Bromodichloromethane | 75-27-4 | N.D. | 0.0004 | 0.8 |
| 11995 | Bromoform | 75-25-2 | N.D. | 0.005 | 0.8 |
| 11995 | Bromomethane | 74-83-9 | N.D. | 0.0007 | 0.8 |
| 11995 | Carbon Tetrachloride | 56-23-5 | N.D. | 0.0005 | 0.8 |
| 11995 | Chlorobenzene | 108-90-7 | N.D. | 0.0005 | 0.8 |
| 11995 | Chloroethane | 75-00-3 | N.D. | 0.001 | 0.8 |
| 11995 | Chloroform | 67-66-3 | N.D. | 0.0006 | 0.8 |
| 11995 | Chloromethane | 74-87-3 | N.D. | 0.0006 | 0.8 |
| 11995 | Dibromochloromethane | 124-48-1 | N.D. | 0.0004 | 0.8 |
| 11995 | 1,2-Dichlorobenzene | 95-50-1 | N.D. | 0.0005 | 0.8 |
| 11995 | 1,3-Dichlorobenzene | 541-73-1 | N.D. | 0.0005 | 0.8 |
| 11995 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 0.0004 | 0.8 |
| 11995 | 1,1-Dichloroethane | 75-34-3 | N.D. | 0.0005 | 0.8 |
| 11995 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.0006 | 0.8 |
| 11995 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.0005 | 0.8 |
| 11995 | cis-1,2-Dichloroethene | 156-59-2 | N.D. | 0.0005 | 0.8 |
| 11995 | trans-1,2-Dichloroethene | 156-60-5 | N.D. | 0.0005 | 0.8 |
| 11995 | 1,2-Dichloropropane | 78-87-5 | N.D. | 0.0005 | 0.8 |
| 11995 | cis-1,3-Dichloropropene | 10061-01-5 | N.D. | 0.0004 | 0.8 |
| 11995 | trans-1,3-Dichloropropene | 10061-02-6 | N.D. | 0.0003 | 0.8 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.8 |
| 11995 | Freon 113 | 76-13-1 | N.D. | 0.0006 | 0.8 |
| 11995 | Methylene Chloride | 75-09-2 | N.D. | 0.002 | 0.8 |
| 11995 | 1,1,2,2-Tetrachloroethane | 79-34-5 | N.D. | 0.0004 | 0.8 |
| 11995 | Tetrachloroethene | 127-18-4 | N.D. | 0.0005 | 0.8 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.8 |
| 11995 | 1,1,1-Trichloroethane | 71-55-6 | N.D. | 0.0006 | 0.8 |
| 11995 | 1,1,2-Trichloroethane | 79-00-5 | N.D. | 0.0005 | 0.8 |
| 11995 | Trichloroethene | 79-01-6 | N.D. | 0.0005 | 0.8 |
| 11995 | Trichlorofluoromethane | 75-69-4 | N.D. | 0.0007 | 0.8 |
| 11995 | Vinyl Chloride | 75-01-4 | N.D. | 0.0006 | 0.8 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.8 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.008 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 24.04 |
| PCBs | | SW-846 8082A Feb 2007 Rev 1 | mg/kg | mg/kg | |
| 10885 | PCB-1016 | 12674-11-2 | N.D. D1 | 0.0045 | 1 |
| 10885 | PCB-1221 | 11104-28-2 | N.D. D1 | 0.0058 | 1 |
| 10885 | PCB-1232 | 11141-16-5 | N.D. D1 | 0.010 | 1 |
| 10885 | PCB-1242 | 53469-21-9 | N.D. D1 | 0.0041 | 1 |
| 10885 | PCB-1248 | 12672-29-6 | N.D. D1 | 0.0041 | 1 |

Sample Description: SVP-2-S-10.0-180830 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789524
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submission Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/30/2018 13:30
SDG#: LDC03-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|-------------------------------------|--------------|----------------------------|-----------------|
| PCBs | | SW-846 8082A Feb 2007 Rev 1 | mg/kg | mg/kg | |
| 10885 | PCB-1254 | 11097-69-1 | N.D. D1 | 0.0041 | 1 |
| 10885 | PCB-1260 | 11096-82-5 | N.D. D1 | 0.0061 | 1 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.8 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 13 | 1 |
| GC Petroleum Hydrocarbons | | ECY 97-602 WA EPH | mg/kg | mg/kg | |
| 05970 | >C10-C12 Aliphatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C10-C12 Aromatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C12-C16 Aliphatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C12-C16 Aromatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C16-C21 Aliphatic | n.a. | N.D. | 3.7 | 1 |
| 05970 | >C16-C21 Aromatic | n.a. | N.D. | 2.4 | 1 |
| 05970 | >C21-C34 Aliphatic | n.a. | N.D. | 7.3 | 1 |
| 05970 | >C21-C34 Aromatic | n.a. | N.D. | 2.4 | 1 |
| Trial ID: RE | | | | | |
| 05970 | >C10-C12 Aliphatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C10-C12 Aromatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C12-C16 Aliphatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C12-C16 Aromatic | n.a. | N.D. | 1.2 | 1 |
| 05970 | >C16-C21 Aliphatic | n.a. | N.D. | 3.7 | 1 |
| 05970 | >C16-C21 Aromatic | n.a. | N.D. | 2.4 | 1 |
| 05970 | >C21-C34 Aliphatic | n.a. | N.D. | 7.3 | 1 |
| 05970 | >C21-C34 Aromatic | n.a. | N.D. | 2.4 | 1 |
| The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. The following action was taken: The sample was re-extracted outside the method required holding time and the QC is compliant. Results are reported from both trials. | | | | | |
| GC Petroleum Hydrocarbons | | ECY 97-602 WA VPH | mg/kg | mg/kg | |
| 05666 | Benzene | 71-43-2 | N.D. | 0.0647 | 50.78 |
| 05666 | C5-C6 Aliphatic Hydrocarbons | n.a. | N.D. | 3.23 | 50.78 |
| 05666 | C6-C8 Aliphatic Hydrocarbons | n.a. | N.D. | 3.23 | 50.78 |
| 05666 | C8-C10 Aliphatic Hydrocarbons | n.a. | N.D. | 3.23 | 50.78 |
| 05666 | C8-C10 Aromatic Hydrocarbons | n.a. | N.D. | 3.23 | 50.78 |
| 05666 | Ethylbenzene | 100-41-4 | N.D. | 0.0647 | 50.78 |
| 05666 | Methyl t-butyl ether | 1634-04-4 | N.D. | 0.0647 | 50.78 |
| 05666 | Toluene | 108-88-3 | N.D. | 0.0647 | 50.78 |
| 05666 | o-Xylene | 95-47-6 | N.D. | 0.0647 | 50.78 |
| 05666 | m,p-Xylenes | 179601-23-1 | N.D. | 0.129 | 50.78 |

Sample Description: SVP-2-S-10.0-180830 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789524
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submission Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/30/2018 13:30
SDG#: LDC03-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|---------------|------------|--------------------------------------|----------------------------|-----------------|
| Metals | | | SW-846 6010D Rev.4, July 2014 | mg/kg | |
| 06955 | Lead | 7439-92-1 | 7.53 | 0.611 | 1 |
| Wet Chemistry | | | SM 2540 G-2011 %Moisture Calc | % | |
| 00111 | Moisture | n.a. | 21.5 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.
The temperature of the temperature blank bottle(s) upon receipt at the lab was 6.3 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 14.3-19.0 C.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 11995 | HVOCs + BTEX | SW-846 8260C | 1 | A182521AA | 09/09/2018 20:22 | Stephen C Nolte | 0.8 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201825051158 | 08/30/2018 13:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201825051158 | 08/30/2018 13:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 3 | 201825051158 | 08/30/2018 13:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 4 | 201825051158 | 08/30/2018 13:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201825051158 | 08/30/2018 13:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 2 | 201825051158 | 08/30/2018 13:30 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18251SLD026 | 09/14/2018 14:40 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18251SLD026 | 09/11/2018 16:45 | Kate E Lutte | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18253B16A | 09/11/2018 06:40 | Jeremy C Giffin | 24.04 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201825051158 | 08/30/2018 13:30 | Client Supplied | n.a. |
| 10885 | PCBs 8082A/3546 | SW-846 8082A Feb 2007 Rev 1 | 1 | 182540003A | 09/13/2018 01:33 | Kirby B Turner | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 182540003A | 09/12/2018 09:00 | Michelle A Newswanger | 1 |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182550017A | 09/14/2018 22:53 | Thomas C Wildermuth | 1 |

Sample Description: SVP-2-S-10.0-180830 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789524
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submission Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/30/2018 13:30
SDG#: LDC03-06

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-------------------------------|----------------------------------|--------|--------------|------------------------|-----------------------|-----------------|
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 1 | 182500003A | 09/19/2018 16:52 | Heather E Williams | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 1 | 182500003A | 09/19/2018 17:32 | Heather E Williams | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 2-RE | 182700031A | 10/03/2018 20:52 | Amy Lehr | 1 |
| 05970 | WA EPH in Soil | ECY 97-602 WA EPH | 2-RE | 182700031A | 10/03/2018 21:32 | Amy Lehr | 1 |
| 05666 | WA- VPH soils | ECY 97-602 WA VPH | 1 | 18253A08A | 09/11/2018 00:04 | Thomas C Wildermuth | 50.78 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182550017A | 09/12/2018 17:50 | Elizabeth E Donovan | 1 |
| 11213 | WA EPH Soils Extraction | ECY 97-602 WA EPH | 1 | 182500003A | 09/08/2018 11:20 | Sally L Appleyard | 1 |
| 11213 | WA EPH Soils Extraction | ECY 97-602 WA EPH | 2 | 182700031A | 09/28/2018 09:00 | Michelle A Newswanger | 1 |
| 00388 | GC - Field Preserved (MA-VPH) | MA DEP VPH modified | 1 | 201825151160 | 08/30/2018 13:30 | Client Supplied | 1 |
| 00497 | Silica Gel Fractionation | SW-846 3630C modified | 1 | 182500003A | 09/18/2018 08:00 | David S Schrum | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182501404903 | 09/12/2018 09:20 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182501404903 | 09/10/2018 07:25 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18250820004B | 09/07/2018 11:22 | Larry E Bevins | 1 |

Sample Description: SVP-3-S-8.0-180830 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789525
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submission Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/30/2018 14:45
SDG#: LDC03-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.88 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.88 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.88 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.88 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | 0.64 | 0.008 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 23.91 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 4.9 | 3.5 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 13 | 12 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 10.9 | 0.476 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 14.3 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.
The temperature of the temperature blank bottle(s) upon receipt at the lab was 6.3 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 14.3-19.0 C.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182521AA | 09/09/2018 20:45 | Stephen C Nolte | 0.88 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201825051158 | 08/30/2018 14:45 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201825051158 | 08/30/2018 14:45 | Client Supplied | 1 |

Sample Description: SVP-3-S-8.0-180830 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789525
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submission Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/30/2018 14:45
SDG#: LDC03-07

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201825051158 | 08/30/2018 14:45 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18251SLD026 | 09/14/2018 15:03 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18251SLD026 | 09/11/2018 16:45 | Kate E Lutte | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18253B16A | 09/11/2018 07:18 | Jeremy C Giffin | 23.91 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201825051158 | 08/30/2018 14:45 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182550017A | 09/14/2018 23:13 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182550017A | 09/12/2018 17:50 | Elizabeth E Donovan | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182501404903 | 09/12/2018 09:23 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182501404903 | 09/10/2018 07:25 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18250820004B | 09/07/2018 11:22 | Larry E Bevins | 1 |

Sample Description: SVP-3-S-10.0-180830 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789526
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/30/2018 15:20
SDG#: LDC03-08

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.76 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.76 |
| 11995 | Toluene | 108-88-3 | 0.001 | 0.0006 | 0.76 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.76 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.009 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 27.19 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.0 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 13 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 7.11 | 0.676 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 25.4 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.
The temperature of the temperature blank bottle(s) upon receipt at the lab was 6.3 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 14.3-19.0 C.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182541AA | 09/11/2018 12:06 | Linda C Pape | 0.76 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201825051158 | 08/30/2018 15:20 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201825051158 | 08/30/2018 15:20 | Client Supplied | 1 |

Sample Description: SVP-3-S-10.0-180830 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789526
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submission Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/30/2018 15:20
SDG#: LDC03-08

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201825051158 | 08/30/2018 15:20 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18251SLD026 | 09/14/2018 15:26 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18251SLD026 | 09/11/2018 16:45 | Kate E Lutte | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18253B16A | 09/11/2018 07:56 | Jeremy C Giffin | 27.19 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201825051158 | 08/30/2018 15:20 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182550017A | 09/14/2018 23:33 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182550017A | 09/12/2018 17:50 | Elizabeth E Donovan | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182501404903 | 09/12/2018 09:26 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182501404903 | 09/10/2018 07:25 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18250820004B | 09/07/2018 11:22 | Larry E Bevins | 1 |

Sample Description: SB-9-S-7.0-180831 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789527
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submission Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/31/2018 10:40
SDG#: LDC03-09

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.87 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.87 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.87 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.87 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | 0.040 | 0.008 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 0.8 | 0.3 | 25.23 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.5 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 13 | 12 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 27.3 | 0.623 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 16.2 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.
The temperature of the temperature blank bottle(s) upon receipt at the lab was 6.3 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 14.3-19.0 C.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182541AA | 09/11/2018 12:29 | Linda C Pape | 0.87 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201825051158 | 08/31/2018 10:40 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201825051158 | 08/31/2018 10:40 | Client Supplied | 1 |

Sample Description: SB-9-S-7.0-180831 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789527
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submission Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/31/2018 10:40
SDG#: LDC03-09

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201825051158 | 08/31/2018 10:40 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18251SLD026 | 09/14/2018 15:50 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18251SLD026 | 09/11/2018 16:45 | Kate E Lutte | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18253B16A | 09/11/2018 08:34 | Jeremy C Giffin | 25.23 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201825051158 | 08/31/2018 10:40 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182550017A | 09/14/2018 23:52 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182550017A | 09/12/2018 17:50 | Elizabeth E Donovan | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182501404903 | 09/12/2018 09:28 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182501404903 | 09/10/2018 07:25 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18250820004B | 09/07/2018 11:22 | Larry E Bevins | 1 |

Sample Description: SB-9-S-11.5-180831 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789528
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/31/2018 11:50
SDG#: LDC03-10

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.86 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.86 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.86 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.86 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | 0.009 | 0.008 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 26.53 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 3.5 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 14 | 12 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 25.4 | 0.490 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 13.7 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.
The temperature of the temperature blank bottle(s) upon receipt at the lab was 6.3 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 14.3-19.0 C.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A182541AA | 09/11/2018 12:52 | Linda C Pape | 0.86 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201825051158 | 08/31/2018 11:50 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201825051158 | 08/31/2018 11:50 | Client Supplied | 1 |

Sample Description: SB-9-S-11.5-180831 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 9789528
ELLE Group #: 1984163
Matrix: Soil

Project Name: 204117

Submission Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/31/2018 11:50
SDG#: LDC03-10

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201825051158 | 08/31/2018 11:50 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 18251SLD026 | 09/14/2018 16:13 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 18251SLD026 | 09/11/2018 16:45 | Kate E Lutte | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18253B16A | 09/11/2018 09:11 | Jeremy C Giffin | 26.53 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201825051158 | 08/31/2018 11:50 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 182550017A | 09/15/2018 00:12 | Thomas C Wildermuth | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 182550017A | 09/12/2018 17:50 | Elizabeth E Donovan | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 182501404903 | 09/12/2018 09:31 | Eric L Eby | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U5 | SW-846 3050B | 1 | 182501404903 | 09/10/2018 07:25 | Denise L Trimby | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 18250820004B | 09/07/2018 11:22 | Larry E Bevins | 1 |

Sample Description: QA-2-O-180831 NA Water
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 9789529
ELLE Group #: 1984163
Matrix: Water

Project Name: 204117

Submittal Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/31/2018 12:00
SDG#: LDC03-11EB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | 0.2 | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457
The temperature of the temperature blank bottle(s) upon receipt at the lab was 6.3 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 14.3-19.0 C.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|-----------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | Z182542AA | 09/11/2018 20:05 | Hu Yang | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | Z182542AA | 09/11/2018 20:05 | Hu Yang | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18249A53A | 09/09/2018 03:33 | Jeremy C Giffin | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 18249A53A | 09/09/2018 03:33 | Jeremy C Giffin | 1 |

Sample Description: QA-6-T-180831 NA Water
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 9789530
ELLE Group #: 1984163
Matrix: Water

Project Name: 204117

Submittal Date/Time: 09/05/2018 10:00
Collection Date/Time: 08/31/2018 15:00
SDG#: LDC03-12TB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457
The temperature of the temperature blank bottle(s) upon receipt at the lab was 6.3 C using a digital thermometer. The sample bottles were then measured using an IR thermometer and were recorded at 14.3-19.0 C.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|-----------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | Z182542AA | 09/11/2018 20:29 | Hu Yang | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | Z182542AA | 09/11/2018 20:29 | Hu Yang | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 18249A53A | 09/09/2018 04:00 | Jeremy C Giffin | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 18249A53A | 09/09/2018 04:00 | Jeremy C Giffin | 1 |

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/05/2018 10:16

Group Number: 1984163

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

| Analysis Name | Result mg/kg | MDL mg/kg |
|---------------------------|-----------------------------------|--------------|
| Batch number: A182521AA | Sample number(s): 9789519-9789525 | |
| Benzene | N.D. | 0.0005 |
| Bromodichloromethane | N.D. | 0.0004 |
| Bromoform | N.D. | 0.005 |
| Bromomethane | N.D. | 0.0007 |
| Carbon Tetrachloride | N.D. | 0.0005 |
| Chlorobenzene | N.D. | 0.0005 |
| Chloroethane | N.D. | 0.001 |
| Chloroform | N.D. | 0.0006 |
| Chloromethane | N.D. | 0.0006 |
| Dibromochloromethane | N.D. | 0.0004 |
| 1,2-Dichlorobenzene | N.D. | 0.0005 |
| 1,3-Dichlorobenzene | N.D. | 0.0005 |
| 1,4-Dichlorobenzene | N.D. | 0.0004 |
| 1,1-Dichloroethane | N.D. | 0.0005 |
| 1,2-Dichloroethane | N.D. | 0.0006 |
| 1,1-Dichloroethene | N.D. | 0.0005 |
| cis-1,2-Dichloroethene | N.D. | 0.0005 |
| trans-1,2-Dichloroethene | N.D. | 0.0005 |
| 1,2-Dichloropropane | N.D. | 0.0005 |
| cis-1,3-Dichloropropene | N.D. | 0.0004 |
| trans-1,3-Dichloropropene | N.D. | 0.0003 |
| Ethylbenzene | N.D. | 0.0004 |
| Freon 113 | N.D. | 0.0006 |
| Methylene Chloride | N.D. | 0.002 |
| 1,1,2,2-Tetrachloroethane | N.D. | 0.0004 |
| Tetrachloroethene | N.D. | 0.0005 |
| Toluene | N.D. | 0.0006 |
| 1,1,1-Trichloroethane | N.D. | 0.0006 |
| 1,1,2-Trichloroethane | N.D. | 0.0005 |
| Trichloroethene | N.D. | 0.0005 |
| Trichlorofluoromethane | N.D. | 0.0007 |
| Vinyl Chloride | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| Batch number: A182541AA | Sample number(s): 9789526-9789528 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/05/2018 10:16

Group Number: 1984163

Method Blank (continued)

| Analysis Name | Result | MDL |
|-------------------------------|---|--------|
| | ug/l | ug/l |
| Batch number: Z182542AA | Sample number(s): 9789529-9789530 | |
| Benzene | N.D. | 0.2 |
| Ethylbenzene | N.D. | 0.4 |
| Toluene | N.D. | 0.2 |
| Xylene (Total) | N.D. | 1 |
| | mg/kg | mg/kg |
| Batch number: 18251SLD026 | Sample number(s): 9789519-9789528 | |
| Naphthalene | N.D. | 0.007 |
| Batch number: 18253B16A | Sample number(s): 9789519-9789528 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |
| | ug/l | ug/l |
| Batch number: 18249A53A | Sample number(s): 9789529-9789530 | |
| NWTPH-Gx water C7-C12 | 25 | 19 |
| | mg/kg | mg/kg |
| Batch number: 182540003A | Sample number(s): 9789519-9789520,9789523-9789524 | |
| PCB-1016 | N.D. | 0.0036 |
| PCB-1221 | N.D. | 0.0046 |
| PCB-1232 | N.D. | 0.0080 |
| PCB-1242 | N.D. | 0.0033 |
| PCB-1248 | N.D. | 0.0033 |
| PCB-1254 | N.D. | 0.0033 |
| PCB-1260 | N.D. | 0.0049 |
| Batch number: 182500003A | Sample number(s): 9789519-9789520,9789523-9789524 | |
| >C10-C12 Aliphatic | N.D. | 1.0 |
| >C10-C12 Aromatic | N.D. | 1.0 |
| >C12-C16 Aliphatic | N.D. | 1.0 |
| >C12-C16 Aromatic | N.D. | 1.0 |
| >C16-C21 Aliphatic | N.D. | 3.0 |
| >C16-C21 Aromatic | N.D. | 2.0 |
| >C21-C34 Aliphatic | N.D. | 6.0 |
| >C21-C34 Aromatic | N.D. | 2.0 |
| Batch number: 182500053A | Sample number(s): 9789519 | |
| Diesel Range Organics C12-C24 | N.D. | 3.0 |
| Heavy Range Organics C24-C40 | N.D. | 10 |
| Batch number: 18253A08A | Sample number(s): 9789519-9789520,9789523-9789524 | |
| Benzene | N.D. | 0.0500 |
| C5-C6 Aliphatic Hydrocarbons | N.D. | 2.50 |
| C6-C8 Aliphatic Hydrocarbons | N.D. | 2.50 |
| C8-C10 Aliphatic Hydrocarbons | N.D. | 2.50 |
| C8-C10 Aromatic Hydrocarbons | N.D. | 2.50 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/05/2018 10:16

Group Number: 1984163

Method Blank (continued)

| Analysis Name | Result | MDL |
|-------------------------------|---|--------|
| | mg/kg | mg/kg |
| Ethylbenzene | N.D. | 0.0500 |
| Methyl t-butyl ether | N.D. | 0.0500 |
| Toluene | N.D. | 0.0500 |
| o-Xylene | N.D. | 0.0500 |
| m,p-Xylenes | N.D. | 0.100 |
| Batch number: 182550017A | Sample number(s): 9789520-9789528 | |
| Diesel Range Organics C12-C24 | N.D. | 3.0 |
| Heavy Range Organics C24-C40 | N.D. | 10 |
| Batch number: 182700031A | Sample number(s): 9789519-9789520,9789523-9789524 | |
| >C10-C12 Aliphatic | N.D. | 1.0 |
| >C10-C12 Aromatic | N.D. | 1.0 |
| >C12-C16 Aliphatic | N.D. | 1.0 |
| >C12-C16 Aromatic | N.D. | 1.0 |
| >C16-C21 Aliphatic | N.D. | 3.0 |
| >C16-C21 Aromatic | N.D. | 2.0 |
| >C21-C34 Aliphatic | N.D. | 6.0 |
| >C21-C34 Aromatic | N.D. | 2.0 |
| Batch number: 182501404903 | Sample number(s): 9789519-9789528 | |
| Lead | N.D. | 0.600 |

LCS/LCSD

| Analysis Name | LCS Spike Added | LCS Conc | LCSD Spike Added | LCSD Conc | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|-------------------------|-----------------------------------|----------|------------------|-----------|----------|-----------|-----------------|-----|---------|
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: A182521AA | Sample number(s): 9789519-9789525 | | | | | | | | |
| Benzene | 0.0200 | 0.0189 | 0.0200 | 0.0185 | 94 | 92 | 80-120 | 2 | 30 |
| Bromodichloromethane | 0.0200 | 0.0175 | 0.0200 | 0.0178 | 88 | 89 | 70-120 | 1 | 30 |
| Bromoform | 0.0200 | 0.0156 | 0.0200 | 0.0165 | 78 | 82 | 51-127 | 5 | 30 |
| Bromomethane | 0.0200 | 0.0166 | 0.0200 | 0.0160 | 83 | 80 | 45-140 | 4 | 30 |
| Carbon Tetrachloride | 0.0200 | 0.0176 | 0.0200 | 0.0168 | 88 | 84 | 64-134 | 5 | 30 |
| Chlorobenzene | 0.0200 | 0.0193 | 0.0200 | 0.0189 | 97 | 94 | 80-120 | 2 | 30 |
| Chloroethane | 0.0200 | 0.0148 | 0.0200 | 0.0143 | 74 | 72 | 43-135 | 4 | 30 |
| Chloroform | 0.0200 | 0.0189 | 0.0200 | 0.0188 | 95 | 94 | 80-120 | 1 | 30 |
| Chloromethane | 0.0200 | 0.0126 | 0.0200 | 0.0123 | 63 | 61 | 56-120 | 2 | 30 |
| Dibromochloromethane | 0.0200 | 0.0176 | 0.0200 | 0.0179 | 88 | 89 | 69-125 | 1 | 30 |
| 1,2-Dichlorobenzene | 0.0200 | 0.0181 | 0.0200 | 0.0182 | 91 | 91 | 76-120 | 0 | 30 |
| 1,3-Dichlorobenzene | 0.0200 | 0.0178 | 0.0200 | 0.0176 | 89 | 88 | 75-120 | 1 | 30 |
| 1,4-Dichlorobenzene | 0.0200 | 0.0179 | 0.0200 | 0.0180 | 90 | 90 | 80-120 | 0 | 30 |
| 1,1-Dichloroethane | 0.0200 | 0.0184 | 0.0200 | 0.0179 | 92 | 90 | 79-120 | 3 | 30 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/05/2018 10:16

Group Number: 1984163

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|-----------------------------------|-----------------------|----------------|------------------------|-----------------|----------|-----------|-----------------|-----|---------|
| 1,2-Dichloroethane | 0.0200 | 0.0183 | 0.0200 | 0.0188 | 91 | 94 | 71-128 | 3 | 30 |
| 1,1-Dichloroethene | 0.0200 | 0.0197 | 0.0200 | 0.0187 | 99 | 94 | 73-129 | 5 | 30 |
| cis-1,2-Dichloroethene | 0.0200 | 0.0199 | 0.0200 | 0.0195 | 99 | 98 | 80-123 | 2 | 30 |
| trans-1,2-Dichloroethene | 0.0200 | 0.0197 | 0.0200 | 0.0192 | 98 | 96 | 80-125 | 2 | 30 |
| 1,2-Dichloropropane | 0.0200 | 0.0186 | 0.0200 | 0.0187 | 93 | 94 | 80-120 | 1 | 30 |
| cis-1,3-Dichloropropene | 0.0200 | 0.0166 | 0.0200 | 0.0170 | 83 | 85 | 66-120 | 2 | 30 |
| trans-1,3-Dichloropropene | 0.0200 | 0.0168 | 0.0200 | 0.0173 | 84 | 87 | 68-122 | 3 | 30 |
| Ethylbenzene | 0.0200 | 0.0186 | 0.0200 | 0.0181 | 93 | 90 | 78-120 | 3 | 30 |
| Freon 113 | 0.0200 | 0.0157 | 0.0200 | 0.0151 | 79 | 75 | 64-135 | 4 | 30 |
| Methylene Chloride | 0.0200 | 0.0196 | 0.0200 | 0.0196 | 98 | 98 | 76-122 | 0 | 30 |
| 1,1,2,2-Tetrachloroethane | 0.0200 | 0.0160 | 0.0200 | 0.0182 | 80 | 91 | 69-125 | 13 | 30 |
| Tetrachloroethene | 0.0200 | 0.0189 | 0.0200 | 0.0181 | 94 | 90 | 73-120 | 4 | 30 |
| Toluene | 0.0200 | 0.0190 | 0.0200 | 0.0183 | 95 | 92 | 80-120 | 3 | 30 |
| 1,1,1-Trichloroethane | 0.0200 | 0.0165 | 0.0200 | 0.0160 | 83 | 80 | 69-123 | 3 | 30 |
| 1,1,2-Trichloroethane | 0.0200 | 0.0190 | 0.0200 | 0.0201 | 95 | 100 | 80-120 | 6 | 30 |
| Trichloroethene | 0.0200 | 0.0184 | 0.0200 | 0.0177 | 92 | 88 | 80-120 | 4 | 30 |
| Trichlorofluoromethane | 0.0200 | 0.0161 | 0.0200 | 0.0152 | 80 | 76 | 55-134 | 5 | 30 |
| Vinyl Chloride | 0.0200 | 0.0142 | 0.0200 | 0.0130 | 71 | 65 | 52-120 | 9 | 30 |
| Xylene (Total) | 0.0600 | 0.0569 | 0.0600 | 0.0552 | 95 | 92 | 75-120 | 3 | 30 |
| Batch number: A182541AA | | | | | | | | | |
| Sample number(s): 9789526-9789528 | | | | | | | | | |
| Benzene | 0.0200 | 0.0190 | 0.0200 | 0.0191 | 95 | 96 | 80-120 | 1 | 30 |
| Ethylbenzene | 0.0200 | 0.0187 | 0.0200 | 0.0190 | 94 | 95 | 78-120 | 2 | 30 |
| Toluene | 0.0200 | 0.0185 | 0.0200 | 0.0188 | 93 | 94 | 80-120 | 2 | 30 |
| Xylene (Total) | 0.0600 | 0.0565 | 0.0600 | 0.0576 | 94 | 96 | 75-120 | 2 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: Z182542AA | | | | | | | | | |
| Sample number(s): 9789529-9789530 | | | | | | | | | |
| Benzene | 20 | 20.32 | 20 | 20.43 | 102 | 102 | 80-120 | 1 | 30 |
| Ethylbenzene | 20 | 19.5 | 20 | 20.09 | 98 | 100 | 80-120 | 3 | 30 |
| Toluene | 20 | 21.42 | 20 | 21.57 | 107 | 108 | 80-120 | 1 | 30 |
| Xylene (Total) | 60 | 59.92 | 60 | 61.08 | 100 | 102 | 80-120 | 2 | 30 |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 18251SLD026 | | | | | | | | | |
| Sample number(s): 9789519-9789528 | | | | | | | | | |
| Naphthalene | 1.67 | 1.44 | | | 87 | | 81-111 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 18253B16A | | | | | | | | | |
| Sample number(s): 9789519-9789528 | | | | | | | | | |
| NWTPH-GX Soil C7-C12 | 11 | 8.79 | 11 | 8.86 | 80 | 81 | 55-145 | 1 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: 18249A53A | | | | | | | | | |
| Sample number(s): 9789529-9789530 | | | | | | | | | |
| NWTPH-Gx water C7-C12 | 1100 | 1054.53 | 1100 | 1063.1 | 96 | 97 | 64-131 | 1 | 30 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/05/2018 10:16

Group Number: 1984163

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added ug/l | LCS Conc ug/l | LCSD Spike Added ug/l | LCSD Conc ug/l | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|-------------------------------|---|---------------|-----------------------|----------------|----------|-----------|-----------------|-----|---------|
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 182540003A | Sample number(s): 9789519-9789520,9789523-9789524 | | | | | | | | |
| PCB-1016 | 0.167 | 0.180 | | | 108 | | 76-121 | | |
| PCB-1260 | 0.167 | 0.190 | | | 114 | | 79-130 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 182500003A | Sample number(s): 9789519-9789520,9789523-9789524 | | | | | | | | |
| >C10-C12 Aliphatic | 4.01 | 2.41 | 4.01 | 1.82 | 60 | 45 | 31-137 | 28 | 50 |
| >C10-C12 Aromatic | 4.01 | 2.28 | 4.01 | 1.91 | 57 | 48 | 22-119 | 18 | 50 |
| >C12-C16 Aliphatic | 8.02 | 2.52 | 8.02 | 2.09 | 31* | 26* | 42-146 | 18 | 50 |
| >C12-C16 Aromatic | 12.02 | 7.29 | 12.02 | 6.31 | 61 | 52 | 24-136 | 14 | 50 |
| >C16-C21 Aliphatic | 12.03 | 8.33 | 12.03 | 7.42 | 69 | 62 | 57-111 | 11 | 50 |
| >C16-C21 Aromatic | 20.06 | 13.42 | 20.06 | 13.31 | 67 | 66 | 34-143 | 1 | 50 |
| >C21-C34 Aliphatic | 20.06 | 13.65 | 20.06 | 12.22 | 68 | 61 | 50-124 | 11 | 50 |
| >C21-C34 Aromatic | 32.08 | 20.05 | 32.08 | 20.63 | 62 | 64 | 44-134 | 3 | 50 |
| Batch number: 182500053A | Sample number(s): 9789519 | | | | | | | | |
| Diesel Range Organics C12-C24 | 133.83 | 103.72 | | | 77 | | 61-115 | | |
| Batch number: 18253A08A | Sample number(s): 9789519-9789520,9789523-9789524 | | | | | | | | |
| Benzene | 2.53 | 2.31 | 2.53 | 2.31 | 91 | 91 | 70-130 | 0 | 50 |
| C5-C6 Aliphatic Hydrocarbons | 5.08 | 4.05 | 5.08 | 3.97 | 80 | 78 | 70-130 | 2 | 50 |
| C6-C8 Aliphatic Hydrocarbons | 2.55 | 2.09 | 2.55 | 2.11 | 82 | 83 | 70-130 | 1 | 50 |
| C8-C10 Aliphatic Hydrocarbons | 2.55 | 2.27 | 2.55 | 2.36 | 89 | 93 | 70-130 | 4 | 50 |
| C8-C10 Aromatic Hydrocarbons | 2.57 | 2.32 | 2.57 | 2.34 | 91 | 91 | 70-130 | 1 | 50 |
| Ethylbenzene | 2.54 | 2.37 | 2.54 | 2.38 | 93 | 94 | 70-130 | 0 | 50 |
| Methyl t-butyl ether | 2.55 | 2.42 | 2.55 | 2.40 | 95 | 94 | 70-130 | 1 | 50 |
| Toluene | 2.54 | 2.33 | 2.54 | 2.34 | 92 | 92 | 70-130 | 0 | 50 |
| o-Xylene | 2.50 | 2.37 | 2.50 | 2.38 | 95 | 95 | 70-130 | 0 | 50 |
| m,p-Xylenes | 5.10 | 4.72 | 5.10 | 4.72 | 93 | 93 | 70-130 | 0 | 50 |
| Batch number: 182550017A | Sample number(s): 9789520-9789528 | | | | | | | | |
| Diesel Range Organics C12-C24 | 133.83 | 98.31 | | | 73 | | 61-115 | | |
| Batch number: 182700031A | Sample number(s): 9789519-9789520,9789523-9789524 | | | | | | | | |
| >C10-C12 Aliphatic | 4.01 | 2.50 | | | 62 | | 31-137 | | |
| >C10-C12 Aromatic | 4.01 | 4.07 | | | 101 | | 22-119 | | |
| >C12-C16 Aliphatic | 8.02 | 5.70 | | | 71 | | 42-146 | | |
| >C12-C16 Aromatic | 12.02 | 13.33 | | | 111 | | 24-136 | | |
| >C16-C21 Aliphatic | 12.03 | 9.38 | | | 78 | | 57-111 | | |
| >C16-C21 Aromatic | 20.06 | 24.87 | | | 124 | | 34-143 | | |
| >C21-C34 Aliphatic | 20.06 | 15.15 | | | 76 | | 50-124 | | |
| >C21-C34 Aromatic | 32.08 | 40.46 | | | 126 | | 44-134 | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/05/2018 10:16

Group Number: 1984163

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|--|-----------------------|----------------|------------------------|-----------------|----------|-----------|-----------------|-----|---------|
| Batch number: 182501404903 Lead | 15 | 14.51 | | | 97 | | 80-120 | | |
| | % | % | % | % | | | | | |
| Batch number: 18250820004B Moisture | 89.5 | 89.41 | | | 100 | | 99-101 | | |

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

| Analysis Name | Unspiked Conc mg/kg | MS Spike Added mg/kg | MS Conc mg/kg | MSD Spike Added mg/kg | MSD Conc mg/kg | MS %Rec | MSD %Rec | MS/MSD Limits | RPD | RPD Max |
|--|---------------------|----------------------|---------------|-----------------------|----------------|---------|----------|---------------|-----|---------|
| Batch number: 18251SLD026 Naphthalene | 0.00873 | 1.66 | 1.50 | 1.64 | 1.46 | 90 | 88 | 81-111 | 3 | 30 |
| Batch number: 182501404903 Lead | 7.75 | 14.85 | 21.61 | 14.85 | 25.62 | 93 | 120 | 75-125 | 17 | 20 |

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | BKG Conc mg/kg | DUP Conc mg/kg | DUP RPD | DUP RPD Max |
|--|----------------|----------------|---------|-------------|
| Batch number: 182501404903 Lead | 7.75 | 7.50 | 3 (1) | 20 |
| Batch number: 18250820004B Moisture | 21.52 | 21.37 | 1 | 5 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/05/2018 10:16

Group Number: 1984163

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: HVOCs + BTEX
Batch number: A182521AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 9789519 | 104 | 106 | 100 | 88 |
| 9789520 | 104 | 107 | 105 | 84 |
| 9789521 | 105 | 104 | 99 | 93 |
| 9789522 | 104 | 107 | 99 | 91 |
| 9789523 | 102 | 106 | 99 | 92 |
| 9789524 | 105 | 108 | 99 | 91 |
| 9789525 | 106 | 109 | 97 | 90 |
| Blank | 105 | 106 | 98 | 94 |
| LCS | 101 | 102 | 102 | 100 |
| LCSD | 102 | 105 | 101 | 100 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260 Soil
Batch number: A182541AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 9789526 | 100 | 104 | 100 | 95 |
| 9789527 | 100 | 106 | 100 | 94 |
| 9789528 | 102 | 107 | 104 | 85 |
| Blank | 110 | 107 | 96 | 93 |
| LCS | 105 | 102 | 100 | 103 |
| LCSD | 103 | 104 | 100 | 102 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260C
Batch number: Z182542AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 9789529 | 99 | 103 | 104 | 95 |
| 9789530 | 102 | 104 | 104 | 94 |
| Blank | 99 | 103 | 105 | 96 |
| LCS | 97 | 103 | 104 | 100 |
| LCSD | 96 | 103 | 104 | 100 |
| Limits: | 80-120 | 80-120 | 80-120 | 80-120 |

Analysis Name: Naphthalene 8270D
Batch number: 18251SLD026

| | Phenol-d6 | 2-Fluorophenol | 2,4,6-Tribromophenol | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------|----------------|----------------------|-----------------|------------------|---------------|
| 9789519 | 88 | 90 | 83 | 88 | 93 | 93 |
| Blank | 93 | 98 | 93 | 87 | 101 | 97 |
| LCS | 92 | 93 | 79 | 85 | 93 | 87 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/05/2018 10:16

Group Number: 1984163

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Naphthalene 8270D
Batch number: 18251SLD026

| | Phenol-d6 | 2-Fluorophenol | 2,4,6-Tribromophenol | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------|----------------|----------------------|-----------------|------------------|---------------|
| MS | 102 | 104 | 92 | 87 | 98 | 94 |
| MSD | 96 | 95 | 85 | 85 | 90 | 94 |
| Limits: | 47-120 | 51-123 | 19-137 | 49-118 | 57-116 | 55-118 |

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 9789520 | 89 | 98 | 91 |
| 9789521 | 87 | 94 | 93 |
| 9789522 | 88 | 95 | 92 |
| 9789523 | 87 | 94 | 93 |
| 9789524 | 87 | 94 | 93 |
| 9789525 | 84 | 91 | 89 |
| 9789526 | 85 | 93 | 96 |
| 9789527 | 88 | 102 | 93 |
| 9789528 | 88 | 95 | 91 |
| Limits: | 49-118 | 57-116 | 55-118 |

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 18249A53A

| | Trifluorotoluene-F |
|---------|--------------------|
| 9789529 | 86 |
| 9789530 | 102 |
| Blank | 88 |
| LCS | 97 |
| LCSD | 97 |
| Limits: | 50-150 |

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 18253B16A

| | Trifluorotoluene-F |
|---------|--------------------|
| 9789519 | 66 |
| 9789520 | 64 |
| 9789521 | 79 |
| 9789522 | 73 |
| 9789523 | 58 |
| 9789524 | 56 |
| 9789525 | 68 |
| 9789526 | 59 |
| 9789527 | 65 |
| 9789528 | 65 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/05/2018 10:16

Group Number: 1984163

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-GX Soil C7-C12

Batch number: 18253B16A

| | Trifluorotoluene-F |
|-------|--------------------|
| Blank | 89 |
| LCS | 95 |
| LCS D | 95 |

Limits: 50-150

Analysis Name: PCBs 8082A/3546

Batch number: 182540003A

| | Tetrachloro-m-xylene-D1 | Decachlorobiphenyl-D1 | Tetrachloro-m-xylene-D2 | Decachlorobiphenyl-D2 |
|---------|-------------------------|-----------------------|-------------------------|-----------------------|
| 9789519 | 112 | 97 | 113 | 98 |
| 9789520 | 108 | 92 | 106 | 103 |
| 9789523 | 114 | 95 | 108 | 94 |
| 9789524 | 112 | 92 | 108 | 93 |
| Blank | 117 | 99 | 115 | 97 |
| LCS | 114 | 99 | 116 | 97 |

Limits: 53-140 45-143 53-140 45-143

Analysis Name: WA EPH in Soil

Batch number: 182500003A

| | Orthoterphenyl | 1-chlorooctadecane |
|---------|----------------|--------------------|
| 9789519 | 86 | 55 |
| 9789520 | 63 | 47 |
| 9789523 | 72 | 58 |
| 9789524 | 75 | 55 |
| Blank | 72 | 52 |
| LCS | 61 | 49 |
| LCS D | 62 | 45 |

Limits: 42-115 33-122

Analysis Name: NWTPH-Dx soil

Batch number: 182500053A

| | Orthoterphenyl |
|---------|----------------|
| 9789519 | 101 |
| Blank | 103 |
| LCS | 105 |

Limits: 50-150

Analysis Name: WA- VPH soils

Batch number: 18253A08A

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 10/05/2018 10:16

Group Number: 1984163

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: WA- VPH soils
Batch number: 18253A08A

| | Trifluorotoluene-P | Trifluorotoluene-F |
|---------|--------------------|--------------------|
| 9789519 | 100 | 101 |
| 9789520 | 100 | 101 |
| 9789523 | 103 | 103 |
| 9789524 | 99 | 100 |
| Blank | 83 | 85 |
| LCS | 93 | 94 |
| LCS D | 93 | 94 |
| Limits: | 60-140 | 60-140 |

Analysis Name: NWTPH-Dx soil
Batch number: 182550017A

| | Orthoterphenyl |
|---------|----------------|
| 9789520 | 119 |
| 9789521 | 104 |
| 9789522 | 103 |
| 9789523 | 94 |
| 9789524 | 88 |
| 9789525 | 103 |
| 9789526 | 87 |
| 9789527 | 95 |
| 9789528 | 97 |
| Blank | 98 |
| LCS | 100 |
| Limits: | 50-150 |

Analysis Name: WA EPH in Soil
Batch number: 182700031A

| | Orthoterphenyl | 1-chlorooctadecane |
|-----------|----------------|--------------------|
| 9789519RE | 85 | 63 |
| 9789520RE | 93 | 68 |
| 9789523RE | 92 | 65 |
| 9789524RE | 89 | 65 |
| Blank | 93 | 44 |
| LCS | 111 | 56 |
| Limits: | 42-115 | 33-122 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody



223559

For Lancaster Laboratories use only

Acct. #: 13271

Sample #: 9789519-30

SCR#: _____

G-1984163

Facility #: 204117
 Site Address: 2021 6th Street, Bremerton, WA
 Chevron PM: Eric Hetrick Lead Consultant: Leidos Inc
 Consultant/Office: Leidos / Bothell, WA
 Consultant Prj. Mgr.: Russ Shropshire
 Consultant Phone #: 425-482-3323 Fax#: _____
 Sampler: R. Otteman and K. Gowri
 Service Order #: PO10215249 Non SAR: _____

| Matrix | | Analyses Requested | | | | | | | | | | | | Preservative Codes | | | | | |
|--------|-------|---|----------------------------|--|--|--|--|--|--|--|--|--|--|---|--|--|--|--|--|
| | | | | | | | | | | | | | | H = HCl T = Thiosulfate N = HNO ₃ B = NaOH S = H ₂ SO ₄ O = Other | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| Soil | Water | Oil <input type="checkbox"/> Air <input type="checkbox"/> | Total Number of Containers | | | | | | | | | | | | | <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy s on highest hit <input type="checkbox"/> Run ___ oxy s on all hits | | | |

| Sample Identification | Date Collected | Time Collected | Grab | Composite | Soil | Water | Oil <input type="checkbox"/> Air <input type="checkbox"/> | Total Number of Containers | BTEX + MTBE | 8260 | Naphth | Oxygenates | NWTPH G | NWTPH D | Extended Rng. Silica Gel Cleanup | Lead Total | Diss. | Method | VPH/EPH | NWTPH H | HClID | quantification | HVOCs | PCBs | EPA | Naphthalenes | FPA | 8070 |
|---------------------------------|----------------|----------------|------|-----------|------|-------|---|----------------------------|-------------|------|--------|------------|---------|---------|----------------------------------|------------|-------|--------|---------|---------|-------|----------------|-------|------|-----|--------------|-----|------|
| SVP-1-10.0-S-083018 | 8/30/18 | 1015 | / | / | / | / | / | 14 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / |
| SVP-1-8.0-S-083018 | ↓ | 1005 | / | / | / | / | / | 14 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / |
| UST-8-8.0-S-082918 | 8/29/18 | 1545 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / |
| UST-7-8.0-S-082918 | 8/29/18 | 1500 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / |
| SVP-2-8.0-S-082818 | 8/30/18 | 1320 | / | / | / | / | / | 14 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / |
| SVP-2-10.0-S-083018 | 8/30/18 | 1330 | / | / | / | / | / | 14 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / |
| SVP-3-8.0-S-083018 | 8/30/18 | 1445 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / |
| SVP-3-10.0-S-083018 | 8/30/18 | 1520 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / |
| SB-9-7.0-S-083118 | 8/31/18 | 1040 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / |
| SB-9-11.5-S-083118 | ↓ | 1150 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / |
| SB-9 ^{B20} ER-2-083118 | ↓ | 1200 | / | / | / | / | / | 6 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / |
| UST-7-8.0-S-082918 | 8/29/18 | 1500 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / |
| TB-6-083118 | 8/31/18 | 1500 | / | / | / | / | / | 4 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / |

Comments / Remarks
 Bill to Leidos Inc.

| | | | |
|---|--|---|-------------------------|
| Turnaround Time Requested (TAT) (please circle) STD. TAT: 72 hour, 48 hour, 24 hour 4 day, 5 day | Relinquished by: <u>[Signature]</u> Date: <u>9/4/18</u> Time: <u>1030</u> | Received by: _____ Date: _____ Time: _____ | Date: _____ Time: _____ |
| Relinquished by: _____ Date: _____ Time: _____ | Relinquished by: _____ Date: _____ Time: _____ | Received by: _____ Date: _____ Time: _____ | Date: _____ Time: _____ |
| Data Package Options (please circle if required) QC Summary: <u>Type I - Full</u> Type VI (Raw Data): <u>Disk/EDD</u> WIP (RWQCB): <u>Standard Format</u> Disk: _____ Other: _____ | Relinquished by Commercial Carrier: <u>UPS</u> FedEx Other: _____ Temperature Upon Receipt: <u>68.3</u> °C | Received by: <u>[Signature]</u> Date: <u>9-5-18</u> Time: <u>10:00</u> | Date: _____ Time: _____ |
| Custody Seals Intact? <u>Yes</u> No | | | |



Client: Chevron

Delivery and Receipt Information

Delivery Method: Fed Ex Arrival Timestamp: 09/05/2018 10:00
 Number of Packages: 1 Number of Projects: 1

Arrival Condition Summary

| | | | |
|--------------------------------------|-----|-------------------------------------|-----|
| Shipping Container Sealed: | Yes | Sample IDs on COC match Containers: | Yes |
| Custody Seal Present: | Yes | Sample Date/Times match COC: | Yes |
| Custody Seal Intact: | Yes | VOA Vial Headspace \geq 6mm: | N/A |
| Samples Chilled: | Yes | Total Trip Blank Qty: | 4 |
| Paperwork Enclosed: | Yes | Trip Blank Type: | HCI |
| Samples Intact: | Yes | Air Quality Samples Present: | No |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |

Unpacked by Wanita Curry (14057) at 16:54 on 09/05/2018

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle)* *IR = Infrared (Surface Temp)* *All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Elevated Temp? | <u>Samples Collected Same Day as Receipt?</u> |
|----------|----------------|----------------|-------------|----------|--------------|---------------|----------------|---|
| 1 | DT42-02 | 6.3 | DT | Wet | N | Bagged | Y | N |

Elevated Temperature Details

All Temperatures in °C

| Cooler # | Thermometer ID | Top Left Temp | Top Right Temp | Bottom Left Temp | Bottom Right Temp | Center Temp | Factors Contributing to Elevated Temp | Comments |
|----------|----------------|---------------|----------------|------------------|-------------------|-------------|---------------------------------------|----------|
| 1 | 32170023 | 19.0 | 16.1 | 16.3 | 15.7 | 14.3 | | |

General Comments: UST-7-8.0-5-0-082918- COC lists two sets of this sample ID. Only one set arrived

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

| | | | |
|-------------------------|--|-----------------|-------------------------------|
| BMQL | Below Minimum Quantitation Level | mL | milliliter(s) |
| C | degrees Celsius | MPN | Most Probable Number |
| cfu | colony forming units | N.D. | non-detect |
| CP Units | cobalt-chloroplatinate units | ng | nanogram(s) |
| F | degrees Fahrenheit | NTU | nephelometric turbidity units |
| g | gram(s) | pg/L | picogram/liter |
| IU | International Units | RL | Reporting Limit |
| kg | kilogram(s) | TNTC | Too Numerous To Count |
| L | liter(s) | µg | microgram(s) |
| lb. | pound(s) | µL | microliter(s) |
| m3 | cubic meter(s) | umhos/cm | micromhos/cm |
| meq | milliequivalents | MCL | Maximum Contamination Limit |
| mg | milligram(s) | | |
| < | less than | | |
| > | greater than | | |
| ppm | parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas. | | |
| ppb | parts per billion | | |
| Dry weight basis | Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis. | | |

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

| Qualifier | Definition |
|----------------|---|
| C | Result confirmed by reanalysis |
| D1 | Indicates for dual column analyses that the result is reported from column 1 |
| D2 | Indicates for dual column analyses that the result is reported from column 2 |
| E | Concentration exceeds the calibration range |
| K1 | Initial Calibration Blank is above the QC limit and the sample result is ND |
| K2 | Continuing Calibration Blank is above the QC limit and the sample result is ND |
| K3 | Initial Calibration Verification is above the QC limit and the sample result is ND |
| K4 | Continuing Calibration Verification is above the QC limit and the sample result is ND |
| J (or G, I, X) | Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL) |
| P | Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported. |
| P^ | Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported. |
| U | Analyte was not detected at the value indicated |
| V | Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference. |
| W | The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L. |
| Z | Laboratory Defined - see analysis report |

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



2655 Park Center Dr., Suite A
Simi Valley, CA 93065
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F: +1 805 526 7270
www.alsglobal.com

LABORATORY REPORT

October 23, 2018

Russell Shropshire, PE
Leidos
18912 North Creek Parkway, Suite 101
Bothell, WA 98011

RE: Newman's Chevron / 204117

Dear Russell:

Enclosed are the results of the samples submitted to our laboratory on October 2, 2018. For your reference, these analyses have been assigned our service request number P1 805236.

All analyses were performed according to our laboratory's NELAP and DoD-ELAP-approved quality assurance program. The test results meet requirements of the current NELAP and DoD-ELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP and DoD-ELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. Results are intended to be considered in their entirety and apply only to the samples analyzed and reported herein.

If you have any questions, please call me at (805) 526-7161.

Respectfully submitted,

ALS | Environmental

By Sue Anderson at 12:10 pm, Oct 23, 2018

Sue Anderson
Project Manager



2655 Park Center Dr., Suite A
Simi Valley, CA 93065
T: +1 805 526 7161
F: +1 805 526 7270
www.alsglobal.com

Client: Leidos
Project: Newman's Chevron / 204117

Service Request No: P1805236

CASE NARRATIVE

The samples were received intact under chain of custody on October 2, 2018 and were stored in accordance with the analytical method requirements. Please refer to the sample acceptance check form for additional information. The results reported herein are applicable only to the condition of the samples at the time of sample receipt.

Helium Analysis

The samples were analyzed for helium according to modified EPA Method 3C (single injection) using a gas chromatograph equipped with a thermal conductivity detector (TCD). This method is not included on the laboratory's NELAP or DoD-ELAP scope of accreditation.

Fixed Gases Analysis

The samples were also analyzed for fixed gases (oxygen, nitrogen, methane and carbon dioxide) according to modified EPA Method 3C (single injection) using a gas chromatograph equipped with a thermal conductivity detector (TCD). This procedure is described in laboratory SOP VOA-EPA3C. This method is included on the laboratory's DoD-ELAP scope of accreditation, however it is not part of the NELAP accreditation.

Volatile Organic Compound Analysis

The samples were also analyzed in SIM mode for volatile organic compounds in accordance with EPA Method TO-15 from the Compendium of Methods for the Determination of Toxic Organic Compounds in Ambient Air, Second Edition (EPA/625/R-96/010b), January, 1999. This procedure is described in laboratory SOP VOA-TO15. The analytical system was comprised of a gas chromatograph / mass spectrometer (GC/MS) interfaced to a whole-air preconcentrator. This method is included on the laboratory's NELAP and DoD-ELAP scope of accreditation. Any analytes flagged with an X are not included on the NELAP or DoD-ELAP accreditation.

The containers were cleaned, prior to sampling, down to the method reporting limit (MRL) reported for this project. For projects requiring DoD QSM 5.1 compliance canisters were cleaned to <1/2 the MRL. Please note, projects which require reporting below the MRL could have results between the MRL and method detection limit (MDL) that are biased high.

The results of analyses are given in the attached laboratory report. All results are intended to be considered in their entirety, and ALS Environmental (ALS) is not responsible for utilization of less than the complete report.

Use of ALS Environmental (ALS)'s Name. Client shall not use ALS's name or trademark in any marketing or reporting materials, press releases or in any other manner ("Materials") whatsoever and shall not attribute to ALS any test result, tolerance or specification derived from ALS's data ("Attribution") without ALS's prior written consent, which may be withheld by ALS for any reason in its sole discretion. To request ALS's consent, Client shall provide copies of the proposed Materials or Attribution and describe in writing Client's proposed use of such Materials or Attribution. If ALS has not provided written approval of the Materials or Attribution within ten (10) days of receipt from Client, Client's request to use ALS's name or trademark in any Materials or Attribution shall be deemed denied. ALS may, in its discretion, reasonably charge Client for its time in reviewing Materials or Attribution requests. Client acknowledges and agrees that the unauthorized use of ALS's name or trademark may cause ALS to incur irreparable harm for which the recovery of money damages will be inadequate. Accordingly, Client acknowledges and agrees that a violation shall justify preliminary injunctive relief. For questions contact the laboratory.



2655 Park Center Dr., Suite A
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www.alsglobal.com

ALS Environmental – Simi Valley

CERTIFICATIONS, ACCREDITATIONS, AND REGISTRATIONS

| Agency | Web Site | Number |
|------------------------|---|-------------------------|
| Alaska DEC | http://dec.alaska.gov/eh/lab.aspx | 17-019 |
| Arizona DHS | http://www.azdhs.gov/preparedness/state-laboratory/lab-licensure-certification/index.php#laboratory-licensure-home | AZ0694 |
| Florida DOH (NELAP) | http://www.floridahealth.gov/licensing-and-regulation/environmental-laboratories/index.html | E871020 |
| Louisiana DEQ (NELAP) | http://www.deq.louisiana.gov/page/la-lab-accreditation | 05071 |
| Maine DHHS | http://www.maine.gov/dhhs/mecdc/environmental-health/dwp/professionals/labCert.shtml | 2016036 |
| Minnesota DOH (NELAP) | http://www.health.state.mn.us/accreditation | 1347317 |
| New Jersey DEP (NELAP) | http://www.nj.gov/dep/enforcement/oqa.html | CA009 |
| New York DOH (NELAP) | http://www.wadsworth.org/labcert/elap/elap.html | 11221 |
| Oregon PHD (NELAP) | http://www.oregon.gov/oha/ph/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx | 4068-005 |
| Pennsylvania DEP | http://www.dep.pa.gov/Business/OtherPrograms/Labs/Pages/Laboratory-Accreditation-Program.aspx | 68-03307 (Registration) |
| PJLA (DoD ELAP) | http://www.pjlabs.com/search-accredited-labs | 65818 (Testing) |
| Texas CEQ (NELAP) | http://www.tceq.texas.gov/agency/qa/env_lab_accreditation.html | T104704413-18-9 |
| Utah DOH (NELAP) | http://health.utah.gov/lab/lab_cert_env | CA016272018-9 |
| Washington DOE | http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html | C946 |

Analyses were performed according to our laboratory's NELAP and DoD-ELAP approved quality assurance program. A complete listing of specific NELAP and DoD-ELAP certified analytes can be found in the certifications section at www.alsglobal.com, or at the accreditation body's website.

Each of the certifications listed above have an explicit Scope of Accreditation that applies to specific matrices/methods/analytes; therefore, please contact the laboratory for information corresponding to a particular certification.

ALS ENVIRONMENTAL

DETAIL SUMMARY REPORT

Client: Leidos
 Project ID: Newman's Chevron / 204117

Service Request: P1805236

Date Received: 10/2/2018
 Time Received: 09:30

| | | |
|-------------------------------------|--------------------------|--------------------------|
| ASTM D1946-90(2006) - Fxd Gases Can | 3C Modified - Helium Can | TO-15 Modified - VOC SIM |
|-------------------------------------|--------------------------|--------------------------|

| Client Sample ID | Lab Code | Matrix | Date Collected | Time Collected | Container ID | Pi1 (psig) | Pf1 (psig) | ASTM D1946-90(2006) - Fxd Gases Can | 3C Modified - Helium Can | TO-15 Modified - VOC SIM |
|------------------|--------------|--------|----------------|----------------|--------------|------------|------------|-------------------------------------|--------------------------|--------------------------|
| SVP-1-092718 | P1805236-001 | Air | 9/27/2018 | 10:10 | 1SC00712 | -0.24 | 5.57 | X | X | X |
| SVP-2-092718 | P1805236-002 | Air | 9/27/2018 | 11:16 | 1SC00522 | 0.37 | 5.66 | X | X | X |
| SVP-3-092718 | P1805236-003 | Air | 9/27/2018 | 11:59 | 1SC01378 | 0.40 | 5.09 | X | X | X |
| DUP-1-092718 | P1805236-004 | Air | 9/27/2018 | 00:00 | 1SC00702 | 0.39 | 5.72 | X | X | X |
| EB-1-092618 | P1805236-005 | Air | 9/26/2018 | 14:20 | 1SC00703 | -4.56 | 6.16 | X | X | X |
| EB-1-092818 | P1805236-006 | Air | 9/28/2018 | 11:26 | 1SS00042 | -4.22 | 5.09 | X | X | X |



2655 Park Center Drive, Suite A
 Simi Valley, California 93065
 Phone (805) 526-7161
 Fax (805) 526-7270

Air - Chain of Custody Record & Analytical Service Request

ALS quote # 44579

Requested Turnaround Time in Business Days (Surcharges) please circle
 1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10-Day-Standard

ALS Project ID: **P180523X**

| Company Name & Address (Reporting Information) | | Project Name | | ALS Contact: | | Analysis Method | Comments e.g. Actual Preservative or specific instructions | |
|---|-------------------|--|--|--|--|--------------------------------------|---|---|
| Leidos 18939 120th Ave NE, Suite 112 Boothell, WA 98011 | | Newmags Chevron 204117 PO # / Billing Information PO 10215233 | | BTEX, MTBE, Naphthalene by TO-15 Modified H ₂ , CO ₂ , CO, Ne, CH ₄ , O ₂ by ASTM method H ₂ ium using GC/MS | | | | |
| Project Manager Russ Shropshire | | Sampler (Print & Sign) Russell Shropshire | | Flow Controller ID (Bar code # - FC #) | Canister Start Pressure "Hg | Canister End Pressure "Hg psig | Sample Volume | |
| Laboratory ID Number | Date Collected | Time Collected | Canister ID (Bar code # - AC, SC, etc.) | Canister Start Pressure "Hg | Canister End Pressure "Hg psig | Canister Start Pressure "Hg | Canister End Pressure "Hg psig | |
| SVP-1-092718 | 9/27/18 | 10:10 | 15C00712 | 29.96 | -1 | 29.96 | 1L | |
| SVP-2-092718 | | 11:16 | 15C00522 | 30.07 | -1.75 | 30.07 | 1L | |
| SVP-3-092718 | | 11:59 | 15C01378 | 30.02 | -1 | 30.02 | 1L | |
| DUP-1-092718 | | | 15C00702 | 30.08 | | 30.08 | 1L | |
| EB-1-092618 | 9/26/18 | 14:20 | 15C00703 | 30.24 | -10.49 | 30.24 | 1L | |
| EB-1-092818 | 9/28/18 | 11:26 | 15500042 | 29.87 30.85 | -9.33 | 29.87 | 1L | |
| Report Tier Levels - please select Tier I - Results (Default in not specified) _____ Tier II (Results + QC Summaries) _____ Tier III (Results + QC & Calibration Summaries) _____ Tier IV (Date Validation Package) 10% Surcharge <input checked="" type="checkbox"/> | | | | | | | | |
| Relinquished by: (Signature) Russ Shropshire | | Date: 9/28/18 | Time: 11:40 | | EDD required <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO | | | Chain of Custody Seal (Circle) INTACT <input type="checkbox"/> BROKEN <input type="checkbox"/> ABSENT <input type="checkbox"/> |
| Relinquished by: (Signature) Russ Shropshire | | Date: | Time: | | Date: 10-2-18 | | | Time: 8:30 |
| | | | | | | | Project Requirements (MRLs, QAPP) | Cooler / Blank Temperature °C |

1 2 3 4 5 6

**ALS Environmental
Sample Acceptance Check Form**

Client: Leidos Work order: P1805236
 Project: Newman's Chevron / 204117
 Sample(s) received on: 10/2/18 Date opened: 10/2/18 by: ADAVID

Note: This form is used for all samples received by ALS. The use of this form for custody seals is strictly meant to indicate presence/absence and not as an indication of compliance or nonconformity. Thermal preservation and pH will only be evaluated either at the request of the client and/or as required by the method/SOP.

- | | <u>Yes</u> | <u>No</u> | <u>N/A</u> |
|---|-------------------------------------|-------------------------------------|-------------------------------------|
| 1 Were sample containers properly marked with client sample ID? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 2 Did sample containers arrive in good condition? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 3 Were chain-of-custody papers used and filled out? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 4 Did sample container labels and/or tags agree with custody papers? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 5 Was sample volume received adequate for analysis? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 6 Are samples within specified holding times? | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 Was proper temperature (thermal preservation) of cooler at receipt adhered to? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 8 Were custody seals on outside of cooler/Box/Container? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| Location of seal(s)? _____ Sealing Lid? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Were signature and date included? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Were seals intact? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 9 Do containers have appropriate preservation , according to method/SOP or Client specified information? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Is there a client indication that the submitted samples are pH preserved? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Were VOA vials checked for presence/absence of air bubbles? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Does the client/method/SOP require that the analyst check the sample pH and <u>if necessary</u> alter it? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 10 Tubes: Are the tubes capped and intact? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 11 Badges: Are the badges properly capped and intact? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Are dual bed badges separated and individually capped and intact? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

| Lab Sample ID | Container Description | Required pH * | Received pH | Adjusted pH | VOA Headspace (Presence/Absence) | Receipt / Preservation Comments |
|-----------------|--------------------------------|---------------|-------------|-------------|----------------------------------|---------------------------------|
| P1805236-001.01 | 1.0 L Source Can | | | | | |
| P1805236-002.01 | 1.0 L Source Can | | | | | |
| P1805236-003.01 | 1.0 L Source Can | | | | | |
| P1805236-004.01 | 1.0 L Source Can | | | | | |
| P1805236-005.01 | 1.0 L Source Can | | | | | |
| P1805236-006.01 | 1.0 L Source Silonite Canister | | | | | |
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Explain any discrepancies: (include lab sample ID numbers): _____

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Leidos
Client Project ID: Newman's Chevron / 204117

ALS Project ID: P1805236

Helium

Test Code: EPA 3C Modified
 Instrument ID: HP5890 II/GC8/TCD
 Analyst: Gilbert Gutierrez
 Sample Type: 1.0 L Summa Canister(s)
 Test Notes:

Date(s) Collected: 9/26 - 9/28/18
 Date Received: 10/2/18
 Date Analyzed: 10/9/18

| Client Sample ID | ALS Sample ID | Injection Volume ml(s) | Container Dilution Factor | Result ppmV | MRL ppmV | MDL ppmV | Data Qualifier |
|------------------|---------------|------------------------|---------------------------|-------------|----------|----------|----------------|
| SVP-1-092718 | P1805236-001 | 1.00 | 1.40 | 69 | 35 | 7.7 | |
| SVP-2-092718 | P1805236-002 | 1.00 | 1.35 | 250 | 34 | 7.4 | |
| SVP-3-092718 | P1805236-003 | 1.00 | 1.31 | 140 | 33 | 7.2 | |
| DUP-1-092718 | P1805236-004 | 1.00 | 1.35 | 250 | 34 | 7.4 | |
| EB-1-092618 | P1805236-005 | 1.00 | 2.06 | 3,700 | 52 | 11 | |
| EB-1-092818 | P1805236-006 | 1.00 | 1.89 | 850 | 47 | 10 | |
| Method Blank | P181009-MB | 1.00 | 1.00 | ND | 25 | 5.5 | |

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

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Client: Leidos
Client Sample ID: Lab Control Sample
Client Project ID: Newman's Chevron / 204117

ALS Project ID: P1805236
ALS Sample ID: P181009-LCS

Test Code: EPA 3C Modified
Instrument ID: HP5890 II/GC8/TCD
Analyst: Gilbert Gutierrez
Sample Type: 1.0 L Summa Canister
Test Notes:

Date Collected: NA
Date Received: NA
Date Analyzed: 10/09/18
Volume(s) Analyzed: NA ml(s)

| CAS # | Compound | Spike Amount ppmV | Result ppmV | % Recovery | ALS Acceptance Limits | Data Qualifier |
|-----------|----------|----------------------|----------------|------------|-----------------------------|-------------------|
| 7440-59-7 | Helium | 10,000 | 11,500 | 115 | 83-129 | |

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: Leidos
Client Sample ID: SVP-1-092718
Client Project ID: Newman's Chevron / 204117

ALS Project ID: P1805236
 ALS Sample ID: P1805236-001

Test Code: ASTM D1946
 Instrument ID: HP5890 II/GC1/TCD
 Analyst: Gilbert Gutierrez
 Sample Type: 1.0 L Summa Canister
 Test Notes:
 Container ID: 1SC00712

Date Collected: 9/27/18
 Date Received: 10/2/18
 Date Analyzed: 10/10/18
 Volume(s) Analyzed: 0.10 ml(s)

Initial Pressure (psig): -0.24 Final Pressure (psig): 5.57

Container Dilution Factor: 1.40

| CAS # | Compound | Result %, v/v | MRL %, v/v | Data Qualifier |
|-----------|-----------------------|------------------|---------------|-------------------|
| 1333-74-0 | Hydrogen | ND | 0.14 | |
| 7782-44-7 | Oxygen* | 14.6 | 0.14 | |
| 630-08-0 | Carbon Monoxide | ND | 0.14 | |
| 74-82-8 | Methane | ND | 0.14 | |
| 124-38-9 | Carbon Dioxide | 5.79 | 0.14 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

* = The oxygen result may include argon due to coelution. Ambient air includes 0.93% argon.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Leidos
Client Sample ID: SVP-2-092718
Client Project ID: Newman's Chevron / 204117

ALS Project ID: P1805236
 ALS Sample ID: P1805236-002

Test Code: ASTM D1946
 Instrument ID: HP5890 II/GC1/TCD
 Analyst: Gilbert Gutierrez
 Sample Type: 1.0 L Summa Canister
 Test Notes:
 Container ID: 1SC00522

Date Collected: 9/27/18
 Date Received: 10/2/18
 Date Analyzed: 10/10/18
 Volume(s) Analyzed: 0.10 ml(s)

Initial Pressure (psig): 0.37 Final Pressure (psig): 5.66

Container Dilution Factor: 1.35

| CAS # | Compound | Result %, v/v | MRL %, v/v | Data Qualifier |
|-----------|-----------------------|------------------|---------------|-------------------|
| 1333-74-0 | Hydrogen | ND | 0.14 | |
| 7782-44-7 | Oxygen* | 13.8 | 0.14 | |
| 630-08-0 | Carbon Monoxide | ND | 0.14 | |
| 74-82-8 | Methane | ND | 0.14 | |
| 124-38-9 | Carbon Dioxide | 5.71 | 0.14 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

* = The oxygen result may include argon due to coelution. Ambient air includes 0.93% argon.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Leidos
Client Sample ID: SVP-3-092718
Client Project ID: Newman's Chevron / 204117

ALS Project ID: P1805236
 ALS Sample ID: P1805236-003

Test Code: ASTM D1946
 Instrument ID: HP5890 II/GC1/TCD
 Analyst: Gilbert Gutierrez
 Sample Type: 1.0 L Summa Canister
 Test Notes:
 Container ID: 1SC01378

Date Collected: 9/27/18
 Date Received: 10/2/18
 Date Analyzed: 10/10/18
 Volume(s) Analyzed: 0.10 ml(s)

Initial Pressure (psig): 0.40 Final Pressure (psig): 5.09

Container Dilution Factor: 1.31

| CAS # | Compound | Result %, v/v | MRL %, v/v | Data Qualifier |
|-----------|-----------------------|------------------|---------------|-------------------|
| 1333-74-0 | Hydrogen | ND | 0.13 | |
| 7782-44-7 | Oxygen* | 17.9 | 0.13 | |
| 630-08-0 | Carbon Monoxide | ND | 0.13 | |
| 74-82-8 | Methane | ND | 0.13 | |
| 124-38-9 | Carbon Dioxide | 3.63 | 0.13 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

* = The oxygen result may include argon due to coelution. Ambient air includes 0.93% argon.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Leidos
Client Sample ID: DUP-1-092718
Client Project ID: Newman's Chevron / 204117

ALS Project ID: P1805236
 ALS Sample ID: P1805236-004

Test Code: ASTM D1946
 Instrument ID: HP5890 II/GC1/TCD
 Analyst: Gilbert Gutierrez
 Sample Type: 1.0 L Summa Canister
 Test Notes:
 Container ID: 1SC00702

Date Collected: 9/27/18
 Date Received: 10/2/18
 Date Analyzed: 10/10/18
 Volume(s) Analyzed: 0.10 ml(s)

Initial Pressure (psig): 0.39 Final Pressure (psig): 5.72

Container Dilution Factor: 1.35

| CAS # | Compound | Result %, v/v | MRL %, v/v | Data Qualifier |
|-----------|-----------------------|------------------|---------------|-------------------|
| 1333-74-0 | Hydrogen | ND | 0.14 | |
| 7782-44-7 | Oxygen* | 13.8 | 0.14 | |
| 630-08-0 | Carbon Monoxide | ND | 0.14 | |
| 74-82-8 | Methane | ND | 0.14 | |
| 124-38-9 | Carbon Dioxide | 5.68 | 0.14 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

* = The oxygen result may include argon due to coelution. Ambient air includes 0.93% argon.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Leidos
Client Sample ID: EB-1-092618
Client Project ID: Newman's Chevron / 204117

ALS Project ID: P1805236
 ALS Sample ID: P1805236-005

Test Code: ASTM D1946
 Instrument ID: HP5890 II/GC1/TCD
 Analyst: Gilbert Gutierrez
 Sample Type: 1.0 L Summa Canister
 Test Notes:
 Container ID: 1SC00703

Date Collected: 9/26/18
 Date Received: 10/2/18
 Date Analyzed: 10/10/18
 Volume(s) Analyzed: 0.10 ml(s)

Initial Pressure (psig): -4.56 Final Pressure (psig): 6.16

Container Dilution Factor: 2.06

| CAS # | Compound | Result %, v/v | MRL %, v/v | Data Qualifier |
|-----------|-----------------|------------------|---------------|-------------------|
| 1333-74-0 | Hydrogen | ND | 0.21 | |
| 7782-44-7 | Oxygen* | 12.5 | 0.21 | |
| 630-08-0 | Carbon Monoxide | ND | 0.21 | |
| 74-82-8 | Methane | ND | 0.21 | |
| 124-38-9 | Carbon Dioxide | ND | 0.21 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

* = The oxygen result may include argon due to coelution. Ambient air includes 0.93% argon.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Leidos
Client Sample ID: EB-1-092818
Client Project ID: Newman's Chevron / 204117

ALS Project ID: P1805236
 ALS Sample ID: P1805236-006

Test Code: ASTM D1946
 Instrument ID: HP5890 II/GC1/TCD
 Analyst: Gilbert Gutierrez
 Sample Type: 1.0 L Silonite Summa Canister
 Test Notes:
 Container ID: 1SS00042

Date Collected: 9/28/18
 Date Received: 10/2/18
 Date Analyzed: 10/10/18
 Volume(s) Analyzed: 0.10 ml(s)

Initial Pressure (psig): -4.22 Final Pressure (psig): 5.09

Container Dilution Factor: 1.89

| CAS # | Compound | Result %, v/v | MRL %, v/v | Data Qualifier |
|-----------|-----------------|------------------|---------------|-------------------|
| 1333-74-0 | Hydrogen | ND | 0.19 | |
| 7782-44-7 | Oxygen* | 19.9 | 0.19 | |
| 630-08-0 | Carbon Monoxide | ND | 0.19 | |
| 74-82-8 | Methane | ND | 0.19 | |
| 124-38-9 | Carbon Dioxide | ND | 0.19 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

* = The oxygen result may include argon due to coelution. Ambient air includes 0.93% argon.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: Leidos
Client Sample ID: Method Blank
Client Project ID: Newman's Chevron / 204117

ALS Project ID: P1805236
 ALS Sample ID: P181010-MB

Test Code: ASTM D1946
 Instrument ID: HP5890 II/GC1/TCD
 Analyst: Gilbert Gutierrez
 Sample Type: 1.0 L Summa Canister
 Test Notes:

Date Collected: NA
 Date Received: NA
 Date Analyzed: 10/10/18
 Volume(s) Analyzed: 0.10 ml(s)

| CAS # | Compound | Result %, v/v | MRL %, v/v | Data Qualifier |
|-----------|-----------------|------------------|---------------|-------------------|
| 1333-74-0 | Hydrogen | ND | 0.10 | |
| 7782-44-7 | Oxygen* | ND | 0.10 | |
| 630-08-0 | Carbon Monoxide | ND | 0.10 | |
| 74-82-8 | Methane | ND | 0.10 | |
| 124-38-9 | Carbon Dioxide | ND | 0.10 | |

ND = Compound was analyzed for, but not detected above the laboratory reporting limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

* = The oxygen result may include argon due to coelution. Ambient air includes 0.93% argon.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

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Client: Leidos
Client Sample ID: Lab Control Sample
Client Project ID: Newman's Chevron / 204117

ALS Project ID: P1805236
 ALS Sample ID: P181010-LCS

Test Code: ASTM D1946
 Instrument ID: HP5890 II/GC1/TCD
 Analyst: Gilbert Gutierrez
 Sample Type: 1.0 L Summa Canister
 Test Notes:

Date Collected: NA
 Date Received: NA
 Date Analyzed: 10/10/18
 Volume(s) Analyzed: NA ml(s)

| CAS # | Compound | Spike Amount ppmV | Result ppmV | % Recovery | ALS Acceptance Limits | Data Qualifier |
|-----------|-----------------|----------------------|----------------|------------|-----------------------------|-------------------|
| 1333-74-0 | Hydrogen | 40,000 | 42,100 | 105 | 94-107 | |
| 7782-44-7 | Oxygen* | 40,000 | 41,400 | 104 | 98-109 | |
| 630-08-0 | Carbon Monoxide | 50,000 | 52,500 | 105 | 98-109 | |
| 74-82-8 | Methane | 40,000 | 41,700 | 104 | 98-110 | |
| 124-38-9 | Carbon Dioxide | 50,000 | 49,000 | 98 | 95-108 | |

* = The oxygen result may include argon due to coelution. Ambient air includes 0.93% argon.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Leidos
Client Sample ID: SVP-1-092718
Client Project ID: Newman's Chevron / 204117

ALS Project ID: P1805236
 ALS Sample ID: P1805236-001

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 1.0 L Summa Canister
 Test Notes:
 Container ID: 1SC00712

Date Collected: 9/27/18
 Date Received: 10/2/18
 Date Analyzed: 10/12/18
 Volume(s) Analyzed: 0.40 Liter(s)

Initial Pressure (psig): -0.24 Final Pressure (psig): 5.57

Container Dilution Factor: 1.40

| CAS # | Compound | Result µg/m ³ | MRL µg/m ³ | MDL µg/m ³ | Result ppbV | MRL ppbV | MDL ppbV | Data Qualifier |
|-------------|-------------------------|-----------------------------|--------------------------|--------------------------|----------------|-------------|-------------|-------------------|
| 1634-04-4 | Methyl tert-Butyl Ether | ND | 1.9 | 0.033 | ND | 0.52 | 0.0090 | |
| 71-43-2 | Benzene | 0.46 | 1.8 | 0.070 | 0.14 | 0.57 | 0.022 | J |
| 108-88-3 | Toluene | 1.8 | 1.9 | 0.039 | 0.48 | 0.49 | 0.010 | J |
| 100-41-4 | Ethylbenzene | 0.12 | 1.8 | 0.034 | 0.028 | 0.42 | 0.0078 | J |
| 179601-23-1 | m,p-Xylenes | 0.35 | 3.9 | 0.067 | 0.081 | 0.89 | 0.015 | J |
| 95-47-6 | o-Xylene | 0.34 | 1.9 | 0.031 | 0.078 | 0.43 | 0.0072 | J |
| 91-20-3 | Naphthalene | 0.23 | 1.8 | 0.056 | 0.044 | 0.34 | 0.011 | J |

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Leidos
Client Sample ID: SVP-2-092718
Client Project ID: Newman's Chevron / 204117

ALS Project ID: P1805236
 ALS Sample ID: P1805236-002

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 1.0 L Summa Canister
 Test Notes:
 Container ID: 1SC00522

Date Collected: 9/27/18
 Date Received: 10/2/18
 Date Analyzed: 10/12/18
 Volume(s) Analyzed: 0.40 Liter(s)

Initial Pressure (psig): 0.37 Final Pressure (psig): 5.66

Container Dilution Factor: 1.35

| CAS # | Compound | Result µg/m ³ | MRL µg/m ³ | MDL µg/m ³ | Result ppbV | MRL ppbV | MDL ppbV | Data Qualifier |
|-------------|-------------------------|-----------------------------|--------------------------|--------------------------|----------------|-------------|-------------|-------------------|
| 1634-04-4 | Methyl tert-Butyl Ether | ND | 1.8 | 0.031 | ND | 0.51 | 0.0087 | |
| 71-43-2 | Benzene | 0.26 | 1.8 | 0.068 | 0.080 | 0.55 | 0.021 | J |
| 108-88-3 | Toluene | 0.26 | 1.8 | 0.037 | 0.069 | 0.47 | 0.0099 | J |
| 100-41-4 | Ethylbenzene | 0.096 | 1.8 | 0.033 | 0.022 | 0.40 | 0.0075 | J |
| 179601-23-1 | m,p-Xylenes | 0.15 | 3.7 | 0.064 | 0.034 | 0.86 | 0.015 | J |
| 95-47-6 | o-Xylene | 0.083 | 1.8 | 0.030 | 0.019 | 0.41 | 0.0069 | J |
| 91-20-3 | Naphthalene | ND | 1.7 | 0.054 | ND | 0.33 | 0.010 | |

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Leidos
Client Sample ID: SVP-3-092718
Client Project ID: Newman's Chevron / 204117

ALS Project ID: P1805236
 ALS Sample ID: P1805236-003

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 1.0 L Summa Canister
 Test Notes:
 Container ID: 1SC01378

Date Collected: 9/27/18
 Date Received: 10/2/18
 Date Analyzed: 10/12/18
 Volume(s) Analyzed: 0.40 Liter(s)

Initial Pressure (psig): 0.40 Final Pressure (psig): 5.09

Container Dilution Factor: 1.31

| CAS # | Compound | Result µg/m ³ | MRL µg/m ³ | MDL µg/m ³ | Result ppbV | MRL ppbV | MDL ppbV | Data Qualifier |
|-------------|-------------------------|-----------------------------|--------------------------|--------------------------|----------------|-------------|-------------|-------------------|
| 1634-04-4 | Methyl tert-Butyl Ether | ND | 1.8 | 0.030 | ND | 0.49 | 0.0085 | |
| 71-43-2 | Benzene | 0.18 | 1.7 | 0.066 | 0.056 | 0.53 | 0.021 | J |
| 108-88-3 | Toluene | 1.7 | 1.7 | 0.036 | 0.45 | 0.46 | 0.0096 | J |
| 100-41-4 | Ethylbenzene | 0.30 | 1.7 | 0.032 | 0.069 | 0.39 | 0.0073 | J |
| 179601-23-1 | m,p-Xylenes | 0.66 | 3.6 | 0.062 | 0.15 | 0.83 | 0.014 | J |
| 95-47-6 | o-Xylene | 0.47 | 1.7 | 0.029 | 0.11 | 0.40 | 0.0067 | J |
| 91-20-3 | Naphthalene | 1.4 | 1.7 | 0.052 | 0.27 | 0.32 | 0.010 | J |

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

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Client: Leidos
Client Sample ID: DUP-1-092718
Client Project ID: Newman's Chevron / 204117

ALS Project ID: P1805236
 ALS Sample ID: P1805236-004

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 1.0 L Summa Canister
 Test Notes:
 Container ID: 1SC00702

Date Collected: 9/27/18
 Date Received: 10/2/18
 Date Analyzed: 10/12/18
 Volume(s) Analyzed: 0.40 Liter(s)

Initial Pressure (psig): 0.39 Final Pressure (psig): 5.72

Container Dilution Factor: 1.35

| CAS # | Compound | Result µg/m ³ | MRL µg/m ³ | MDL µg/m ³ | Result ppbV | MRL ppbV | MDL ppbV | Data Qualifier |
|-------------|-------------------------|-----------------------------|--------------------------|--------------------------|----------------|-------------|-------------|-------------------|
| 1634-04-4 | Methyl tert-Butyl Ether | ND | 1.8 | 0.031 | ND | 0.51 | 0.0087 | |
| 71-43-2 | Benzene | 0.58 | 1.8 | 0.068 | 0.18 | 0.55 | 0.021 | J |
| 108-88-3 | Toluene | 0.80 | 1.8 | 0.037 | 0.21 | 0.47 | 0.0099 | J |
| 100-41-4 | Ethylbenzene | 0.26 | 1.8 | 0.033 | 0.061 | 0.40 | 0.0075 | J |
| 179601-23-1 | m,p-Xylenes | 0.70 | 3.7 | 0.064 | 0.16 | 0.86 | 0.015 | J |
| 95-47-6 | o-Xylene | 0.52 | 1.8 | 0.030 | 0.12 | 0.41 | 0.0069 | J |
| 91-20-3 | Naphthalene | 0.16 | 1.7 | 0.054 | 0.030 | 0.33 | 0.010 | J |

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: Leidos
Client Sample ID: EB-1-092618
Client Project ID: Newman's Chevron / 204117

ALS Project ID: P1805236
 ALS Sample ID: P1805236-005

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 1.0 L Summa Canister
 Test Notes:
 Container ID: 1SC00703

Date Collected: 9/26/18
 Date Received: 10/2/18
 Date Analyzed: 10/12/18
 Volume(s) Analyzed: 0.40 Liter(s)

Initial Pressure (psig): -4.56 Final Pressure (psig): 6.16

Container Dilution Factor: 2.06

| CAS # | Compound | Result µg/m ³ | MRL µg/m ³ | MDL µg/m ³ | Result ppbV | MRL ppbV | MDL ppbV | Data Qualifier |
|-------------|-------------------------|-----------------------------|--------------------------|--------------------------|----------------|-------------|-------------|-------------------|
| 1634-04-4 | Methyl tert-Butyl Ether | ND | 2.8 | 0.048 | ND | 0.77 | 0.013 | |
| 71-43-2 | Benzene | 0.38 | 2.7 | 0.10 | 0.12 | 0.84 | 0.032 | J |
| 108-88-3 | Toluene | 5.7 | 2.7 | 0.057 | 1.5 | 0.72 | 0.015 | |
| 100-41-4 | Ethylbenzene | 0.46 | 2.7 | 0.050 | 0.11 | 0.62 | 0.012 | J |
| 179601-23-1 | m,p-Xylenes | 1.5 | 5.7 | 0.098 | 0.34 | 1.3 | 0.023 | J |
| 95-47-6 | o-Xylene | 0.33 | 2.7 | 0.046 | 0.076 | 0.63 | 0.011 | J |
| 91-20-3 | Naphthalene | ND | 2.6 | 0.082 | ND | 0.50 | 0.016 | |

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: Leidos
Client Sample ID: EB-1-092818
Client Project ID: Newman's Chevron / 204117

ALS Project ID: P1805236
 ALS Sample ID: P1805236-006

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 1.0 L Silonite Summa Canister
 Test Notes:
 Container ID: 1SS00042

Date Collected: 9/28/18
 Date Received: 10/2/18
 Date Analyzed: 10/12/18
 Volume(s) Analyzed: 0.40 Liter(s)

Initial Pressure (psig): -4.22 Final Pressure (psig): 5.09

Container Dilution Factor: 1.89

| CAS # | Compound | Result µg/m ³ | MRL µg/m ³ | MDL µg/m ³ | Result ppbV | MRL ppbV | MDL ppbV | Data Qualifier |
|-------------|-------------------------|-----------------------------|--------------------------|--------------------------|----------------|-------------|-------------|-------------------|
| 1634-04-4 | Methyl tert-Butyl Ether | ND | 2.6 | 0.044 | ND | 0.71 | 0.012 | |
| 71-43-2 | Benzene | 0.36 | 2.5 | 0.095 | 0.11 | 0.77 | 0.030 | J |
| 108-88-3 | Toluene | 14 | 2.5 | 0.052 | 3.7 | 0.66 | 0.014 | |
| 100-41-4 | Ethylbenzene | 0.58 | 2.5 | 0.046 | 0.13 | 0.57 | 0.011 | J |
| 179601-23-1 | m,p-Xylenes | 2.1 | 5.2 | 0.090 | 0.47 | 1.2 | 0.021 | J |
| 95-47-6 | o-Xylene | 0.47 | 2.5 | 0.042 | 0.11 | 0.58 | 0.0097 | J |
| 91-20-3 | Naphthalene | 1.1 | 2.4 | 0.076 | 0.21 | 0.46 | 0.014 | J |

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

J = The result is an estimated concentration that is less than the MRL but greater than or equal to the MDL.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: Leidos
Client Sample ID: Method Blank
Client Project ID: Newman's Chevron / 204117

ALS Project ID: P1805236
 ALS Sample ID: P181012-MB

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 1.0 L Summa Canister
 Test Notes:

Date Collected: NA
 Date Received: NA
 Date Analyzed: 10/12/18
 Volume(s) Analyzed: 1.00 Liter(s)

Container Dilution Factor: 1.00

| CAS # | Compound | Result µg/m ³ | MRL µg/m ³ | MDL µg/m ³ | Result ppbV | MRL ppbV | MDL ppbV | Data Qualifier |
|-------------|-------------------------|-----------------------------|--------------------------|--------------------------|----------------|-------------|-------------|-------------------|
| 1634-04-4 | Methyl tert-Butyl Ether | ND | 0.54 | 0.0093 | ND | 0.15 | 0.0026 | |
| 71-43-2 | Benzene | ND | 0.52 | 0.020 | ND | 0.16 | 0.0063 | |
| 108-88-3 | Toluene | ND | 0.53 | 0.011 | ND | 0.14 | 0.0029 | |
| 100-41-4 | Ethylbenzene | ND | 0.52 | 0.0097 | ND | 0.12 | 0.0022 | |
| 179601-23-1 | m,p-Xylenes | ND | 1.1 | 0.019 | ND | 0.25 | 0.0044 | |
| 95-47-6 | o-Xylene | ND | 0.53 | 0.0089 | ND | 0.12 | 0.0020 | |
| 91-20-3 | Naphthalene | ND | 0.51 | 0.016 | ND | 0.097 | 0.0031 | |

ND = Compound was analyzed for, but not detected above the laboratory detection limit.

MRL = Method Reporting Limit - The minimum quantity of a target analyte that can be confidently determined by the referenced method.

ALS ENVIRONMENTAL

SURROGATE SPIKE RECOVERY RESULTS

Page 1 of 1

Client: Leidos
Client Project ID: Newman's Chevron / 204117

ALS Project ID: P1805236

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 1.0 L Summa Canister(s) / 1.0 L Silonite Summa Canister(s)
 Test Notes:

Date(s) Collected: 9/26 - 9/28/18
 Date(s) Received: 10/2/18
 Date(s) Analyzed: 10/12/18

| Client Sample ID | ALS Sample ID | 1,2-Dichloroethane-d4 | Toluene-d8 | Bromofluorobenzene | Acceptance Limits | Data Qualifier |
|--------------------|---------------|-----------------------|-------------|--------------------|-------------------|----------------|
| | | % Recovered | % Recovered | % Recovered | | |
| Method Blank | P181012-MB | 99 | 104 | 103 | 70-130 | |
| Lab Control Sample | P181012-LCS | 97 | 100 | 110 | 70-130 | |
| SVP-1-092718 | P1805236-001 | 99 | 105 | 104 | 70-130 | |
| SVP-2-092718 | P1805236-002 | 99 | 105 | 104 | 70-130 | |
| SVP-3-092718 | P1805236-003 | 99 | 107 | 100 | 70-130 | |
| DUP-1-092718 | P1805236-004 | 98 | 104 | 106 | 70-130 | |
| EB-1-092618 | P1805236-005 | 98 | 103 | 106 | 70-130 | |
| EB-1-092818 | P1805236-006 | 99 | 103 | 105 | 70-130 | |

Surrogate percent recovery is verified and accepted based on the on-column result.

Reported results are shown in concentration units and as a result of the calculation, may vary slightly from the on-column percent recovery.

ALS ENVIRONMENTAL

LABORATORY CONTROL SAMPLE SUMMARY

Page 1 of 1

Client: Leidos
Client Sample ID: Lab Control Sample
Client Project ID: Newman's Chevron / 204117

ALS Project ID: P1805236
 ALS Sample ID: P181012-LCS

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5973N/HP6890A/MS19
 Analyst: Wida Ang
 Sample Type: 1.0 L Summa Canister
 Test Notes:

Date Collected: NA
 Date Received: NA
 Date Analyzed: 10/12/18
 Volume(s) Analyzed: 0.125 Liter(s)

| CAS # | Compound | Spike Amount µg/m ³ | Result µg/m ³ | % Recovery | ALS | Data Qualifier |
|-------------|-------------------------|-----------------------------------|-----------------------------|------------|----------------------|-------------------|
| | | | | | Acceptance Limits | |
| 1634-04-4 | Methyl tert-Butyl Ether | 8.58 | 8.20 | 96 | 69-125 | |
| 71-43-2 | Benzene | 8.44 | 7.84 | 93 | 76-126 | |
| 108-88-3 | Toluene | 8.48 | 8.06 | 95 | 69-122 | |
| 100-41-4 | Ethylbenzene | 8.49 | 8.57 | 101 | 76-122 | |
| 179601-23-1 | m,p-Xylenes | 17.0 | 17.8 | 105 | 73-126 | |
| 95-47-6 | o-Xylene | 8.56 | 8.89 | 104 | 70-129 | |
| 91-20-3 | Naphthalene | 8.12 | 8.63 | 106 | 26-143 | |

Laboratory Control Sample percent recovery is verified and accepted based on the on-column result.
 Reported results are shown in concentration units and as a result of the calculation, may vary slightly.

ALS ENVIRONMENTAL

RESULTS OF ANALYSIS

Page 1 of 1

Client: Leidos
Client Project ID: Newman's Chevron / 204117

ALS Project ID: P1805236

Internal Standard Area and RT Summary

Test Code: EPA TO-15 SIM
 Instrument ID: Tekmar AUTOCAN/Agilent 5975Cinert/7890A/MS19
 Analyst: Wida Ang
 Sample Type: 1.0 L Summa Canister(s)
 Test Notes:

Lab File ID: 10121802.D
 Date Analyzed: 10/12/18
 Time Analyzed: 03:46

| | IS1 (BCM) | | IS2 (DFB) | | IS3 (CBZ) | |
|-------------------------|-----------|------|-----------|-------|-----------|-------|
| | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| 24 Hour Standard | 19534 | 9.62 | 89611 | 11.58 | 11132 | 15.92 |
| Upper Limit | 27348 | 9.95 | 125455 | 11.91 | 15585 | 16.25 |
| Lower Limit | 11720 | 9.29 | 53767 | 11.25 | 6679 | 15.59 |

| Client Sample ID | | IS1 (BCM) | | IS2 (DFB) | | IS3 (CBZ) | |
|------------------|--------------------|-----------|------|-----------|-------|-----------|-------|
| | | AREA # | RT # | AREA # | RT # | AREA # | RT # |
| 01 | Method Blank | 18092 | 9.62 | 77381 | 11.58 | 10109 | 15.92 |
| 02 | Lab Control Sample | 18769 | 9.62 | 86003 | 11.58 | 10717 | 15.92 |
| 03 | EB-1-092618 | 18247 | 9.62 | 82106 | 11.58 | 10610 | 15.92 |
| 04 | EB-1-092818 | 18689 | 9.61 | 83171 | 11.58 | 10888 | 15.92 |
| 05 | SVP-1-092718 | 18723 | 9.62 | 85533 | 11.58 | 12091 | 15.92 |
| 06 | SVP-2-092718 | 18649 | 9.62 | 84471 | 11.58 | 11705 | 15.92 |
| 07 | SVP-3-092718 | 18364 | 9.62 | 83356 | 11.58 | 12234 | 15.92 |
| 08 | DUP-1-092718 | 18966 | 9.62 | 87158 | 11.58 | 12021 | 15.92 |
| 09 | | | | | | | |
| 10 | | | | | | | |
| 11 | | | | | | | |
| 12 | | | | | | | |
| 13 | | | | | | | |
| 14 | | | | | | | |
| 15 | | | | | | | |
| 16 | | | | | | | |
| 17 | | | | | | | |
| 18 | | | | | | | |
| 19 | | | | | | | |
| 20 | | | | | | | |

IS1 (BCM) = Bromochloromethane
 IS2 (DFB) = 1,4-Difluorobenzene
 IS3 (CBZ) = Chlorobenzene-d5

AREA UPPER LIMIT = 140% of internal standard area
 AREA LOWER LIMIT = 60% of internal standard area
 RT UPPER LIMIT = 0.33 minutes of internal standard RT
 RT LOWER LIMIT = 0.33 minutes of internal standard RT

Column used to flag values outside QC limits with an I.
 I = Internal standard not within the specified limits. See case narrative.

Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
 Data File : 10091813.D
 Signal(s) : TCD1A.CH
 Acq On : 09-Oct-2018, 10:48:26
 Operator : GG
 Sample : P1805236-001 1.0ml
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Oct 10 11:16:36 2018
 Quant Method : J:\GC08\METHODS\H2HE092517.M
 Quant Title : Hydrogen and Helium by EPA Method 3C
 QLast Update : Tue Sep 26 13:09:57 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

| Compound | R.T. | Response | Conc | Units |
|------------------|-------|----------|--------|-------|
| ----- | | | | |
| Target Compounds | | | | |
| 1) Helium | 0.767 | 1785 | 49.561 | ppm m |
| 2) Hydrogen | 0.000 | 0 | N.D. | ppm |
| ----- | | | | |

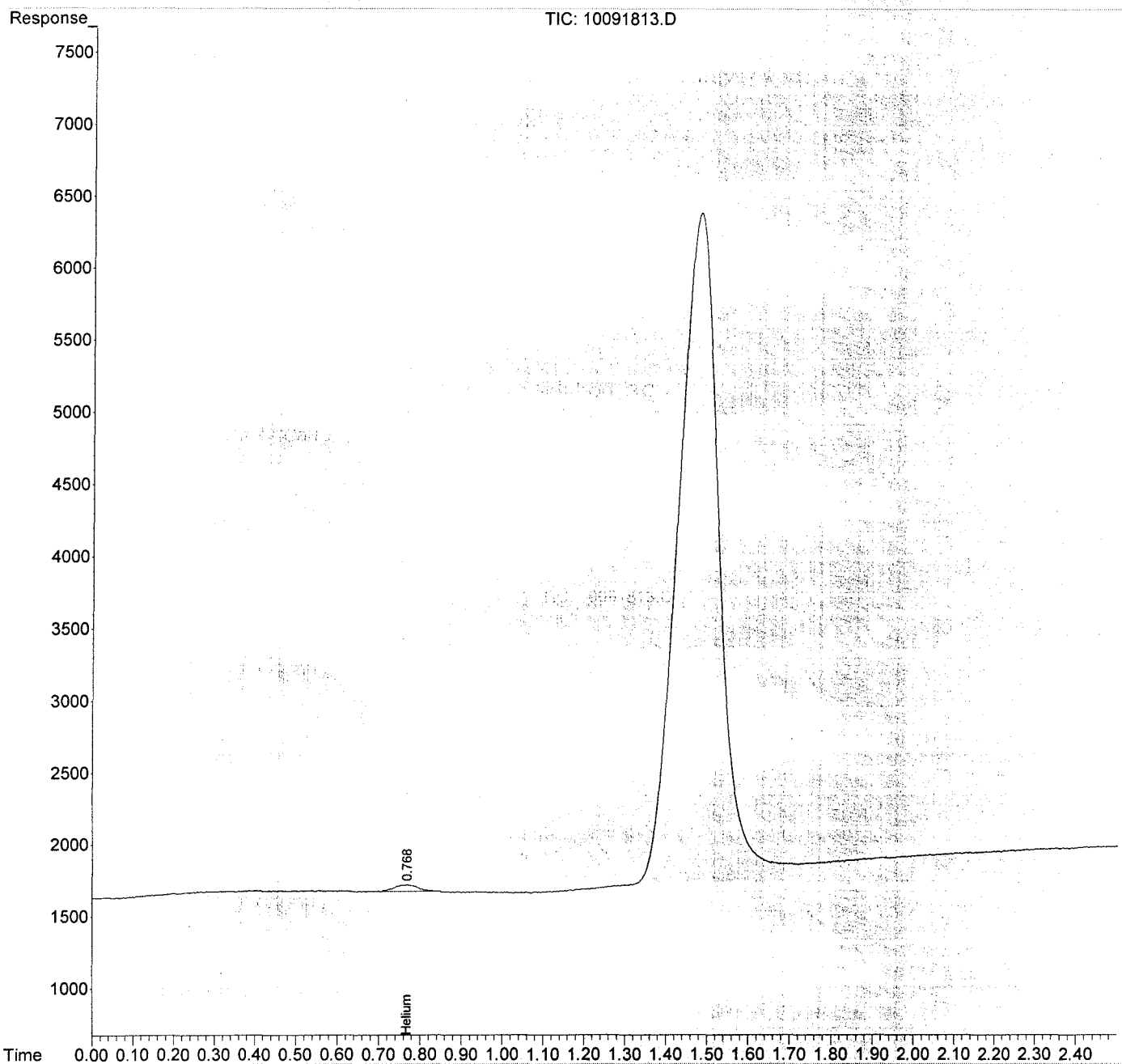
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
Data File : 10091813.D
Signal(s) : TCD1A.CH
Acq On : 09-Oct-2018, 10:48:26
Operator : GG
Sample : P1805236-001 1.0ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 10 11:16:36 2018
Quant Method : J:\GC08\METHODS\H2HE092517.M
Quant Title : Hydrogen and Helium by EPA Method 3C
QLast Update : Tue Sep 26 13:09:57 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :

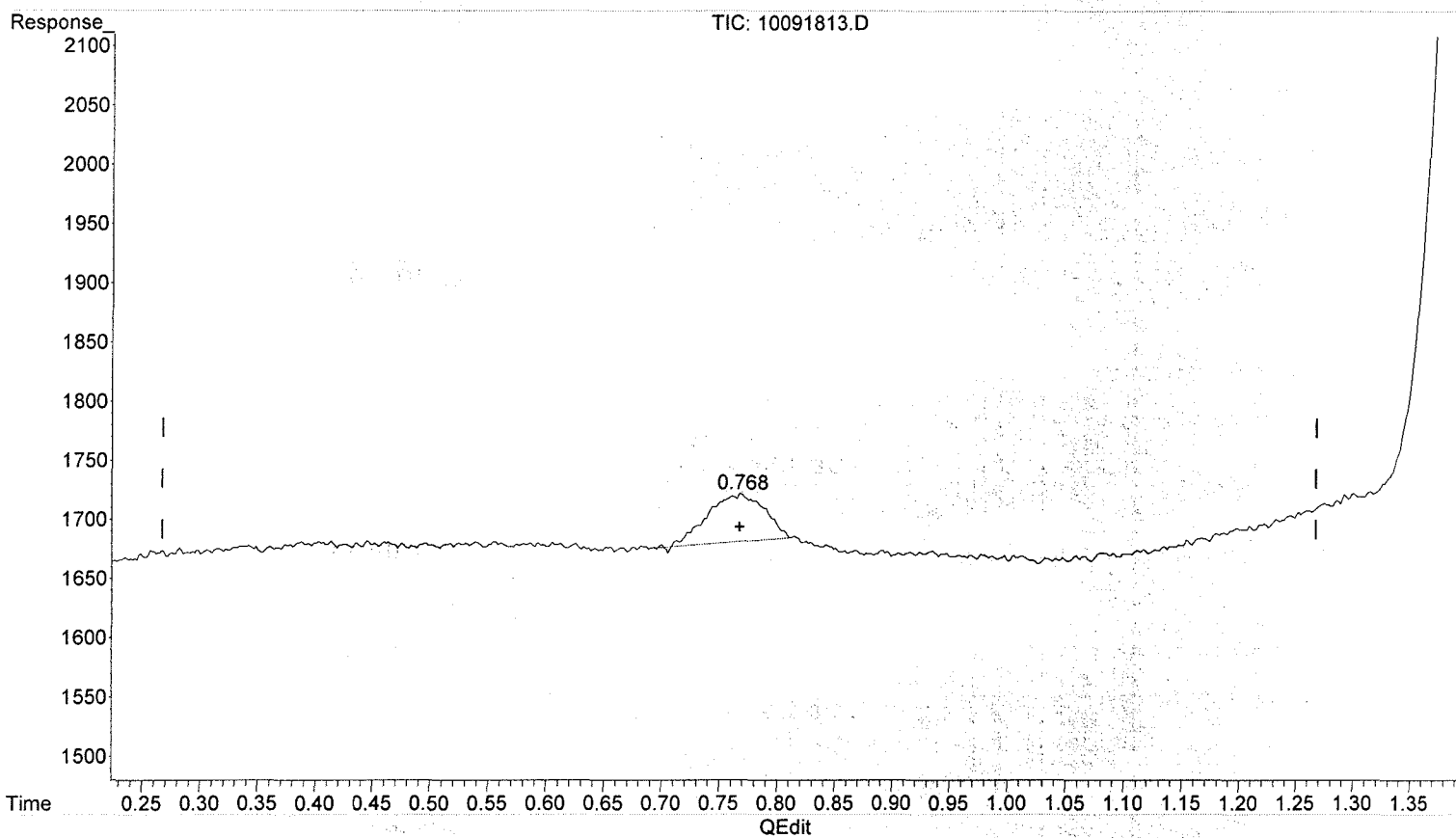


Quantitation Report (Qedit)

Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
Data File : 10091813.D
Signal(s) : TCD1A.CH
Acq On : 09-Oct-2018, 10:48:26
Operator : GG
Sample : P1805236-001 1.0ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 10 11:16:36 2018
Quant Method : J:\GC08\METHODS\H2HE092517.M
Quant Title : Hydrogen and Helium by EPA Method 3C
QLast Update : Tue Sep 26 13:09:57 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



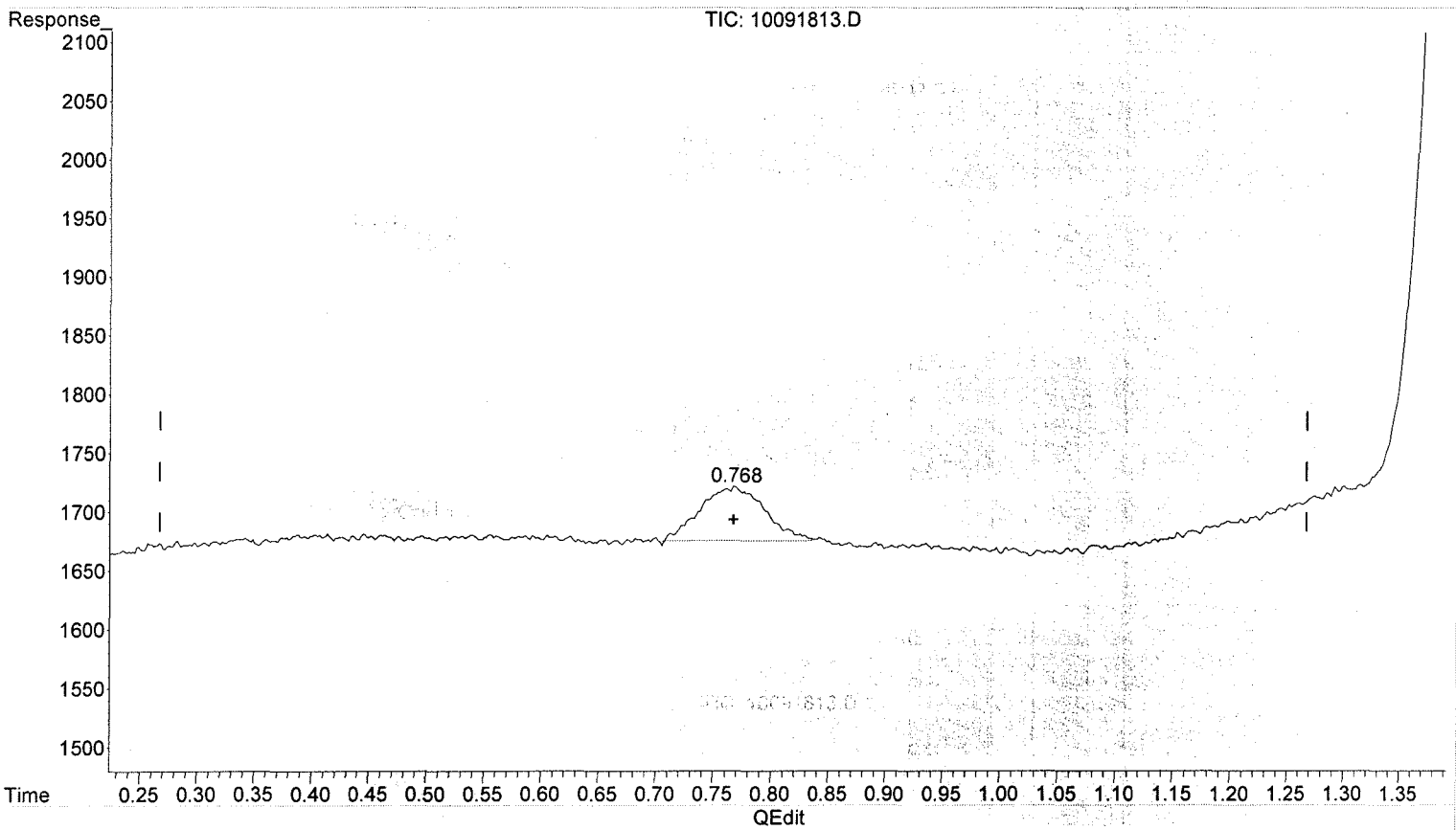
(1) Helium
0.769min 37.695 ppm
response 1358

Quantitation Report (Qedit)

Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
Data File : 10091813.D
Signal(s) : TCD1A.CH
Acq On : 09-Oct-2018, 10:48:26
Operator : GG
Sample : P1805236-001 1.0ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 10 11:16:36 2018
Quant Method : J:\GC08\METHODS\H2HE092517.M
Quant Title : Hydrogen and Helium by EPA Method 3C
QLast Update : Tue Sep 26 13:09:57 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



(1) Helium
0.767min 49.561 ppm m
response 1785

BLC
10/10/18
[Signature]

WA
10/12/18

Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
 Data File : 10091814.D
 Signal(s) : TCD1A.CH
 Acq On : 09-Oct-2018, 10:55:16
 Operator : GG
 Sample : P1805236-002 1.0ml
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Oct 10 11:17:19 2018
 Quant Method : J:\GC08\METHODS\H2HE092517.M
 Quant Title : Hydrogen and Helium by EPA Method 3C
 QLast Update : Tue Sep 26 13:09:57 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|------------------|-------|----------|-------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Helium | 0.773 | 6734 | 186.976 ppm |
| 2) Hydrogen | 0.000 | 0 | N.D. ppm |
| ----- | | | |

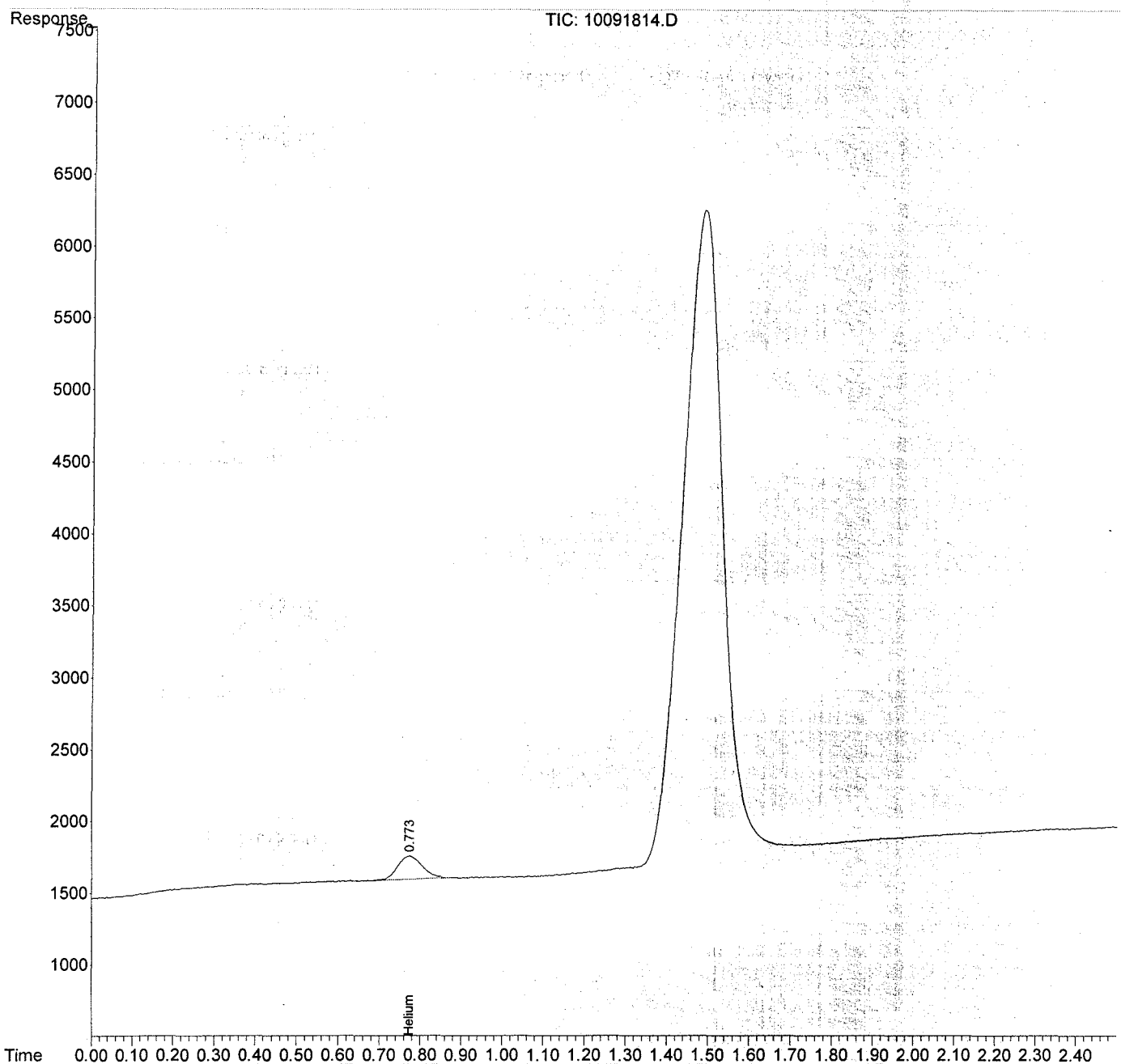
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
Data File : 10091814.D
Signal(s) : TCD1A.CH
Acq On : 09-Oct-2018, 10:55:16
Operator : GG
Sample : P1805236-002 1.0ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 10 11:17:19 2018
Quant Method : J:\GC08\METHODS\H2HE092517.M
Quant Title : Hydrogen and Helium by EPA Method 3C
QLast Update : Tue Sep 26 13:09:57 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
 Data File : 10091816.D
 Signal(s) : TCD1A.CH
 Acq On : 09-Oct-2018, 11:12:35
 Operator : GG
 Sample : P1805236-003 1.0ml
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Oct 10 11:17:47 2018
 Quant Method : J:\GC08\METHODS\H2HE092517.M
 Quant Title : Hydrogen and Helium by EPA Method 3C
 QLast Update : Tue Sep 26 13:09:57 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|------------------|-------|----------|-------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Helium | 0.766 | 3780 | 104.957 ppm |
| 2) Hydrogen | 0.000 | 0 | N.D. ppm |
| ----- | | | |

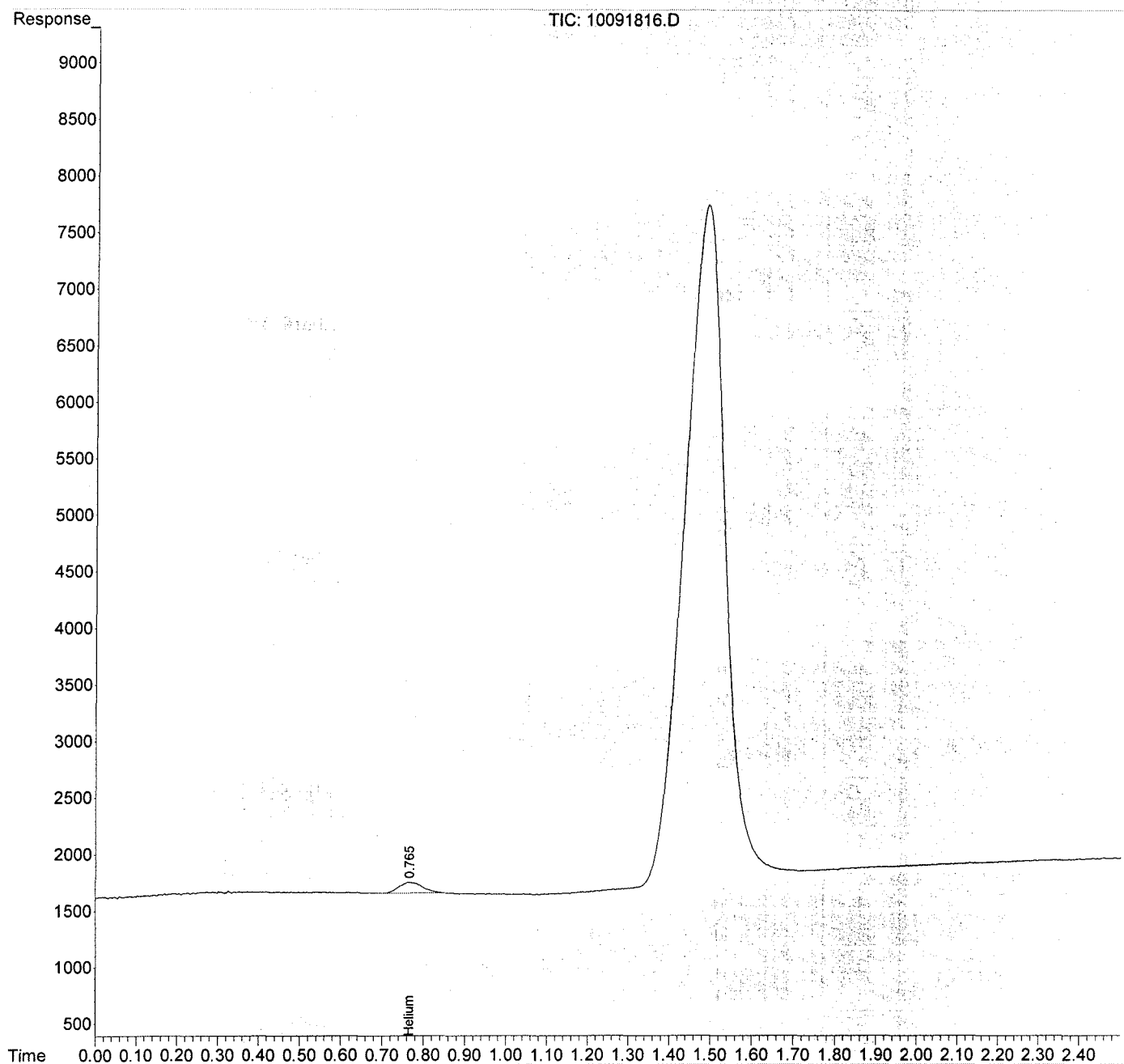
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(m)=manual int.

Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
Data File : 10091816.D
Signal(s) : TCD1A.CH
Acq On : 09-Oct-2018, 11:12:35
Operator : GG
Sample : P1805236-003 1.0ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 10 11:17:47 2018
Quant Method : J:\GC08\METHODS\H2HE092517.M
Quant Title : Hydrogen and Helium by EPA Method 3C
QLast Update : Tue Sep 26 13:09:57 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
 Data File : 10091817.D
 Signal(s) : TCD1A.CH
 Acq On : 09-Oct-2018, 11:19:52
 Operator : GG
 Sample : P1805236-004 1.0ml
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Oct 10 11:18:06 2018
 Quant Method : J:\GC08\METHODS\H2HE092517.M
 Quant Title : Hydrogen and Helium by EPA Method 3C
 QLast Update : Tue Sep 26 13:09:57 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|------------------|-------|----------|-------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Helium | 0.774 | 6553 | 181.957 ppm |
| 2) Hydrogen | 0.000 | 0 | N.D. ppm |
| ----- | | | |

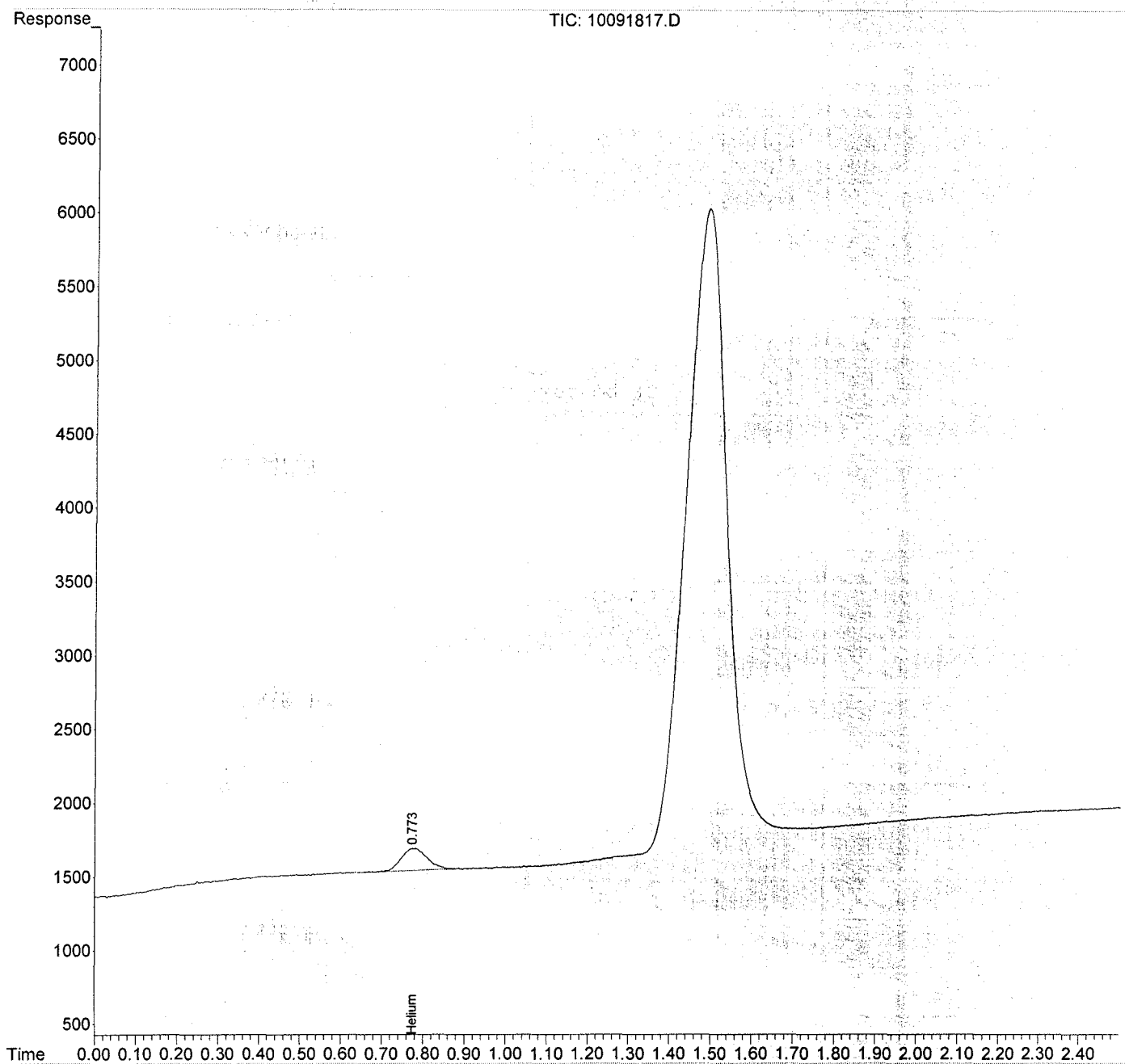
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(m)=manual int.

Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
Data File : 10091817.D
Signal(s) : TCD1A.CH
Acq On : 09-Oct-2018, 11:19:52
Operator : GG
Sample : P1805236-004 1.0ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 10 11:18:06 2018
Quant Method : J:\GC08\METHODS\H2HE092517.M
Quant Title : Hydrogen and Helium by EPA Method 3C
QLast Update : Tue Sep 26 13:09:57 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
 Data File : 10091818.D
 Signal(s) : TCD1A.CH
 Acq On : 09-Oct-2018, 11:38:49
 Operator : GG
 Sample : P1805236-005 1.0ml
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Oct 10 11:18:33 2018
 Quant Method : J:\GC08\METHODS\H2HE092517.M
 Quant Title : Hydrogen and Helium by EPA Method 3C
 QLast Update : Tue Sep 26 13:09:57 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|------------------|-------|----------|--------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Helium | 0.772 | 65540 | 1819.842 ppm |
| 2) Hydrogen | 0.000 | 0 | N.D. ppm |
| ----- | | | |

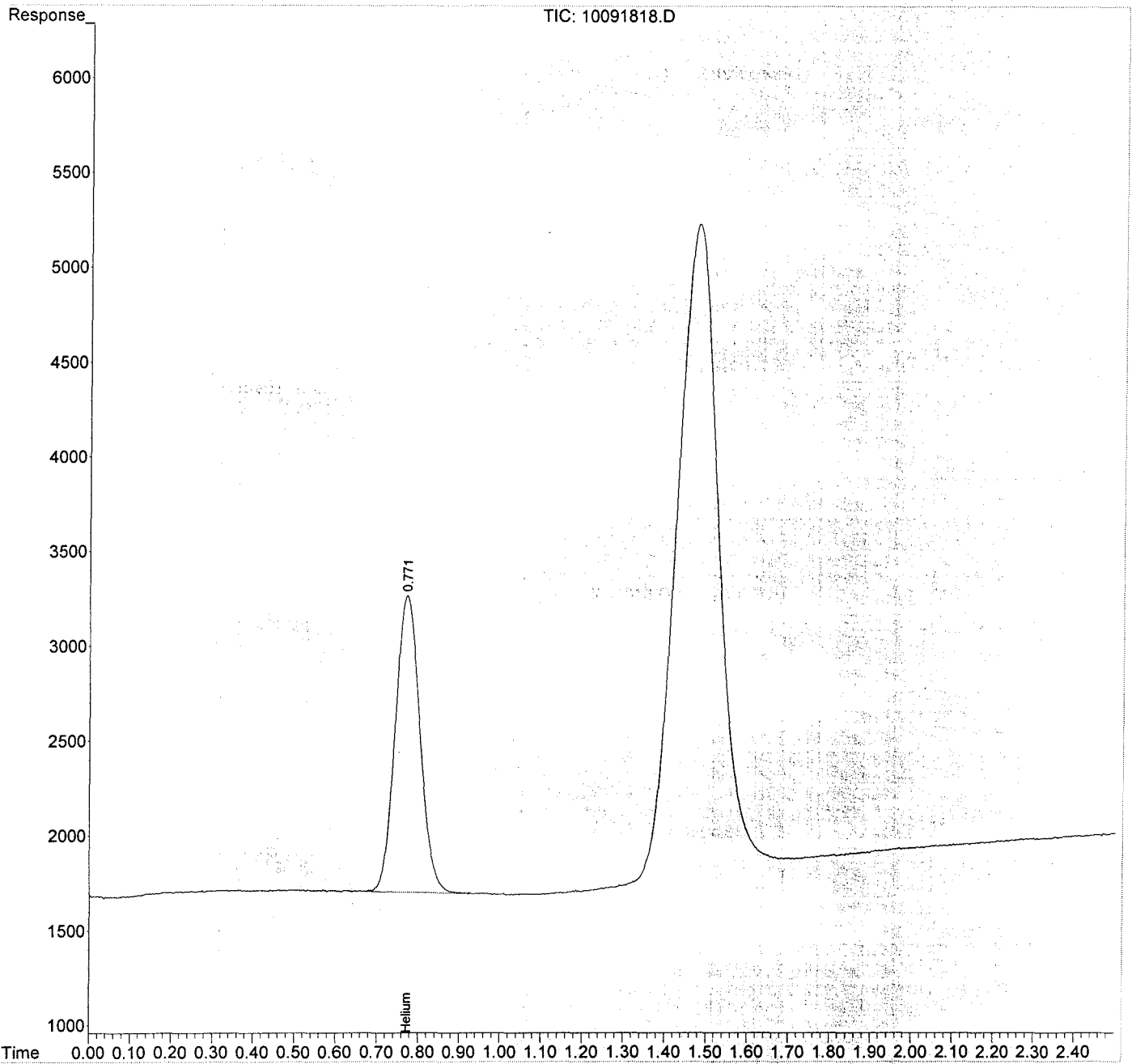
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
Data File : 10091818.D
Signal(s) : TCD1A.CH
Acq On : 09-Oct-2018, 11:38:49
Operator : GG
Sample : P1805236-005 1.0ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 10 11:18:33 2018
Quant Method : J:\GC08\METHODS\H2HE092517.M
Quant Title : Hydrogen and Helium by EPA Method 3C
QLast Update : Tue Sep 26 13:09:57 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
 Data File : 10091819.D
 Signal(s) : TCD1A.CH
 Acq On : 09-Oct-2018, 12:18:02
 Operator : GG
 Sample : P1805236-006 1.0ml
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Oct 10 11:19:28 2018
 Quant Method : J:\GC08\METHODS\H2HE092517.M
 Quant Title : Hydrogen and Helium by EPA Method 3C
 QLast Update : Tue Sep 26 13:09:57 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|------------------|-------|----------|-------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Helium | 0.773 | 16147 | 448.340 ppm |
| 2) Hydrogen | 0.000 | 0 | N.D. ppm |
| ----- | | | |

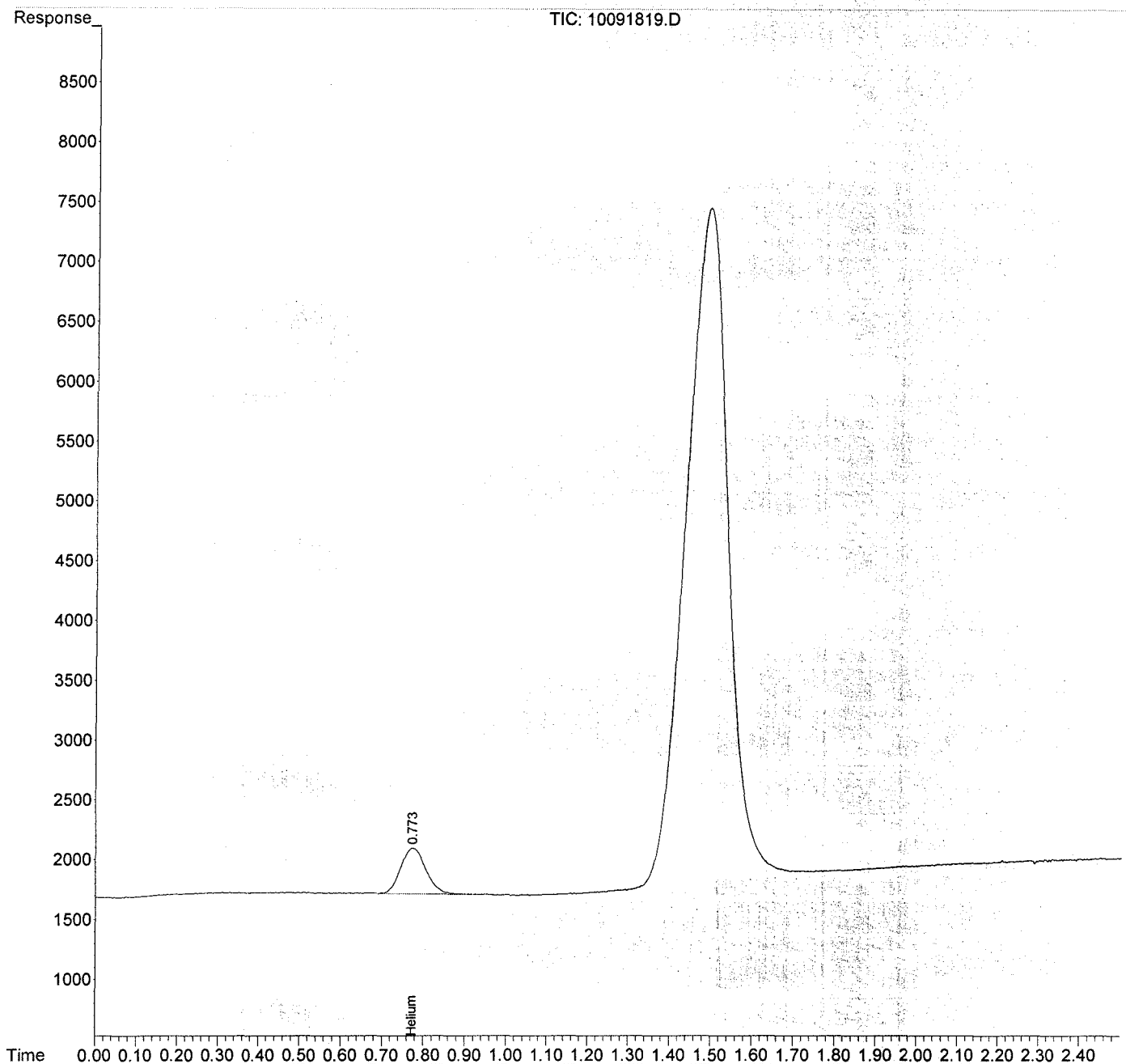
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
Data File : 10091819.D
Signal(s) : TCD1A.CH
Acq On : 09-Oct-2018, 12:18:02
Operator : GG
Sample : P1805236-006 1.0ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 10 11:19:28 2018
Quant Method : J:\GC08\METHODS\H2HE092517.M
Quant Title : Hydrogen and Helium by EPA Method 3C
QLast Update : Tue Sep 26 13:09:57 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
 Data File : 10091802.D
 Signal(s) : TCD1A.CH
 Acq On : 09-Oct-2018, 09:19:22
 Operator : GG
 Sample : MB 1.0ml
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Oct 10 10:02:05 2018
 Quant Method : J:\GC08\METHODS\H2HE092517.M
 Quant Title : Hydrogen and Helium by EPA Method 3C
 QLast Update : Tue Sep 26 13:09:57 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

| Compound | R.T. | Response | Conc | Units |
|------------------|-------|----------|------|-------|
| ----- | | | | |
| Target Compounds | | | | |
| 1) Helium | 0.000 | 0 | N.D. | ppm |
| 2) Hydrogen | 0.000 | 0 | N.D. | ppm |
| ----- | | | | |

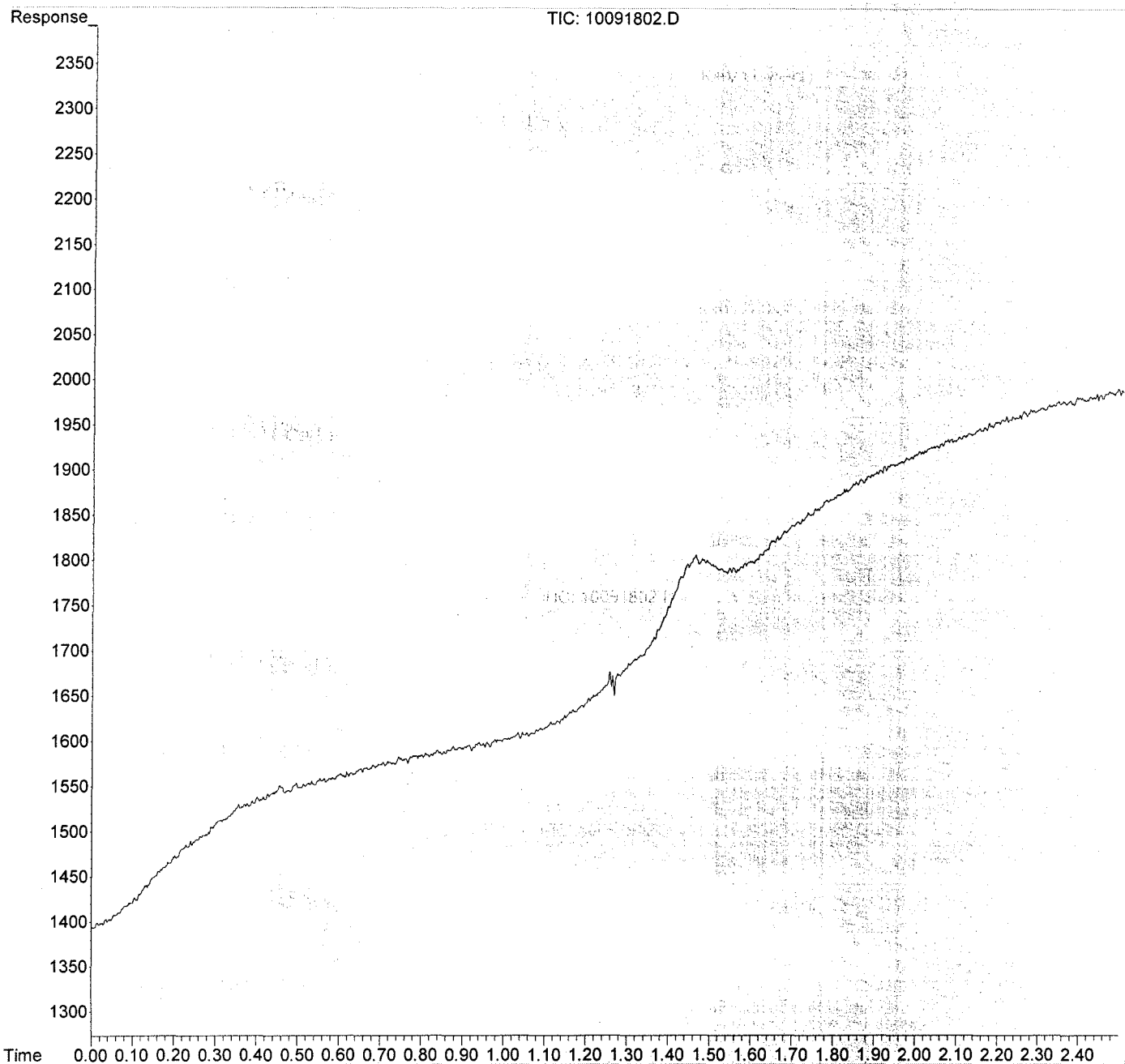
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
Data File : 10091802.D
Signal(s) : TCD1A.CH
Acq On : 09-Oct-2018, 09:19:22
Operator : GG
Sample : MB 1.0ml
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 10 10:02:05 2018
Quant Method : J:\GC08\METHODS\H2HE092517.M
Quant Title : Hydrogen and Helium by EPA Method 3C
QLast Update : Tue Sep 26 13:09:57 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
 Data File : 10091803.D
 Signal(s) : TCD1A.CH
 Acq On : 09-Oct-2018, 09:27:01
 Operator : GG
 Sample : LCS S32-10091802
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Oct 10 10:02:19 2018
 Quant Method : J:\GC08\METHODS\H2HE092517.M
 Quant Title : Hydrogen and Helium by EPA Method 3C
 QLast Update : Tue Sep 26 13:09:57 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|------------------|-------|----------|--------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Helium | 0.762 | 41380 | 1148.989 ppm |
| 2) Hydrogen | 0.000 | 0 | N.D. ppm |
| ----- | | | |

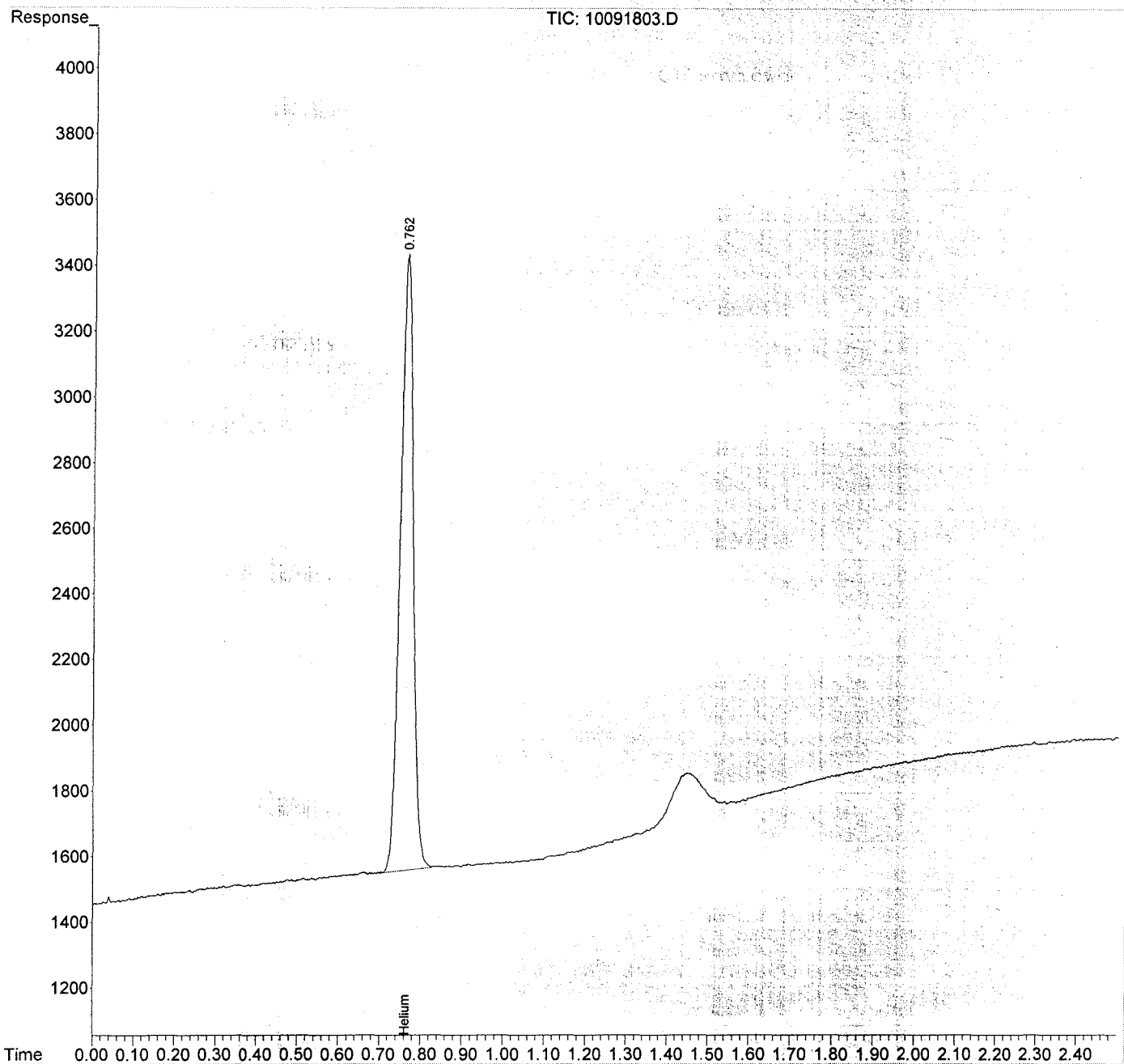
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
Data File : 10091803.D
Signal(s) : TCD1A.CH
Acq On : 09-Oct-2018, 09:27:01
Operator : GG
Sample : LCS S32-10091802
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 10 10:02:19 2018
Quant Method : J:\GC08\METHODS\H2HE092517.M
Quant Title : Hydrogen and Helium by EPA Method 3C
QLast Update : Tue Sep 26 13:09:57 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Response Factor Report HP5890

Method Path : I:\GC08\METHODS\
 Method File : H2HE092517.M
 Title : Hydrogen and Helium by EPA Method 3C
 Last Update : Tue Sep 26 13:09:57 2017
 Response Via : Initial Calibration

Calibration Files

1 =09251703.D 2 =09251704.D 3 =09251705.D
 4 =09251706.D 5 =09251707.D

| Compound | 1 | 2 | 3 | 4 | 5 | Avg | %RSD |
|-------------|-------|-------|-------|-------|-------|----------|-------|
| 1) Helium | 3.697 | 2.953 | 3.773 | 3.842 | 3.741 | 3.601 E1 | 10.17 |
| 2) Hydrogen | 5.493 | 4.748 | 5.681 | 5.795 | 5.694 | 5.482 E1 | 7.75 |

(#) = Out of Range

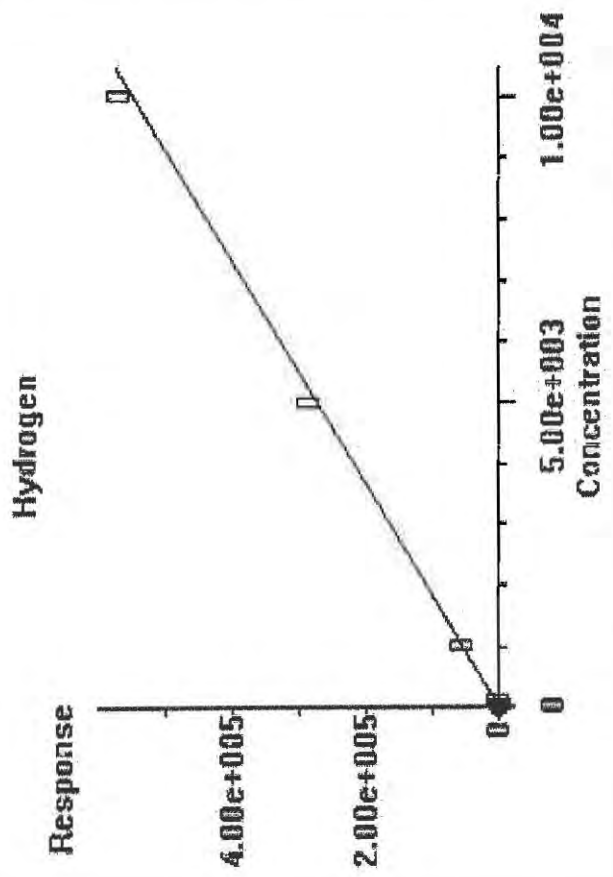
H2HE092517.M Tue Oct 10 09:59:28 2017

Search by: Ret Time Name Index First Compound

Compound Database External Standard Compound

Helium
Hydrogen

| LvlID | Concentration | Response | LvlID | Concentration | Response |
|-------|---------------|---------------|-------|---------------|----------|
| 1 | 20.000000 | 1093.662565 | | | |
| 2 | 100.000000 | 4747.620750 | | | |
| 3 | 1000.000000 | 56811.425000 | | | |
| 4 | 5000.000000 | 289740.073715 | | | |
| 5 | 10000.000000 | 569434.835823 | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |



0.000e+000 Quadratic term
 5.482e+001 Linear term
 0.000e+000 Constant term
 8% R/F Rel Std Dev

Search by Ret Time

Name

Index

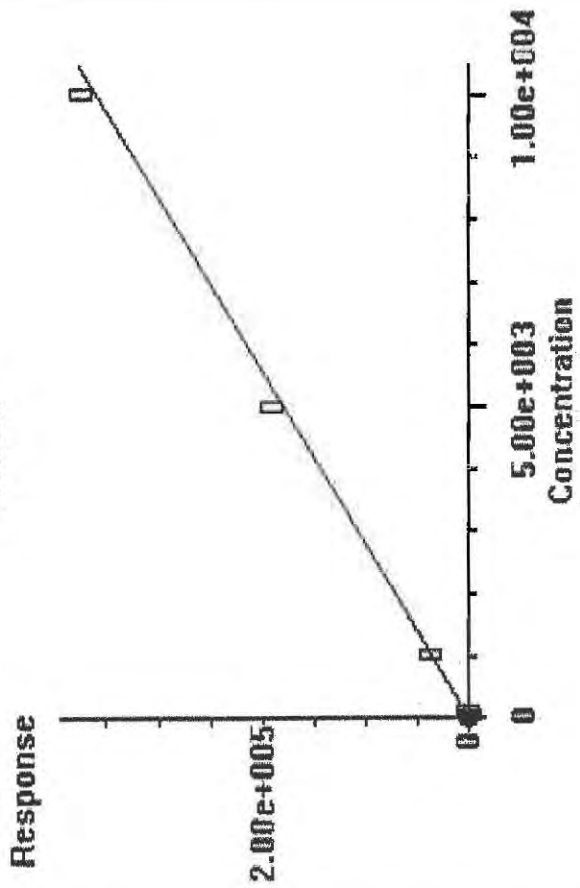
Compound Database
External Standard Compound

- Helium
- Hydrogen

Identification | Calibration | User-Defined | Advanced | Reporting

| Lvl ID | Concentration | Response | Lvl ID | Concentration | Response |
|--------|---------------|---------------|--------|---------------|----------|
| 1 | 20.000000 | 739.481516 | | | |
| 2 | 100.000000 | 2953.330737 | | | |
| 3 | 1000.000000 | 37734.456000 | | | |
| 4 | 5000.000000 | 192081.649285 | | | |
| 5 | 10000.000000 | 374130.495177 | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

Helium



| | |
|------------|----------------|
| 0.000e+000 | Quadratic term |
| 3.601e+001 | Linear term |
| 0.000e+000 | Constant term |
| 10% | RF Rel Std Dev |

OK

Cancel

Help

Print Calibration Curve

Copy Calibration Curve

Calibration Status Report HP5890

Method Path : I:\GC08\METHODS\
 Method File : H2HE092517.M
 Title : Hydrogen and Helium by EPA Method 3C
 Last Update : Tue Sep 26 13:09:57 2017
 Response Via : Initial Calibration

| # | ID | Conc | ISTD Conc | Path\File |
|---|----|-------|--------------|--|
| 1 | 1 | 20 | 0 | I:\GC08\DATA\TO_3M\2017_09\25HEH2\09251703.D |
| 2 | 2 | 100 | 0 | I:\GC08\DATA\TO_3M\2017_09\25HEH2\09251704.D |
| 3 | 3 | 1000 | 0 | I:\GC08\DATA\TO_3M\2017_09\25HEH2\09251705.D |
| 4 | 4 | 5000 | 0 | I:\GC08\DATA\TO_3M\2017_09\25HEH2\09251706.D |
| 5 | 5 | 10000 | 0 | I:\GC08\DATA\TO_3M\2017_09\25HEH2\09251707.D |

| # | ID | Update Time | Quant Time | Acquisition Time |
|---|----|-------------------|-------------------|-----------------------|
| 1 | 1 | Sep 26 13:08 2017 | Sep 26 11:17 2017 | 25-Sep-2017, 09:02:44 |
| 2 | 2 | Sep 26 13:09 2017 | Sep 25 09:23 2017 | 25-Sep-2017, 09:13:33 |
| 3 | 3 | Sep 26 13:09 2017 | Sep 25 09:31 2017 | 25-Sep-2017, 09:27:09 |
| 4 | 4 | Sep 26 13:09 2017 | Sep 25 09:47 2017 | 25-Sep-2017, 09:38:45 |
| 5 | 5 | Sep 26 13:09 2017 | Sep 25 10:05 2017 | 25-Sep-2017, 09:51:09 |

H2HE092517.M Tue Oct 10 09:59:52 2017

Data Path : I:\GC08\DATA\TO_3M\2017_09\25HEH2\
 Data File : 09251703.D
 Signal(s) : TCD1A.CH
 Acq On : 25-Sep-2017, 09:02:44
 Operator : RS
 Sample : 20ppm s32-09251702
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Sep 26 11:16:47 2017
 Quant Method : I:\GC08\METHODS\H2HE092517.M
 Quant Title : Hydrogen and Helium by EPA Method 3C
 QLast Update : Mon Sep 25 10:05:52 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

| Compound | R.T. | Response | Conc | Units |
|------------------|-------|----------|--------|-------|
| ----- | | | | |
| Target Compounds | | | | |
| 1) Helium | 0.796 | 739 | 17.187 | ppm m |
| 2) Hydrogen | 0.946 | 1099 | 16.747 | ppm m |
| ----- | | | | |

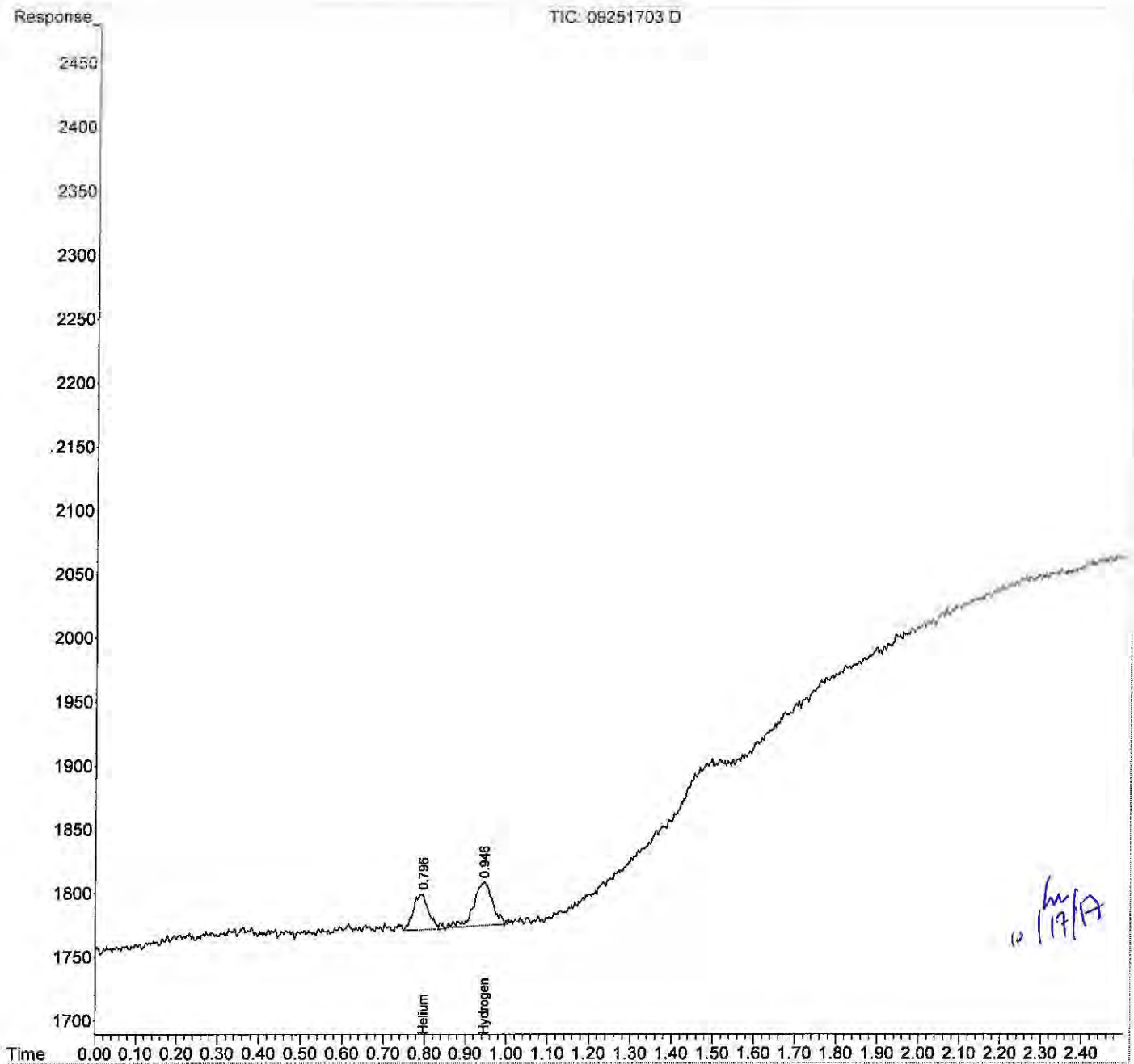
(f)=RT Delta > 1/2 Window

(m)=manual int.

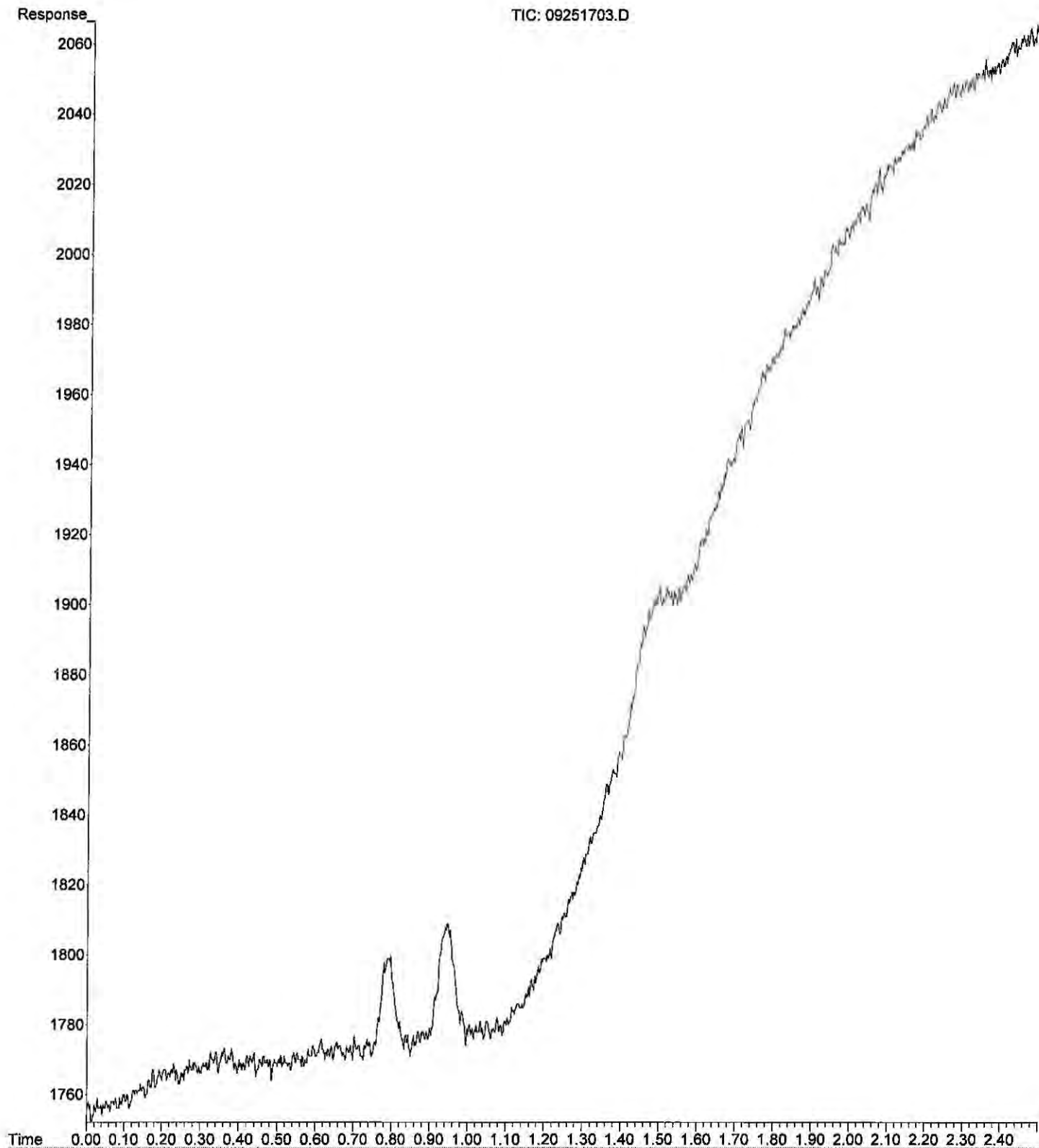
Data Path : I:\GC08\DATA\TO_3M\2017_09\25HEH2\
Data File : 09251703.D
Signal(s) : TCD1A.CH
Acq On : 25-Sep-2017, 09:02:44
Operator : RS
Sample : 20ppm s32-09251702
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 26 11:16:47 2017
Quant Method : I:\GC08\METHODS\H2HE092517.M
Quant Title : Hydrogen and Helium by EPA Method 3C
QLast Update : Mon Sep 25 10:05:52 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



File : I:\GC08\DATA\TO_3M\2017_09\25HEH2\09251703.D
Operator : RS
Acquired : 25-Sep-2017, 09:02:44 using AcqMethod H2_HE.M
Instrument : HP5890
Sample Name: 20ppm s32-09251702
Misc Info :
Vial Number: 1



Data Path : I:\GC08\DATA\TO_3M\2017_09\25HEH2\
 Data File : 09251704.D
 Signal(s) : TCD1A.CH
 Acq On : 25-Sep-2017, 09:13:33
 Operator : RS
 Sample : 100ppm s32-09251702
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Sep 25 09:21:50 2017
 Quant Method : I:\GC08\METHODS\H2HE092517.M
 Quant Title : Hydrogen and Helium by EPA Method 3C
 QLast Update : Mon Sep 25 09:16:25 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|------------------|-------|----------|--------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Helium | 0.783 | 2953 | 69.001 ppm m |
| 2) Hydrogen | 0.936 | 4748 | 70.884 ppm |
| ----- | | | |

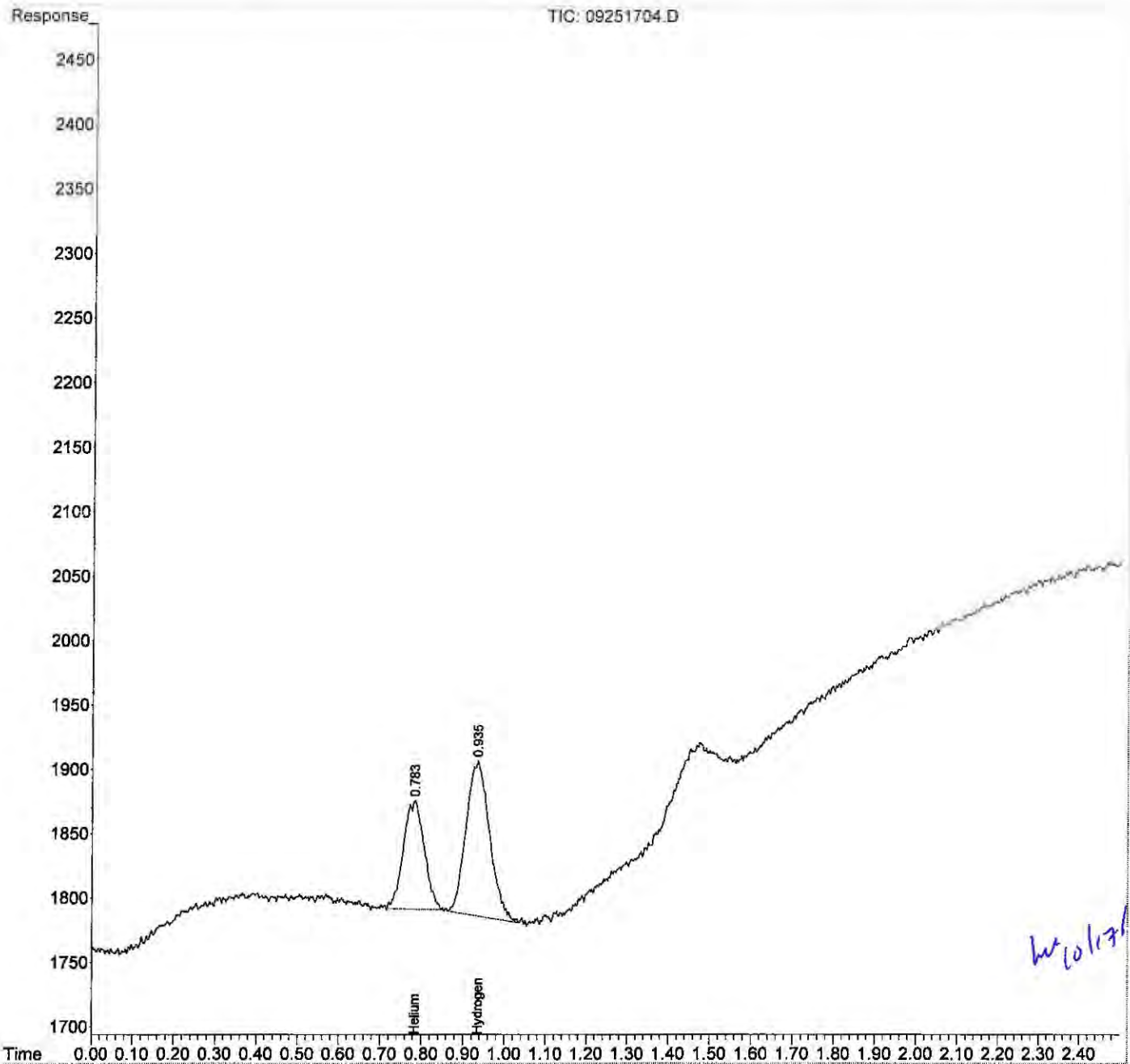
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : I:\GC08\DATA\TO_3M\2017_09\25HEH2\
Data File : 09251704.D
Signal(s) : TCD1A.CH
Acq On : 25-Sep-2017, 09:13:33
Operator : RS
Sample : 100ppm s32-09251702
Misc :
ALS Vial : 1 Sample Multiplier: 1

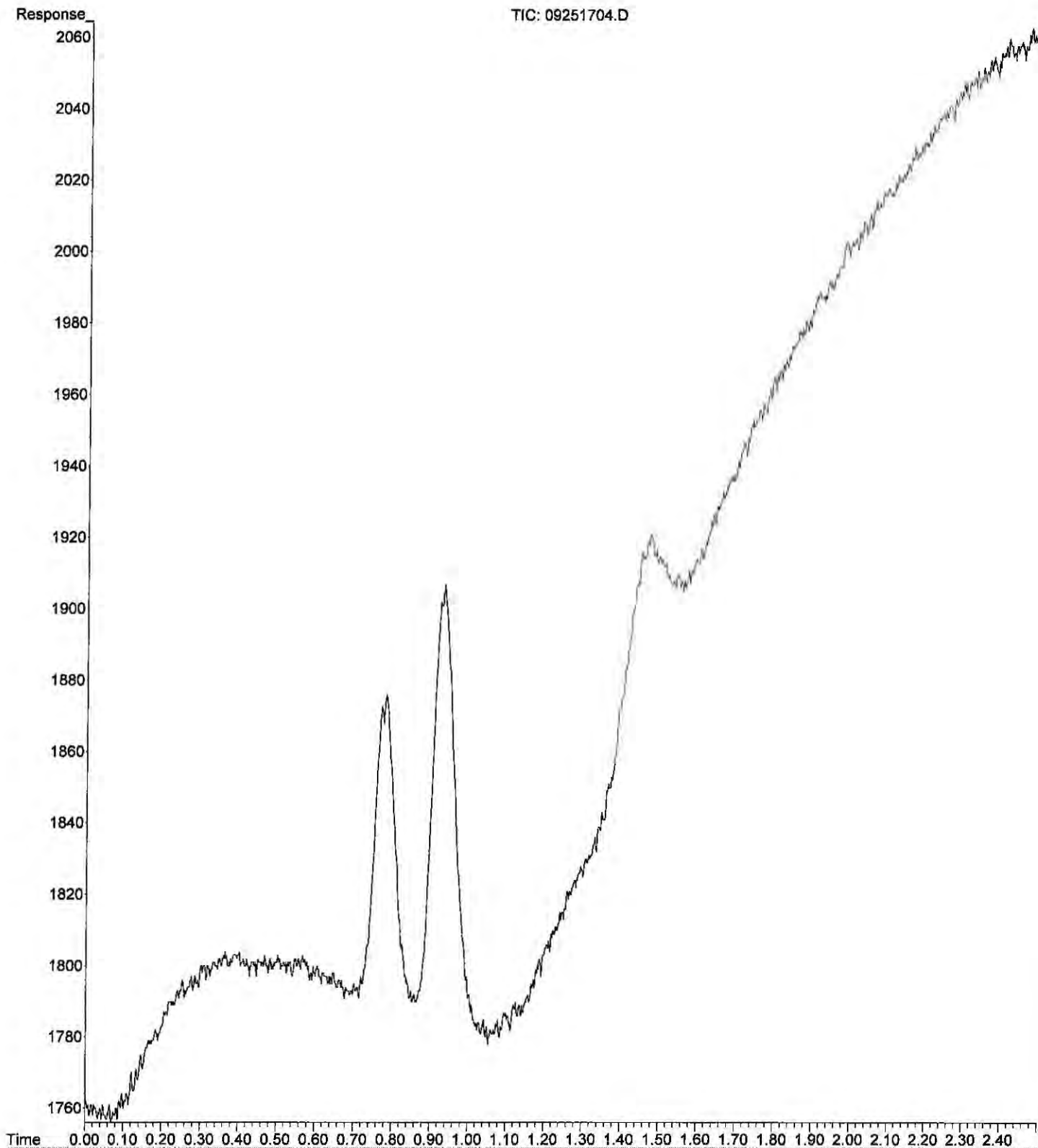
Integration File: autoint1.e
Quant Time: Sep 25 09:21:50 2017
Quant Method : I:\GC08\METHODS\H2HE092517.M
Quant Title : Hydrogen and Helium by EPA Method 3C
QLast Update : Mon Sep 25 09:16:25 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



RS 9/26/17
MR

File :I:\GC08\DATA\TO_3M\2017_09\25HEH2\09251704.D
Operator : RS
Acquired : 25-Sep-2017, 09:13:33 using AcqMethod H2_HE.M
Instrument : HP5890
Sample Name: 100ppm s32-09251702
Misc Info :
Vial Number: 1



Data Path : I:\GC08\DATA\TO_3M\2017_09\25HEH2\
 Data File : 09251705.D
 Signal(s) : TCD1A.CH
 Acq On : 25-Sep-2017, 09:27:09
 Operator : RS
 Sample : 1000ppm s32-09251701
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Sep 25 09:31:38 2017
 Quant Method : I:\GC08\METHODS\H2HE092517.M
 Quant Title : Hydrogen and Helium by EPA Method 3C
 QLast Update : Mon Sep 25 09:23:40 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|------------------|-------|----------|-------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Helium | 0.794 | 37734 | 918.944 ppm |
| 2) Hydrogen | 0.946 | 56811 | 883.819 ppm |
| ----- | | | |

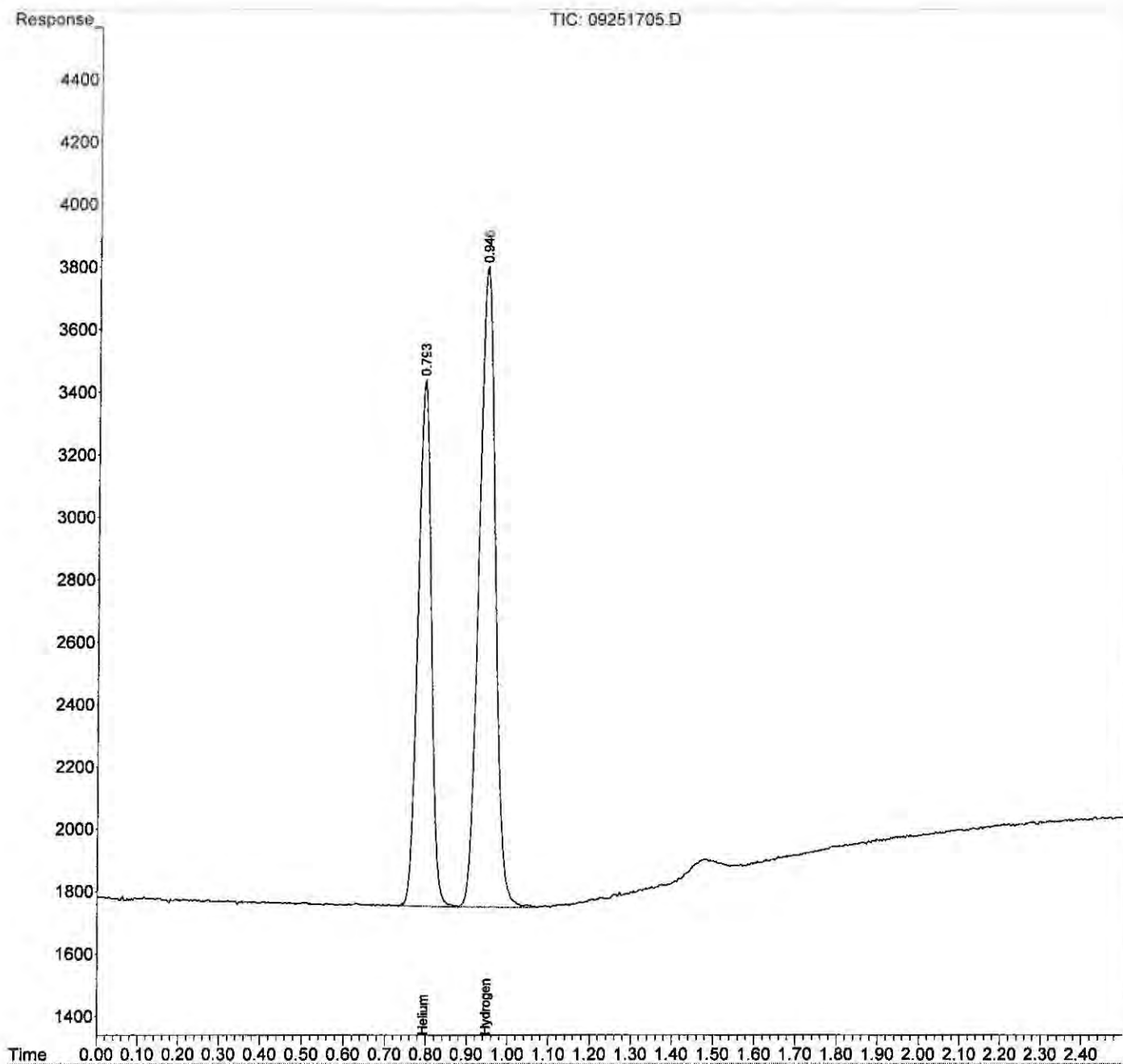
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : I:\GC08\DATA\TO_3M\2017_09\25HEH2\
Data File : 09251705.D
Signal(s) : TCD1A.CH
Acq On : 25-Sep-2017, 09:27:09
Operator : RS
Sample : 1000ppm s32-09251701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 25 09:31:38 2017
Quant Method : I:\GC08\METHODS\H2HE092517.M
Quant Title : Hydrogen and Helium by EPA Method 3C
QLast Update : Mon Sep 25 09:23:40 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : I:\GC08\DATA\TO_3M\2017_09\25HEH2\
 Data File : 09251706.D
 Signal(s) : TCD1A.CH
 Acq On : 25-Sep-2017, 09:38:45
 Operator : RS
 Sample : 5000ppm s32-09251701
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Sep 25 09:47:15 2017
 Quant Method : I:\GC08\METHODS\H2HE092517.M
 Quant Title : Hydrogen and Helium by EPA Method 3C
 QLast Update : Mon Sep 25 09:37:21 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|------------------|-------|----------|--------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Helium | 0.794 | 192082 | 4561.698 ppm |
| 2) Hydrogen | 0.945 | 289740 | 4534.333 ppm |
| ----- | | | |

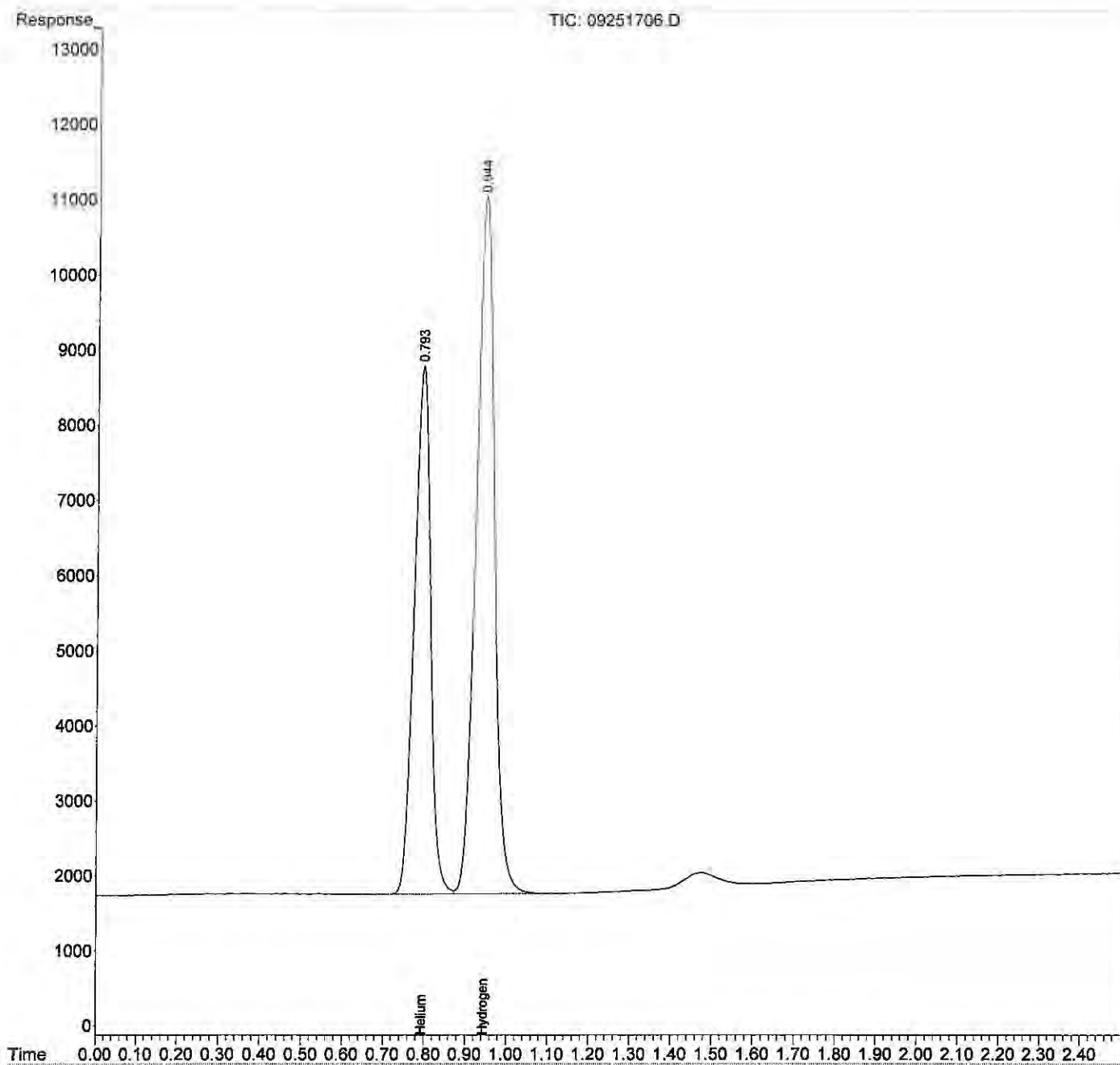
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : I:\GC08\DATA\TO_3M\2017_09\25HEH2\
Data File : 09251706.D
Signal(s) : TCD1A.CH
Acq On : 25-Sep-2017, 09:38:45
Operator : RS
Sample : 5000ppm s32-09251701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 25 09:47:15 2017
Quant Method : I:\GC08\METHODS\H2HE092517.M
Quant Title : Hydrogen and Helium by EPA Method 3C
QLast Update : Mon Sep 25 09:37:21 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : I:\GC08\DATA\TO_3M\2017_09\25HEH2\
 Data File : 09251707.D
 Signal(s) : TCD1A.CH
 Acq On : 25-Sep-2017, 09:51:09
 Operator : RS
 Sample : 10000ppm s32-09251701
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Sep 25 10:05:31 2017
 Quant Method : I:\GC08\METHODS\H2HE092517.M
 Quant Title : Hydrogen and Helium by EPA Method 3C
 QLast Update : Mon Sep 25 09:47:45 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|------------------|-------|----------|--------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Helium | 0.788 | 374130 | 8695.568 ppm |
| 2) Hydrogen | 0.939 | 569435 | 8679.983 ppm |
| ----- | | | |

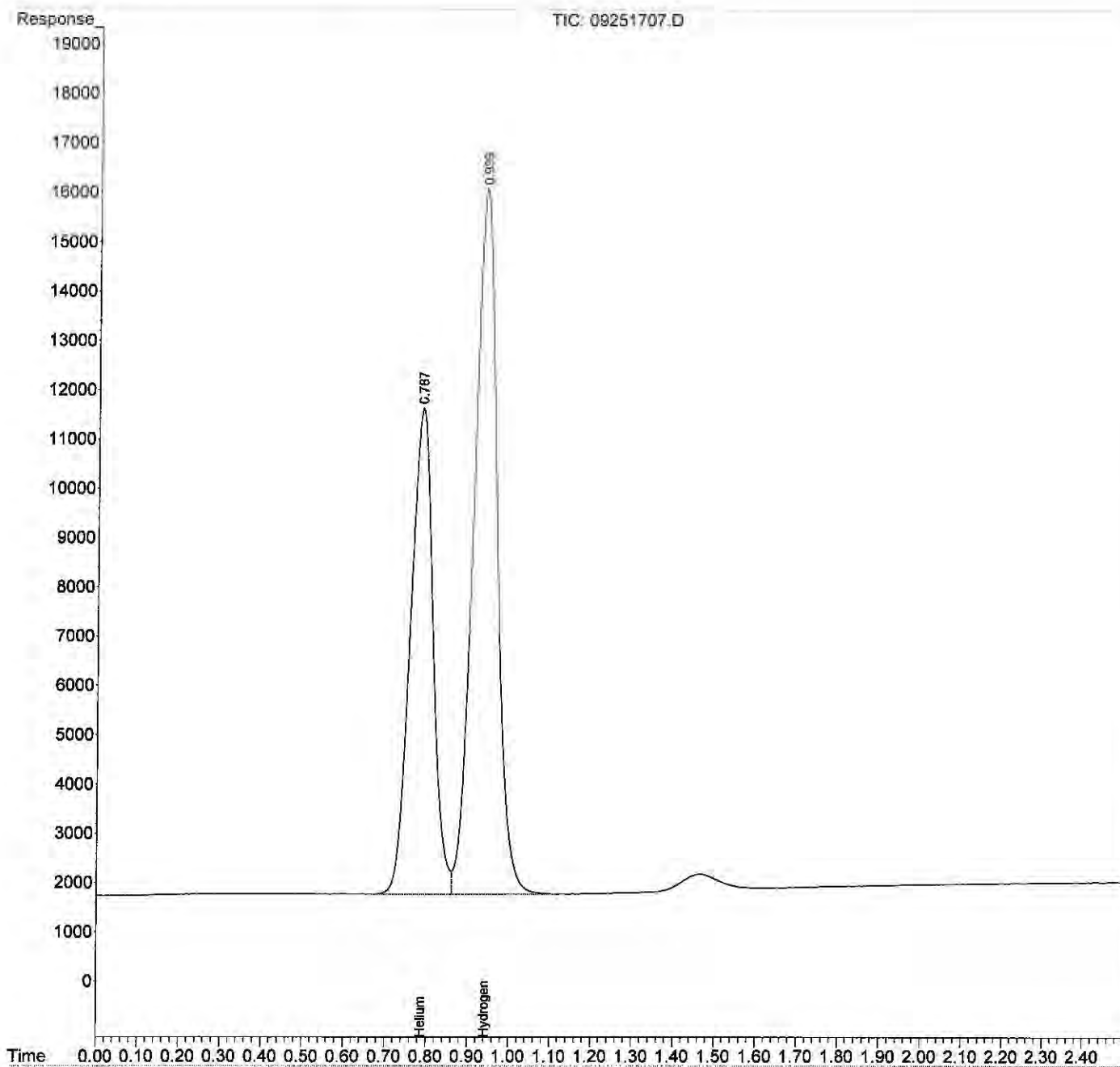
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : I:\GC08\DATA\TO_3M\2017_09\25HEH2\
Data File : 09251707.D
Signal(s) : TCD1A.CH
Acq On : 25-Sep-2017, 09:51:09
Operator : RS
Sample : 10000ppm s32-09251701
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 25 10:05:31 2017
Quant Method : I:\GC08\METHODS\H2HE092517.M
Quant Title : Hydrogen and Helium by EPA Method 3C
QLast Update : Mon Sep 25 09:47:45 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : I:\GC08\DATA\TO_3M\2017_09\25HEH2\
 Data File : 09251709.D
 Signal(s) : TCD1A.CH
 Acq On : 25-Sep-2017, 10:17:24
 Operator : RS
 Sample : ICV s32-09251703
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Sep 26 13:10:30 2017
 Quant Method : I:\GC08\METHODS\H2HE092517.M
 Quant Title : Hydrogen and Helium by EPA Method 3C
 QLast Update : Tue Sep 26 13:09:57 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|------------------|-------|----------|--------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Helium | 0.804 | 40923 | 1136.305 ppm |
| 2) Hydrogen | 0.956 | 61315 | 1118.436 ppm |
| ----- | | | |

actual %D 113.6%

actual %D 119%

(f)=RT Delta > 1/2 Window

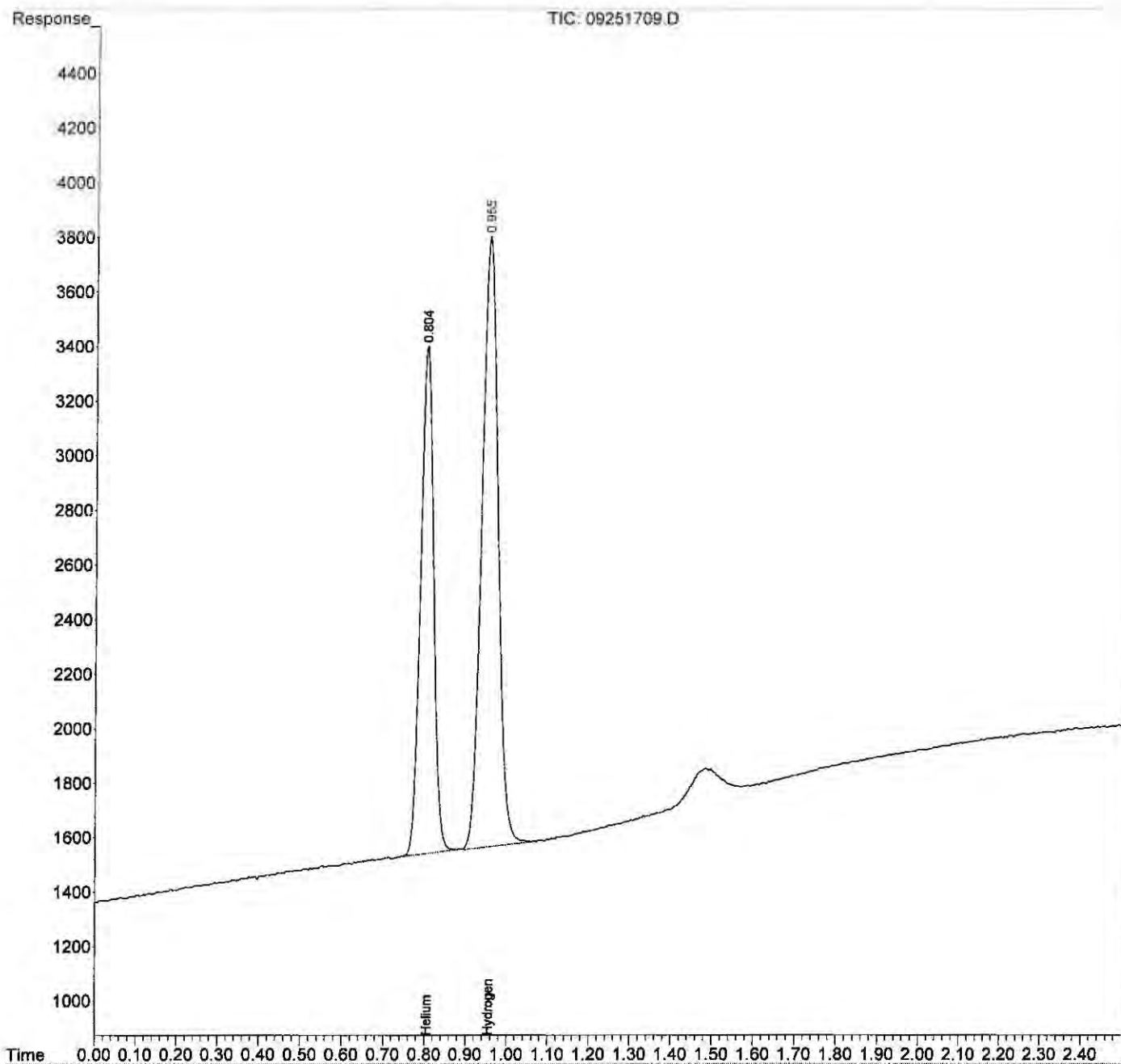
(m)=manual int.

W 10/17/17

Data Path : I:\GC08\DATA\TO_3M\2017_09\2SHEH2\
Data File : 09251709.D
Signal(s) : TCD1A.CH
Acq On : 25-Sep-2017, 10:17:24
Operator : RS
Sample : ICV s32-09251703
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Sep 26 13:10:30 2017
Quant Method : I:\GC08\METHODS\H2HE092517.M
Quant Title : Hydrogen and Helium by EPA Method 3C
QLast Update : Tue Sep 26 13:09:57 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



10/10/18

REPORT SUMMARY

Method : Helium by modified EPA 3C
 Client : Leidos
 Analyst : GG

Service Request : P1805236
 Instrument : Instrument #8 / TCD #8
 Date Acquired : 10/9/2018
 Sample Amount : 1 mL

| | | | | | |
|--------------------------------|-----------|---|-----------|---|-----------|
| Opening CCV¹ | He | Opening CCV¹ | He | Laboratory Control Spike² | He |
| STD S32-10091801 | 10949.47 | STD S32-10091801 | 11030.60 | LCS S32-10091802 | 11489.89 |
| Sample result (ppm) | 10000.00 | Sample result (ppm) | 10000.00 | sample result ppm | 10000 |
| ACTUAL | 9.49% | ACTUAL | 10.31% | spike amount | 114.90% |
| %Difference | | %Difference | | % recovery | |
| Closing CCV¹ | He | Laboratory Control Spike⁴ | He | LCS S32-10091802 | 11235.33 |
| STD S32-10091801 | 10453.86 | LCS S32-10091802 | 10000 | sample result ppm | 112.35% |
| Sample result (ppm) | 10000.00 | sample result ppm | 10000 | spike amount | 2.24% |
| ACTUAL | 4.54% | % recovery | | % RPD | |
| %Difference | | | | | |

FINAL SAMPLE RESULT SUMMARIES

| Sample ID | Inject. Vol(ml) | Dilution | Pi | Pf | PI/Pf | He Result (ppm) | FINAL HELIUM RESULT ppm | FINAL HELIUM RESULT mg/M3 | File ID | Acq time |
|---------------------|-----------------|----------|-------|------|-------|-----------------|-------------------------|---------------------------|------------|----------|
| MBX-0ml | 1.000 | 1.0 | ND | ND | 1.00 | 0.00 | ND | ND | 10091813.D | 09:19:22 |
| P-1805236-001 1.0ml | 1.00 | 1.0 | -0.24 | 5.57 | 1.40 | 49.56 | 69.475 | 11.369 | 10091814.D | 10:48:26 |
| P-1805236-002 1.0ml | 1.00 | 1.0 | 0.37 | 5.66 | 1.35 | 186.98 | 252.610 | 41.337 | 10091816.D | 10:55:16 |
| P-1805236-003 1.0ml | 1.00 | 1.0 | 0.40 | 5.09 | 1.31 | 104.96 | 137.556 | 22.510 | 10091817.D | 11:12:35 |
| P-1805236-004 1.0ml | 1.00 | 1.0 | 0.39 | 5.72 | 1.35 | 181.96 | 246.227 | 40.292 | 10091818.D | 11:19:52 |
| P-1805236-005 1.0ml | 1.00 | 1.0 | -4.56 | 6.16 | 2.06 | 1819.84 | 3743.778 | 612.626 | 10091819.D | 11:38:49 |
| P-1805236-006 1.0ml | 1.00 | 1.0 | -4.22 | 5.09 | 1.89 | 448.34 | 846.627 | 138.541 | | 12:18:02 |

- 15% difference allowed for the opening and closing standards.
- 83-129% helium recovery for the lab control spike.
- 13% helium RPD allowed between duplicate samples.

10/10/18
 @

Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
 Data File : 10091801.D
 Signal(s) : TCD1A.CH
 Acq On : 09-Oct-2018, 09:13:11
 Operator : GG
 Sample : STD S32-10091801
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Oct 10 10:01:50 2018
 Quant Method : J:\GC08\METHODS\H2HE092517.M
 Quant Title : Hydrogen and Helium by EPA Method 3C
 QLast Update : Wed Oct 10 10:01:45 2018
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|------------------|-------|----------|--------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Helium | 0.772 | 39434 | 1094.947 ppm |
| 2) Hydrogen | 0.000 | 0 | N.D. ppm |
| ----- | | | |

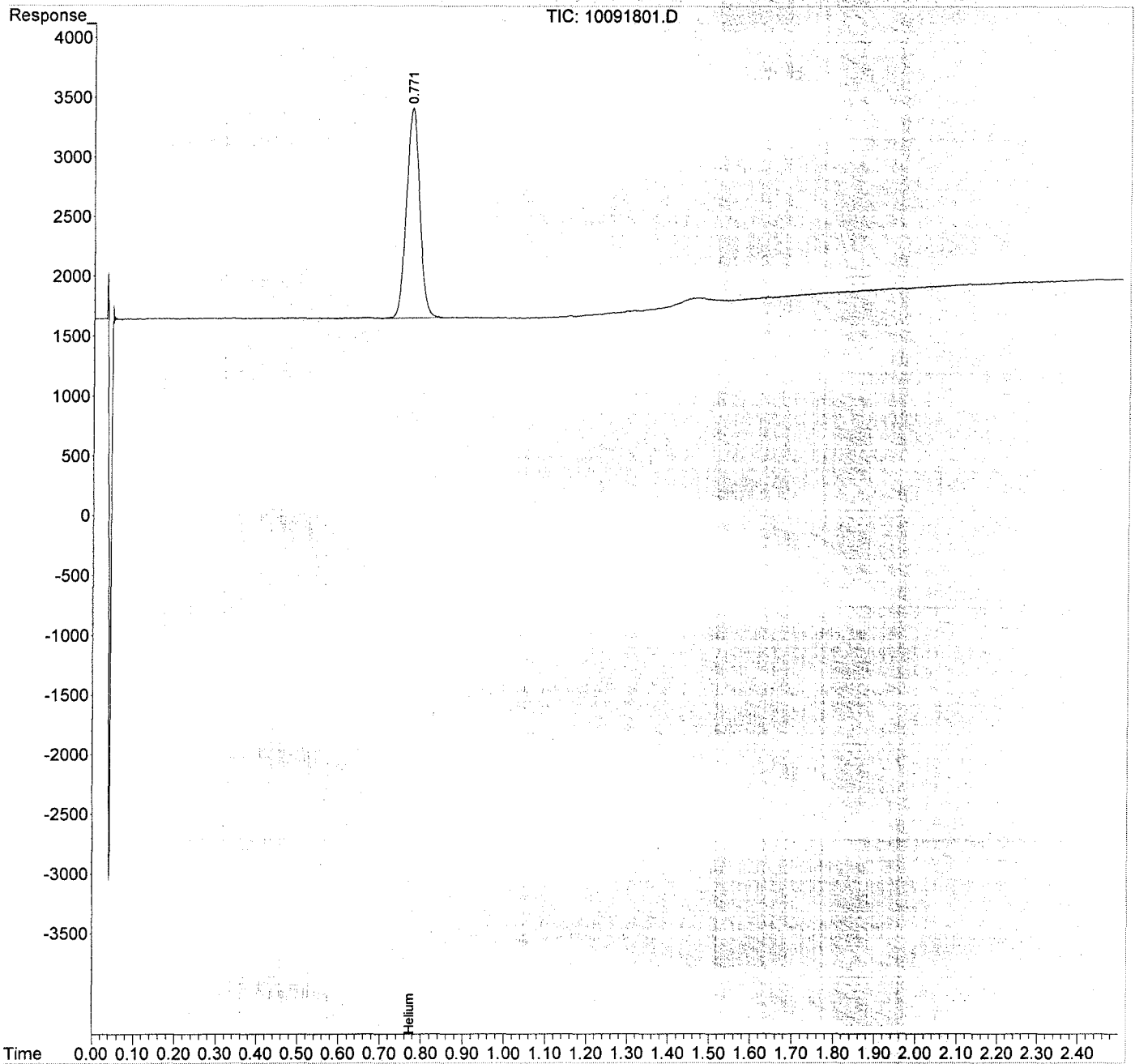
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
Data File : 10091801.D
Signal(s) : TCD1A.CH
Acq On : 09-Oct-2018, 09:13:11
Operator : GG
Sample : STD S32-10091801
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 10 10:01:50 2018
Quant Method : J:\GC08\METHODS\H2HE092517.M
Quant Title : Hydrogen and Helium by EPA Method 3C
QLast Update : Wed Oct 10 10:01:45 2018
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
 Data File : 10091815.D
 Signal(s) : TCD1A.CH
 Acq On : 09-Oct-2018, 11:03:14
 Operator : GG
 Sample : STD S32-10091801
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Oct 10 10:03:50 2018
 Quant Method : J:\GC08\METHODS\H2HE092517.M
 Quant Title : Hydrogen and Helium by EPA Method 3C
 QLast Update : Tue Sep 26 13:09:57 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|------------------|-------|----------|--------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Helium | 0.775 | 37649 | 1045.386 ppm |
| 2) Hydrogen | 0.000 | 0 | N.D. ppm |
| ----- | | | |

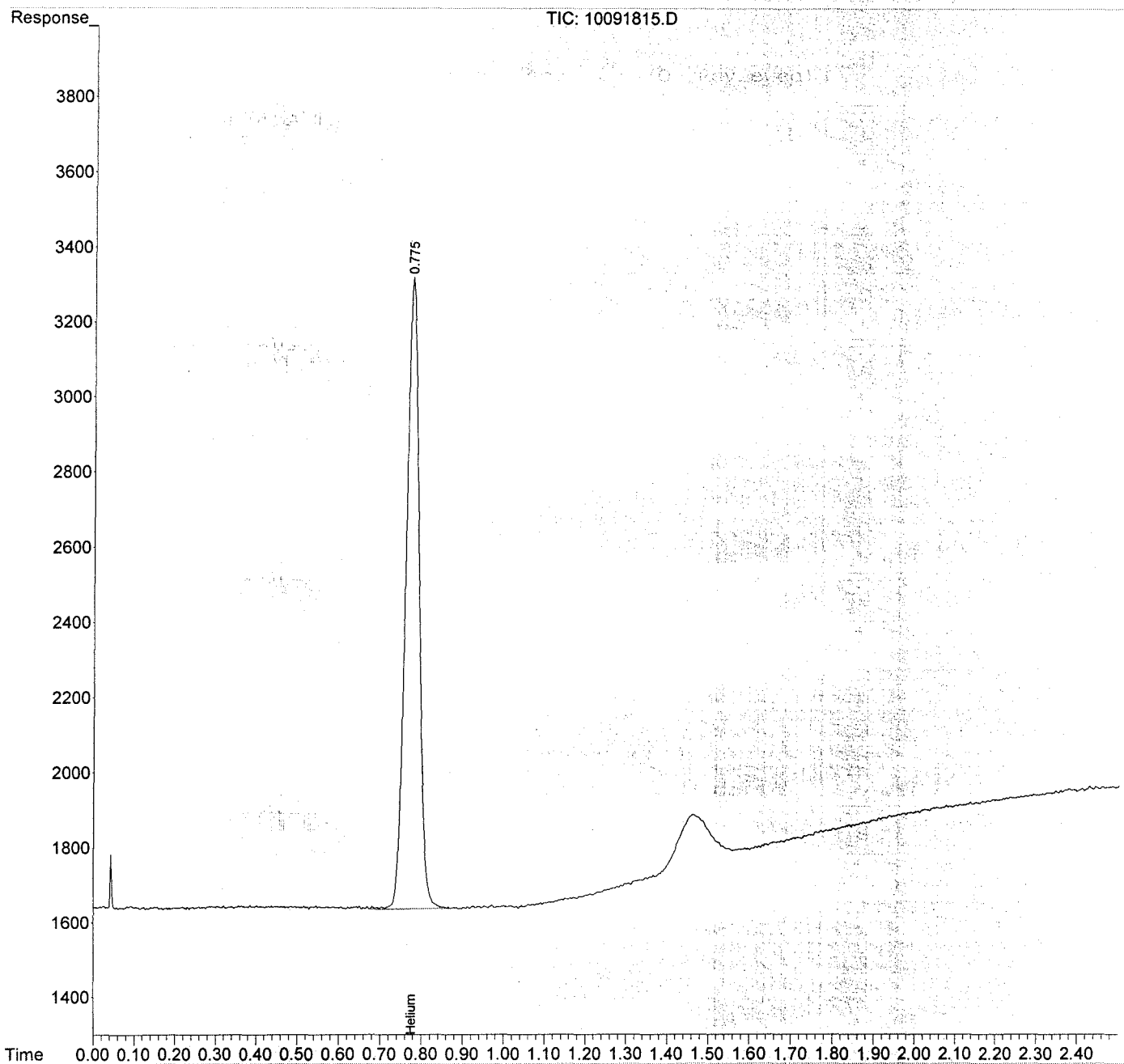
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
Data File : 10091815.D
Signal(s) : TCD1A.CH
Acq On : 09-Oct-2018, 11:03:14
Operator : GG
Sample : STD S32-10091801
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 10 10:03:50 2018
Quant Method : J:\GC08\METHODS\H2HE092517.M
Quant Title : Hydrogen and Helium by EPA Method 3C
QLast Update : Tue Sep 26 13:09:57 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
 Data File : 10091826.D
 Signal(s) : TCD1A.CH
 Acq On : 09-Oct-2018, 13:16:55
 Operator : GG
 Sample : STD S32-10091801
 Misc :
 ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
 Quant Time: Oct 10 11:19:55 2018
 Quant Method : J:\GC08\METHODS\H2HE092517.M
 Quant Title : Hydrogen and Helium by EPA Method 3C
 QLast Update : Tue Sep 26 13:09:57 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. :
 Signal Phase :
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|------------------|-------|----------|--------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Helium | 0.786 | 39726 | 1103.060 ppm |
| 2) Hydrogen | 0.000 | 0 | N.D. ppm |
| ----- | | | |

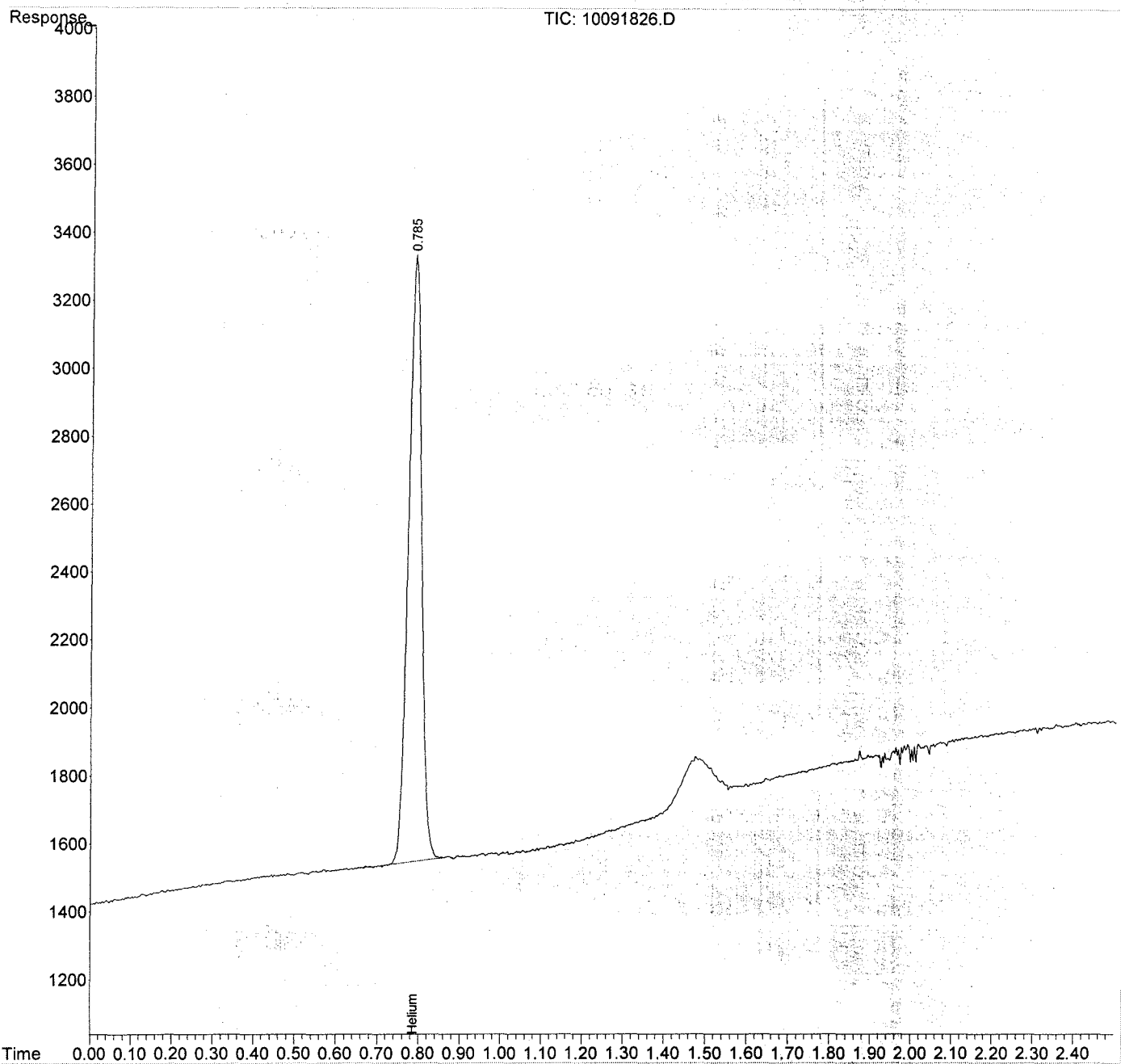
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : J:\GC08\DATA\TO_3M\2018_10\09HE\
Data File : 10091826.D
Signal(s) : TCD1A.CH
Acq On : 09-Oct-2018, 13:16:55
Operator : GG
Sample : STD S32-10091801
Misc :
ALS Vial : 1 Sample Multiplier: 1

Integration File: autoint1.e
Quant Time: Oct 10 11:19:55 2018
Quant Method : J:\GC08\METHODS\H2HE092517.M
Quant Title : Hydrogen and Helium by EPA Method 3C
QLast Update : Tue Sep 26 13:09:57 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. :
Signal Phase :
Signal Info :



Injection Log

Directory: I:\GC08\DATA\H2_HE\2018_10\09\

| | Date/Time | File Name | Sample ID | Misc Info | Operator | Acquisition Method | Comments |
|----|---------------------|------------|--------------------|-----------|----------|--------------------|----------|
| 1 | 09-Oct-18, 09:13:11 | 10091801.D | STD S32-10091801 | | GG | H2_HE.M | pass |
| 2 | 09-Oct-18, 09:19:22 | 10091802.D | MB 1.0ml | | GG | H2_HE.M | pass |
| 3 | 09-Oct-18, 09:27:01 | 10091803.D | LCS S32-10091802 | | GG | H2_HE.M | pass |
| 4 | 09-Oct-18, 09:32:12 | 10091804.D | LCSD S32-10091802 | | GG | H2_HE.M | pass |
| 5 | 09-Oct-18, 09:42:48 | 10091805.D | xP1805287-001 1.0 | | GG | H2_HE.M | |
| 6 | 09-Oct-18, 09:58:19 | 10091806.D | P1805287-001 0.1ml | | GG | H2_HE.M | |
| 7 | 09-Oct-18, 10:05:35 | 10091807.D | P1805237-001 1.0ml | | GG | H2_HE.M | |
| 8 | 09-Oct-18, 10:12:02 | 10091808.D | P1805237-002 1.0ml | | GG | H2_HE.M | |
| 9 | 09-Oct-18, 10:18:02 | 10091809.D | P1805237-003 1.0ml | | GG | H2_HE.M | |
| 10 | 09-Oct-18, 10:26:04 | 10091810.D | P1805324-001 1.0ml | | GG | H2_HE.M | |
| 11 | 09-Oct-18, 10:33:07 | 10091811.D | P1805324-002 1.0ml | | GG | H2_HE.M | |
| 12 | 09-Oct-18, 10:40:57 | 10091812.D | P1805324-006 1.0ml | | GG | H2_HE.M | |
| 13 | 09-Oct-18, 10:48:26 | 10091813.D | P1805236-001 1.0ml | | GG | H2_HE.M | |
| 14 | 09-Oct-18, 10:55:16 | 10091814.D | P1805236-002 1.0ml | | GG | H2_HE.M | |
| 15 | 09-Oct-18, 11:03:14 | 10091815.D | STD S32-10091801 | | GG | H2_HE.M | pass |
| 16 | 09-Oct-18, 11:12:35 | 10091816.D | P1805236-003 1.0ml | | GG | H2_HE.M | |
| 17 | 09-Oct-18, 11:19:52 | 10091817.D | P1805236-004 1.0ml | | GG | H2_HE.M | |
| 18 | 09-Oct-18, 11:38:49 | 10091818.D | P1805236-005 1.0ml | | GG | H2_HE.M | |
| 19 | 09-Oct-18, 12:18:02 | 10091819.D | P1805236-006 1.0ml | | GG | H2_HE.M | |
| 20 | 09-Oct-18, 12:36:23 | 10091820.D | P1805327-001 1.0ml | | GG | H2_HE.M | |
| 21 | 09-Oct-18, 12:42:11 | 10091821.D | P1805327-002 1.0ml | | GG | H2_HE.M | |
| 22 | 09-Oct-18, 12:48:37 | 10091822.D | P1805327-003 1.0ml | | GG | H2_HE.M | |
| 23 | 09-Oct-18, 12:55:01 | 10091823.D | P1805327-004 1.0ml | | GG | H2_HE.M | |
| 24 | 09-Oct-18, 13:02:48 | 10091824.D | P1805327-005 1.0ml | | GG | H2_HE.M | |
| 25 | 09-Oct-18, 13:10:28 | 10091825.D | P1805327-006 1.0ml | | GG | H2_HE.M | |
| 26 | 09-Oct-18, 13:16:55 | 10091826.D | STD S32-10091801 | | GG | H2_HE.M | pass |
| 27 | 09-Oct-18, 13:24:12 | 10091827.D | MB 1.0ml | | GG | H2_HE.M | pass |
| 28 | 09-Oct-18, 13:29:44 | 10091828.D | LCS S32-10091802 | | GG | H2_HE.M | pass |
| 29 | 09-Oct-18, 13:34:36 | 10091829.D | LCSD S32-10091802 | | GG | H2_HE.M | pass |
| 30 | 09-Oct-18, 13:40:13 | 10091830.D | P1805327-007 1.0ml | | GG | H2_HE.M | |
| 31 | 09-Oct-18, 13:45:26 | 10091831.D | P1805327-008 1.0ml | | GG | H2_HE.M | |
| 32 | 09-Oct-18, 13:52:58 | 10091832.D | P1805327-009 1.0ml | | GG | H2_HE.M | |
| 33 | 09-Oct-18, 13:59:59 | 10091833.D | P1805327-010 1.0ml | | GG | H2_HE.M | |
| 34 | 09-Oct-18, 14:06:14 | 10091834.D | P1805327-011 1.0ml | | GG | H2_HE.M | |
| 35 | 09-Oct-18, 14:13:55 | 10091835.D | P1805327-012 1.0ml | | GG | H2_HE.M | |
| 36 | 09-Oct-18, 14:19:43 | 10091836.D | P1805327-013 1.0ml | | GG | H2_HE.M | |
| 37 | 09-Oct-18, 14:27:16 | 10091837.D | P1805327-014 1.0ml | | GG | H2_HE.M | |
| 38 | 09-Oct-18, 14:33:04 | 10091838.D | P1805327-015 1.0ml | | GG | H2_HE.M | |

Data Path : J:\GC01\DATA\FXG\2018_10\10\
 Data File : 10101808.D
 Signal(s) : TCD1A.CH
 Acq On : 10 Oct 2018 10:01 am
 Operator : GG
 Sample : P1805236-001
 Misc :
 ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
 Quant Time: Oct 12 07:17:51 2018
 Quant Method : J:\GC01\METHODS\3C012417.M
 Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 QLast Update : Tue Jan 24 17:15:32 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 100ul
 Signal Phase : CarboSieve Packed Column
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|--------------------|-------|----------|----------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Hydrogen | 0.000 | 0 | N.D. ppm |
| 2) Oxygen | 2.246 | 154361 | 100998.452 ppm |
| 3) Nitrogen | 2.367 | 1477299 | 831043.520 ppm |
| 4) Carbon Monoxide | 0.000 | 0 | N.D. ppm |
| 5) Methane | 0.000 | 0 | N.D. ppm |
| 6) Carbon Dioxide | 6.807 | 81735 | 40154.412 ppm |
| ----- | | | |

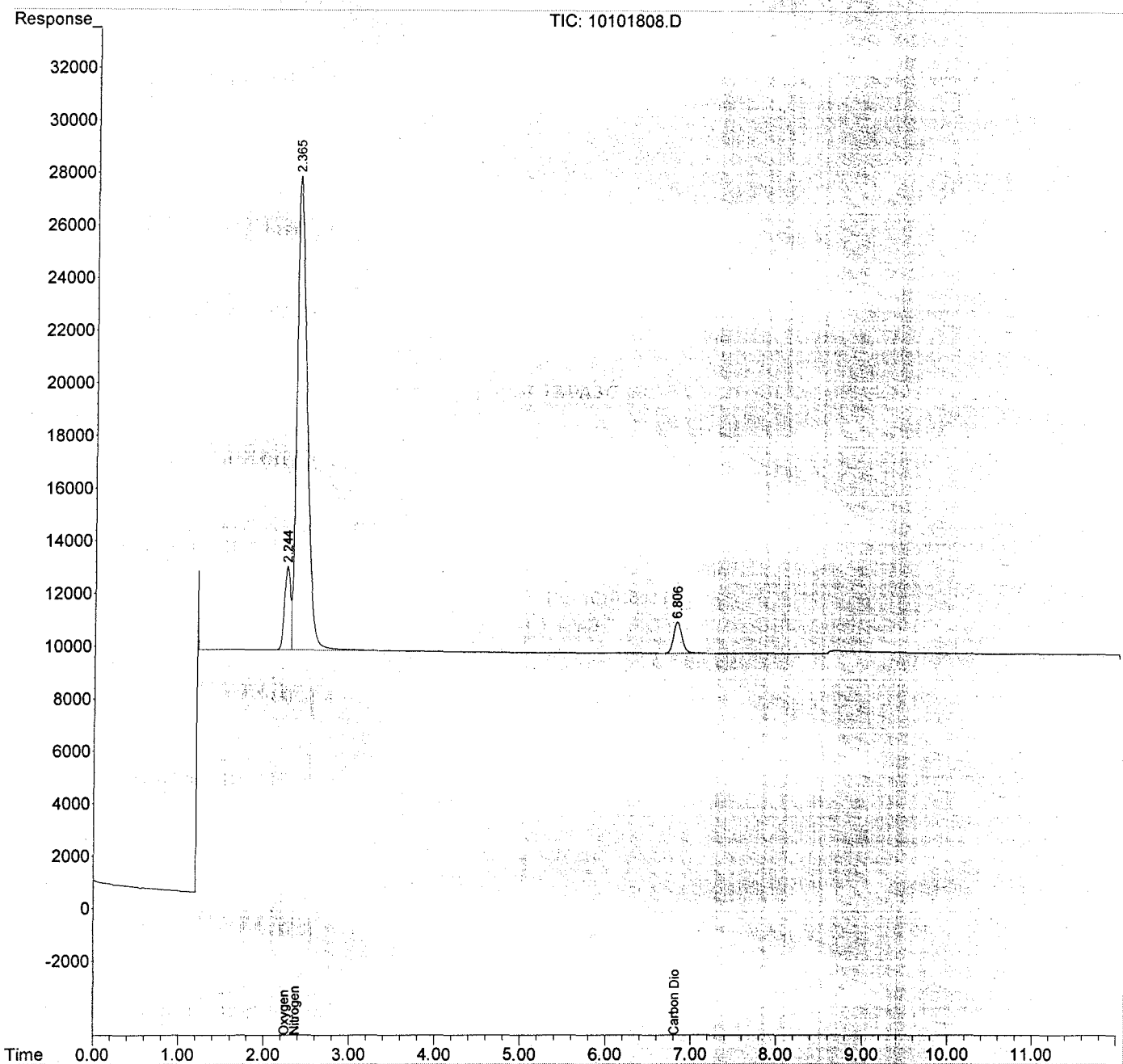
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : J:\GC01\DATA\FXG\2018_10\10\
Data File : 10101808.D
Signal(s) : TCD1A.CH
Acq On : 10 Oct 2018 10:01 am
Operator : GG
Sample : P1805236-001
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Oct 12 07:17:51 2018
Quant Method : J:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 17:15:32 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :



Data Path : J:\GC01\DATA\FXG\2018_10\10\
 Data File : 10101809.D
 Signal(s) : TCD1A.CH
 Acq On : 10 Oct 2018 10:34 am
 Operator : GG
 Sample : P1805236-002
 Misc :
 ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
 Quant Time: Oct 12 07:20:02 2018
 Quant Method : J:\GC01\METHODS\3C012417.M
 Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 QLast Update : Tue Jan 24 17:15:32 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 100ul
 Signal Phase : CarboSieve Packed Column
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|--------------------|-------|----------|----------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Hydrogen | 0.000 | 0 | N.D. ppm |
| 2) Oxygen | 2.259 | 152895 | 100039.452 ppm |
| 3) Nitrogen | 2.380 | 1491837 | 839221.898 ppm |
| 4) Carbon Monoxide | 0.000 | 0 | N.D. ppm |
| 5) Methane | 0.000 | 0 | N.D. ppm |
| 6) Carbon Dioxide | 6.812 | 84325 | 41426.618 ppm |
| ----- | | | |

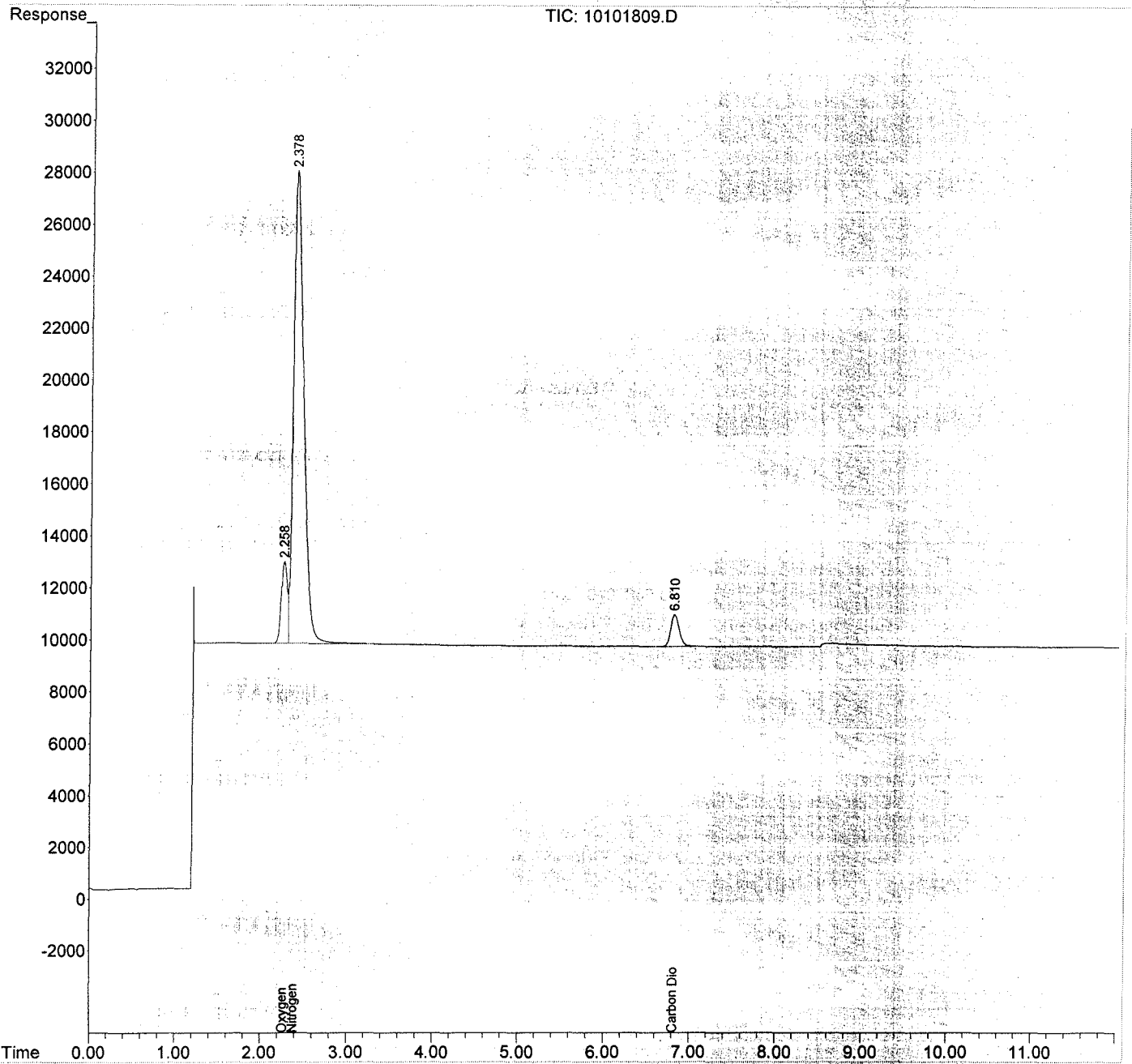
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : J:\GC01\DATA\FXG\2018_10\10\
Data File : 10101809.D
Signal(s) : TCD1A.CH
Acq On : 10 Oct 2018 10:34 am
Operator : GG
Sample : P1805236-002
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Oct 12 07:20:02 2018
Quant Method : J:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 17:15:32 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :



Data Path : J:\GC01\DATA\FXG\2018_10\10\
 Data File : 10101810.D
 Signal(s) : TCD1A.CH
 Acq On : 10 Oct 2018 10:51 am
 Operator : GG
 Sample : P1805236-003
 Misc :
 ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
 Quant Time: Oct 12 07:20:24 2018
 Quant Method : J:\GC01\METHODS\3C012417.M
 Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 QLast Update : Tue Jan 24 17:15:32 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 100ul
 Signal Phase : CarboSieve Packed Column
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|--------------------|-------|----------|----------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Hydrogen | 0.000 | 0 | N.D. ppm |
| 2) Oxygen | 2.251 | 205758 | 134627.462 ppm |
| 3) Nitrogen | 2.377 | 1467426 | 825489.677 ppm |
| 4) Carbon Monoxide | 0.000 | 0 | N.D. ppm |
| 5) Methane | 0.000 | 0 | N.D. ppm |
| 6) Carbon Dioxide | 6.809 | 55622 | 27325.692 ppm |
| ----- | | | |

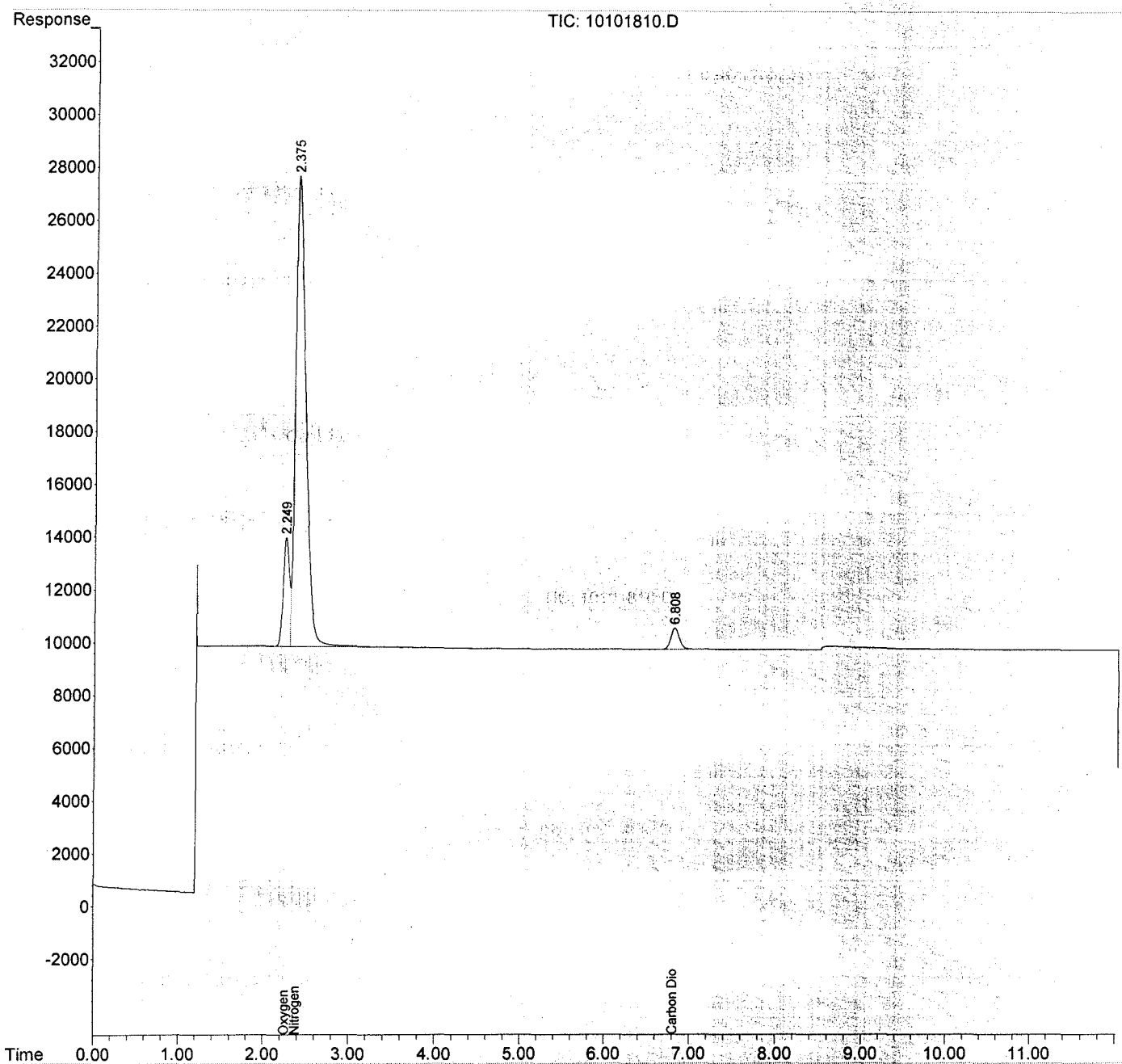
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : J:\GC01\DATA\FXG\2018_10\10\
Data File : 10101810.D
Signal(s) : TCD1A.CH
Acq On : 10 Oct 2018 10:51 am
Operator : GG
Sample : P1805236-003
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Oct 12 07:20:24 2018
Quant Method : J:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 17:15:32 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :



Data Path : J:\GC01\DATA\FXG\2018_10\10\
 Data File : 10101811.D
 Signal(s) : TCD1A.CH
 Acq On : 10 Oct 2018 11:13 am
 Operator : GG
 Sample : P1805236-004
 Misc :
 ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
 Quant Time: Oct 12 07:20:44 2018
 Quant Method : J:\GC01\METHODS\3C012417.M
 Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 QLast Update : Tue Jan 24 17:15:32 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 100ul
 Signal Phase : CarboSieve Packed Column
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|--------------------|-------|----------|----------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Hydrogen | 0.000 | 0 | N.D. ppm |
| 2) Oxygen | 2.258 | 152994 | 100104.366 ppm |
| 3) Nitrogen | 2.379 | 1494017 | 840448.510 ppm |
| 4) Carbon Monoxide | 0.000 | 0 | N.D. ppm |
| 5) Methane | 0.000 | 0 | N.D. ppm |
| 6) Carbon Dioxide | 6.810 | 83950 | 41242.432 ppm |
| ----- | | | |

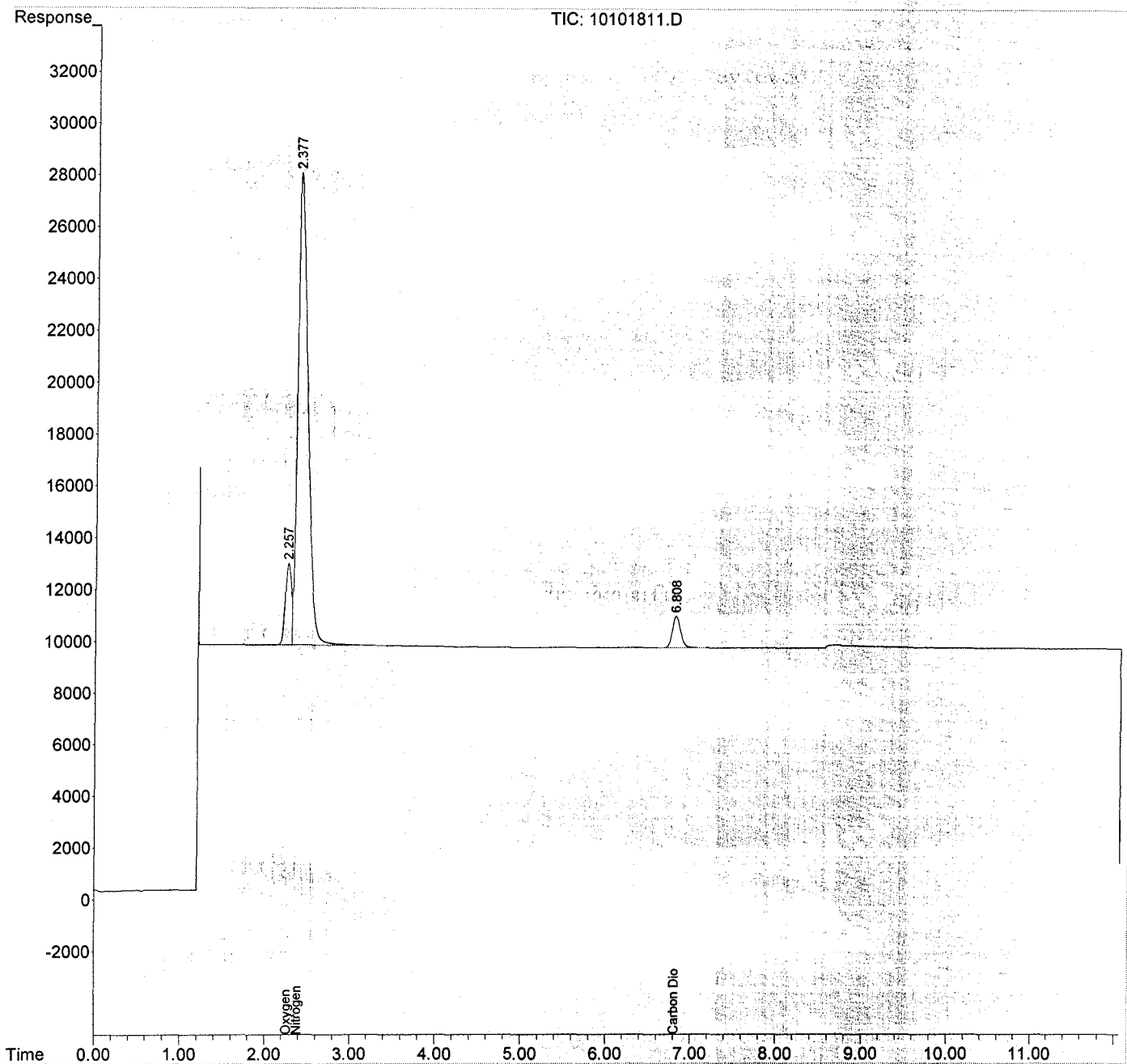
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : J:\GC01\DATA\FXG\2018_10\10\
 Data File : 10101811.D
 Signal(s) : TCD1A.CH
 Acq On : 10 Oct 2018 11:13 am
 Operator : GG
 Sample : P1805236-004
 Misc :
 ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
 Quant Time: Oct 12 07:20:44 2018
 Quant Method : J:\GC01\METHODS\3C012417.M
 Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 QLast Update : Tue Jan 24 17:15:32 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 100ul
 Signal Phase : CarboSieve Packed Column
 Signal Info :



Data Path : J:\GC01\DATA\FXG\2018_10\10\
 Data File : 10101812.D
 Signal(s) : TCD1A.CH
 Acq On : 10 Oct 2018 11:33 am
 Operator : GG
 Sample : P1805236-005
 Misc :
 ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
 Quant Time: Oct 12 07:21:03 2018
 Quant Method : J:\GC01\METHODS\3C012417.M
 Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 QLast Update : Tue Jan 24 17:15:32 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 100ul
 Signal Phase : CarboSieve Packed Column
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|--------------------|-------|----------|----------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Hydrogen | 0.000 | 0 | N.D. ppm |
| 2) Oxygen | 2.257 | 91066 | 59584.493 ppm |
| 3) Nitrogen | 2.368 | 1634825 | 919658.683 ppm |
| 4) Carbon Monoxide | 0.000 | 0 | N.D. ppm |
| 5) Methane | 0.000 | 0 | N.D. ppm |
| 6) Carbon Dioxide | 0.000 | 0 | N.D. ppm |
| ----- | | | |

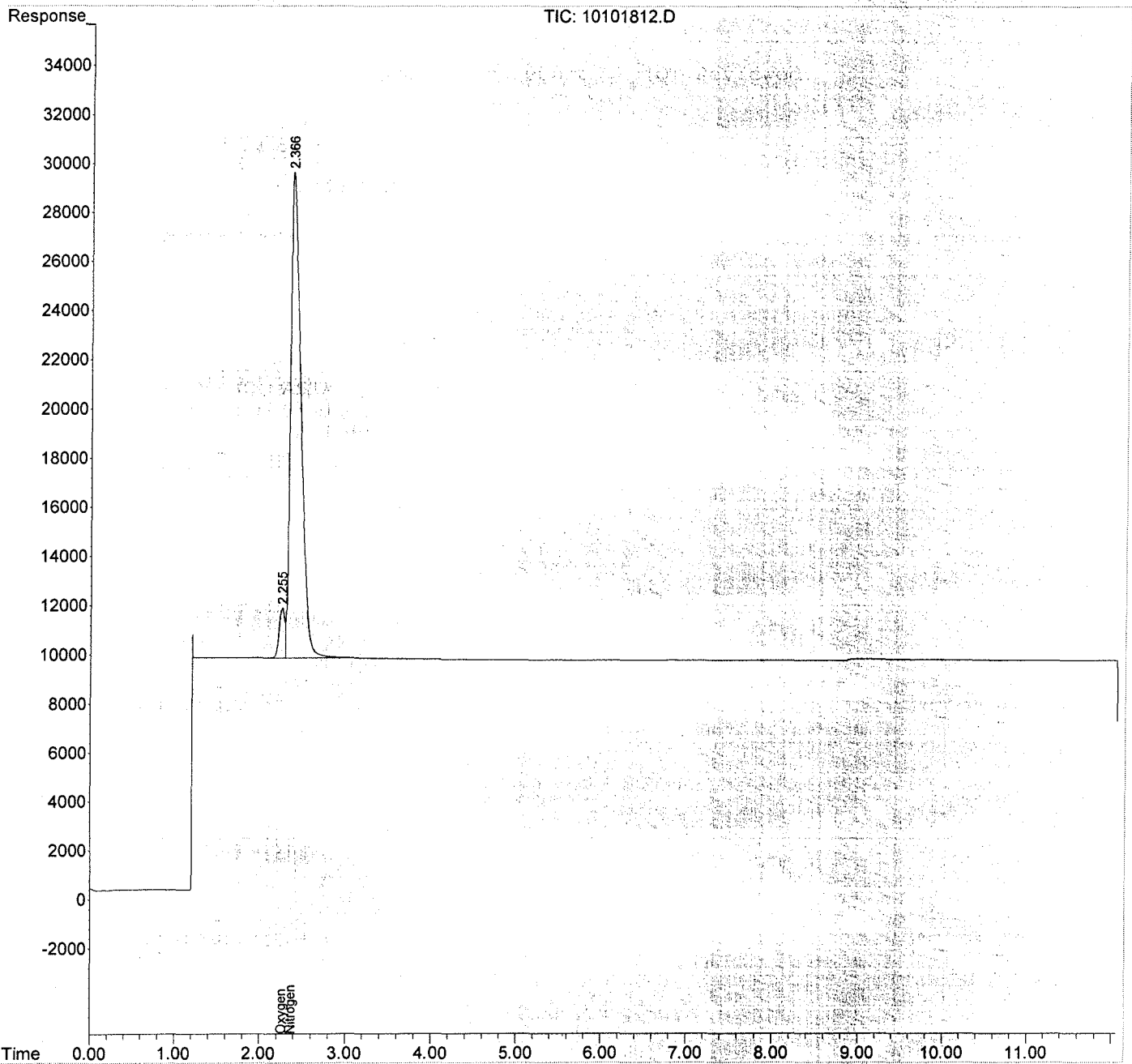
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : J:\GC01\DATA\FXG\2018_10\10\
Data File : 10101812.D
Signal(s) : TCD1A.CH
Acq On : 10 Oct 2018 11:33 am
Operator : GG
Sample : P1805236-005
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Oct 12 07:21:03 2018
Quant Method : J:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 17:15:32 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :



Data Path : J:\GC01\DATA\FXG\2018_10\10\
 Data File : 10101813.D
 Signal(s) : TCD1A.CH
 Acq On : 10 Oct 2018 12:13 pm
 Operator : GG
 Sample : P1805236-006
 Misc :
 ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
 Quant Time: Oct 12 07:21:58 2018
 Quant Method : J:\GC01\METHODS\3C012417.M
 Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 QLast Update : Tue Jan 24 17:15:32 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 100ul
 Signal Phase : CarboSieve Packed Column
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|--------------------|-------|----------|----------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Hydrogen | 0.000 | 0 | N.D. ppm |
| 2) Oxygen | 2.254 | 159340 | 104256.259 ppm |
| 3) Nitrogen | 2.373 | 1574950 | 885976.251 ppm |
| 4) Carbon Monoxide | 0.000 | 0 | N.D. ppm |
| 5) Methane | 0.000 | 0 | N.D. ppm |
| 6) Carbon Dioxide | 0.000 | 0 | N.D. ppm |
| ----- | | | |

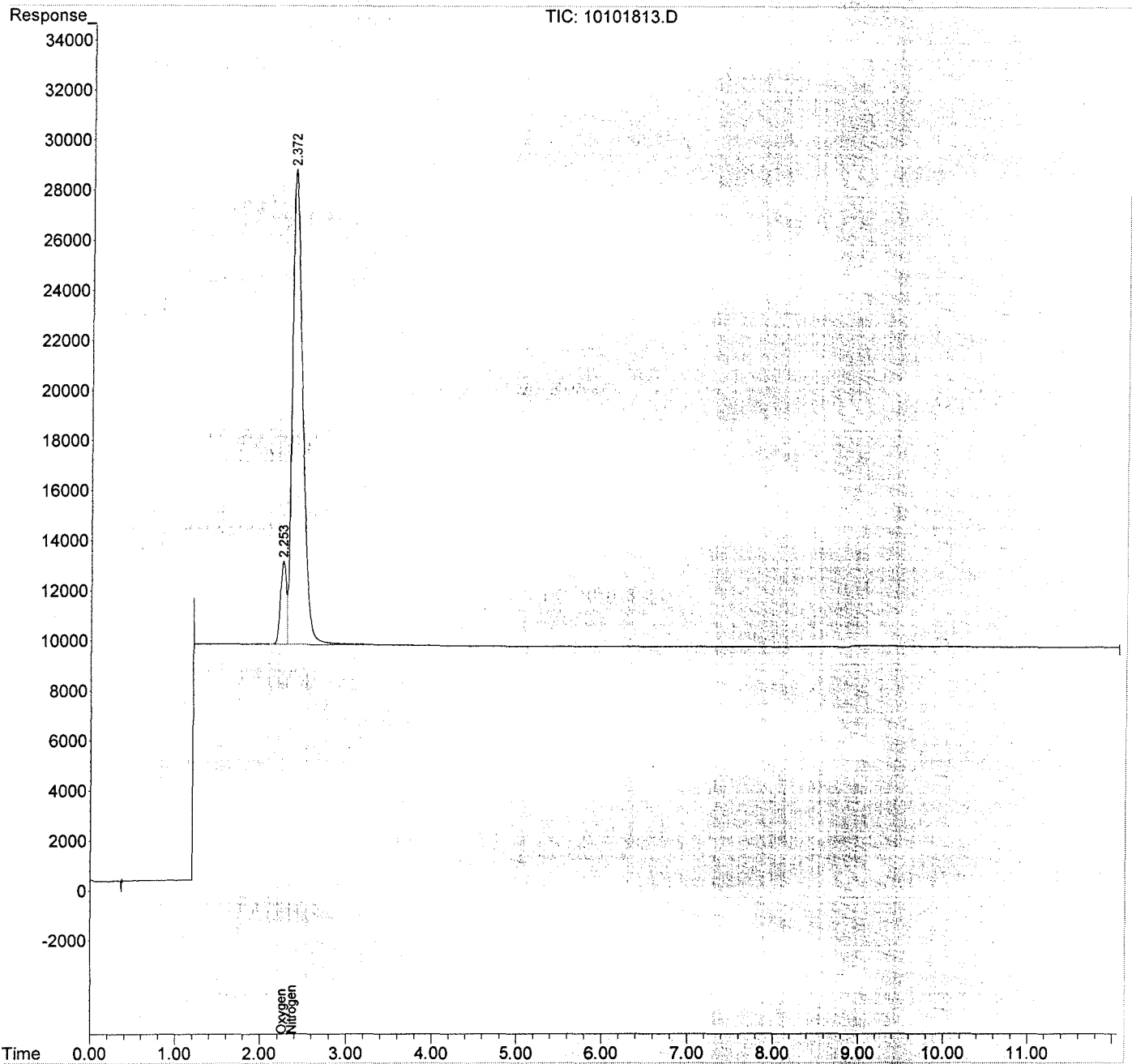
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : J:\GC01\DATA\FXG\2018_10\10\
Data File : 10101813.D
Signal(s) : TCD1A.CH
Acq On : 10 Oct 2018 12:13 pm
Operator : GG
Sample : P1805236-006
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Oct 12 07:21:58 2018
Quant Method : J:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 17:15:32 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :



Data Path : J:\GC01\DATA\FXG\2018_10\10\
 Data File : 10101802.D
 Signal(s) : TCD1A.CH
 Acq On : 10 Oct 2018 7:54 am
 Operator : GG
 Sample : MB
 Misc :
 ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
 Quant Time: Oct 10 14:36:09 2018
 Quant Method : J:\GC01\METHODS\3C012417.M
 Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 QLast Update : Tue Jan 24 17:15:32 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 100ul
 Signal Phase : CarboSieve Packed Column
 Signal Info :

| Compound | R.T. | Response | Conc | Units |
|--------------------|-------|----------|------|-------|
| ----- | | | | |
| Target Compounds | | | | |
| 1) Hydrogen | 0.000 | 0 | N.D. | ppm |
| 2) Oxygen | 0.000 | 0 | N.D. | ppm |
| 3) Nitrogen | 0.000 | 0 | N.D. | ppm |
| 4) Carbon Monoxide | 0.000 | 0 | N.D. | ppm |
| 5) Methane | 0.000 | 0 | N.D. | ppm |
| 6) Carbon Dioxide | 0.000 | 0 | N.D. | ppm |
| ----- | | | | |

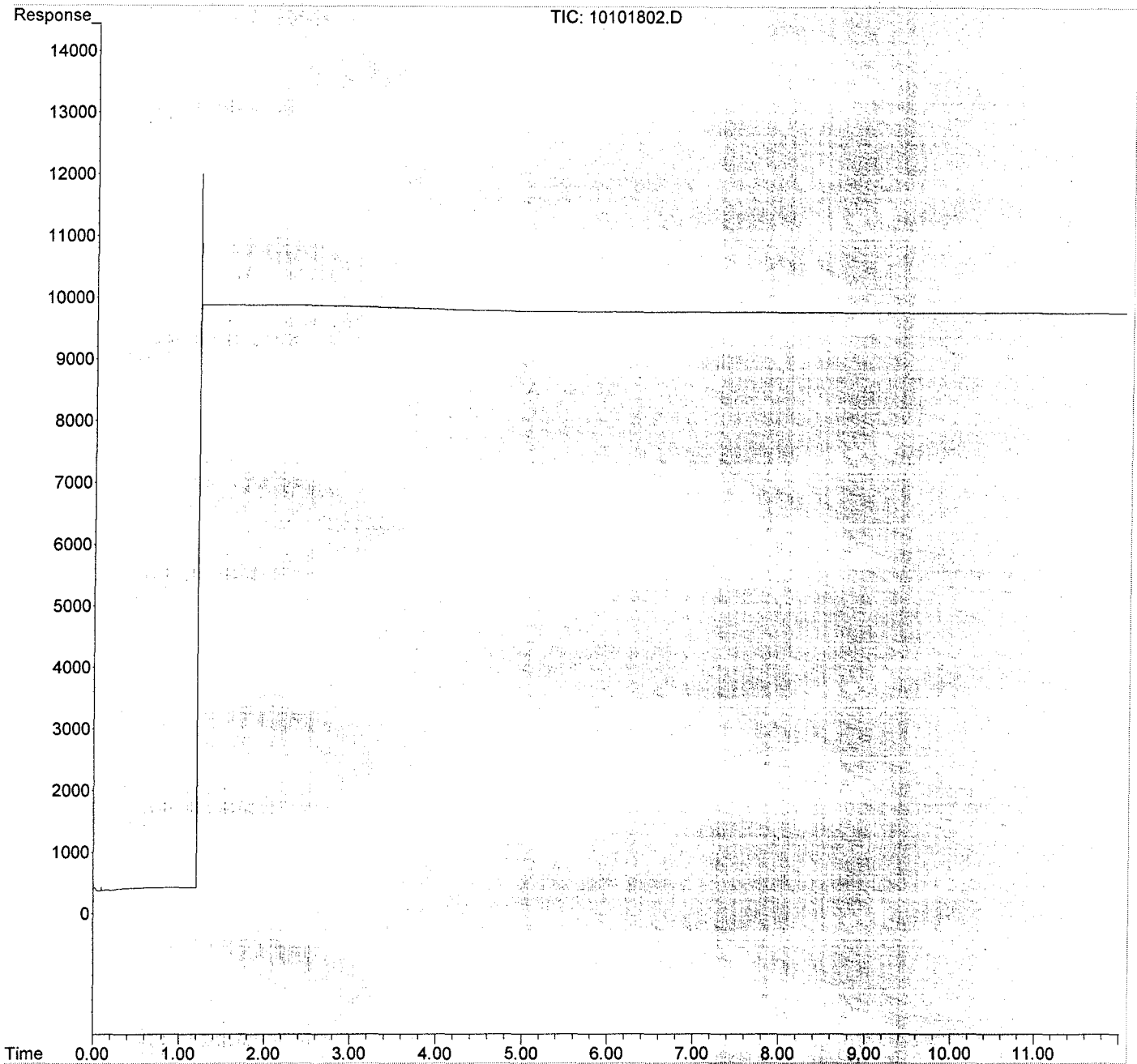
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : J:\GC01\DATA\FXG\2018_10\10\
Data File : 10101802.D
Signal(s) : TCD1A.CH
Acq On : 10 Oct 2018 7:54 am
Operator : GG
Sample : MB
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Oct 10 14:36:09 2018
Quant Method : J:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 17:15:32 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :



Data Path : J:\GC01\DATA\FXG\2018_10\10\
 Data File : 10101804.D
 Signal(s) : TCD1A.CH
 Acq On : 10 Oct 2018 8:37 am
 Operator : GG
 Sample : LCS S32-10081801
 Misc :
 ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
 Quant Time: Oct 10 14:36:50 2018
 Quant Method : J:\GC01\METHODS\3C012417.M
 Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 QLast Update : Tue Jan 24 17:15:32 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 100ul
 Signal Phase : CarboSieve Packed Column
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|--------------------|-------|----------|---------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Hydrogen | 0.735 | 57055 | 42057.167 ppm |
| 2) Oxygen | 2.301 | 63200 | 41351.565 ppm |
| 3) Nitrogen | 2.478 | 90173 | 50725.938 ppm |
| 4) Carbon Monoxide | 3.166 | 89951 | 52459.289 ppm |
| 5) Methane | 5.154 | 53302 | 41713.046 ppm |
| 6) Carbon Dioxide | 6.811 | 99737 | 48998.467 ppm |
| ----- | | | |

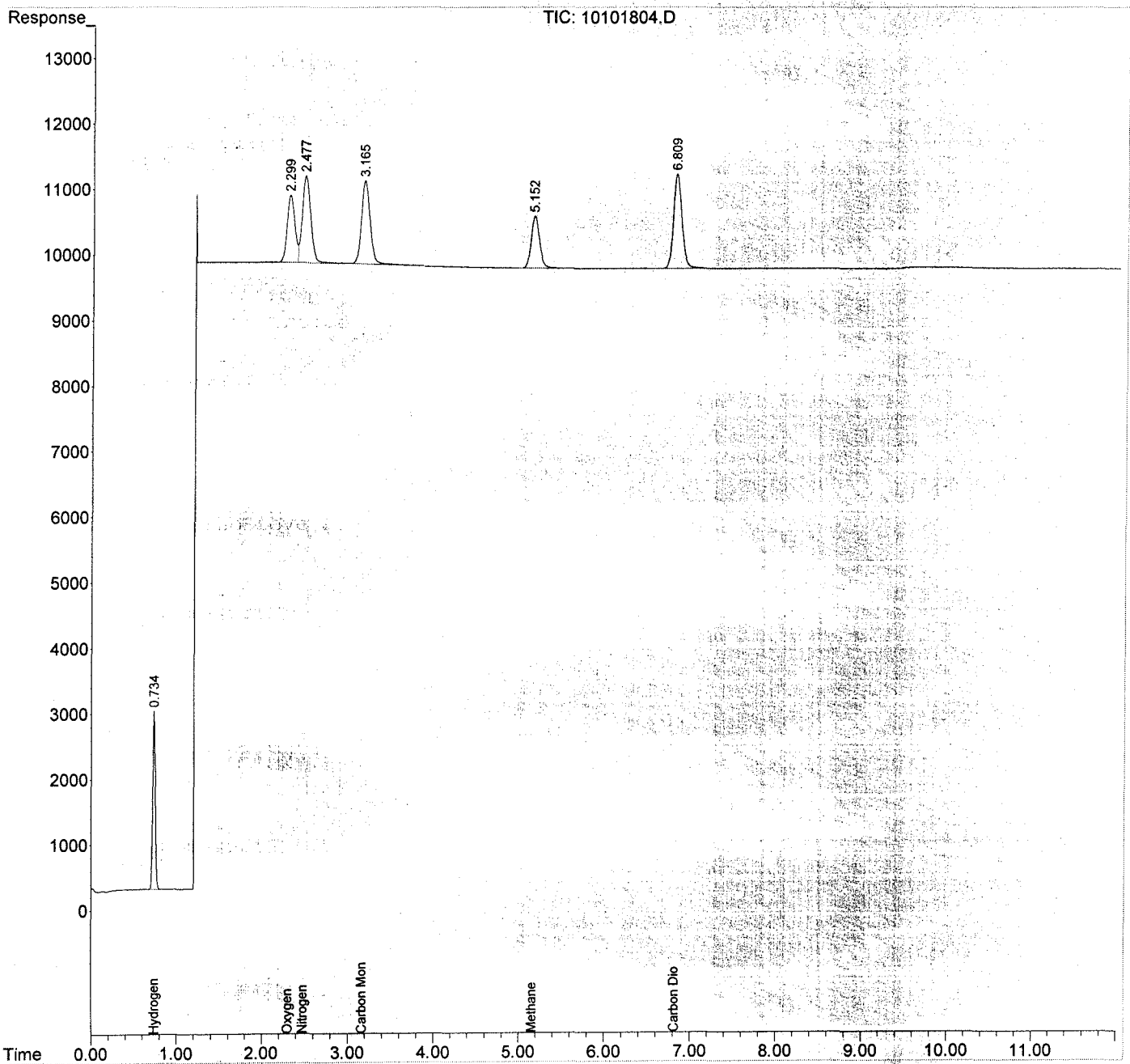
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : J:\GC01\DATA\FXG\2018_10\10\
Data File : 10101804.D
Signal(s) : TCD1A.CH
Acq On : 10 Oct 2018 8:37 am
Operator : GG
Sample : LCS S32-10081801
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Oct 10 14:36:50 2018
Quant Method : J:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 17:15:32 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :



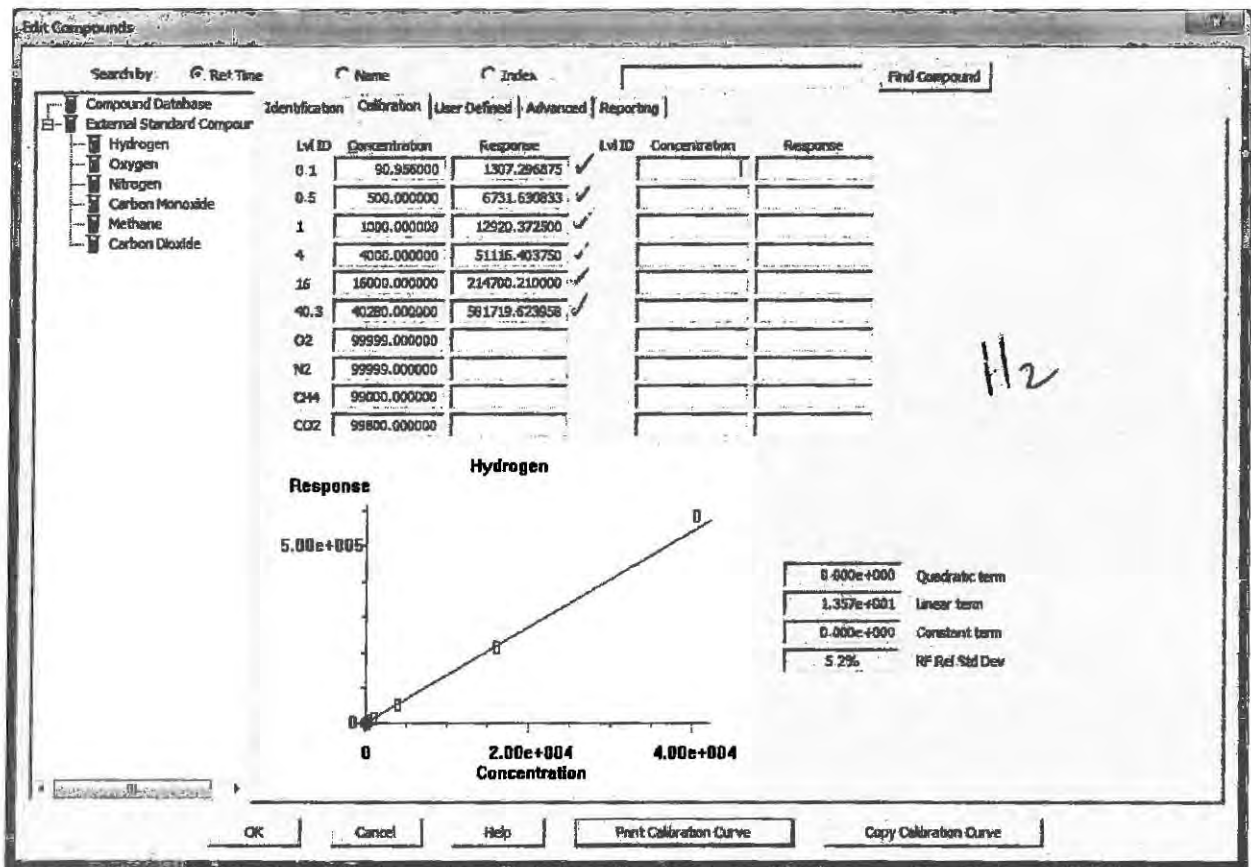
Method Path : I:\GC01\METHODS\
 Method File : 3C012417.M
 Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 Last Update : Tue Jan 24 17:15:32 2017
 Response Via : Initial Calibration

Calibration Files

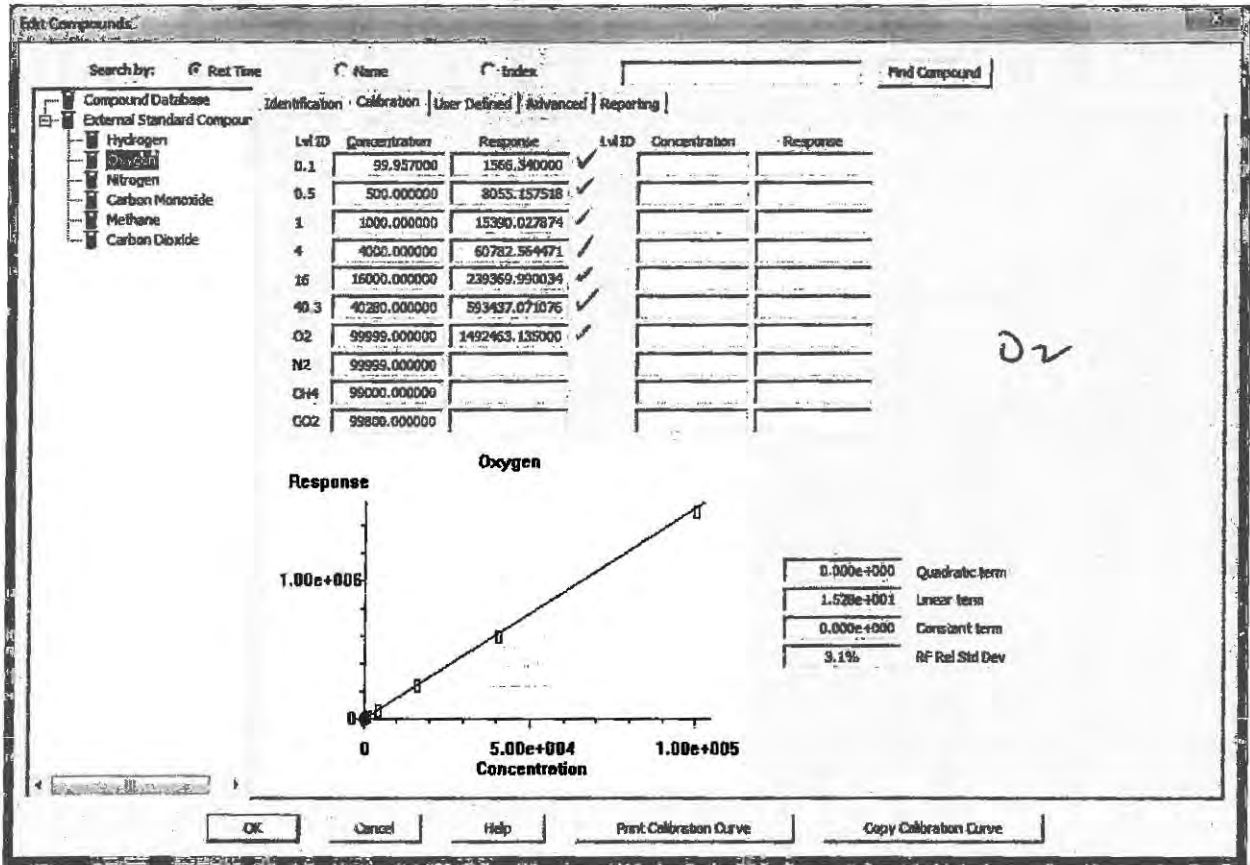
0.1 =01241708.D 0.5 =01241710.D 1 =01241711.D
 4 =01241712.D 16 =01241713.D 40.3 =01241727.D

| Compound | 0.1 | 0.5 | 1 | 4 | 16 | 40.3 | Avg | | %RSD |
|--------------------|-------|-------|-------|-------|-------|-------|-------|----|------|
| 1) Hydrogen | 1.437 | 1.346 | 1.292 | 1.278 | 1.342 | 1.444 | 1.357 | E1 | 5.20 |
| 2) Oxygen | 1.567 | 1.611 | 1.539 | 1.520 | 1.496 | 1.473 | 1.528 | E1 | 3.15 |
| 3) Nitrogen | 1.858 | 1.875 | 1.740 | 1.695 | 1.671 | 1.668 | 1.778 | E1 | 6.22 |
| 4) Carbon Monoxide | 1.736 | 1.818 | 1.718 | 1.684 | 1.670 | 1.662 | 1.715 | E1 | 3.39 |
| 5) Methane | 1.322 | 1.367 | 1.266 | 1.252 | 1.241 | 1.228 | 1.278 | E1 | 3.87 |
| 6) Carbon Dioxide | 2.083 | 2.165 | 2.077 | 2.020 | 2.008 | 1.978 | 2.036 | E1 | 3.97 |

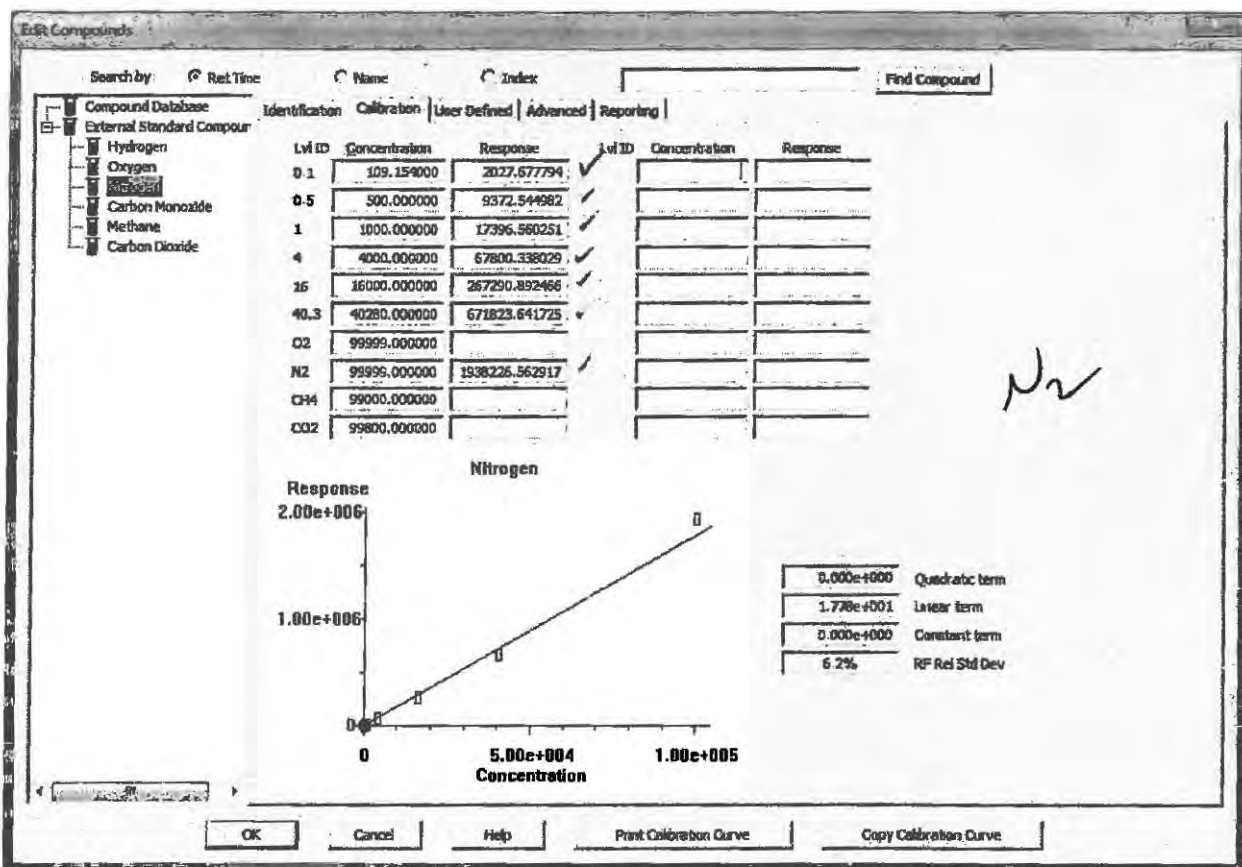
(#) = Out of Range ### Number of calibration levels exceeded format ###



We 1/20/12

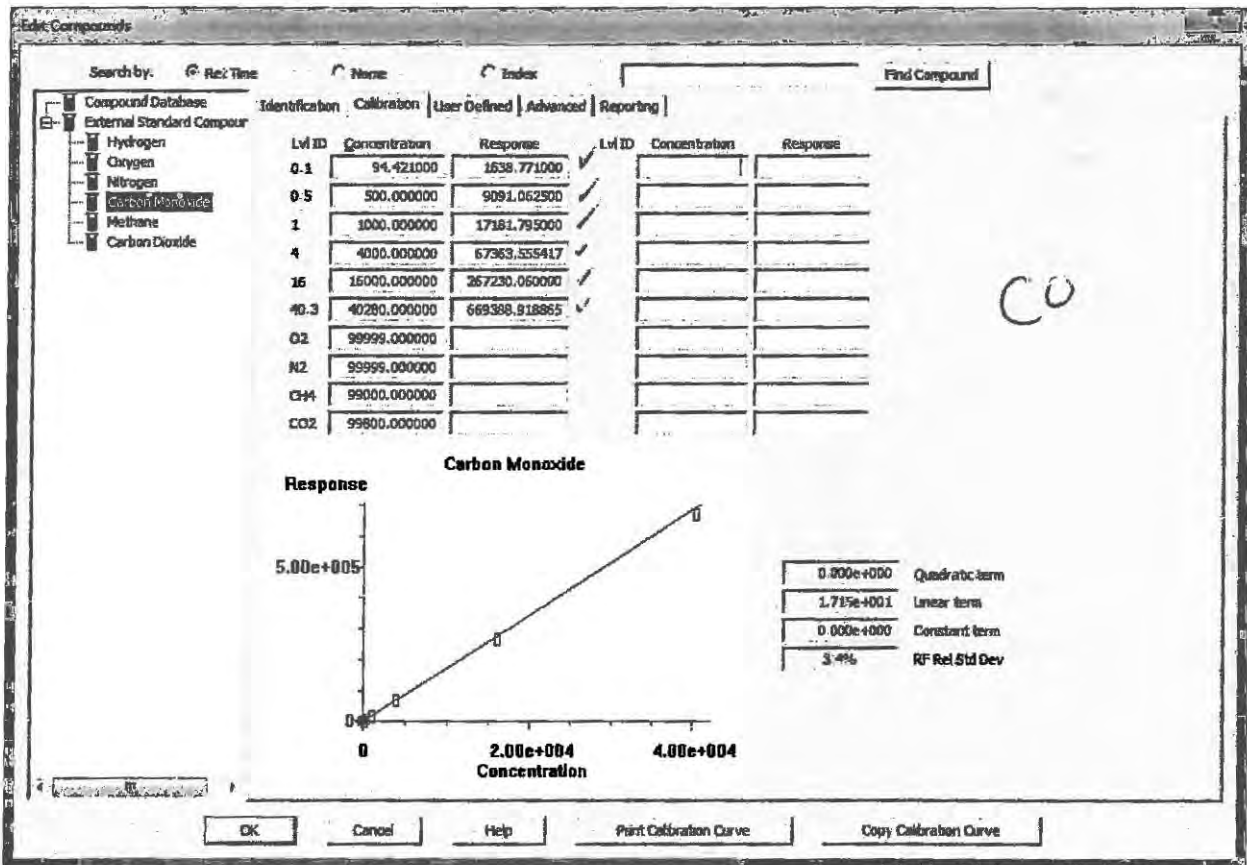


WJ 1/26/12

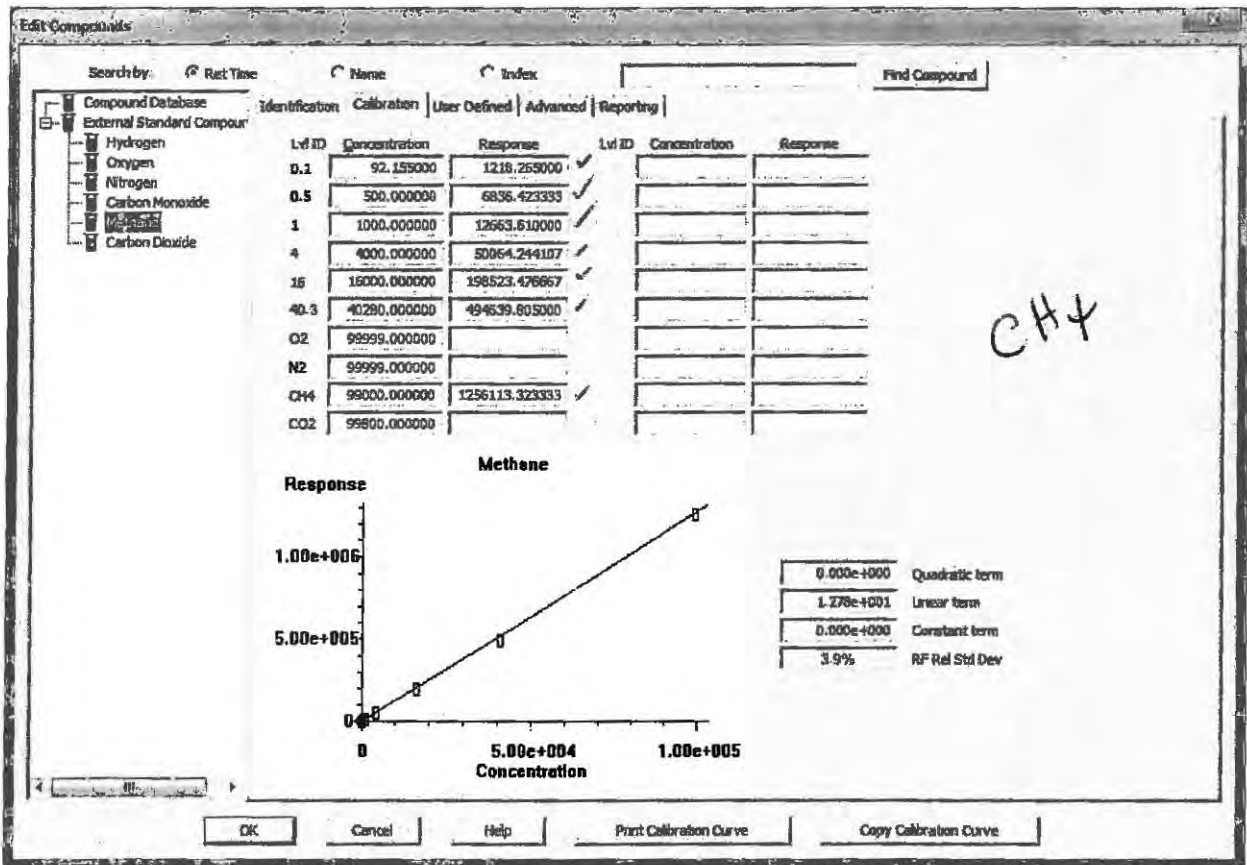


N2

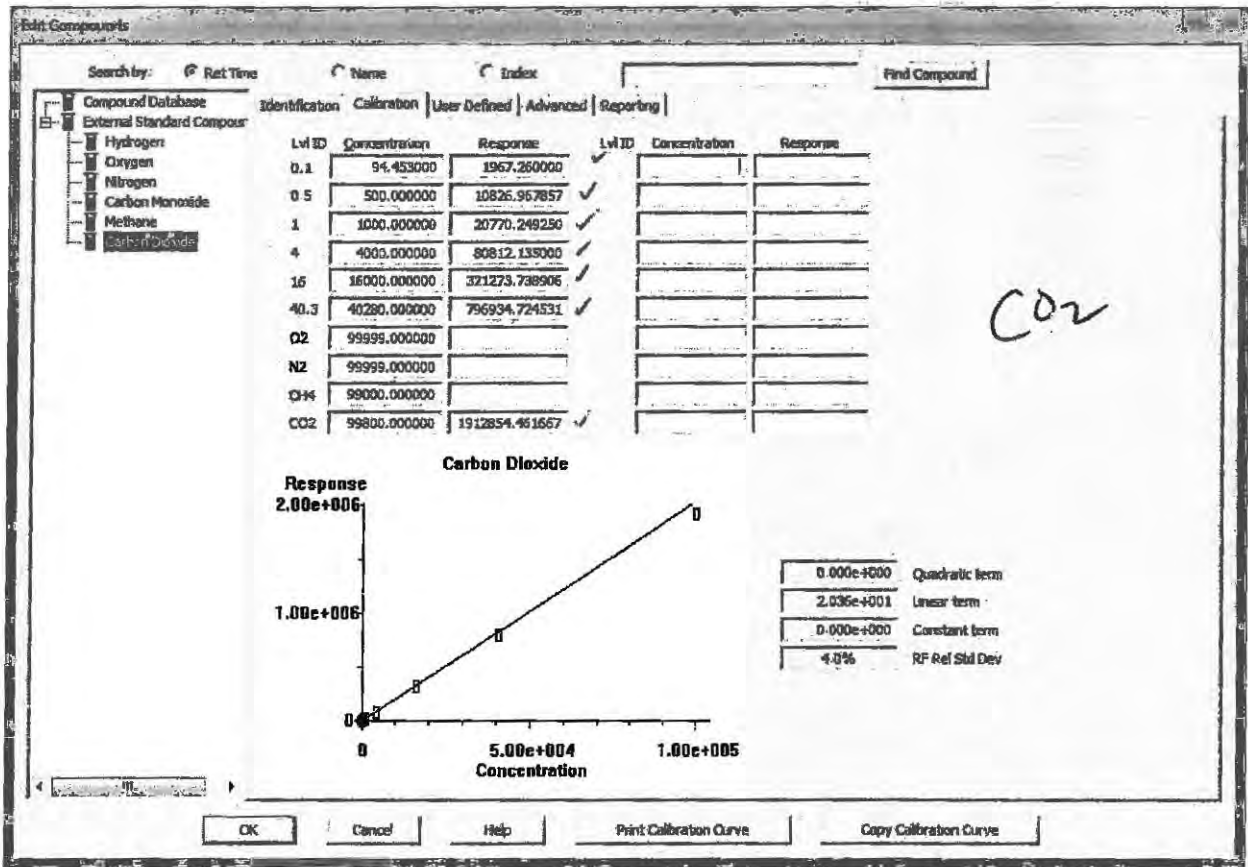
Ww 1/26/17



1/26/17



1/26/12



Mr Huber

Method Path : I:\GC01\METHODS\
 Method File : 3C012417.M
 Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 Last Update : Tue Jan 24 17:15:32 2017
 Response Via : Initial Calibration

| # | ID | Conc | ISTD Conc | Path\File |
|----|------|-------|--------------|--|
| 1 | 0.1 | 94 | 0 | I:\GC01\DATA\FXG\2017_01\24\01241708.D |
| 2 | 0.5 | 500 | 0 | I:\GC01\DATA\FXG\2017_01\24\01241710.D |
| 3 | 1 | 1000 | 0 | I:\GC01\DATA\FXG\2017_01\24\01241711.D |
| 4 | 4 | 4000 | 0 | I:\GC01\DATA\FXG\2017_01\24\01241712.D |
| 5 | 16 | 16000 | 0 | I:\GC01\DATA\FXG\2017_01\24\01241713.D |
| 6 | 40.3 | 40280 | 0 | I:\GC01\DATA\FXG\2017_01\24\01241726.D |
| 7 | O2 | 99999 | 0 | I:\GC01\DATA\FXG\2017_01\24\01241714.D |
| 8 | N2 | 99999 | 0 | I:\GC01\DATA\FXG\2017_01\24\01241724.D |
| 9 | CH4 | 99000 | 0 | I:\GC01\DATA\FXG\2017_01\24\01241716.D |
| 10 | CO2 | 99800 | 0 | I:\GC01\DATA\FXG\2017_01\24\01241728.D |

| # | ID | Update Time | Quant Time | Acquisition Time |
|----|------|-------------------|-------------------|----------------------|
| 1 | 0.1 | Jan 24 17:11 2017 | Jan 24 17:11 2017 | 24 Jan 2017 9:54 am |
| 2 | 0.5 | Jan 24 17:09 2017 | Jan 24 17:07 2017 | 24 Jan 2017 10:28 am |
| 3 | 1 | Jan 24 16:02 2017 | Jan 24 11:06 2017 | 24 Jan 2017 10:46 am |
| 4 | 4 | Jan 24 16:02 2017 | Jan 24 11:29 2017 | 24 Jan 2017 11:04 am |
| 5 | 16 | Jan 24 16:02 2017 | Jan 24 11:44 2017 | 24 Jan 2017 11:28 am |
| 6 | 40.3 | Jan 24 16:58 2017 | Jan 24 16:13 2017 | 24 Jan 2017 3:39 pm |
| 7 | O2 | Jan 24 16:47 2017 | Jan 24 12:03 2017 | 24 Jan 2017 11:45 am |
| 8 | N2 | Jan 24 16:50 2017 | Jan 24 15:54 2017 | 24 Jan 2017 3:08 pm |
| 9 | CH4 | Jan 24 16:49 2017 | Jan 24 15:50 2017 | 24 Jan 2017 12:21 pm |
| 10 | CO2 | Jan 24 17:15 2017 | Jan 24 17:14 2017 | 24 Jan 2017 4:51 pm |

3C012417.M Thu Jan 26 10:32:03 2017

Data Path : I:\GC01\DATA\FXG\2017_01\24\
Data File : 01241708.D
Signal(s) : TCD1A.CH
Acq On : 24 Jan 2017 9:54 am
Operator : MC
Sample : std s30-12301601 0.1%
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Jan 24 17:11:21 2017
Quant Method : I:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 16:58:22 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :

Ww 1/26/17

| Compound | R.T. | Response | Conc | Units |
|--------------------|-------|----------|----------|-------|
| ----- | | | | |
| Target Compounds | | | | |
| 1) Hydrogen | 0.699 | 1307 | 963.654 | ppm |
| 2) Oxygen | 2.202 | 1566 | 1022.329 | ppm m |
| 3) Nitrogen | 2.368 | 2028 | 1155.333 | ppm m |
| 4) Carbon Monoxide | 3.071 | 1639 | 955.727 | ppm |
| 5) Methane | 5.052 | 1218 | 953.387 | ppm |
| 6) Carbon Dioxide | 6.719 | 1967 | 957.152 | ppm |
| ----- | | | | |

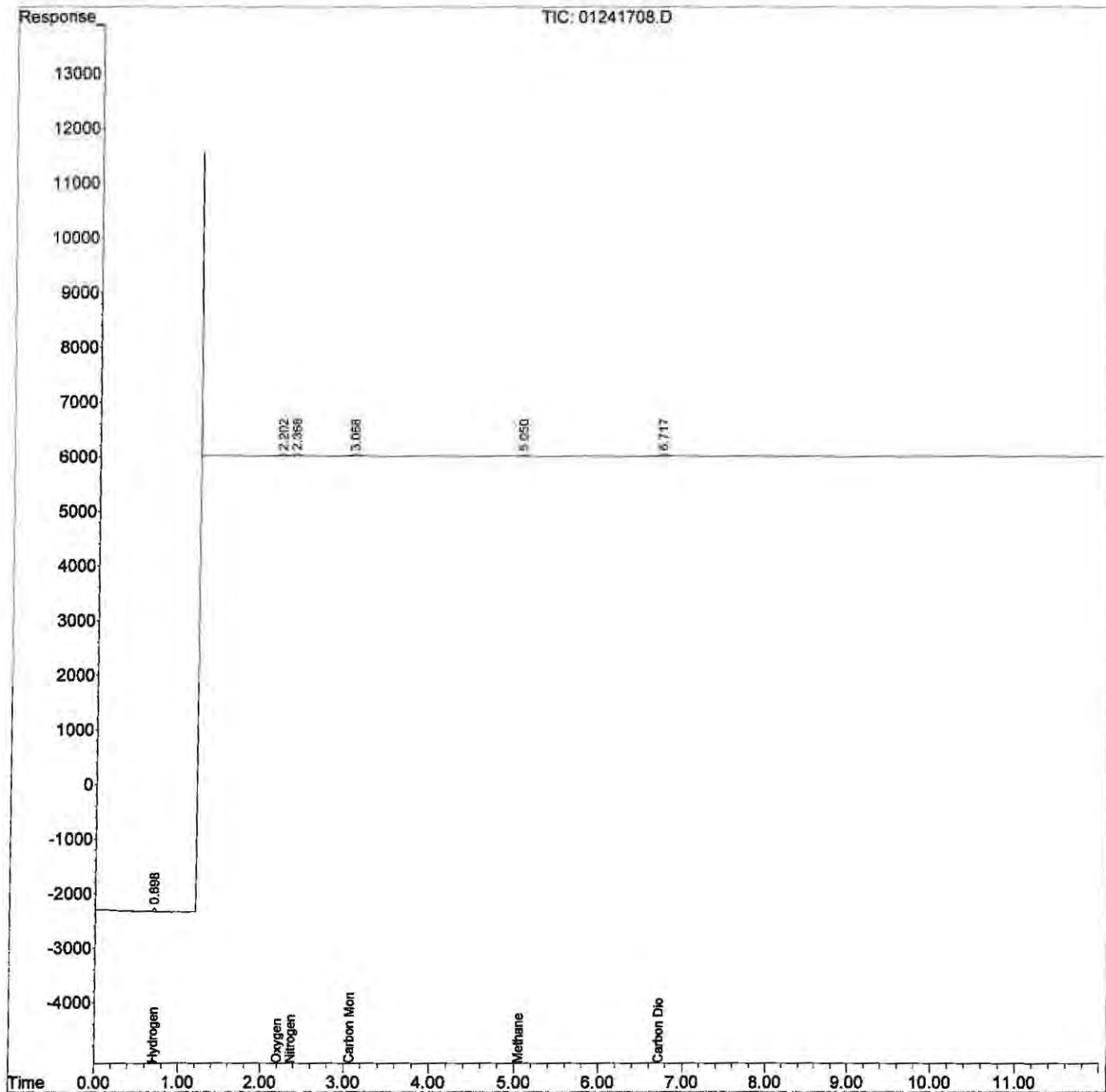
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : I:\GC01\DATA\FXG\2017_01\24\
Data File : 01241708.D
Signal(s) : TCD1A.CH
Acq On : 24 Jan 2017 9:54 am
Operator : MC
Sample : std s30-12301601 0.1%
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Jan 24 17:11:21 2017
Quant Method : I:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 16:58:22 2017
Response via : Initial Calibration
Integrator: ChemStation

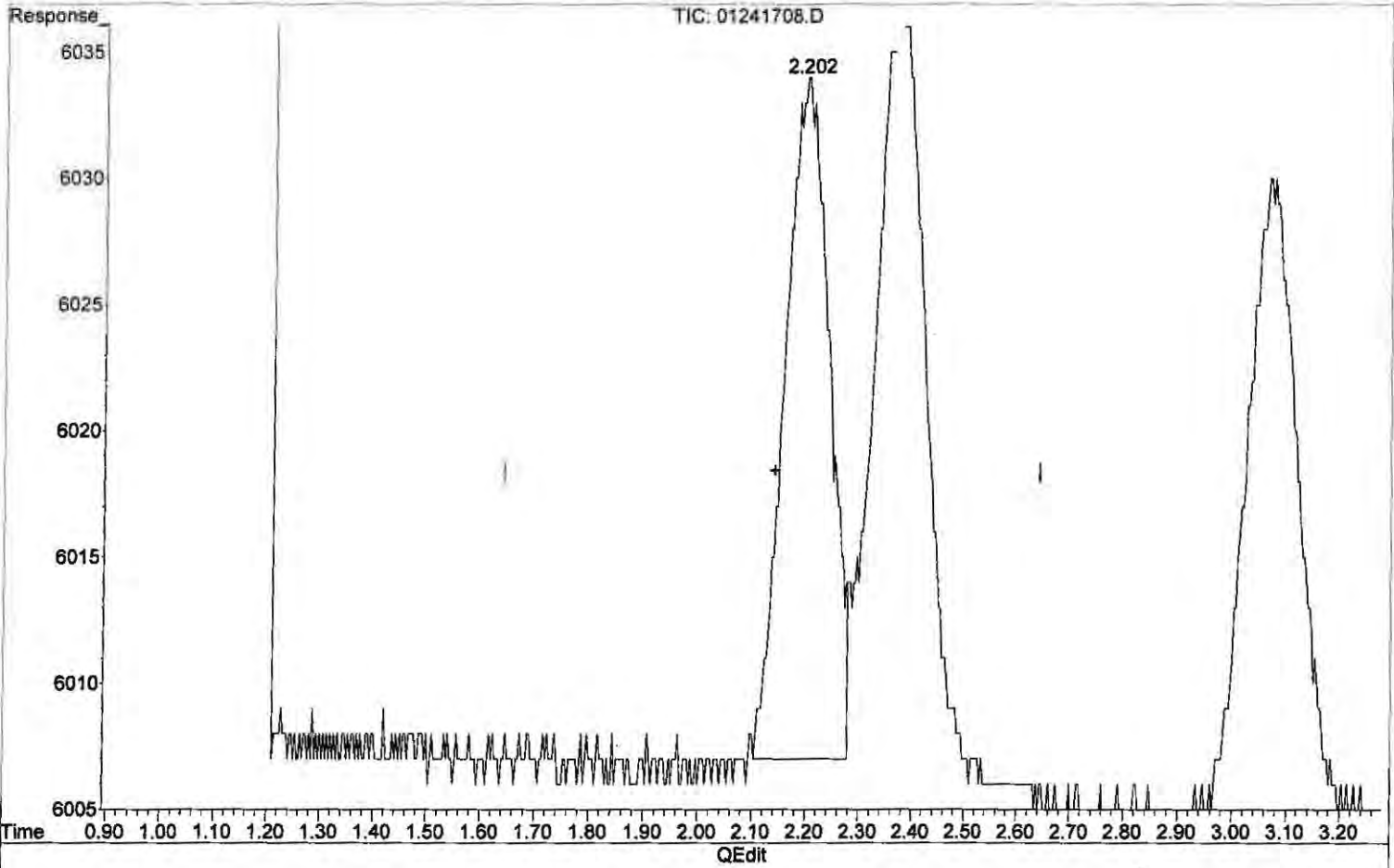
Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :



Data Path : I:\GC01\DATA\FXG\2017_01\24\
Data File : 01241708.D
Signal(s) : TCD1A.CH
Acq On : 24 Jan 2017 9:54 am
Operator : MC
Sample : std s30-12301601 0.1%
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Jan 24 17:11:21 2017
Quant Method : I:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 16:58:22 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :



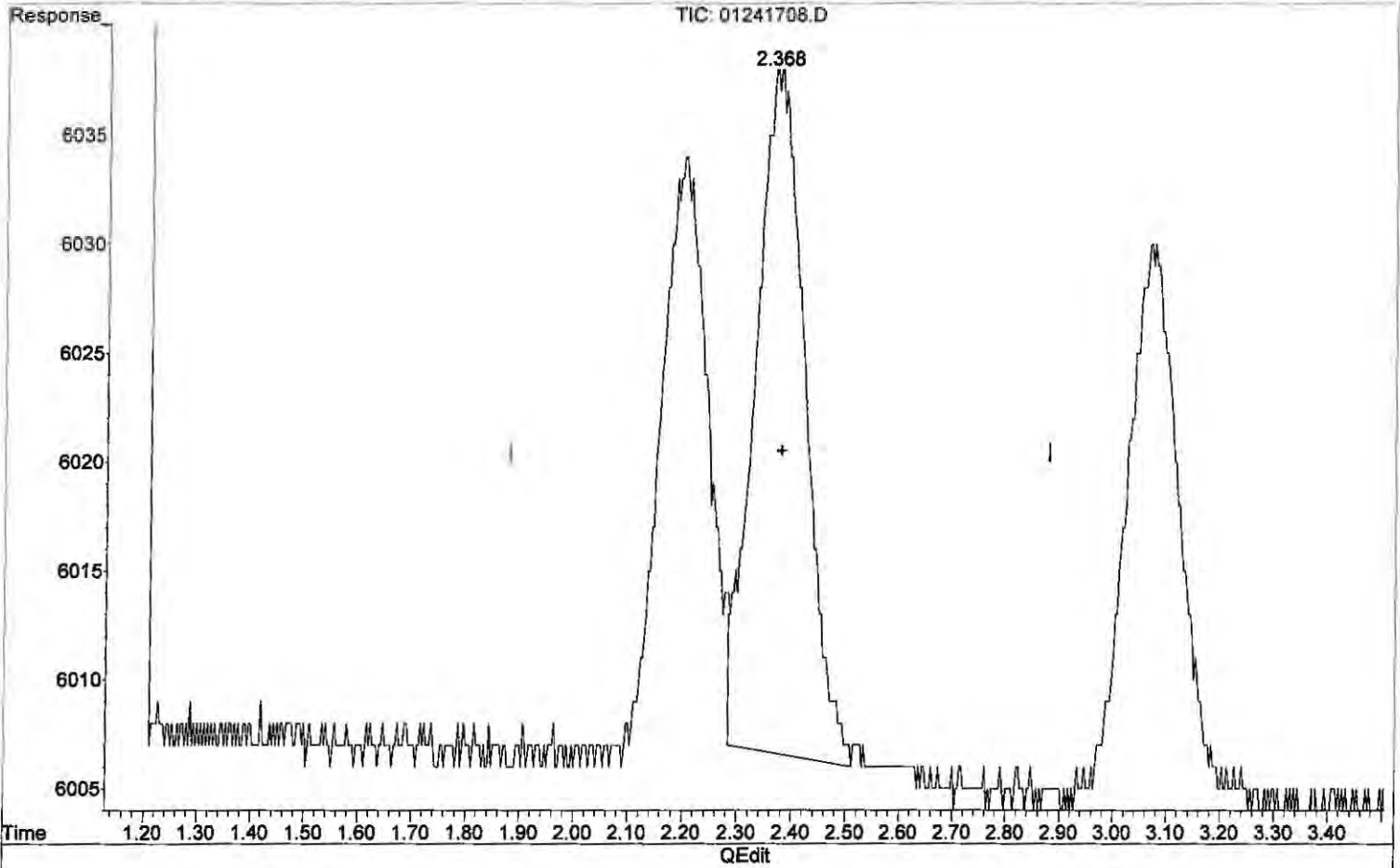
(2) Oxygen
2.202min 1022.329 ppm m
response 1566

Handwritten notes:
1/26/17
no previous
BLC
1/22/17

Data Path : I:\GC01\DATA\FXG\2017_01\24\
Data File : 01241708.D
Signal(s) : TCD1A.CH
Acq On : 24 Jan 2017 9:54 am
Operator : MC
Sample : std s30-12301601 0.1%
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Jan 24 17:11:21 2017
Quant Method : I:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 16:58:22 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :



(3) Nitrogen
2.368min 1155.333 ppm m
response 2028

MC
1/26/17

LC
1/26/17
no previous
BLC

Data Path : I:\GC01\DATA\FXG\2017_01\24\
Data File : 01241710.D
Signal(s) : TCD1A.CH
Acq On : 24 Jan 2017 10:28 am
Operator : MC
Sample : std s30-1231702 0.5%
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Jan 24 17:07:30 2017
Quant Method : I:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 16:58:22 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :

| Compound | R.T. | Response | Conc Units |
|--------------------|-------|----------|--------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Hydrogen | 0.702 | 6732 | 4962.119 ppm |
| 2) Oxygen | 2.204 | 8055 | 5257.492 ppm |
| 3) Nitrogen | 2.380 | 9373 | 5340.301 ppm |
| 4) Carbon Monoxide | 3.070 | 9091 | 5301.886 ppm |
| 5) Methane | 5.056 | 6836 | 5350.030 ppm |
| 6) Carbon Dioxide | 6.719 | 10827 | 5267.759 ppm |
| ----- | | | |

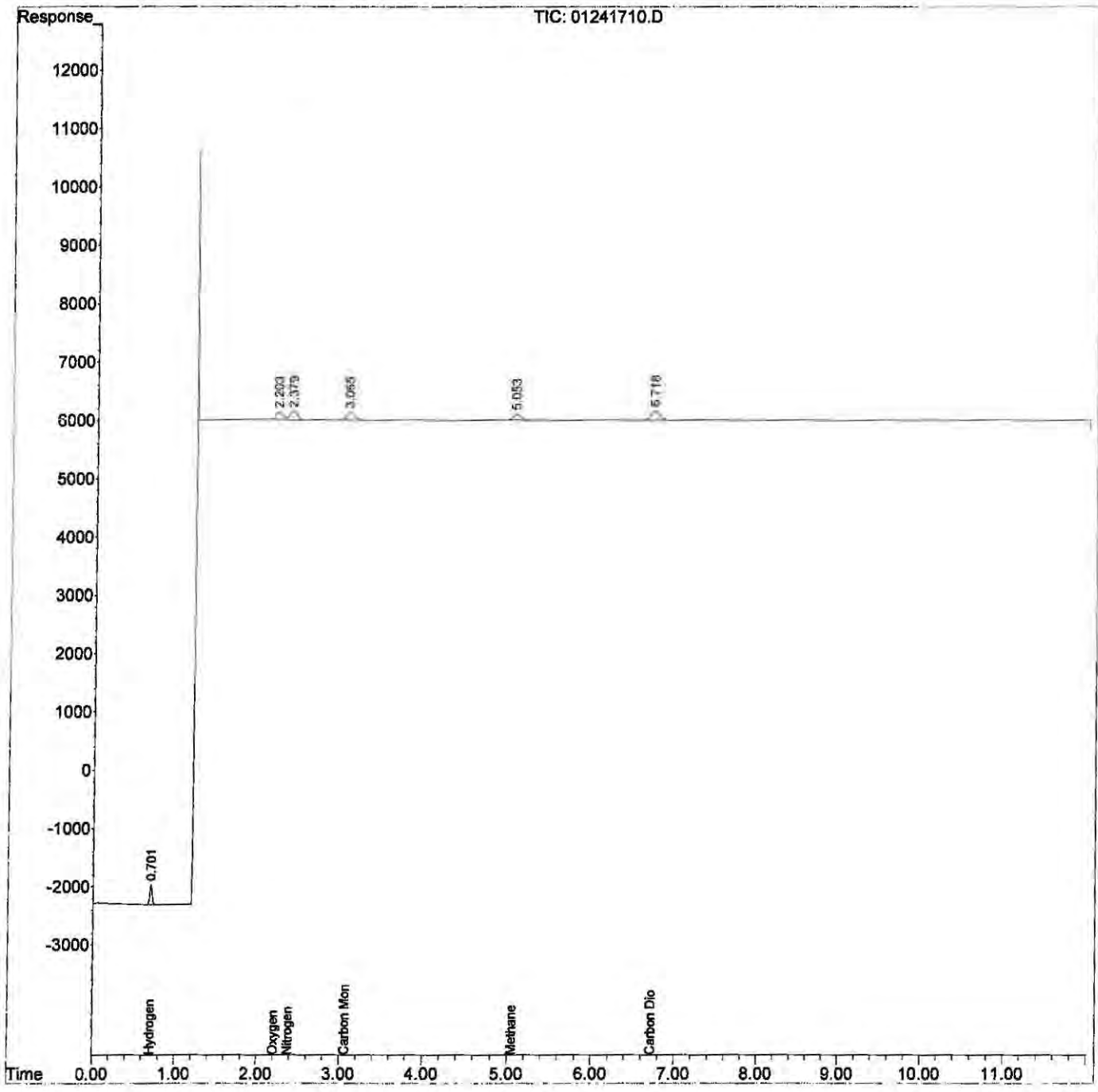
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : I:\GC01\DATA\FXG\2017_01\24\
Data File : 01241710.D
Signal(s) : TCD1A.CH
Acq On : 24 Jan 2017 10:28 am
Operator : MC
Sample : std s30-1231702 0.5%
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Jan 24 17:07:30 2017
Quant Method : I:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 16:58:22 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :



Data Path : I:\GC01\DATA\FXG\2017_01\24\
 Data File : 01241711.D
 Signal(s) : TCD1A.CH
 Acq On : 24 Jan 2017 10:46 am
 Operator : MC
 Sample : std s30-01231701 1%
 Misc :
 ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
 Quant Time: Jan 24 11:06:38 2017
 Quant Method : I:\GC01\METHODS\3C012417.M
 Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 QLast Update : Tue Jan 24 11:05:53 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 100ul
 Signal Phase : CarboSieve Packed Column
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|--------------------|-------|----------|---------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Hydrogen | 0.703 | 12920 | 9749.462 ppm |
| 2) Oxygen | 2.207 | 15390 | 10022.255 ppm |
| 3) Nitrogen | 2.381 | 17397 | 10088.258 ppm |
| 4) Carbon Monoxide | 3.070 | 17182 | 10123.136 ppm |
| 5) Methane | 5.056 | 12664 | 10035.134 ppm |
| 6) Carbon Dioxide | 6.720 | 20770 | 10324.389 ppm |
| ----- | | | |

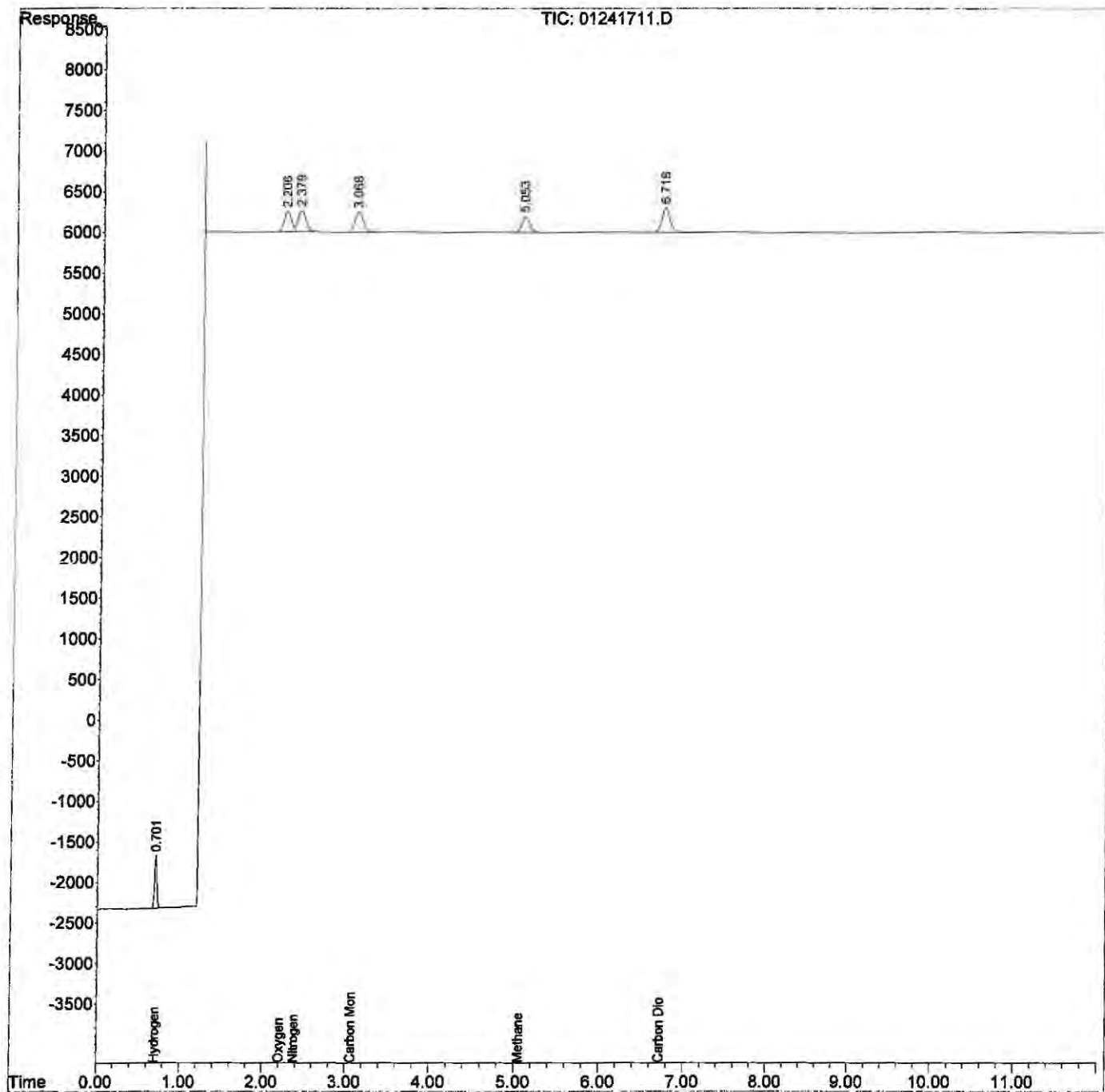
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : I:\GC01\DATA\FXG\2017_01\24\
Data File : 01241711.D
Signal(s) : TCD1A.CH
Acq On : 24 Jan 2017 10:46 am
Operator : MC
Sample : std s30-01231701 1%
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Jan 24 11:06:38 2017
Quant Method : I:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 11:05:53 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :



Data Path : I:\GC01\DATA\FXG\2017_01\24\
Data File : 01241712.D
Signal(s) : TCD1A.CH
Acq On : 24 Jan 2017 11:04 am
Operator : MC
Sample : std s30-12191601 4%
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Jan 24 11:29:02 2017
Quant Method : I:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 11:06:54 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :

| Compound | R.T. | Response | Conc Units |
|--------------------|-------|----------|---------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Hydrogen | 0.701 | 51116 | 38471.422 ppm |
| 2) Oxygen | 2.202 | 60783 | 39655.182 ppm |
| 3) Nitrogen | 2.378 | 67800 | 39325.034 ppm |
| 4) Carbon Monoxide | 3.065 | 67364 | 39718.927 ppm |
| 5) Methane | 5.054 | 50064 | 39812.023 ppm |
| 6) Carbon Dioxide | 6.716 | 80812 | 40218.015 ppm |
| ----- | | | |

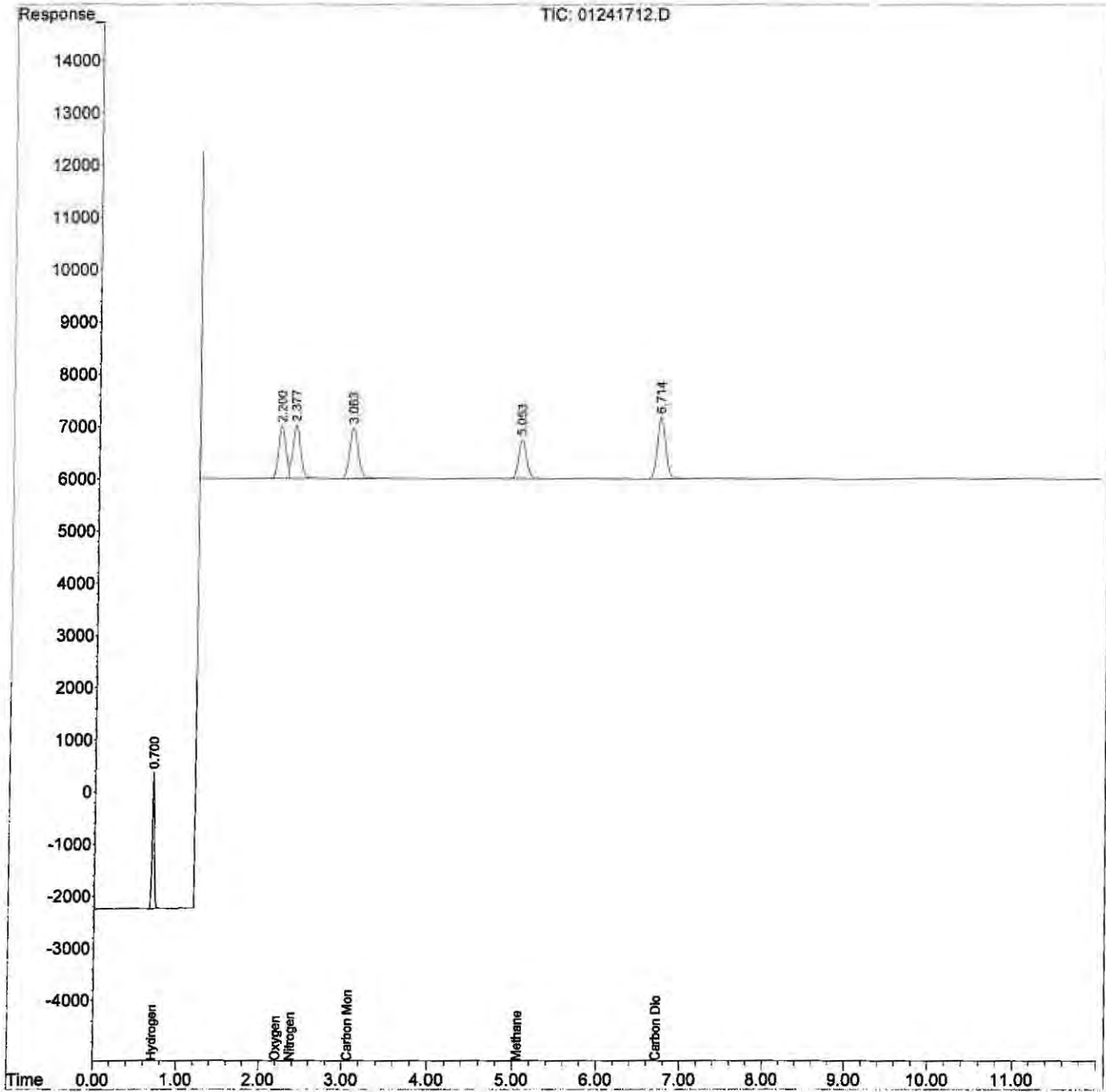
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : I:\GC01\DATA\FXG\2017_01\24\
Data File : 01241712.D
Signal(s) : TCD1A.CH
Acq On : 24 Jan 2017 11:04 am
Operator : MC
Sample : std s30-12191601 4%
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Jan 24 11:29:02 2017
Quant Method : I:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 11:06:54 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :



Data Path : I:\GC01\DATA\FXG\2017_01\24\
 Data File : 01241713.D
 Signal(s) : TCD1A.CH
 Acq On : 24 Jan 2017 11:28 am
 Operator : MC
 Sample : std s30-01231703 16%
 Misc :
 ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
 Quant Time: Jan 24 11:44:36 2017
 Quant Method : I:\GC01\METHODS\3C012417.M
 Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 QLast Update : Tue Jan 24 11:30:32 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 100ul
 Signal Phase : CarboSieve Packed Column
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|--------------------|-------|----------|----------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Hydrogen | 0.695 | 214700 | 160970.040 ppm |
| 2) Oxygen | 2.182 | 239370 | 156211.792 ppm |
| 3) Nitrogen | 2.360 | 267291 | 155149.115 ppm |
| 4) Carbon Monoxide | 3.048 | 267230 | 157650.776 ppm |
| 5) Methane | 5.043 | 198523 | 158115.703 ppm |
| 6) Carbon Dioxide | 6.703 | 321274 | 160126.033 ppm |
| ----- | | | |

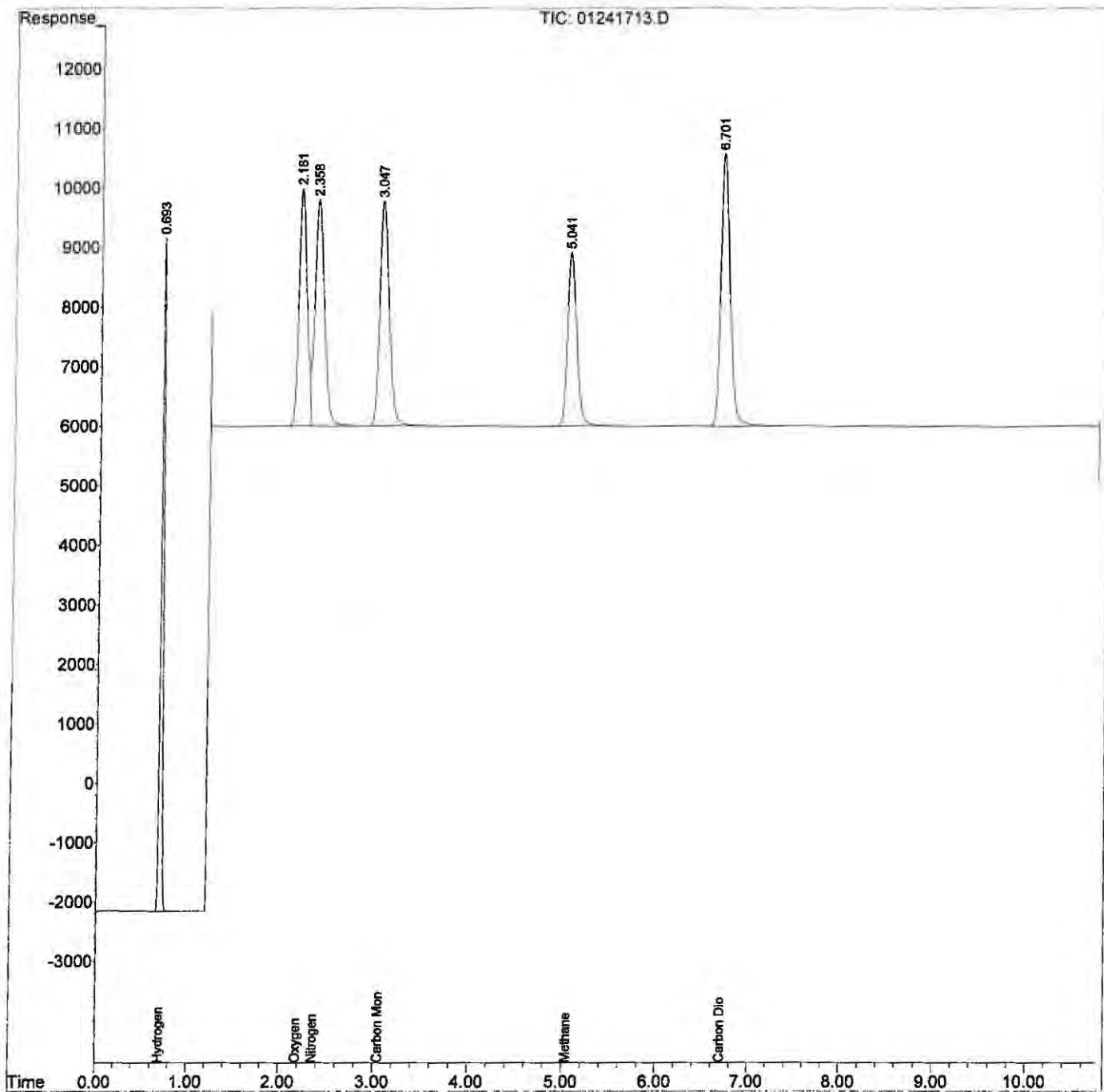
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : I:\GC01\DATA\FXG\2017_01\24\
 Data File : 01241713.D
 Signal(s) : TCD1A.CH
 Acq On : 24 Jan 2017 11:28 am
 Operator : MC
 Sample : std s30-01231703 16%
 Misc :
 ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
 Quant Time: Jan 24 11:44:36 2017
 Quant Method : I:\GC01\METHODS\3C012417.M
 Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 QLast Update : Tue Jan 24 11:30:32 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 100ul
 Signal Phase : CarboSieve Packed Column
 Signal Info :



Data Path : I:\GC01\DATA\FXG\2017_01\24\
 Data File : 01241714.D
 Signal(s) : TCD1A.CH
 Acq On : 24 Jan 2017 11:45 am
 Operator : MC
 Sample : s11-12021503 O2
 Misc :
 ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
 Quant Time: Jan 24 12:03:07 2017
 Quant Method : I:\GC01\METHODS\3C012417.M
 Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 QLast Update : Tue Jan 24 11:45:03 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 100ul
 Signal Phase : CarboSieve Packed Column
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|--------------------|-------|----------|----------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Hydrogen | 0.000 | 0 | N.D. ppm |
| 2) Oxygen | 2.102 | 1492463 | 975822.655 ppm |
| 3) Nitrogen | 0.000 | 0 | N.D. ppm |
| 4) Carbon Monoxide | 0.000 | 0 | N.D. ppm |
| 5) Methane | 0.000 | 0 | N.D. ppm |
| 6) Carbon Dioxide | 0.000 | 0 | N.D. ppm |
| ----- | | | |

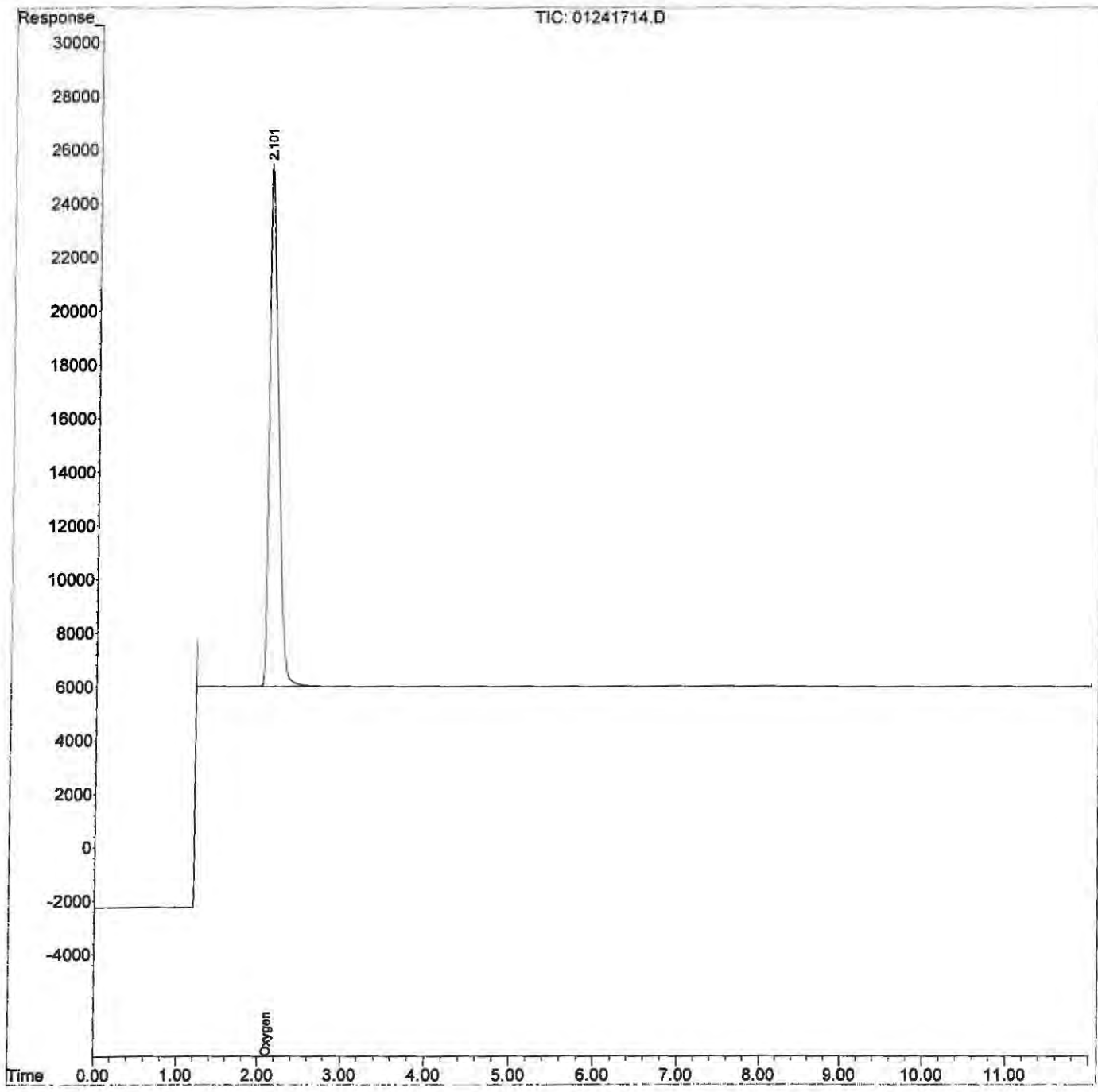
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : I:\GC01\DATA\FXG\2017_01\24\
Data File : 01241714.D
Signal(s) : TCD1A.CH
Acq On : 24 Jan 2017 11:45 am
Operator : MC
Sample : s11-12021503 O2
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Jan 24 12:03:07 2017
Quant Method : I:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 11:45:03 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :



Data Path : I:\GC01\DATA\FXG\2017_01\24\
 Data File : 01241716.D
 Signal(s) : TCD1A.CH
 Acq On : 24 Jan 2017 12:21 pm
 Operator : MC
 Sample : s30-01241701 CH4
 Misc :
 ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
 Quant Time: Jan 24 15:50:33 2017
 Quant Method : I:\GC01\METHODS\3C012417.M
 Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 QLast Update : Tue Jan 24 12:21:02 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 100ul
 Signal Phase : CarboSieve Packed Column
 Signal Info :

| Compound | R.T. | Response | Conc | Units |
|--------------------|-------|----------|-------------|-------|
| ----- | | | | |
| Target Compounds | | | | |
| 1) Hydrogen | 0.000 | 0 | N.D. | ppm |
| 2) Oxygen | 0.000 | 0 | N.D. | ppm d |
| 3) Nitrogen | 0.000 | 0 | N.D. | ppm d |
| 4) Carbon Monoxide | 0.000 | 0 | N.D. | ppm |
| 5) Methane | 4.953 | 1256113 | 1001419.959 | ppm |
| 6) Carbon Dioxide | 0.000 | 0 | N.D. | ppm |
| ----- | | | | |

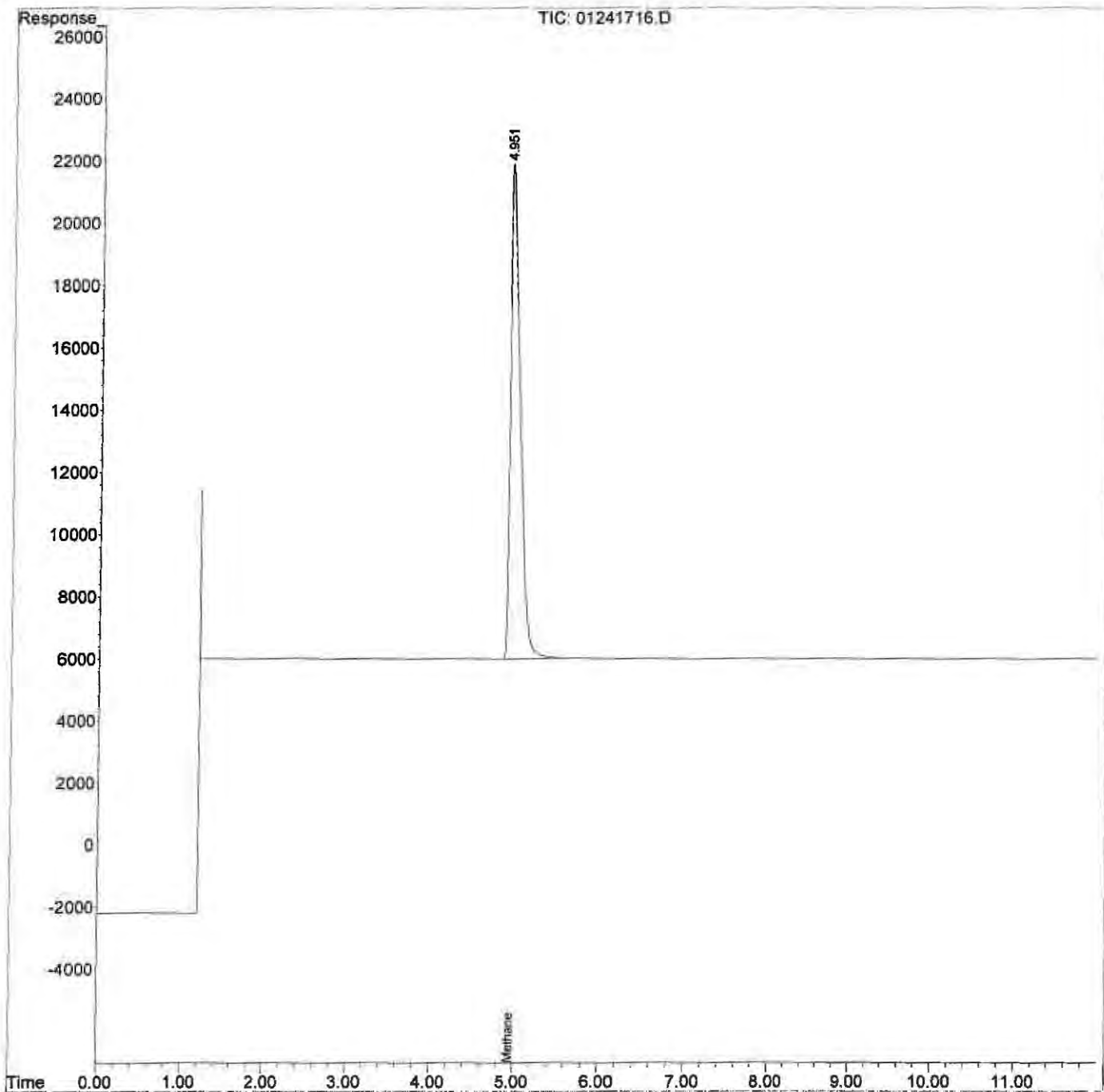
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : I:\GC01\DATA\FXG\2017_01\24\
 Data File : 01241716.D
 Signal(s) : TCD1A.CH
 Acq On : 24 Jan 2017 12:21 pm
 Operator : MC
 Sample : s30-01241701 CH4
 Misc :
 ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
 Quant Time: Jan 24 15:50:33 2017
 Quant Method : I:\GC01\METHODS\3C012417.M
 Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 QLast Update : Tue Jan 24 12:21:02 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 100ul
 Signal Phase : CarboSieve Packed Column
 Signal Info :



Data Path : I:\GC01\DATA\FXG\2017_01\24\
 Data File : 01241724.D
 Signal(s) : TCD1A.CH
 Acq On : 24 Jan 2017 3:08 pm
 Operator : MC
 Sample : s11-12021502 N2
 Misc :
 ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
 Quant Time: Jan 24 15:54:48 2017
 Quant Method : I:\GC01\METHODS\3C012417.M
 Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 QLast Update : Tue Jan 24 13:54:15 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 100ul
 Signal Phase : CarboSieve Packed Column
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|--------------------|-------|----------|-----------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Hydrogen | 0.000 | 0 | N.D. ppm |
| 2) Oxygen | 0.000 | 0 | N.D. ppm d |
| 3) Nitrogen | 2.258 | 1938227 | 1101353.052 ppm |
| 4) Carbon Monoxide | 0.000 | 0 | N.D. ppm |
| 5) Methane | 0.000 | 0 | N.D. ppm |
| 6) Carbon Dioxide | 0.000 | 0 | N.D. ppm |
| ----- | | | |

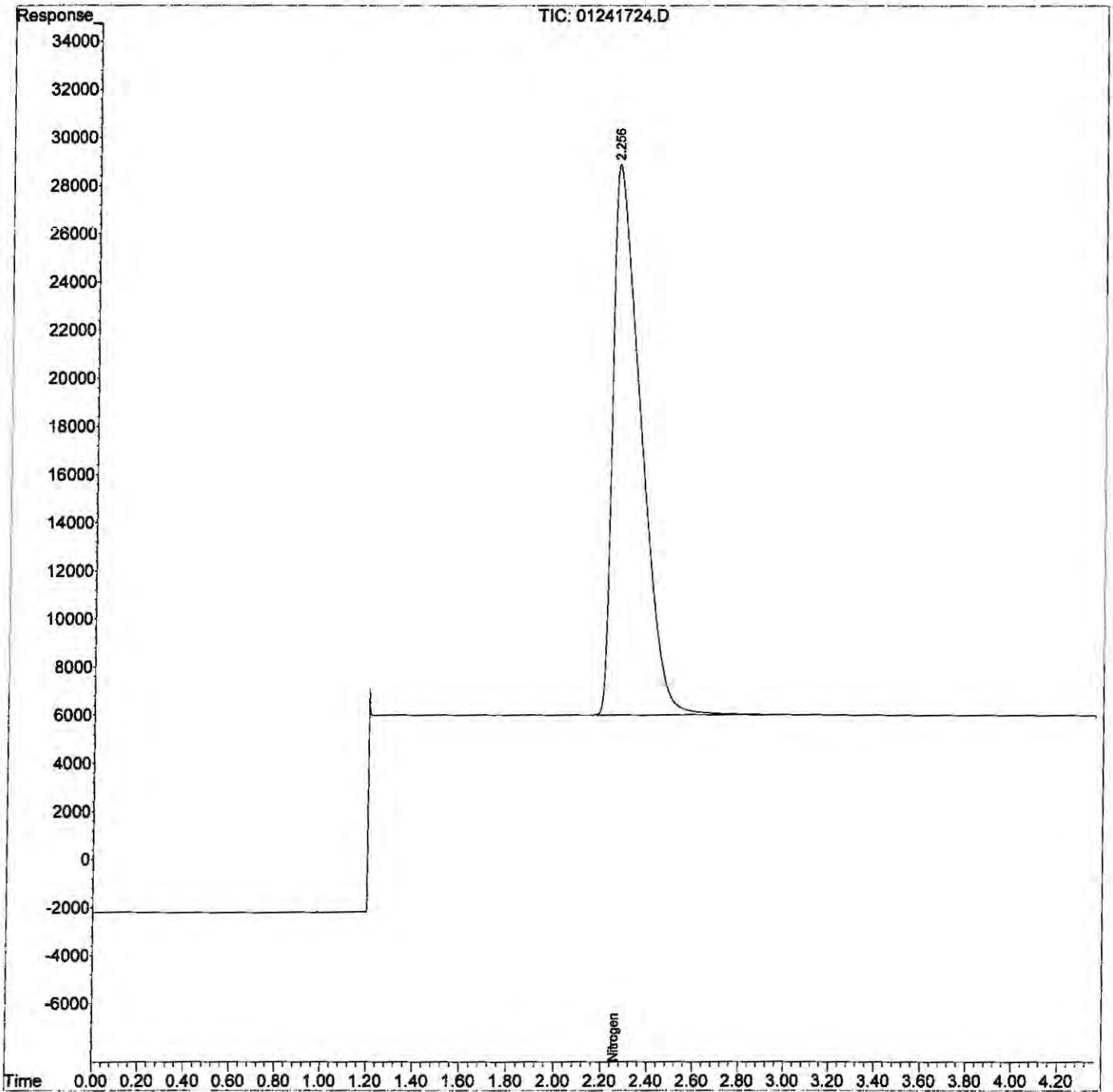
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : I:\GC01\DATA\FXG\2017_01\24\
Data File : 01241724.D
Signal(s) : TCD1A.CH
Acq On : 24 Jan 2017 3:08 pm
Operator : MC
Sample : s11-12021502 N2
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Jan 24 15:54:48 2017
Quant Method : I:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 13:54:15 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :



Data Path : I:\GC01\DATA\FXG\2017_01\24\
Data File : 01241727.D
Signal(s) : TCD1A.CH
Acq On : 24 Jan 2017 4:13 pm
Operator : MC
Sample : lg loop S30-12191601 40.28%
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Jan 24 16:40:16 2017
Quant Method : I:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 16:07:39 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :

| Compound | R.T. | Response | Conc Units |
|--------------------|-------|----------|----------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Hydrogen | 0.759 | 581720 | 434415.125 ppm |
| 2) Oxygen | 2.218 | 593437 | 384865.128 ppm |
| 3) Nitrogen | 2.397 | 671824 | 379650.320 ppm |
| 4) Carbon Monoxide | 3.075 | 669389 | 387994.466 ppm |
| 5) Methane | 5.042 | 494640 | 384594.565 ppm |
| 6) Carbon Dioxide | 6.690 | 796935 | 384863.394 ppm |
| ----- | | | |

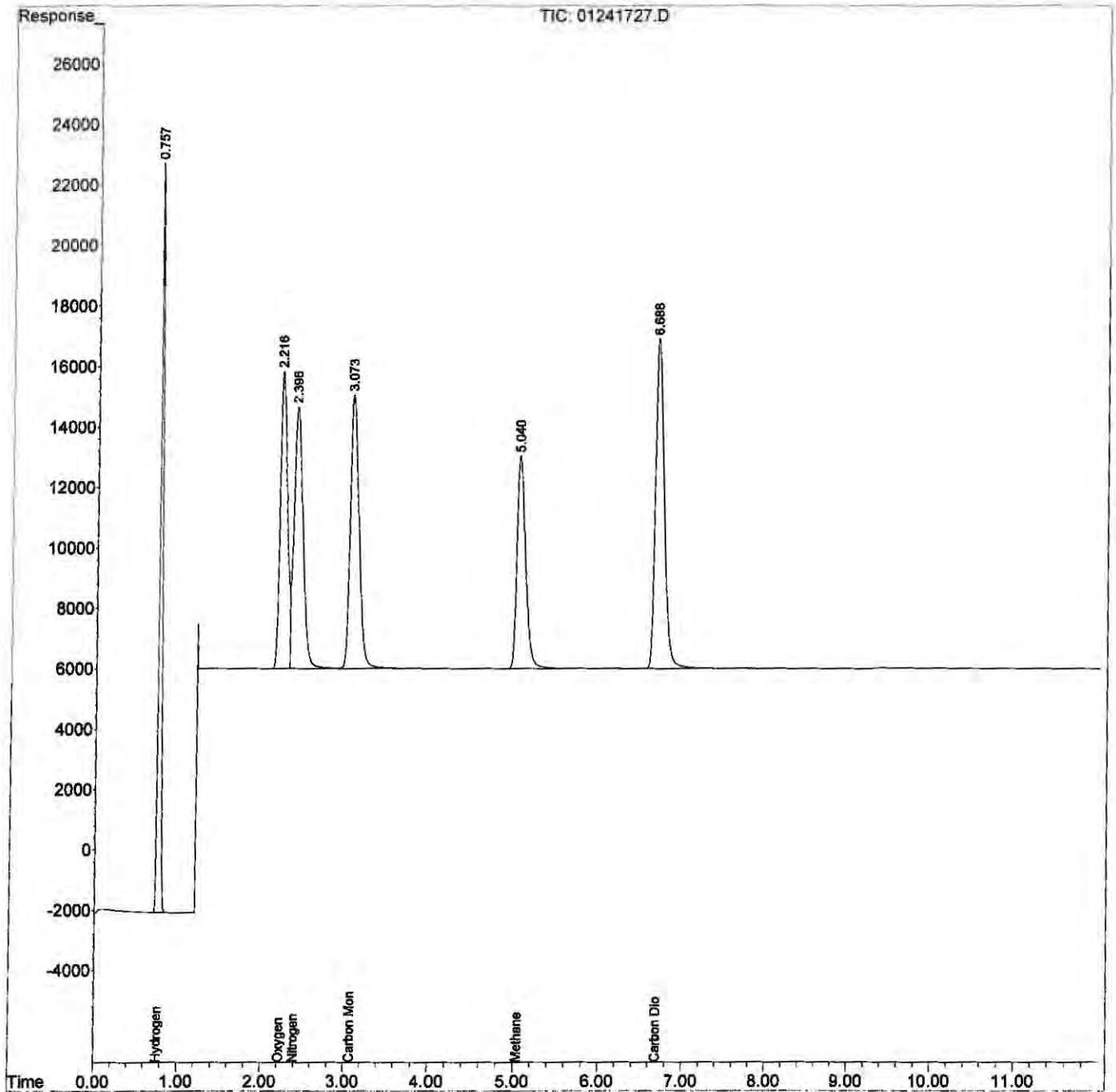
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : I:\GC01\DATA\FXG\2017_01\24\
 Data File : 01241727.D
 Signal(s) : TCD1A.CH
 Acq On : 24 Jan 2017 4:13 pm
 Operator : MC
 Sample : lg loop S30-12191601 40.28%
 Misc :
 ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
 Quant Time: Jan 24 16:40:16 2017
 Quant Method : I:\GC01\METHODS\3C012417.M
 Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 QLast Update : Tue Jan 24 16:07:39 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 100ul
 Signal Phase : CarboSieve Packed Column
 Signal Info :



Data Path : I:\GC01\DATA\FXG\2017_01\24\
 Data File : 01241728.D
 Signal(s) : TCD1A.CH
 Acq On : 24 Jan 2017 4:51 pm
 Operator : MC
 Sample : S30-01241702 CO2
 Misc :
 ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
 Quant Time: Jan 24 17:14:40 2017
 Quant Method : I:\GC01\METHODS\3C012417.M
 Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 QLast Update : Tue Jan 24 17:11:31 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 100ul
 Signal Phase : CarboSieve Packed Column
 Signal Info :

| Compound | R.T. | Response | Conc | Units |
|--------------------|-------|----------|------------|-------|
| ----- | | | | |
| Target Compounds | | | | |
| 1) Hydrogen | 0.000 | 0 | N.D. | ppm |
| 2) Oxygen | 0.000 | 0 | N.D. | ppm |
| 3) Nitrogen | 0.000 | 0 | N.D. | ppm d |
| 4) Carbon Monoxide | 0.000 | 0 | N.D. | ppm |
| 5) Methane | 0.000 | 0 | N.D. | ppm |
| 6) Carbon Dioxide | 6.625 | 1912854 | 930681.280 | ppm |
| ----- | | | | |

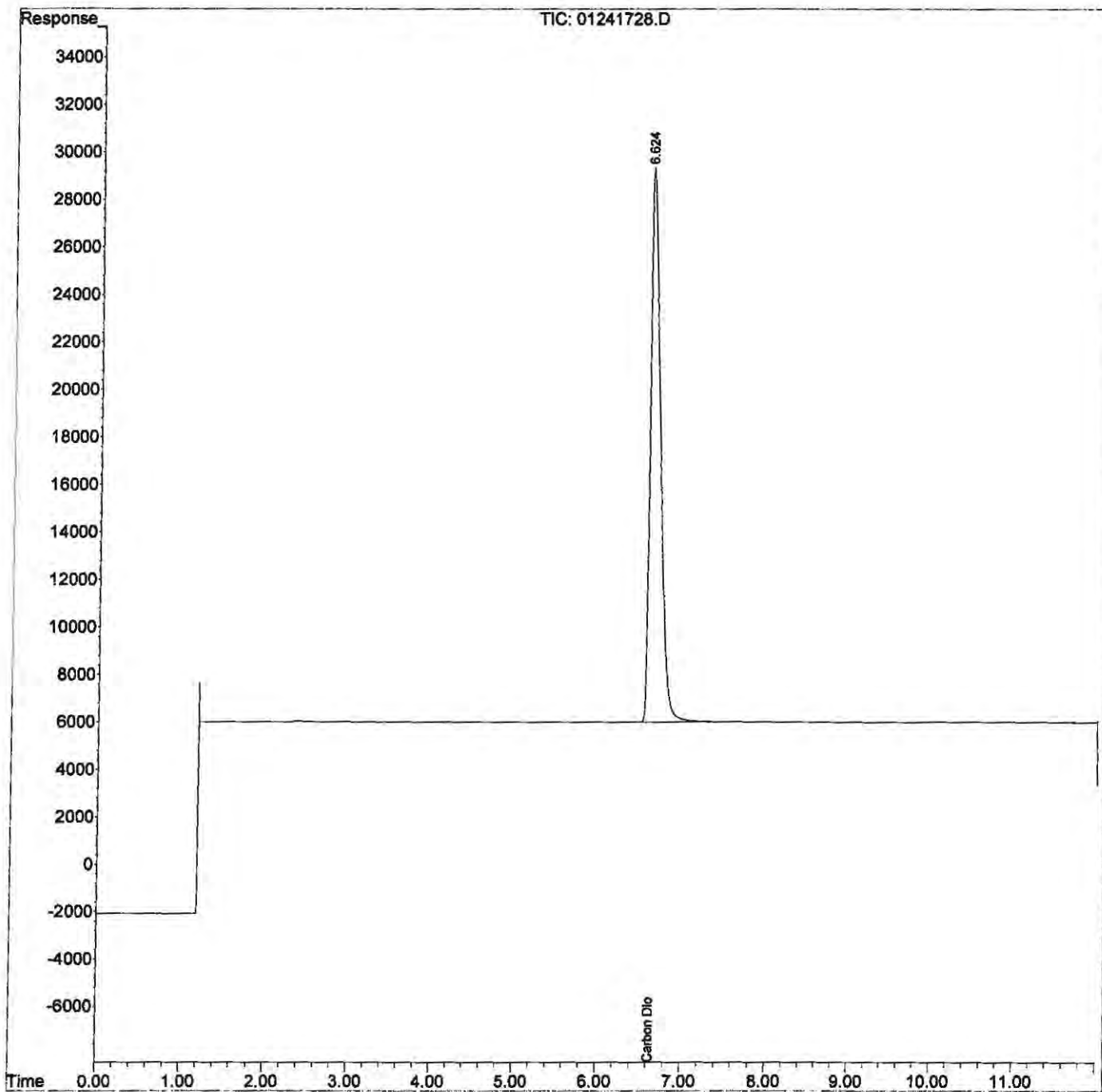
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : I:\GC01\DATA\FXG\2017_01\24\
Data File : 01241728.D
Signal(s) : TCD1A.CH
Acq On : 24 Jan 2017 4:51 pm
Operator : MC
Sample : S30-01241702 CO2
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Jan 24 17:14:40 2017
Quant Method : I:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 17:11:31 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :



Data Path : I:\GC01\DATA\FXG\2017_01\24\
 Data File : 01241729.D
 Signal(s) : TCD1A.CH
 Acq On : 24 Jan 2017 5:13 pm
 Operator : MC
 Sample : icv S30-12091603
 Misc :
 ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
 Quant Time: Jan 26 11:43:57 2017
 Quant Method : I:\GC01\METHODS\3C012417.M
 Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 QLast Update : Tue Jan 24 17:15:32 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 100ul
 Signal Phase : CarboSieve Packed Column
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|--------------------|-------|----------|---------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Hydrogen | 0.704 | 52203 | 38480.504 ppm |
| 2) Oxygen | 2.211 | 60261 | 39428.995 ppm |
| 3) Nitrogen | 2.386 | 85544 | 48121.904 ppm |
| 4) Carbon Monoxide | 3.073 | 84807 | 49459.452 ppm |
| 5) Methane | 5.064 | 50827 | 39776.144 ppm |
| 6) Carbon Dioxide | 6.724 | 97748 | 48020.992 ppm |
| ----- | | | |

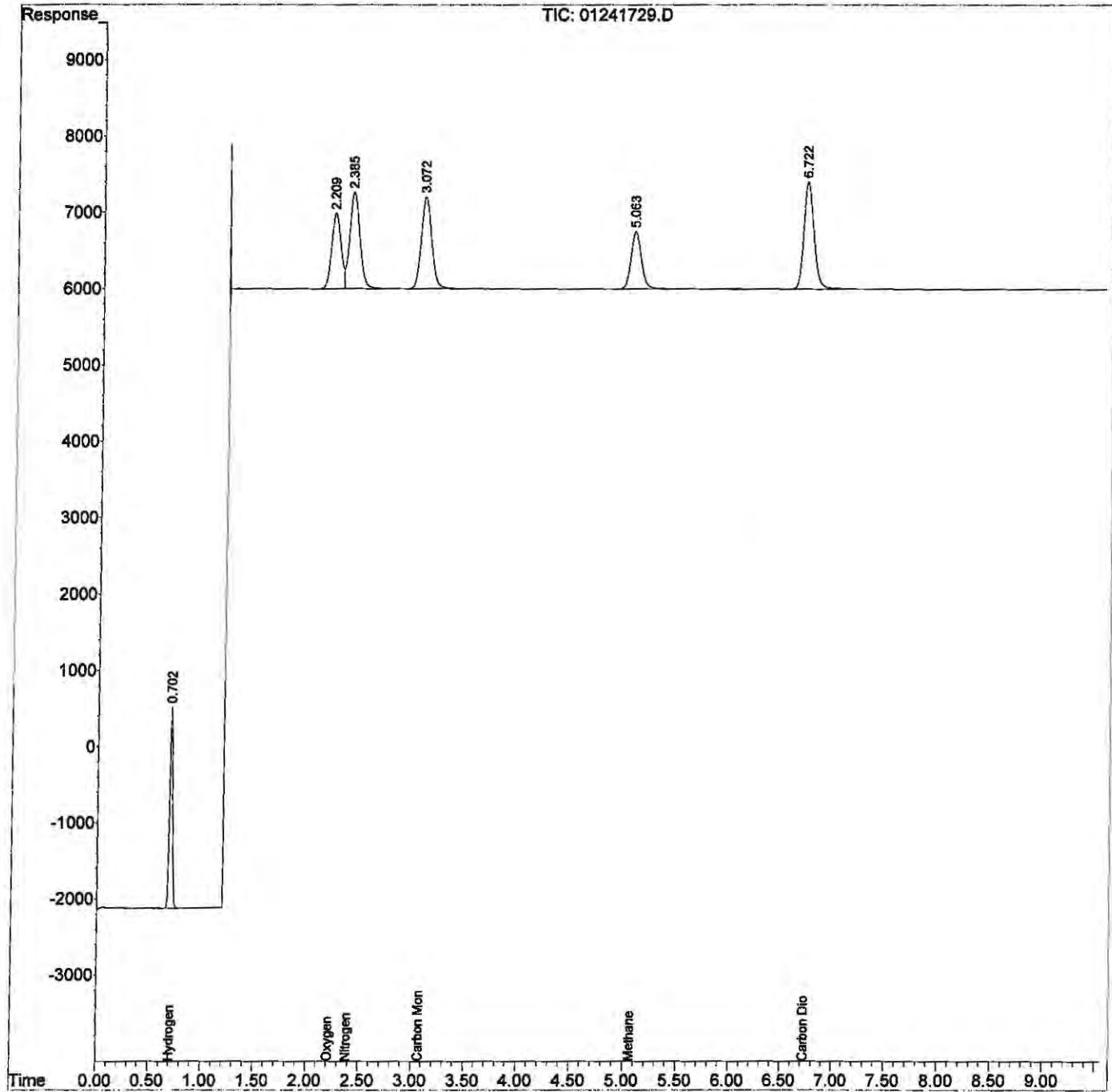
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : I:\GC01\DATA\FXG\2017_01\24\
Data File : 01241729.D
Signal(s) : TCD1A.CH
Acq On : 24 Jan 2017 5:13 pm
Operator : MC
Sample : icv S30-12091603
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Jan 26 11:43:57 2017
Quant Method : I:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 17:15:32 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :



Modified EPA Method 3C Daily QC Summary

Client : Leidos
 Analyst : GG
 Method Name : EPA 3C, ASTM D 1946-90, VOA-EPA3C

Instrument : GC01
 Date Analyzed : 10/10/2018

RT Summaries and QC Check (minutes)

| Sample ID | Hydrogen | Oxygen | Nitrogen | Carbon Monoxide | Methane | Carbon Dioxide | File ID | Time |
|-----------------------------|------------|------------|------------|-----------------|------------|----------------|------------|-------|
| ICAL Mean RT | 0.708 | 2.188 | 2.368 | 3.076 | 5.045 | 6.707 | | |
| RT Windows (+/- min) | 0.072 | 0.133 | 0.146 | 0.034 | 0.130 | 0.145 | | |
| STD S32-08311801 | 0.738 | 2.308 | 2.485 | 3.172 | 5.160 | 6.816 | 10101801.D | 07:29 |
| +/- 0.33min of ICAL Mean RT | Pass | Pass | Pass | Pass | Pass | Pass | | |
| MB | | | | | | | | |
| Lab air | | 2.248 Pass | 2.388 Pass | | | 6.819 Pass | 10101802.D | 07:54 |
| LCS S32-10081801 | 0.735 Pass | 2.301 Pass | 2.478 Pass | 3.166 Pass | 5.154 Pass | 6.811 Pass | 10101803.D | 08:16 |
| LCSD S32-10081801 | 0.735 Pass | 2.302 Pass | 2.479 Pass | 3.167 Pass | 5.155 Pass | 6.811 Pass | 10101804.D | 08:37 |
| P1805236-001 | | 2.246 Pass | 2.367 Pass | | | 6.807 Pass | 10101805.D | 08:59 |
| P1805236-002 | | 2.259 Pass | 2.380 Pass | | | 6.812 Pass | 10101808.D | 10:01 |
| P1805236-003 | | 2.251 Pass | 2.377 Pass | | | 6.809 Pass | 10101809.D | 10:34 |
| P1805236-004 | | 2.258 Pass | 2.379 Pass | | | 6.810 Pass | 10101810.D | 10:51 |
| P1805236-005 | | 2.257 Pass | 2.368 Pass | | | | 10101811.D | 11:13 |
| P1805236-006 | | 2.254 Pass | 2.373 Pass | | | | 10101812.D | 11:33 |
| STD S32-08311801 | 0.735 Pass | 2.301 Pass | 2.476 Pass | 3.163 Pass | 5.152 Pass | 6.808 Pass | 10101813.D | 12:13 |
| | | | | | | | 10101816.D | 13:26 |

Continuing Calibration Standards Summary (ppm)

| Sample ID | Hydrogen | Oxygen | Nitrogen | Carbon Monoxide | Methane | Carbon Dioxide | File ID | Time |
|-----------------------|--------------|--------------|--------------|-----------------|--------------|----------------|------------|-------|
| ACTUAL | 40120.0 | 25570.0 | 50140.0 | 50110.0 | 40010.0 | 50380.0 | | |
| CCV Criteria (+/- %D) | 15.0% | 10.0% | 10.0% | 10.0% | 10.0% | 10.0% | | |
| STD S32-08311801 | 41409.2 3.2% | 25804.2 0.9% | 49909.1 0.5% | 51444.2 2.7% | 41259.9 3.1% | 50344.3 0.1% | 10101801.D | 07:29 |
| STD S32-08311801 | 41726.8 4.0% | 25957.3 1.5% | 50574.7 0.9% | 52174.7 4.1% | 41449.1 3.6% | 50251.1 0.3% | 10101816.D | 13:26 |
| | #### | #### | #### | #### | #### | #### | | |

Lab Dup Summary (ppm, without DF correction and normalization)

| Sample ID | Hydrogen | Oxygen | Nitrogen | Carbon Monoxide | Methane | Carbon Dioxide | File ID | Time |
|-----------|----------|--------|----------|-----------------|---------|----------------|---------|------|
| | | | | | | | | |


LCS / LCS Dup Summary (ppm, without DF correction)

| Sample ID | Hydrogen | Oxygen | Nitrogen | Carbon Monoxide | Methane | Carbon Dioxide | File ID | Time |
|--------------------------|-----------|-----------|-----------|-----------------|-----------|----------------|------------|-------|
| LCS Actual Conc. (ppm) | 40000.0 | 40000.0 | 50000.0 | 50000.0 | 40000.0 | 50000.0 | | |
| LCS Criteria (% Range) | 94%-107% | 98%-109% | 94%-105% | 98%-109% | 98%-110% | 95%-108% | | |
| LCS S32-10081801 | 42057.2 | 41351.6 | 50725.9 | 52459.3 | 41713.0 | 48998.5 | 10101804.D | 08:37 |
| LCS % Recovery | 105% Pass | 103% Pass | 101% Pass | 105% Pass | 104% Pass | 98% Pass | | |
| LCSD S32-10081801 | 41829.2 | 40676.7 | 49945.1 | 51226.0 | 41309.3 | 49454.6 | 10101805.D | 08:59 |
| LCS % Recovery | 105% Pass | 102% Pass | 100% Pass | 102% Pass | 103% Pass | 99% Pass | | |
| Duplicate % RPD | 0.5% | 1.6% | 1.6% | 2.4% | 1.0% | 0.9% | | |
| Duplicate Criteria % RPD | 3% Pass | 10% Pass | 8% Pass | 2% Fail | 8% Pass | 5% Pass | | |

Lab Air QC Summary

| Sample ID | Hydrogen | Oxygen | Nitrogen | Carbon Monoxid | Methane | Carbon Dioxide | Lab Air Criteria Total (90%-110%) |
|------------------------|----------|----------|----------|----------------|---------|----------------|-----------------------------------|
| Lab air | | 216922.8 | 768321.1 | | | 392.0 | 98.6% Pass |
| Lab Air Normalized (%) | | 22.01% | 77.94% | | | 0.04% | 100.0% |

Data Path : J:\GC01\DATA\FXG\2018_10\10\
 Data File : 10101801.D
 Signal(s) : TCD1A.CH
 Acq On : 10 Oct 2018 7:29 am
 Operator : GG
 Sample : STD S32-08311801
 Misc :
 ALS Vial : 1 Sample Multiplier: 10

10/12/18


Integration File: autoint1.e
 Quant Time: Oct 10 14:35:47 2018
 Quant Method : J:\GC01\METHODS\3C012417.M
 Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 QLast Update : Tue Jan 24 17:15:32 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 100ul
 Signal Phase : CarboSieve Packed Column
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|--------------------|-------|----------|---------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Hydrogen | 0.738 | 56176 | 41409.191 ppm |
| 2) Oxygen | 2.308 | 39438 | 25804.208 ppm |
| 3) Nitrogen | 2.485 | 88721 | 49909.067 ppm |
| 4) Carbon Monoxide | 3.172 | 88211 | 51444.179 ppm |
| 5) Methane | 5.160 | 52723 | 41259.947 ppm |
| 6) Carbon Dioxide | 6.816 | 102477 | 50344.300 ppm |
| ----- | | | |

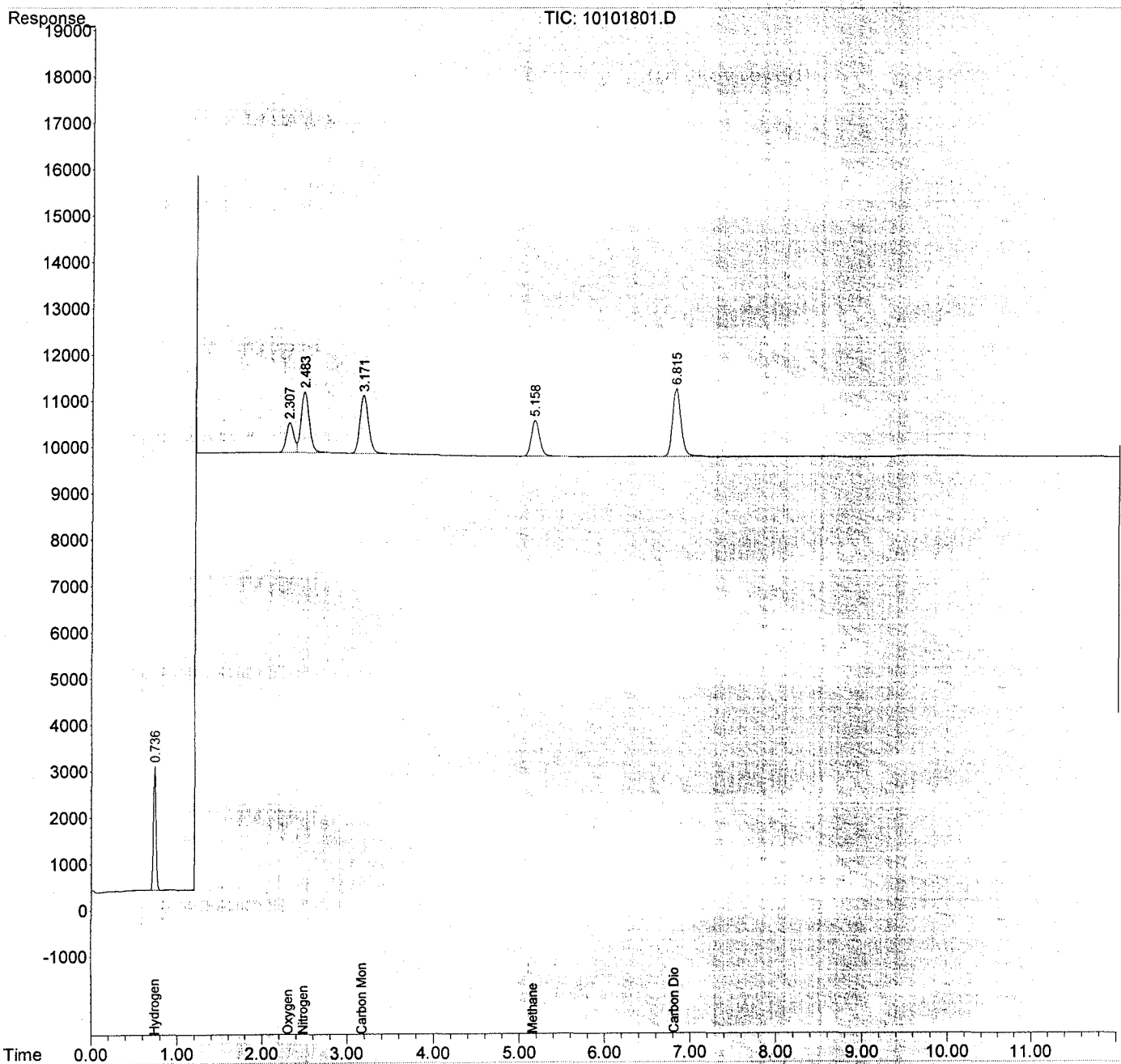
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : J:\GC01\DATA\FXG\2018_10\10\
Data File : 10101801.D
Signal(s) : TCD1A.CH
Acq On : 10 Oct 2018 7:29 am
Operator : GG
Sample : STD S32-08311801
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Oct 10 14:35:47 2018
Quant Method : J:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 17:15:32 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :



Data Path : J:\GC01\DATA\FXG\2018_10\10\
 Data File : 10101816.D
 Signal(s) : TCD1A.CH
 Acq On : 10 Oct 2018 1:26 pm
 Operator : GG
 Sample : STD S32-08311801
 Misc :
 ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
 Quant Time: Oct 10 14:38:07 2018
 Quant Method : J:\GC01\METHODS\3C012417.M
 Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
 QLast Update : Tue Jan 24 17:15:32 2017
 Response via : Initial Calibration
 Integrator: ChemStation

Volume Inj. : 100ul
 Signal Phase : CarboSieve Packed Column
 Signal Info :

| Compound | R.T. | Response | Conc Units |
|--------------------|-------|----------|---------------|
| ----- | | | |
| Target Compounds | | | |
| 1) Hydrogen | 0.735 | 56607 | 41726.793 ppm |
| 2) Oxygen | 2.301 | 39672 | 25957.300 ppm |
| 3) Nitrogen | 2.476 | 89904 | 50574.740 ppm |
| 4) Carbon Monoxide | 3.163 | 89463 | 52174.730 ppm |
| 5) Methane | 5.152 | 52965 | 41449.142 ppm |
| 6) Carbon Dioxide | 6.808 | 102287 | 50251.107 ppm |
| ----- | | | |

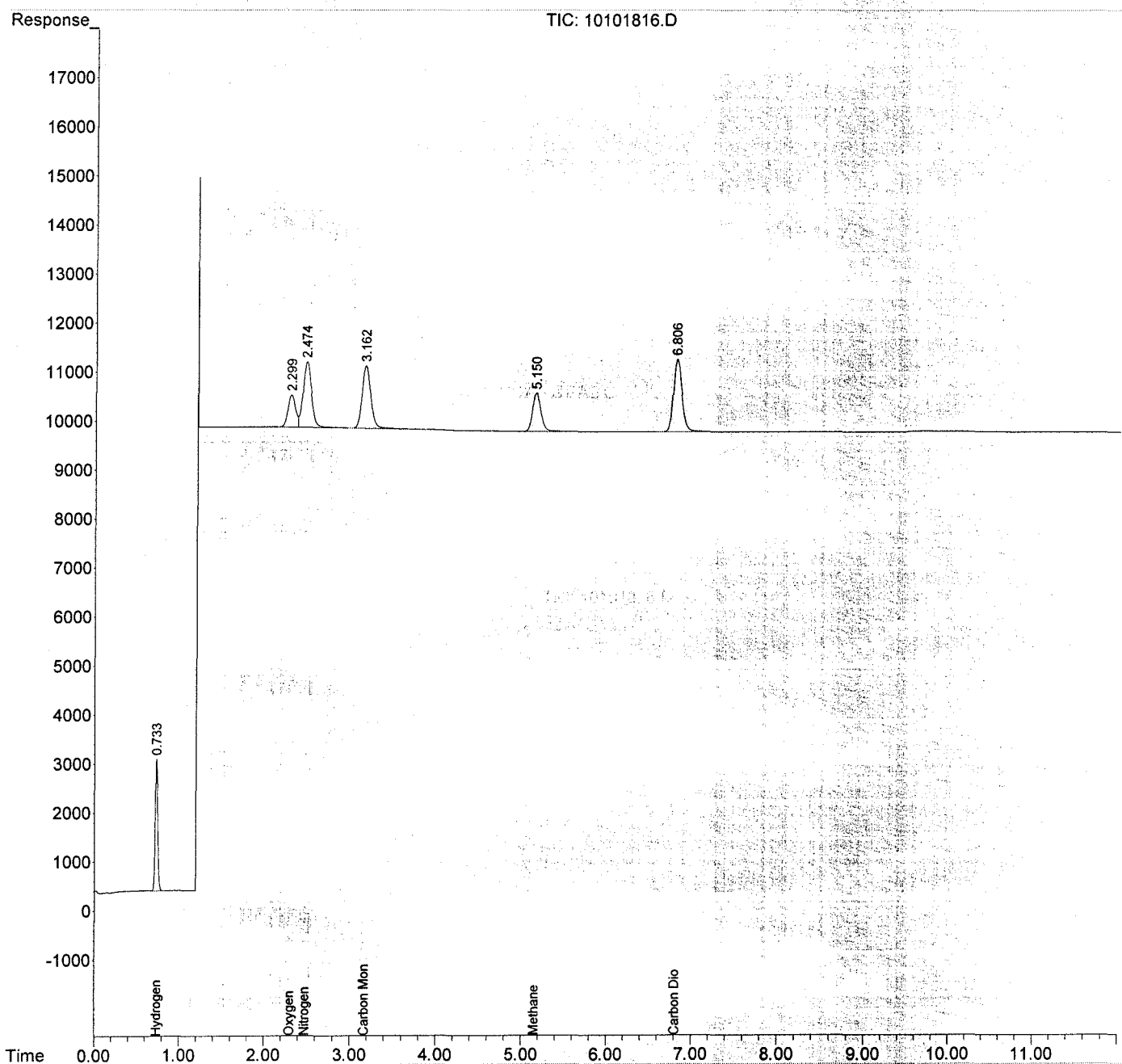
(f)=RT Delta > 1/2 Window

(m)=manual int.

Data Path : J:\GC01\DATA\FXG\2018_10\10\
Data File : 10101816.D
Signal(s) : TCD1A.CH
Acq On : 10 Oct 2018 1:26 pm
Operator : GG
Sample : STD S32-08311801
Misc :
ALS Vial : 1 Sample Multiplier: 10

Integration File: autoint1.e
Quant Time: Oct 10 14:38:07 2018
Quant Method : J:\GC01\METHODS\3C012417.M
Quant Title : EPA 3C, ASTM D 1946-90, VOA-EPA3C
QLast Update : Tue Jan 24 17:15:32 2017
Response via : Initial Calibration
Integrator: ChemStation

Volume Inj. : 100ul
Signal Phase : CarboSieve Packed Column
Signal Info :



Injection Log

Directory: I:\GC01\DATA\FXG\2017_01\24\

| | Date/Time | File Name | Sample ID | Misc Info | Operator | Acquisition Method | Comments |
|----|---------------------|------------|-----------------------------|-----------|----------|--------------------|----------|
| 1 | 24 Jan 117 8:04 am | 01241701.D | X | | MC | MFXGS25C.M | |
| 2 | 24 Jan 117 8:19 am | 01241702.D | xstd s30-01231703 | | MC | MFXGS25C.M | |
| 3 | 24 Jan 117 8:32 am | 01241703.D | std 30-12091603 | | MC | MFXGS25C.M | |
| 4 | 24 Jan 117 8:48 am | 01241704.D | mb | | MC | MFXGS25C.M | |
| 5 | 24 Jan 117 9:04 am | 01241705.D | lab air | | MC | MFXGS25C.M | |
| 6 | 24 Jan 117 9:22 am | 01241706.D | 0285-001 | | MC | MFXGS25C.M | |
| 7 | 24 Jan 117 9:38 am | 01241707.D | 0285-002 | | MC | MFXGS25C.M | |
| 8 | 24 Jan 117 9:54 am | 01241708.D | std s30-12301601 0.1% | | MC | MFXGS25C.M | |
| 9 | 24 Jan 117 10:12 am | 01241709.D | pressure check | | MC | MFXGS25C.M | |
| 10 | 24 Jan 117 10:28 am | 01241710.D | std s30-1231702 0.5% | | MC | MFXGS25C.M | |
| 11 | 24 Jan 117 10:46 am | 01241711.D | std s30-01231701 1% | | MC | MFXGS25C.M | |
| 12 | 24 Jan 117 11:04 am | 01241712.D | std s30-12191601 4% | | MC | MFXGS25C.M | |
| 13 | 24 Jan 117 11:28 am | 01241713.D | std s30-01231703 16% | | MC | MFXGS25C.M | |
| 14 | 24 Jan 117 11:45 am | 01241714.D | s11-12021503 O2 | | MC | MFXGS25C.M | |
| 15 | 24 Jan 117 12:02 pm | 01241715.D | pressure check | | MC | MFXGS25C.M | |
| 16 | 24 Jan 117 12:21 pm | 01241716.D | s30-01241701 CH4 | | MC | MFXGS25C.M | |
| 17 | 24 Jan 117 12:38 pm | 01241717.D | pressure check | | MC | MFXGS25C.M | |
| 18 | 24 Jan 117 1:55 pm | 01241718.D | pressure check | | MC | MFXGS25C.M | |
| 19 | 24 Jan 117 2:11 pm | 01241719.D | pressure check | | MC | MFXGS25C.M | |
| 20 | 24 Jan 117 2:32 pm | 01241720.D | pressure check | | MC | MFXGS25C.M | |
| 21 | 24 Jan 117 2:42 pm | 01241721.D | pressure check | | MC | MFXGS25C.M | |
| 22 | 24 Jan 117 2:54 pm | 01241722.D | pressure check | | MC | MFXGS25C.M | |
| 23 | 24 Jan 117 3:01 pm | 01241723.D | pressure check | | MC | MFXGS25C.M | |
| 24 | 24 Jan 117 3:08 pm | 01241724.D | s11-12021502 N2 | | MC | MFXGS25C.M | |
| 25 | 24 Jan 117 3:17 pm | 01241725.D | mb | | MC | MFXGS25C.M | |
| 26 | 24 Jan 117 3:39 pm | 01241726.D | pressure check | | MC | MFXGS25C.M | |
| 27 | 24 Jan 117 4:13 pm | 01241727.D | lg loop S30-12191601 40.28% | | MC | MFXGS25C.M | |
| 28 | 24 Jan 117 4:51 pm | 01241728.D | S30-01241702 CO2 | | MC | MFXGS25C.M | |
| 29 | 24 Jan 117 5:13 pm | 01241729.D | icv S30-12091603 | | MC | MFXGS25C.M | |
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Injection Log

Directory: I:\GC01\DATA\FXG\2018_10\10\

| | Date/Time | File Name | Sample ID | Misc Info | Operator | Acquisition Method | Comments |
|----|---------------------|------------|-------------------|-----------|----------|--------------------|----------|
| 1 | 10 Oct 118 7:29 am | 10101801.D | STD S32-08311801 | | GG | MFSGS25C.M | pass |
| 2 | 10 Oct 118 7:54 am | 10101802.D | MB | | GG | MFSGS25C.M | pass |
| 3 | 10 Oct 118 8:16 am | 10101803.D | Lab air | | GG | MFSGS25C.M | pass |
| 4 | 10 Oct 118 8:37 am | 10101804.D | LCS S32-10081801 | | GG | MFSGS25C.M | pass |
| 5 | 10 Oct 118 8:59 am | 10101805.D | LCSD S32-10081801 | | GG | MFSGS25C.M | pass |
| 6 | 10 Oct 118 9:21 am | 10101806.D | P1805287-001 | | GG | MFSGS25C.M | |
| 7 | 10 Oct 118 9:44 am | 10101807.D | P1805305-001 | | GG | MFSGS25C.M | |
| 8 | 10 Oct 118 10:01 am | 10101808.D | P1805236-001 | | GG | MFSGS25C.M | |
| 9 | 10 Oct 118 10:34 am | 10101809.D | P1805236-002 | | GG | MFSGS25C.M | |
| 10 | 10 Oct 118 10:51 am | 10101810.D | P1805236-003 | | GG | MFSGS25C.M | |
| 11 | 10 Oct 118 11:13 am | 10101811.D | P1805236-004 | | GG | MF25VCH4.M | |
| 12 | 10 Oct 118 11:33 am | 10101812.D | P1805236-005 | | GG | MF25VCH4.M | |
| 13 | 10 Oct 118 12:13 pm | 10101813.D | P1805236-006 | | GG | MF25VCH4.M | |
| 14 | 10 Oct 118 12:39 pm | 10101814.D | P1805217-001 | | GG | MF25VCH4.M | |
| 15 | 10 Oct 118 1:04 pm | 10101815.D | P1805217-002 | | GG | MFSGS25C.M | |
| 16 | 10 Oct 118 1:26 pm | 10101816.D | STD S32-08311801 | | GG | MFSGS25C.M | pass |
| 17 | 10 Oct 118 1:45 pm | 10101817.D | P1805217-003 | | GG | MFSGS25C.M | |
| 18 | 10 Oct 118 2:06 pm | 10101818.D | P1805217-004 | | GG | MFSGS25C.M | |
| 19 | 10 Oct 118 2:23 pm | 10101819.D | P1805217-005 | | GG | MFSGS25C.M | |
| 20 | 10 Oct 118 2:41 pm | 10101820.D | P1805217-006 | | GG | MFSGS25C.M | |
| 21 | 10 Oct 118 2:58 pm | 10101821.D | STD S32-08311801 | | GG | MFSGS25C.M | pass |
| | | | | | | | |
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Data File : I:\MS19\DATA\2018_10\12\10121809.D
 Acq On : 12 Oct 2018 13:19
 Sample : P1805236-001 (400mL)
 Misc : S31-09241806

Vial: 1
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 10:34:49 2018

Quant Method : I:\MS19\METHODS\S19100118.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Oct 02 06:45:50 2018

Response via : Initial Calibration

~~WA~~ 10/15/18

DataAcq Meth:TO15SIM.M

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------------|-------|------|----------|----------|-------|----------|
| 1) Bromochloromethane (IS1) | 9.62 | 130 | 18723 | 1000.000 | pg | -0.03 |
| 25) 1,4-Difluorobenzene (IS2) | 11.58 | 114 | 85533 | 1000.000 | pg | -0.02 |
| 38) Chlorobenzene-d5 (IS3) | 15.92 | 54 | 12091 | 1000.000 | pg | 0.00 |

System Monitoring Compounds

| | | | | | | |
|-------------------------------|----------|-------|----------|----------|----|---------|
| 20) 1,2-Dichloroethane-d4 ... | 10.40 | 65 | 22214 | 991.147 | pg | -0.03 |
| Spiked Amount | 1000.000 | Range | 70 - 130 | Recovery | = | 99.11% |
| 33) Toluene-d8 (SS2) | 14.02 | 98 | 92599 | 1049.807 | pg | -0.01 |
| Spiked Amount | 1000.000 | Range | 70 - 130 | Recovery | = | 104.98% |
| 45) Bromofluorobenzene (SS3) | 17.44 | 174 | 35509 | 1039.327 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range | 70 - 130 | Recovery | = | 103.93% |

Target Compounds

| | R.T. | QIon | Response | Conc | Units | Qvalue |
|-------------------------------|-------|------|----------|-----------|-------|--------|
| 2) Dichlorodifluoromethan... | 4.32 | 85 | 32431 | 812.927 | pg | 100 |
| 3) Chloromethane | 4.53 | 52 | 563 | 60.353 | pg | 97 |
| 4) 1,2-Dichloro,1,1,2,2-t... | 4.70 | 85 | 829 | 28.827 | pg | 98 |
| 5) Vinyl Chloride | 0.00 | 62 | 0 | N.D. | | |
| 6) 1,3-Butadiene | 5.01 | 54 | 138 | N.D. | | |
| 7) Bromomethane | 5.33 | 94 | 4621 | 253.910 | pg | 100 |
| 8) Chloroethane | 5.55 | 64 | 274 | 20.215 | pg | 100 |
| 9) Acrolein | 6.12 | 56 | 5099 | 465.372 | pg | 100 |
| 10) Acetone | 6.26 | 58 | 67366 | 4849.644 | pg | 100 |
| 11) Trichlorofluoromethane | 6.48 | 101 | 30489 | 977.229 | pg | 100 |
| 12) 1,1-Dichloroethene | 7.20 | 96 | 146 | N.D. | | |
| 13) Methylene Chloride | 7.33 | 84 | 1125 | 48.641 | pg | 97 |
| 14) Trichlorotrifluoroethane | 7.67 | 151 | 2428 | 111.037 | pg | 100 |
| 15) trans-1,2-Dichloroethene | 0.00 | 96 | 0 | N.D. | | |
| 16) 1,1-Dichloroethane | 8.58 | 63 | 117 | N.D. | | |
| 17) Methyl tert-Butyl Ether | 0.00 | 73 | 0 | N.D. | d | |
| 18) cis-1,2-Dichloroethene | 9.46 | 96 | 93 | N.D. | | |
| 19) Chloroform | 9.76 | 83 | 22055 | 570.218 | pg | 100 |
| 21) 1,2-Dichloroethane | 10.51 | 62 | 87 | N.D. | | |
| 22) 1,1,1-Trichloroethane | 10.78 | 97 | 9973 | 303.994 | pg | 100 |
| 23) Benzene | 11.23 | 78 | 12662 | 130.309 | pg | 98 |
| 24) Carbon Tetrachloride | 11.39 | 117 | 707 | 23.610 | pg | 98 |
| 26) 1,2-Dichloropropane | 12.04 | 63 | 93 | N.D. | | |
| 27) Bromodichloromethane | 0.00 | 83 | 0 | N.D. | d | |
| 28) Trichloroethene | 12.28 | 130 | 2271 | 84.974 | pg | 97 |
| 29) 1,4-Dioxane | 12.26 | 88 | 641 | 35.057 | pg | 94 |
| 30) cis-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 31) trans-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | d | |
| 32) 1,1,2-Trichloroethane | 0.00 | 83 | 0 | N.D. | d | |
| 34) Toluene | 14.11 | 91 | 50119 | 513.189 | pg | 100 |
| 35) Dibromochloromethane | 14.52 | 129 | 64 | N.D. | | |
| 36) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | | |
| 37) Tetrachloroethene | 15.27 | 166 | 1652041 | 57484.130 | pg | 99 |
| 39) Chlorobenzene | 0.00 | 112 | 0 | N.D. | d | |
| 40) Ethylbenzene | 16.36 | 91 | 3936 | 35.310 | pg | 99 |
| 41) m,p-Xylene | 16.52 | 91 | 8594 | 100.833 | pg | 100 |
| 42) Styrene | 16.89 | 104 | 1621 | 23.945 | pg | 95 |
| 43) o-Xylene | 16.99 | 106 | 4397 | 97.037 | pg | 98 |
| 44) 1,1,2,2-Tetrachloroethane | 0.00 | 83 | 0 | N.D. | d | |
| 46) 1,3,5-Trimethylbenzene | 18.27 | 105 | 2982 | 31.290 | pg | 99 |
| 47) 1,2,4-Trimethylbenzene | 18.66 | 105 | 8481 | 89.206 | pg | 88 |
| 48) 1,3-Dichlorobenzene | 18.81 | 146 | 303 | N.D. | | |
| 49) 1,4-Dichlorobenzene | 18.87 | 146 | 858 | 13.756 | pg | 98 |
| 50) 1,2-Dichlorobenzene | 19.20 | 146 | 146 | N.D. | | |
| 51) 1,2-Dibromo-3-chloropr... | 0.00 | 157 | 0 | N.D. | | |
| 52) 1,2,4-Trichlorobenzene | 20.82 | 182 | 219 | N.D. | | |
| 53) Naphthalene | 20.94 | 128 | 7396 | 66.509 | pg | 99 |

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Data File : I:\MS19\DATA\2018_10\12\10121809.D
 Acq On : 12 Oct 2018 13:19
 Sample : P1805236-001 (400mL)
 Misc : S31-09241806

Vial: 1
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 10:34:49 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

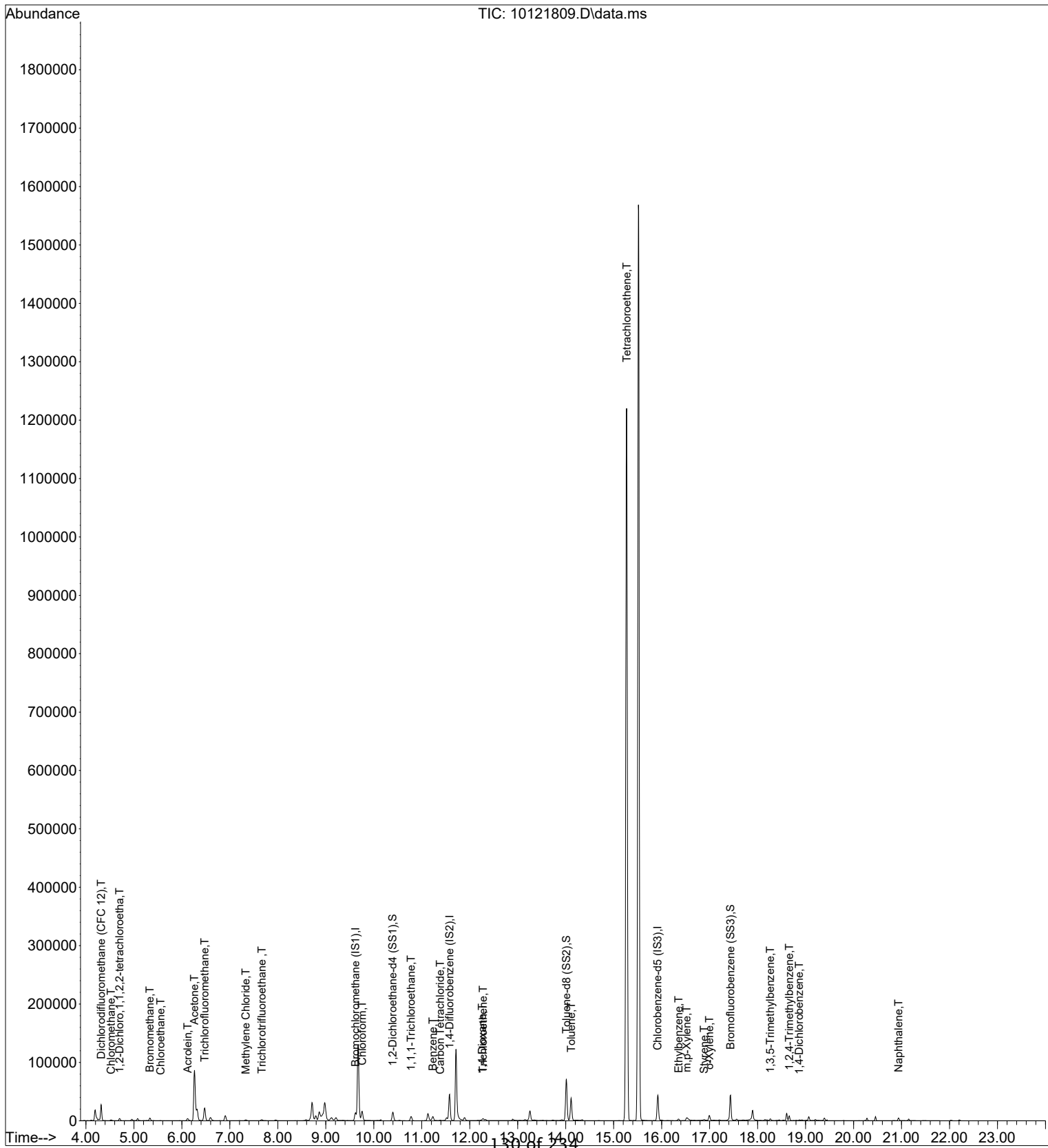
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------|------|------|----------|------|-------|----------|
| 54) Hexachlorobutadiene | 0.00 | 225 | 0 | N.D. | | |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2018_10\12\10121809.D
 Acq On : 12 Oct 2018 13:19
 Sample : P1805236-001 (400mL)
 Misc : S31-09241806

Vial: 1
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 10:34:49 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

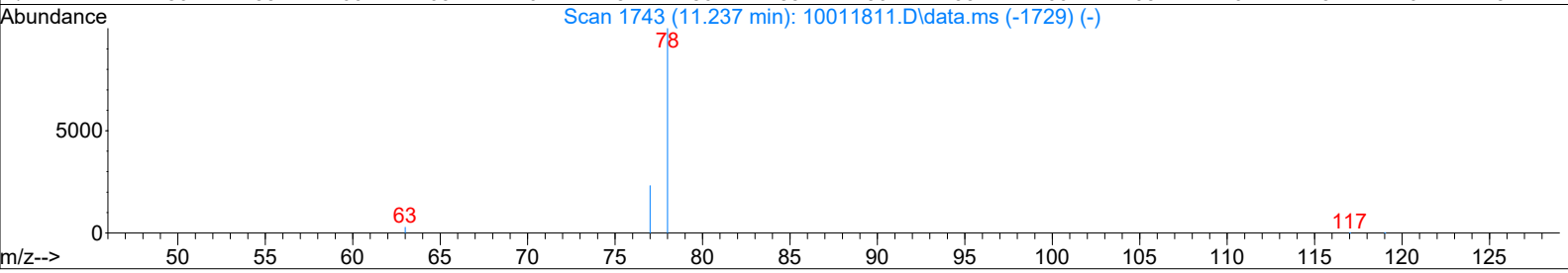
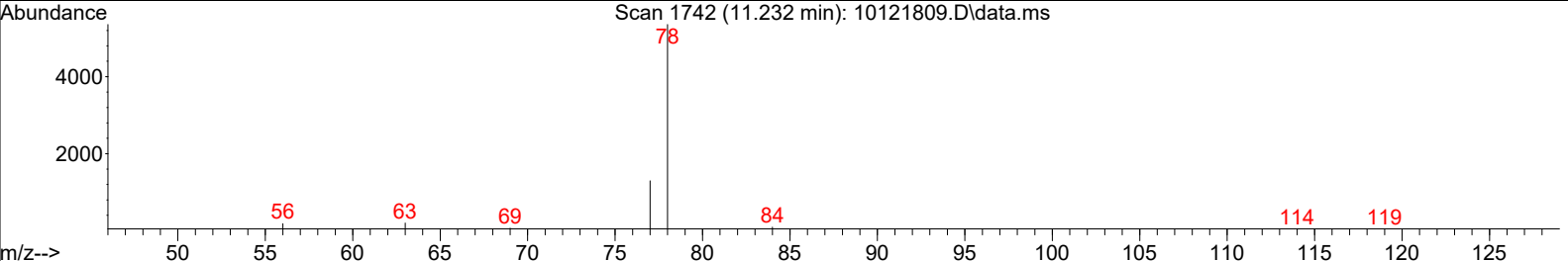
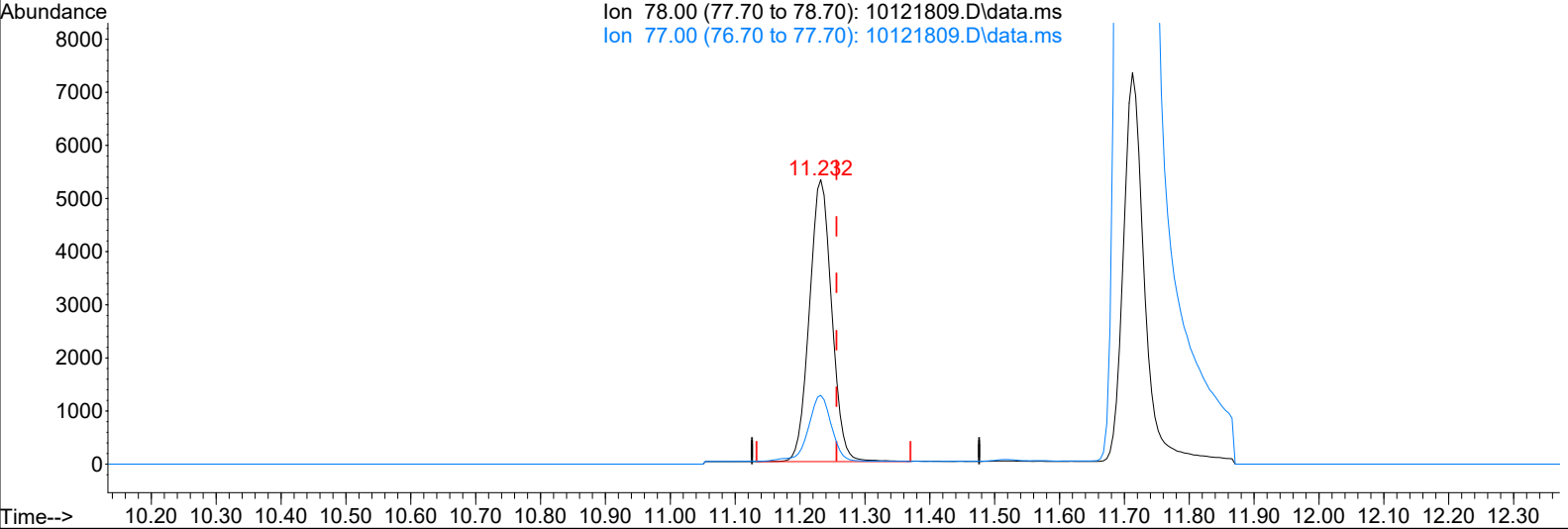


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Data File : I:\MS19\DATA\2018_10\12\10121809.D
 Acq On : 12 Oct 2018 13:19
 Sample : P1805236-001 (400mL)
 Misc : S31-09241806

Vial: 1
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 13:58:53 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121809.D\data.ms

(23) Benzene (T)

11.232min (-0.024) 130.31pg

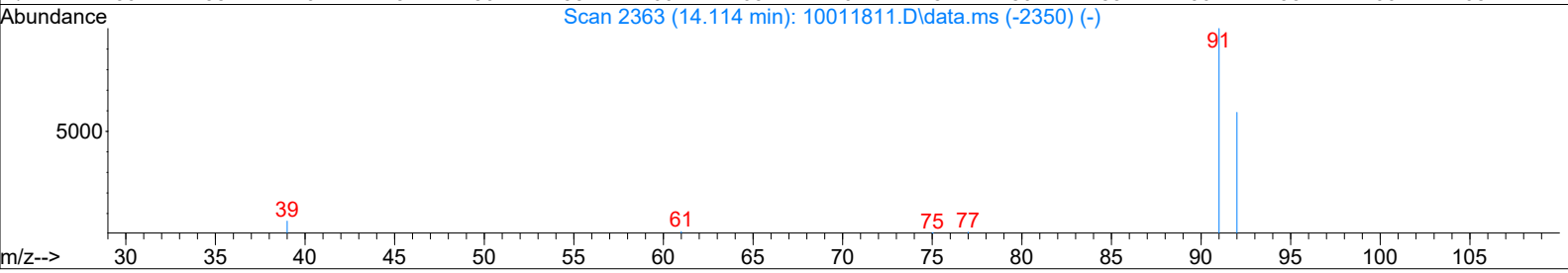
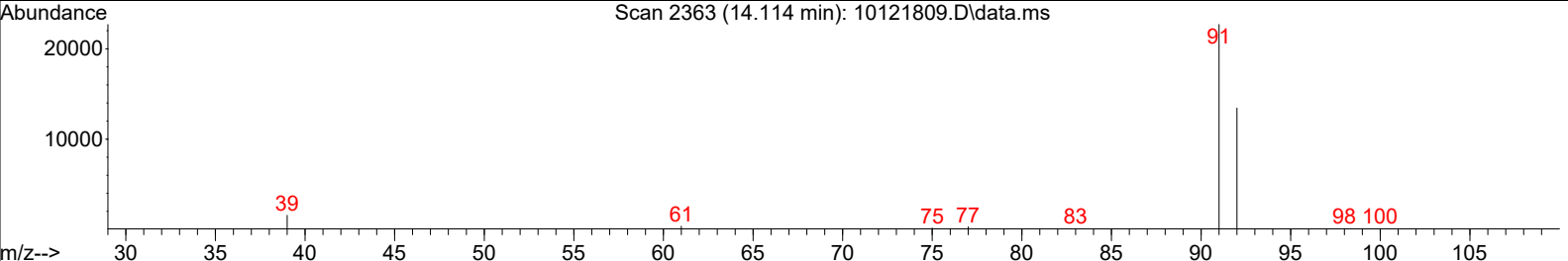
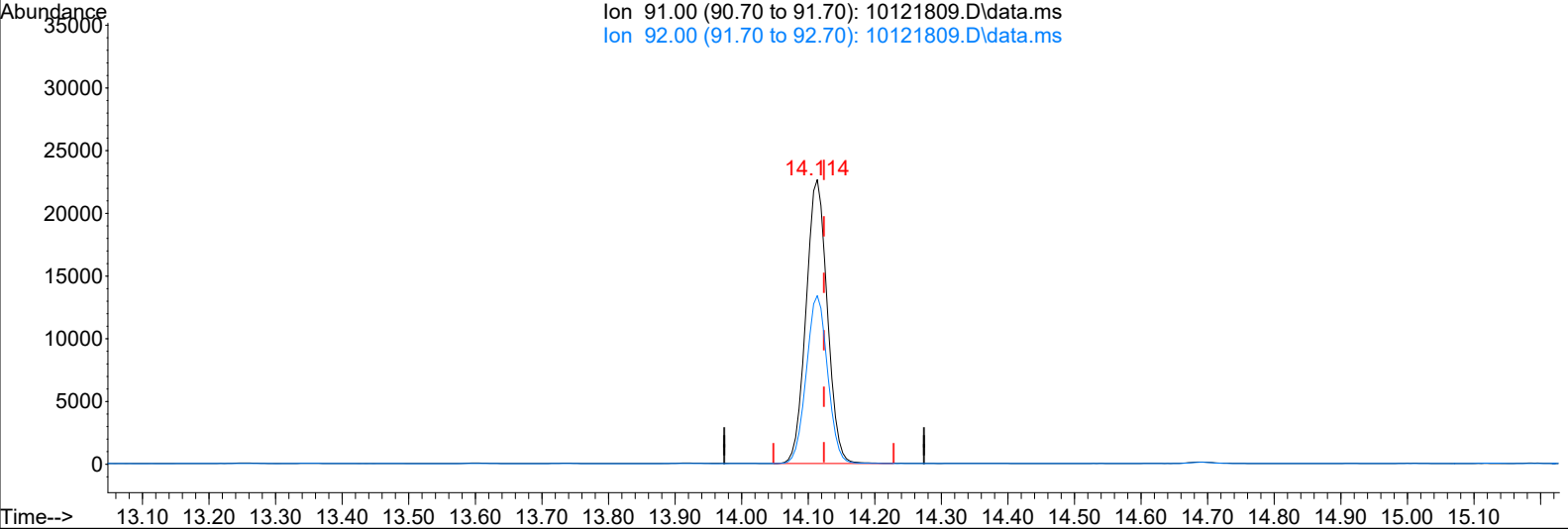
response 12662

| Ion | Exp% | Act% |
|-------|-------|-------|
| 78.00 | 100 | 100 |
| 77.00 | 23.30 | 24.17 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121809.D
 Acq On : 12 Oct 2018 13:19
 Sample : P1805236-001 (400mL)
 Misc : S31-09241806

Vial: 1
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 13:58:53 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121809.D\data.ms

(34) Toluene (T)

14.114min (-0.010) 513.19pg

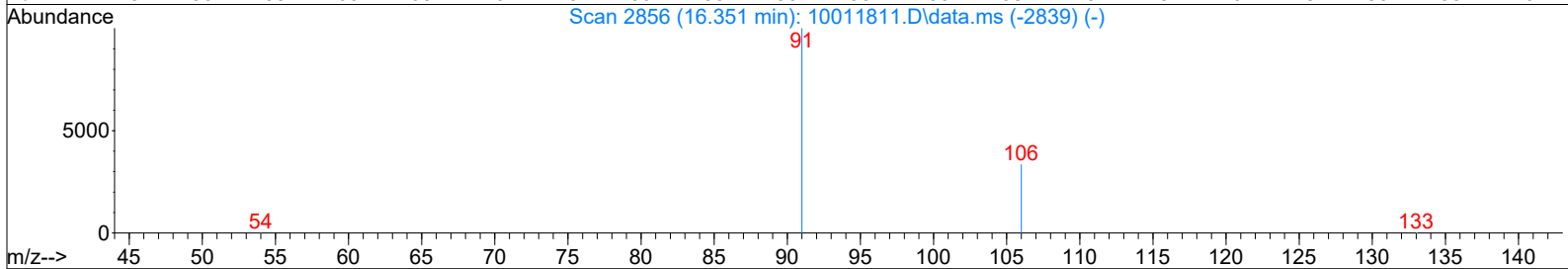
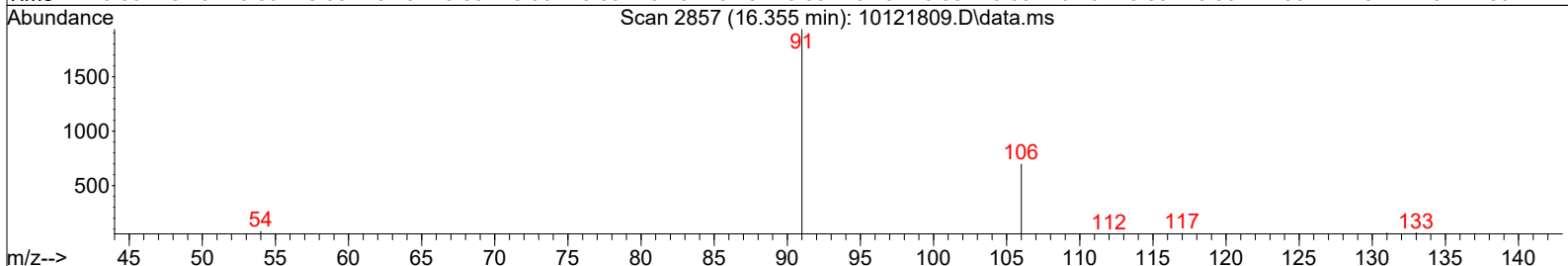
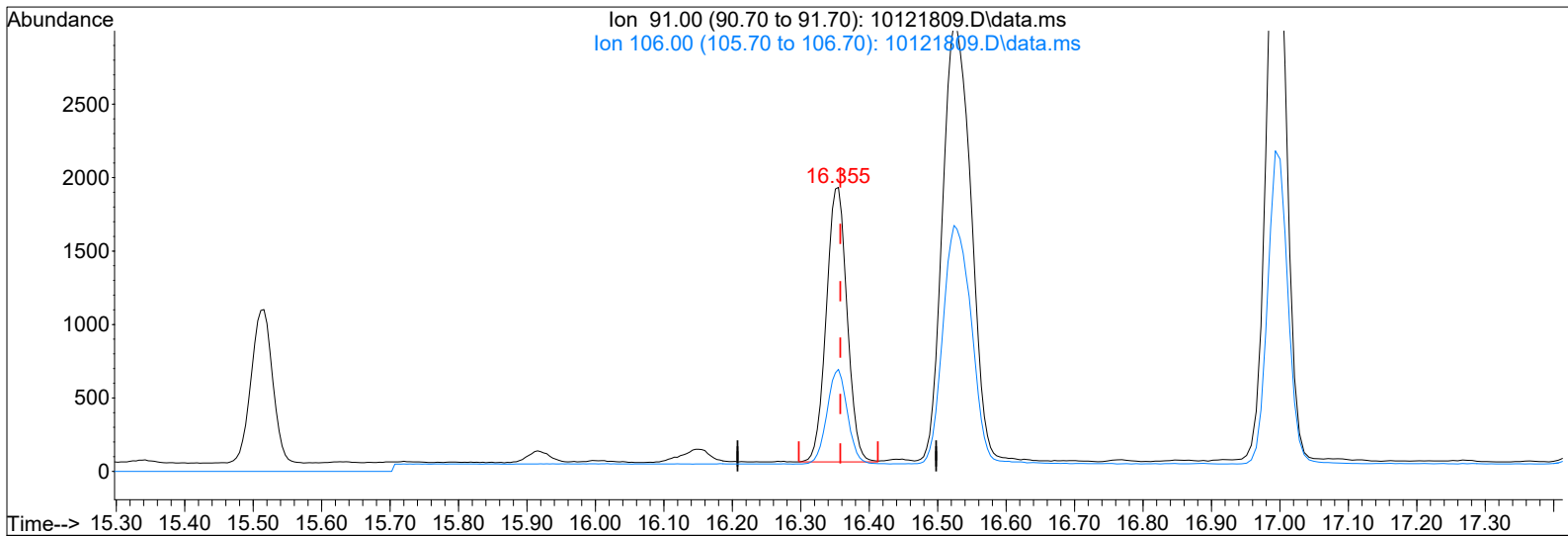
response 50119

| Ion | Exp% | Act% |
|-------|-------|-------|
| 91.00 | 100 | 100 |
| 92.00 | 59.20 | 59.26 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121809.D
 Acq On : 12 Oct 2018 13:19
 Sample : P1805236-001 (400mL)
 Misc : S31-09241806

Vial: 1
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 13:58:53 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121809.D\data.ms

(40) Ethylbenzene (T)

16.355min (-0.003) 35.31pg

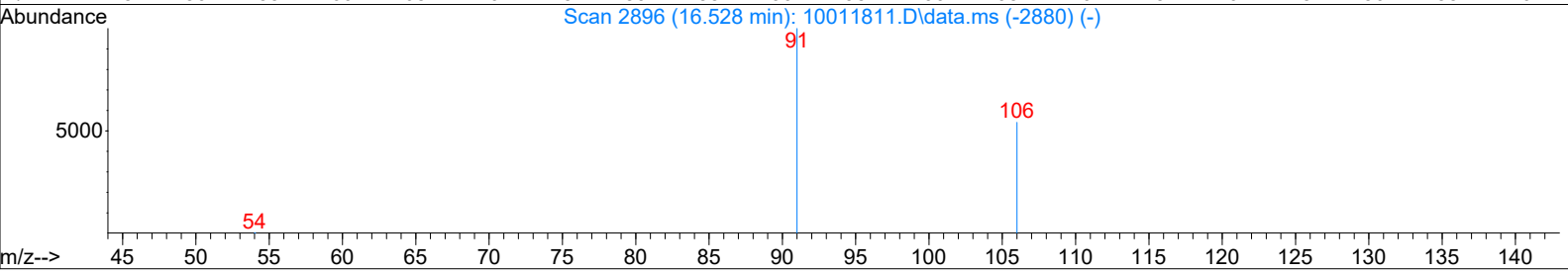
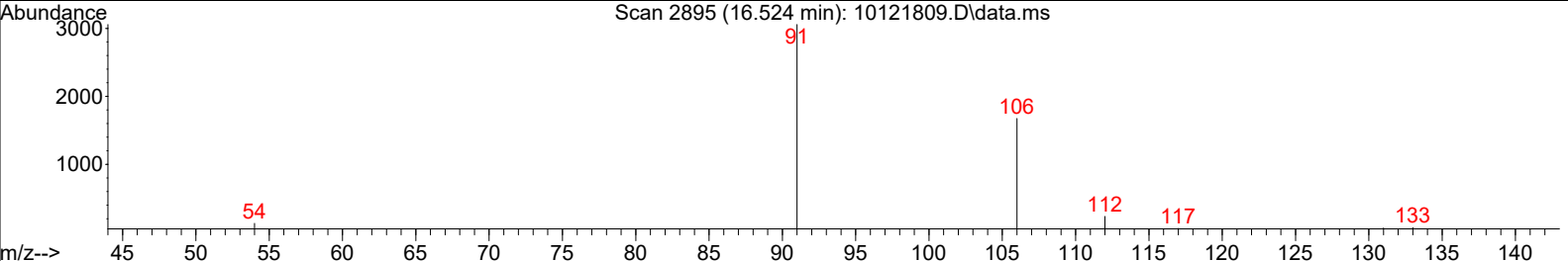
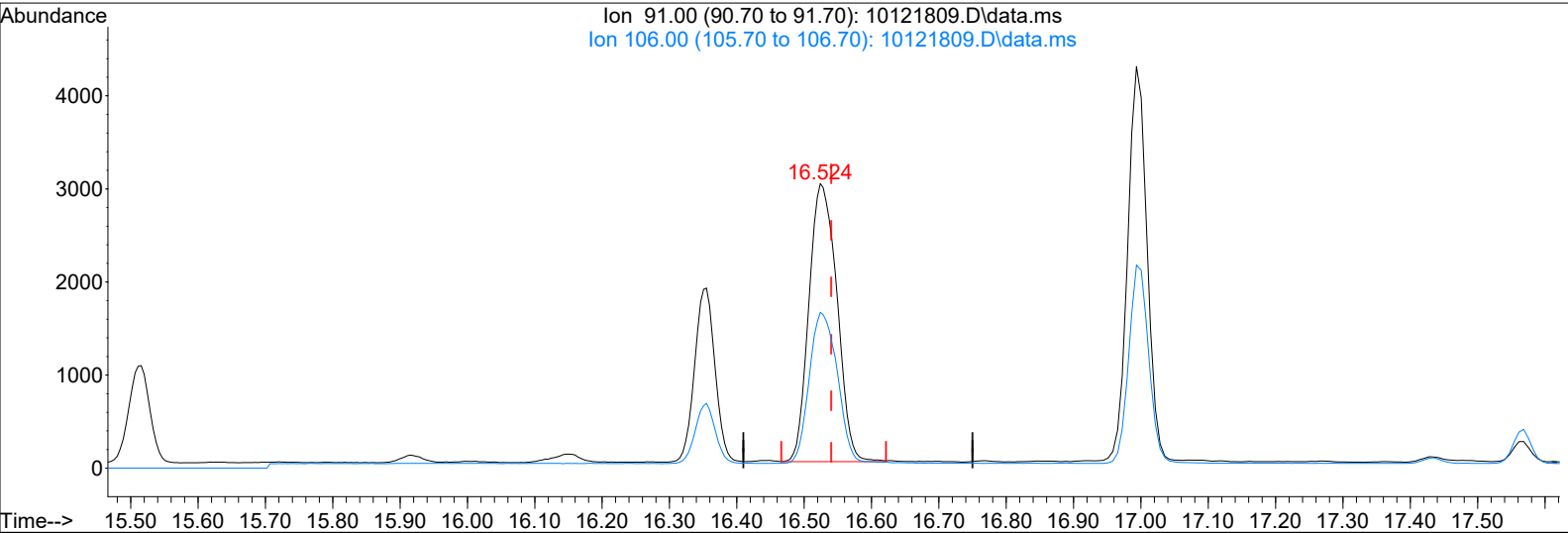
response 3936

| Ion | Exp% | Act% |
|--------|-------|-------|
| 91.00 | 100 | 100 |
| 106.00 | 33.70 | 34.20 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121809.D
 Acq On : 12 Oct 2018 13:19
 Sample : P1805236-001 (400mL)
 Misc : S31-09241806

Vial: 1
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 13:58:53 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121809.D\data.ms

(41) m,p-Xylene (T)

16.524min (-0.016) 100.83pg

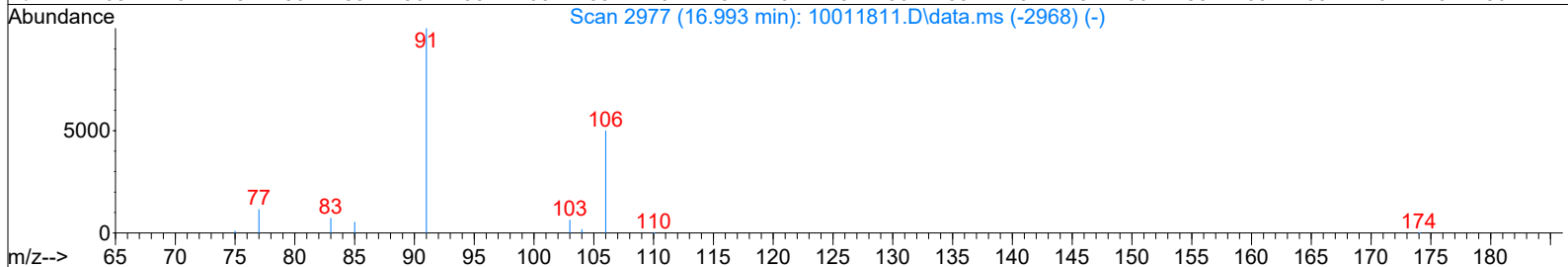
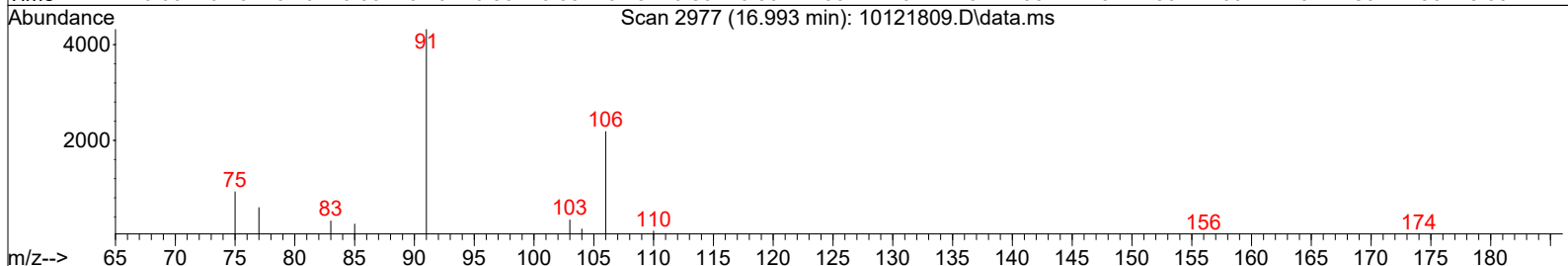
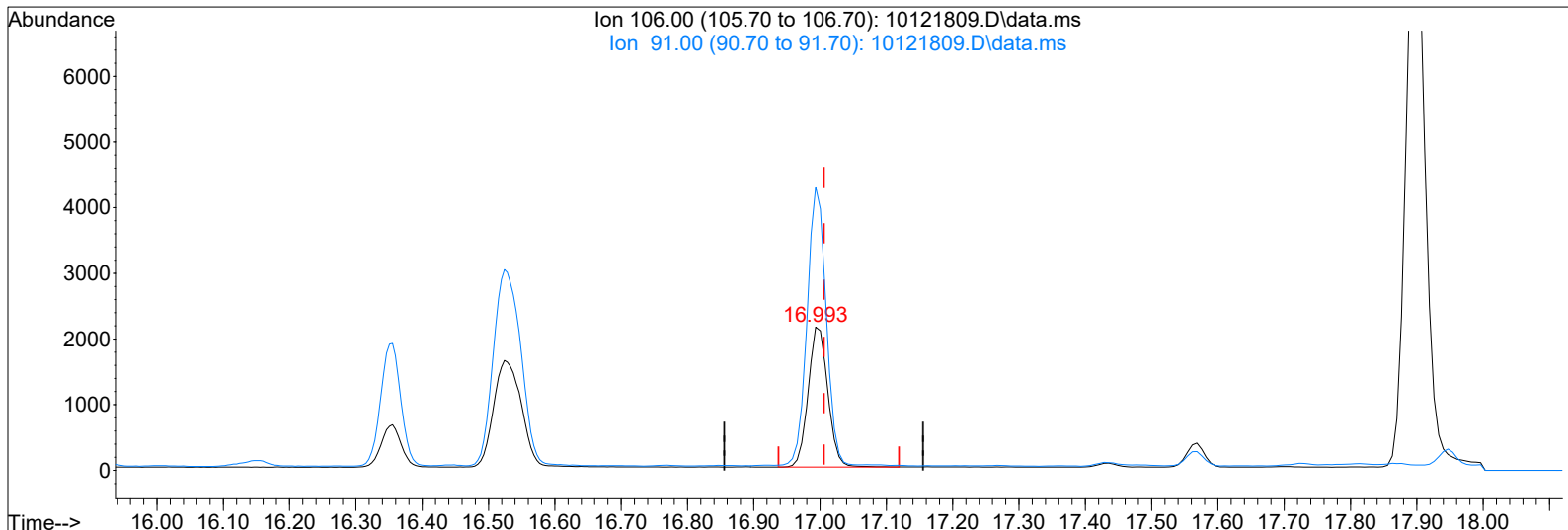
response 8594

| Ion | Exp% | Act% |
|--------|-------|-------|
| 91.00 | 100 | 100 |
| 106.00 | 54.30 | 54.58 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121809.D
 Acq On : 12 Oct 2018 13:19
 Sample : P1805236-001 (400mL)
 Misc : S31-09241806

Vial: 1
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 13:58:53 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121809.D\data.ms

(43) o-Xylene (T)

16.993min (-0.012) 97.04pg

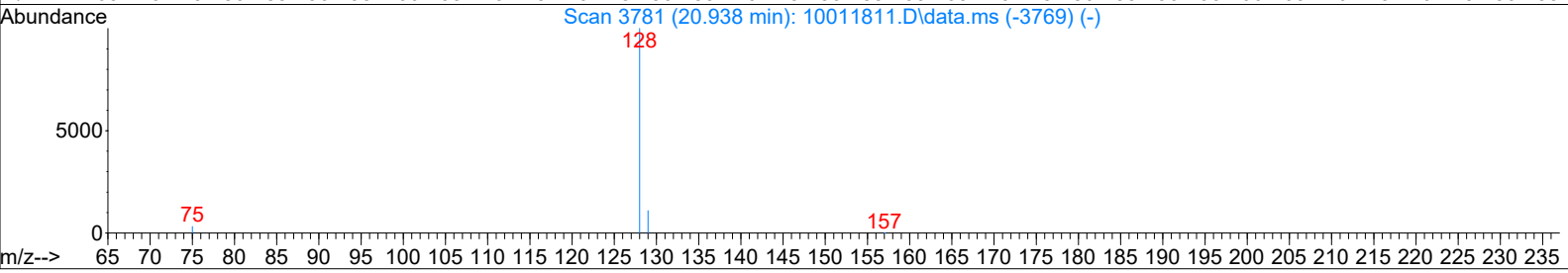
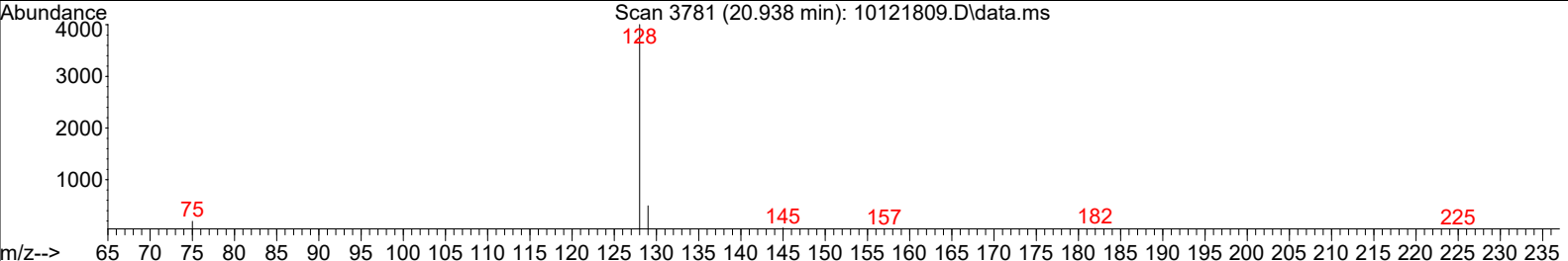
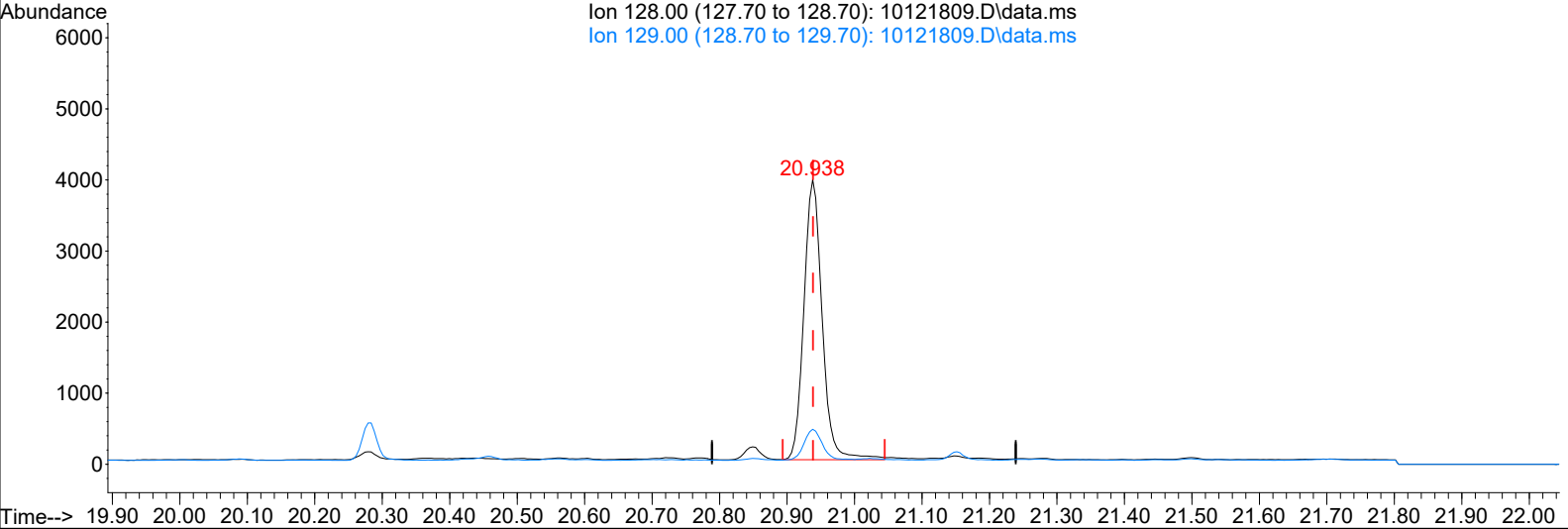
response 4397

| Ion | Exp% | Act% |
|--------|--------|--------|
| 106.00 | 100 | 100 |
| 91.00 | 195.60 | 192.49 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121809.D
 Acq On : 12 Oct 2018 13:19
 Sample : P1805236-001 (400mL)
 Misc : S31-09241806

Vial: 1
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 13:58:53 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121809.D\data.ms

(53) Naphthalene (T)

20.938min (-0.001) 66.51pg

response 7396

| Ion | Exp% | Act% |
|--------|-------|-------|
| 128.00 | 100 | 100 |
| 129.00 | 10.80 | 11.11 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121810.D
 Acq On : 12 Oct 2018 13:51
 Sample : P1805236-002 (400mL)
 Misc : S31-09241806

Vial: 3
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 11:35:52 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

~~10/15/18~~ 10/15/18

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------------|-------|------|----------|----------|-------|----------|
| 1) Bromochloromethane (IS1) | 9.62 | 130 | 18649 | 1000.000 | pg | -0.03 |
| 25) 1,4-Difluorobenzene (IS2) | 11.58 | 114 | 84471 | 1000.000 | pg | -0.02 |
| 38) Chlorobenzene-d5 (IS3) | 15.92 | 54 | 11705 | 1000.000 | pg | 0.00 |

| System Monitoring Compounds | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------------|----------|-------|------------|----------|-------|----------|
| 20) 1,2-Dichloroethane-d4 ... | 10.40 | 65 | 22112 | 990.510 | pg | -0.03 |
| Spiked Amount 1000.000 | Range 70 | - 130 | Recovery = | 99.05% | | |
| 33) Toluene-d8 (SS2) | 14.01 | 98 | 91340 | 1048.553 | pg | -0.01 |
| Spiked Amount 1000.000 | Range 70 | - 130 | Recovery = | 104.85% | | |
| 45) Bromofluorobenzene (SS3) | 17.43 | 174 | 34213 | 1034.417 | pg | 0.00 |
| Spiked Amount 1000.000 | Range 70 | - 130 | Recovery = | 103.44% | | |

| Target Compounds | R.T. | QIon | Response | Conc | Units | Qvalue |
|-------------------------------|-------|------|------------|-----------|-------|--------|
| 2) Dichlorodifluoromethan... | 4.32 | 85 | 27898 | 702.076 | pg | 100 |
| 3) Chloromethane | 4.53 | 52 | 597 | 64.252 | pg | 92 |
| 4) 1,2-Dichloro,1,1,2,2-t... | 4.69 | 85 | 887 | 30.966 | pg | 99 |
| 5) Vinyl Chloride | 4.82 | 62 | 60 | N.D. | | |
| 6) 1,3-Butadiene | 5.01 | 54 | 110 | N.D. | | |
| 7) Bromomethane | 5.33 | 94 | 417 | 23.004 | pg | 100 |
| 8) Chloroethane | 5.55 | 64 | 594 | 43.997 | pg | 99 |
| 9) Acrolein | 6.12 | 56 | 2191 | 200.760 | pg | 100 |
| 10) Acetone | 6.26 | 58 | 72923 | 5270.520 | pg | # 77 |
| 11) Trichlorofluoromethane | 6.47 | 101 | 17326 | 557.534 | pg | 100 |
| 12) 1,1-Dichloroethene | 7.19 | 96 | 1113 | 50.610 | pg | 97 |
| 13) Methylene Chloride | 7.33 | 84 | 274 | 11.894 | pg | 99 |
| 14) Trichlorotrifluoroethane | 7.67 | 151 | 2940 | 134.985 | pg | 100 |
| 15) trans-1,2-Dichloroethene | 8.37 | 96 | 123 | N.D. | | |
| 16) 1,1-Dichloroethane | 8.58 | 63 | 501 | 14.030 | pg | 100 |
| 17) Methyl tert-Butyl Ether | 8.59 | 73 | 482 | N.D. | | |
| 18) cis-1,2-Dichloroethene | 9.46 | 96 | 9703 | 398.437 | pg | 100 |
| 19) Chloroform | 9.75 | 83 | 62809 | 1630.330 | pg | 99 |
| 21) 1,2-Dichloroethane | 10.53 | 62 | 63 | N.D. | | |
| 22) 1,1,1-Trichloroethane | 10.78 | 97 | 973 | 29.776 | pg | 99 |
| 23) Benzene | 11.23 | 78 | 7343 | 75.869 | pg | 99 |
| 24) Carbon Tetrachloride | 11.39 | 117 | 520 | 17.434 | pg | 99 |
| 26) 1,2-Dichloropropane | 0.00 | 63 | 0 | N.D. | | |
| 27) Bromodichloromethane | 0.00 | 83 | 0 | N.D. d | | |
| 28) Trichloroethene | 12.28 | 130 | 68995 | 2614.049 | pg | 99 |
| 29) 1,4-Dioxane | 12.26 | 88 | 803 | 44.469 | pg | 95 |
| 30) cis-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 31) trans-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. d | | |
| 32) 1,1,2-Trichloroethane | 13.81 | 83 | 110 | N.D. | | |
| 34) Toluene | 14.11 | 91 | 7388 | 76.600 | pg | 100 |
| 35) Dibromochloromethane | 14.52 | 129 | 111 | N.D. | | |
| 36) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | | |
| 37) Tetrachloroethene | 15.27 | 166 | 334563 | 11787.756 | pg | 100 |
| 39) Chlorobenzene | 0.00 | 112 | 0 | N.D. d | | |
| 40) Ethylbenzene | 16.35 | 91 | 3078 | 28.523 | pg | 99 |
| 41) m,p-Xylene | 16.52 | 91 | 3657 | 44.322 | pg | 98 |
| 42) Styrene | 16.89 | 104 | 112 | N.D. | | |
| 43) o-Xylene | 17.00 | 106 | 1083 | 24.689 | pg | 96 |
| 44) 1,1,2,2-Tetrachloroethane | 16.99 | 83 | 228 | N.D. | | |
| 46) 1,3,5-Trimethylbenzene | 18.27 | 105 | 1076 | 11.663 | pg | 96 |
| 47) 1,2,4-Trimethylbenzene | 18.66 | 105 | 1439 | 15.635 | pg | # 72 |
| 48) 1,3-Dichlorobenzene | 18.88 | 146 | 73 | N.D. | | |
| 49) 1,4-Dichlorobenzene | 18.88 | 146 | 73 | N.D. | | |
| 50) 1,2-Dichlorobenzene | 0.00 | 146 | 0 | N.D. | | |
| 51) 1,2-Dibromo-3-chloropr... | 0.00 | 157 | 0 | N.D. | | |
| 52) 1,2,4-Trichlorobenzene | 0.00 | 182 | 0 | N.D. | | |
| 53) Naphthalene | 20.95 | 128 | 137 of 234 | N.D. | | |

Data File : I:\MS19\DATA\2018_10\12\10121810.D
 Acq On : 12 Oct 2018 13:51
 Sample : P1805236-002 (400mL)
 Misc : S31-09241806

Vial: 3
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 11:35:52 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

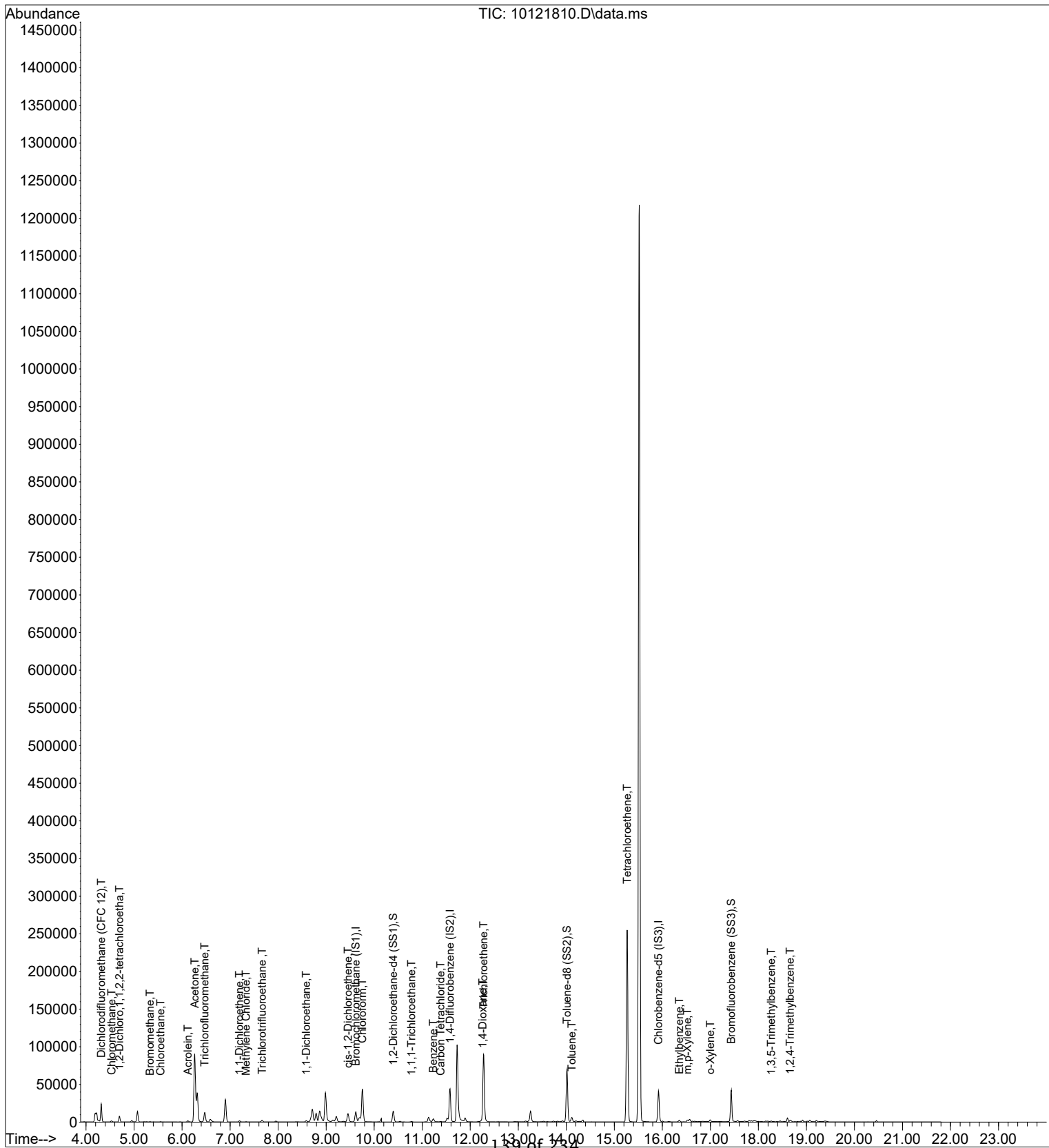
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------|------|------|----------|------|-------|----------|
| 54) Hexachlorobutadiene | 0.00 | 225 | 0 | N.D. | | |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2018_10\12\10121810.D
 Acq On : 12 Oct 2018 13:51
 Sample : P1805236-002 (400mL)
 Misc : S31-09241806

Vial: 3
 Operator: WA
 Inst : MS19

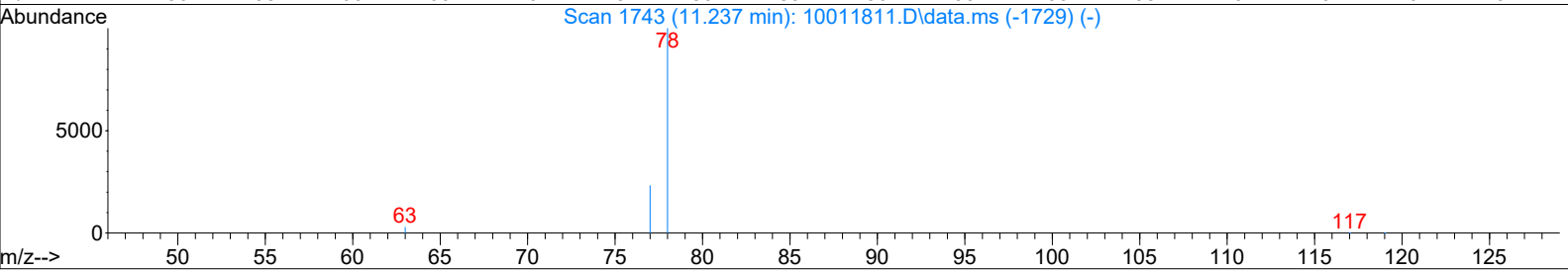
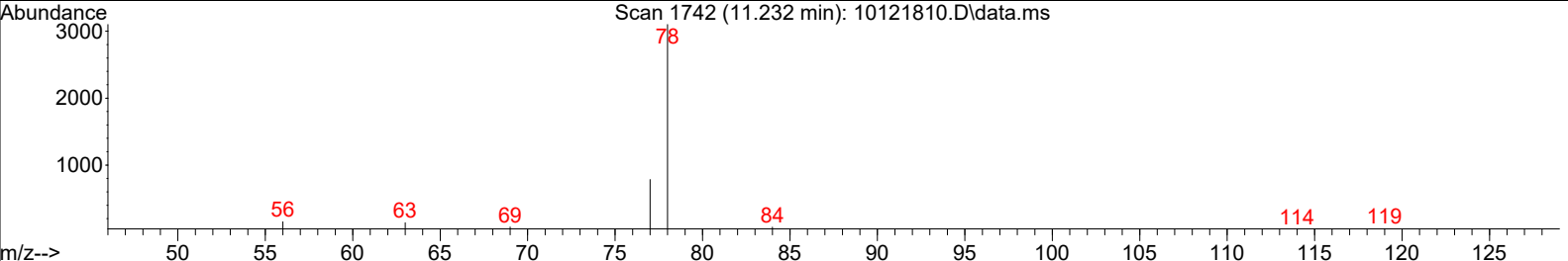
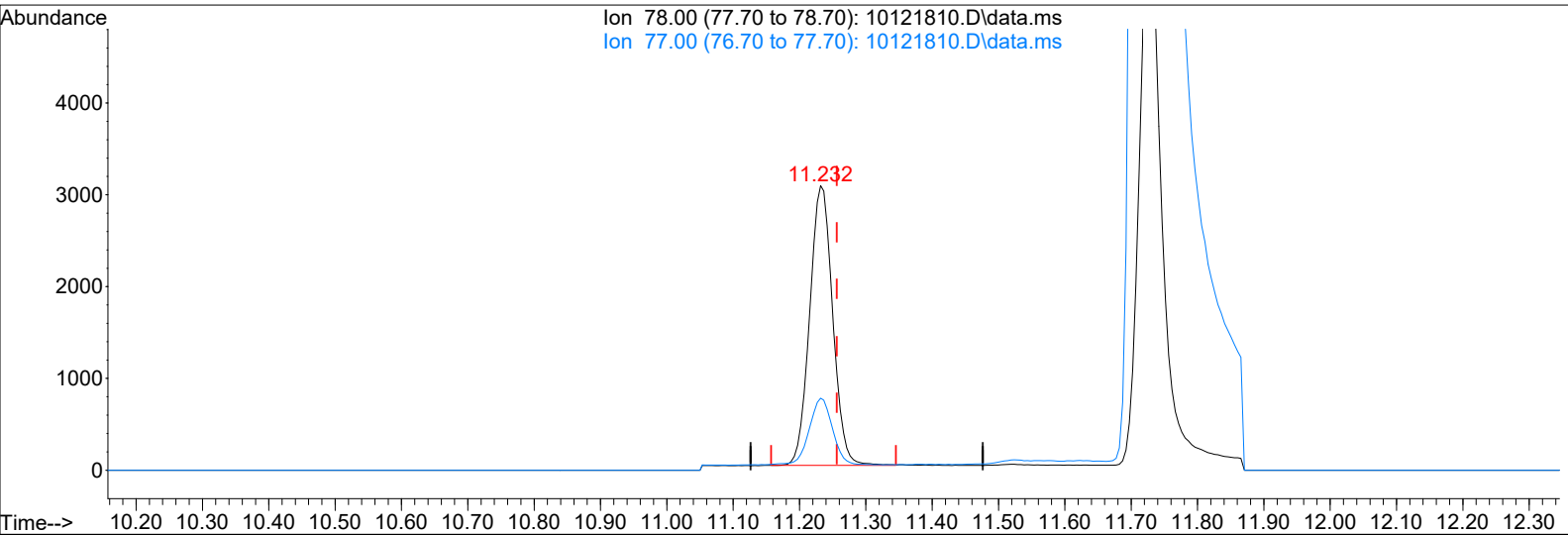
Quant Time: Oct 15 11:35:52 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



Data File : I:\MS19\DATA\2018_10\12\10121810.D
 Acq On : 12 Oct 2018 13:51
 Sample : P1805236-002 (400mL)
 Misc : S31-09241806

Vial: 3
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 08:00:11 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121810.D\data.ms

(23) Benzene (T)

11.232min (-0.025) 75.87pg

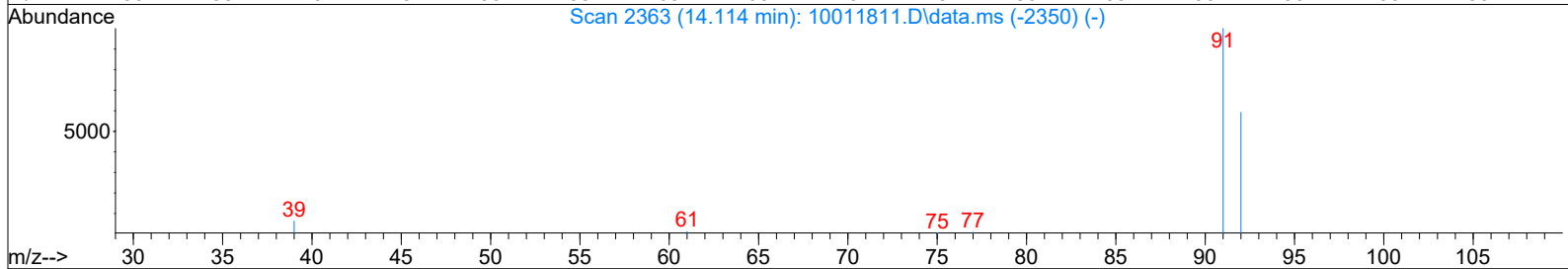
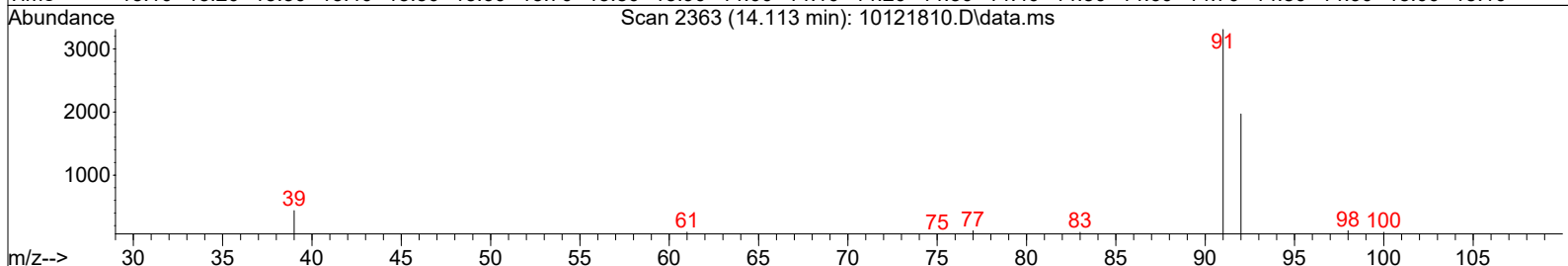
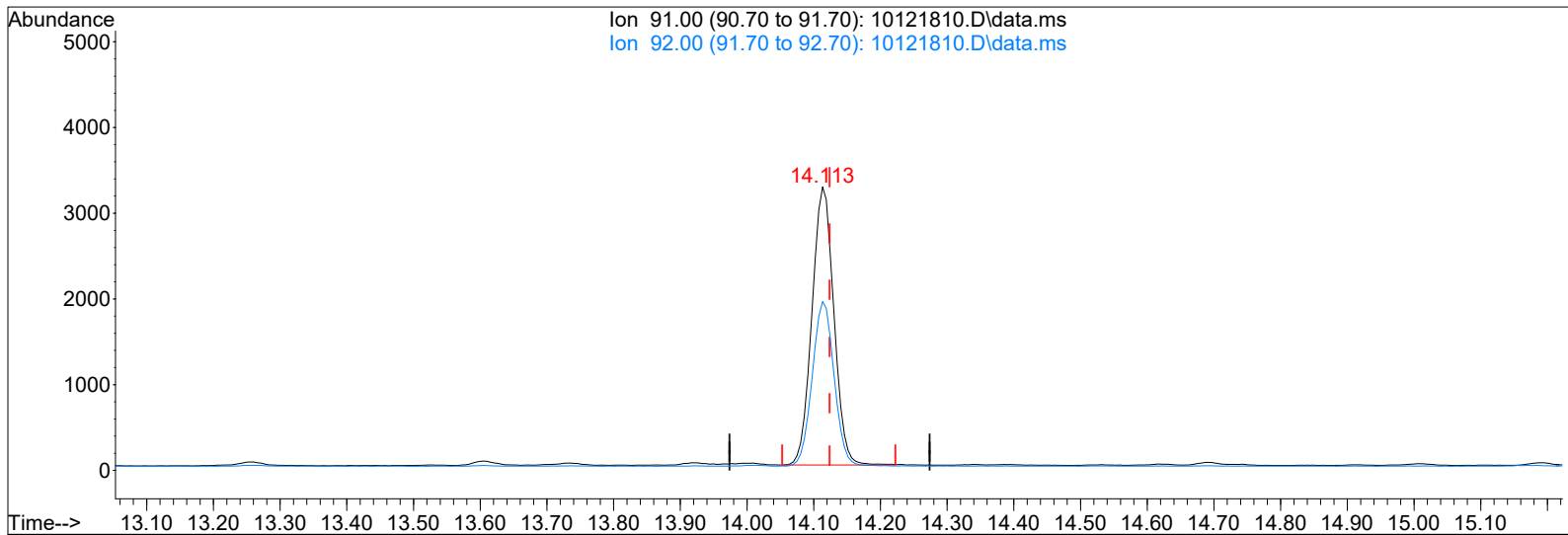
response 7343

| Ion | Exp% | Act% |
|-------|-------|-------|
| 78.00 | 100 | 100 |
| 77.00 | 23.30 | 23.82 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121810.D
 Acq On : 12 Oct 2018 13:51
 Sample : P1805236-002 (400mL)
 Misc : S31-09241806

Vial: 3
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 08:00:11 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121810.D\data.ms

(34) Toluene (T)

14.113min (-0.011) 76.60pg

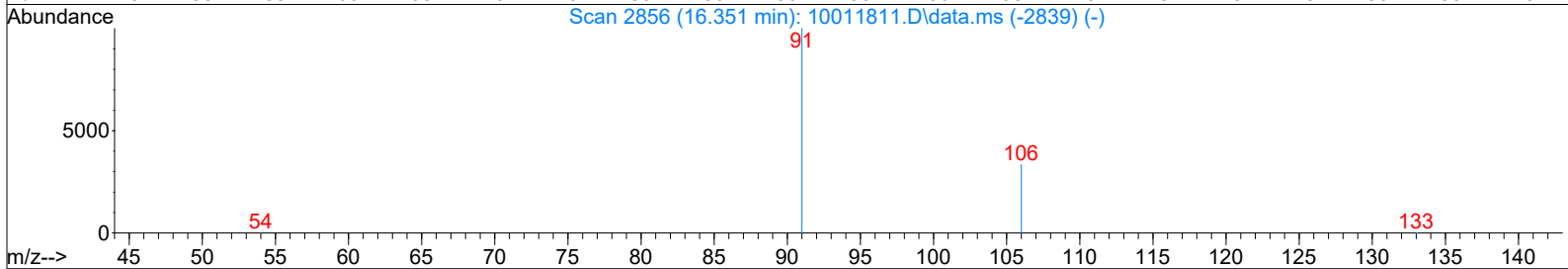
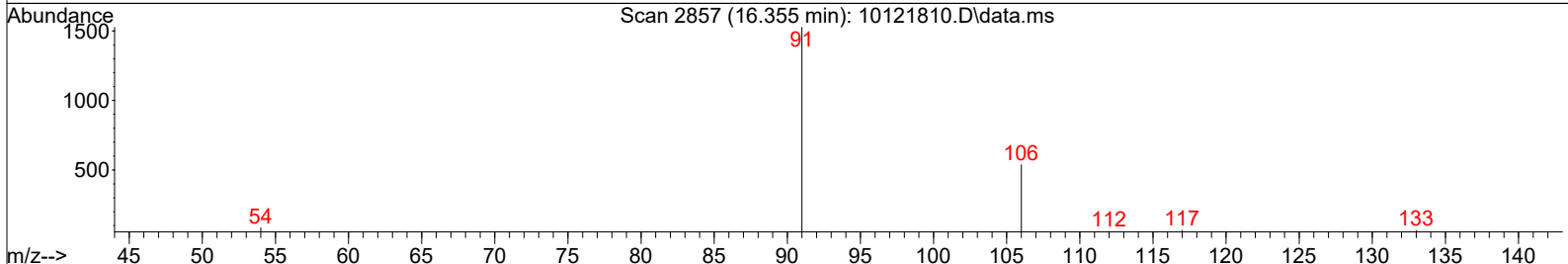
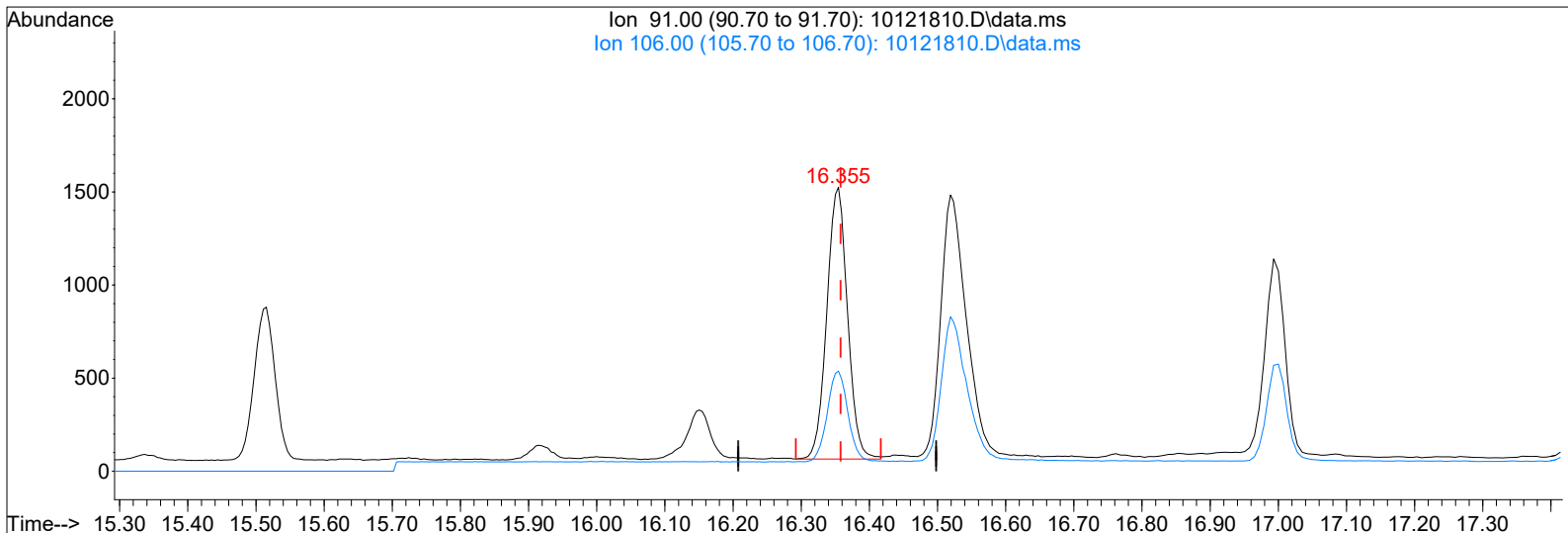
response 7388

| Ion | Exp% | Act% |
|-------|-------|-------|
| 91.00 | 100 | 100 |
| 92.00 | 59.20 | 59.19 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121810.D
 Acq On : 12 Oct 2018 13:51
 Sample : P1805236-002 (400mL)
 Misc : S31-09241806

Vial: 3
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 08:00:11 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121810.D\data.ms

(40) Ethylbenzene (T)

16.355min (-0.003) 28.52pg

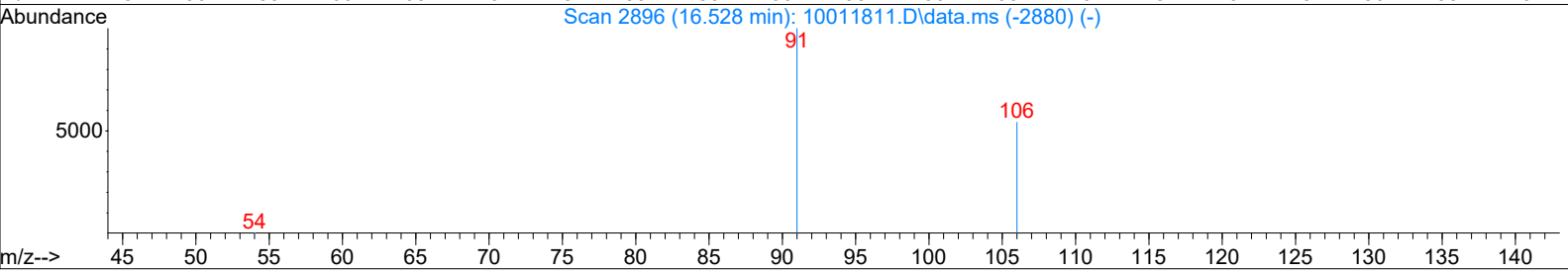
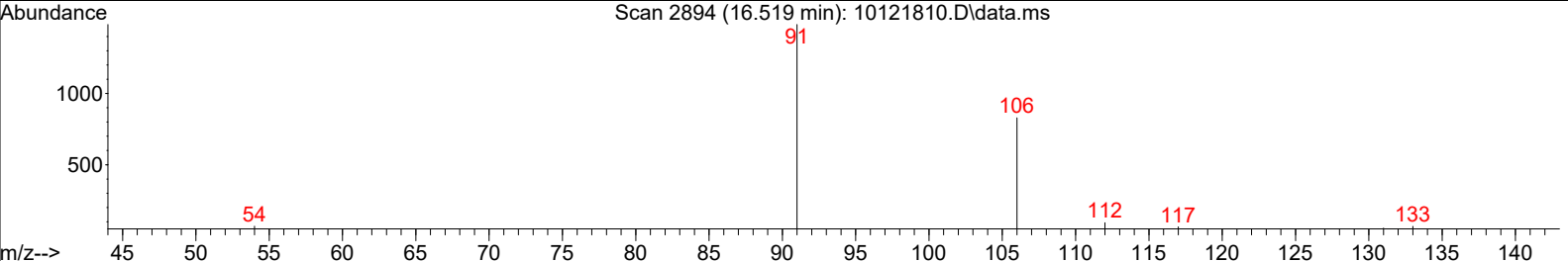
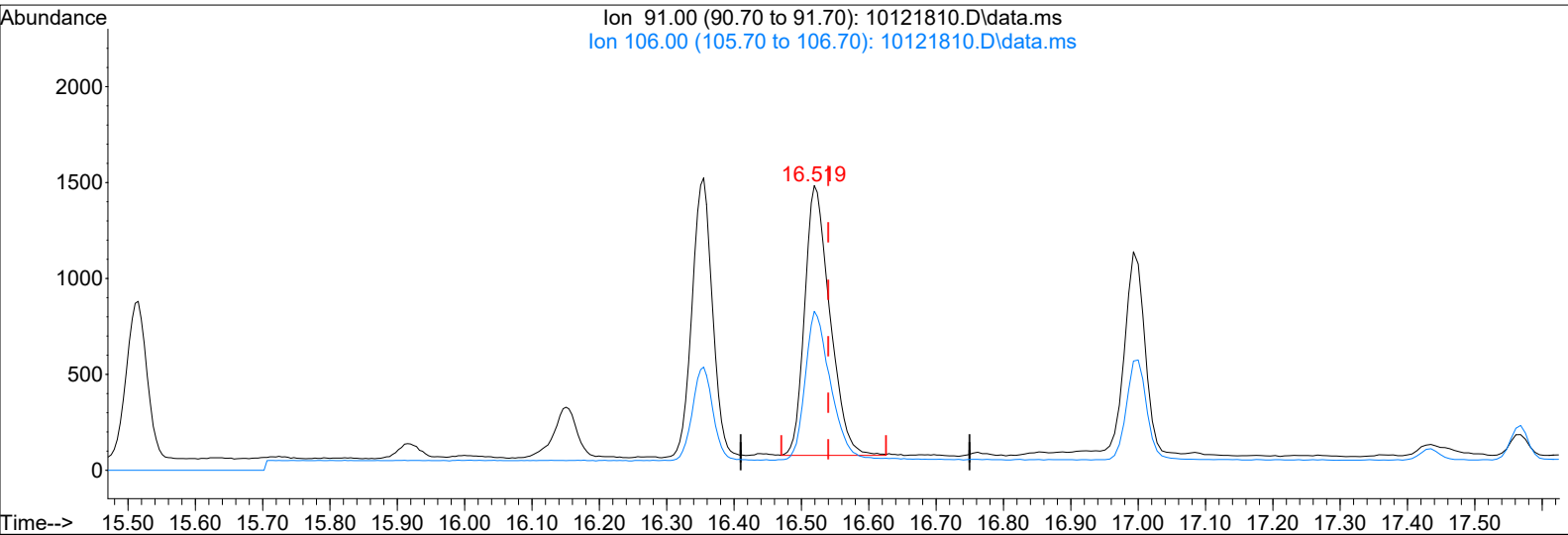
response 3078

| Ion | Exp% | Act% |
|--------|-------|-------|
| 91.00 | 100 | 100 |
| 106.00 | 33.70 | 33.33 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121810.D
 Acq On : 12 Oct 2018 13:51
 Sample : P1805236-002 (400mL)
 Misc : S31-09241806

Vial: 3
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 08:00:11 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121810.D\data.ms

(41) m,p-Xylene (T)

16.519min (-0.021) 44.32pg

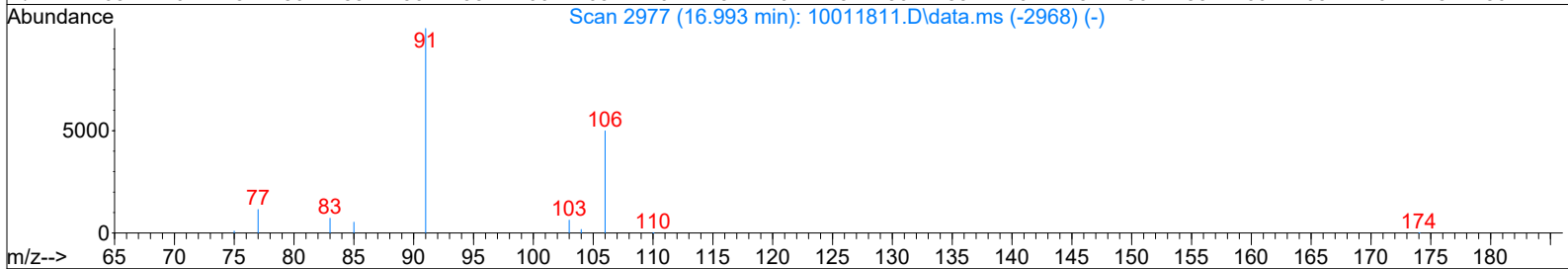
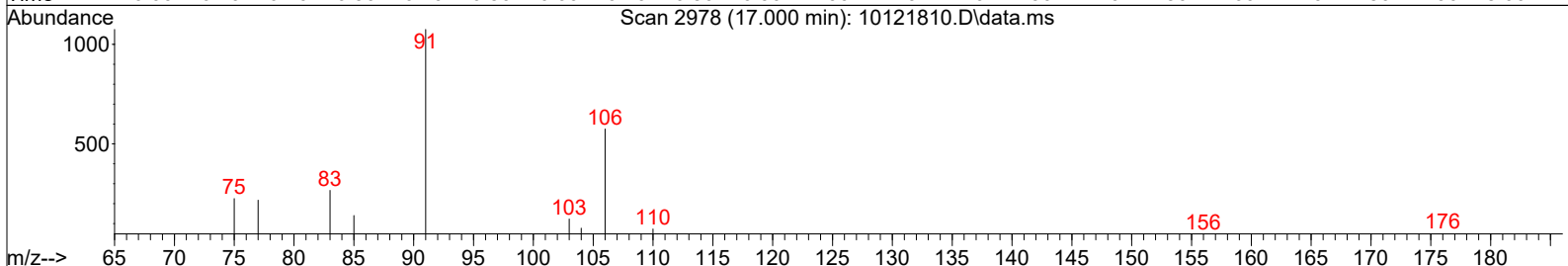
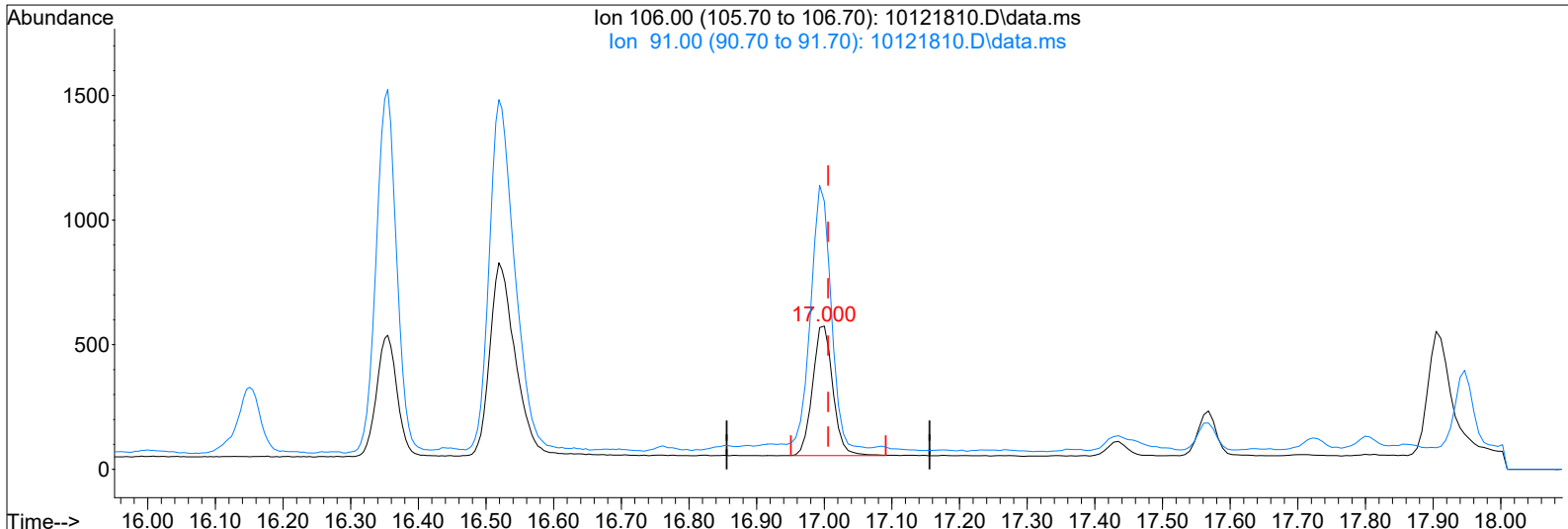
response 3657

| Ion | Exp% | Act% |
|--------|-------|-------|
| 91.00 | 100 | 100 |
| 106.00 | 54.30 | 55.43 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121810.D
 Acq On : 12 Oct 2018 13:51
 Sample : P1805236-002 (400mL)
 Misc : S31-09241806

Vial: 3
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 08:00:11 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121810.D\data.ms

(43) o-Xylene (T)

17.000min (-0.006) 24.69pg

response 1083

| Ion | Exp% | Act% |
|--------|--------|--------|
| 106.00 | 100 | 100 |
| 91.00 | 195.60 | 201.75 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121811.D
 Acq On : 12 Oct 2018 14:22
 Sample : P1805236-003 (400mL)
 Misc : S31-09241806

Vial: 4
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 11:37:00 2018

Quant Method : I:\MS19\METHODS\S19100118.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Oct 02 06:45:50 2018

Response via : Initial Calibration

~~10/15/18~~ 10/15/18

DataAcq Meth:TO15SIM.M

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------------|-------|------|----------|----------|-------|----------|
| 1) Bromochloromethane (IS1) | 9.62 | 130 | 18364 | 1000.000 | pg | -0.03 |
| 25) 1,4-Difluorobenzene (IS2) | 11.58 | 114 | 83356 | 1000.000 | pg | -0.02 |
| 38) Chlorobenzene-d5 (IS3) | 15.92 | 54 | 12234 | 1000.000 | pg | 0.00 |

System Monitoring Compounds

| | | | | | | |
|-------------------------------|----------|-------|----------|----------|----|---------|
| 20) 1,2-Dichloroethane-d4 ... | 10.40 | 65 | 21735 | 988.733 | pg | -0.03 |
| Spiked Amount | 1000.000 | Range | 70 - 130 | Recovery | = | 98.87% |
| 33) Toluene-d8 (SS2) | 14.02 | 98 | 91979 | 1070.012 | pg | -0.01 |
| Spiked Amount | 1000.000 | Range | 70 - 130 | Recovery | = | 107.00% |
| 45) Bromofluorobenzene (SS3) | 17.44 | 174 | 34454 | 996.660 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range | 70 - 130 | Recovery | = | 99.67% |

Target Compounds

| | R.T. | QIon | Response | Conc | Units | Qvalue |
|-------------------------------|-------|------|----------|-----------|-------|--------|
| 2) Dichlorodifluoromethan... | 4.32 | 85 | 27148 | 693.804 | pg | 100 |
| 3) Chloromethane | 4.53 | 52 | 186 | 20.329 | pg | 99 |
| 4) 1,2-Dichloro,1,1,2,2-t... | 4.70 | 85 | 828 | 29.355 | pg | 98 |
| 5) Vinyl Chloride | 0.00 | 62 | 0 | N.D. | | |
| 6) 1,3-Butadiene | 5.01 | 54 | 75 | N.D. | | |
| 7) Bromomethane | 0.00 | 94 | 0 | N.D. | | |
| 8) Chloroethane | 5.56 | 64 | 52 | N.D. | | |
| 9) Acrolein | 6.13 | 56 | 851 | 79.187 | pg | 100 |
| 10) Acetone | 6.27 | 58 | 21743 | 1595.867 | pg | # 84 |
| 11) Trichlorofluoromethane | 6.48 | 101 | 10623 | 347.143 | pg | 100 |
| 12) 1,1-Dichloroethene | 7.20 | 96 | 82 | N.D. | | |
| 13) Methylene Chloride | 7.34 | 84 | 615 | 27.110 | pg | 96 |
| 14) Trichlorotrifluoroethane | 7.67 | 151 | 2733 | 127.429 | pg | 100 |
| 15) trans-1,2-Dichloroethene | 0.00 | 96 | 0 | N.D. | | |
| 16) 1,1-Dichloroethane | 0.00 | 63 | 0 | N.D. | | |
| 17) Methyl tert-Butyl Ether | 8.59 | 73 | 198 | N.D. | | |
| 18) cis-1,2-Dichloroethene | 0.00 | 96 | 0 | N.D. | | |
| 19) Chloroform | 9.76 | 83 | 11412 | 300.818 | pg | 99 |
| 21) 1,2-Dichloroethane | 10.54 | 62 | 126 | N.D. | | |
| 22) 1,1,1-Trichloroethane | 10.78 | 97 | 6246 | 194.111 | pg | 100 |
| 23) Benzene | 11.23 | 78 | 5218 | 54.750 | pg | 99 |
| 24) Carbon Tetrachloride | 11.39 | 117 | 264 | 8.989 | pg | 95 |
| 26) 1,2-Dichloropropane | 12.04 | 63 | 114 | N.D. | | |
| 27) Bromodichloromethane | 0.00 | 83 | 0 | N.D. | d | |
| 28) Trichloroethene | 12.29 | 130 | 297 | 11.403 | pg | 95 |
| 29) 1,4-Dioxane | 12.27 | 88 | 129 | N.D. | | |
| 30) cis-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 31) trans-1,3-Dichloropropene | 13.61 | 75 | 217 | N.D. | | |
| 32) 1,1,2-Trichloroethane | 0.00 | 83 | 0 | N.D. | | |
| 34) Toluene | 14.11 | 91 | 49064 | 515.508 | pg | 100 |
| 35) Dibromochloromethane | 14.52 | 129 | 58 | N.D. | | |
| 36) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | | |
| 37) Tetrachloroethene | 15.27 | 166 | 1477247 | 52744.490 | pg | 99 |
| 39) Chlorobenzene | 0.00 | 112 | 0 | N.D. | d | |
| 40) Ethylbenzene | 16.36 | 91 | 10293 | 91.259 | pg | 99 |
| 41) m,p-Xylene | 16.52 | 91 | 17372 | 201.442 | pg | 100 |
| 42) Styrene | 16.89 | 104 | 3102 | 45.286 | pg | 97 |
| 43) o-Xylene | 17.00 | 106 | 6512 | 142.033 | pg | 100 |
| 44) 1,1,2,2-Tetrachloroethane | 17.00 | 83 | 166 | N.D. | | |
| 46) 1,3,5-Trimethylbenzene | 18.27 | 105 | 1516 | 15.721 | pg | 96 |
| 47) 1,2,4-Trimethylbenzene | 18.66 | 105 | 5095 | 52.964 | pg | 88 |
| 48) 1,3-Dichlorobenzene | 18.81 | 146 | 1008 | 16.039 | pg | 99 |
| 49) 1,4-Dichlorobenzene | 18.87 | 146 | 4151 | 65.772 | pg | 100 |
| 50) 1,2-Dichlorobenzene | 0.00 | 146 | 0 | N.D. | | |
| 51) 1,2-Dibromo-3-chloropr... | 0.00 | 157 | 0 | N.D. | | |
| 52) 1,2,4-Trichlorobenzene | 0.00 | 182 | 0 | N.D. | | |
| 53) Naphthalene | 20.94 | 128 | 48276 | 429.047 | pg | 99 |

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Data File : I:\MS19\DATA\2018_10\12\10121811.D
 Acq On : 12 Oct 2018 14:22
 Sample : P1805236-003 (400mL)
 Misc : S31-09241806

Vial: 4
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 11:37:00 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

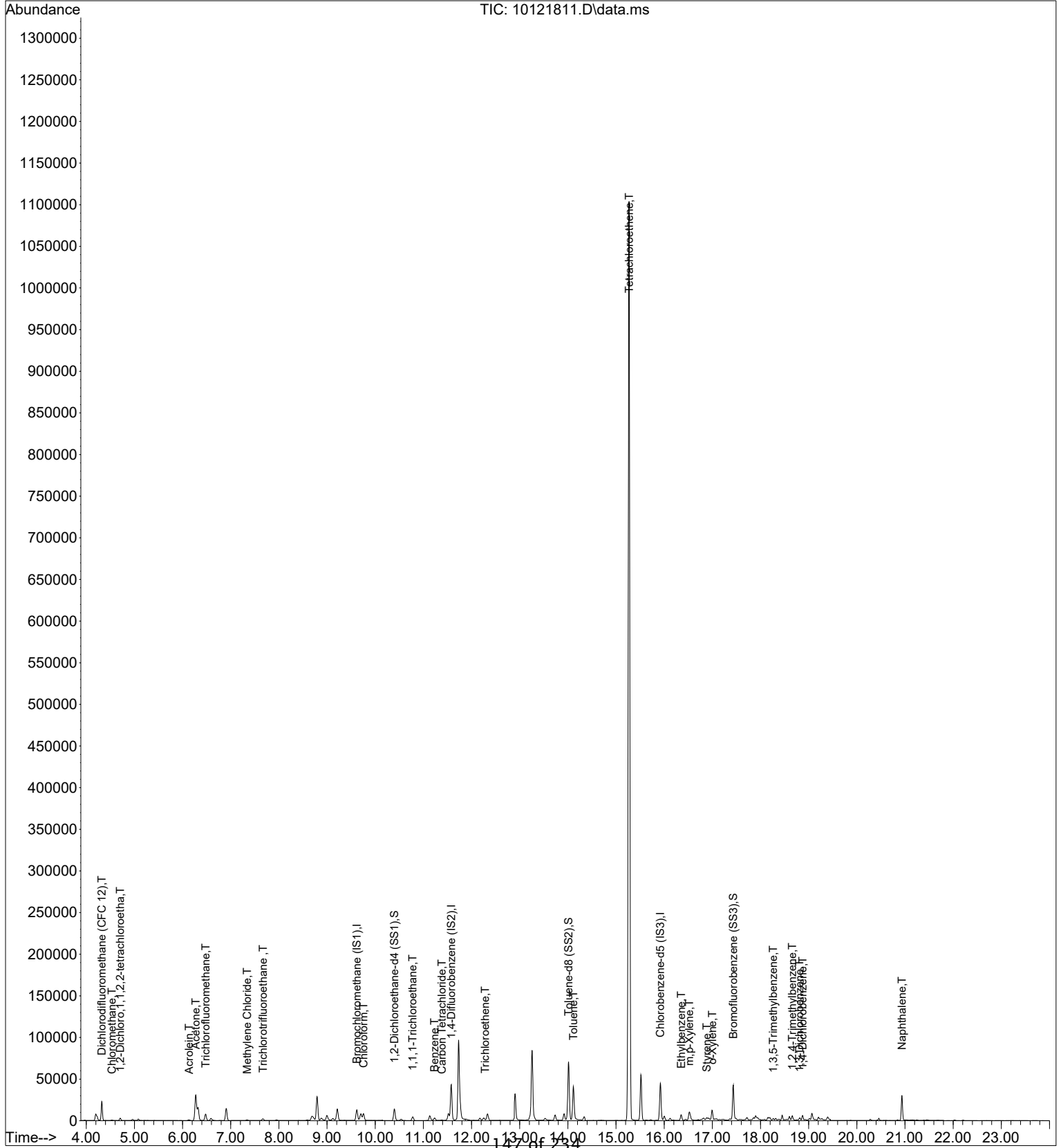
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------|------|------|----------|------|-------|----------|
| 54) Hexachlorobutadiene | 0.00 | 225 | 0 | N.D. | | |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2018_10\12\10121811.D
Acq On : 12 Oct 2018 14:22
Sample : P1805236-003 (400mL)
Misc : S31-09241806

Vial: 4
Operator: WA
Inst : MS19

Quant Time: Oct 15 11:37:00 2018
Quant Method : I:\MS19\METHODS\S19100118.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Oct 02 06:45:50 2018
Response via : Initial Calibration
DataAcq Meth:TO15SIM.M

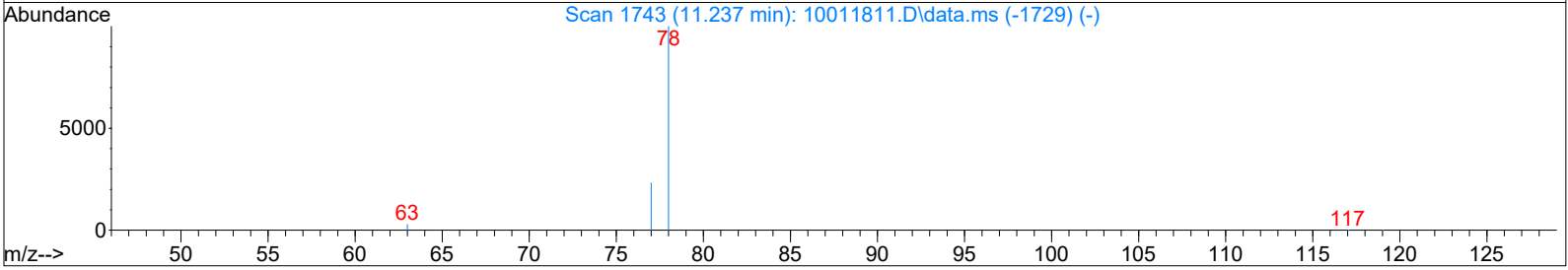
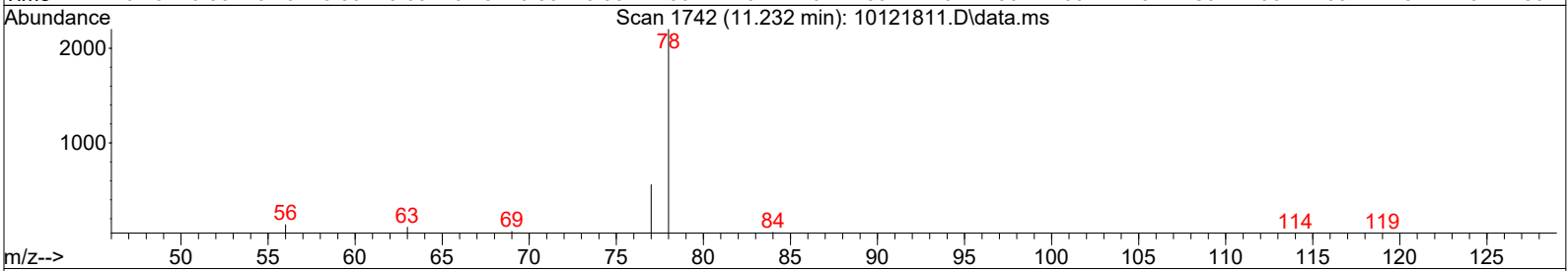
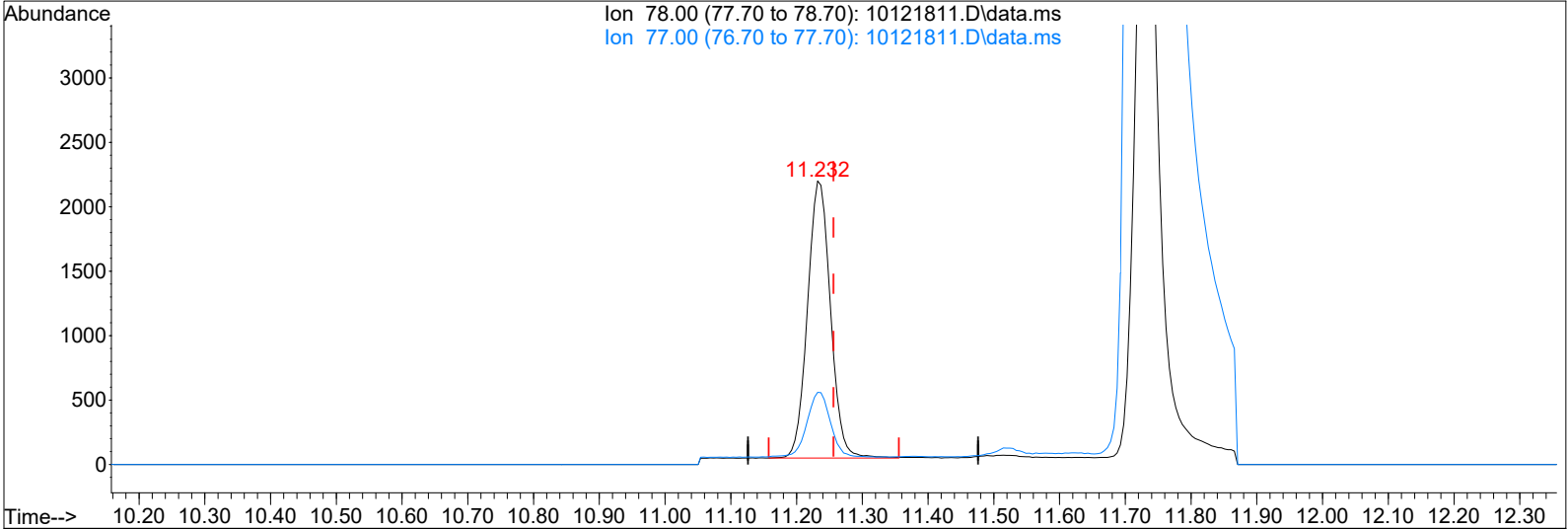


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Data File : I:\MS19\DATA\2018_10\12\10121811.D
 Acq On : 12 Oct 2018 14:22
 Sample : P1805236-003 (400mL)
 Misc : S31-09241806

Vial: 4
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 08:00:12 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121811.D\data.ms

(23) Benzene (T)

11.232min (-0.024) 54.75pg

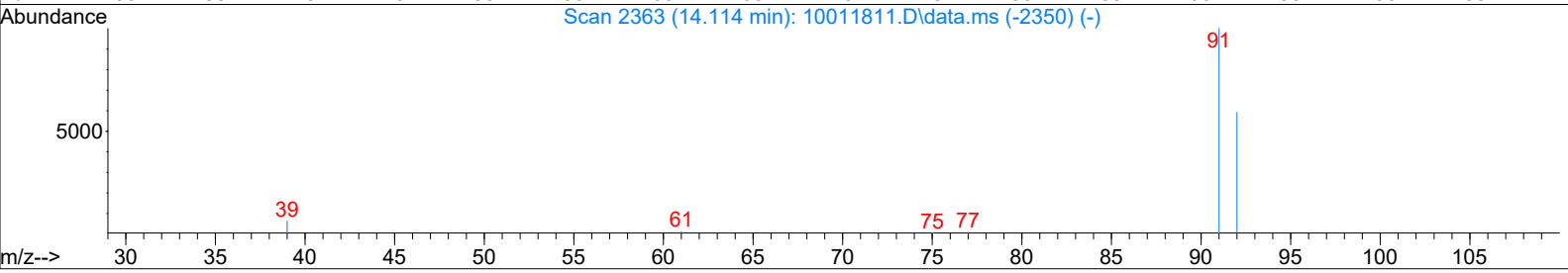
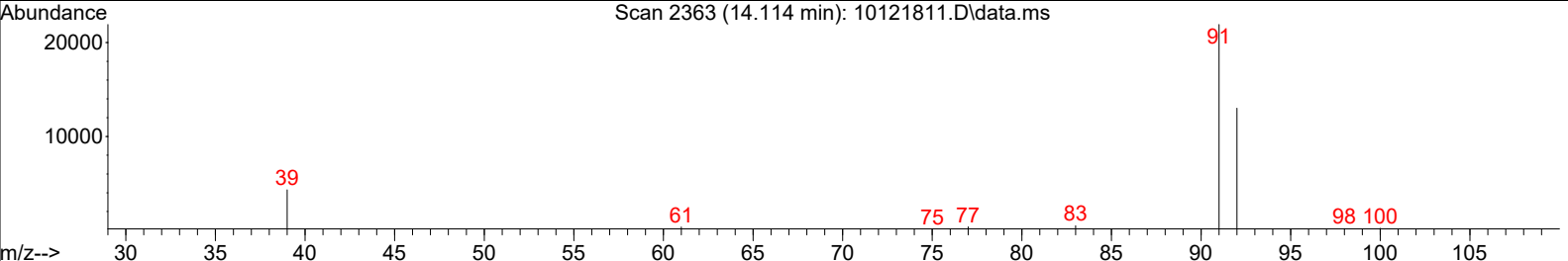
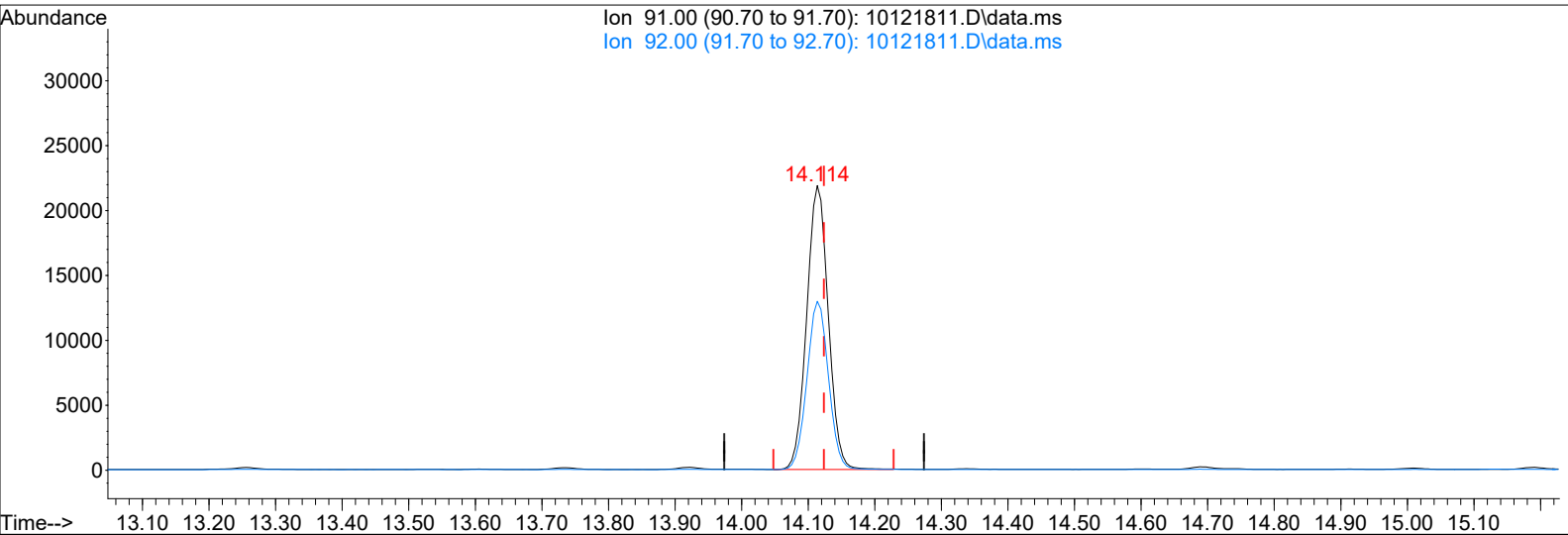
response 5218

| Ion | Exp% | Act% |
|-------|-------|-------|
| 78.00 | 100 | 100 |
| 77.00 | 23.30 | 23.94 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121811.D
 Acq On : 12 Oct 2018 14:22
 Sample : P1805236-003 (400mL)
 Misc : S31-09241806

Vial: 4
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 08:00:12 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121811.D\data.ms

(34) Toluene (T)

14.114min (-0.010) 515.51pg

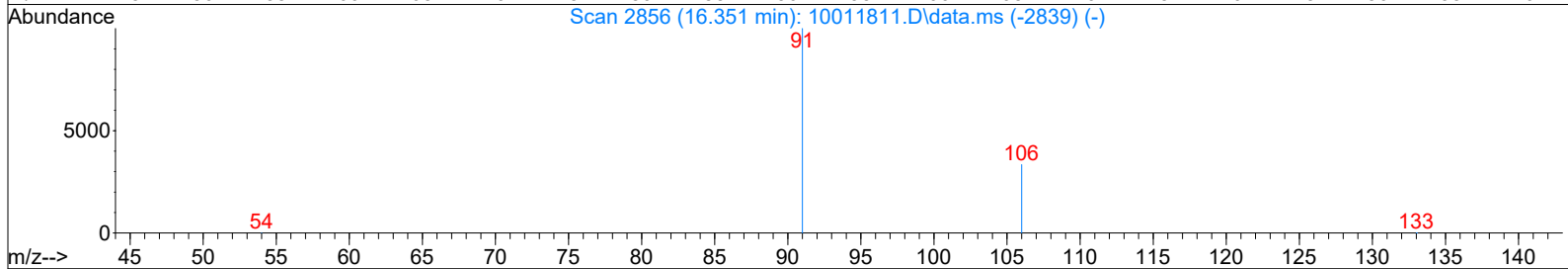
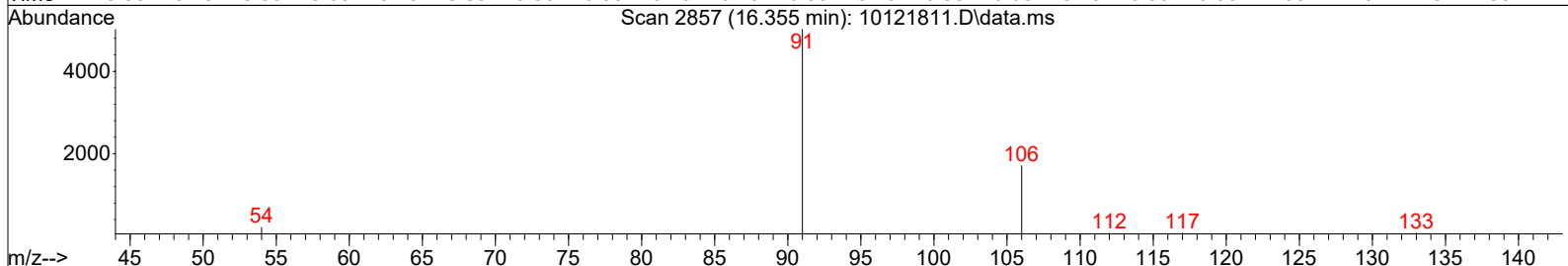
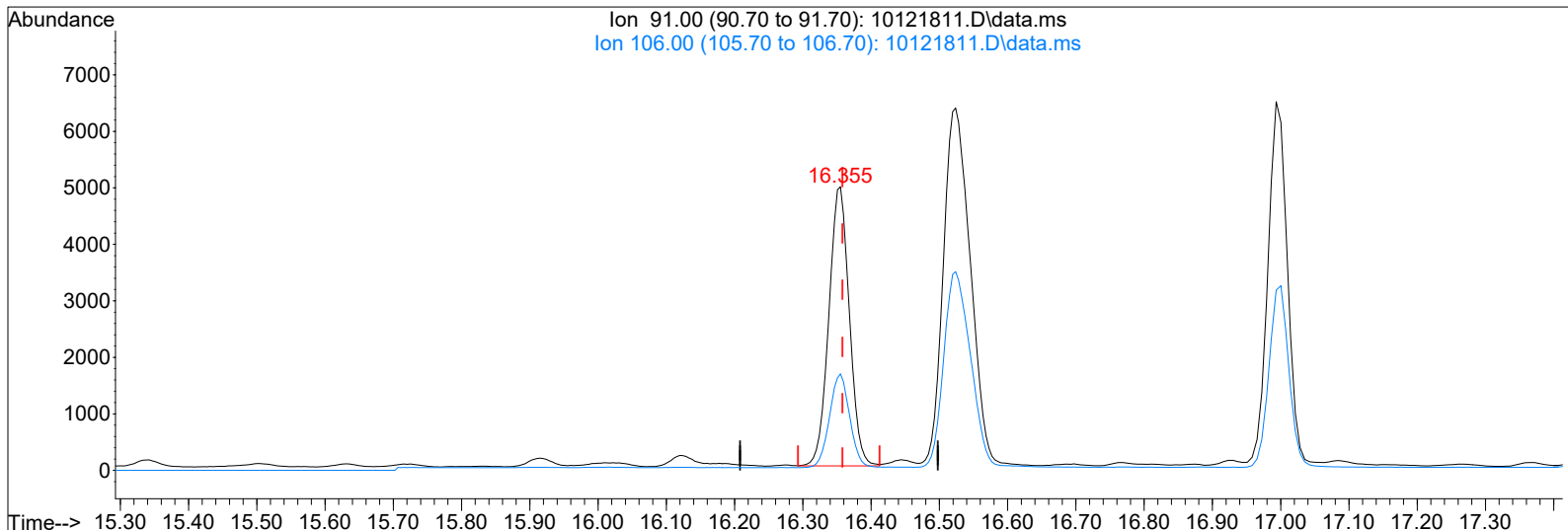
response 49064

| Ion | Exp% | Act% |
|-------|-------|-------|
| 91.00 | 100 | 100 |
| 92.00 | 59.20 | 59.23 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121811.D
 Acq On : 12 Oct 2018 14:22
 Sample : P1805236-003 (400mL)
 Misc : S31-09241806

Vial: 4
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 08:00:12 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121811.D\data.ms

(40) Ethylbenzene (T)

16.355min (-0.003) 91.26pg

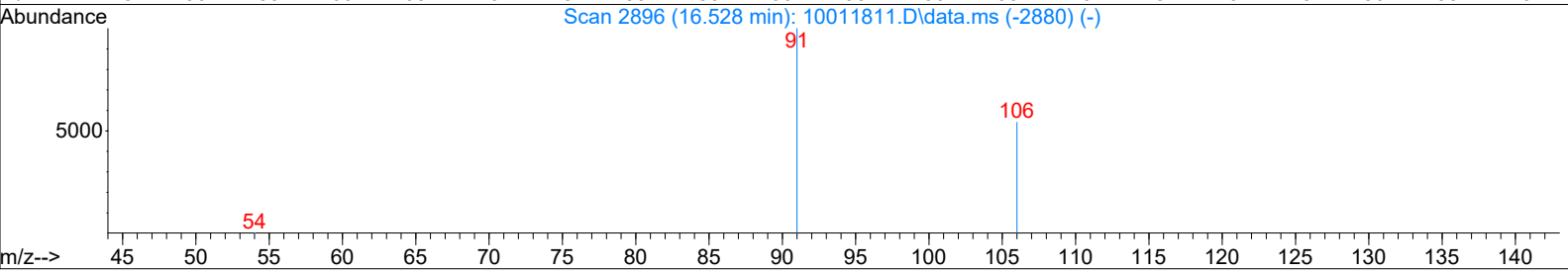
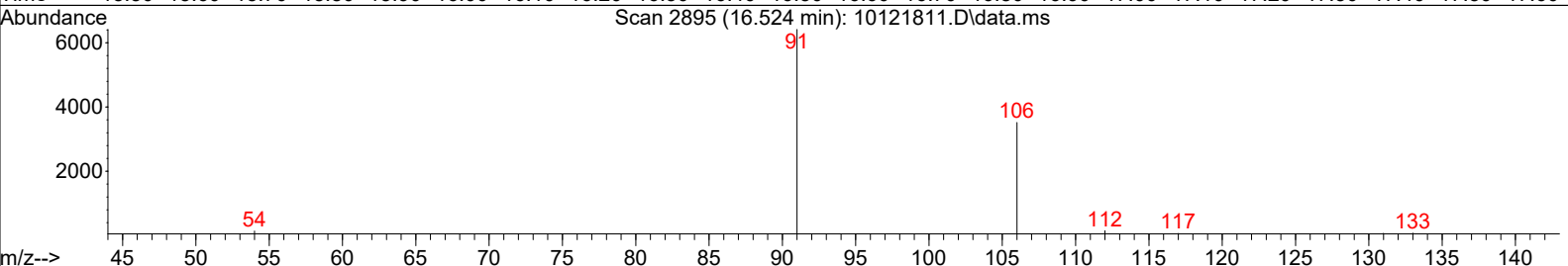
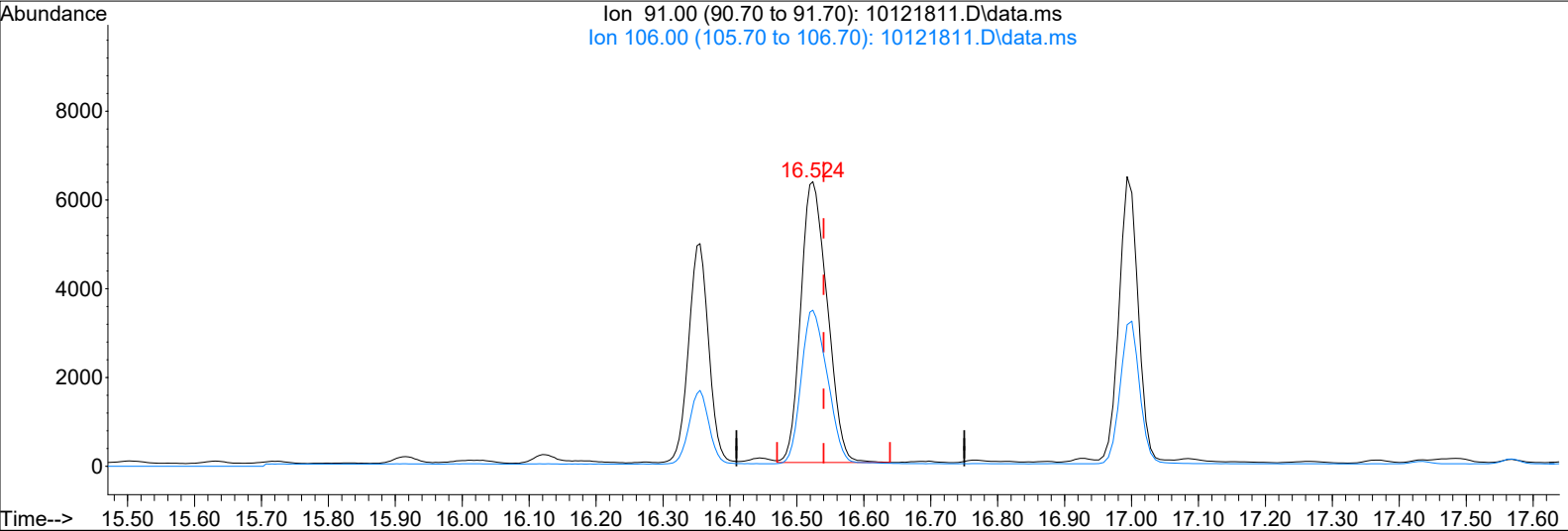
response 10293

| Ion | Exp% | Act% |
|--------|-------|-------|
| 91.00 | 100 | 100 |
| 106.00 | 33.70 | 33.01 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121811.D
 Acq On : 12 Oct 2018 14:22
 Sample : P1805236-003 (400mL)
 Misc : S31-09241806

Vial: 4
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 08:00:12 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121811.D\data.ms

(41) m,p-Xylene (T)

16.524min (-0.016) 201.44pg

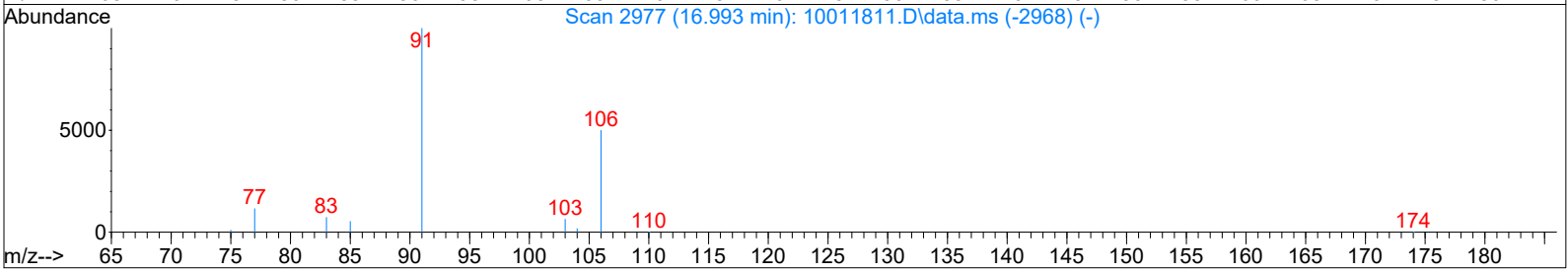
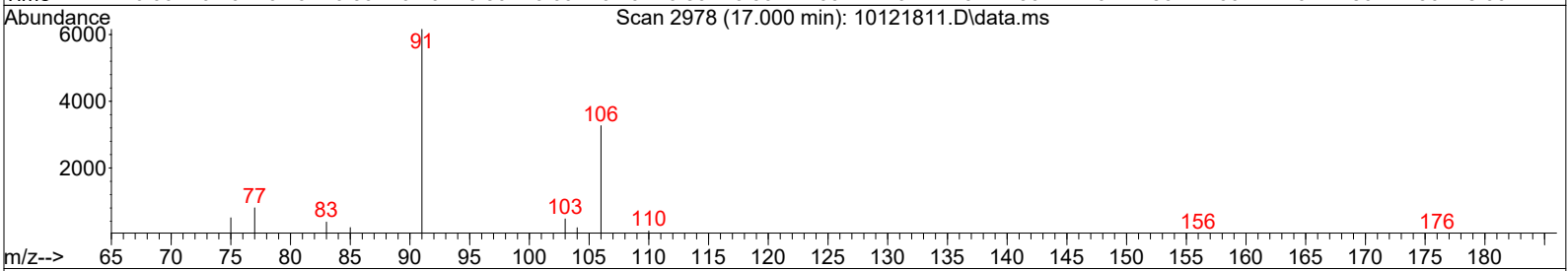
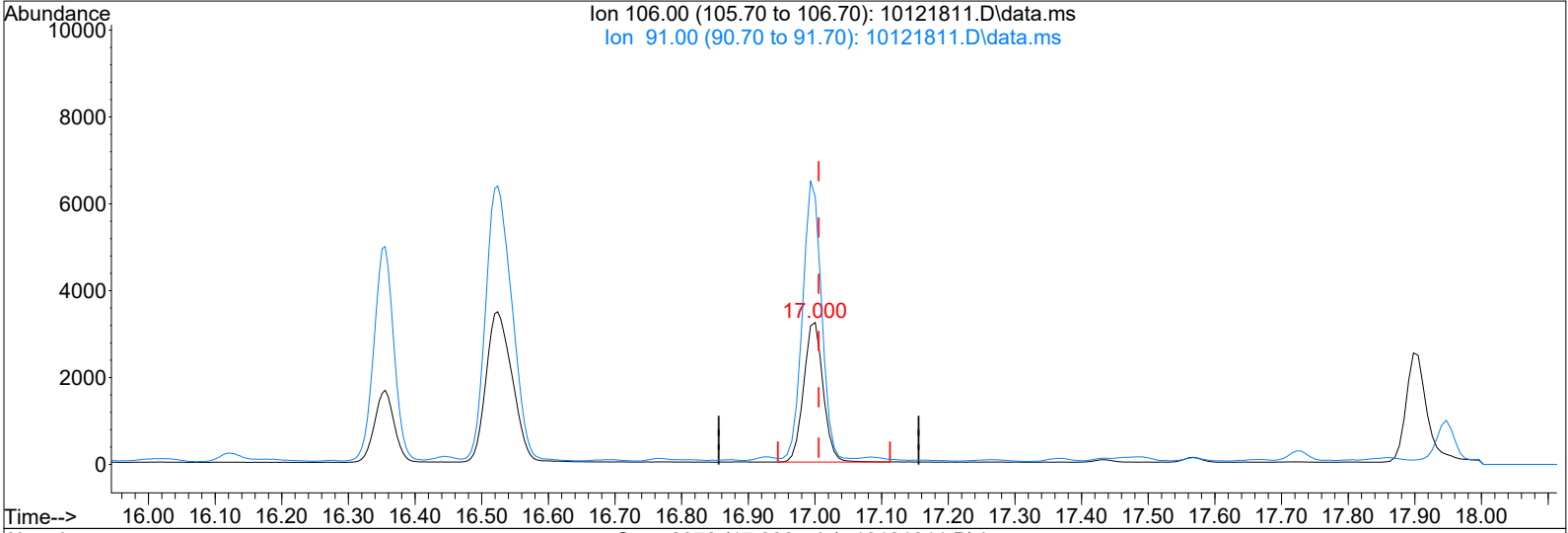
response 17372

| Ion | Exp% | Act% |
|--------|-------|-------|
| 91.00 | 100 | 100 |
| 106.00 | 54.30 | 54.33 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121811.D
 Acq On : 12 Oct 2018 14:22
 Sample : P1805236-003 (400mL)
 Misc : S31-09241806

Vial: 4
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 08:00:12 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121811.D\data.ms

(43) o-Xylene (T)

17.000min (-0.005) 142.03pg

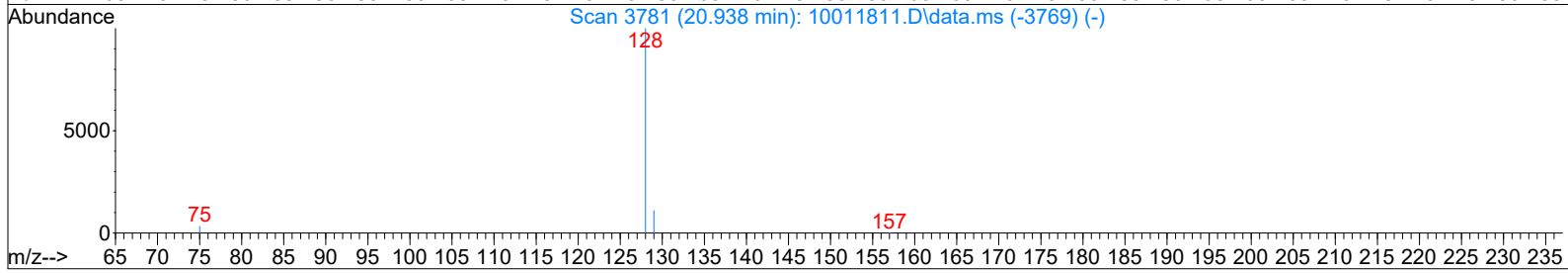
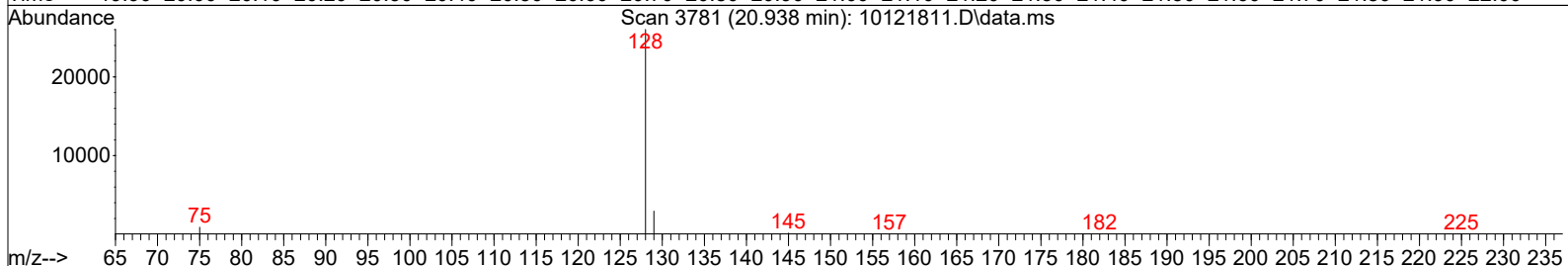
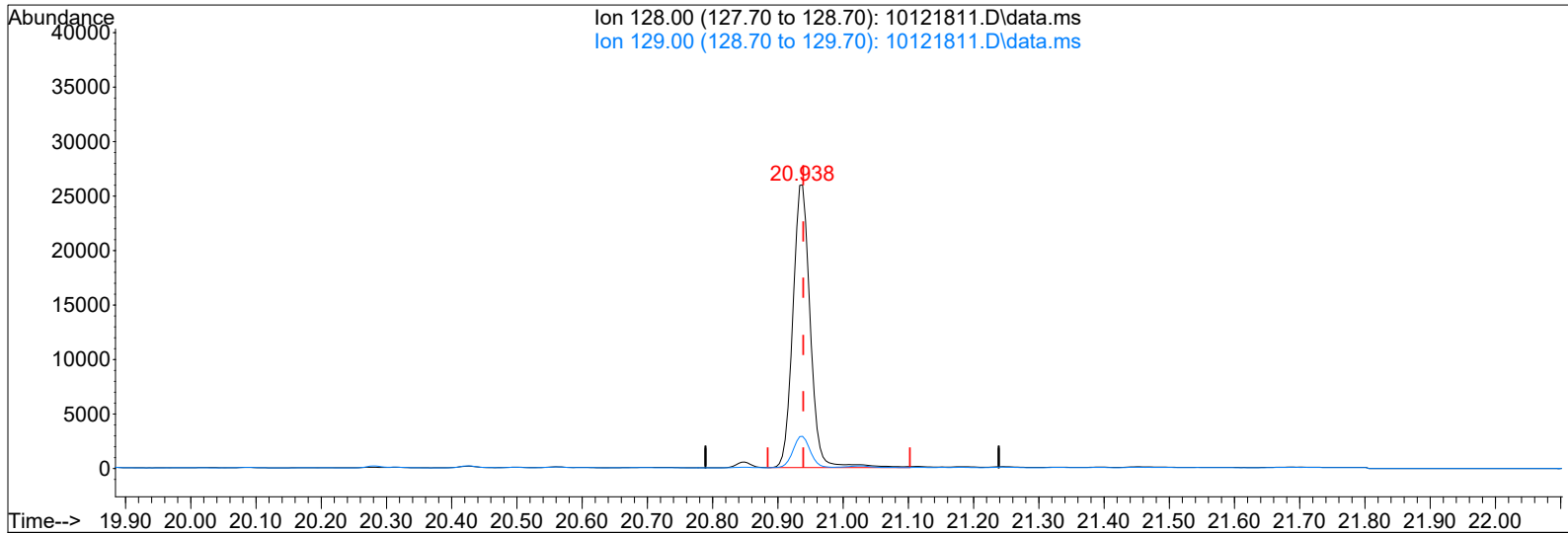
response 6512

| Ion | Exp% | Act% |
|--------|--------|--------|
| 106.00 | 100 | 100 |
| 91.00 | 195.60 | 196.25 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121811.D
 Acq On : 12 Oct 2018 14:22
 Sample : P1805236-003 (400mL)
 Misc : S31-09241806

Vial: 4
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 08:00:12 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121811.D\data.ms

(53) Naphthalene (T)

20.938min (-0.001) 429.05pg

response 48276

| Ion | Exp% | Act% |
|--------|-------|-------|
| 128.00 | 100 | 100 |
| 129.00 | 10.80 | 11.03 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121812.D
 Acq On : 12 Oct 2018 14:53
 Sample : P1805236-004 (400mL)
 Misc : S31-09241806

Vial: 5
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 11:38:40 2018

Quant Method : I:\MS19\METHODS\S19100118.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Oct 02 06:45:50 2018

~~DA~~ 10/15/18

Response via : Initial Calibration

DataAcq Meth:TO15SIM.M

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------------|-------|------|----------|----------|-------|----------|
| 1) Bromochloromethane (IS1) | 9.62 | 130 | 18966 | 1000.000 | pg | -0.03 |
| 25) 1,4-Difluorobenzene (IS2) | 11.58 | 114 | 87158 | 1000.000 | pg | -0.01 |
| 38) Chlorobenzene-d5 (IS3) | 15.92 | 54 | 12021 | 1000.000 | pg | 0.00 |

System Monitoring Compounds

| | | | | | | |
|-------------------------------|----------|----------------|----------|----------|---------|-------|
| 20) 1,2-Dichloroethane-d4 ... | 10.41 | 65 | 22289 | 981.751 | pg | -0.02 |
| Spiked Amount | 1000.000 | Range 70 - 130 | Recovery | = | 98.17% | |
| 33) Toluene-d8 (SS2) | 14.01 | 98 | 93418 | 1039.346 | pg | -0.01 |
| Spiked Amount | 1000.000 | Range 70 - 130 | Recovery | = | 103.94% | |
| 45) Bromofluorobenzene (SS3) | 17.43 | 174 | 35877 | 1056.213 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range 70 - 130 | Recovery | = | 105.62% | |

Target Compounds

| | R.T. | QIon | Response | Conc | Units | Qvalue |
|-------------------------------|-------|------|----------|-----------|-------|--------|
| 2) Dichlorodifluoromethan... | 4.32 | 85 | 27704 | 685.541 | pg | 100 |
| 3) Chloromethane | 4.53 | 52 | 810 | 85.718 | pg | 95 |
| 4) 1,2-Dichloro,1,1,2,2-t... | 4.70 | 85 | 877 | 30.106 | pg | 99 |
| 5) Vinyl Chloride | 0.00 | 62 | 0 | N.D. | | |
| 6) 1,3-Butadiene | 5.01 | 54 | 533 | 26.868 | pg | 85 |
| 7) Bromomethane | 5.34 | 94 | 231 | 12.530 | pg | 92 |
| 8) Chloroethane | 5.55 | 64 | 356 | 25.928 | pg | 99 |
| 9) Acrolein | 6.12 | 56 | 9065 | 816.738 | pg | 100 |
| 10) Acetone | 6.26 | 58 | 123816 | 8799.248 | pg | # 84 |
| 11) Trichlorofluoromethane | 6.48 | 101 | 17296 | 547.266 | pg | 100 |
| 12) 1,1-Dichloroethene | 7.20 | 96 | 53 | N.D. | | |
| 13) Methylene Chloride | 7.34 | 84 | 333 | 14.213 | pg | 97 |
| 14) Trichlorotrifluoroethane | 7.67 | 151 | 2921 | 131.872 | pg | 100 |
| 15) trans-1,2-Dichloroethene | 0.00 | 96 | 0 | N.D. | | |
| 16) 1,1-Dichloroethane | 8.58 | 63 | 156 | N.D. | | |
| 17) Methyl tert-Butyl Ether | 0.00 | 73 | 0 | N.D. | d | |
| 18) cis-1,2-Dichloroethene | 0.00 | 96 | 0 | N.D. | | |
| 19) Chloroform | 9.77 | 83 | 65716 | 1677.276 | pg | 100 |
| 21) 1,2-Dichloroethane | 10.53 | 62 | 76 | N.D. | | |
| 22) 1,1,1-Trichloroethane | 10.78 | 97 | 959 | 28.857 | pg | 99 |
| 23) Benzene | 11.24 | 78 | 17054 | 173.260 | pg | 98 |
| 24) Carbon Tetrachloride | 11.39 | 117 | 540 | 17.802 | pg | 100 |
| 26) 1,2-Dichloropropane | 12.05 | 63 | 12520 | 576.730 | pg | 99 |
| 27) Bromodichloromethane | 0.00 | 83 | 0 | N.D. | d | |
| 28) Trichloroethene | 12.28 | 130 | 293 | 10.759 | pg | 96 |
| 29) 1,4-Dioxane | 12.25 | 88 | 9535 | 511.760 | pg | 99 |
| 30) cis-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 31) trans-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | d | |
| 32) 1,1,2-Trichloroethane | 0.00 | 83 | 0 | N.D. | d | |
| 34) Toluene | 14.11 | 91 | 23634 | 237.487 | pg | 100 |
| 35) Dibromochloromethane | 14.53 | 129 | 132 | N.D. | | |
| 36) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | | |
| 37) Tetrachloroethene | 15.27 | 166 | 395383 | 13501.176 | pg | 100 |
| 39) Chlorobenzene | 15.97 | 112 | 6800 | 93.435 | pg | 90 |
| 40) Ethylbenzene | 16.35 | 91 | 8679 | 78.313 | pg | 100 |
| 41) m,p-Xylene | 16.52 | 91 | 17586 | 207.537 | pg | 99 |
| 42) Styrene | 16.89 | 104 | 1320 | 19.612 | pg | # 1 |
| 43) o-Xylene | 17.00 | 106 | 6884 | 152.807 | pg | 96 |
| 44) 1,1,2,2-Tetrachloroethane | 16.99 | 83 | 262 | N.D. | | |
| 46) 1,3,5-Trimethylbenzene | 18.27 | 105 | 6193 | 65.361 | pg | 100 |
| 47) 1,2,4-Trimethylbenzene | 18.66 | 105 | 18128 | 191.786 | pg | 93 |
| 48) 1,3-Dichlorobenzene | 18.81 | 146 | 924 | 14.963 | pg | 100 |
| 49) 1,4-Dichlorobenzene | 18.87 | 146 | 2159 | 34.815 | pg | 97 |
| 50) 1,2-Dichlorobenzene | 19.20 | 146 | 1558 | 26.291 | pg | 98 |
| 51) 1,2-Dibromo-3-chloropr... | 19.61 | 157 | 12334 | 603.620 | pg | 97 |
| 52) 1,2,4-Trichlorobenzene | 20.82 | 182 | 135 | N.D. | | |
| 53) Naphthalene | 20.94 | 128 | 5154 | 46.617 | pg | 82 |

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Data File : I:\MS19\DATA\2018_10\12\10121812.D
 Acq On : 12 Oct 2018 14:53
 Sample : P1805236-004 (400mL)
 Misc : S31-09241806

Vial: 5
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 11:38:40 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

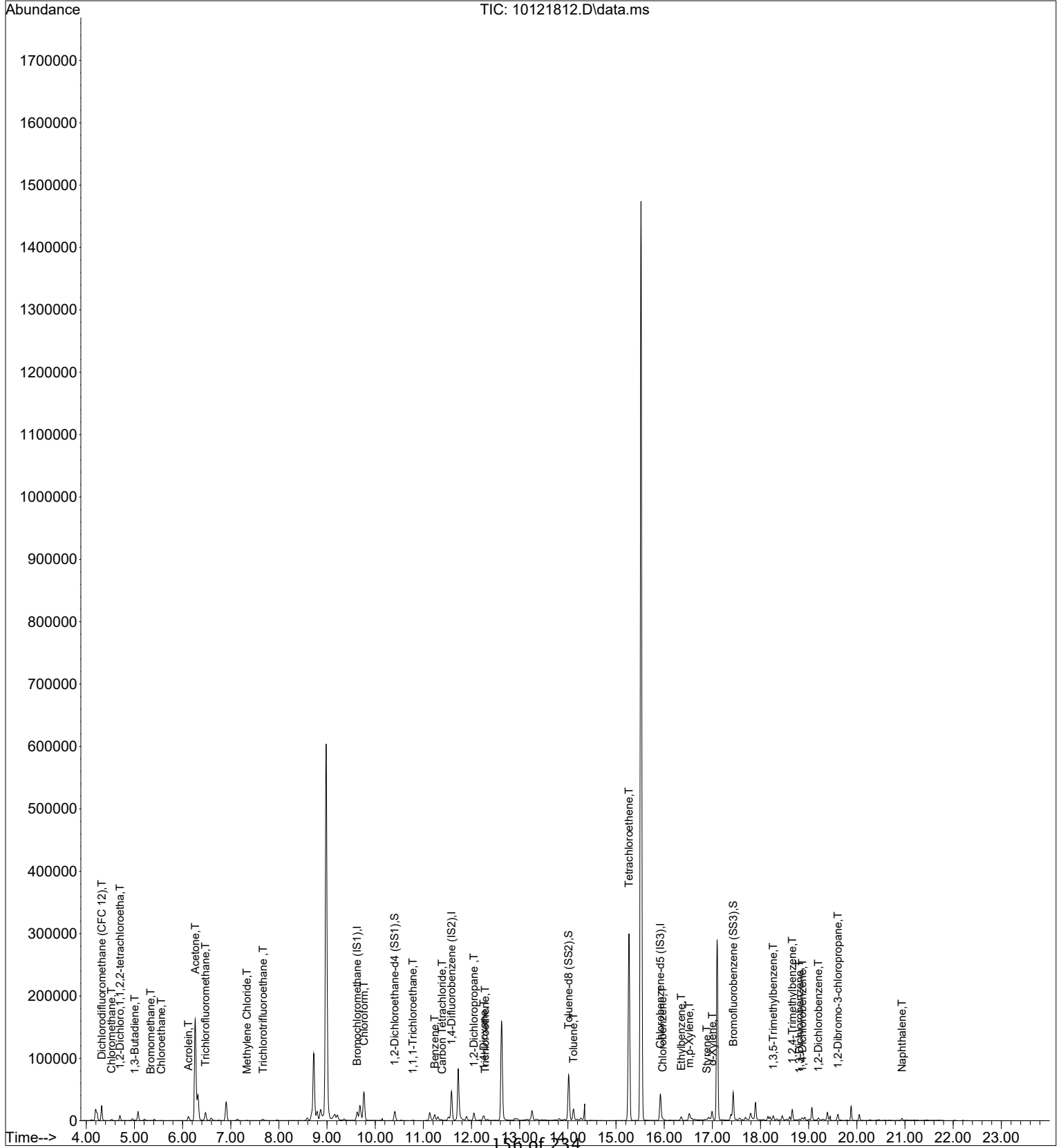
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------|------|------|----------|------|-------|----------|
| 54) Hexachlorobutadiene | 0.00 | 225 | 0 | N.D. | | |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2018_10\12\10121812.D
 Acq On : 12 Oct 2018 14:53
 Sample : P1805236-004 (400mL)
 Misc : S31-09241806

Vial: 5
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 11:38:40 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

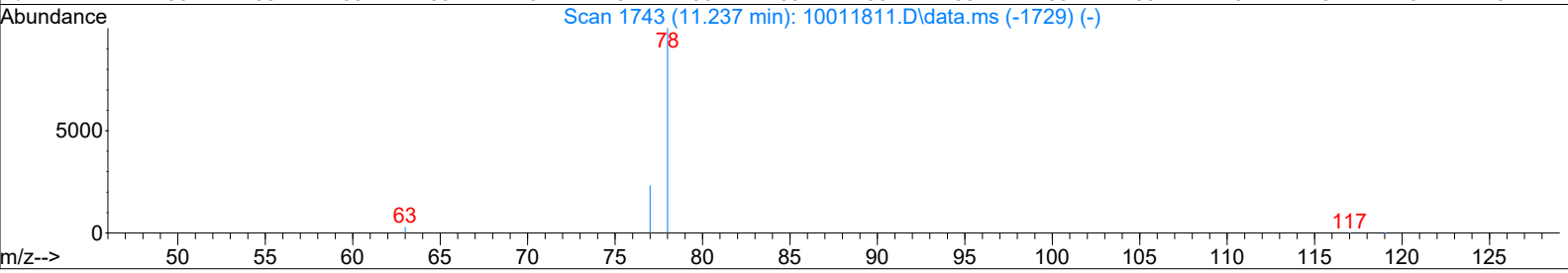
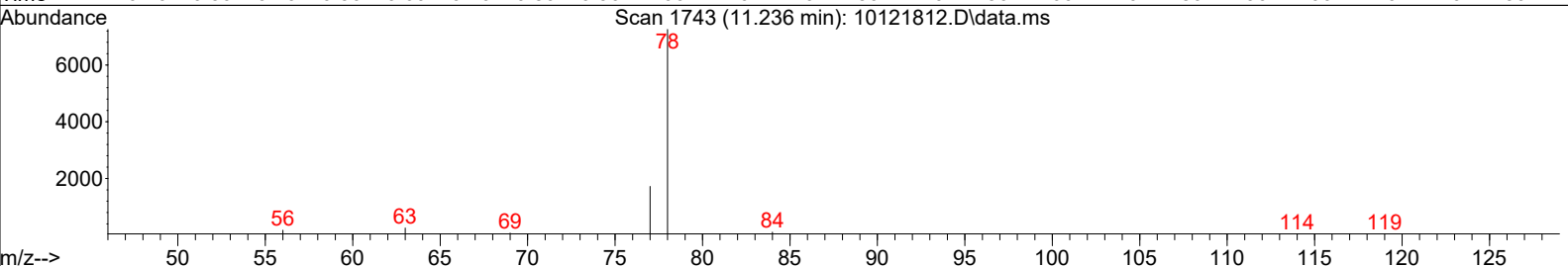
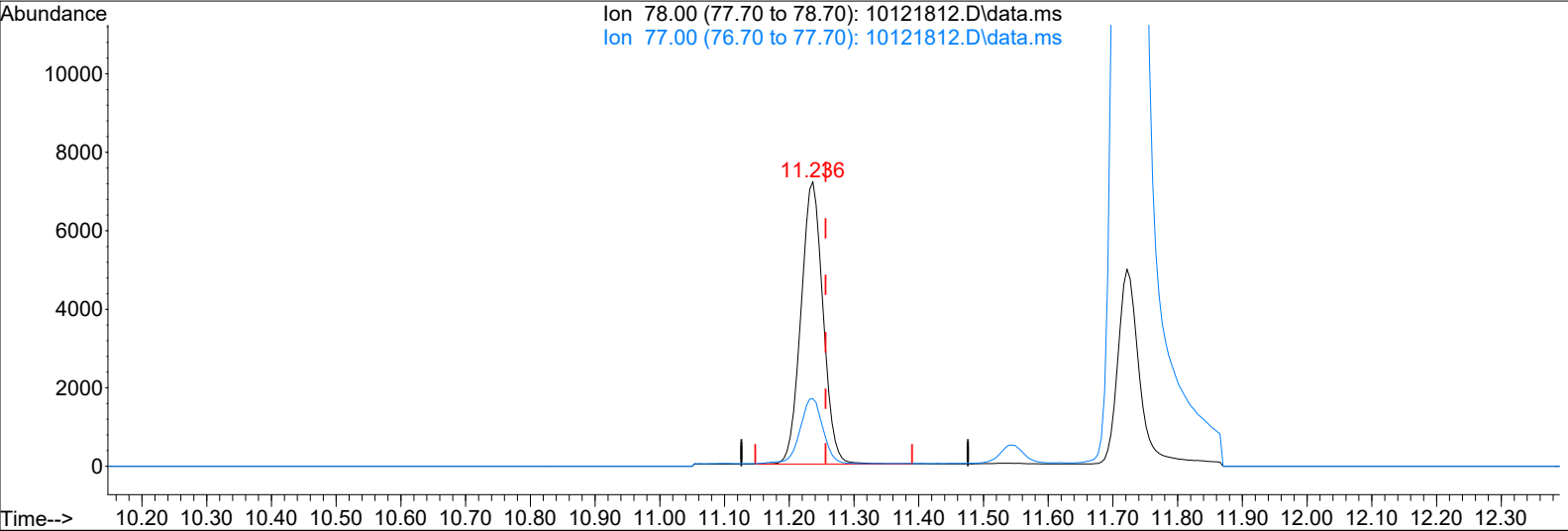


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Data File : I:\MS19\DATA\2018_10\12\10121812.D
 Acq On : 12 Oct 2018 14:53
 Sample : P1805236-004 (400mL)
 Misc : S31-09241806

Vial: 5
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 08:00:13 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121812.D\data.ms

(23) Benzene (T)

11.236min (-0.020) 173.26pg

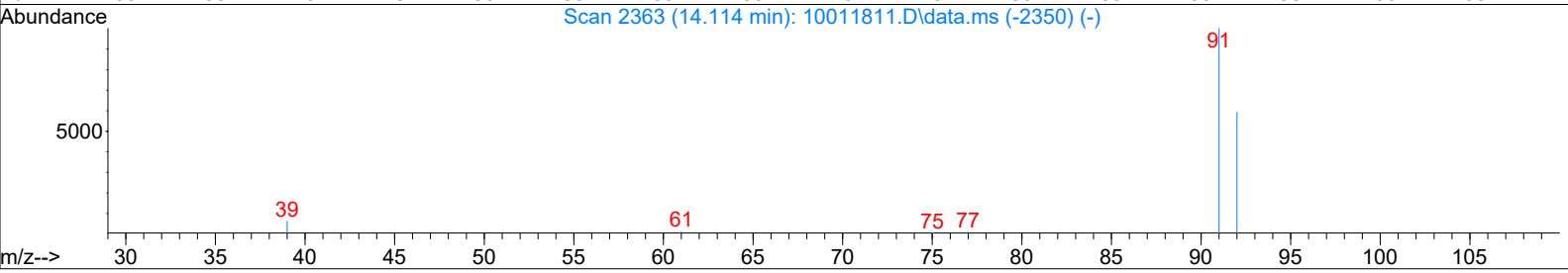
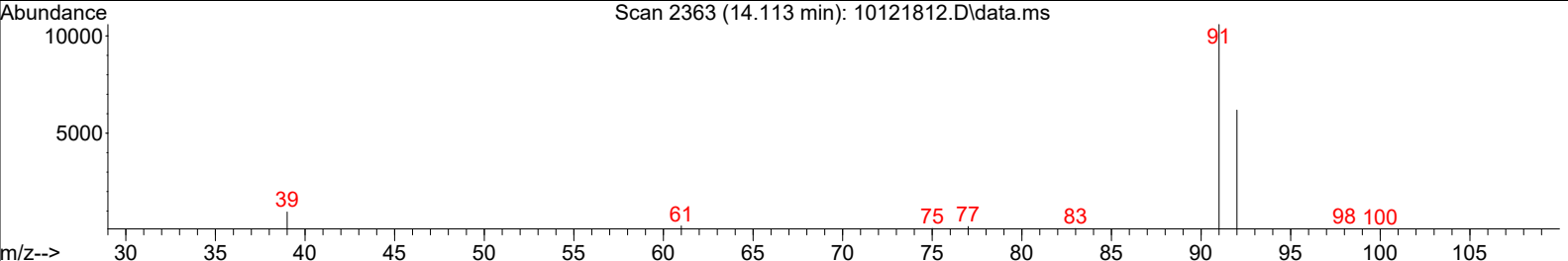
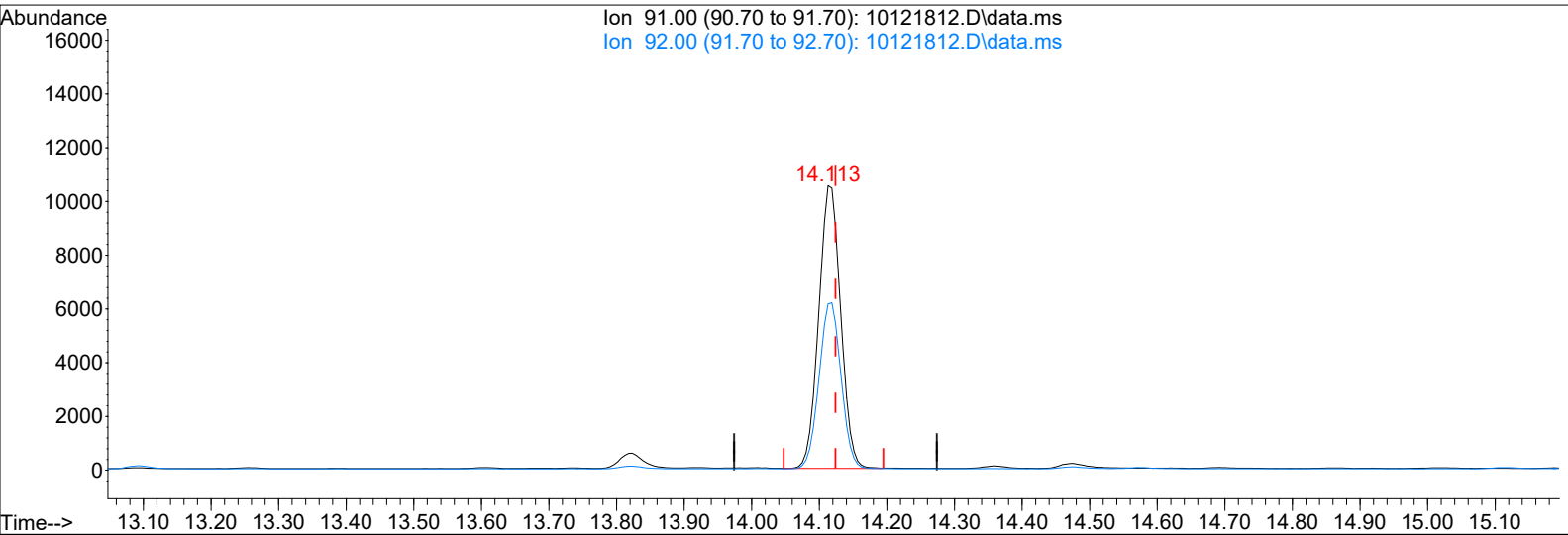
response 17054

| Ion | Exp% | Act% |
|-------|-------|-------|
| 78.00 | 100 | 100 |
| 77.00 | 23.30 | 24.05 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121812.D
 Acq On : 12 Oct 2018 14:53
 Sample : P1805236-004 (400mL)
 Misc : S31-09241806

Vial: 5
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 08:00:13 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121812.D\data.ms

(34) Toluene (T)

14.113min (-0.011) 237.49pg

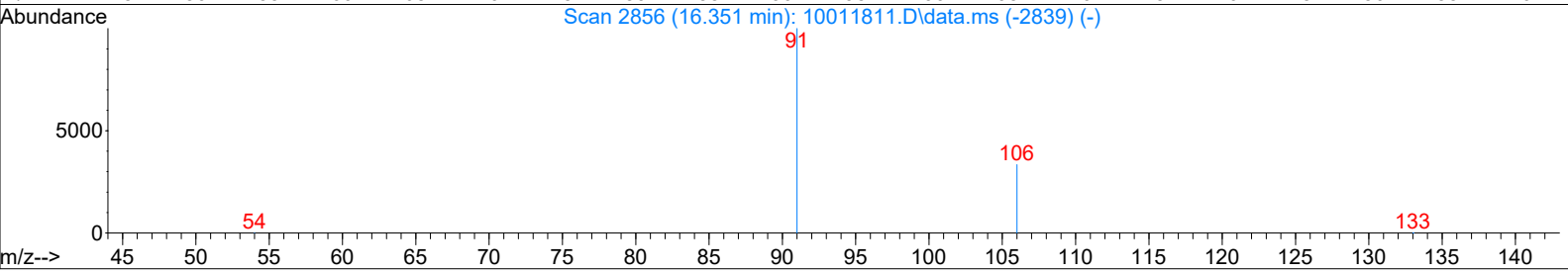
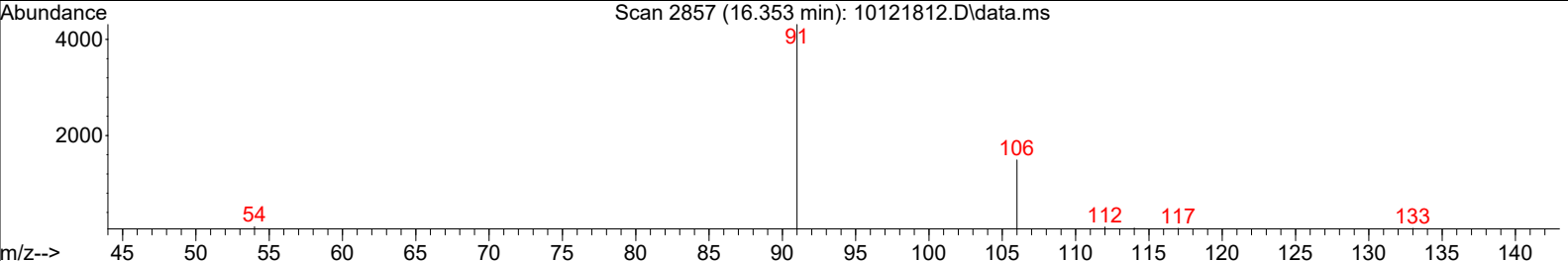
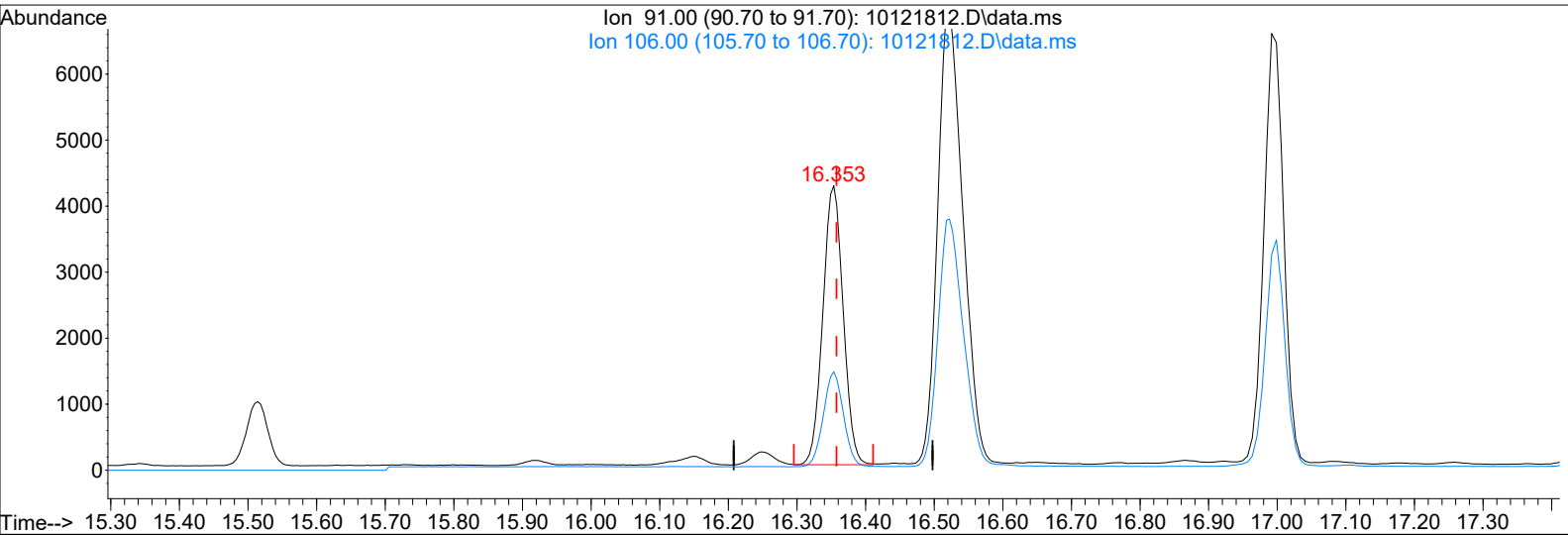
response 23634

| Ion | Exp% | Act% |
|-------|-------|-------|
| 91.00 | 100 | 100 |
| 92.00 | 59.20 | 59.22 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121812.D
 Acq On : 12 Oct 2018 14:53
 Sample : P1805236-004 (400mL)
 Misc : S31-09241806

Vial: 5
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 08:00:13 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121812.D\data.ms

(40) Ethylbenzene (T)

16.353min (-0.004) 78.31pg

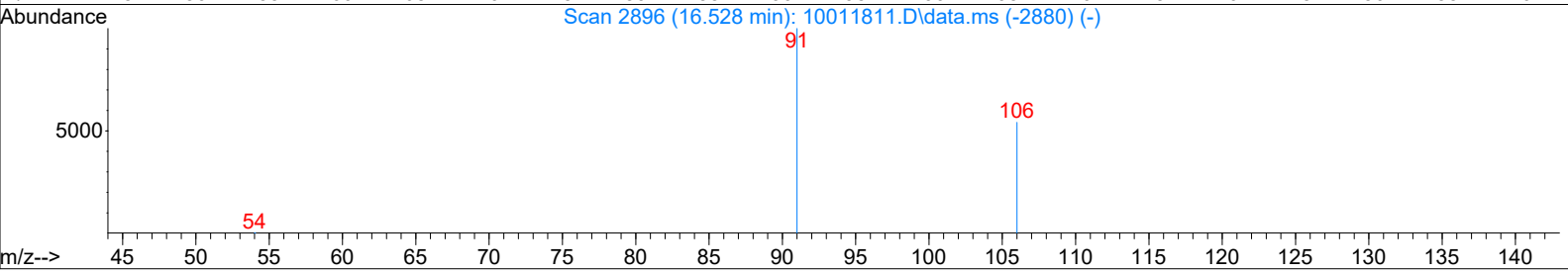
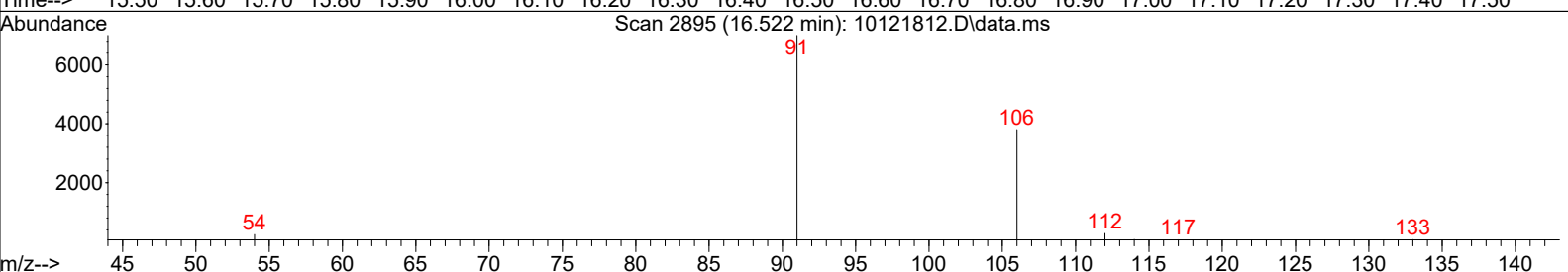
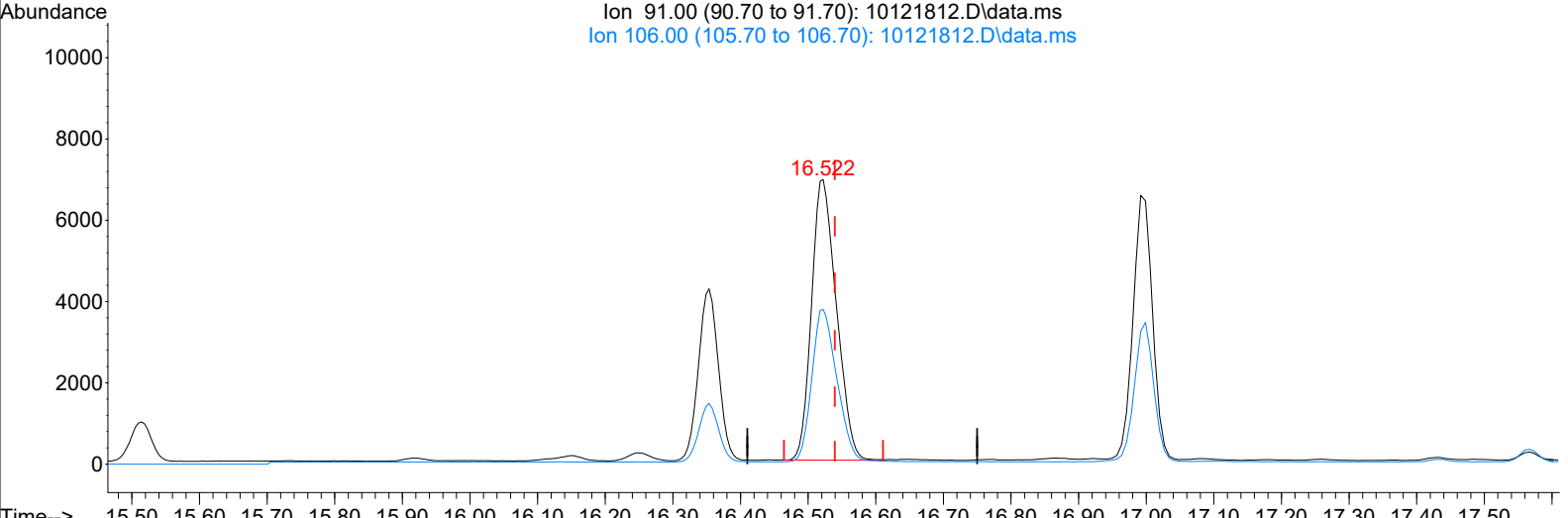
response 8679

| Ion | Exp% | Act% |
|--------|-------|-------|
| 91.00 | 100 | 100 |
| 106.00 | 33.70 | 33.62 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121812.D
 Acq On : 12 Oct 2018 14:53
 Sample : P1805236-004 (400mL)
 Misc : S31-09241806

Vial: 5
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 08:00:13 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121812.D\data.ms

(41) m,p-Xylene (T)

16.522min (-0.018) 207.54pg

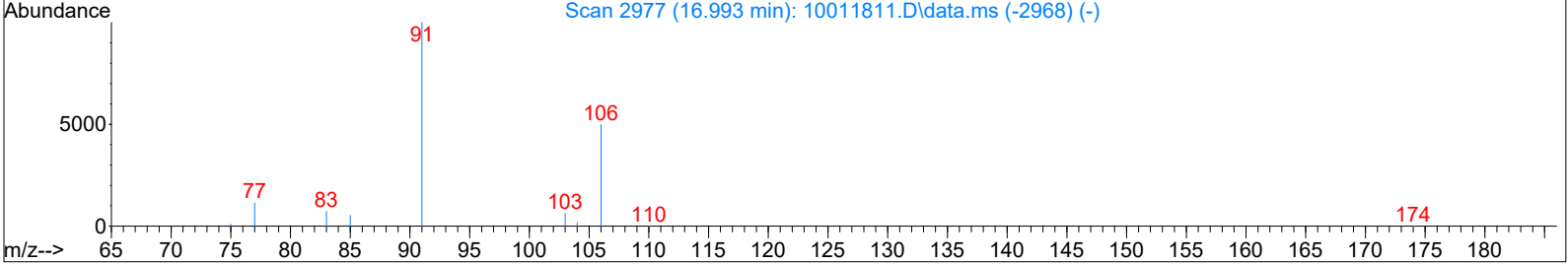
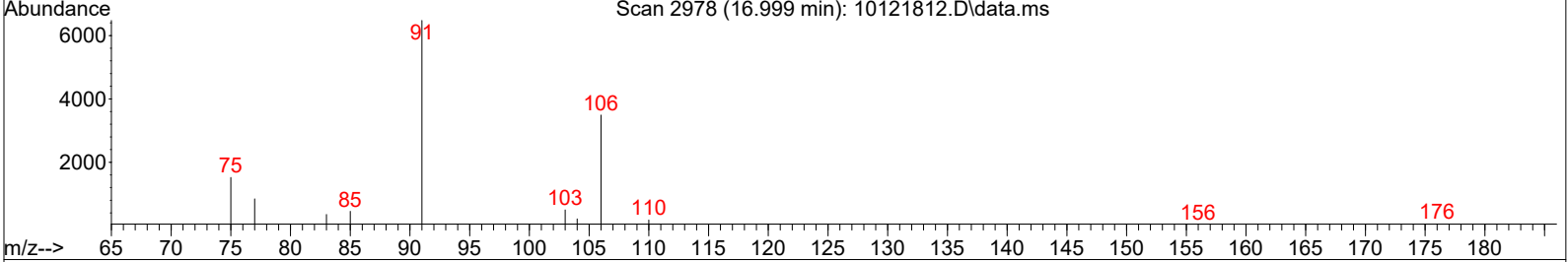
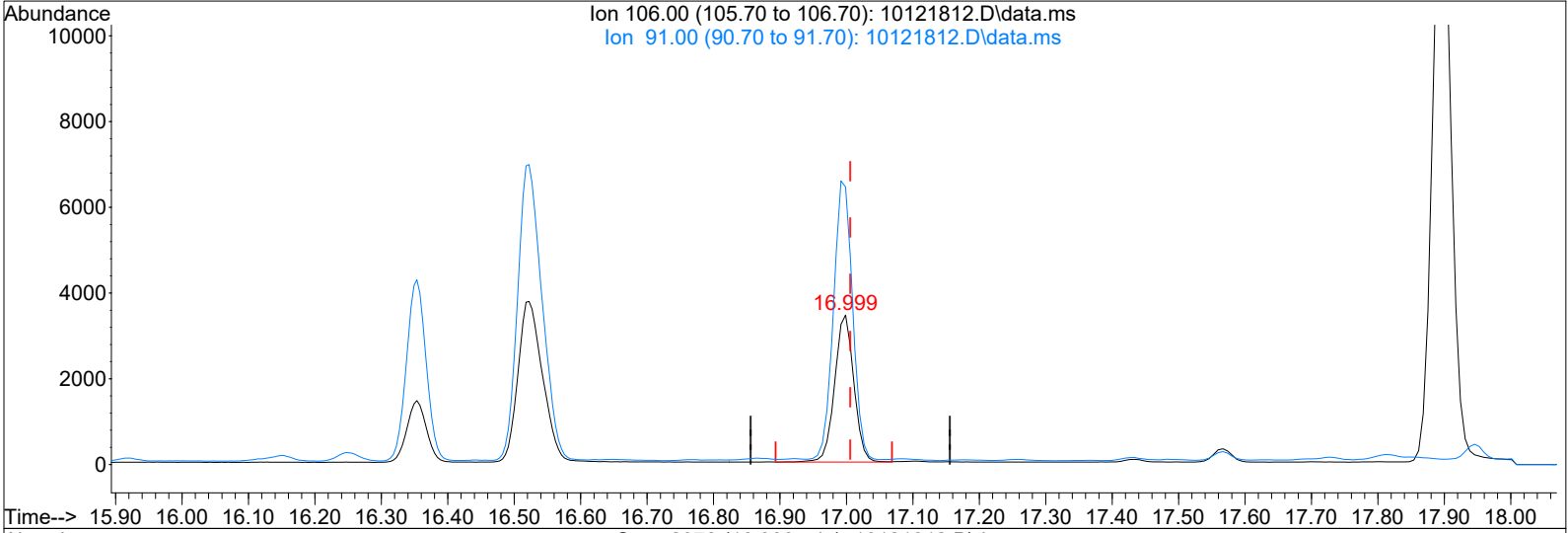
response 17586

| Ion | Exp% | Act% |
|--------|-------|-------|
| 91.00 | 100 | 100 |
| 106.00 | 54.30 | 54.86 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121812.D
 Acq On : 12 Oct 2018 14:53
 Sample : P1805236-004 (400mL)
 Misc : S31-09241806

Vial: 5
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 08:00:13 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121812.D\data.ms

(43) o-Xylene (T)

16.999min (-0.007) 152.81pg

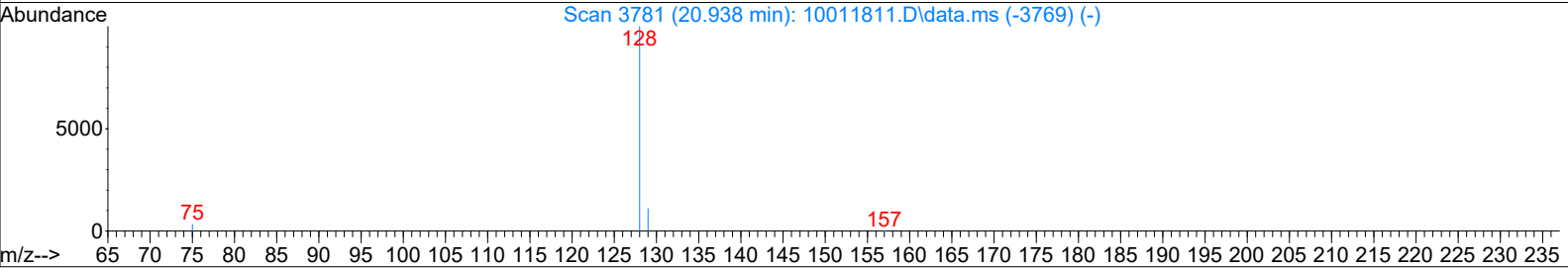
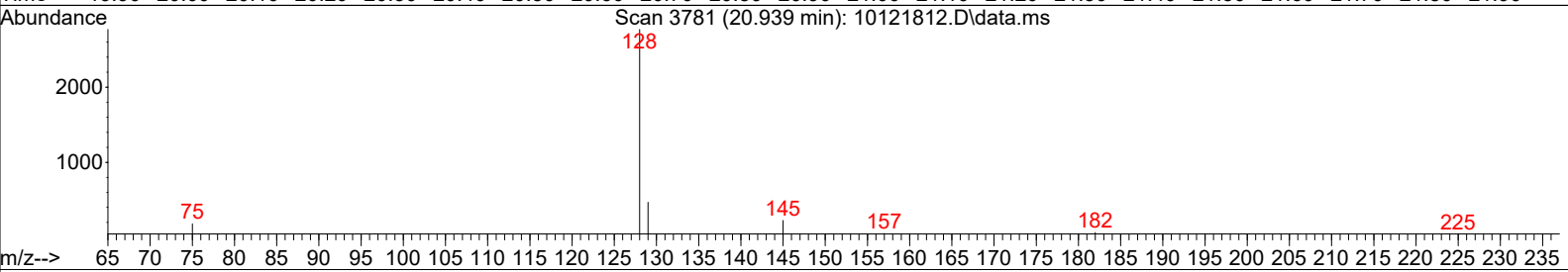
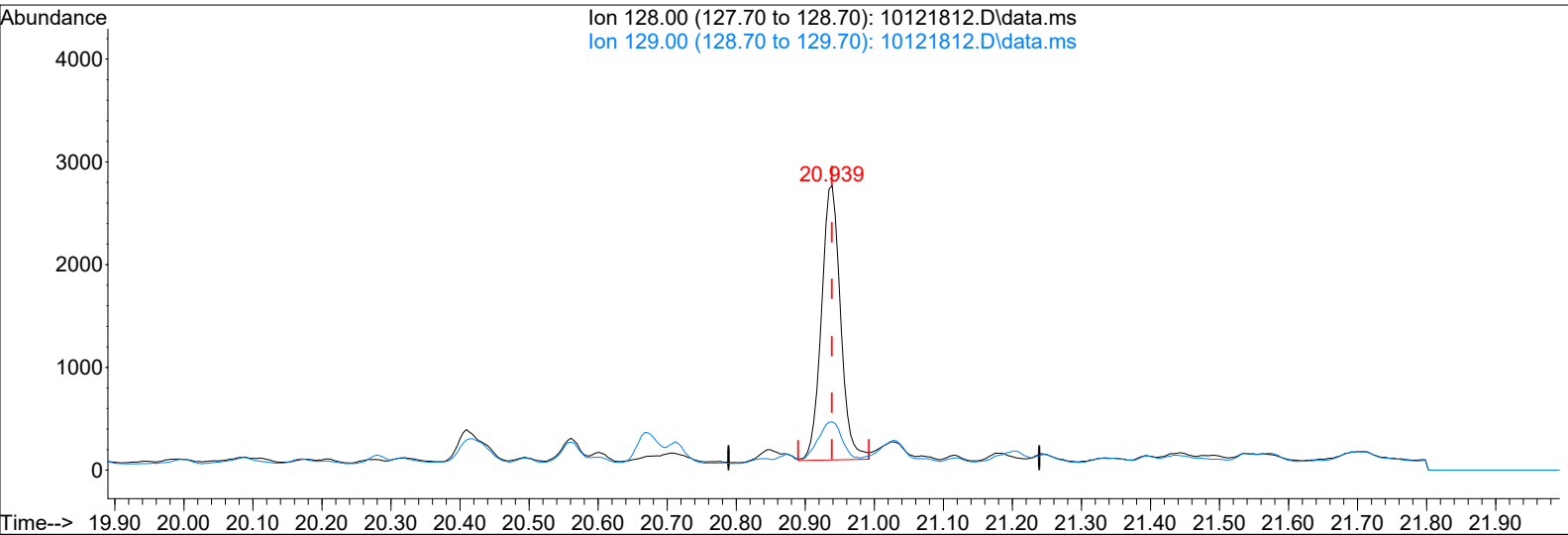
response 6884

| Ion | Exp% | Act% |
|--------|--------|--------|
| 106.00 | 100 | 100 |
| 91.00 | 195.60 | 189.09 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121812.D
 Acq On : 12 Oct 2018 14:53
 Sample : P1805236-004 (400mL)
 Misc : S31-09241806

Vial: 5
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 08:00:13 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121812.D\data.ms

(53) Naphthalene (T)

20.939min (-0.000) 46.62pg

response 5154

| Ion | Exp% | Act% |
|--------|-------|-------|
| 128.00 | 100 | 100 |
| 129.00 | 10.80 | 17.73 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121807.D
 Acq On : 12 Oct 2018 11:45
 Sample : P1805236-005 (400mL)
 Misc : S31-09241806

Vial: 7
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 11:40:36 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

~~WA~~ 10/15/18

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------------|-------|------|----------|----------|-------|----------|
| 1) Bromochloromethane (IS1) | 9.62 | 130 | 18247 | 1000.000 | pg | -0.03 |
| 25) 1,4-Difluorobenzene (IS2) | 11.58 | 114 | 82106 | 1000.000 | pg | -0.02 |
| 38) Chlorobenzene-d5 (IS3) | 15.92 | 54 | 10610 | 1000.000 | pg | 0.00 |

System Monitoring Compounds

| | | | | | | |
|-------------------------------|----------|-------|----------|----------|----|---------|
| 20) 1,2-Dichloroethane-d4 ... | 10.40 | 65 | 21454 | 982.208 | pg | -0.03 |
| Spiked Amount | 1000.000 | Range | 70 - 130 | Recovery | = | 98.22% |
| 33) Toluene-d8 (SS2) | 14.01 | 98 | 87392 | 1032.128 | pg | -0.02 |
| Spiked Amount | 1000.000 | Range | 70 - 130 | Recovery | = | 103.21% |
| 45) Bromofluorobenzene (SS3) | 17.43 | 174 | 31755 | 1059.187 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range | 70 - 130 | Recovery | = | 105.92% |

Target Compounds

| | R.T. | QIon | Response | Conc | Units | Qvalue |
|-------------------------------|-------|------|----------|----------|-------|--------|
| 2) Dichlorodifluoromethan... | 4.31 | 85 | 5748 | 147.840 | pg | 100 |
| 3) Chloromethane | 4.52 | 52 | 536 | 58.957 | pg | 97 |
| 4) 1,2-Dichloro,1,1,2,2-t... | 4.70 | 85 | 148 | N.D. | | |
| 5) Vinyl Chloride | 0.00 | 62 | 0 | N.D. | | |
| 6) 1,3-Butadiene | 5.01 | 54 | 178 | 9.326 | pg | # 88 |
| 7) Bromomethane | 5.33 | 94 | 99 | N.D. | | |
| 8) Chloroethane | 5.56 | 64 | 165 | 12.491 | pg | 100 |
| 9) Acrolein | 6.12 | 56 | 3836 | 359.235 | pg | 100 |
| 10) Acetone | 6.26 | 58 | 78777 | 5819.055 | pg | 91 |
| 11) Trichlorofluoromethane | 6.48 | 101 | 21706 | 713.866 | pg | 100 |
| 12) 1,1-Dichloroethene | 0.00 | 96 | 0 | N.D. | | |
| 13) Methylene Chloride | 7.33 | 84 | 3562 | 158.027 | pg | 99 |
| 14) Trichlorotrifluoroethane | 7.67 | 151 | 444 | 20.835 | pg | 97 |
| 15) trans-1,2-Dichloroethene | 8.37 | 96 | 141 | N.D. | | |
| 16) 1,1-Dichloroethane | 8.59 | 63 | 73 | N.D. | | |
| 17) Methyl tert-Butyl Ether | 8.61 | 73 | 450 | N.D. | | |
| 18) cis-1,2-Dichloroethene | 9.46 | 96 | 716 | 30.049 | pg | 99 |
| 19) Chloroform | 9.75 | 83 | 2491 | 66.083 | pg | 100 |
| 21) 1,2-Dichloroethane | 10.51 | 62 | 255 | 10.937 | pg | 99 |
| 22) 1,1,1-Trichloroethane | 0.00 | 97 | 0 | N.D. | | |
| 23) Benzene | 11.23 | 78 | 7015 | 74.077 | pg | 99 |
| 24) Carbon Tetrachloride | 11.39 | 117 | 890 | 30.497 | pg | 81 |
| 26) 1,2-Dichloropropane | 12.05 | 63 | 297 | 14.523 | pg | 100 |
| 27) Bromodichloromethane | 0.00 | 83 | 0 | N.D. | d | |
| 28) Trichloroethene | 12.28 | 130 | 9599 | 374.158 | pg | 99 |
| 29) 1,4-Dioxane | 0.00 | 88 | 0 | N.D. | d | |
| 30) cis-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 31) trans-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 32) 1,1,2-Trichloroethane | 0.00 | 83 | 0 | N.D. | d | |
| 34) Toluene | 14.11 | 91 | 103679 | 1105.923 | pg | 100 |
| 35) Dibromochloromethane | 0.00 | 129 | 0 | N.D. | | |
| 36) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | | |
| 37) Tetrachloroethene | 15.27 | 166 | 2434 | 88.228 | pg | 100 |
| 39) Chlorobenzene | 0.00 | 112 | 0 | N.D. | d | |
| 40) Ethylbenzene | 16.35 | 91 | 8764 | 89.597 | pg | 100 |
| 41) m,p-Xylene | 16.52 | 91 | 21656 | 289.555 | pg | 100 |
| 42) Styrene | 16.89 | 104 | 1791 | 30.149 | pg | 99 |
| 43) o-Xylene | 16.99 | 106 | 2545 | 64.005 | pg | 99 |
| 44) 1,1,2,2-Tetrachloroethane | 16.99 | 83 | 157 | N.D. | | |
| 46) 1,3,5-Trimethylbenzene | 18.27 | 105 | 515 | N.D. | | |
| 47) 1,2,4-Trimethylbenzene | 18.66 | 105 | 1759 | 21.084 | pg | 88 |
| 48) 1,3-Dichlorobenzene | 18.81 | 146 | 389 | N.D. | | |
| 49) 1,4-Dichlorobenzene | 18.87 | 146 | 1677 | 30.639 | pg | 99 |
| 50) 1,2-Dichlorobenzene | 0.00 | 146 | 0 | N.D. | | |
| 51) 1,2-Dibromo-3-chloropr... | 0.00 | 157 | 0 | N.D. | | |
| 52) 1,2,4-Trichlorobenzene | 0.00 | 182 | 0 | N.D. | | |
| 53) Naphthalene | 20.94 | 128 | 771 | N.D. | | |

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Data File : I:\MS19\DATA\2018_10\12\10121807.D
 Acq On : 12 Oct 2018 11:45
 Sample : P1805236-005 (400mL)
 Misc : S31-09241806

Vial: 7
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 11:40:36 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

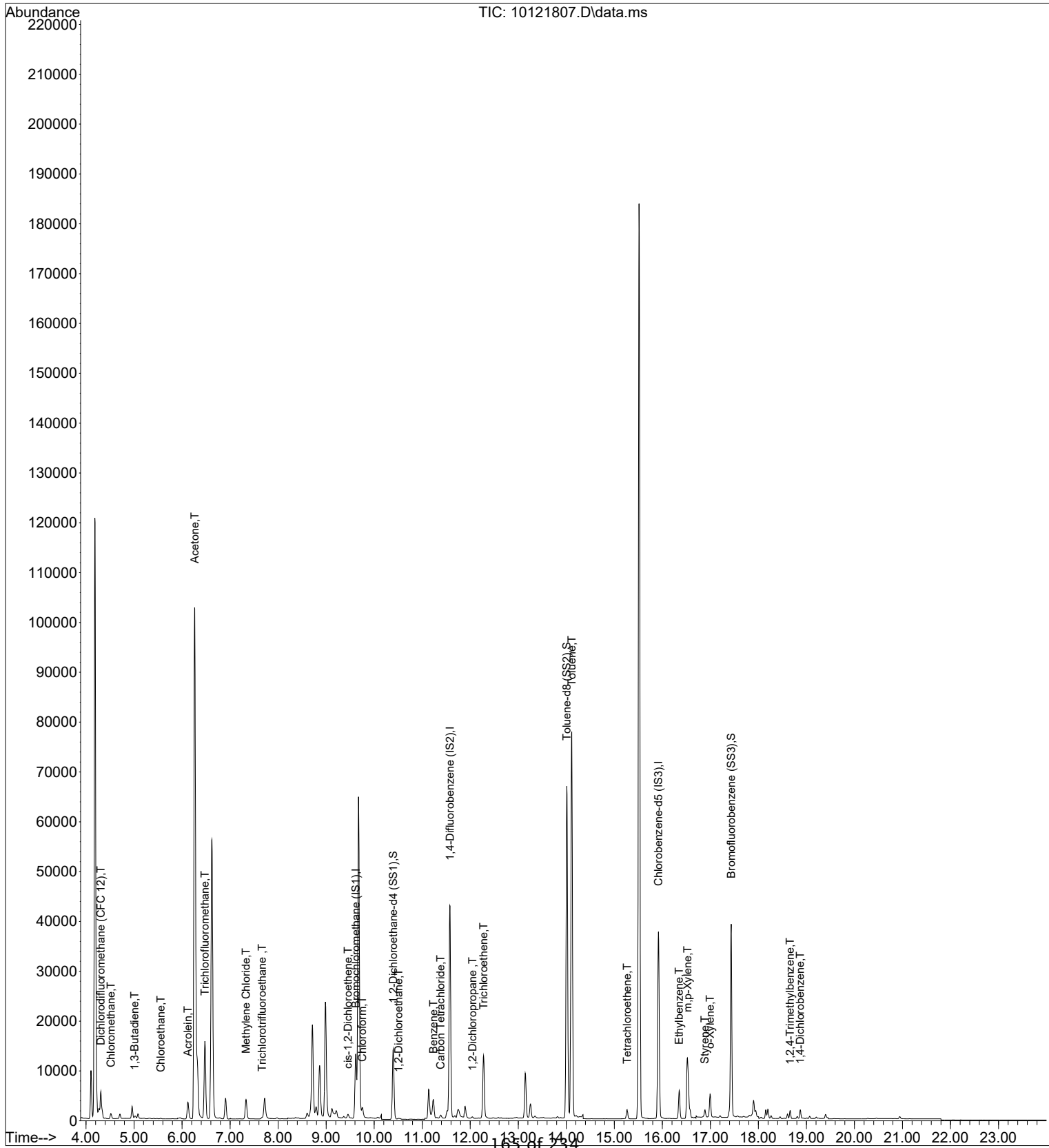
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------|------|------|----------|------|-------|----------|
| 54) Hexachlorobutadiene | 0.00 | 225 | 0 | N.D. | | |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2018_10\12\10121807.D
Acq On : 12 Oct 2018 11:45
Sample : P1805236-005 (400mL)
Misc : S31-09241806

Vial: 7
Operator: WA
Inst : MS19

Quant Time: Oct 15 11:40:36 2018
Quant Method : I:\MS19\METHODS\S19100118.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Oct 02 06:45:50 2018
Response via : Initial Calibration
DataAcq Meth:TO15SIM.M

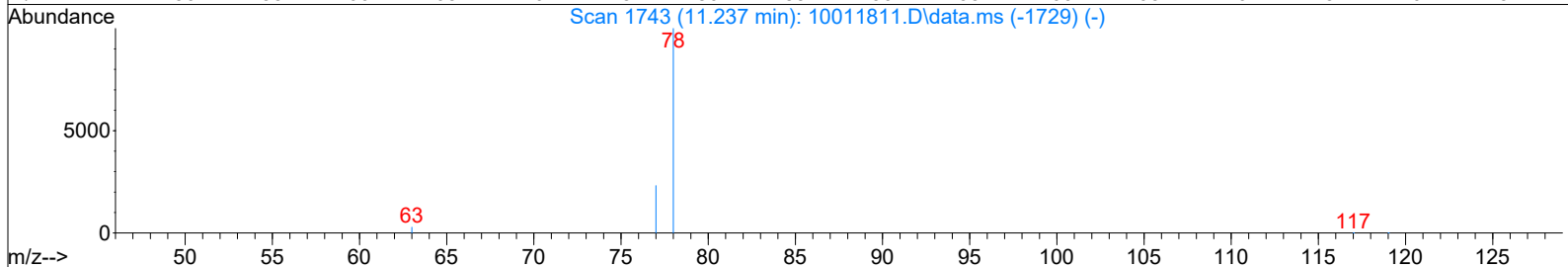
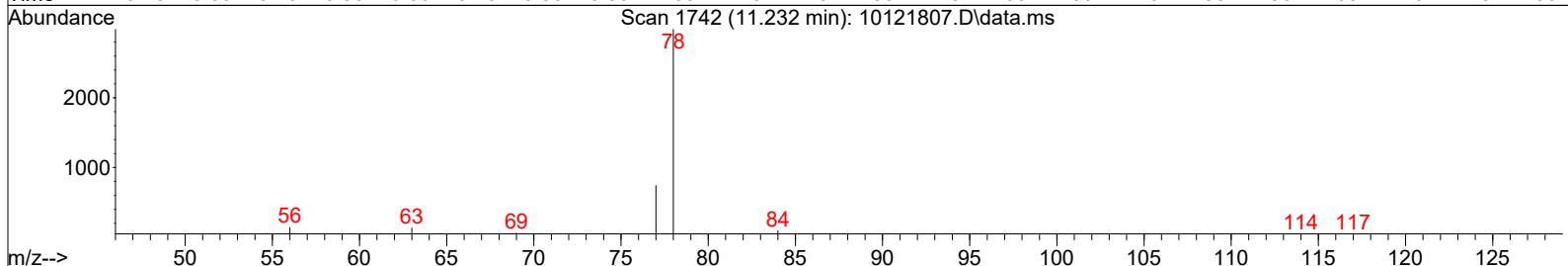
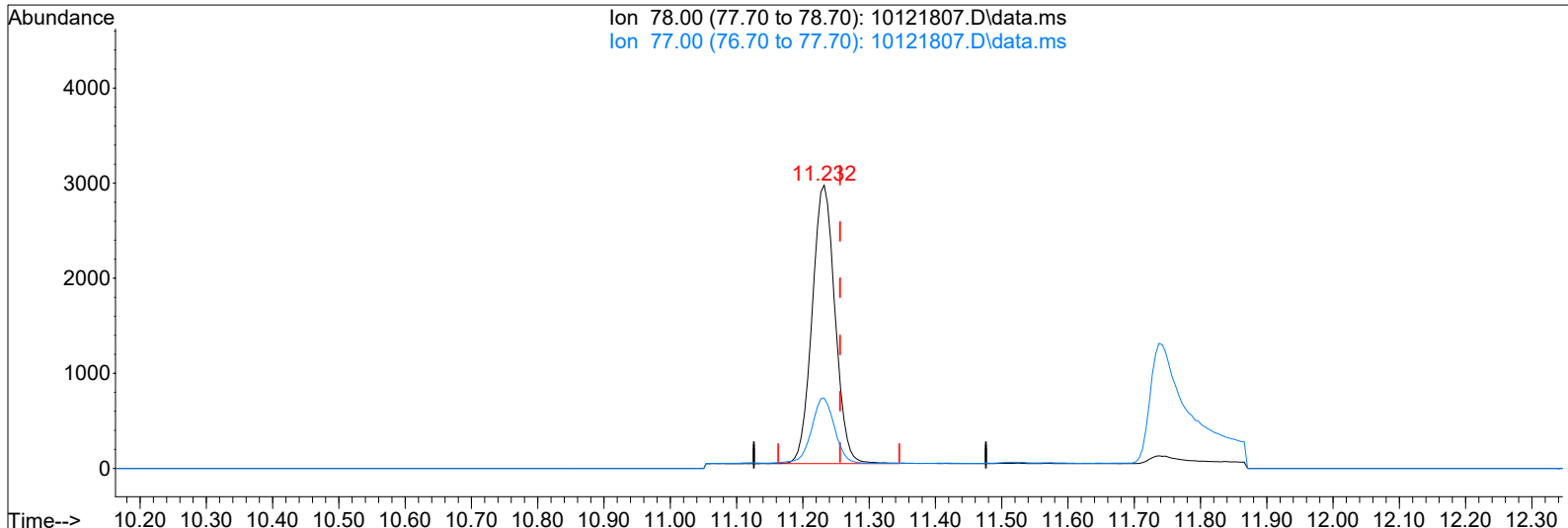


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Data File : I:\MS19\DATA\2018_10\12\10121807.D
 Acq On : 12 Oct 2018 11:45
 Sample : P1805236-005 (400mL)
 Misc : S31-09241806

Vial: 7
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 13:06:27 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121807.D\data.ms

(23) Benzene (T)

11.232min (-0.024) 74.08pg

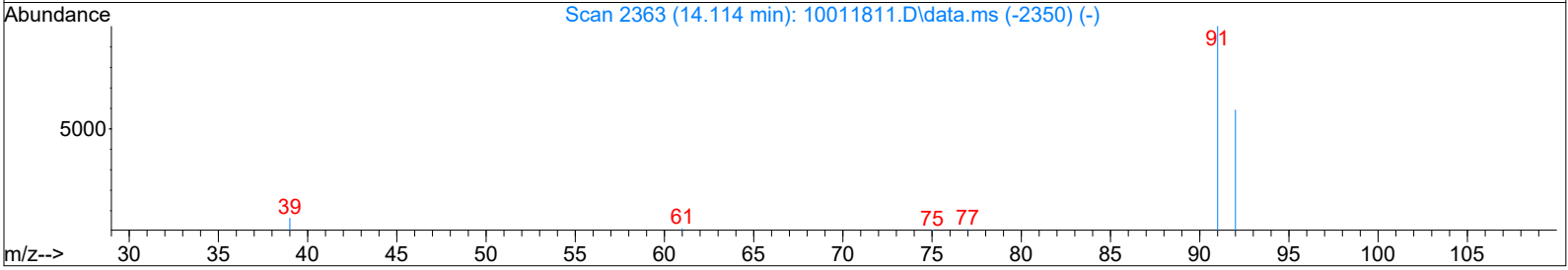
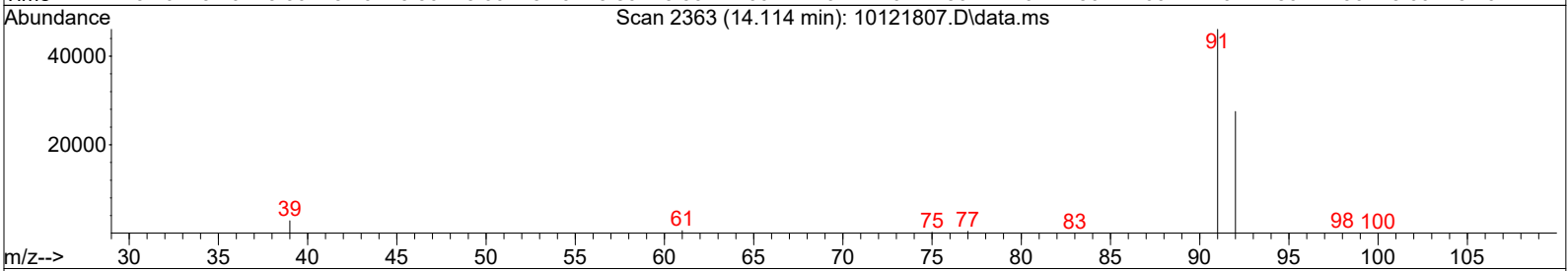
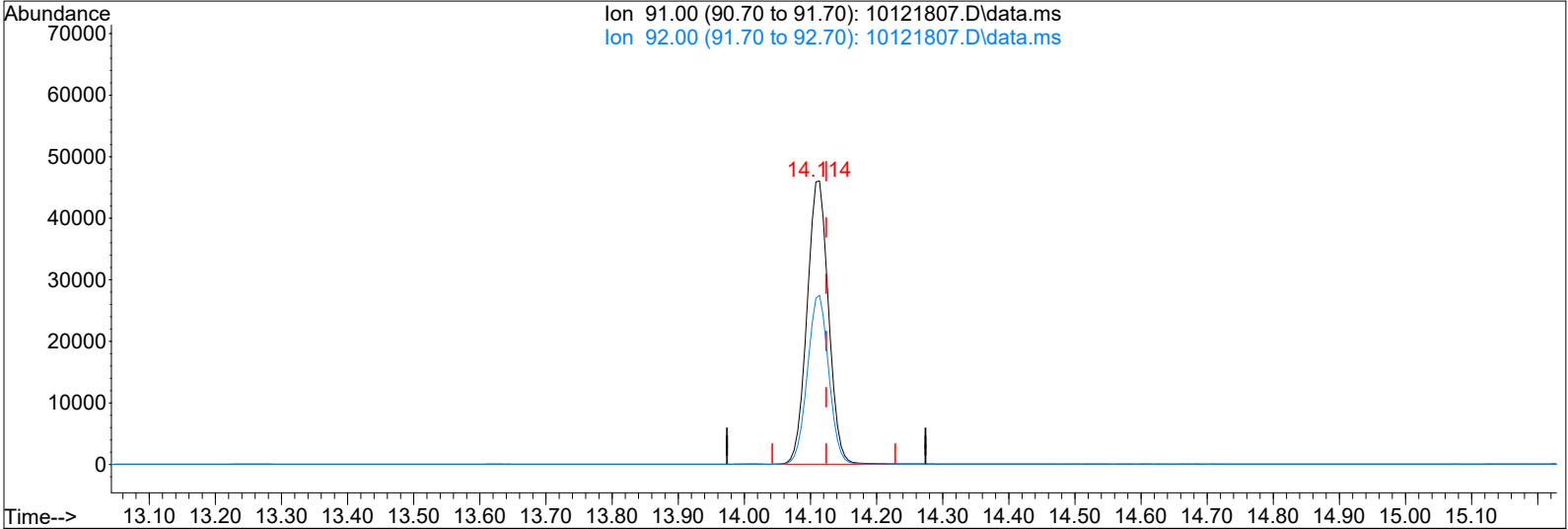
response 7015

| Ion | Exp% | Act% |
|-------|-------|-------|
| 78.00 | 100 | 100 |
| 77.00 | 23.30 | 23.69 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121807.D
 Acq On : 12 Oct 2018 11:45
 Sample : P1805236-005 (400mL)
 Misc : S31-09241806

Vial: 7
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 13:06:27 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121807.D\data.ms

(34) Toluene (T)

14.114min (-0.010) 1105.92pg

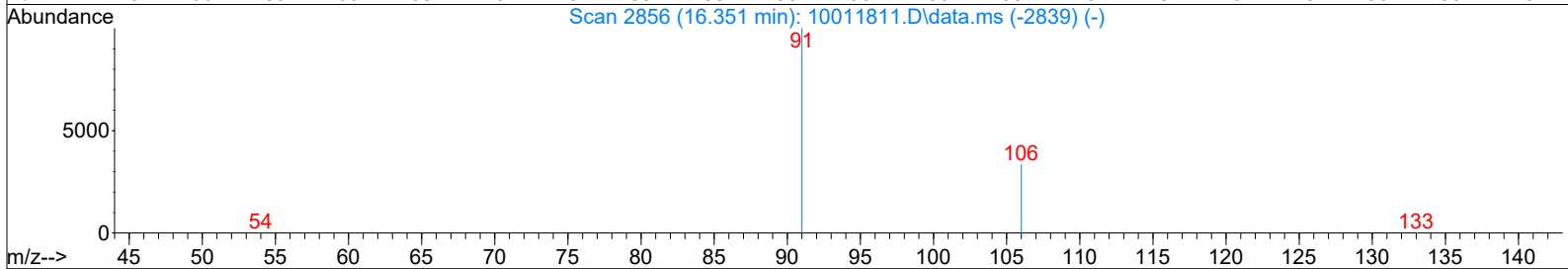
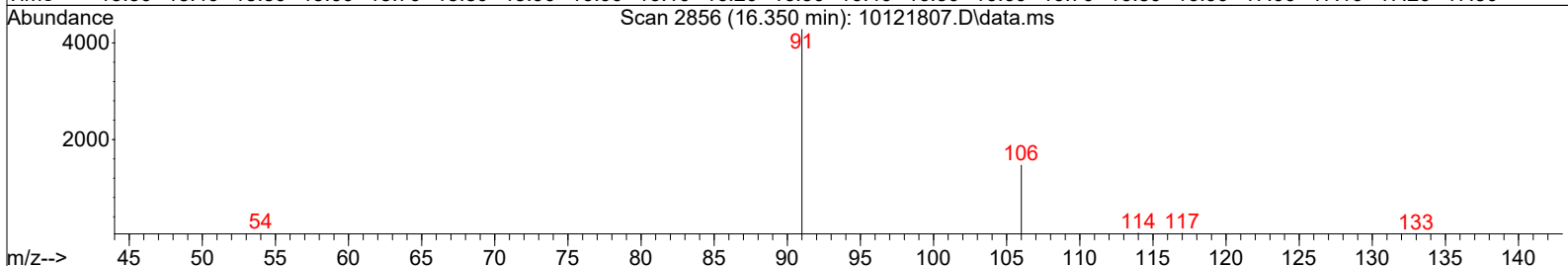
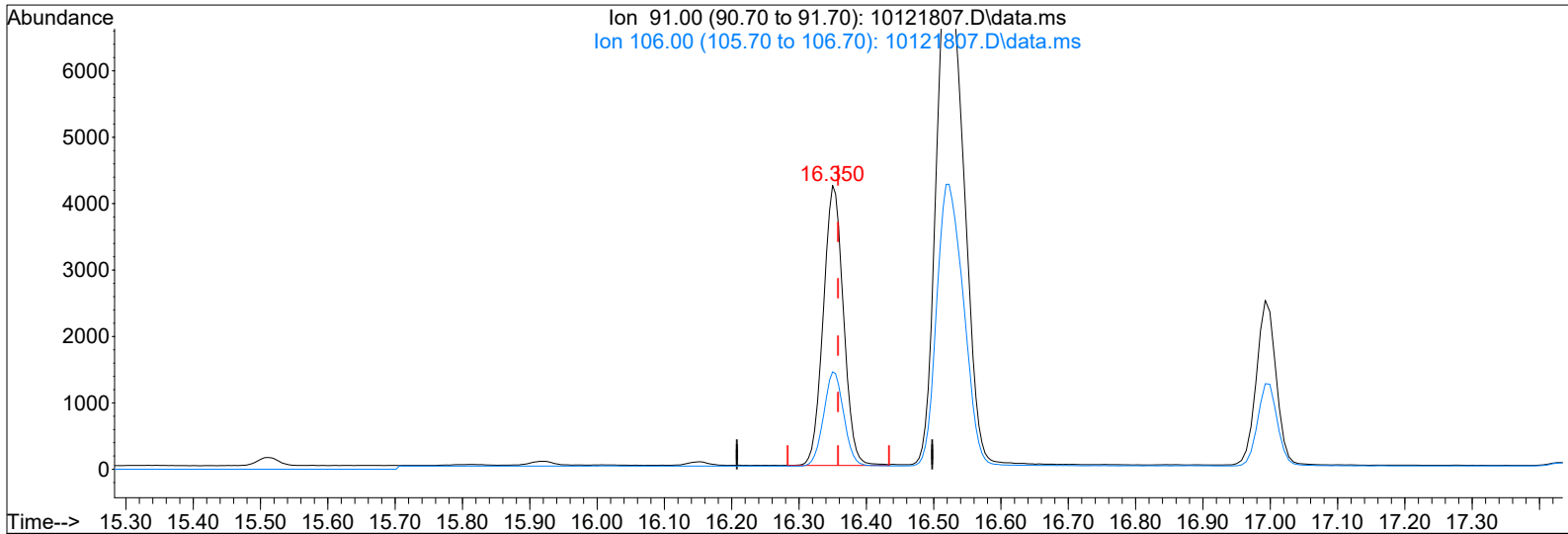
response 103679

| Ion | Exp% | Act% |
|-------|-------|-------|
| 91.00 | 100 | 100 |
| 92.00 | 59.20 | 59.28 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121807.D
 Acq On : 12 Oct 2018 11:45
 Sample : P1805236-005 (400mL)
 Misc : S31-09241806

Vial: 7
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 13:06:27 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121807.D\data.ms

(40) Ethylbenzene (T)

16.350min (-0.008) 89.60pg

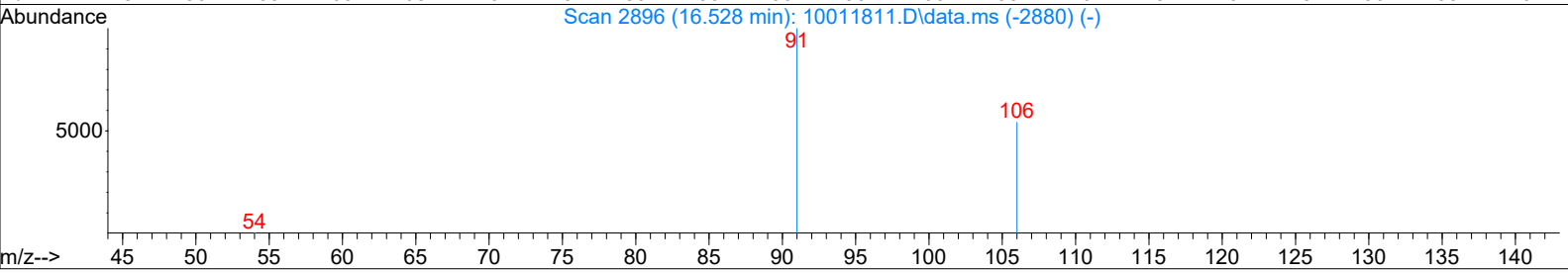
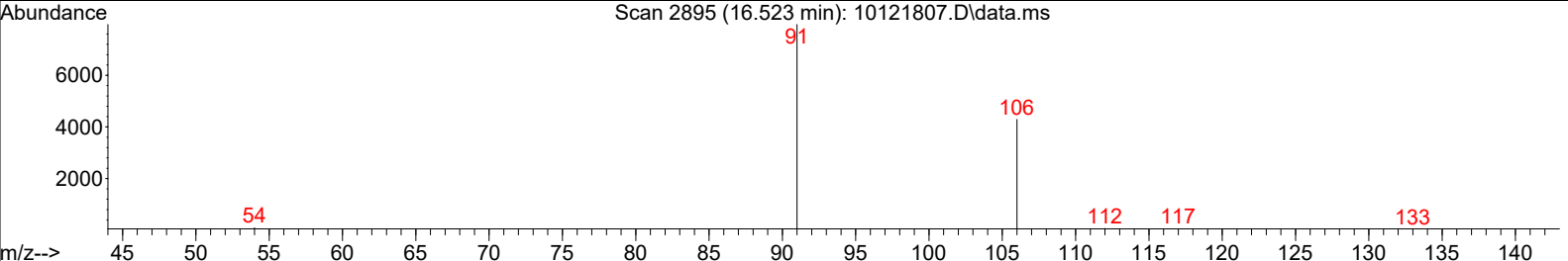
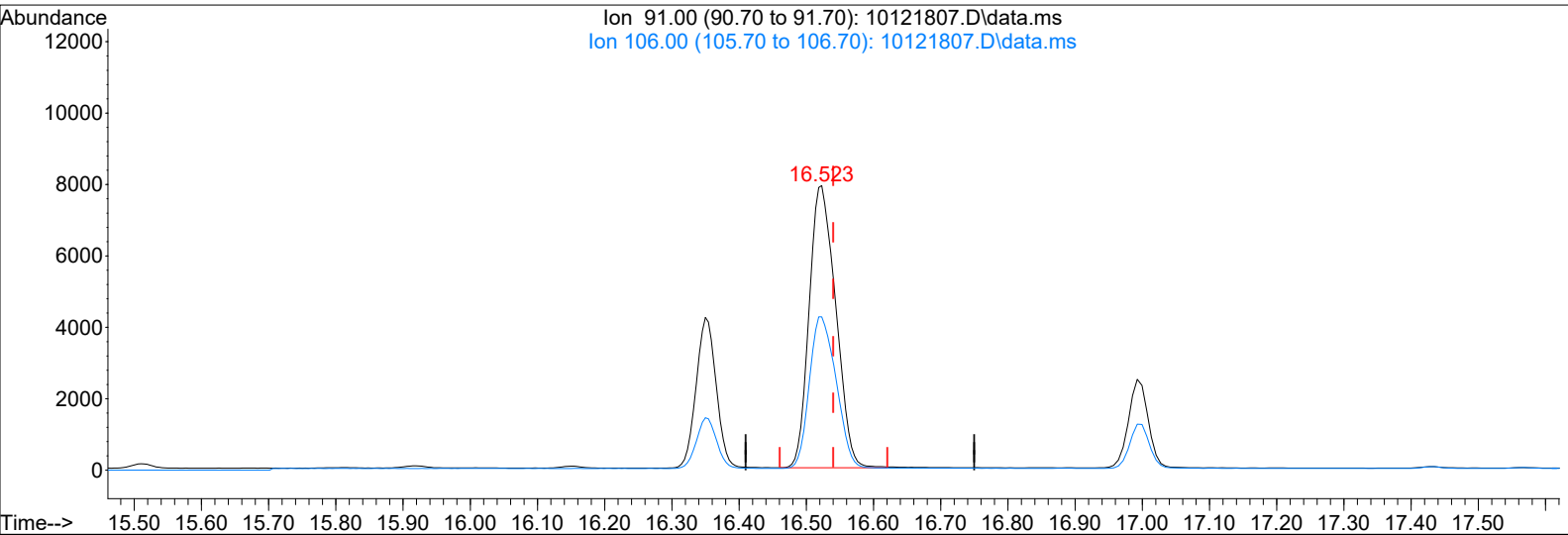
response 8764

| Ion | Exp% | Act% |
|--------|-------|-------|
| 91.00 | 100 | 100 |
| 106.00 | 33.70 | 33.60 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121807.D
 Acq On : 12 Oct 2018 11:45
 Sample : P1805236-005 (400mL)
 Misc : S31-09241806

Vial: 7
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 13:06:27 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121807.D\data.ms

(41) m,p-Xylene (T)

16.523min (-0.017) 289.56pg

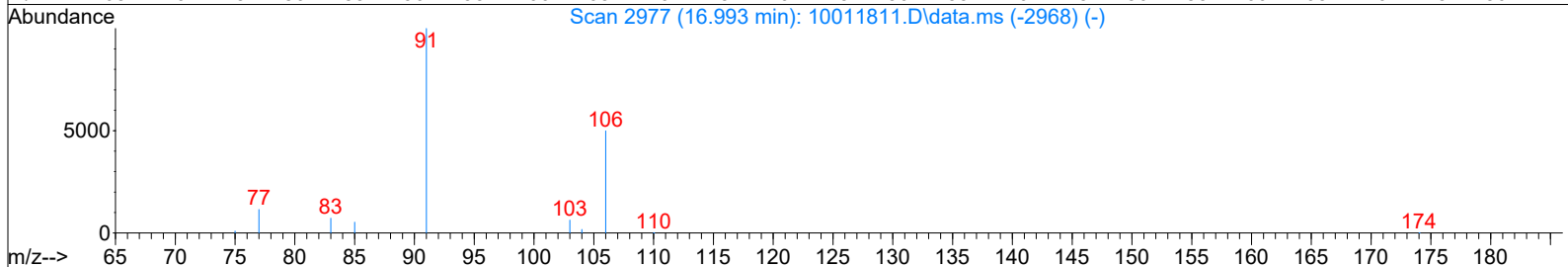
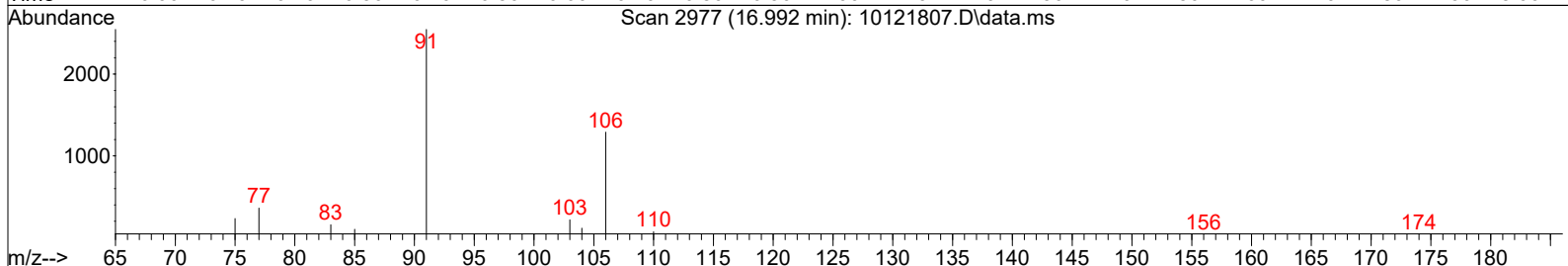
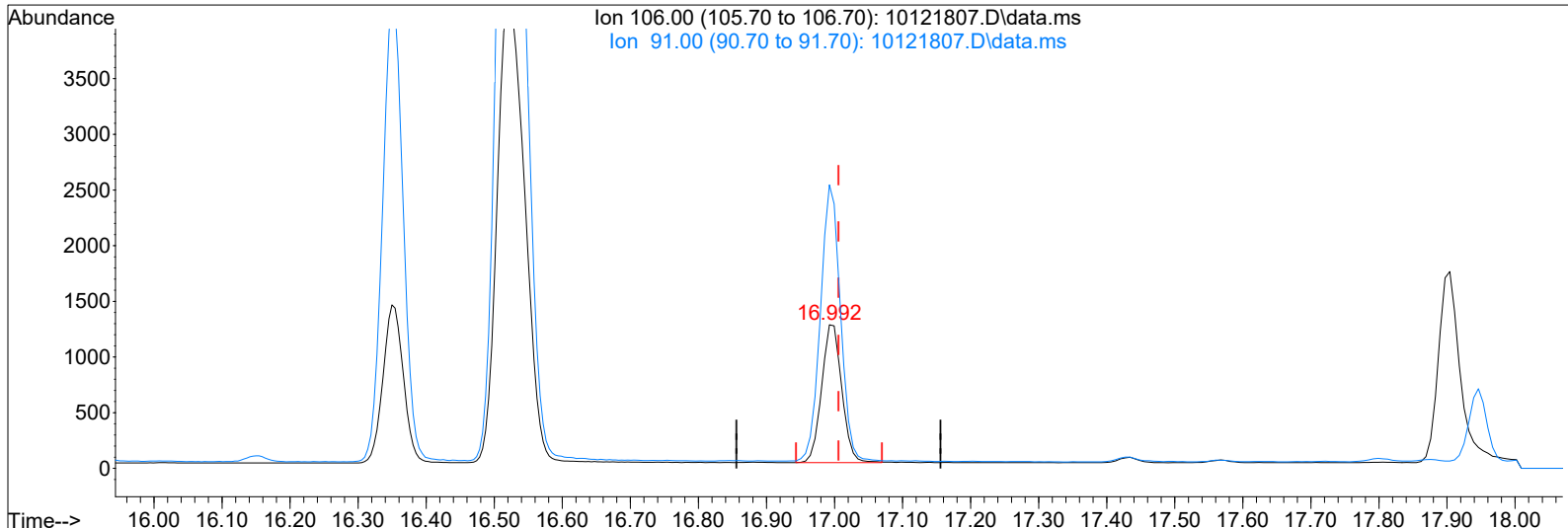
response 21656

| Ion | Exp% | Act% |
|--------|-------|-------|
| 91.00 | 100 | 100 |
| 106.00 | 54.30 | 54.34 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121807.D
 Acq On : 12 Oct 2018 11:45
 Sample : P1805236-005 (400mL)
 Misc : S31-09241806

Vial: 7
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 13:06:27 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121807.D\data.ms

(43) o-Xylene (T)

16.992min (-0.013) 64.01pg

response 2545

| Ion | Exp% | Act% |
|--------|--------|--------|
| 106.00 | 100 | 100 |
| 91.00 | 195.60 | 197.80 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121808.D
 Acq On : 12 Oct 2018 12:17
 Sample : P1805236-006 (400mL)
 Misc : S31-09241806

Vial: 8
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 11:41:57 2018

Quant Method : I:\MS19\METHODS\S19100118.M

Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)

QLast Update : Tue Oct 02 06:45:50 2018

Response via : Initial Calibration

~~10/15/18~~ 10/15/18

DataAcq Meth:TO15SIM.M

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------------|-------|------|----------|----------|-------|----------|
| 1) Bromochloromethane (IS1) | 9.61 | 130 | 18689 | 1000.000 | pg | -0.04 |
| 25) 1,4-Difluorobenzene (IS2) | 11.58 | 114 | 83171 | 1000.000 | pg | -0.02 |
| 38) Chlorobenzene-d5 (IS3) | 15.92 | 54 | 10888 | 1000.000 | pg | 0.00 |

System Monitoring Compounds

| | | | | | | |
|-------------------------------|----------|----------------|----------|----------|---------|-------|
| 20) 1,2-Dichloroethane-d4 ... | 10.40 | 65 | 22187 | 991.743 | pg | -0.03 |
| Spiked Amount | 1000.000 | Range 70 - 130 | Recovery | = | 99.17% | |
| 33) Toluene-d8 (SS2) | 14.01 | 98 | 88262 | 1029.055 | pg | -0.02 |
| Spiked Amount | 1000.000 | Range 70 - 130 | Recovery | = | 102.91% | |
| 45) Bromofluorobenzene (SS3) | 17.43 | 174 | 32351 | 1051.515 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range 70 - 130 | Recovery | = | 105.15% | |

Target Compounds

| | R.T. | QIon | Response | Conc | Units | Qvalue |
|-------------------------------|-------|------|----------|----------|-------|--------|
| 2) Dichlorodifluoromethan... | 4.30 | 85 | 4736 | 118.930 | pg | 100 |
| 3) Chloromethane | 4.52 | 52 | 442 | 47.468 | pg | 93 |
| 4) 1,2-Dichloro,1,1,2,2-t... | 4.69 | 85 | 92 | N.D. | | |
| 5) Vinyl Chloride | 0.00 | 62 | 0 | N.D. | | |
| 6) 1,3-Butadiene | 5.01 | 54 | 127 | N.D. | | |
| 7) Bromomethane | 5.34 | 94 | 58 | N.D. | | |
| 8) Chloroethane | 5.56 | 64 | 88 | N.D. | | |
| 9) Acrolein | 6.12 | 56 | 463 | 42.334 | pg | 93 |
| 10) Acetone | 6.26 | 58 | 54505 | 3930.925 | pg | # 84 |
| 11) Trichlorofluoromethane | 6.47 | 101 | 11596 | 372.349 | pg | 100 |
| 12) 1,1-Dichloroethene | 0.00 | 96 | 0 | N.D. | | |
| 13) Methylene Chloride | 7.33 | 84 | 1625 | 70.387 | pg | 89 |
| 14) Trichlorotrifluoroethane | 7.67 | 151 | 206 | 9.438 | pg | 98 |
| 15) trans-1,2-Dichloroethene | 8.37 | 96 | 66 | N.D. | | |
| 16) 1,1-Dichloroethane | 0.00 | 63 | 0 | N.D. | | |
| 17) Methyl tert-Butyl Ether | 8.60 | 73 | 305 | N.D. | | |
| 18) cis-1,2-Dichloroethene | 0.00 | 96 | 0 | N.D. | | |
| 19) Chloroform | 9.75 | 83 | 1263 | 32.713 | pg | 98 |
| 21) 1,2-Dichloroethane | 10.51 | 62 | 285 | 11.935 | pg | 86 |
| 22) 1,1,1-Trichloroethane | 0.00 | 97 | 0 | N.D. | | |
| 23) Benzene | 11.23 | 78 | 7330 | 75.573 | pg | 99 |
| 24) Carbon Tetrachloride | 11.40 | 117 | 590 | 19.739 | pg | # 60 |
| 26) 1,2-Dichloropropane | 12.04 | 63 | 1546 | 74.630 | pg | 99 |
| 27) Bromodichloromethane | 12.25 | 83 | 128 | N.D. | | |
| 28) Trichloroethene | 12.28 | 130 | 712 | 27.398 | pg | 99 |
| 29) 1,4-Dioxane | 12.27 | 88 | 525 | 29.528 | pg | 90 |
| 30) cis-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 31) trans-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | |
| 32) 1,1,2-Trichloroethane | 0.00 | 83 | 0 | N.D. | d | |
| 34) Toluene | 14.11 | 91 | 282070 | 2970.257 | pg | 100 |
| 35) Dibromochloromethane | 0.00 | 129 | 0 | N.D. | | |
| 36) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | | |
| 37) Tetrachloroethene | 15.27 | 166 | 3455 | 123.634 | pg | 100 |
| 39) Chlorobenzene | 0.00 | 112 | 0 | N.D. | d | |
| 40) Ethylbenzene | 16.35 | 91 | 12289 | 122.426 | pg | 100 |
| 41) m,p-Xylene | 16.52 | 91 | 33459 | 435.947 | pg | 100 |
| 42) Styrene | 16.89 | 104 | 4976 | 81.624 | pg | 99 |
| 43) o-Xylene | 17.00 | 106 | 4061 | 99.524 | pg | 98 |
| 44) 1,1,2,2-Tetrachloroethane | 17.00 | 83 | 147 | N.D. | | |
| 46) 1,3,5-Trimethylbenzene | 18.27 | 105 | 1579 | 18.399 | pg | 99 |
| 47) 1,2,4-Trimethylbenzene | 18.66 | 105 | 6930 | 80.945 | pg | 87 |
| 48) 1,3-Dichlorobenzene | 18.81 | 146 | 1067 | 19.077 | pg | 98 |
| 49) 1,4-Dichlorobenzene | 18.87 | 146 | 4717 | 83.980 | pg | 99 |
| 50) 1,2-Dichlorobenzene | 19.20 | 146 | 50 | N.D. | | |
| 51) 1,2-Dibromo-3-chloropr... | 0.00 | 157 | 0 | N.D. | | |
| 52) 1,2,4-Trichlorobenzene | 0.00 | 182 | 0 | N.D. | | |
| 53) Naphthalene | 20.94 | 128 | 22838 | 228.062 | pg | 98 |

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Data File : I:\MS19\DATA\2018_10\12\10121808.D
 Acq On : 12 Oct 2018 12:17
 Sample : P1805236-006 (400mL)
 Misc : S31-09241806

Vial: 8
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 11:41:57 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

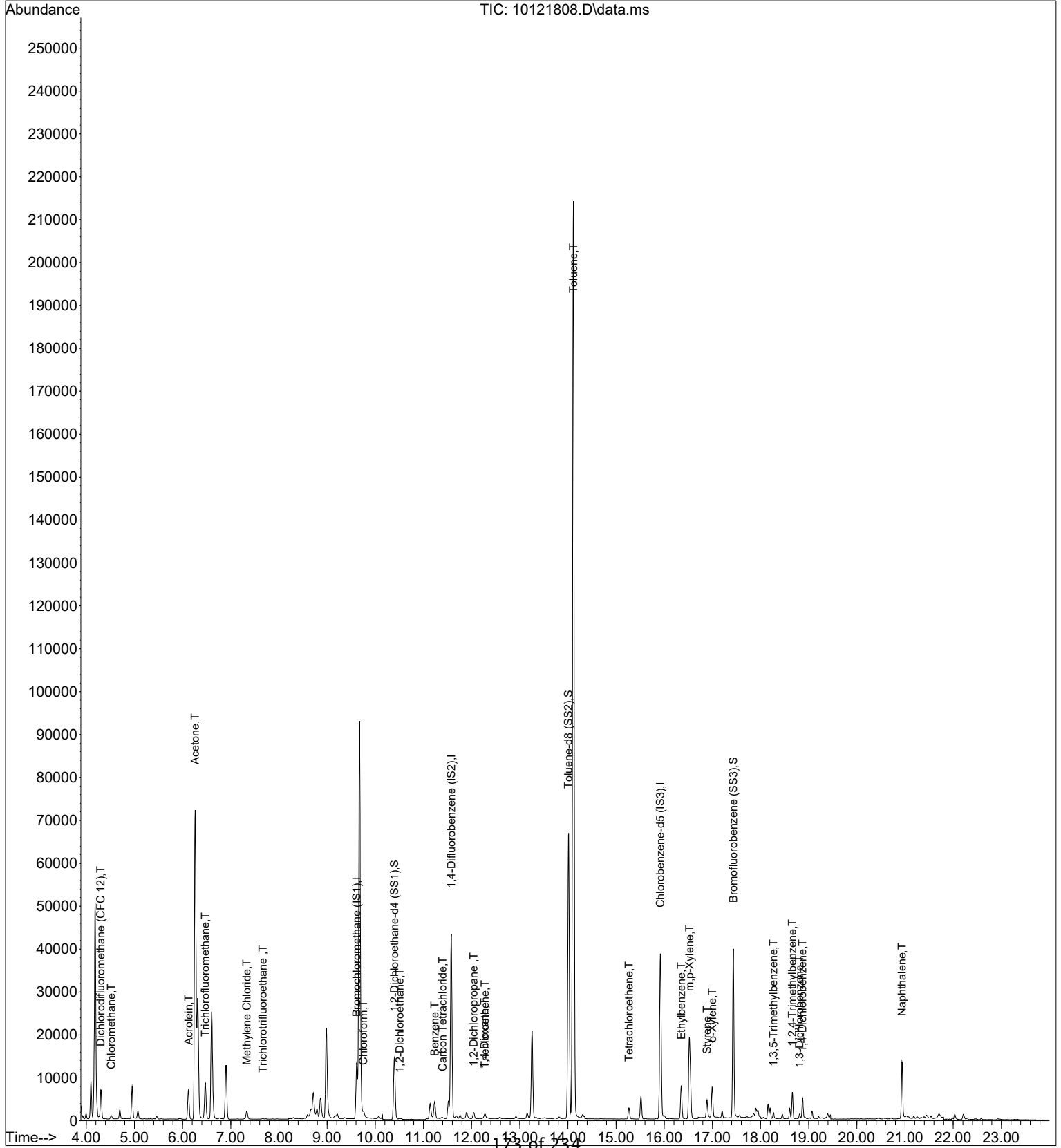
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------|------|------|----------|------|-------|----------|
| 54) Hexachlorobutadiene | 0.00 | 225 | 0 | N.D. | | |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2018_10\12\10121808.D
 Acq On : 12 Oct 2018 12:17
 Sample : P1805236-006 (400mL)
 Misc : S31-09241806

Vial: 8
 Operator: WA
 Inst : MS19

Quant Time: Oct 15 11:41:57 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

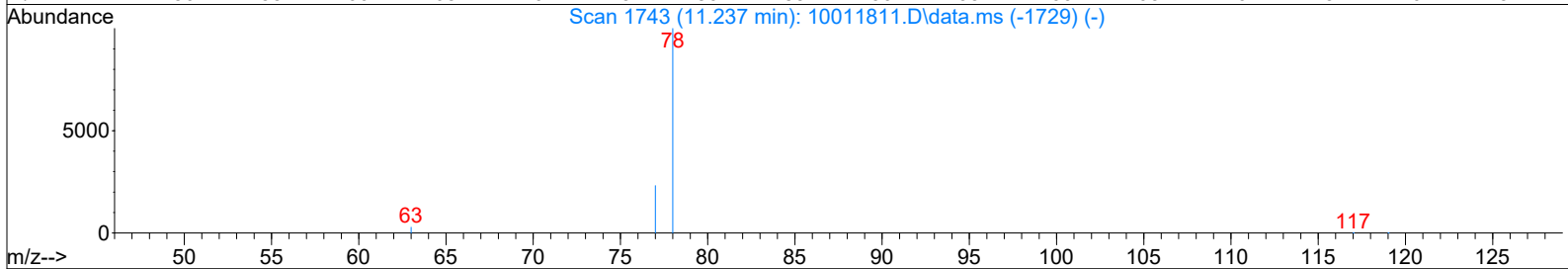
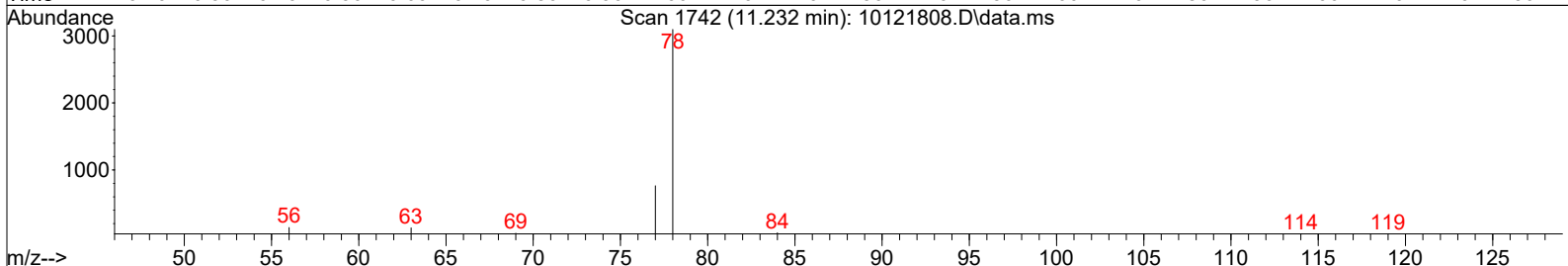
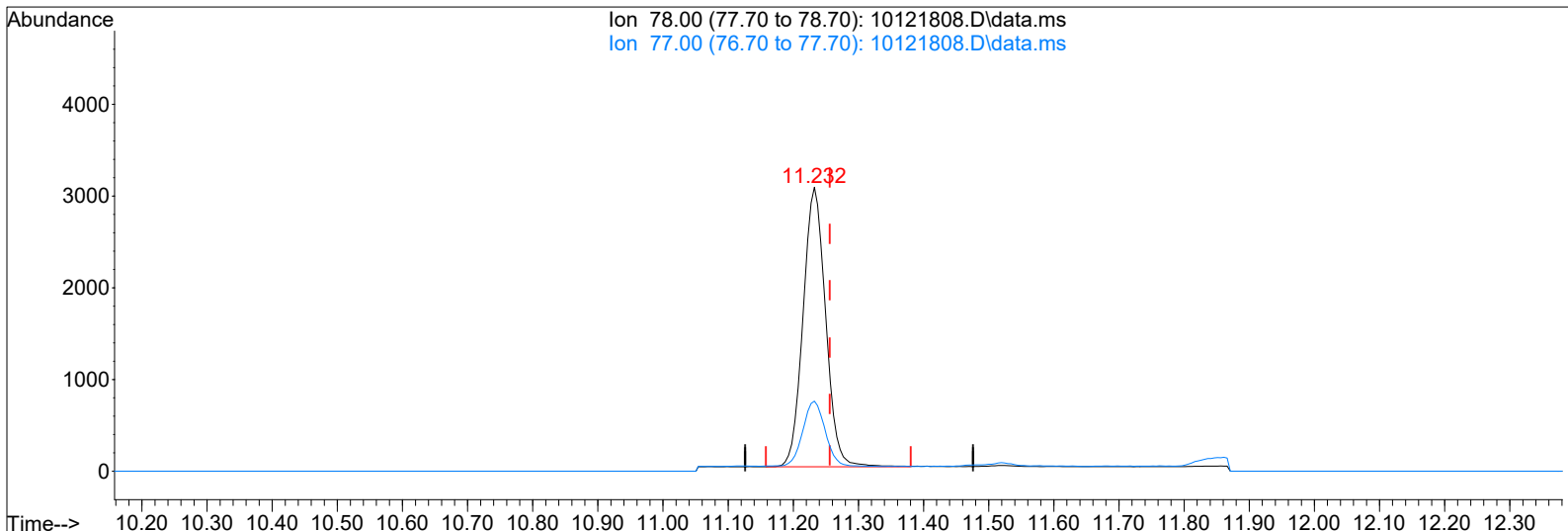


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Data File : I:\MS19\DATA\2018_10\12\10121808.D
 Acq On : 12 Oct 2018 12:17
 Sample : P1805236-006 (400mL)
 Misc : S31-09241806

Vial: 8
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 13:06:39 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121808.D\data.ms

(23) Benzene (T)

11.232min (-0.024) 75.57pg

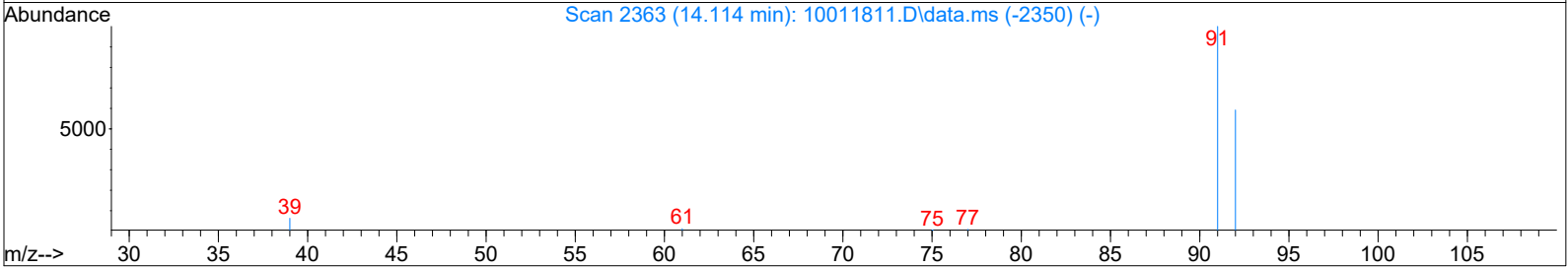
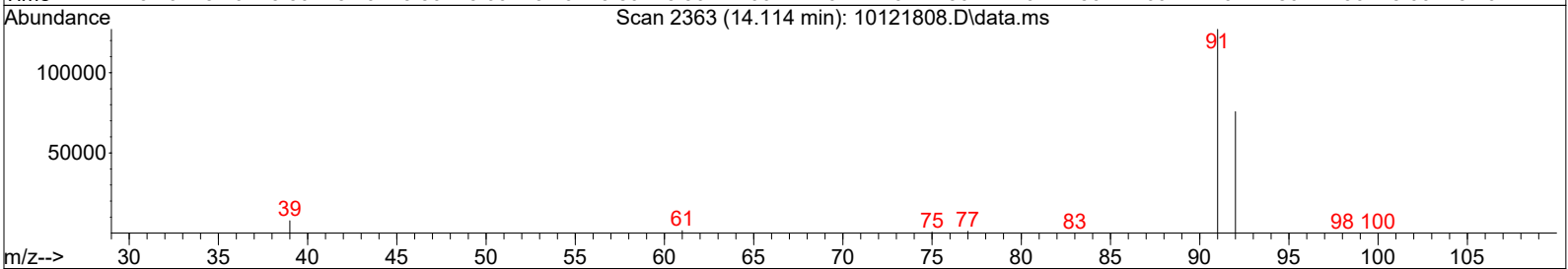
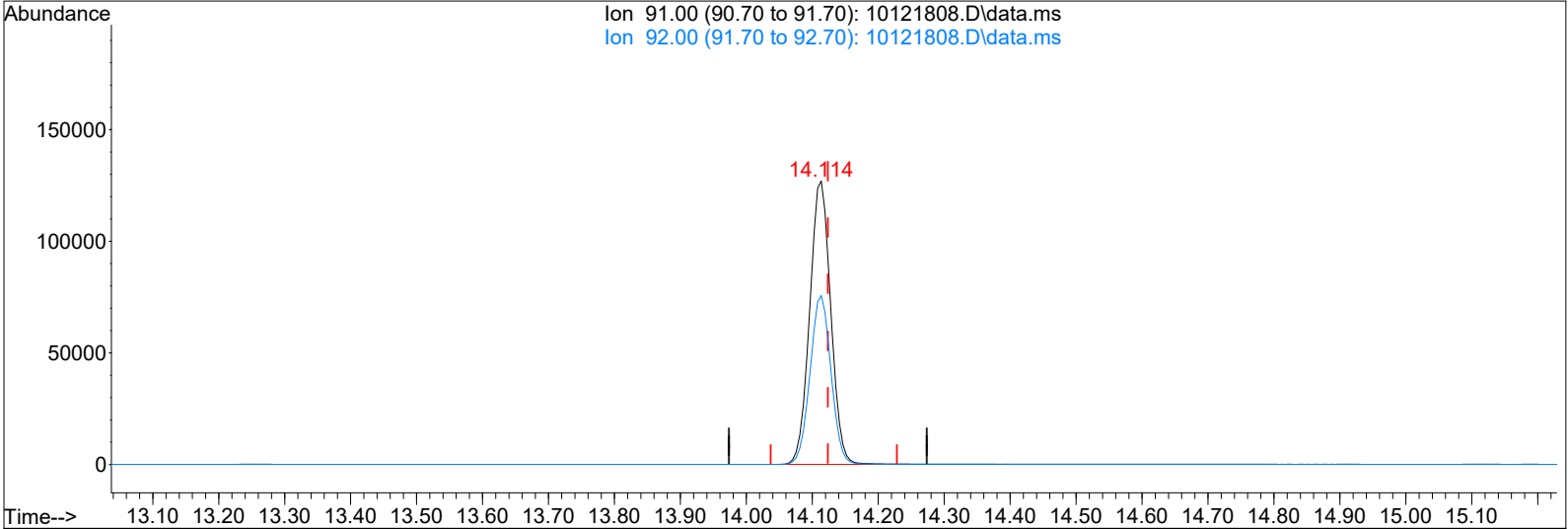
response 7330

| Ion | Exp% | Act% |
|-------|-------|-------|
| 78.00 | 100 | 100 |
| 77.00 | 23.30 | 23.03 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121808.D
 Acq On : 12 Oct 2018 12:17
 Sample : P1805236-006 (400mL)
 Misc : S31-09241806

Vial: 8
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 13:06:39 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121808.D\data.ms

(34) Toluene (T)

14.114min (-0.010) 2970.26pg

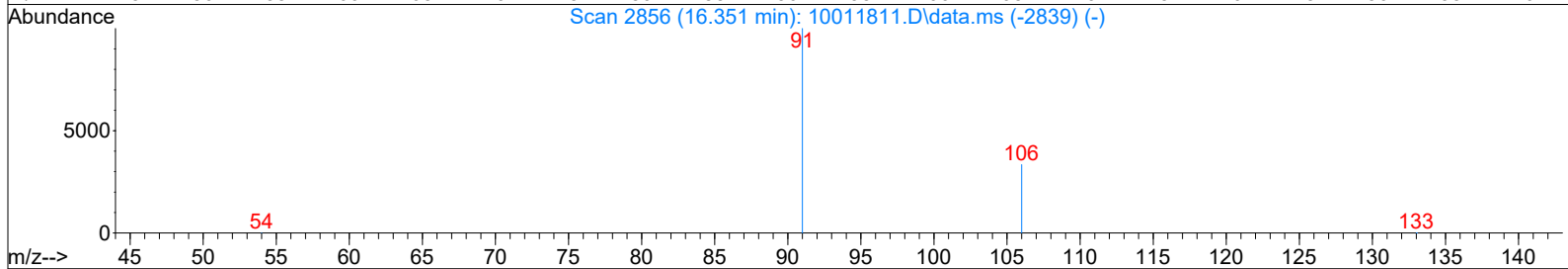
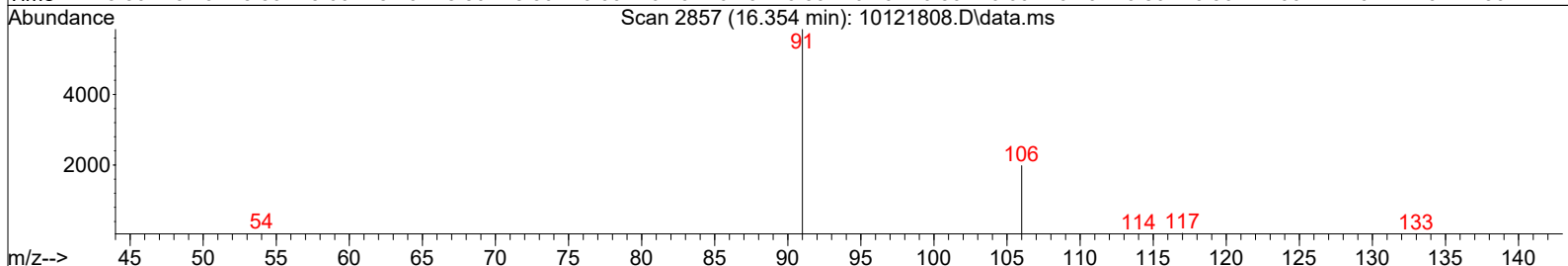
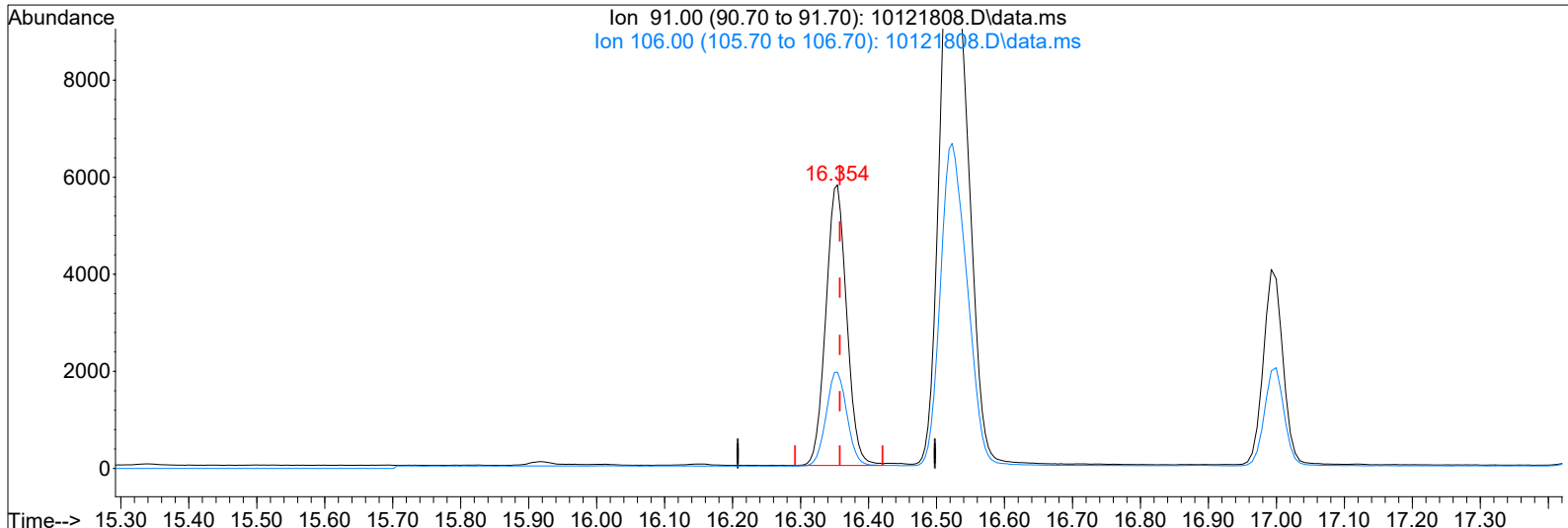
response 282070

| Ion | Exp% | Act% |
|-------|-------|-------|
| 91.00 | 100 | 100 |
| 92.00 | 59.20 | 59.33 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121808.D
 Acq On : 12 Oct 2018 12:17
 Sample : P1805236-006 (400mL)
 Misc : S31-09241806

Vial: 8
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 13:06:39 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121808.D\data.ms

(40) Ethylbenzene (T)

16.354min (-0.004) 122.43pg

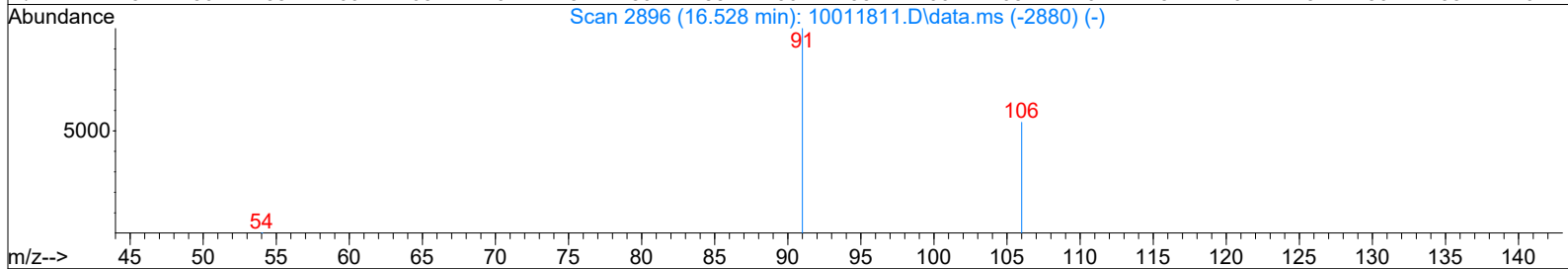
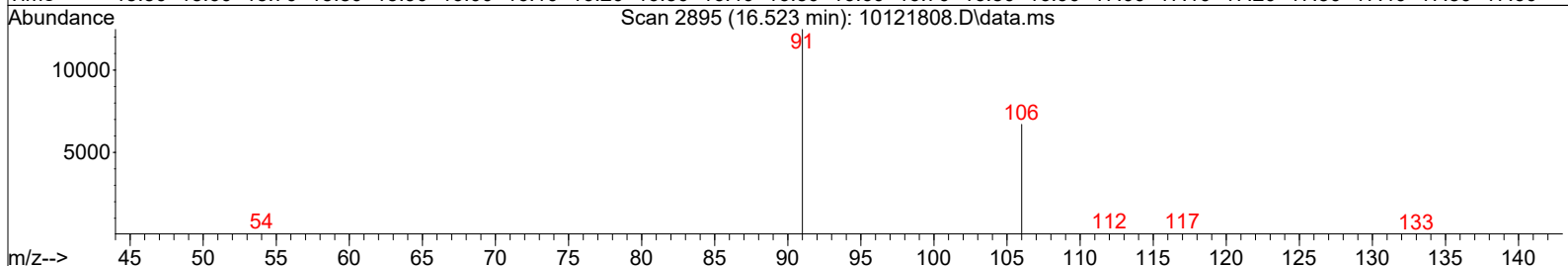
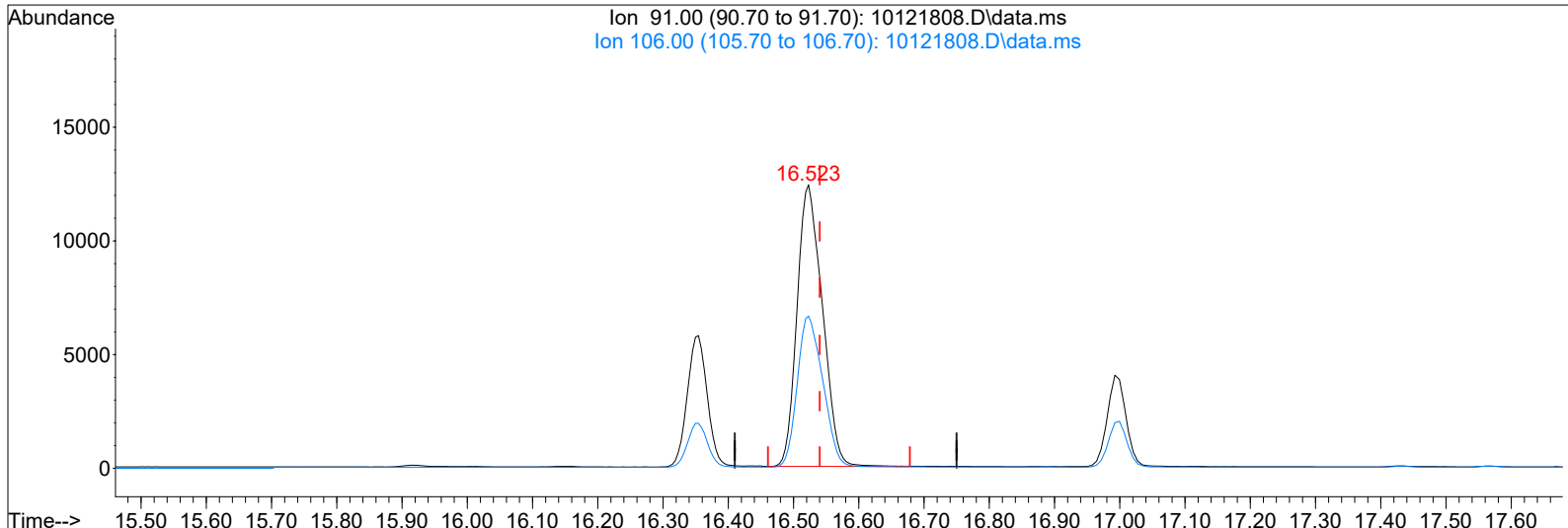
response 12289

| Ion | Exp% | Act% |
|--------|-------|-------|
| 91.00 | 100 | 100 |
| 106.00 | 33.70 | 33.97 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121808.D
 Acq On : 12 Oct 2018 12:17
 Sample : P1805236-006 (400mL)
 Misc : S31-09241806

Vial: 8
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 13:06:39 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121808.D\data.ms

(41) m,p-Xylene (T)

16.523min (-0.017) 435.95pg

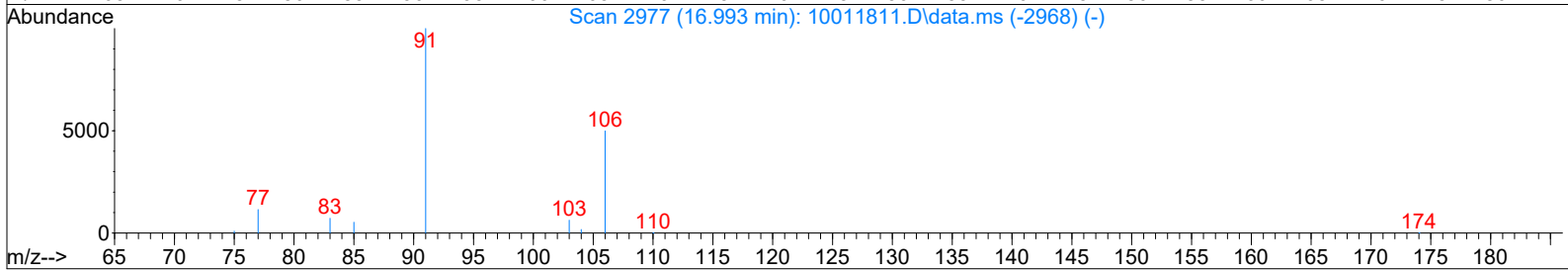
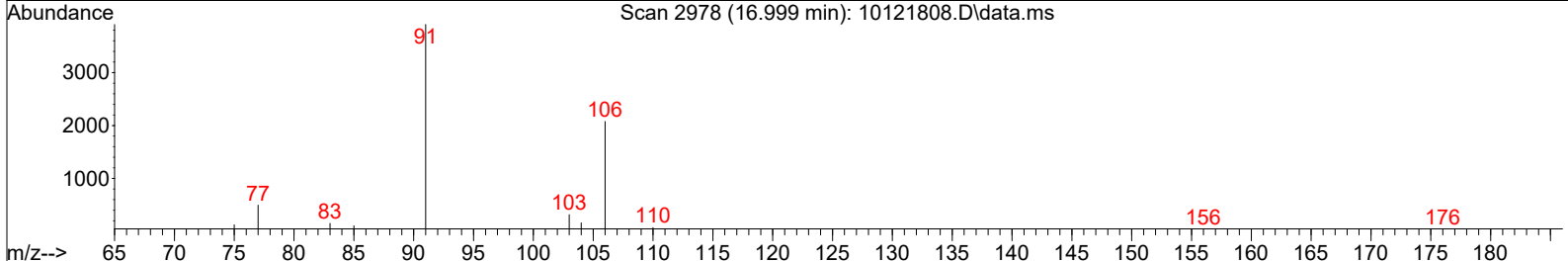
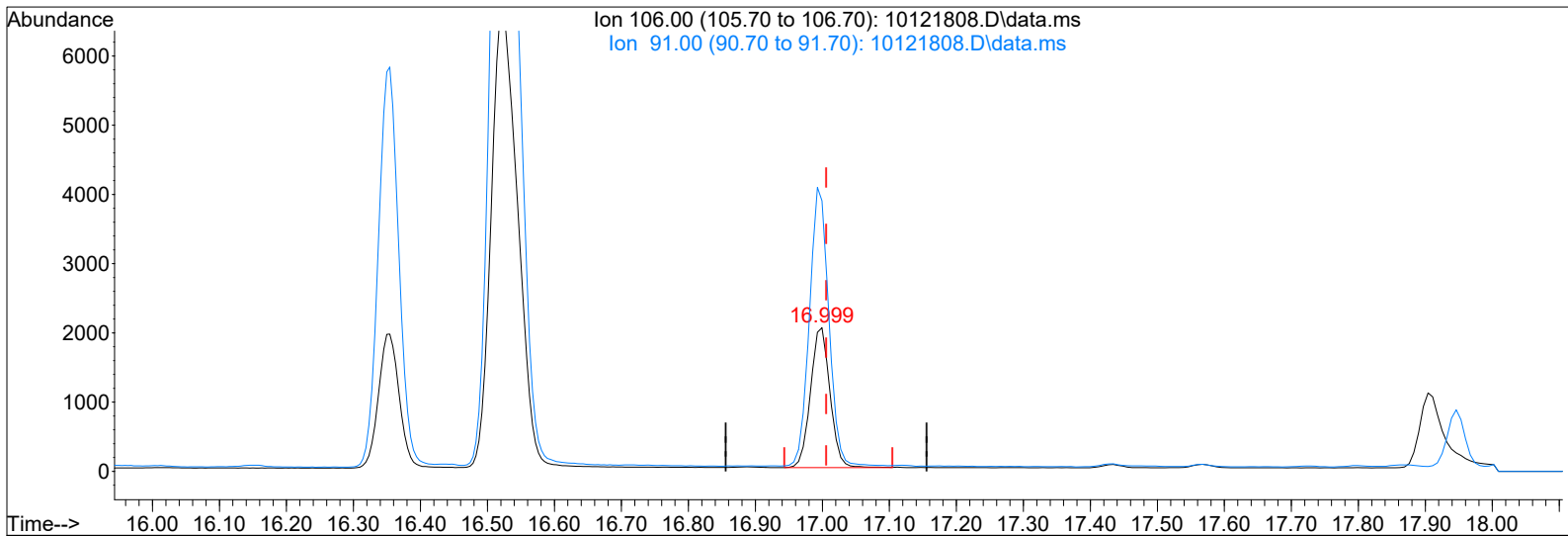
response 33459

| Ion | Exp% | Act% |
|--------|-------|-------|
| 91.00 | 100 | 100 |
| 106.00 | 54.30 | 54.29 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121808.D
 Acq On : 12 Oct 2018 12:17
 Sample : P1805236-006 (400mL)
 Misc : S31-09241806

Vial: 8
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 13:06:39 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121808.D\data.ms

(43) o-Xylene (T)

16.999min (-0.006) 99.52pg

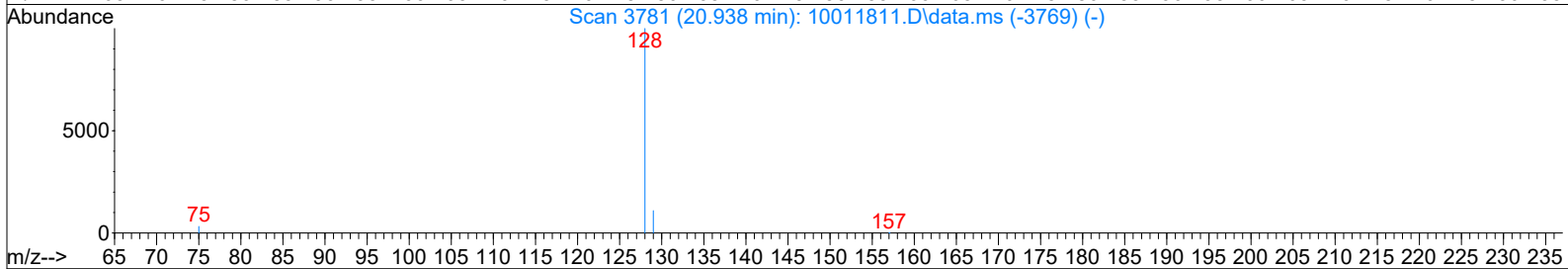
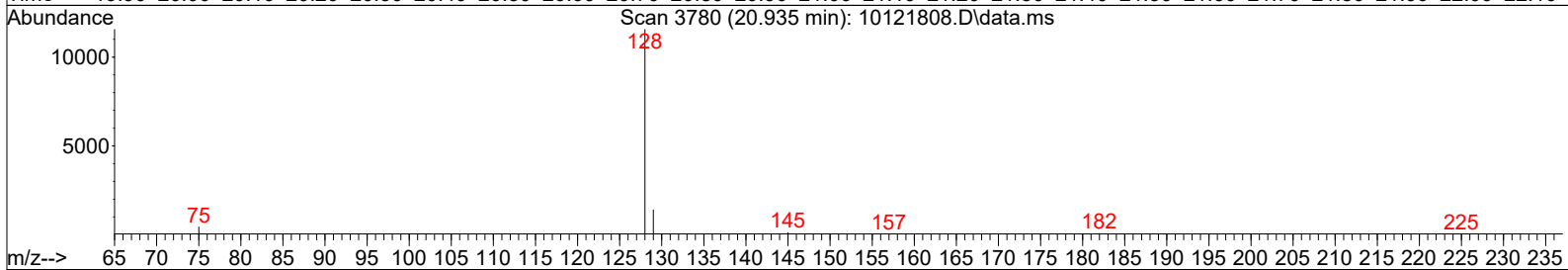
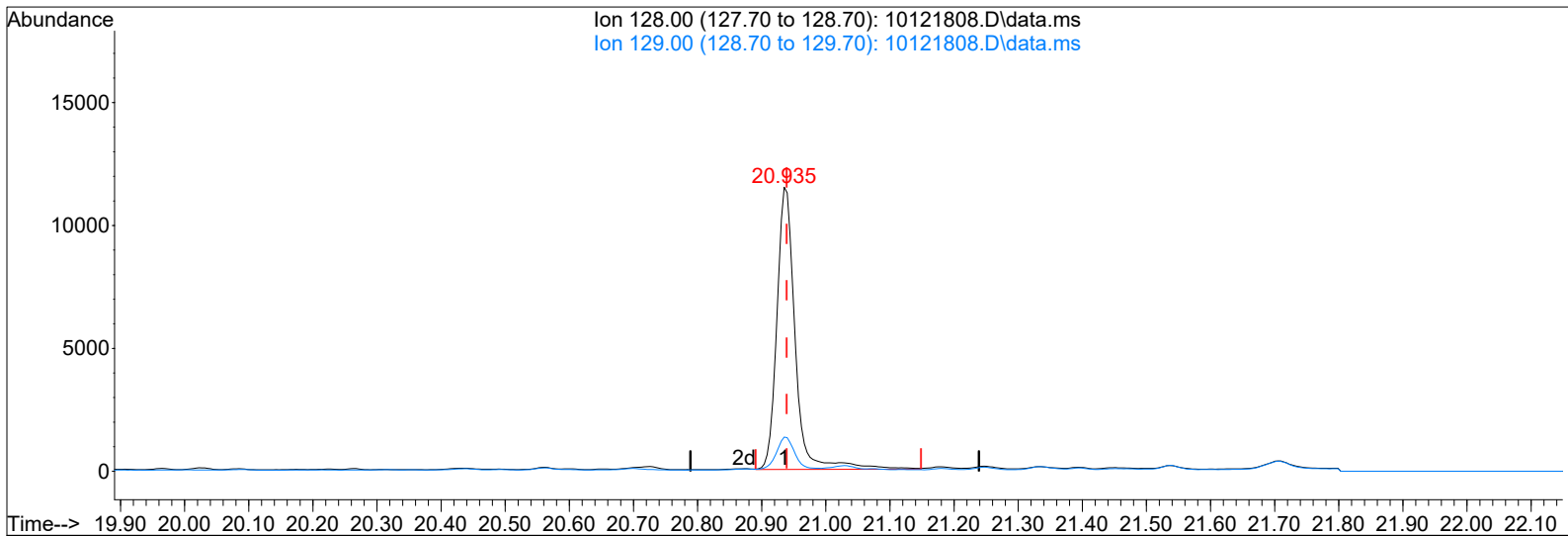
response 4061

| Ion | Exp% | Act% |
|--------|--------|--------|
| 106.00 | 100 | 100 |
| 91.00 | 195.60 | 197.86 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121808.D
 Acq On : 12 Oct 2018 12:17
 Sample : P1805236-006 (400mL)
 Misc : S31-09241806

Vial: 8
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 13:06:39 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



TIC: 10121808.D\data.ms

(53) Naphthalene (T)

20.935min (-0.004) 228.06pg

response 22838

| Ion | Exp% | Act% |
|--------|-------|-------|
| 128.00 | 100 | 100 |
| 129.00 | 10.80 | 11.38 |
| 0.00 | 0.00 | 0.00 |
| 0.00 | 0.00 | 0.00 |

Data File : I:\MS19\DATA\2018_10\12\10121804.D
 Acq On : 12 Oct 2018 4:49
 Sample : MB S19101218_1000mL
 Misc : S31-09241806_AS01329

Vial: 2
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 09:03:17 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

10/12/18

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------------|-------|------|----------|----------|-------|----------|
| 1) Bromochloromethane (IS1) | 9.62 | 130 | 18092 | 1000.000 | pg | -0.03 |
| 25) 1,4-Difluorobenzene (IS2) | 11.58 | 114 | 77381 | 1000.000 | pg | -0.02 |
| 38) Chlorobenzene-d5 (IS3) | 15.92 | 54 | 10109 | 1000.000 | pg | 0.00 |

| System Monitoring Compounds | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------------|----------|-------|------------|----------|-------|----------|
| 20) 1,2-Dichloroethane-d4 ... | 10.40 | 65 | 21387 | 987.529 | pg | -0.03 |
| Spiked Amount 1000.000 | Range 70 | - 130 | Recovery = | 98.75% | | |
| 33) Toluene-d8 (SS2) | 14.02 | 98 | 83222 | 1042.895 | pg | -0.01 |
| Spiked Amount 1000.000 | Range 70 | - 130 | Recovery = | 104.29% | | |
| 45) Bromofluorobenzene (SS3) | 17.44 | 174 | 29303 | 1025.840 | pg | 0.00 |
| Spiked Amount 1000.000 | Range 70 | - 130 | Recovery = | 102.58% | | |

| Target Compounds | R.T. | QIon | Response | Conc | Units | Dev(Min) | Qvalue |
|-------------------------------|-------|------|----------|---------|-------|----------|--------|
| 2) Dichlorodifluoromethan... | 0.00 | 85 | 0 | N.D. | | | |
| 3) Chloromethane | 0.00 | 52 | 0 | N.D. | | | |
| 4) 1,2-Dichloro,1,1,2,2-t... | 0.00 | 85 | 0 | N.D. | | | |
| 5) Vinyl Chloride | 0.00 | 62 | 0 | N.D. | | | |
| 6) 1,3-Butadiene | 0.00 | 54 | 0 | N.D. | | | |
| 7) Bromomethane | 5.36 | 94 | 84 | 4.777 | pg | | 99 |
| 8) Chloroethane | 0.00 | 64 | 0 | N.D. | | | |
| 9) Acrolein | 6.15 | 56 | 205 | 19.362 | pg | | 97 |
| 10) Acetone | 6.30 | 58 | 3495 | 260.379 | pg | | 99 |
| 11) Trichlorofluoromethane | 0.00 | 101 | 0 | N.D. | | | |
| 12) 1,1-Dichloroethene | 0.00 | 96 | 0 | N.D. | | | |
| 13) Methylene Chloride | 0.00 | 84 | 0 | N.D. | | | |
| 14) Trichlorotrifluoroethane | 0.00 | 151 | 0 | N.D. | | | |
| 15) trans-1,2-Dichloroethene | 0.00 | 96 | 0 | N.D. | | | |
| 16) 1,1-Dichloroethane | 0.00 | 63 | 0 | N.D. | | | |
| 17) Methyl tert-Butyl Ether | 0.00 | 73 | 0 | N.D. | | | |
| 18) cis-1,2-Dichloroethene | 0.00 | 96 | 0 | N.D. | | | |
| 19) Chloroform | 9.76 | 83 | 301 | 8.054 | pg | | 100 |
| 21) 1,2-Dichloroethane | 0.00 | 62 | 0 | N.D. | | | |
| 22) 1,1,1-Trichloroethane | 0.00 | 97 | 0 | N.D. | | | |
| 23) Benzene | 11.24 | 78 | 1025 | 10.917 | pg | | 99 |
| 24) Carbon Tetrachloride | 0.00 | 117 | 0 | N.D. | | | |
| 26) 1,2-Dichloropropane | 0.00 | 63 | 0 | N.D. | | | |
| 27) Bromodichloromethane | 0.00 | 83 | 0 | N.D. | | | |
| 28) Trichloroethene | 0.00 | 130 | 0 | N.D. | | | |
| 29) 1,4-Dioxane | 0.00 | 88 | 0 | N.D. | | | |
| 30) cis-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | | |
| 31) trans-1,3-Dichloropropene | 0.00 | 75 | 0 | N.D. | | | |
| 32) 1,1,2-Trichloroethane | 0.00 | 83 | 0 | N.D. | | | |
| 34) Toluene | 14.11 | 91 | 347 | 3.927 | pg | | 98 |
| 35) Dibromochloromethane | 0.00 | 129 | 0 | N.D. | | | |
| 36) 1,2-Dibromoethane | 0.00 | 107 | 0 | N.D. | | | |
| 37) Tetrachloroethene | 0.00 | 166 | 0 | N.D. | | | |
| 39) Chlorobenzene | 0.00 | 112 | 0 | N.D. | | | |
| 40) Ethylbenzene | 16.36 | 91 | 85 | 0.912 | pg | # | 41 |
| 41) m,p-Xylene | 16.53 | 91 | 171 | 2.400 | pg | # | 93 |
| 42) Styrene | 16.90 | 104 | 75 | 1.325 | pg | # | 30 |
| 43) o-Xylene | 0.00 | 106 | 0 | N.D. | | | |
| 44) 1,1,2,2-Tetrachloroethane | 0.00 | 83 | 0 | N.D. | | | |
| 46) 1,3,5-Trimethylbenzene | 0.00 | 105 | 0 | N.D. | | | |
| 47) 1,2,4-Trimethylbenzene | 18.66 | 105 | 61 | 0.767 | pg | # | 21 |
| 48) 1,3-Dichlorobenzene | 18.81 | 146 | 62 | 1.194 | pg | # | 18 |
| 49) 1,4-Dichlorobenzene | 18.88 | 146 | 82 | 1.572 | pg | # | 18 |
| 50) 1,2-Dichlorobenzene | 19.20 | 146 | 52 | 1.043 | pg | # | 18 |
| 51) 1,2-Dibromo-3-chloropr... | 0.00 | 157 | 0 | N.D. | | | |
| 52) 1,2,4-Trichlorobenzene | 20.83 | 182 | 110 | 3.729 | pg | # | 46 |
| 53) Naphthalene | 20.95 | 128 | 421 | 4.528 | pg | # | 71 |

Data File : I:\MS19\DATA\2018_10\12\10121804.D
 Acq On : 12 Oct 2018 4:49
 Sample : MB S19101218_1000mL
 Misc : S31-09241806_AS01329

Vial: 2
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 09:03:17 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

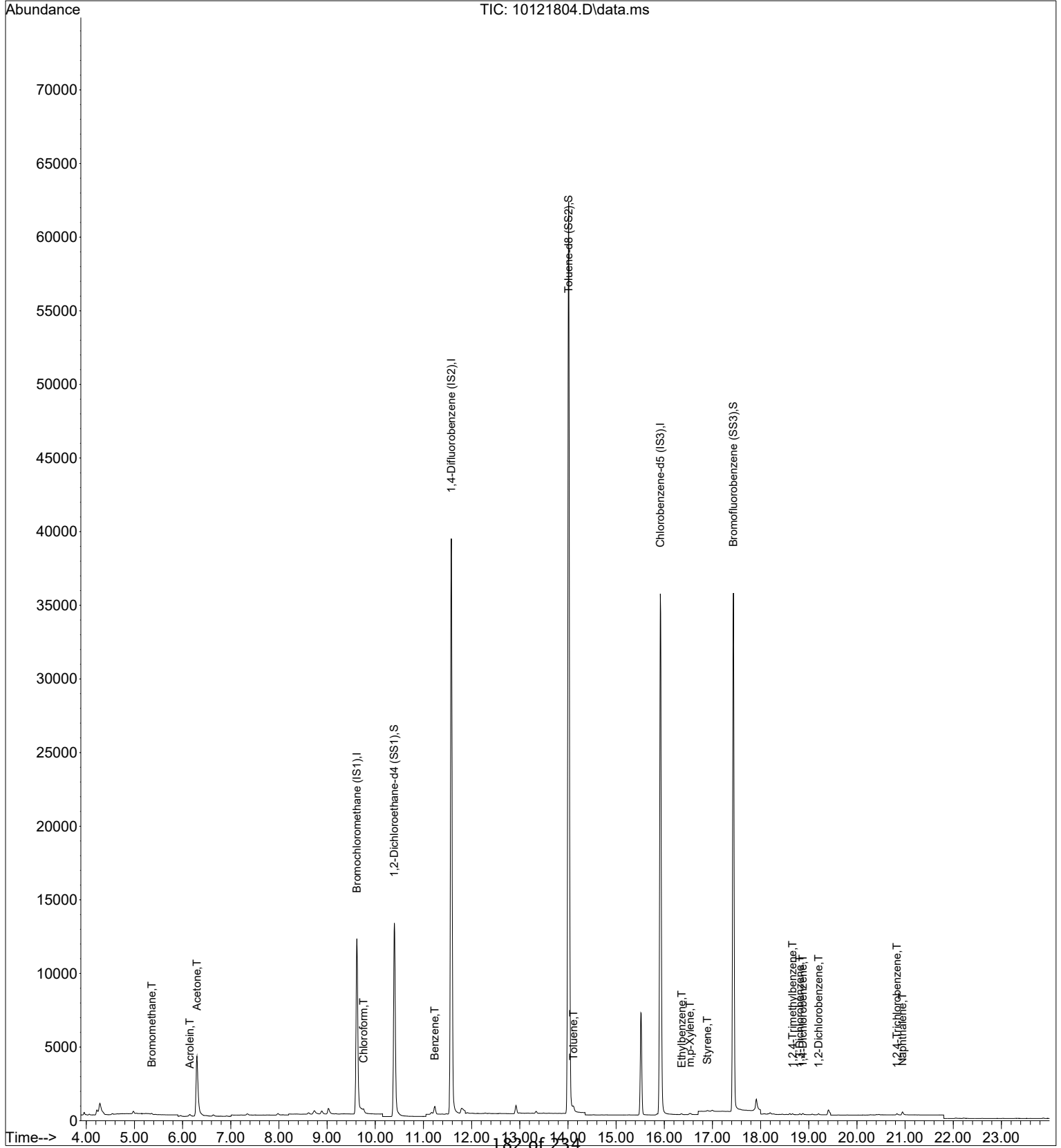
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------|------|------|----------|------|-------|----------|
| 54) Hexachlorobutadiene | 0.00 | 225 | 0 | N.D. | | |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2018_10\12\10121804.D
 Acq On : 12 Oct 2018 4:49
 Sample : MB S19101218_1000mL
 Misc : S31-09241806_AS01329

Vial: 2
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 09:03:17 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



Data File : I:\MS19\DATA\2018_10\12\10121805.D
 Acq On : 12 Oct 2018 5:20
 Sample : LCS S19101218_1000pg
 Misc : S31-09241806/S31-10021801 (11/1)

Vial: 2
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 09:03:18 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

10/12/18

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------------|-------|------|----------|----------|-------|----------|
| 1) Bromochloromethane (IS1) | 9.62 | 130 | 18769 | 1000.000 | pg | -0.03 |
| 25) 1,4-Difluorobenzene (IS2) | 11.58 | 114 | 86003 | 1000.000 | pg | -0.02 |
| 38) Chlorobenzene-d5 (IS3) | 15.92 | 54 | 10717 | 1000.000 | pg | 0.00 |

System Monitoring Compounds

| | | | | | | |
|-------------------------------|----------|----------------|------------|----------|----|-------|
| 20) 1,2-Dichloroethane-d4 ... | 10.40 | 65 | 21854 | 972.694 | pg | -0.03 |
| Spiked Amount | 1000.000 | Range 70 - 130 | Recovery = | 97.27% | | |
| 33) Toluene-d8 (SS2) | 14.02 | 98 | 88576 | 998.710 | pg | -0.01 |
| Spiked Amount | 1000.000 | Range 70 - 130 | Recovery = | 99.87% | | |
| 45) Bromofluorobenzene (SS3) | 17.43 | 174 | 33317 | 1100.192 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range 70 - 130 | Recovery = | 110.02% | | |

Target Compounds

| | R.T. | QIon | Response | Conc | Units | Qvalue |
|-------------------------------|-------|------|----------|----------|-------|--------|
| 2) Dichlorodifluoromethan... | 4.31 | 85 | 40375 | 1009.573 | pg | 100 |
| 3) Chloromethane | 4.52 | 52 | 9142 | 977.608 | pg | 99 |
| 4) 1,2-Dichloro,1,1,2,2-t... | 4.69 | 85 | 26677 | 925.376 | pg | 100 |
| 5) Vinyl Chloride | 4.81 | 62 | 25960 | 999.644 | pg | 100 |
| 6) 1,3-Butadiene | 5.00 | 54 | 17852 | 909.342 | pg | 98 |
| 7) Bromomethane | 5.32 | 94 | 17714 | 970.945 | pg | 100 |
| 8) Chloroethane | 5.55 | 64 | 13293 | 978.310 | pg | 100 |
| 9) Acrolein | 6.11 | 56 | 10135 | 922.728 | pg | 100 |
| 10) Acetone | 6.26 | 58 | 65719 | 4719.482 | pg | 100 |
| 11) Trichlorofluoromethane | 6.48 | 101 | 31105 | 994.529 | pg | 100 |
| 12) 1,1-Dichloroethene | 7.20 | 96 | 22297 | 1007.400 | pg | 99 |
| 13) Methylene Chloride | 7.33 | 84 | 23234 | 1002.099 | pg | 99 |
| 14) Trichlorotrifluoroethane | 7.66 | 151 | 23168 | 1056.921 | pg | 100 |
| 15) trans-1,2-Dichloroethene | 8.36 | 96 | 23556 | 1022.948 | pg | 99 |
| 16) 1,1-Dichloroethane | 8.58 | 63 | 36103 | 1004.533 | pg | 100 |
| 17) Methyl tert-Butyl Ether | 8.65 | 73 | 62384 | 1025.062 | pg | 100 |
| 18) cis-1,2-Dichloroethene | 9.46 | 96 | 24999 | 1019.977 | pg | 100 |
| 19) Chloroform | 9.75 | 83 | 37522 | 967.730 | pg | 100 |
| 21) 1,2-Dichloroethane | 10.51 | 62 | 24246 | 1011.013 | pg | 99 |
| 22) 1,1,1-Trichloroethane | 10.78 | 97 | 33406 | 1015.777 | pg | 100 |
| 23) Benzene | 11.23 | 78 | 95411 | 979.499 | pg | 100 |
| 24) Carbon Tetrachloride | 11.39 | 117 | 30821 | 1026.737 | pg | 100 |
| 26) 1,2-Dichloropropane | 12.05 | 63 | 21794 | 1017.417 | pg | 100 |
| 27) Bromodichloromethane | 12.22 | 83 | 29320 | 1031.149 | pg | 100 |
| 28) Trichloroethene | 12.28 | 130 | 28178 | 1048.577 | pg | 100 |
| 29) 1,4-Dioxane | 12.25 | 88 | 19537 | 1062.668 | pg | 99 |
| 30) cis-1,3-Dichloropropene | 13.12 | 75 | 34154 | 1021.392 | pg | 100 |
| 31) trans-1,3-Dichloropropene | 13.63 | 75 | 29045 | 1031.913 | pg | 100 |
| 32) 1,1,2-Trichloroethane | 13.81 | 83 | 19346 | 1035.871 | pg | 100 |
| 34) Toluene | 14.11 | 91 | 98968 | 1007.837 | pg | 100 |
| 35) Dibromochloromethane | 14.53 | 129 | 27236 | 1035.330 | pg | 100 |
| 36) 1,2-Dibromoethane | 14.78 | 107 | 26198 | 1039.595 | pg | 100 |
| 37) Tetrachloroethene | 15.27 | 166 | 30108 | 1041.907 | pg | 99 |
| 39) Chlorobenzene | 15.97 | 112 | 68811 | 1060.542 | pg | 100 |
| 40) Ethylbenzene | 16.35 | 91 | 105849 | 1071.316 | pg | 100 |
| 41) m,p-Xylene | 16.53 | 91 | 167893 | 2222.429 | pg | 100 |
| 42) Styrene | 16.89 | 104 | 67340 | 1122.240 | pg | 100 |
| 43) o-Xylene | 17.00 | 106 | 44609 | 1110.691 | pg | 100 |
| 44) 1,1,2,2-Tetrachloroethane | 16.97 | 83 | 40214 | 1043.477 | pg | 100 |
| 46) 1,3,5-Trimethylbenzene | 18.27 | 105 | 96110 | 1137.764 | pg | 100 |
| 47) 1,2,4-Trimethylbenzene | 18.66 | 105 | 96524 | 1145.432 | pg | 100 |
| 48) 1,3-Dichlorobenzene | 18.81 | 146 | 60005 | 1089.955 | pg | 100 |
| 49) 1,4-Dichlorobenzene | 18.87 | 146 | 58926 | 1065.841 | pg | 100 |
| 50) 1,2-Dichlorobenzene | 19.19 | 146 | 58550 | 1108.248 | pg | 100 |
| 51) 1,2-Dibromo-3-chloropr... | 19.61 | 157 | 20221 | 1110.017 | pg | 99 |
| 52) 1,2,4-Trichlorobenzene | 20.82 | 182 | 34643 | 1107.673 | pg | 100 |
| 53) Naphthalene | 20.93 | 128 | 106311 | 1078.568 | pg | 100 |

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Data File : I:\MS19\DATA\2018_10\12\10121805.D
 Acq On : 12 Oct 2018 5:20
 Sample : LCS S19101218_1000pg
 Misc : S31-09241806/S31-10021801 (11/1)

Vial: 2
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 09:03:18 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

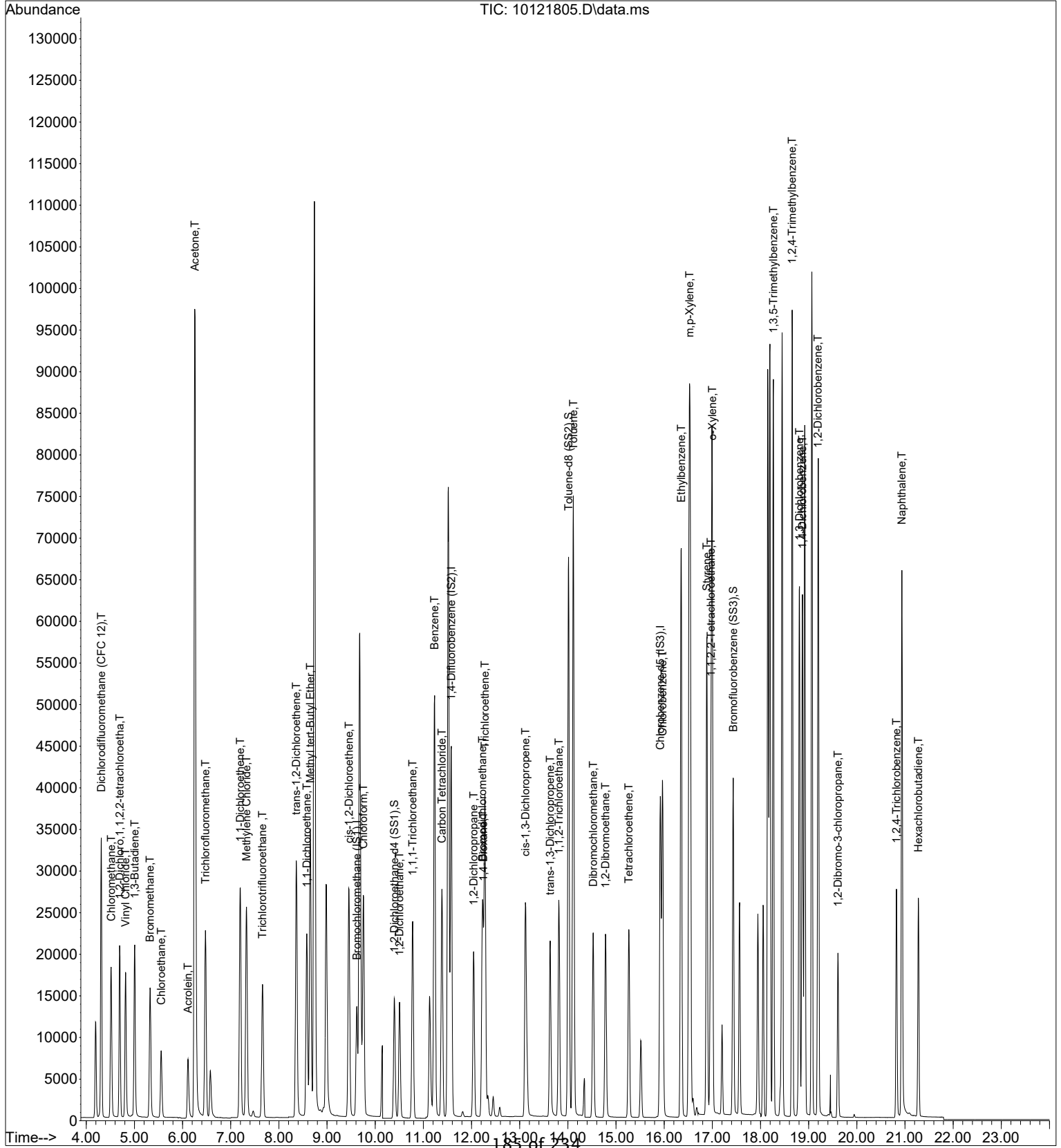
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------|-------|------|----------|----------|-------|----------|
| 54) Hexachlorobutadiene | 21.28 | 225 | 25220 | 1097.342 | pg | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2018_10\12\10121805.D
 Acq On : 12 Oct 2018 5:20
 Sample : LCS S19101218_1000pg
 Misc : S31-09241806/S31-10021801 (11/1)

Vial: 2
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 09:03:18 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



Method Path : I:\MS19\METHODS\
Method File : S19100118.M
Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
Last Update : Tue Oct 02 06:45:50 2018
Response Via : Initial Calibration

Calibration Files
20 =10011807.D 50 =10011808.D 100 =10011809.D 500 =10011810.D 1000 =10011811.D 2000 =10011812.D 5000 =10011813.D
10K =10011814.D 25K =10011815.D 50K =10011816.D

| Compound | 20 | 50 | 100 | 500 | 1000 | 2000 | 5000 | 10K | 25K | 50K | AVG | %RSD |
|------------------------------|----------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| -----ISTD----- | | | | | | | | | | | | |
| 1) I Bromochloromethane... | 2.473 | 2.247 | 2.130 | 2.080 | 2.439 | 2.198 | 1.952 | 1.896 | 2.033 | 1.858 | 2.131 | 9.94 |
| 2) T Dichlorodifluo... | 0.600 | 0.542 | 0.492 | 0.397 | 0.562 | 0.507 | 0.452 | 0.440 | 0.514 | 0.477 | 0.498 | 12.16 |
| 3) T Chloromethane | 1.777 | 1.607 | 1.518 | 1.477 | 1.732 | 1.565 | 1.396 | 1.355 | 1.486 | 1.446 | 1.536 | 8.92 |
| 4) T 1,2-Dichloro,1... | 1.557 | 1.431 | 1.353 | 1.333 | 1.559 | 1.420 | 1.266 | 1.248 | 1.379 | 1.289 | 1.384 | 7.95 |
| 5) T Vinyl Chloride | 1.161 | 0.966 | 0.920 | 0.864 | 1.240 | 1.071 | 0.924 | 0.899 | 1.240 | 1.175 | 1.046 | 14.18 |
| 6) T 1,3-Butadiene | 1.243 | 1.026 | 0.948 | 0.882 | 1.073 | 0.971 | 0.874 | 0.852 | 0.949 | 0.903 | 0.972 | 12.11 |
| 7) T Bromomethane | 0.828 | 0.740 | 0.705 | 0.688 | 0.809 | 0.735 | 0.663 | 0.653 | 0.728 | 0.689 | 0.724 | 7.99 |
| 8) T Chloroethane | 0.784 | 0.634 | 0.563 | 0.570 | 0.609 | 0.572 | 0.520 | 0.511 | 0.558 | 0.531 | 0.585 | 13.57 |
| 9) T Acrolein | 0.943 | 0.764 | 0.764 | 0.807 | 0.732 | 0.659 | 0.637 | 0.650 | 0.742 | 0.742 | 0.742 | 14.74 |
| 10) T Acetone | 1.912 | 1.712 | 1.618 | 1.580 | 1.869 | 1.697 | 1.559 | 1.525 | 1.659 | 1.532 | 1.666 | 8.10 |
| 11) T Trichlorofluor... | 1.295 | 1.147 | 1.099 | 1.105 | 1.323 | 1.233 | 1.125 | 1.110 | 1.222 | 1.132 | 1.179 | 7.04 |
| 12) T 1,1-Dichloroet... | 1.438 | 1.256 | 1.188 | 1.166 | 1.372 | 1.259 | 1.150 | 1.133 | 1.240 | 1.151 | 1.235 | 8.23 |
| 13) T Methylene Chlo... | 1.358 | 1.251 | 1.095 | 0.981 | 1.364 | 1.244 | 1.079 | 1.007 | 1.195 | 1.106 | 1.168 | 11.63 |
| 14) T Trichlorotrifl... | 1.316 | 1.183 | 1.150 | 1.153 | 1.373 | 1.273 | 1.176 | 1.170 | 1.283 | 1.191 | 1.227 | 6.37 |
| 15) T trans-1,2-Dich... | 2.134 | 1.927 | 1.818 | 1.770 | 2.172 | 1.989 | 1.801 | 1.782 | 1.960 | 1.796 | 1.915 | 7.72 |
| 16) T 1,1-Dichloroet... | 3.208 | 2.921 | 2.818 | 2.989 | 3.716 | 3.469 | 3.234 | 3.222 | 3.560 | 3.288 | 3.243 | 8.77 |
| 17) T Methyl tert-Bu... | 1.367 | 1.246 | 1.206 | 1.230 | 1.479 | 1.372 | 1.271 | 1.255 | 1.369 | 1.263 | 1.306 | 6.60 |
| 18) T cis-1,2-Dichlo... | 2.744 | 2.130 | 1.901 | 2.238 | 2.051 | 1.862 | 1.830 | 1.998 | 1.838 | 2.066 | 14.06 | |
| 19) T Chloroform | 1.189 | 1.195 | 1.209 | 1.219 | 1.187 | 1.196 | 1.195 | 1.203 | 1.188 | 1.190 | 1.197 | 0.86 |
| 20) S 1,2-Dichloroet... | 1.355 | 1.255 | 1.218 | 1.231 | 1.455 | 1.342 | 1.226 | 1.205 | 1.299 | 1.192 | 1.278 | 6.57 |
| 21) T 1,2-Dichloroet... | 1.924 | 1.750 | 1.667 | 1.669 | 1.987 | 1.814 | 1.659 | 1.635 | 1.780 | 1.638 | 1.752 | 7.10 |
| 22) T 1,1,1-Trichlor... | 7.432 | 5.606 | 4.900 | 4.761 | 5.550 | 5.114 | 4.625 | 4.523 | 4.896 | 4.490 | 5.190 | 16.92 |
| 23) T Benzene | 1.750 | 1.595 | 1.497 | 1.498 | 1.808 | 1.663 | 1.521 | 1.499 | 1.645 | 1.518 | 1.599 | 7.10 |
| 24) T Carbon Tetrach... | -----ISTD----- | | | | | | | | | | | |
| 25) I 1,4-Difluorobenzen... | 0.287 | 0.253 | 0.240 | 0.231 | 0.281 | 0.257 | 0.236 | 0.230 | 0.248 | 0.227 | 0.249 | 8.45 |
| 26) T 1,2-Dichloropr... | 0.370 | 0.337 | 0.316 | 0.305 | 0.371 | 0.342 | 0.315 | 0.307 | 0.335 | 0.307 | 0.331 | 7.54 |
| 27) T Bromodichlorom... | 0.355 | 0.314 | 0.297 | 0.290 | 0.353 | 0.324 | 0.296 | 0.287 | 0.316 | 0.293 | 0.312 | 7.99 |
| 28) T Trichloroethene | 0.224 | 0.199 | 0.191 | 0.196 | 0.247 | 0.229 | 0.213 | 0.207 | 0.223 | 0.210 | 0.214 | 7.97 |
| 29) T 1,4-Dioxane | 0.399 | 0.355 | 0.344 | 0.357 | 0.440 | 0.414 | 0.391 | 0.385 | 0.418 | 0.384 | 0.389 | 7.82 |
| 30) T cis-1,3-Dichlo... | 0.295 | 0.282 | 0.271 | 0.301 | 0.370 | 0.354 | 0.340 | 0.339 | 0.373 | 0.347 | 0.327 | 11.31 |
| 31) T trans-1,3-Dich... | 0.242 | 0.221 | 0.209 | 0.203 | 0.246 | 0.226 | 0.206 | 0.200 | 0.218 | 0.201 | 0.217 | 7.70 |
| 32) T 1,1,2-Trichlor... | 1.055 | 1.042 | 1.035 | 1.031 | 1.020 | 1.019 | 1.025 | 1.029 | 1.027 | 1.030 | 1.031 | 1.03 |
| 33) S Toluene-d8 (SS2) | 1.377 | 1.171 | 1.091 | 1.064 | 1.272 | 1.170 | 1.077 | 1.044 | 1.129 | 1.024 | 1.142 | 9.69 |
| 34) T Toluene | 0.338 | 0.299 | 0.284 | 0.281 | 0.343 | 0.320 | 0.296 | 0.289 | 0.317 | 0.293 | 0.306 | 7.26 |
| 35) T Dibromochlorom... | 0.317 | 0.285 | 0.273 | 0.275 | 0.329 | 0.307 | 0.283 | 0.278 | 0.302 | 0.280 | 0.293 | 6.65 |
| 36) T 1,2-Dibromoethane | 0.389 | 0.352 | 0.329 | 0.316 | 0.377 | 0.345 | 0.313 | 0.303 | 0.330 | 0.304 | 0.336 | 8.87 |
| 37) T Tetrachloroethene | -----ISTD----- | | | | | | | | | | | |
| 38) I Chlorobenzene-d5 (...) | 7.143 | 6.485 | 6.096 | 5.893 | 7.105 | 6.497 | 5.856 | 5.507 | 5.484 | 4.475 | 6.054 | 13.33 |
| 39) T Chlorobenzene | 0.961 | 0.874 | 0.833 | 0.892 | 1.114 | 1.045 | 0.963 | 0.909 | 0.902 | 0.726 | 0.922 | E1 11.72 |
| 40) T Ethylbenzene | 7.148 | 6.339 | 6.157 | 6.958 | 8.758 | 8.115 | 7.393 | 6.946 | 6.863 | 5.815 | 7.049 | 12.57 |
| 41) T m,p-Xylene | -----ISTD----- | | | | | | | | | | | |

10/2/18

Method Path : I:\MS19\METHODS\
 Method File : S19100118.M

| Title | : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS) | | | | | | | | | | | |
|-------------------------|---|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|----------|
| 42) T Styrene | 4.809 | 4.551 | 4.583 | 5.588 | 6.858 | 6.566 | 6.164 | 5.868 | 6.074 | 4.930 | 5.599 | 14.99 |
| 43) T o-Xylene | 3.672 | 3.480 | 3.417 | 3.747 | 4.661 | 4.297 | 3.905 | 3.659 | 3.662 | 2.977 | 3.748 | 12.44 |
| 44) T 1,1,2,2-Tetrac... | 4.035 | 3.702 | 3.522 | 3.523 | 4.327 | 3.981 | 3.583 | 3.359 | 3.279 | 2.650 | 3.596 | 12.94 |
| 45) S Bromofluoroben... | 2.852 | 2.867 | 2.904 | 3.004 | 3.011 | 2.992 | 2.971 | 2.843 | 2.557 | 2.255 | 2.826 | 8.51 |
| 46) T 1,3,5-Trimethy... | 0.712 | 0.699 | 0.706 | 0.792 | 1.008 | 0.922 | 0.839 | 0.788 | 0.787 | 0.629 | 0.788 | E1 14.32 |
| 47) T 1,2,4-Trimethy... | 0.694 | 0.691 | 0.704 | 0.800 | 1.015 | 0.937 | 0.847 | 0.791 | 0.776 | 0.608 | 0.786 | E1 15.58 |
| 48) T 1,3-Dichlorobe... | 5.469 | 5.156 | 4.996 | 5.127 | 6.210 | 5.722 | 5.138 | 4.806 | 4.807 | 3.938 | 5.137 | 11.75 |
| 49) T 1,4-Dichlorobe... | 5.534 | 5.296 | 5.083 | 5.118 | 6.178 | 5.636 | 5.106 | 4.803 | 4.823 | 4.010 | 5.159 | 11.18 |
| 50) T 1,2-Dichlorobe... | 5.355 | 4.983 | 4.834 | 4.861 | 5.998 | 5.503 | 4.940 | 4.614 | 4.511 | 3.698 | 4.930 | 12.58 |
| 51) T 1,2-Dibromo-3-... | 1.549 | 1.547 | 1.549 | 1.680 | 2.055 | 1.980 | 1.829 | 1.731 | 1.674 | 1.406 | 1.700 | 12.06 |
| 52) T 1,2,4-Trichlor... | 2.814 | 2.746 | 2.593 | 2.776 | 3.010 | 3.435 | 3.187 | 3.017 | 3.007 | 2.597 | 2.918 | 9.10 |
| 53) T Naphthalene | 0.792 | 0.780 | 0.748 | 0.863 | 0.930 | 1.119 | 1.032 | 0.973 | 1.068 | 0.892 | 0.920 | E1 13.87 |
| 54) T Hexachlorobuta... | 2.386 | 2.325 | 2.218 | 2.163 | 1.879 | 2.460 | 2.217 | 2.084 | 1.999 | 1.714 | 2.145 | 10.79 |

(#) = Out of Range

10/4/18

Primary Source Standards Concentrations (Working & Initial Calibration)

Table with columns for Compounds, Source Std. mg/m³, Primary Working Standards (200ng/L, 4ng/L, 100ng/L, 5000ng/L), Dilution Factors (5, 250, 1000, 5000), and Working STD Conc. (ng/L) at various levels (0.050ng, 0.100ng, 0.250ng, 0.500ng, 1.000ng, 2.000ng, 5.000ng, 10.000ng, 20.000ng, 50.000ng, 100.000ng, 250.000ng, 500.000ng, 1000.000ng, 2500.000ng, 5000.000ng).

Method : I:\MS19\METHODS\S19100118.M (RTE Integrator)
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 Last Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration

| # | ID | Conc | ISTD Conc | Path\File |
|----|------|------|--------------|------------------------------------|
| 2 | 20 | 1000 | 1000 | I:\MS19\DATA\2018_10\01\10011807.D |
| 3 | 50 | 1000 | 1000 | I:\MS19\DATA\2018_10\01\10011808.D |
| 4 | 100 | 1000 | 1000 | I:\MS19\DATA\2018_10\01\10011809.D |
| 5 | 500 | 1000 | 1000 | I:\MS19\DATA\2018_10\01\10011810.D |
| 6 | 1000 | 1000 | 1000 | I:\MS19\DATA\2018_10\01\10011811.D |
| 7 | 2000 | 1000 | 1000 | I:\MS19\DATA\2018_10\01\10011812.D |
| 8 | 5000 | 1000 | 1000 | I:\MS19\DATA\2018_10\01\10011813.D |
| 9 | 10K | 1000 | 1000 | I:\MS19\DATA\2018_10\01\10011814.D |
| 10 | 25K | 1000 | 1000 | I:\MS19\DATA\2018_10\01\10011815.D |
| 11 | 50K | 1000 | 1000 | I:\MS19\DATA\2018_10\01\10011816.D |

~~DA~~ 10/2/18

| # | ID | Update Time | Quant Time | Acquisition Time |
|----|------|-------------------|-------------------|------------------|
| 2 | 20 | Oct 02 06:44 2018 | Oct 01 15:35 2018 | 1 Oct 2018 12:11 |
| 3 | 50 | Oct 02 06:44 2018 | Oct 01 15:35 2018 | 1 Oct 2018 13:09 |
| 4 | 100 | Oct 02 06:44 2018 | Oct 01 15:35 2018 | 1 Oct 2018 13:44 |
| 5 | 500 | Oct 02 06:44 2018 | Oct 01 15:35 2018 | 1 Oct 2018 14:21 |
| 6 | 1000 | Oct 02 06:44 2018 | Oct 01 15:35 2018 | 1 Oct 2018 14:52 |
| 7 | 2000 | Oct 02 06:45 2018 | Oct 02 06:40 2018 | 1 Oct 2018 15:36 |
| 8 | 5000 | Oct 02 06:45 2018 | Oct 02 06:40 2018 | 1 Oct 2018 16:08 |
| 9 | 10K | Oct 02 06:45 2018 | Oct 02 06:40 2018 | 1 Oct 2018 16:39 |
| 10 | 25K | Oct 02 06:45 2018 | Oct 02 06:40 2018 | 1 Oct 2018 17:11 |
| 11 | 50K | Oct 02 06:45 2018 | Oct 02 06:40 2018 | 1 Oct 2018 17:43 |

S19100118.M

Tue Oct 02 09:00:05 2018

Data File : I:\MS19\DATA\2018_10\01\10011807.D
 Acq On : 1 Oct 2018 12:11
 Sample : 20pg S19100118 ICAL Std
 Misc : S31-09241806/S31-09271803 (10/26)

Vial: 13
 Operator: WA
 Inst : MS19

Quant Time: Oct 01 15:35:06 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

~~10/1~~ 10/2/18

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------------|-------|------|----------|----------|-------|----------|
| 1) Bromochloromethane (IS1) | 9.62 | 130 | 20699 | 1000.000 | pg | 0.00 |
| 25) 1,4-Difluorobenzene (IS2) | 11.58 | 114 | 88774 | 1000.000 | pg | 0.00 |
| 38) Chlorobenzene-d5 (IS3) | 15.92 | 54 | 11242 | 1000.000 | pg | 0.00 |

System Monitoring Compounds

| | | | | | | |
|-------------------------------|----------|----------------|----------|----------|---------|------|
| 20) 1,2-Dichloroethane-d4 ... | 10.40 | 65 | 24610 | 924.137 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range 70 - 130 | Recovery | = | 92.41% | |
| 33) Toluene-d8 (SS2) | 14.02 | 98 | 93636 | 989.835 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range 70 - 130 | Recovery | = | 98.98% | |
| 45) Bromofluorobenzene (SS3) | 17.43 | 174 | 32067 | 1038.075 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range 70 - 130 | Recovery | = | 103.81% | |

Target Compounds

| | R.T. | QIon | Response | Conc | Units | Qvalue |
|-------------------------------|-------|------|----------|---------|-------|--------|
| 2) Dichlorodifluoromethan... | 4.34 | 85 | 1073 | 25.626 | pg | 100 |
| 3) Chloromethane | 4.55 | 52 | 250 | 24.961 | pg | 97 |
| 4) 1,2-Dichloro,1,1,2,2-t... | 4.73 | 85 | 751 | 24.924 | pg | 99 |
| 5) Vinyl Chloride | 4.85 | 62 | 665 | 23.916 | pg | 94 |
| 6) 1,3-Butadiene | 5.04 | 54 | 509 | 25.518 | pg | # 72 |
| 7) Bromomethane | 5.36 | 94 | 511 | 27.857 | pg | 100 |
| 8) Chloroethane | 5.59 | 64 | 347 | 24.289 | pg | 98 |
| 9) Acrolein | 6.15 | 56 | 342 | 32.266 | pg | 98 |
| 10) Acetone | 6.30 | 58 | 4028 | 262.547 | pg | 96 |
| 11) Trichlorofluoromethane | 6.50 | 101 | 832 | 25.754 | pg | 98 |
| 12) 1,1-Dichloroethene | 7.22 | 96 | 569 | 25.301 | pg | 98 |
| 13) Methylene Chloride | 7.34 | 84 | 630 | 26.254 | pg | 98 |
| 14) Trichlorotrifluoroethane | 7.67 | 151 | 592 | 27.300 | pg | 100 |
| 15) trans-1,2-Dichloroethene | 8.38 | 96 | 589 | 25.118 | pg | 99 |
| 16) 1,1-Dichloroethane | 8.58 | 63 | 903 | 23.963 | pg | 99 |
| 17) Methyl tert-Butyl Ether | 8.69 | 73 | 1421 | 23.047 | pg | 99 |
| 18) cis-1,2-Dichloroethene | 9.46 | 96 | 604 | 24.436 | pg | 98 |
| 19) Chloroform | 9.76 | 83 | 1443 | 36.144 | pg | 99 |
| 21) 1,2-Dichloroethane | 10.51 | 62 | 592 | 23.286 | pg | 98 |
| 22) 1,1,1-Trichloroethane | 10.78 | 97 | 858 | 25.546 | pg | 100 |
| 23) Benzene | 11.24 | 78 | 3252 | 33.579 | pg | 100 |
| 24) Carbon Tetrachloride | 11.39 | 117 | 768 | 27.434 | pg | 100 |
| 26) 1,2-Dichloropropane | 12.05 | 63 | 544 | 26.450 | pg | 98 |
| 27) Bromodichloromethane | 12.23 | 83 | 701 | 26.064 | pg | 97 |
| 28) Trichloroethene | 12.28 | 130 | 668 | 27.141 | pg | 99 |
| 29) 1,4-Dioxane | 12.27 | 88 | 422 | 24.440 | pg | 98 |
| 30) cis-1,3-Dichloropropene | 13.13 | 75 | 793 | 25.244 | pg | 99 |
| 31) trans-1,3-Dichloropropene | 13.64 | 75 | 559 | 21.205 | pg | 95 |
| 32) 1,1,2-Trichloroethane | 13.82 | 83 | 458 | 25.914 | pg | 97 |
| 34) Toluene | 14.11 | 91 | 2576 | 28.067 | pg | 98 |
| 35) Dibromochloromethane | 14.53 | 129 | 637 | 26.654 | pg | 98 |
| 36) 1,2-Dibromoethane | 14.79 | 107 | 599 | 25.485 | pg | 99 |
| 37) Tetrachloroethene | 15.27 | 166 | 735 | 27.998 | pg | 99 |
| 39) Chlorobenzene | 15.97 | 112 | 1712 | 31.025 | pg | 99 |
| 40) Ethylbenzene | 16.35 | 91 | 2274 | 27.046 | pg | 99 |
| 41) m,p-Xylene | 16.53 | 91 | 3412 | 52.899 | pg | 98 |
| 42) Styrene | 16.89 | 104 | 1144 | 24.398 | pg | 100 |
| 43) o-Xylene | 17.00 | 106 | 871 | 25.815 | pg | 90 |
| 44) 1,1,2,2-Tetrachloroethane | 16.97 | 83 | 959 | 29.198 | pg | 98 |
| 46) 1,3,5-Trimethylbenzene | 18.27 | 105 | 1680 | 24.039 | pg | 100 |
| 47) 1,2,4-Trimethylbenzene | 18.66 | 105 | 1639 | 23.610 | pg | 99 |
| 48) 1,3-Dichlorobenzene | 18.81 | 146 | 1317 | 28.883 | pg | 100 |
| 49) 1,4-Dichlorobenzene | 18.87 | 146 | 1324 | 28.951 | pg | 97 |
| 50) 1,2-Dichlorobenzene | 19.20 | 146 | 1304 | 29.943 | pg | 100 |
| 51) 1,2-Dibromo-3-chloropr... | 19.61 | 157 | 366 | 25.182 | pg | 88 |
| 52) 1,2,4-Trichlorobenzene | 20.83 | 182 | 694 | 26.181 | pg | 95 |
| 53) Naphthalene | 20.94 | 128 | 1881 | 20.946 | pg | 97 |

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Data File : I:\MS19\DATA\2018_10\01\10011807.D
 Acq On : 1 Oct 2018 12:11
 Sample : 20pg S19100118 ICAL Std
 Misc : S31-09241806/S31-09271803 (10/26)

Vial: 13
 Operator: WA
 Inst : MS19

Quant Time: Oct 01 15:35:06 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

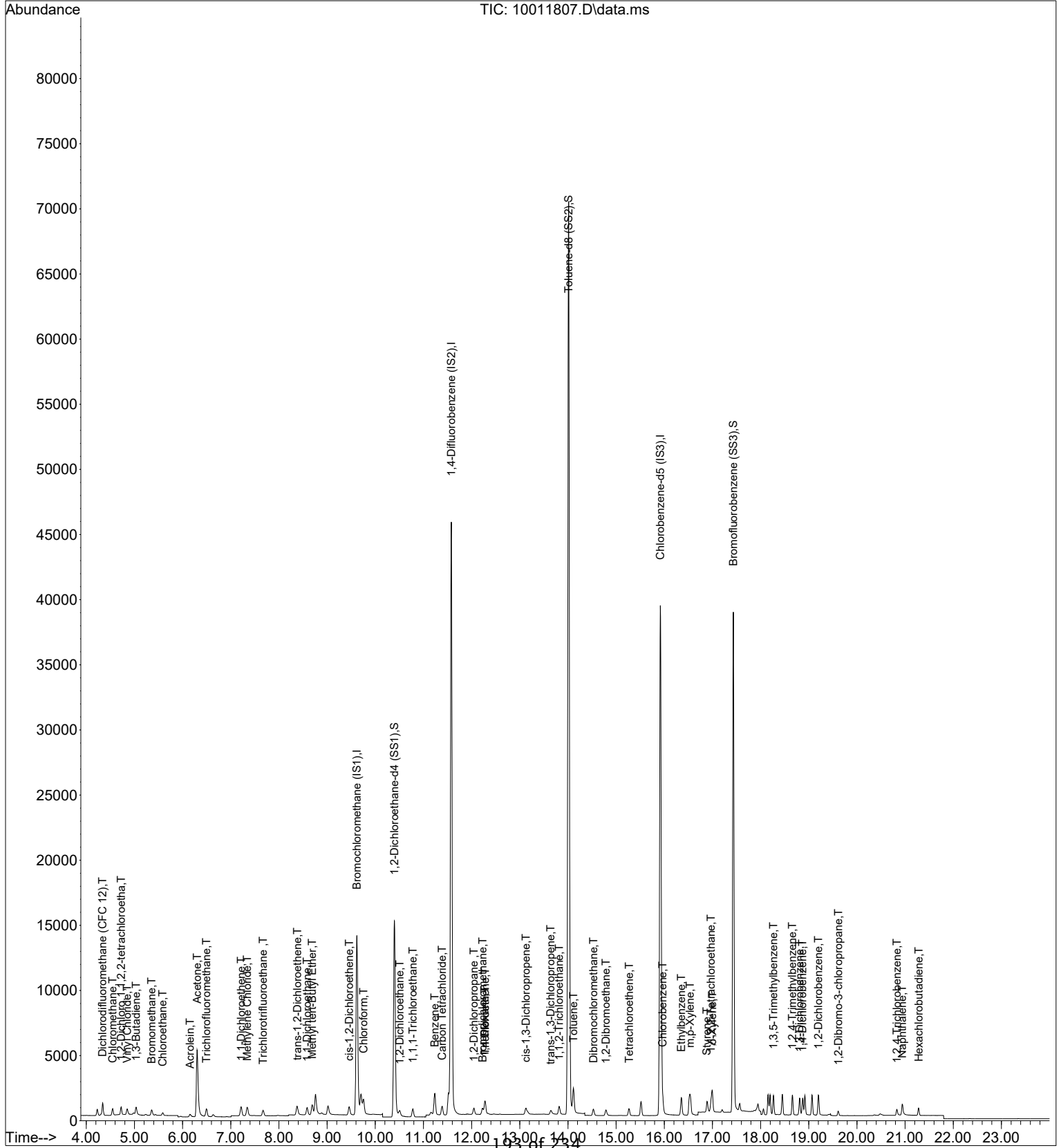
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------|-------|------|----------|--------|-------|----------|
| 54) Hexachlorobutadiene | 21.28 | 225 | 567 | 28.841 | pg | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2018_10\01\10011807.D
 Acq On : 1 Oct 2018 12:11
 Sample : 20pg S19100118 ICAL Std
 Misc : S31-09241806/S31-09271803 (10/26)

Vial: 13
 Operator: WA
 Inst : MS19

Quant Time: Oct 01 15:35:06 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



Data File : I:\MS19\DATA\2018_10\01\10011808.D
 Acq On : 1 Oct 2018 13:09
 Sample : 50pg S19100118 ICAL Std
 Misc : S31-09241806/S31-09271803 (10/26)

Vial: 13
 Operator: WA
 Inst : MS19

Quant Time: Oct 01 15:35:09 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

WA 10/2/18

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------------|-------|------|----------|----------|-------|----------|
| 1) Bromochloromethane (IS1) | 9.62 | 130 | 20108 | 1000.000 | pg | 0.00 |
| 25) 1,4-Difluorobenzene (IS2) | 11.58 | 114 | 87937 | 1000.000 | pg | 0.00 |
| 38) Chlorobenzene-d5 (IS3) | 15.92 | 54 | 10970 | 1000.000 | pg | 0.00 |

System Monitoring Compounds

| | | | | | | |
|-------------------------------|----------|-------|----------|----------|----|---------|
| 20) 1,2-Dichloroethane-d4 ... | 10.40 | 65 | 24026 | 928.724 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range | 70 - 130 | Recovery | = | 92.87% |
| 33) Toluene-d8 (SS2) | 14.02 | 98 | 91636 | 977.913 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range | 70 - 130 | Recovery | = | 97.79% |
| 45) Bromofluorobenzene (SS3) | 17.43 | 174 | 31447 | 1043.246 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range | 70 - 130 | Recovery | = | 104.33% |

Target Compounds

| | R.T. | QIon | Response | Conc | Units | Qvalue |
|-------------------------------|-------|------|----------|---------|-------|--------|
| 2) Dichlorodifluoromethan... | 4.34 | 85 | 2368 | 58.216 | pg | 99 |
| 3) Chloromethane | 4.55 | 52 | 548 | 56.322 | pg | 99 |
| 4) 1,2-Dichloro,1,1,2,2-t... | 4.73 | 85 | 1650 | 56.370 | pg | 100 |
| 5) Vinyl Chloride | 4.85 | 62 | 1485 | 54.976 | pg | 99 |
| 6) 1,3-Butadiene | 5.04 | 54 | 1028 | 53.051 | pg | 97 |
| 7) Bromomethane | 5.36 | 94 | 1024 | 57.464 | pg | 99 |
| 8) Chloroethane | 5.59 | 64 | 753 | 54.258 | pg | 98 |
| 9) Acrolein | 6.15 | 56 | 672 | 65.263 | pg | 97 |
| 10) Acetone | 6.30 | 58 | 6468 | 433.978 | pg | 96 |
| 11) Trichlorofluoromethane | 6.50 | 101 | 1809 | 57.642 | pg | 100 |
| 12) 1,1-Dichloroethene | 7.22 | 96 | 1224 | 56.027 | pg | 99 |
| 13) Methylene Chloride | 7.35 | 84 | 1336 | 57.311 | pg | 98 |
| 14) Trichlorotrifluoroethane | 7.67 | 151 | 1324 | 62.851 | pg | 100 |
| 15) trans-1,2-Dichloroethene | 8.38 | 96 | 1286 | 56.453 | pg | 99 |
| 16) 1,1-Dichloroethane | 8.58 | 63 | 1980 | 54.088 | pg | 100 |
| 17) Methyl tert-Butyl Ether | 8.69 | 73 | 3142 | 52.457 | pg | 99 |
| 18) cis-1,2-Dichloroethene | 9.46 | 96 | 1337 | 55.681 | pg | 100 |
| 19) Chloroform | 9.76 | 83 | 2927 | 75.470 | pg | 99 |
| 21) 1,2-Dichloroethane | 10.51 | 62 | 1331 | 53.892 | pg | 99 |
| 22) 1,1,1-Trichloroethane | 10.78 | 97 | 1895 | 58.079 | pg | 99 |
| 23) Benzene | 11.24 | 78 | 5958 | 63.329 | pg | 100 |
| 24) Carbon Tetrachloride | 11.39 | 117 | 1700 | 62.511 | pg | 100 |
| 26) 1,2-Dichloropropane | 12.05 | 63 | 1184 | 58.117 | pg | 98 |
| 27) Bromodichloromethane | 12.23 | 83 | 1582 | 59.381 | pg | 98 |
| 28) Trichloroethene | 12.28 | 130 | 1465 | 60.089 | pg | 99 |
| 29) 1,4-Dioxane | 12.26 | 88 | 932 | 54.490 | pg | 98 |
| 30) cis-1,3-Dichloropropene | 13.12 | 75 | 1750 | 56.240 | pg | 99 |
| 31) trans-1,3-Dichloropropene | 13.64 | 75 | 1321 | 50.589 | pg | 100 |
| 32) 1,1,2-Trichloroethane | 13.82 | 83 | 1036 | 59.175 | pg | 98 |
| 34) Toluene | 14.11 | 91 | 5429 | 59.716 | pg | 100 |
| 35) Dibromochloromethane | 14.53 | 129 | 1394 | 58.885 | pg | 99 |
| 36) 1,2-Dibromoethane | 14.79 | 107 | 1335 | 57.340 | pg | 99 |
| 37) Tetrachloroethene | 15.27 | 166 | 1647 | 63.337 | pg | 99 |
| 39) Chlorobenzene | 15.97 | 112 | 3792 | 70.423 | pg | 100 |
| 40) Ethylbenzene | 16.35 | 91 | 5045 | 61.491 | pg | 100 |
| 41) m,p-Xylene | 16.53 | 91 | 7381 | 117.271 | pg | 100 |
| 42) Styrene | 16.89 | 104 | 2641 | 57.720 | pg | 100 |
| 43) o-Xylene | 17.00 | 106 | 2014 | 61.172 | pg | 96 |
| 44) 1,1,2,2-Tetrachloroethane | 16.97 | 83 | 2146 | 66.958 | pg | 99 |
| 46) 1,3,5-Trimethylbenzene | 18.27 | 105 | 4024 | 59.007 | pg | 99 |
| 47) 1,2,4-Trimethylbenzene | 18.66 | 105 | 3986 | 58.842 | pg | 99 |
| 48) 1,3-Dichlorobenzene | 18.81 | 146 | 3029 | 68.076 | pg | 99 |
| 49) 1,4-Dichlorobenzene | 18.87 | 146 | 3091 | 69.263 | pg | 98 |
| 50) 1,2-Dichlorobenzene | 19.20 | 146 | 2960 | 69.655 | pg | 100 |
| 51) 1,2-Dibromo-3-chloropr... | 19.61 | 157 | 892 | 62.895 | pg | 96 |
| 52) 1,2,4-Trichlorobenzene | 20.83 | 182 | 1652 | 63.866 | pg | 98 |
| 53) Naphthalene | 20.94 | 128 | 4520 | 51.580 | pg | 99 |

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Data File : I:\MS19\DATA\2018_10\01\10011808.D
 Acq On : 1 Oct 2018 13:09
 Sample : 50pg S19100118 ICAL Std
 Misc : S31-09241806/S31-09271803 (10/26)

Vial: 13
 Operator: WA
 Inst : MS19

Quant Time: Oct 01 15:35:09 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

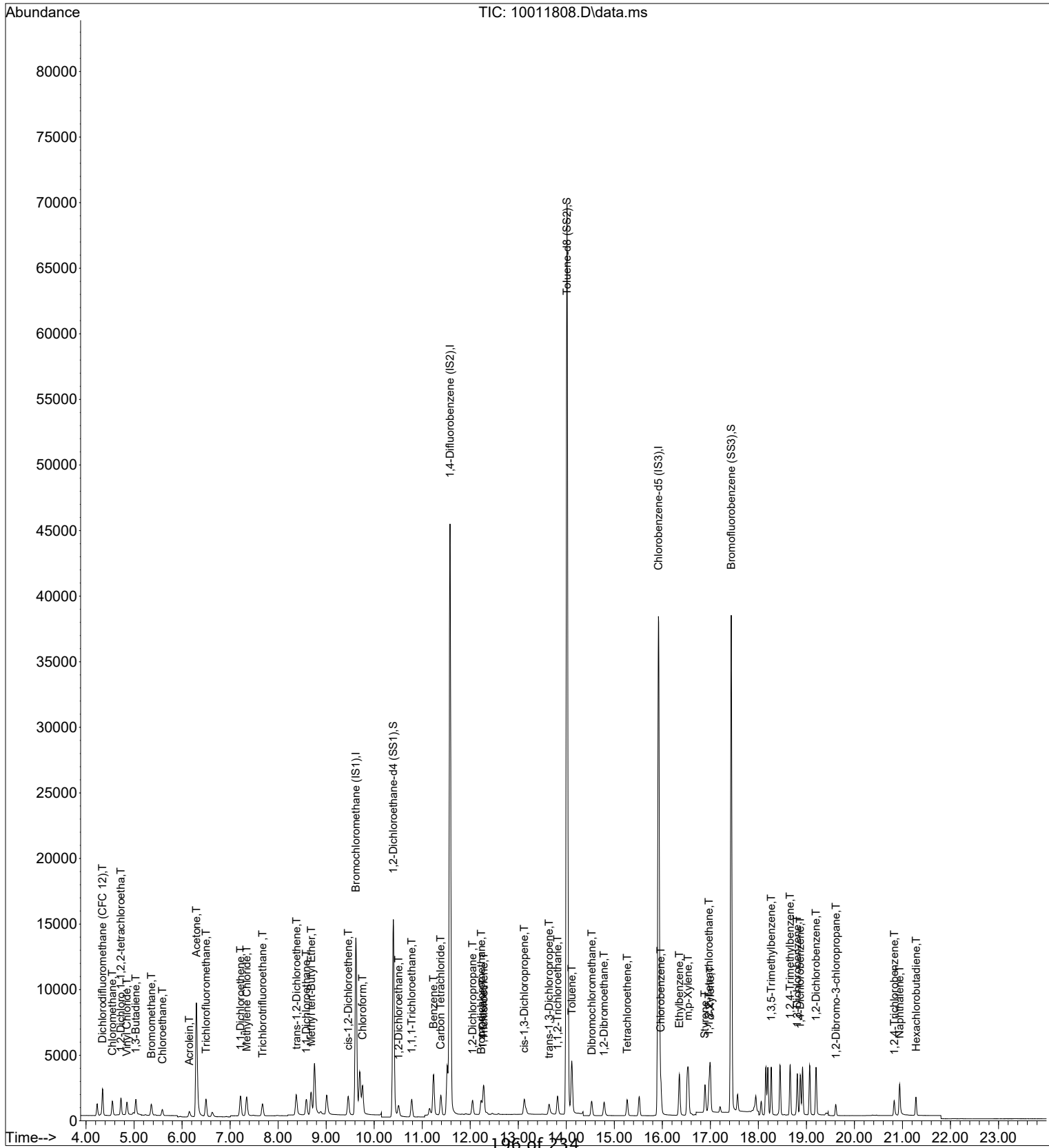
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------|-------|------|----------|--------|-------|----------|
| 54) Hexachlorobutadiene | 21.28 | 225 | 1348 | 70.267 | pg | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2018_10\01\10011808.D
Acq On : 1 Oct 2018 13:09
Sample : 50pg S19100118 ICAL Std
Misc : S31-09241806/S31-09271803 (10/26)

Vial: 13
Operator: WA
Inst : MS19

Quant Time: Oct 01 15:35:09 2018
Quant Method : I:\MS19\METHODS\S19100118.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Oct 01 15:34:24 2018
Response via : Initial Calibration
DataAcq Meth:TO15SIM.M



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Data File : I:\MS19\DATA\2018_10\01\10011809.D
 Acq On : 1 Oct 2018 13:44
 Sample : 100pg S19100118 ICAL Std
 Misc : S31-09241806/S31-09271803 (10/26)

Vial: 13
 Operator: WA
 Inst : MS19

Quant Time: Oct 01 15:35:11 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

~~10/1~~ 10/2/18

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------------|-------|------|----------|----------|-------|----------|
| 1) Bromochloromethane (IS1) | 9.62 | 130 | 20065 | 1000.000 | pg | 0.00 |
| 25) 1,4-Difluorobenzene (IS2) | 11.58 | 114 | 89360 | 1000.000 | pg | 0.00 |
| 38) Chlorobenzene-d5 (IS3) | 15.92 | 54 | 11139 | 1000.000 | pg | 0.00 |

System Monitoring Compounds

| | | | | | | |
|-------------------------------|----------|-------|------------|----------|----|------|
| 20) 1,2-Dichloroethane-d4 ... | 10.40 | 65 | 24256 | 939.624 | pg | 0.00 |
| Spiked Amount 1000.000 | Range 70 | - 130 | Recovery = | 93.96% | | |
| 33) Toluene-d8 (SS2) | 14.02 | 98 | 92480 | 971.204 | pg | 0.00 |
| Spiked Amount 1000.000 | Range 70 | - 130 | Recovery = | 97.12% | | |
| 45) Bromofluorobenzene (SS3) | 17.43 | 174 | 32346 | 1056.789 | pg | 0.00 |
| Spiked Amount 1000.000 | Range 70 | - 130 | Recovery = | 105.68% | | |

Target Compounds

| | R.T. | QIon | Response | Conc | Units | Qvalue |
|-------------------------------|-------|------|----------|---------|-------|--------|
| 2) Dichlorodifluoromethan... | 4.33 | 85 | 4479 | 110.349 | pg | 100 |
| 3) Chloromethane | 4.54 | 52 | 994 | 102.379 | pg | 99 |
| 4) 1,2-Dichloro,1,1,2,2-t... | 4.72 | 85 | 3109 | 106.442 | pg | 100 |
| 5) Vinyl Chloride | 4.84 | 62 | 2802 | 103.955 | pg | 100 |
| 6) 1,3-Butadiene | 5.03 | 54 | 1955 | 101.107 | pg | 95 |
| 7) Bromomethane | 5.35 | 94 | 1888 | 106.176 | pg | 100 |
| 8) Chloroethane | 5.58 | 64 | 1432 | 103.405 | pg | 100 |
| 9) Acrolein | 6.14 | 56 | 1190 | 115.818 | pg | 98 |
| 10) Acetone | 6.29 | 58 | 10075 | 677.442 | pg | 97 |
| 11) Trichlorofluoromethane | 6.49 | 101 | 3413 | 108.985 | pg | 100 |
| 12) 1,1-Dichloroethene | 7.21 | 96 | 2339 | 107.293 | pg | 99 |
| 13) Methylene Chloride | 7.34 | 84 | 2522 | 108.418 | pg | 99 |
| 14) Trichlorotrifluoroethane | 7.67 | 151 | 2313 | 110.035 | pg | 100 |
| 15) trans-1,2-Dichloroethene | 8.38 | 96 | 2495 | 109.760 | pg | 100 |
| 16) 1,1-Dichloroethane | 8.58 | 63 | 3728 | 102.057 | pg | 100 |
| 17) Methyl tert-Butyl Ether | 8.68 | 73 | 6051 | 101.240 | pg | 100 |
| 18) cis-1,2-Dichloroethene | 9.46 | 96 | 2583 | 107.802 | pg | 100 |
| 19) Chloroform | 9.76 | 83 | 4534 | 117.155 | pg | 100 |
| 21) 1,2-Dichloroethane | 10.51 | 62 | 2578 | 104.607 | pg | 98 |
| 22) 1,1,1-Trichloroethane | 10.78 | 97 | 3602 | 110.632 | pg | 100 |
| 23) Benzene | 11.23 | 78 | 10392 | 110.696 | pg | 100 |
| 24) Carbon Tetrachloride | 11.39 | 117 | 3183 | 117.293 | pg | 100 |
| 26) 1,2-Dichloropropane | 12.05 | 63 | 2290 | 110.615 | pg | 99 |
| 27) Bromodichloromethane | 12.22 | 83 | 3016 | 111.404 | pg | 100 |
| 28) Trichloroethene | 12.28 | 130 | 2813 | 113.542 | pg | 99 |
| 29) 1,4-Dioxane | 12.26 | 88 | 1815 | 104.425 | pg | 99 |
| 30) cis-1,3-Dichloropropene | 13.12 | 75 | 3447 | 109.012 | pg | 99 |
| 31) trans-1,3-Dichloropropene | 13.64 | 75 | 2587 | 97.493 | pg | 100 |
| 32) 1,1,2-Trichloroethane | 13.82 | 83 | 1984 | 111.519 | pg | 98 |
| 34) Toluene | 14.11 | 91 | 10272 | 111.187 | pg | 100 |
| 35) Dibromochloromethane | 14.53 | 129 | 2690 | 111.821 | pg | 100 |
| 36) 1,2-Dibromoethane | 14.79 | 107 | 2600 | 109.896 | pg | 99 |
| 37) Tetrachloroethene | 15.27 | 166 | 3128 | 118.374 | pg | 100 |
| 39) Chlorobenzene | 15.97 | 112 | 7239 | 132.398 | pg | 100 |
| 40) Ethylbenzene | 16.35 | 91 | 9765 | 117.215 | pg | 100 |
| 41) m,p-Xylene | 16.53 | 91 | 14559 | 227.808 | pg | 100 |
| 42) Styrene | 16.89 | 104 | 5401 | 116.250 | pg | 100 |
| 43) o-Xylene | 17.00 | 106 | 4016 | 120.129 | pg | 98 |
| 44) 1,1,2,2-Tetrachloroethane | 16.97 | 83 | 4147 | 127.428 | pg | 99 |
| 46) 1,3,5-Trimethylbenzene | 18.27 | 105 | 8246 | 119.084 | pg | 100 |
| 47) 1,2,4-Trimethylbenzene | 18.66 | 105 | 8236 | 119.737 | pg | 100 |
| 48) 1,3-Dichlorobenzene | 18.81 | 146 | 5960 | 131.918 | pg | 100 |
| 49) 1,4-Dichlorobenzene | 18.87 | 146 | 6024 | 132.938 | pg | 100 |
| 50) 1,2-Dichlorobenzene | 19.20 | 146 | 5831 | 135.133 | pg | 99 |
| 51) 1,2-Dibromo-3-chloropr... | 19.61 | 157 | 1813 | 125.895 | pg | 97 |
| 52) 1,2,4-Trichlorobenzene | 20.83 | 182 | 3169 | 120.654 | pg | 100 |
| 53) Naphthalene | 20.94 | 128 | 8799 | 98.886 | pg | 98 |

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Data File : I:\MS19\DATA\2018_10\01\10011809.D
 Acq On : 1 Oct 2018 13:44
 Sample : 100pg S19100118 ICAL Std
 Misc : S31-09241806/S31-09271803 (10/26)

Vial: 13
 Operator: WA
 Inst : MS19

Quant Time: Oct 01 15:35:11 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

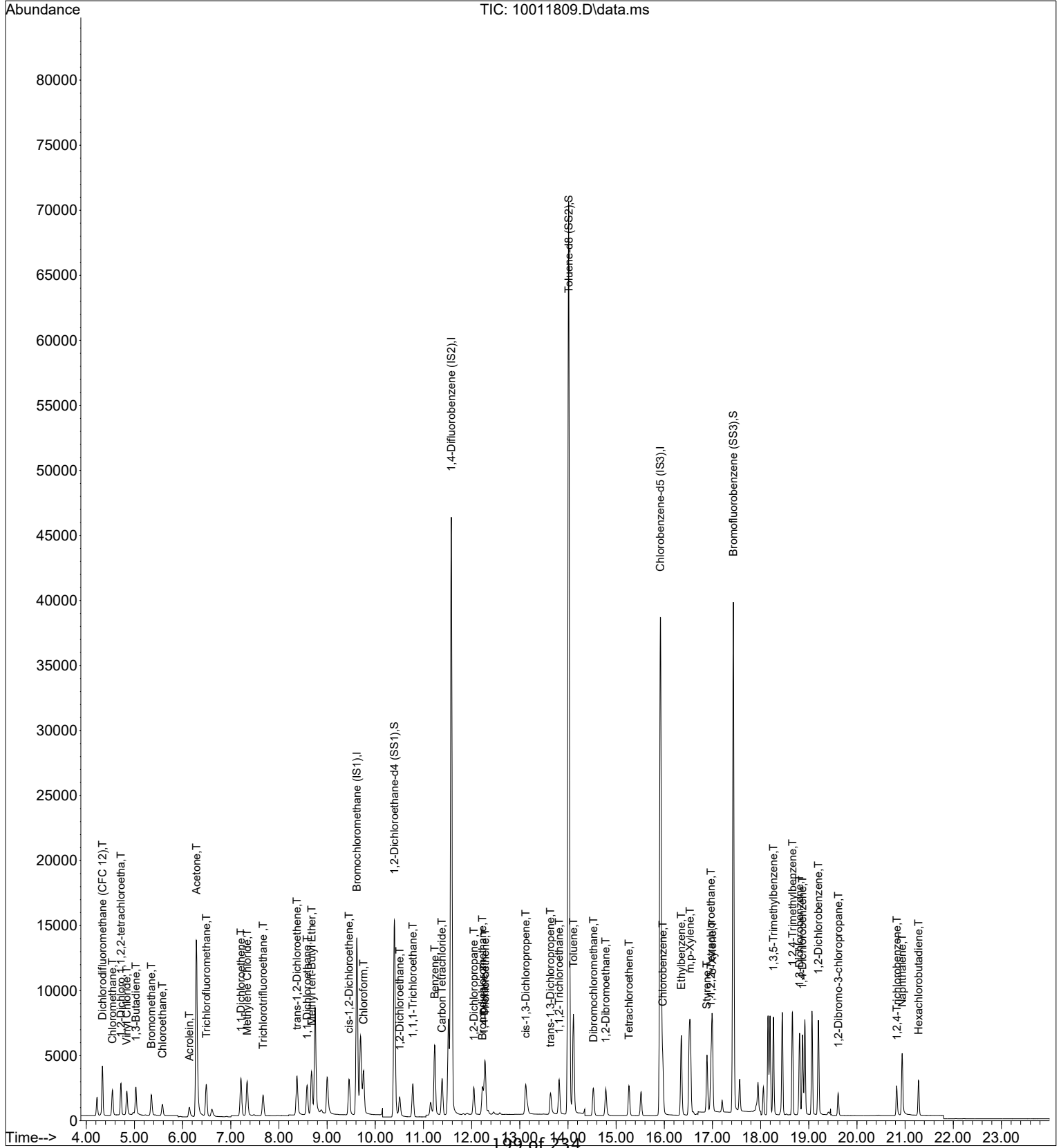
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------|-------|------|----------|---------|-------|----------|
| 54) Hexachlorobutadiene | 21.28 | 225 | 2611 | 134.039 | pg | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2018_10\01\10011809.D
 Acq On : 1 Oct 2018 13:44
 Sample : 100pg S19100118 ICAL Std
 Misc : S31-09241806/S31-09271803 (10/26)

Vial: 13
 Operator: WA
 Inst : MS19

Quant Time: Oct 01 15:35:11 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



Data File : I:\MS19\DATA\2018_10\01\10011810.D
 Acq On : 1 Oct 2018 14:21
 Sample : 500pg S19100118 ICAL Std
 Misc : S31-09241806/S31-09271803 (10/26)

Vial: 13
 Operator: WA
 Inst : MS19

Quant Time: Oct 01 15:35:13 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

~~DATA~~ 10/2/18

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------------|-------|------|----------|----------|-------|----------|
| 1) Bromochloromethane (IS1) | 9.62 | 130 | 19931 | 1000.000 | pg | 0.00 |
| 25) 1,4-Difluorobenzene (IS2) | 11.58 | 114 | 93855 | 1000.000 | pg | 0.00 |
| 38) Chlorobenzene-d5 (IS3) | 15.92 | 54 | 11642 | 1000.000 | pg | 0.00 |

System Monitoring Compounds

| | | | | | | |
|-------------------------------|----------|-------|----------|----------|----|---------|
| 20) 1,2-Dichloroethane-d4 ... | 10.40 | 65 | 24294 | 947.423 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range | 70 - 130 | Recovery | = | 94.74% |
| 33) Toluene-d8 (SS2) | 14.01 | 98 | 96719 | 967.075 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range | 70 - 130 | Recovery | = | 96.71% |
| 45) Bromofluorobenzene (SS3) | 17.43 | 174 | 34970 | 1093.156 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range | 70 - 130 | Recovery | = | 109.32% |

Target Compounds

| | R.T. | QIon | Response | Conc | Units | Qvalue |
|-------------------------------|-------|------|----------|----------|-------|--------|
| 2) Dichlorodifluoromethan... | 4.33 | 85 | 21723 | 538.789 | pg | 100 |
| 3) Chloromethane | 4.53 | 52 | 3976 | 412.271 | pg | 99 |
| 4) 1,2-Dichloro,1,1,2,2-t... | 4.71 | 85 | 15025 | 517.865 | pg | 100 |
| 5) Vinyl Chloride | 4.83 | 62 | 13708 | 511.990 | pg | 99 |
| 6) 1,3-Butadiene | 5.02 | 54 | 9118 | 474.726 | pg | 100 |
| 7) Bromomethane | 5.34 | 94 | 8729 | 494.195 | pg | 99 |
| 8) Chloroethane | 5.57 | 64 | 6937 | 504.288 | pg | 100 |
| 9) Acrolein | 6.12 | 56 | 5986 | 586.513 | pg | 99 |
| 10) Acetone | 6.27 | 58 | 40532 | 2743.691 | pg | 99 |
| 11) Trichlorofluoromethane | 6.49 | 101 | 16551 | 532.066 | pg | 100 |
| 12) 1,1-Dichloroethene | 7.20 | 96 | 11682 | 539.472 | pg | 100 |
| 13) Methylene Chloride | 7.33 | 84 | 12292 | 531.975 | pg | 100 |
| 14) Trichlorotrifluoroethane | 7.67 | 151 | 10290 | 492.813 | pg | 100 |
| 15) trans-1,2-Dichloroethene | 8.37 | 96 | 12419 | 550.012 | pg | 100 |
| 16) 1,1-Dichloroethane | 8.58 | 63 | 18032 | 496.958 | pg | 100 |
| 17) Methyl tert-Butyl Ether | 8.66 | 73 | 31874 | 536.873 | pg | 100 |
| 18) cis-1,2-Dichloroethene | 9.45 | 96 | 13074 | 549.314 | pg | 100 |
| 19) Chloroform | 9.76 | 83 | 20096 | 522.758 | pg | 100 |
| 21) 1,2-Dichloroethane | 10.50 | 62 | 12940 | 528.592 | pg | 99 |
| 22) 1,1,1-Trichloroethane | 10.78 | 97 | 17911 | 553.819 | pg | 100 |
| 23) Benzene | 11.23 | 78 | 50147 | 537.760 | pg | 100 |
| 24) Carbon Tetrachloride | 11.39 | 117 | 15823 | 586.996 | pg | 100 |
| 26) 1,2-Dichloropropane | 12.05 | 63 | 11546 | 531.000 | pg | 100 |
| 27) Bromodichloromethane | 12.22 | 83 | 15278 | 537.307 | pg | 100 |
| 28) Trichloroethene | 12.28 | 130 | 14464 | 555.855 | pg | 100 |
| 29) 1,4-Dioxane | 12.25 | 88 | 9760 | 534.641 | pg | 99 |
| 30) cis-1,3-Dichloropropene | 13.12 | 75 | 18781 | 565.506 | pg | 99 |
| 31) trans-1,3-Dichloropropene | 13.63 | 75 | 15064 | 540.511 | pg | 100 |
| 32) 1,1,2-Trichloroethane | 13.81 | 83 | 10121 | 541.649 | pg | 99 |
| 34) Toluene | 14.11 | 91 | 52607 | 542.162 | pg | 100 |
| 35) Dibromochloromethane | 14.53 | 129 | 13978 | 553.226 | pg | 100 |
| 36) 1,2-Dibromoethane | 14.78 | 107 | 13734 | 552.700 | pg | 99 |
| 37) Tetrachloroethene | 15.27 | 166 | 15788 | 568.855 | pg | 100 |
| 39) Chlorobenzene | 15.97 | 112 | 36568 | 639.917 | pg | 100 |
| 40) Ethylbenzene | 16.35 | 91 | 54645 | 627.594 | pg | 100 |
| 41) m,p-Xylene | 16.53 | 91 | 85981 | 1287.237 | pg | 100 |
| 42) Styrene | 16.89 | 104 | 34415 | 708.740 | pg | 100 |
| 43) o-Xylene | 16.99 | 106 | 23010 | 658.554 | pg | 100 |
| 44) 1,1,2,2-Tetrachloroethane | 16.97 | 83 | 21679 | 637.365 | pg | 100 |
| 46) 1,3,5-Trimethylbenzene | 18.27 | 105 | 48377 | 668.446 | pg | 100 |
| 47) 1,2,4-Trimethylbenzene | 18.66 | 105 | 48925 | 680.550 | pg | 100 |
| 48) 1,3-Dichlorobenzene | 18.81 | 146 | 31963 | 676.897 | pg | 100 |
| 49) 1,4-Dichlorobenzene | 18.87 | 146 | 31699 | 669.314 | pg | 100 |
| 50) 1,2-Dichlorobenzene | 19.20 | 146 | 30647 | 679.555 | pg | 100 |
| 51) 1,2-Dibromo-3-chloropr... | 19.61 | 157 | 10276 | 682.738 | pg | 99 |
| 52) 1,2,4-Trichlorobenzene | 20.82 | 182 | 17728 | 645.799 | pg | 100 |
| 53) Naphthalene | 20.94 | 128 | 53038 | 570.305 | pg | 100 |

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Data File : I:\MS19\DATA\2018_10\01\10011810.D
 Acq On : 1 Oct 2018 14:21
 Sample : 500pg S19100118 ICAL Std
 Misc : S31-09241806/S31-09271803 (10/26)

Vial: 13
 Operator: WA
 Inst : MS19

Quant Time: Oct 01 15:35:13 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

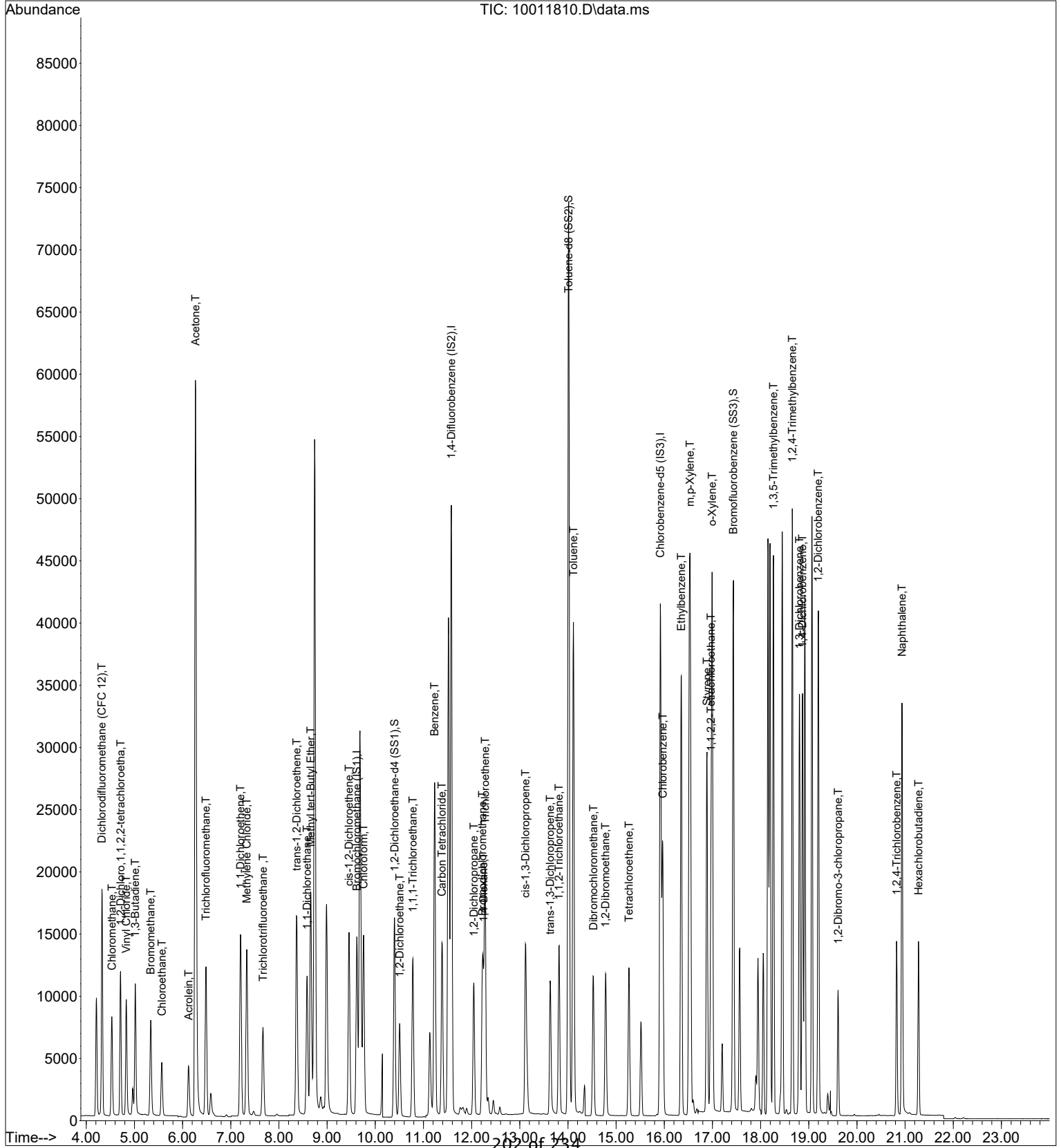
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------|-------|------|----------|---------|-------|----------|
| 54) Hexachlorobutadiene | 21.28 | 225 | 13306 | 653.567 | pg | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2018_10\01\10011810.D
 Acq On : 1 Oct 2018 14:21
 Sample : 500pg S19100118 ICAL Std
 Misc : S31-09241806/S31-09271803 (10/26)

Vial: 13
 Operator: WA
 Inst : MS19

Quant Time: Oct 01 15:35:13 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



Data File : I:\MS19\DATA\2018_10\01\10011811.D
 Acq On : 1 Oct 2018 14:52
 Sample : 1000pg S19100118 ICAL Std
 Misc : S31-09241806/S31-09271802 (10/26)

Vial: 14
 Operator: WA
 Inst : MS19

Quant Time: Oct 01 15:35:15 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

10/2/18

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------------|-------|------|----------|----------|-------|----------|
| 1) Bromochloromethane (IS1) | 9.62 | 130 | 21343 | 1000.000 | pg | 0.00 |
| 25) 1,4-Difluorobenzene (IS2) | 11.58 | 114 | 98418 | 1000.000 | pg | 0.00 |
| 38) Chlorobenzene-d5 (IS3) | 15.92 | 54 | 12041 | 1000.000 | pg | 0.00 |

System Monitoring Compounds

| | | | | | | |
|-------------------------------|----------|-------|------------|----------|----|------|
| 20) 1,2-Dichloroethane-d4 ... | 10.40 | 65 | 25337 | 922.728 | pg | 0.00 |
| Spiked Amount 1000.000 | Range 70 | - 130 | Recovery = | 92.27% | | |
| 33) Toluene-d8 (SS2) | 14.02 | 98 | 100388 | 957.223 | pg | 0.00 |
| Spiked Amount 1000.000 | Range 70 | - 130 | Recovery = | 95.72% | | |
| 45) Bromofluorobenzene (SS3) | 17.44 | 174 | 36261 | 1095.951 | pg | 0.00 |
| Spiked Amount 1000.000 | Range 70 | - 130 | Recovery = | 109.60% | | |

Target Compounds

| | R.T. | QIon | Response | Conc | Units | Qvalue |
|-------------------------------|-------|------|----------|----------|-------|--------|
| 2) Dichlorodifluoromethan... | 4.32 | 85 | 54556 | 1263.616 | pg | 100 |
| 3) Chloromethane | 4.53 | 52 | 12060 | 1167.770 | pg | 100 |
| 4) 1,2-Dichloro,1,1,2,2-t... | 4.70 | 85 | 37736 | 1214.595 | pg | 100 |
| 5) Vinyl Chloride | 4.82 | 62 | 34347 | 1197.981 | pg | 100 |
| 6) 1,3-Butadiene | 5.01 | 54 | 28024 | 1362.534 | pg | 100 |
| 7) Bromomethane | 5.33 | 94 | 22751 | 1202.841 | pg | 100 |
| 8) Chloroethane | 5.56 | 64 | 17484 | 1186.920 | pg | 100 |
| 9) Acrolein | 6.12 | 56 | 13705 | 1253.988 | pg | 100 |
| 10) Acetone | 6.26 | 58 | 91676 | 5795.174 | pg | 100 |
| 11) Trichlorofluoromethane | 6.48 | 101 | 41922 | 1258.511 | pg | 100 |
| 12) 1,1-Dichloroethene | 7.20 | 96 | 29967 | 1292.317 | pg | 100 |
| 13) Methylene Chloride | 7.34 | 84 | 30981 | 1252.095 | pg | 100 |
| 14) Trichlorotrifluoroethane | 7.67 | 151 | 30655 | 1371.014 | pg | 100 |
| 15) trans-1,2-Dichloroethene | 8.37 | 96 | 31674 | 1309.971 | pg | 100 |
| 16) 1,1-Dichloroethane | 8.58 | 63 | 47368 | 1219.087 | pg | 100 |
| 17) Methyl tert-Butyl Ether | 8.65 | 73 | 84859 | 1334.771 | pg | 100 |
| 18) cis-1,2-Dichloroethene | 9.46 | 96 | 33680 | 1321.473 | pg | 100 |
| 19) Chloroform | 9.76 | 83 | 50690 | 1231.365 | pg | 100 |
| 21) 1,2-Dichloroethane | 10.51 | 62 | 32755 | 1249.503 | pg | 100 |
| 22) 1,1,1-Trichloroethane | 10.78 | 97 | 45673 | 1318.808 | pg | 100 |
| 23) Benzene | 11.24 | 78 | 125214 | 1253.920 | pg | 100 |
| 24) Carbon Tetrachloride | 11.39 | 117 | 40898 | 1416.844 | pg | 100 |
| 26) 1,2-Dichloropropane | 12.05 | 63 | 29449 | 1291.565 | pg | 100 |
| 27) Bromodichloromethane | 12.22 | 83 | 38980 | 1307.316 | pg | 100 |
| 28) Trichloroethene | 12.28 | 130 | 36846 | 1350.350 | pg | 100 |
| 29) 1,4-Dioxane | 12.25 | 88 | 25793 | 1347.402 | pg | 100 |
| 30) cis-1,3-Dichloropropene | 13.12 | 75 | 48452 | 1391.275 | pg | 100 |
| 31) trans-1,3-Dichloropropene | 13.63 | 75 | 38882 | 1330.442 | pg | 100 |
| 32) 1,1,2-Trichloroethane | 13.82 | 83 | 25733 | 1313.312 | pg | 100 |
| 34) Toluene | 14.11 | 91 | 131899 | 1296.313 | pg | 100 |
| 35) Dibromochloromethane | 14.53 | 129 | 35806 | 1351.439 | pg | 100 |
| 36) 1,2-Dibromoethane | 14.78 | 107 | 34480 | 1323.252 | pg | 100 |
| 37) Tetrachloroethene | 15.27 | 166 | 39481 | 1356.581 | pg | 100 |
| 39) Chlorobenzene | 15.96 | 112 | 91204 | 1543.127 | pg | 100 |
| 40) Ethylbenzene | 16.35 | 91 | 141081 | 1566.614 | pg | 100 |
| 41) m,p-Xylene | 16.53 | 91 | 223870 | 3240.536 | pg | 100 |
| 42) Styrene | 16.89 | 104 | 87370 | 1739.669 | pg | 100 |
| 43) o-Xylene | 16.99 | 106 | 59205 | 1638.317 | pg | 100 |
| 44) 1,1,2,2-Tetrachloroethane | 16.97 | 83 | 55068 | 1565.356 | pg | 100 |
| 46) 1,3,5-Trimethylbenzene | 18.27 | 105 | 127264 | 1700.191 | pg | 100 |
| 47) 1,2,4-Trimethylbenzene | 18.66 | 105 | 128493 | 1728.119 | pg | 100 |
| 48) 1,3-Dichlorobenzene | 18.81 | 146 | 80086 | 1639.823 | pg | 100 |
| 49) 1,4-Dichlorobenzene | 18.87 | 146 | 79145 | 1615.745 | pg | 100 |
| 50) 1,2-Dichlorobenzene | 19.20 | 146 | 78221 | 1676.970 | pg | 100 |
| 51) 1,2-Dibromo-3-chloropr... | 19.61 | 157 | 26006 | 1670.586 | pg | 100 |
| 52) 1,2,4-Trichlorobenzene | 20.82 | 182 | 39764 | 1400.531 | pg | 100 |
| 53) Naphthalene | 20.94 | 128 | 118266 | 1229.547 | pg | 100 |

Data File : I:\MS19\DATA\2018_10\01\10011811.D
 Acq On : 1 Oct 2018 14:52
 Sample : 1000pg S19100118 ICAL Std
 Misc : S31-09241806/S31-09271802 (10/26)

Vial: 14
 Operator: WA
 Inst : MS19

Quant Time: Oct 01 15:35:15 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

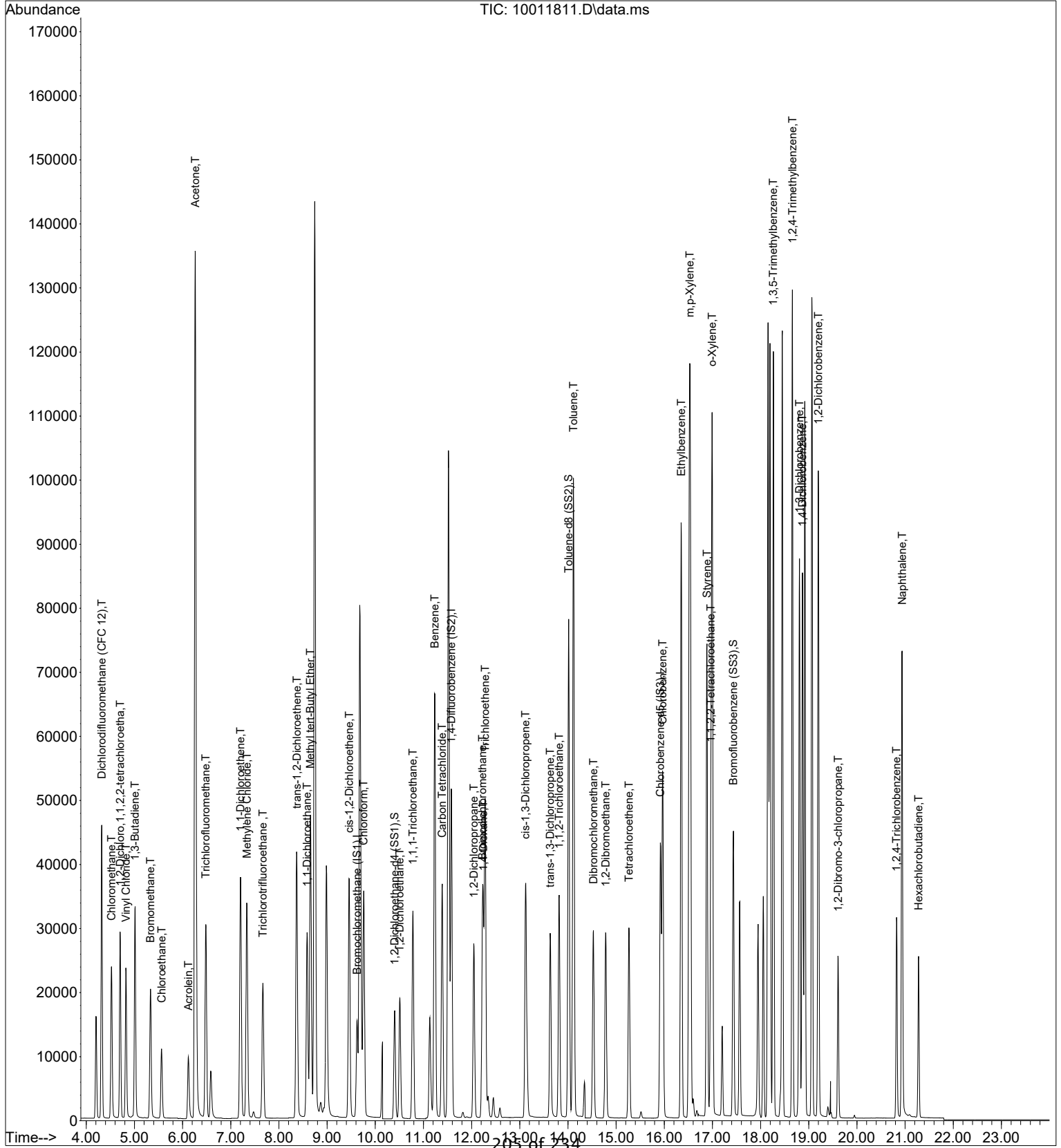
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------|-------|------|----------|----------|-------|----------|
| 54) Hexachlorobutadiene | 21.28 | 225 | 23913 | 1135.643 | pg | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2018_10\01\10011811.D
Acq On : 1 Oct 2018 14:52
Sample : 1000pg S19100118 ICAL Std
Misc : S31-09241806/S31-09271802 (10/26)

Vial: 14
Operator: WA
Inst : MS19

Quant Time: Oct 01 15:35:15 2018
Quant Method : I:\MS19\METHODS\S19100118.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Oct 01 15:34:24 2018
Response via : Initial Calibration
DataAcq Meth:TO15SIM.M



Data File : I:\MS19\DATA\2018_10\01\10011812.D
 Acq On : 1 Oct 2018 15:36
 Sample : 2000pg S19100118 ICAL Std
 Misc : S31-09241806/S31-09271802 (10/26)

Vial: 14
 Operator: WA
 Inst : MS19

Quant Time: Oct 02 06:40:07 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

10/2/18

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------------|-------|------|----------|----------|-------|----------|
| 1) Bromochloromethane (IS1) | 9.62 | 130 | 21158 | 1000.000 | pg | 0.00 |
| 25) 1,4-Difluorobenzene (IS2) | 11.58 | 114 | 98346 | 1000.000 | pg | 0.00 |
| 38) Chlorobenzene-d5 (IS3) | 15.92 | 54 | 12046 | 1000.000 | pg | 0.00 |

System Monitoring Compounds

| | | | | | | |
|-------------------------------|----------|-------|----------|----------|----|---------|
| 20) 1,2-Dichloroethane-d4 ... | 10.40 | 65 | 25304 | 929.584 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range | 70 - 130 | Recovery | = | 92.96% |
| 33) Toluene-d8 (SS2) | 14.01 | 98 | 100255 | 956.655 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range | 70 - 130 | Recovery | = | 95.67% |
| 45) Bromofluorobenzene (SS3) | 17.43 | 174 | 36038 | 1088.759 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range | 70 - 130 | Recovery | = | 108.88% |

Target Compounds

| | R.T. | QIon | Response | Conc | Units | Qvalue |
|-------------------------------|-------|------|----------|-----------|-------|--------|
| 2) Dichlorodifluoromethan... | 4.31 | 85 | 97482 | 2277.603 | pg | 100 |
| 3) Chloromethane | 4.52 | 52 | 21596 | 2109.425 | pg | 100 |
| 4) 1,2-Dichloro,1,1,2,2-t... | 4.70 | 85 | 67634 | 2195.945 | pg | 100 |
| 5) Vinyl Chloride | 4.82 | 62 | 62023 | 2182.201 | pg | 100 |
| 6) 1,3-Butadiene | 5.00 | 54 | 48011 | 2354.718 | pg | 100 |
| 7) Bromomethane | 5.33 | 94 | 40799 | 2175.895 | pg | 100 |
| 8) Chloroethane | 5.55 | 64 | 31468 | 2154.917 | pg | 100 |
| 9) Acrolein | 6.12 | 56 | 25502 | 2353.799 | pg | 100 |
| 10) Acetone | 6.26 | 58 | 164950 | 10518.262 | pg | 99 |
| 11) Trichlorofluoromethane | 6.48 | 101 | 75472 | 2285.502 | pg | 100 |
| 12) 1,1-Dichloroethene | 7.20 | 96 | 55361 | 2408.300 | pg | 100 |
| 13) Methylene Chloride | 7.34 | 84 | 56375 | 2298.314 | pg | 100 |
| 14) Trichlorotrifluoroethane | 7.66 | 151 | 55413 | 2499.960 | pg | 100 |
| 15) trans-1,2-Dichloroethene | 8.37 | 96 | 58249 | 2430.122 | pg | 100 |
| 16) 1,1-Dichloroethane | 8.58 | 63 | 86003 | 2232.771 | pg | 100 |
| 17) Methyl tert-Butyl Ether | 8.65 | 73 | 157062 | 2492.074 | pg | 100 |
| 18) cis-1,2-Dichloroethene | 9.46 | 96 | 61935 | 2451.337 | pg | 100 |
| 19) Chloroform | 9.76 | 83 | 92106 | 2257.008 | pg | 100 |
| 21) 1,2-Dichloroethane | 10.51 | 62 | 59913 | 2305.481 | pg | 100 |
| 22) 1,1,1-Trichloroethane | 10.78 | 97 | 82673 | 2408.056 | pg | 100 |
| 23) Benzene | 11.24 | 78 | 228757 | 2310.852 | pg | 100 |
| 24) Carbon Tetrachloride | 11.39 | 117 | 74610 | 2607.341 | pg | 100 |
| 26) 1,2-Dichloropropane | 12.05 | 63 | 53939 | 2367.371 | pg | 100 |
| 27) Bromodichloromethane | 12.23 | 83 | 71772 | 2408.860 | pg | 100 |
| 28) Trichloroethene | 12.28 | 130 | 67683 | 2482.294 | pg | 100 |
| 29) 1,4-Dioxane | 12.25 | 88 | 47932 | 2505.756 | pg | 100 |
| 30) cis-1,3-Dichloropropene | 13.12 | 75 | 91226 | 2621.426 | pg | 100 |
| 31) trans-1,3-Dichloropropene | 13.63 | 75 | 74271 | 2543.223 | pg | 100 |
| 32) 1,1,2-Trichloroethane | 13.82 | 83 | 47300 | 2415.775 | pg | 100 |
| 34) Toluene | 14.11 | 91 | 242532 | 2385.367 | pg | 100 |
| 35) Dibromochloromethane | 14.53 | 129 | 66689 | 2518.909 | pg | 100 |
| 36) 1,2-Dibromoethane | 14.78 | 107 | 64147 | 2463.596 | pg | 100 |
| 37) Tetrachloroethene | 15.27 | 166 | 72061 | 2477.854 | pg | 100 |
| 39) Chlorobenzene | 15.97 | 112 | 166856 | 2821.949 | pg | 100 |
| 40) Ethylbenzene | 16.35 | 91 | 264742 | 2938.571 | pg | 100 |
| 41) m,p-Xylene | 16.53 | 91 | 415079 | 6005.807 | pg | 100 |
| 42) Styrene | 16.88 | 104 | 167353 | 3330.868 | pg | 100 |
| 43) o-Xylene | 17.00 | 106 | 109222 | 3021.130 | pg | 100 |
| 44) 1,1,2,2-Tetrachloroethane | 16.97 | 83 | 101378 | 2880.563 | pg | 100 |
| 46) 1,3,5-Trimethylbenzene | 18.26 | 105 | 233124 | 3113.142 | pg | 100 |
| 47) 1,2,4-Trimethylbenzene | 18.66 | 105 | 237136 | 3187.948 | pg | 100 |
| 48) 1,3-Dichlorobenzene | 18.81 | 146 | 147647 | 3021.932 | pg | 100 |
| 49) 1,4-Dichlorobenzene | 18.87 | 146 | 144480 | 2948.335 | pg | 100 |
| 50) 1,2-Dichlorobenzene | 19.20 | 146 | 143580 | 3076.915 | pg | 100 |
| 51) 1,2-Dibromo-3-chloropr... | 19.61 | 157 | 50123 | 3218.489 | pg | 100 |
| 52) 1,2,4-Trichlorobenzene | 20.83 | 182 | 90778 | 3195.972 | pg | 100 |
| 53) Naphthalene | 20.94 | 128 | 284738 | 2959.037 | pg | 100 |

Data File : I:\MS19\DATA\2018_10\01\10011812.D
 Acq On : 1 Oct 2018 15:36
 Sample : 2000pg S19100118 ICAL Std
 Misc : S31-09241806/S31-09271802 (10/26)

Vial: 14
 Operator: WA
 Inst : MS19

Quant Time: Oct 02 06:40:07 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

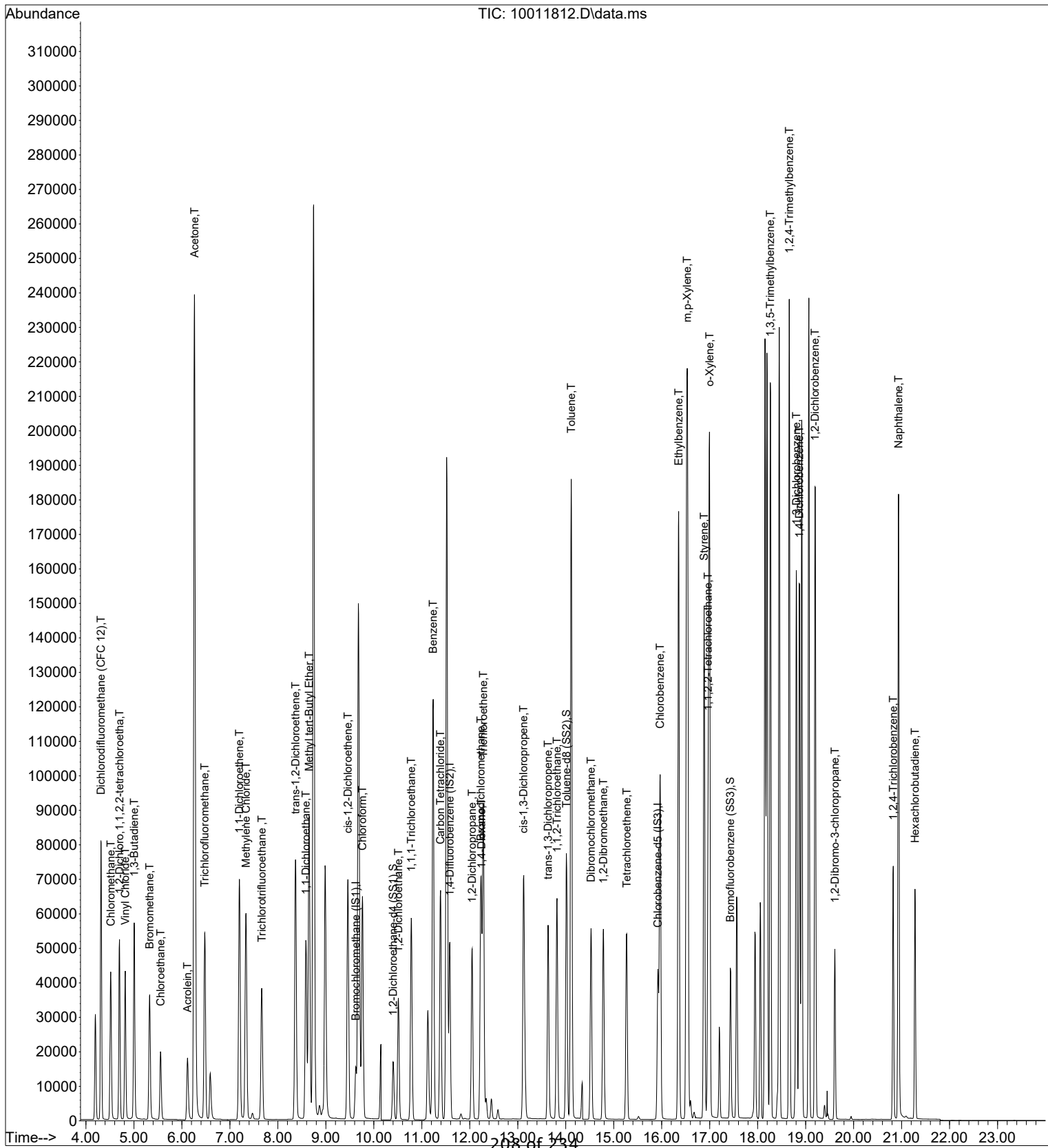
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------|-------|------|----------|----------|-------|----------|
| 54) Hexachlorobutadiene | 21.28 | 225 | 62652 | 2974.146 | pg | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2018_10\01\10011812.D
 Acq On : 1 Oct 2018 15:36
 Sample : 2000pg S19100118 ICAL Std
 Misc : S31-09241806/S31-09271802 (10/26)

Vial: 14
 Operator: WA
 Inst : MS19

Quant Time: Oct 02 06:40:07 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



Data File : I:\MS19\DATA\2018_10\01\10011813.D
 Acq On : 1 Oct 2018 16:08
 Sample : 5000pg S19100118 ICAL Std
 Misc : S31-09241806/S31-09271802 (10/26)

Vial: 14
 Operator: WA
 Inst : MS19

Quant Time: Oct 02 06:40:18 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

10/2/18

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------------|-------|------|----------|----------|-------|----------|
| 1) Bromochloromethane (IS1) | 9.63 | 130 | 21979 | 1000.000 | pg | 0.00 |
| 25) 1,4-Difluorobenzene (IS2) | 11.58 | 114 | 101793 | 1000.000 | pg | 0.00 |
| 38) Chlorobenzene-d5 (IS3) | 15.92 | 54 | 12673 | 1000.000 | pg | 0.00 |

System Monitoring Compounds

| | | | | | | |
|-------------------------------|----------|----------------|------------|----------|----|------|
| 20) 1,2-Dichloroethane-d4 ... | 10.41 | 65 | 26270 | 929.023 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range 70 - 130 | Recovery = | 92.90% | | |
| 33) Toluene-d8 (SS2) | 14.02 | 98 | 104343 | 961.947 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range 70 - 130 | Recovery = | 96.20% | | |
| 45) Bromofluorobenzene (SS3) | 17.43 | 174 | 37651 | 1081.213 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range 70 - 130 | Recovery = | 108.12% | | |

Target Compounds

| | R.T. | QIon | Response | Conc | Units | Qvalue |
|-------------------------------|-------|------|----------|-----------|-------|--------|
| 2) Dichlorodifluoromethan... | 4.30 | 85 | 224861 | 5057.482 | pg | 100 |
| 3) Chloromethane | 4.50 | 52 | 49965 | 4698.112 | pg | 100 |
| 4) 1,2-Dichloro,1,1,2,2-t... | 4.69 | 85 | 156657 | 4896.355 | pg | 100 |
| 5) Vinyl Chloride | 4.81 | 62 | 143597 | 4863.558 | pg | 99 |
| 6) 1,3-Butadiene | 5.00 | 54 | 107512 | 5076.002 | pg | 98 |
| 7) Bromomethane | 5.32 | 94 | 95338 | 4894.644 | pg | 100 |
| 8) Chloroethane | 5.55 | 64 | 73709 | 4859.018 | pg | 100 |
| 9) Acrolein | 6.12 | 56 | 60234 | 5351.844 | pg | 100 |
| 10) Acetone | 6.26 | 58 | 385336 | 23653.636 | pg | 99 |
| 11) Trichlorofluoromethane | 6.47 | 101 | 180051 | 5248.775 | pg | 100 |
| 12) 1,1-Dichloroethene | 7.19 | 96 | 131183 | 5493.521 | pg | 99 |
| 13) Methylene Chloride | 7.34 | 84 | 133745 | 5248.884 | pg | 99 |
| 14) Trichlorotrifluoroethane | 7.66 | 151 | 124815 | 5420.693 | pg | 100 |
| 15) trans-1,2-Dichloroethene | 8.37 | 96 | 139761 | 5612.965 | pg | 100 |
| 16) 1,1-Dichloroethane | 8.59 | 63 | 202292 | 5055.638 | pg | 100 |
| 17) Methyl tert-Butyl Ether | 8.65 | 73 | 380286 | 5808.537 | pg | 100 |
| 18) cis-1,2-Dichloroethene | 9.47 | 96 | 149090 | 5680.442 | pg | 100 |
| 19) Chloroform | 9.77 | 83 | 217099 | 5121.176 | pg | 100 |
| 21) 1,2-Dichloroethane | 10.52 | 62 | 142125 | 5264.749 | pg | 100 |
| 22) 1,1,1-Trichloroethane | 10.78 | 97 | 196324 | 5504.817 | pg | 100 |
| 23) Benzene | 11.24 | 78 | 537276 | 5224.707 | pg | 100 |
| 24) Carbon Tetrachloride | 11.39 | 117 | 177152 | 5959.552 | pg | 100 |
| 26) 1,2-Dichloropropane | 12.05 | 63 | 128300 | 5440.375 | pg | 100 |
| 27) Bromodichloromethane | 12.23 | 83 | 171061 | 5546.848 | pg | 100 |
| 28) Trichloroethene | 12.29 | 130 | 159704 | 5658.851 | pg | 100 |
| 29) 1,4-Dioxane | 12.25 | 88 | 114979 | 5807.251 | pg | 99 |
| 30) cis-1,3-Dichloropropene | 13.12 | 75 | 223011 | 6191.332 | pg | 100 |
| 31) trans-1,3-Dichloropropene | 13.63 | 75 | 184690 | 6110.085 | pg | 100 |
| 32) 1,1,2-Trichloroethane | 13.82 | 83 | 111483 | 5501.015 | pg | 100 |
| 34) Toluene | 14.11 | 91 | 577593 | 5488.414 | pg | 100 |
| 35) Dibromochloromethane | 14.53 | 129 | 159683 | 5827.145 | pg | 100 |
| 36) 1,2-Dibromoethane | 14.79 | 107 | 153521 | 5696.390 | pg | 100 |
| 37) Tetrachloroethene | 15.27 | 166 | 169392 | 5627.391 | pg | 100 |
| 39) Chlorobenzene | 15.97 | 112 | 395561 | 6358.933 | pg | 100 |
| 40) Ethylbenzene | 16.35 | 91 | 641860 | 6772.001 | pg | 100 |
| 41) m,p-Xylene | 16.53 | 91 | 994468 | 13677.127 | pg | 100 |
| 42) Styrene | 16.89 | 104 | 413208 | 7817.287 | pg | 100 |
| 43) o-Xylene | 17.00 | 106 | 261034 | 6863.091 | pg | 99 |
| 44) 1,1,2,2-Tetrachloroethane | 16.96 | 83 | 239946 | 6480.531 | pg | 100 |
| 46) 1,3,5-Trimethylbenzene | 18.27 | 105 | 558005 | 7082.938 | pg | 100 |
| 47) 1,2,4-Trimethylbenzene | 18.66 | 105 | 564297 | 7210.825 | pg | 100 |
| 48) 1,3-Dichlorobenzene | 18.81 | 146 | 348686 | 6783.565 | pg | 100 |
| 49) 1,4-Dichlorobenzene | 18.87 | 146 | 344250 | 6677.386 | pg | 100 |
| 50) 1,2-Dichlorobenzene | 19.20 | 146 | 338979 | 6904.907 | pg | 100 |
| 51) 1,2-Dibromo-3-chloropr... | 19.61 | 157 | 121782 | 7432.956 | pg | 98 |
| 52) 1,2,4-Trichlorobenzene | 20.82 | 182 | 221549 | 7414.051 | pg | 100 |
| 53) Naphthalene | 20.94 | 128 | 690675 | 6822.477 | pg | 100 |

Data File : I:\MS19\DATA\2018_10\01\10011813.D
 Acq On : 1 Oct 2018 16:08
 Sample : 5000pg S19100118 ICAL Std
 Misc : S31-09241806/S31-09271802 (10/26)

Vial: 14
 Operator: WA
 Inst : MS19

Quant Time: Oct 02 06:40:18 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

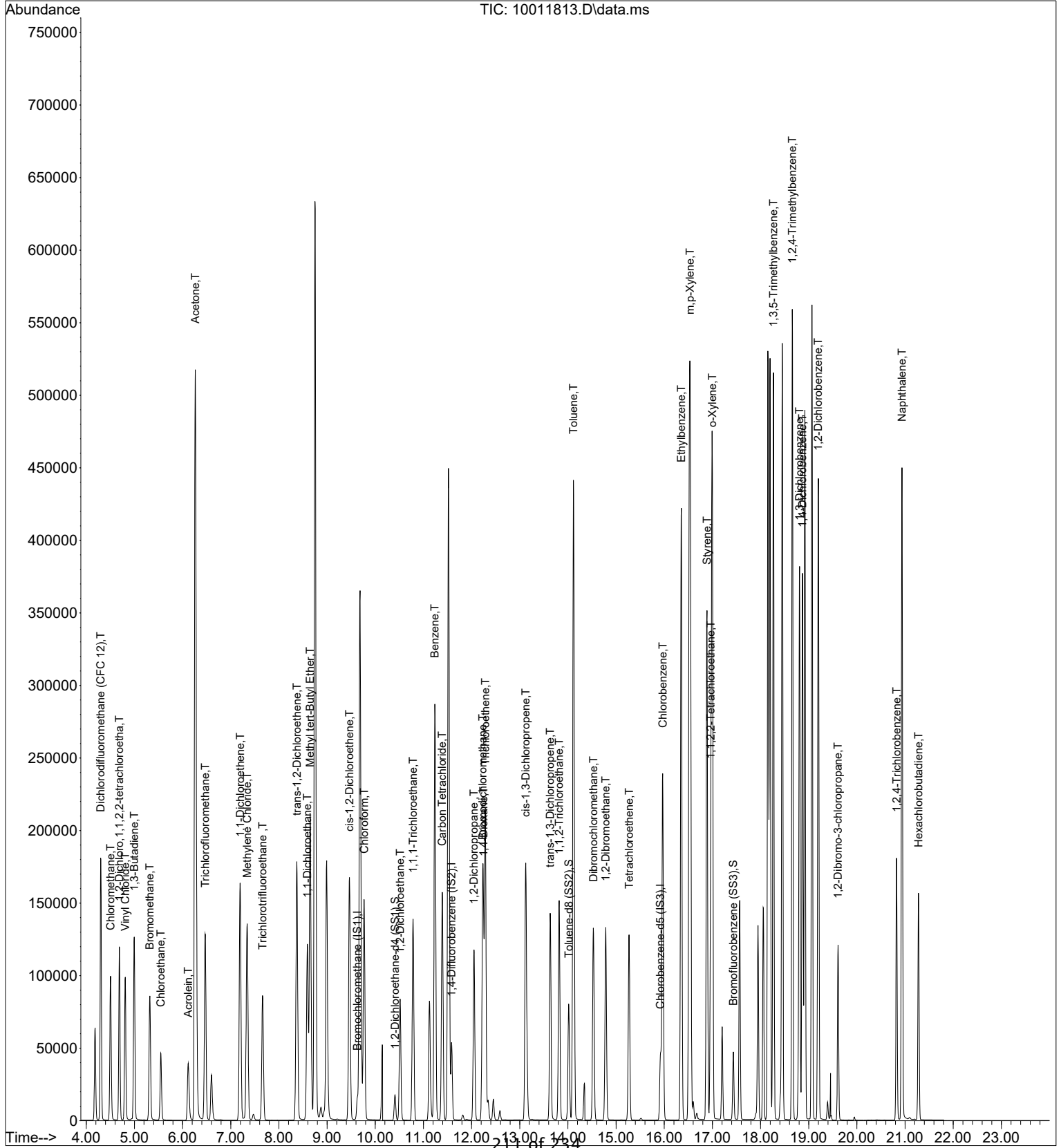
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------|-------|------|----------|----------|-------|----------|
| 54) Hexachlorobutadiene | 21.28 | 225 | 148497 | 6700.519 | pg | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2018_10\01\10011813.D
Acq On : 1 Oct 2018 16:08
Sample : 5000pg S19100118 ICAL Std
Misc : S31-09241806/S31-09271802 (10/26)

Vial: 14
Operator: WA
Inst : MS19

Quant Time: Oct 02 06:40:18 2018
Quant Method : I:\MS19\METHODS\S19100118.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Oct 01 15:34:24 2018
Response via : Initial Calibration
DataAcq Meth:TO15SIM.M



Data File : I:\MS19\DATA\2018_10\01\10011814.D
 Acq On : 1 Oct 2018 16:39
 Sample : 10000pg S19100118 ICAL Std
 Misc : S31-09241806/S31-09271802 (10/26)

Vial: 14
 Operator: WA
 Inst : MS19

Quant Time: Oct 02 06:40:25 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

10/2/18

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------------|-------|------|----------|----------|-------|----------|
| 1) Bromochloromethane (IS1) | 9.64 | 130 | 21839 | 1000.000 | pg | 0.01 |
| 25) 1,4-Difluorobenzene (IS2) | 11.59 | 114 | 102402 | 1000.000 | pg | 0.01 |
| 38) Chlorobenzene-d5 (IS3) | 15.92 | 54 | 13188 | 1000.000 | pg | 0.00 |

System Monitoring Compounds

| | | | | | | |
|-------------------------------|----------|-------|------------|----------|----|------|
| 20) 1,2-Dichloroethane-d4 ... | 10.42 | 65 | 26267 | 934.871 | pg | 0.01 |
| Spiked Amount 1000.000 | Range 70 | - 130 | Recovery = | 93.49% | | |
| 33) Toluene-d8 (SS2) | 14.02 | 98 | 105337 | 965.336 | pg | 0.00 |
| Spiked Amount 1000.000 | Range 70 | - 130 | Recovery = | 96.53% | | |
| 45) Bromofluorobenzene (SS3) | 17.43 | 174 | 37497 | 1034.741 | pg | 0.00 |
| Spiked Amount 1000.000 | Range 70 | - 130 | Recovery = | 103.47% | | |

Target Compounds

| | R.T. | QIon | Response | Conc | Units | Qvalue |
|-------------------------------|-------|------|----------|-----------|-------|--------|
| 2) Dichlorodifluoromethan... | 4.30 | 85 | 433912 | 9821.935 | pg | 100 |
| 3) Chloromethane | 4.51 | 52 | 96612 | 9142.474 | pg | 100 |
| 4) 1,2-Dichloro,1,1,2,2-t... | 4.69 | 85 | 302197 | 9505.794 | pg | 100 |
| 5) Vinyl Chloride | 4.81 | 62 | 281319 | 9589.213 | pg | 99 |
| 6) 1,3-Butadiene | 5.00 | 54 | 207819 | 9874.732 | pg | 98 |
| 7) Bromomethane | 5.32 | 94 | 184794 | 9548.126 | pg | 100 |
| 8) Chloroethane | 5.56 | 64 | 144421 | 9581.501 | pg | 100 |
| 9) Acrolein | 6.13 | 56 | 117735 | 10527.918 | pg | 100 |
| 10) Acetone | 6.28 | 58 | 740502 | 45746.698 | pg | 99 |
| 11) Trichlorofluoromethane | 6.48 | 101 | 350111 | 10271.725 | pg | 100 |
| 12) 1,1-Dichloroethene | 7.20 | 96 | 257291 | 10843.589 | pg | 99 |
| 13) Methylene Chloride | 7.35 | 84 | 261754 | 10338.510 | pg | 98 |
| 14) Trichlorotrifluoroethane | 7.67 | 151 | 231594 | 10122.563 | pg | 100 |
| 15) trans-1,2-Dichloroethene | 8.38 | 96 | 276102 | 11159.663 | pg | 100 |
| 16) 1,1-Dichloroethane | 8.60 | 63 | 397667 | 10002.119 | pg | 100 |
| 17) Methyl tert-Butyl Ether | 8.65 | 73 | 752976 | 11574.781 | pg | 100 |
| 18) cis-1,2-Dichloroethene | 9.47 | 96 | 292496 | 11215.760 | pg | 100 |
| 19) Chloroform | 9.78 | 83 | 424086 | 10067.949 | pg | 99 |
| 21) 1,2-Dichloroethane | 10.52 | 62 | 277683 | 10352.177 | pg | 100 |
| 22) 1,1,1-Trichloroethane | 10.79 | 97 | 384459 | 10849.125 | pg | 100 |
| 23) Benzene | 11.24 | 78 | 1044137 | 10218.735 | pg | 100 |
| 24) Carbon Tetrachloride | 11.40 | 117 | 347002 | 11748.291 | pg | 100 |
| 26) 1,2-Dichloropropane | 12.05 | 63 | 250769 | 10570.256 | pg | 99 |
| 27) Bromodichloromethane | 12.23 | 83 | 335620 | 10818.140 | pg | 100 |
| 28) Trichloroethene | 12.29 | 130 | 311721 | 10979.638 | pg | 100 |
| 29) 1,4-Dioxane | 12.25 | 88 | 225390 | 11316.085 | pg | 99 |
| 30) cis-1,3-Dichloropropene | 13.12 | 75 | 441642 | 12188.146 | pg | 100 |
| 31) trans-1,3-Dichloropropene | 13.64 | 75 | 370381 | 12180.414 | pg | 100 |
| 32) 1,1,2-Trichloroethane | 13.82 | 83 | 218143 | 10700.028 | pg | 100 |
| 34) Toluene | 14.12 | 91 | 1127023 | 10645.528 | pg | 99 |
| 35) Dibromochloromethane | 14.53 | 129 | 314167 | 11396.386 | pg | 100 |
| 36) 1,2-Dibromoethane | 14.79 | 107 | 302923 | 11173.099 | pg | 100 |
| 37) Tetrachloroethene | 15.27 | 166 | 330033 | 10898.859 | pg | 100 |
| 39) Chlorobenzene | 15.97 | 112 | 774148 | 11959.012 | pg | 100 |
| 40) Ethylbenzene | 16.35 | 91 | 1261319 | 12787.985 | pg | 100 |
| 41) m,p-Xylene | 16.53 | 91 | 1944860 | 25703.538 | pg | 100 |
| 42) Styrene | 16.89 | 104 | 818745 | 14884.577 | pg | 100 |
| 43) o-Xylene | 17.00 | 106 | 509044 | 12861.112 | pg | 99 |
| 44) 1,1,2,2-Tetrachloroethane | 16.97 | 83 | 468194 | 12151.318 | pg | 100 |
| 46) 1,3,5-Trimethylbenzene | 18.27 | 105 | 1089463 | 13288.879 | pg | 99 |
| 47) 1,2,4-Trimethylbenzene | 18.66 | 105 | 1096552 | 13465.017 | pg | 100 |
| 48) 1,3-Dichlorobenzene | 18.81 | 146 | 678792 | 12689.972 | pg | 100 |
| 49) 1,4-Dichlorobenzene | 18.87 | 146 | 673906 | 12561.236 | pg | 100 |
| 50) 1,2-Dichlorobenzene | 19.20 | 146 | 659009 | 12899.618 | pg | 100 |
| 51) 1,2-Dibromo-3-chloropr... | 19.61 | 157 | 239958 | 14073.891 | pg | 98 |
| 52) 1,2,4-Trichlorobenzene | 20.82 | 182 | 436487 | 14036.459 | pg | 100 |
| 53) Naphthalene | 20.94 | 128 | 1354459 | 12856.854 | pg | 99 |

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Data File : I:\MS19\DATA\2018_10\01\10011814.D
 Acq On : 1 Oct 2018 16:39
 Sample : 10000pg S19100118 ICAL Std
 Misc : S31-09241806/S31-09271802 (10/26)

Vial: 14
 Operator: WA
 Inst : MS19

Quant Time: Oct 02 06:40:25 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

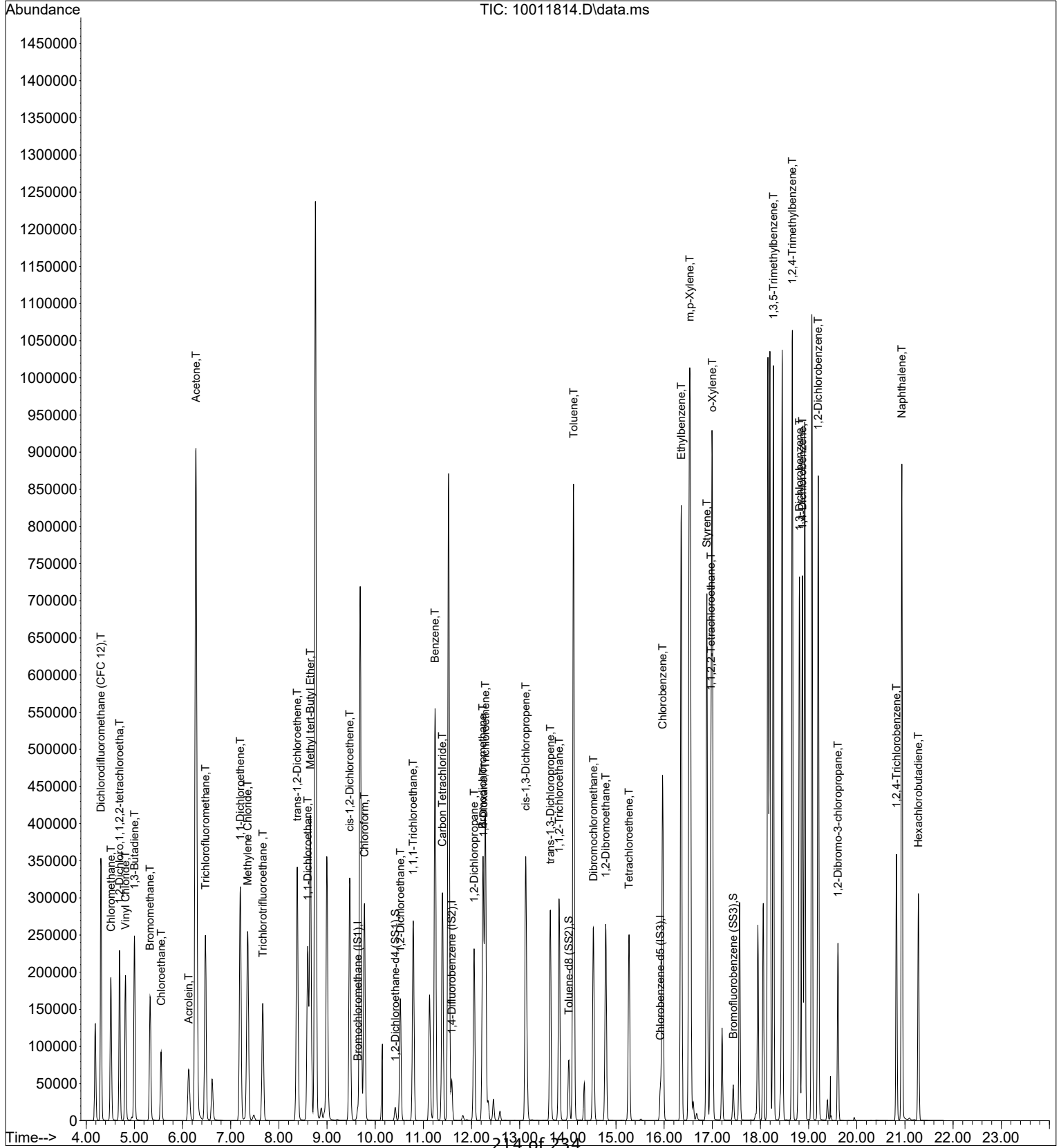
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------|-------|------|----------|-----------|-------|----------|
| 54) Hexachlorobutadiene | 21.28 | 225 | 290485 | 12595.487 | pg | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2018_10\01\10011814.D
 Acq On : 1 Oct 2018 16:39
 Sample : 10000pg S19100118 ICAL Std
 Misc : S31-09241806/S31-09271802 (10/26)

Vial: 14
 Operator: WA
 Inst : MS19

Quant Time: Oct 02 06:40:25 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



Data File : I:\MS19\DATA\2018_10\01\10011815.D
 Acq On : 1 Oct 2018 17:11
 Sample : 25000pg S19100118 ICAL Std
 Misc : S31-09241806/S31-08171802

Vial: 15
 Operator: WA
 Inst : MS19

Quant Time: Oct 02 06:40:32 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

10/2/18

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------------|-------|------|----------|----------|-------|----------|
| 1) Bromochloromethane (IS1) | 9.65 | 130 | 22065 | 1000.000 | pg | 0.02 |
| 25) 1,4-Difluorobenzene (IS2) | 11.59 | 114 | 103137 | 1000.000 | pg | 0.01 |
| 38) Chlorobenzene-d5 (IS3) | 15.92 | 54 | 14496 | 1000.000 | pg | 0.00 |

System Monitoring Compounds

| | | | | | | |
|-------------------------------|----------|-------|------------|---------|----|------|
| 20) 1,2-Dichloroethane-d4 ... | 10.42 | 65 | 26208 | 923.218 | pg | 0.02 |
| Spiked Amount 1000.000 | Range 70 | - 130 | Recovery = | 92.32% | | |
| 33) Toluene-d8 (SS2) | 14.02 | 98 | 105918 | 963.743 | pg | 0.00 |
| Spiked Amount 1000.000 | Range 70 | - 130 | Recovery = | 96.37% | | |
| 45) Bromofluorobenzene (SS3) | 17.43 | 174 | 37072 | 930.705 | pg | 0.00 |
| Spiked Amount 1000.000 | Range 70 | - 130 | Recovery = | 93.07% | | |

Target Compounds

| | R.T. | QIon | Response | Conc | Units | Qvalue |
|-------------------------------|-------|------|----------|------------|-------|--------|
| 2) Dichlorodifluoromethan... | 4.30 | 85 | 1175449 | 26334.679 | pg | 100 |
| 3) Chloromethane | 4.52 | 52 | 285120 | 26704.790 | pg | 100 |
| 4) 1,2-Dichloro,1,1,2,2-t... | 4.69 | 85 | 837060 | 26060.555 | pg | 100 |
| 5) Vinyl Chloride | 4.82 | 62 | 785255 | 26492.529 | pg | 99 |
| 6) 1,3-Butadiene | 5.00 | 54 | 724653 | 34079.952 | pg | 100 |
| 7) Bromomethane | 5.33 | 94 | 519739 | 26579.353 | pg | 100 |
| 8) Chloroethane | 5.56 | 64 | 406431 | 26688.172 | pg | 100 |
| 9) Acrolein | 6.14 | 56 | 324675 | 28735.223 | pg | 100 |
| 10) Acetone | 6.29 | 58 | 1908854 | 116717.249 | pg | 97 |
| 11) Trichlorofluoromethane | 6.48 | 101 | 961848 | 27930.127 | pg | 100 |
| 12) 1,1-Dichloroethene | 7.20 | 96 | 715370 | 29840.630 | pg | 99 |
| 13) Methylene Chloride | 7.36 | 84 | 723597 | 28287.216 | pg | 99 |
| 14) Trichlorotrifluoroethane | 7.66 | 151 | 694310 | 30036.229 | pg | 100 |
| 15) trans-1,2-Dichloroethene | 8.39 | 96 | 765357 | 30617.830 | pg | 100 |
| 16) 1,1-Dichloroethane | 8.61 | 63 | 1104862 | 27504.851 | pg | 100 |
| 17) Methyl tert-Butyl Ether | 8.66 | 73 | 2101384 | 31971.710 | pg | 100 |
| 18) cis-1,2-Dichloroethene | 9.48 | 96 | 805588 | 30573.883 | pg | 100 |
| 19) Chloroform | 9.79 | 83 | 1169368 | 27476.859 | pg | 100 |
| 21) 1,2-Dichloroethane | 10.53 | 62 | 755703 | 27884.467 | pg | 100 |
| 22) 1,1,1-Trichloroethane | 10.79 | 97 | 1057295 | 29530.422 | pg | 100 |
| 23) Benzene | 11.25 | 78 | 2854604 | 27651.222 | pg | 100 |
| 24) Carbon Tetrachloride | 11.40 | 117 | 961856 | 32231.581 | pg | 100 |
| 26) 1,2-Dichloropropane | 12.06 | 63 | 682689 | 28571.203 | pg | 99 |
| 27) Bromodichloromethane | 12.24 | 83 | 921769 | 29499.918 | pg | 100 |
| 28) Trichloroethene | 12.29 | 130 | 864600 | 30236.473 | pg | 100 |
| 29) 1,4-Dioxane | 12.25 | 88 | 611449 | 30480.055 | pg | 99 |
| 30) cis-1,3-Dichloropropene | 13.13 | 75 | 1208471 | 33112.919 | pg | 100 |
| 31) trans-1,3-Dichloropropene | 13.64 | 75 | 1026925 | 33530.964 | pg | 100 |
| 32) 1,1,2-Trichloroethane | 13.82 | 83 | 596957 | 29072.383 | pg | 99 |
| 34) Toluene | 14.12 | 91 | 3069160 | 28783.785 | pg | 99 |
| 35) Dibromochloromethane | 14.53 | 129 | 867155 | 31231.818 | pg | 100 |
| 36) 1,2-Dibromoethane | 14.79 | 107 | 828968 | 30357.996 | pg | 99 |
| 37) Tetrachloroethene | 15.27 | 166 | 904671 | 29662.536 | pg | 100 |
| 39) Chlorobenzene | 15.97 | 112 | 2118495 | 29773.474 | pg | 99 |
| 40) Ethylbenzene | 16.35 | 91 | 3438163 | 31712.787 | pg | 99 |
| 41) m,p-Xylene | 16.54 | 91 | 5280531 | 63491.109 | pg | 98 |
| 42) Styrene | 16.89 | 104 | 2328920 | 38518.836 | pg | 100 |
| 43) o-Xylene | 17.00 | 106 | 1400023 | 32180.229 | pg | 98 |
| 44) 1,1,2,2-Tetrachloroethane | 16.97 | 83 | 1255875 | 29653.416 | pg | 99 |
| 46) 1,3,5-Trimethylbenzene | 18.27 | 105 | 2991368 | 33195.290 | pg | 98 |
| 47) 1,2,4-Trimethylbenzene | 18.66 | 105 | 2955963 | 33022.309 | pg | 99 |
| 48) 1,3-Dichlorobenzene | 18.81 | 146 | 1865896 | 31735.267 | pg | 99 |
| 49) 1,4-Dichlorobenzene | 18.87 | 146 | 1859677 | 31535.616 | pg | 99 |
| 50) 1,2-Dichlorobenzene | 19.20 | 146 | 1770377 | 31526.955 | pg | 99 |
| 51) 1,2-Dibromo-3-chloropr... | 19.61 | 157 | 637450 | 34013.852 | pg | 97 |
| 52) 1,2,4-Trichlorobenzene | 20.82 | 182 | 1195622 | 34979.283 | pg | 100 |
| 53) Naphthalene | 20.93 | 128 | 4087226 | 35296.226 | pg | 99 |

Data File : I:\MS19\DATA\2018_10\01\10011815.D
 Acq On : 1 Oct 2018 17:11
 Sample : 25000pg S19100118 ICAL Std
 Misc : S31-09241806/S31-08171802

Vial: 15
 Operator: WA
 Inst : MS19

Quant Time: Oct 02 06:40:32 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

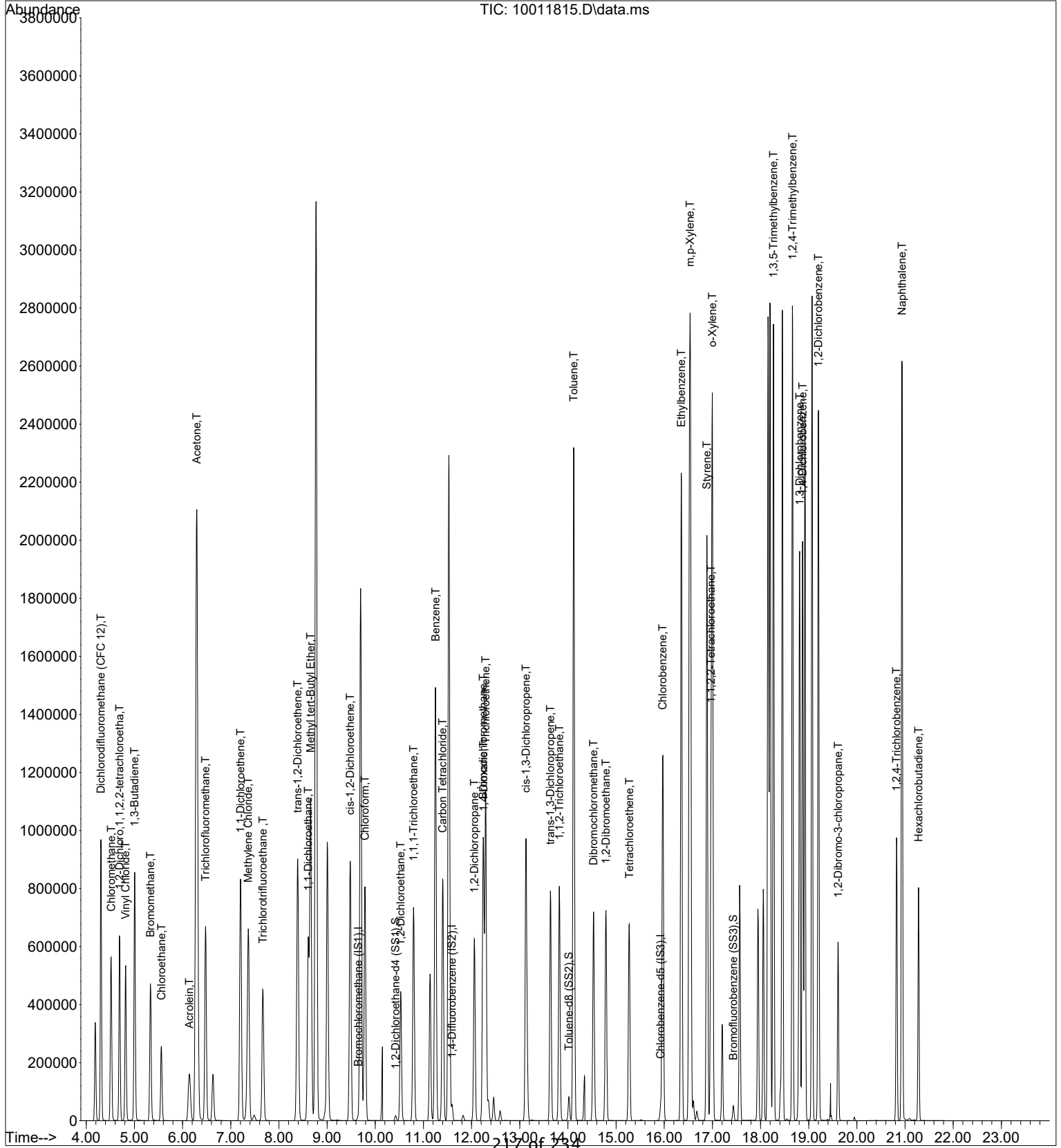
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------|-------|------|----------|-----------|-------|----------|
| 54) Hexachlorobutadiene | 21.28 | 225 | 765922 | 30213.883 | pg | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2018_10\01\10011815.D
Acq On : 1 Oct 2018 17:11
Sample : 25000pg S19100118 ICAL Std
Misc : S31-09241806/S31-08171802

Vial: 15
Operator: WA
Inst : MS19

Quant Time: Oct 02 06:40:32 2018
Quant Method : I:\MS19\METHODS\S19100118.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Oct 01 15:34:24 2018
Response via : Initial Calibration
DataAcq Meth:TO15SIM.M



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Data File : I:\MS19\DATA\2018_10\01\10011816.D
 Acq On : 1 Oct 2018 17:43
 Sample : 50000pg S19100118 ICAL Std
 Misc : S31-09241806/S31-08171802

Vial: 15
 Operator: WA
 Inst : MS19

Quant Time: Oct 02 06:40:38 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

~~10/1~~ 10/2/18

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------------|-------|------|----------|----------|-------|----------|
| 1) Bromochloromethane (IS1) | 9.65 | 130 | 21786 | 1000.000 | pg | 0.03 |
| 25) 1,4-Difluorobenzene (IS2) | 11.60 | 114 | 102151 | 1000.000 | pg | 0.02 |
| 38) Chlorobenzene-d5 (IS3) | 15.92 | 54 | 16136 | 1000.000 | pg | 0.00 |

System Monitoring Compounds

| | | | | | | |
|-------------------------------|----------|-------|------------|---------|----|------|
| 20) 1,2-Dichloroethane-d4 ... | 10.43 | 65 | 25928 | 925.051 | pg | 0.03 |
| Spiked Amount 1000.000 | Range 70 | - 130 | Recovery = | 92.50% | | |
| 33) Toluene-d8 (SS2) | 14.03 | 98 | 105227 | 966.697 | pg | 0.01 |
| Spiked Amount 1000.000 | Range 70 | - 130 | Recovery = | 96.67% | | |
| 45) Bromofluorobenzene (SS3) | 17.43 | 174 | 36393 | 820.797 | pg | 0.00 |
| Spiked Amount 1000.000 | Range 70 | - 130 | Recovery = | 82.08% | | |

Target Compounds

| | R.T. | QIon | Response | Conc | Units | Qvalue |
|-------------------------------|-------|------|----------|------------|-------|--------|
| 2) Dichlorodifluoromethan... | 4.30 | 85 | 2121230 | 48132.501 | pg | 99 |
| 3) Chloromethane | 4.52 | 52 | 522445 | 49559.680 | pg | 99 |
| 4) 1,2-Dichloro,1,1,2,2-t... | 4.69 | 85 | 1608435 | 50717.405 | pg | 99 |
| 5) Vinyl Chloride | 4.82 | 62 | 1449049 | 49513.339 | pg | 100 |
| 6) 1,3-Butadiene | 5.01 | 54 | 1355430 | 64561.321 | pg | 100 |
| 7) Bromomethane | 5.34 | 94 | 976601 | 50582.780 | pg | 100 |
| 8) Chloroethane | 5.56 | 64 | 760043 | 50547.141 | pg | 100 |
| 9) Acrolein | 6.15 | 56 | 609177 | 54605.407 | pg | 100 |
| 10) Acetone | 6.31 | 58 | 3436847 | 212837.898 | pg | 95 |
| 11) Trichlorofluoromethane | 6.48 | 101 | 1753519 | 51570.740 | pg | 100 |
| 12) 1,1-Dichloroethene | 7.21 | 96 | 1308137 | 55265.859 | pg | 99 |
| 13) Methylene Chloride | 7.38 | 84 | 1326001 | 52500.536 | pg | 99 |
| 14) Trichlorotrifluoroethane | 7.67 | 151 | 1269075 | 55603.959 | pg | 100 |
| 15) trans-1,2-Dichloroethene | 8.40 | 96 | 1402081 | 56808.051 | pg | 100 |
| 16) 1,1-Dichloroethane | 8.62 | 63 | 1999424 | 50411.845 | pg | 100 |
| 17) Methyl tert-Butyl Ether | 8.66 | 73 | 3831900 | 59047.436 | pg | 100 |
| 18) cis-1,2-Dichloroethene | 9.49 | 96 | 1467538 | 56409.649 | pg | 100 |
| 19) Chloroform | 9.80 | 83 | 2124196 | 50551.832 | pg | 100 |
| 21) 1,2-Dichloroethane | 10.54 | 62 | 1370000 | 51198.613 | pg | 100 |
| 22) 1,1,1-Trichloroethane | 10.80 | 97 | 1921689 | 54360.447 | pg | 99 |
| 23) Benzene | 11.26 | 78 | 5170027 | 50720.988 | pg | 100 |
| 24) Carbon Tetrachloride | 11.40 | 117 | 1752780 | 59487.455 | pg | 100 |
| 26) 1,2-Dichloropropane | 12.06 | 63 | 1235662 | 52212.824 | pg | 100 |
| 27) Bromodichloromethane | 12.24 | 83 | 1673814 | 54085.118 | pg | 100 |
| 28) Trichloroethene | 12.30 | 130 | 1587270 | 56045.220 | pg | 100 |
| 29) 1,4-Dioxane | 12.26 | 88 | 1137524 | 57251.641 | pg | 98 |
| 30) cis-1,3-Dichloropropene | 13.13 | 75 | 2195223 | 60731.185 | pg | 99 |
| 31) trans-1,3-Dichloropropene | 13.64 | 75 | 1893529 | 62423.935 | pg | 99 |
| 32) 1,1,2-Trichloroethane | 13.82 | 83 | 1091659 | 53678.017 | pg | 99 |
| 34) Toluene | 14.12 | 91 | 5513325 | 52205.209 | pg | 98 |
| 35) Dibromochloromethane | 14.54 | 129 | 1588204 | 57753.550 | pg | 100 |
| 36) 1,2-Dibromoethane | 14.79 | 107 | 1520188 | 56208.824 | pg | 99 |
| 37) Tetrachloroethene | 15.27 | 166 | 1650507 | 54639.518 | pg | 99 |
| 39) Chlorobenzene | 15.97 | 112 | 3848880 | 48594.681 | pg | 99 |
| 40) Ethylbenzene | 16.36 | 91 | 6159455 | 51039.044 | pg | 97 |
| 41) m,p-Xylene | 16.54 | 91 | 9382796 | 101349.097 | pg | 96 |
| 42) Styrene | 16.89 | 104 | 4208085 | 62525.242 | pg | 100 |
| 43) o-Xylene | 17.01 | 106 | 2533620 | 52317.591 | pg | 96 |
| 44) 1,1,2,2-Tetrachloroethane | 16.97 | 83 | 2260027 | 47939.581 | pg | 99 |
| 46) 1,3,5-Trimethylbenzene | 18.27 | 105 | 5320337 | 53039.334 | pg | 97 |
| 47) 1,2,4-Trimethylbenzene | 18.67 | 105 | 5158974 | 51775.474 | pg | 98 |
| 48) 1,3-Dichlorobenzene | 18.81 | 146 | 3402479 | 51987.923 | pg | 99 |
| 49) 1,4-Dichlorobenzene | 18.87 | 146 | 3442390 | 52441.629 | pg | 99 |
| 50) 1,2-Dichlorobenzene | 19.20 | 146 | 3230938 | 51688.888 | pg | 99 |
| 51) 1,2-Dibromo-3-chloropr... | 19.61 | 157 | 1191870 | 57133.507 | pg | 97 |
| 52) 1,2,4-Trichlorobenzene | 20.83 | 182 | 2298722 | 60416.526 | pg | 100 |
| 53) Naphthalene | 20.94 | 128 | 7596985 | 58937.700 | pg | 98 |

Data File : I:\MS19\DATA\2018_10\01\10011816.D
 Acq On : 1 Oct 2018 17:43
 Sample : 50000pg S19100118 ICAL Std
 Misc : S31-09241806/S31-08171802

Vial: 15
 Operator: WA
 Inst : MS19

Quant Time: Oct 02 06:40:38 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Mon Oct 01 15:34:24 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

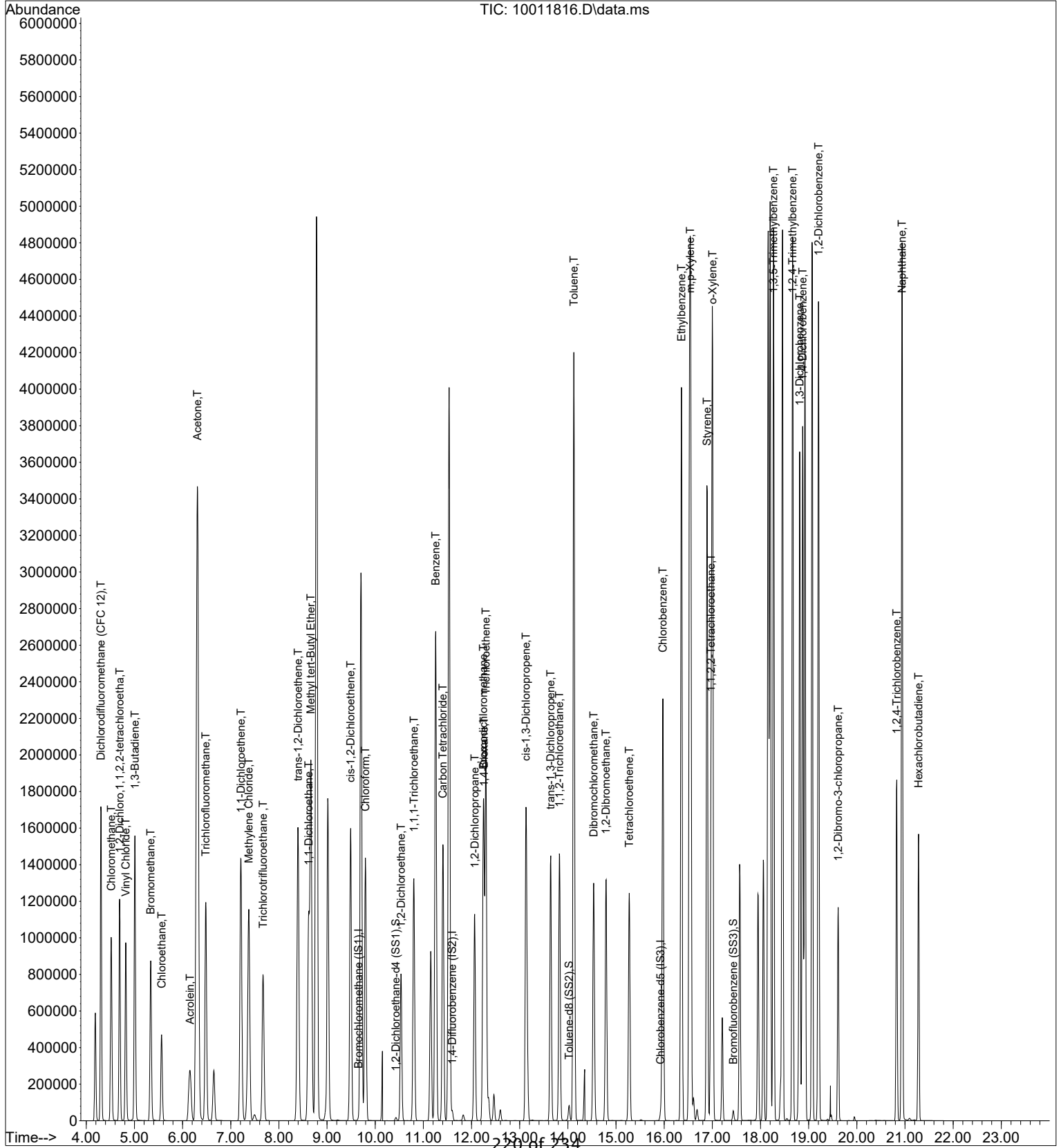
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------|-------|------|----------|-----------|-------|----------|
| 54) Hexachlorobutadiene | 21.28 | 225 | 1462036 | 51812.239 | pg | 99 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2018_10\01\10011816.D
Acq On : 1 Oct 2018 17:43
Sample : 50000pg S19100118 ICAL Std
Misc : S31-09241806/S31-08171802

Vial: 15
Operator: WA
Inst : MS19

Quant Time: Oct 02 06:40:38 2018
Quant Method : I:\MS19\METHODS\S19100118.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Mon Oct 01 15:34:24 2018
Response via : Initial Calibration
DataAcq Meth:TO15SIM.M



Data File : I:\MS19\DATA\2018_10\01\10011819.D
 Acq On : 1 Oct 2018 19:18
 Sample : 1000pg S19100118 ICV Std
 Misc : S31-09241806/S31-09271801 (10/26)

Vial: 9
 Operator: WA
 Inst : MS19

Quant Time: Oct 02 06:50:02 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

10/18

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------------|-------|------|----------|----------|-------|----------|
| 1) Bromochloromethane (IS1) | 9.62 | 130 | 19284 | 1000.000 | pg | -0.03 |
| 25) 1,4-Difluorobenzene (IS2) | 11.58 | 114 | 90340 | 1000.000 | pg | -0.02 |
| 38) Chlorobenzene-d5 (IS3) | 15.92 | 54 | 11755 | 1000.000 | pg | 0.00 |

System Monitoring Compounds

| | | | | | | |
|-------------------------------|----------|-------|----------|----------|----|---------|
| 20) 1,2-Dichloroethane-d4 ... | 10.40 | 65 | 23710 | 1027.119 | pg | -0.03 |
| Spiked Amount | 1000.000 | Range | 70 - 130 | Recovery | = | 102.71% |
| 33) Toluene-d8 (SS2) | 14.01 | 98 | 94591 | 1015.329 | pg | -0.01 |
| Spiked Amount | 1000.000 | Range | 70 - 130 | Recovery | = | 101.53% |
| 45) Bromofluorobenzene (SS3) | 17.43 | 174 | 33942 | 1021.858 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range | 70 - 130 | Recovery | = | 102.19% |

Target Compounds

| | R.T. | QIon | Response | Conc | Units | Qvalue |
|-------------------------------|-------|------|----------|----------|-------|--------|
| 2) Dichlorodifluoromethan... | 4.31 | 85 | 46083 | 1121.528 | pg | 100 |
| 3) Chloromethane | 4.51 | 52 | 10852 | 1129.477 | pg | 99 |
| 4) 1,2-Dichloro,1,1,2,2-t... | 4.69 | 85 | 30940 | 1044.589 | pg | 100 |
| 5) Vinyl Chloride | 4.81 | 62 | 30208 | 1132.157 | pg | 99 |
| 6) 1,3-Butadiene | 5.00 | 54 | 21243 | 1053.174 | pg | 99 |
| 7) Bromomethane | 5.32 | 94 | 19977 | 1065.743 | pg | 100 |
| 8) Chloroethane | 5.55 | 64 | 15635 | 1119.941 | pg | 100 |
| 9) Acrolein | 6.11 | 56 | 12939 | 1146.554 | pg | 100 |
| 10) Acetone | 6.26 | 58 | 88055 | 6154.623 | pg | 98 |
| 11) Trichlorofluoromethane | 6.47 | 101 | 35243 | 1096.742 | pg | 100 |
| 12) 1,1-Dichloroethene | 7.19 | 96 | 25399 | 1116.905 | pg | 98 |
| 13) Methylene Chloride | 7.33 | 84 | 26395 | 1108.033 | pg | 97 |
| 14) Trichlorotrifluoroethane | 7.66 | 151 | 23781 | 1055.913 | pg | 100 |
| 15) trans-1,2-Dichloroethene | 8.37 | 96 | 27072 | 1144.238 | pg | 100 |
| 16) 1,1-Dichloroethane | 8.58 | 63 | 41751 | 1130.659 | pg | 100 |
| 17) Methyl tert-Butyl Ether | 8.65 | 73 | 74261 | 1187.632 | pg | 100 |
| 18) cis-1,2-Dichloroethene | 9.45 | 96 | 28325 | 1124.817 | pg | 100 |
| 19) Chloroform | 9.76 | 83 | 43586 | 1094.105 | pg | 100 |
| 21) 1,2-Dichloroethane | 10.51 | 62 | 28072 | 1139.290 | pg | 100 |
| 22) 1,1,1-Trichloroethane | 10.78 | 97 | 37540 | 1110.996 | pg | 100 |
| 23) Benzene | 11.23 | 78 | 108739 | 1086.513 | pg | 100 |
| 24) Carbon Tetrachloride | 11.39 | 117 | 33790 | 1095.581 | pg | 100 |
| 26) 1,2-Dichloropropane | 12.05 | 63 | 25221 | 1120.876 | pg | 99 |
| 27) Bromodichloromethane | 12.23 | 83 | 32895 | 1101.339 | pg | 100 |
| 28) Trichloroethene | 12.28 | 130 | 30568 | 1082.906 | pg | 100 |
| 29) 1,4-Dioxane | 12.24 | 88 | 21765 | 1127.020 | pg | 99 |
| 30) cis-1,3-Dichloropropene | 13.12 | 75 | 39716 | 1130.707 | pg | 100 |
| 31) trans-1,3-Dichloropropene | 13.63 | 75 | 34545 | 1168.397 | pg | 100 |
| 32) 1,1,2-Trichloroethane | 13.82 | 83 | 21609 | 1101.495 | pg | 99 |
| 34) Toluene | 14.11 | 91 | 112377 | 1089.448 | pg | 100 |
| 35) Dibromochloromethane | 14.53 | 129 | 28858 | 1044.324 | pg | 100 |
| 36) 1,2-Dibromoethane | 14.78 | 107 | 29006 | 1095.765 | pg | 100 |
| 37) Tetrachloroethene | 15.27 | 166 | 32294 | 1063.904 | pg | 100 |
| 39) Chlorobenzene | 15.97 | 112 | 76186 | 1070.522 | pg | 100 |
| 40) Ethylbenzene | 16.35 | 91 | 121902 | 1124.844 | pg | 99 |
| 41) m,p-Xylene | 16.53 | 91 | 189199 | 2283.309 | pg | 99 |
| 42) Styrene | 16.89 | 104 | 74123 | 1126.202 | pg | 100 |
| 43) o-Xylene | 17.00 | 106 | 49274 | 1118.508 | pg | 99 |
| 44) 1,1,2,2-Tetrachloroethane | 16.97 | 83 | 44182 | 1045.205 | pg | 100 |
| 46) 1,3,5-Trimethylbenzene | 18.27 | 105 | 104660 | 1129.574 | pg | 99 |
| 47) 1,2,4-Trimethylbenzene | 18.66 | 105 | 105037 | 1136.389 | pg | 100 |
| 48) 1,3-Dichlorobenzene | 18.81 | 146 | 62869 | 1041.138 | pg | 100 |
| 49) 1,4-Dichlorobenzene | 18.87 | 146 | 62994 | 1038.808 | pg | 100 |
| 50) 1,2-Dichlorobenzene | 19.20 | 146 | 60465 | 1043.433 | pg | 100 |
| 51) 1,2-Dibromo-3-chloropr... | 19.61 | 157 | 19998 | 1000.839 | pg | 98 |
| 52) 1,2,4-Trichlorobenzene | 20.83 | 182 | 35513 | 1035.223 | pg | 100 |
| 53) Naphthalene | 20.94 | 128 | 108646 | 1004.925 | pg | 100 |

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Data File : I:\MS19\DATA\2018_10\01\10011819.D
 Acq On : 1 Oct 2018 19:18
 Sample : 1000pg S19100118 ICV Std
 Misc : S31-09241806/S31-09271801 (10/26)

Vial: 9
 Operator: WA
 Inst : MS19

Quant Time: Oct 02 06:50:02 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

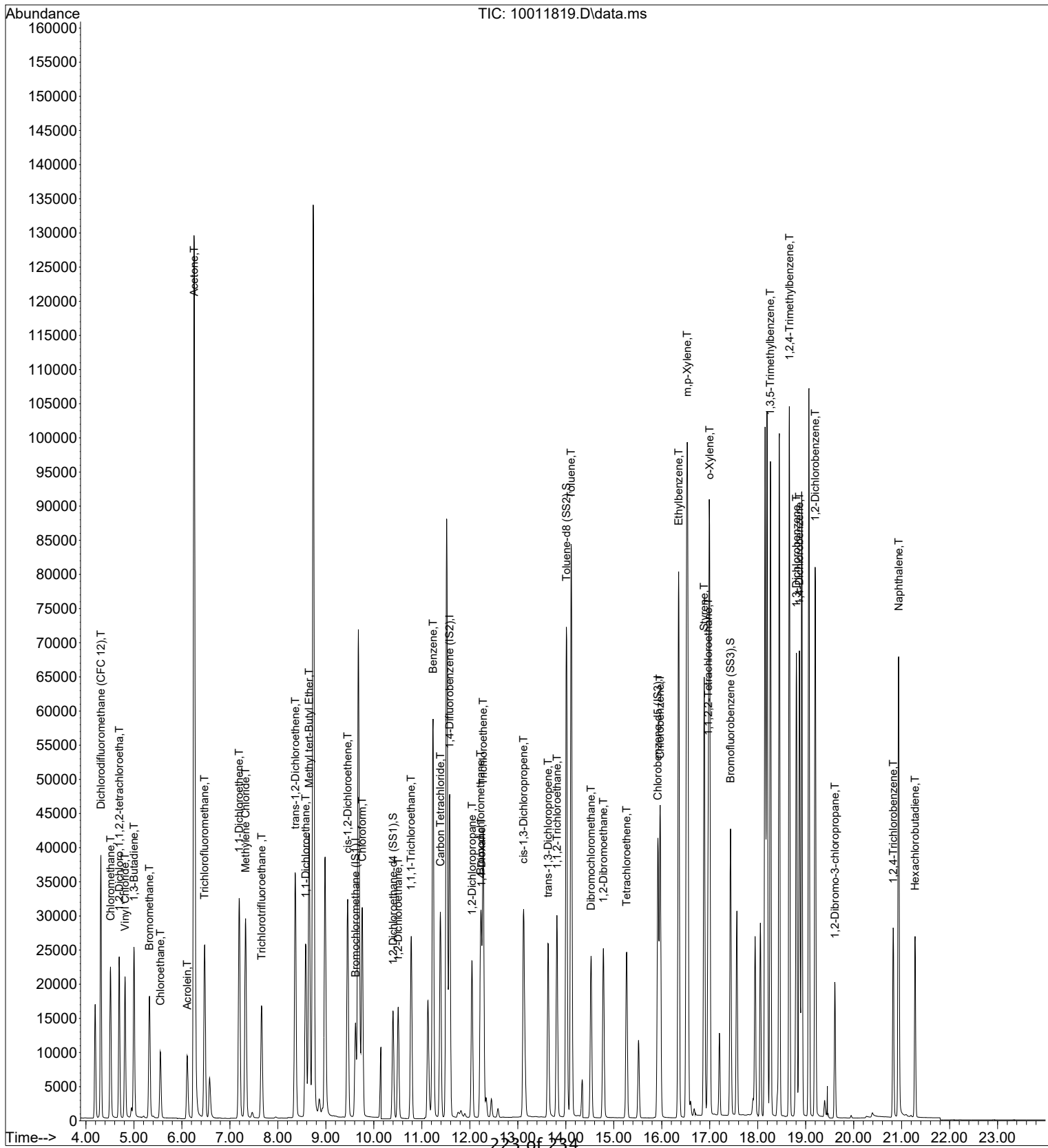
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------|-------|------|----------|----------|-------|----------|
| 54) Hexachlorobutadiene | 21.28 | 225 | 25301 | 1003.657 | pg | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2018_10\01\10011819.D
 Acq On : 1 Oct 2018 19:18
 Sample : 1000pg S19100118 ICV Std
 Misc : S31-09241806/S31-09271801 (10/26)

Vial: 9
 Operator: WA
 Inst : MS19

Quant Time: Oct 02 06:50:02 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



Laboratory Control Sample Recovery Check Sheet - MS19

Data File Name: 10011819.D
 Data File Path: I:\MS19\DATA\2018_10\01\
 Operator: WA
 Instrument Name: MS19
 Sample Name: 1000pg S19100118 ICV Std
 Misc Info: S31-09241806/S31-09271801 (10/26)
 Date Acquired: 10/1/18 19:18
 Acq. Method File: TO15SIM.M

~~WA~~ 10/2/18

| # | Compound Name | Ret. Time | Amount Spiked (pg) | Amount Found (pg) | Percent Recovery | Lower Limit | Upper Limit | Flag | 70-130% Method |
|-----|--|-----------|--------------------|-------------------|------------------|-------------|-------------|------|----------------|
| 2) | Dichlorodifluoromethane (CFC 12) | 4.31 | 1052.0 | 1121.5 | 107 | 80 | 130 | * | * |
| 3) | Chloromethane | 4.51 | 1055.0 | 1129.5 | 107 | 54 | 144 | * | * |
| 4) | 1,2-Dichloro,1,1,2,2-tetrachloroetha * | 4.69 | 1055.0 | 1044.6 | 99 | 65 | 125 | * | * |
| 5) | Vinyl Chloride | 4.81 | 1069.0 | 1132.2 | 106 | 65 | 136 | * | * |
| 6) | 1,3-Butadiene * | 5.00 | 1051.0 | 1053.2 | 100 | 27 | 154 | * | * |
| 7) | Bromomethane | 5.32 | 1059.0 | 1065.7 | 101 | 71 | 126 | * | * |
| 8) | Chloroethane | 5.55 | 1070.0 | 1119.9 | 105 | 71 | 129 | * | * |
| 9) | Acrolein * | 6.11 | 1025.0 | 1146.6 | 112 | 49 | 117 | * | * |
| 10) | Acetone | 6.26 | 5293.0 | 6154.6 | 116 | 62 | 158 | * | * |
| 11) | Trichlorofluoromethane | 6.47 | 1056.0 | 1096.7 | 104 | 82 | 122 | * | * |
| 12) | 1,1-Dichloroethene | 7.19 | 1089.0 | 1116.9 | 103 | 76 | 120 | * | * |
| 13) | Methylene Chloride | 7.33 | 1083.0 | 1108.0 | 102 | 76 | 120 | * | * |
| 14) | Trichlorotrifluoroethane | 7.66 | 1078.0 | 1055.9 | 98 | 77 | 118 | * | * |
| 15) | trans-1,2-Dichloroethene | 8.37 | 1069.0 | 1144.2 | 107 | 73 | 124 | * | * |
| 16) | 1,1-Dichloroethane | 8.58 | 1078.0 | 1130.7 | 105 | 71 | 126 | * | * |
| 17) | Methyl tert-Butyl Ether | 8.65 | 1072.0 | 1187.6 | 111 | 69 | 125 | * | * |
| 18) | cis-1,2-Dichloroethene | 9.45 | 1054.0 | 1124.8 | 107 | 76 | 121 | * | * |
| 19) | Chloroform | 9.76 | 1083.0 | 1094.1 | 101 | 80 | 121 | * | * |
| 21) | 1,2-Dichloroethane | 10.51 | 1074.0 | 1139.3 | 106 | 68 | 126 | * | * |
| 22) | 1,1,1-Trichloroethane | 10.78 | 1076.0 | 1111.0 | 103 | 75 | 121 | * | * |
| 25) | Benzene | 11.23 | 1055.0 | 1086.5 | 103 | 76 | 126 | * | * |
| 24) | Carbon Tetrachloride | 11.39 | 1058.0 | 1095.6 | 104 | 78 | 117 | * | * |
| 26) | 1,2-Dichloropropane | 12.05 | 1079.0 | 1120.9 | 104 | 65 | 126 | * | * |
| 27) | Bromodichloromethane | 12.23 | 1073.0 | 1101.3 | 103 | 72 | 119 | * | * |
| 28) | Trichloroethene | 12.28 | 1067.0 | 1082.9 | 101 | 73 | 121 | * | * |
| 29) | 1,4-Dioxane | 12.24 | 1069.0 | 1127.0 | 105 | 66 | 119 | * | * |
| 30) | cis-1,3-Dichloropropene | 13.12 | 1071.0 | 1130.7 | 106 | 60 | 122 | * | * |
| 31) | trans-1,3-Dichloropropene | 13.63 | 1064.0 | 1168.4 | 110 | 58 | 122 | * | * |
| 32) | 1,1,2-Trichloroethane | 13.82 | 1074.0 | 1101.5 | 103 | 68 | 124 | * | * |
| 34) | Toluene | 14.01 | 1060.0 | 1089.4 | 103 | 69 | 122 | * | * |
| 35) | Dibromochloromethane * | 14.53 | 1064.0 | 1044.3 | 98 | 71 | 114 | * | * |
| 36) | 1,2-Dibromoethane | 14.78 | 1081.0 | 1095.8 | 101 | 71 | 119 | * | * |
| 37) | Tetrachloroethene | 15.27 | 1064.0 | 1063.9 | 100 | 72 | 118 | * | * |
| 39) | Chlorobenzene | 15.97 | 1073.0 | 1070.5 | 100 | 76 | 123 | * | * |
| 40) | Ethylbenzene | 16.35 | 1061.0 | 1124.8 | 106 | 76 | 122 | * | * |
| 41) | m,p-Xylene | 16.53 | 2131.0 | 2283.3 | 107 | 73 | 126 | * | * |
| 42) | Styrene * | 16.89 | 1060.0 | 1126.2 | 106 | 53 | 129 | * | * |
| 43) | o-Xylene | 17.00 | 1070.0 | 1118.5 | 105 | 70 | 129 | * | * |
| 44) | 1,1,2,2-Tetrachloroethane | 16.97 | 1072.0 | 1045.2 | 98 | 73 | 123 | * | * |
| 46) | 1,3,5-Trimethylbenzene * | 18.27 | 1069.0 | 1129.6 | 106 | 63 | 132 | * | * |
| 47) | 1,2,4-Trimethylbenzene * | 18.66 | 1076.0 | 1136.4 | 106 | 57 | 134 | * | * |
| 48) | 1,3-Dichlorobenzene | 18.81 | 1079.0 | 1041.1 | 96 | 59 | 133 | * | * |
| 49) | 1,4-Dichlorobenzene | 18.87 | 1080.0 | 1038.8 | 96 | 59 | 125 | * | * |
| 50) | 1,2-Dichlorobenzene | 19.20 | 1078.0 | 1043.4 | 97 | 60 | 127 | * | * |
| 51) | 1,2-Dibromo-3-chloropropane * | 19.61 | 1046.0 | 1000.8 | 96 | 48 | 132 | * | * |
| 52) | 1,2,4-Trichlorobenzene | 20.83 | 1071.0 | 1035.2 | 97 | 36 | 136 | * | * |
| 53) | Naphthalene | 19.20 | 1015.0 | 1004.9 | 99 | 26 | 143 | * | * |
| 54) | Hexachlorobutadiene | 21.28 | 1045.0 | 1003.7 | 96 | 41 | 144 | * | * |

* **Compounds with 70 - 130 as advisory limits**

Data File : I:\MS19\DATA\2018_10\12\10121802.D
 Acq On : 12 Oct 2018 3:46
 Sample : CCV S19101218_1000pg
 Misc : S31-09241806/S31-09271802 (10/26)

Vial: 16
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 09:03:14 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

10/12/18

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
 Max. RRF Dev : 30% Max. Rel. Area : 200%

| | Compound | AvgRF | CCRF | %Dev | Area% | Dev(min) |
|------|-----------------------------|-------|-------|-------|-------|----------|
| 1 I | Bromochloromethane (IS1) | 1.000 | 1.000 | 0.0 | 92 | -0.03 |
| 2 T | Dichlorodifluoromethane (CF | 2.131 | 1.908 | 10.5 | 80 | 0.00 |
| 3 T | Chloromethane | 0.498 | 0.438 | 12.0 | 80 | 0.00 |
| 4 T | 1,2-Dichloro,1,1,2,2-tetrac | 1.536 | 1.365 | 11.1 | 80 | 0.00 |
| 5 T | Vinyl Chloride | 1.384 | 1.233 | 10.9 | 80 | 0.00 |
| 6 T | 1,3-Butadiene | 1.046 | 0.972 | 7.1 | 84 | 0.00 |
| 7 T | Bromomethane | 0.972 | 0.845 | 13.1 | 80 | -0.01 |
| 8 T | Chloroethane | 0.724 | 0.634 | 12.4 | 80 | 0.00 |
| 9 T | Acrolein | 0.585 | 0.490 | 16.2 | 79 | -0.04 |
| 10 T | Acetone | 0.742 | 0.652 | 12.1 | 82 | -0.05 |
| 11 T | Trichlorofluoromethane | 1.666 | 1.479 | 11.2 | 80 | 0.00 |
| 12 T | 1,1-Dichloroethene | 1.179 | 1.069 | 9.3 | 80 | -0.01 |
| 13 T | Methylene Chloride | 1.235 | 1.103 | 10.7 | 81 | -0.04 |
| 14 T | Trichlorotrifluoroethane | 1.168 | 1.079 | 7.6 | 80 | 0.00 |
| 15 T | trans-1,2-Dichloroethene | 1.227 | 1.126 | 8.2 | 82 | -0.03 |
| 16 T | 1,1-Dichloroethane | 1.915 | 1.728 | 9.8 | 80 | -0.03 |
| 17 T | Methyl tert-Butyl Ether | 3.243 | 3.044 | 6.1 | 81 | 0.00 |
| 18 T | cis-1,2-Dichloroethene | 1.306 | 1.215 | 7.0 | 82 | -0.03 |
| 19 T | Chloroform | 2.066 | 1.784 | 13.6 | 80 | -0.03 |
| 20 S | 1,2-Dichloroethane-d4 (SS1) | 1.197 | 1.164 | 2.8 | 90 | -0.03 |
| 21 T | 1,2-Dichloroethane | 1.278 | 1.162 | 9.1 | 80 | -0.03 |
| 22 T | 1,1,1-Trichloroethane | 1.752 | 1.593 | 9.1 | 81 | -0.02 |
| 23 T | Benzene | 5.190 | 4.439 | 14.5 | 80 | -0.02 |
| 24 T | Carbon Tetrachloride | 1.599 | 1.459 | 8.8 | 81 | -0.02 |
| 25 I | 1,4-Difluorobenzene (IS2) | 1.000 | 1.000 | 0.0 | 91 | -0.02 |
| 26 T | 1,2-Dichloropropane | 0.249 | 0.227 | 8.8 | 80 | -0.02 |
| 27 T | Bromodichloromethane | 0.331 | 0.302 | 8.8 | 80 | -0.02 |
| 28 T | Trichloroethene | 0.312 | 0.290 | 7.1 | 81 | -0.02 |
| 29 T | 1,4-Dioxane | 0.214 | 0.198 | 7.5 | 79 | -0.01 |
| 30 T | cis-1,3-Dichloropropene | 0.389 | 0.367 | 5.7 | 81 | -0.01 |
| 31 T | trans-1,3-Dichloropropene | 0.327 | 0.315 | 3.7 | 81 | -0.01 |
| 32 T | 1,1,2-Trichloroethane | 0.217 | 0.199 | 8.3 | 80 | -0.01 |
| 33 S | Toluene-d8 (SS2) | 1.031 | 1.030 | 0.1 | 92 | -0.01 |
| 34 T | Toluene | 1.142 | 1.037 | 9.2 | 81 | -0.01 |
| 35 T | Dibromochloromethane | 0.306 | 0.284 | 7.2 | 81 | 0.00 |
| 36 T | 1,2-Dibromoethane | 0.293 | 0.272 | 7.2 | 81 | 0.00 |
| 37 T | Tetrachloroethene | 0.336 | 0.307 | 8.6 | 81 | 0.00 |
| 38 I | Chlorobenzene-d5 (IS3) | 1.000 | 1.000 | 0.0 | 92 | 0.00 |
| 39 T | Chlorobenzene | 6.054 | 5.676 | 6.2 | 81 | 0.00 |
| 40 T | Ethylbenzene | 9.219 | 9.117 | 1.1 | 81 | 0.00 |
| 41 T | m,p-Xylene | 7.049 | 7.082 | -0.5 | 81 | 0.00 |
| 42 T | Styrene | 5.599 | 5.353 | 4.4 | 75 | 0.00 |
| 43 T | o-Xylene | 3.748 | 3.749 | -0.0 | 81 | -0.01 |
| 44 T | 1,1,2,2-Tetrachloroethane | 3.596 | 3.466 | 3.6 | 80 | 0.00 |
| 45 S | Bromofluorobenzene (SS3) | 2.826 | 3.119 | -10.4 | 96 | 0.00 |
| 46 T | 1,3,5-Trimethylbenzene | 7.882 | 7.937 | -0.7 | 80 | 0.00 |
| 47 T | 1,2,4-Trimethylbenzene | 7.863 | 8.043 | -2.3 | 79 | 0.00 |
| 48 T | 1,3-Dichlorobenzene | 5.137 | 4.944 | 3.8 | 80 | 0.00 |
| 49 T | 1,4-Dichlorobenzene | 5.159 | 4.857 | 5.9 | 80 | 0.00 |
| 50 T | 1,2-Dichlorobenzene | 4.930 | 4.786 | 2.9 | 80 | 0.00 |
| 51 T | 1,2-Dibromo-3-chloropropane | 1.700 | 1.741 | -2.4 | 81 | 0.00 |
| 52 T | 1,2,4-Trichlorobenzene | 2.918 | 2.942 | -0.8 | 79 | 0.00 |
| 53 T | Naphthalene | 9.197 | 8.693 | 5.5 | 72 | 0.00 |
| 54 T | Hexachlorobutadiene | 2.145 | 2.182 | -1.7 | 82 | 0.00 |

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Data File : I:\MS19\DATA\2018_10\12\10121802.D
Acq On : 12 Oct 2018 3:46
Sample : CCV S19101218_1000pg
Misc : S31-09241806/S31-09271802 (10/26)

Vial: 16
Operator: WA
Inst : MS19

Quant Time: Oct 12 09:03:14 2018
Quant Method : I:\MS19\METHODS\S19100118.M
Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
QLast Update : Tue Oct 02 06:45:50 2018
Response via : Initial Calibration
DataAcq Meth:TO15SIM.M

Min. RRF : 0.000 Min. Rel. Area : 50% Max. R.T. Dev 0.33min
Max. RRF Dev : 30% Max. Rel. Area : 200%

| Compound | AvgRF | CCRF | %Dev Area% | Dev(min) |
|----------|-------|------|------------|----------|
|----------|-------|------|------------|----------|

(#) = Out of Range

SPCC's out = 0 CCC's out = 0

Data File : I:\MS19\DATA\2018_10\12\10121802.D
 Acq On : 12 Oct 2018 3:46
 Sample : CCV S19101218_1000pg
 Misc : S31-09241806/S31-09271802 (10/26)

Vial: 16
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 09:03:14 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

~~10/12/18~~ 10/12/18

| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------------|-------|------|----------|----------|-------|----------|
| 1) Bromochloromethane (IS1) | 9.62 | 130 | 19534 | 1000.000 | pg | -0.03 |
| 25) 1,4-Difluorobenzene (IS2) | 11.58 | 114 | 89611 | 1000.000 | pg | -0.02 |
| 38) Chlorobenzene-d5 (IS3) | 15.92 | 54 | 11132 | 1000.000 | pg | 0.00 |

System Monitoring Compounds

| | | | | | | |
|-------------------------------|----------|----------------|----------|----------|---------|-------|
| 20) 1,2-Dichloroethane-d4 ... | 10.40 | 65 | 22734 | 972.235 | pg | -0.03 |
| Spiked Amount | 1000.000 | Range 70 - 130 | Recovery | = | 97.22% | |
| 33) Toluene-d8 (SS2) | 14.01 | 98 | 92292 | 998.711 | pg | -0.01 |
| Spiked Amount | 1000.000 | Range 70 - 130 | Recovery | = | 99.87% | |
| 45) Bromofluorobenzene (SS3) | 17.43 | 174 | 34722 | 1103.843 | pg | 0.00 |
| Spiked Amount | 1000.000 | Range 70 - 130 | Recovery | = | 110.38% | |

Target Compounds

| | R.T. | QIon | Response | Conc | Units | Qvalue |
|-------------------------------|-------|------|----------|----------|-------|--------|
| 2) Dichlorodifluoromethan... | 4.31 | 85 | 78123 | 1876.957 | pg | 100 |
| 3) Chloromethane | 4.51 | 52 | 17199 | 1767.163 | pg | 99 |
| 4) 1,2-Dichloro,1,1,2,2-t... | 4.69 | 85 | 54435 | 1814.301 | pg | 100 |
| 5) Vinyl Chloride | 4.81 | 62 | 49693 | 1838.595 | pg | 100 |
| 6) 1,3-Butadiene | 5.00 | 54 | 40210 | 1967.997 | pg | 100 |
| 7) Bromomethane | 5.32 | 94 | 32763 | 1725.487 | pg | 100 |
| 8) Chloroethane | 5.55 | 64 | 25083 | 1773.711 | pg | 100 |
| 9) Acrolein | 6.11 | 56 | 20183 | 1765.572 | pg | 99 |
| 10) Acetone | 6.26 | 58 | 135599 | 9356.423 | pg | 97 |
| 11) Trichlorofluoromethane | 6.48 | 101 | 60733 | 1865.787 | pg | 100 |
| 12) 1,1-Dichloroethene | 7.20 | 96 | 44324 | 1924.175 | pg | 99 |
| 13) Methylene Chloride | 7.33 | 84 | 45586 | 1889.158 | pg | 99 |
| 14) Trichlorotrifluoroethane | 7.66 | 151 | 44397 | 1946.067 | pg | 100 |
| 15) trans-1,2-Dichloroethene | 8.37 | 96 | 47551 | 1984.090 | pg | 100 |
| 16) 1,1-Dichloroethane | 8.58 | 63 | 69004 | 1844.782 | pg | 100 |
| 17) Methyl tert-Butyl Ether | 8.65 | 73 | 127249 | 2009.006 | pg | 100 |
| 18) cis-1,2-Dichloroethene | 9.45 | 96 | 50643 | 1985.351 | pg | 100 |
| 19) Chloroform | 9.76 | 83 | 73964 | 1832.899 | pg | 100 |
| 21) 1,2-Dichloroethane | 10.51 | 62 | 47885 | 1918.519 | pg | 100 |
| 22) 1,1,1-Trichloroethane | 10.78 | 97 | 67046 | 1958.830 | pg | 100 |
| 23) Benzene | 11.24 | 78 | 183299 | 1808.072 | pg | 100 |
| 24) Carbon Tetrachloride | 11.39 | 117 | 60431 | 1934.292 | pg | 100 |
| 26) 1,2-Dichloropropane | 12.05 | 63 | 43276 | 1938.926 | pg | 100 |
| 27) Bromodichloromethane | 12.22 | 83 | 57690 | 1947.199 | pg | 100 |
| 28) Trichloroethene | 12.28 | 130 | 55078 | 1967.074 | pg | 100 |
| 29) 1,4-Dioxane | 12.25 | 88 | 37784 | 1972.422 | pg | 99 |
| 30) cis-1,3-Dichloropropene | 13.12 | 75 | 73749 | 2116.701 | pg | 100 |
| 31) trans-1,3-Dichloropropene | 13.63 | 75 | 60173 | 2051.755 | pg | 100 |
| 32) 1,1,2-Trichloroethane | 13.81 | 83 | 38010 | 1953.280 | pg | 99 |
| 34) Toluene | 14.11 | 91 | 195838 | 1914.012 | pg | 100 |
| 35) Dibromochloromethane | 14.53 | 129 | 54026 | 1971.018 | pg | 100 |
| 36) 1,2-Dibromoethane | 14.78 | 107 | 51902 | 1976.663 | pg | 100 |
| 37) Tetrachloroethene | 15.27 | 166 | 58537 | 1944.151 | pg | 100 |
| 39) Chlorobenzene | 15.96 | 112 | 134713 | 1998.847 | pg | 100 |
| 40) Ethylbenzene | 16.35 | 91 | 213545 | 2080.752 | pg | 100 |
| 41) m,p-Xylene | 16.53 | 91 | 334749 | 4265.939 | pg | 99 |
| 42) Styrene | 16.89 | 104 | 126091 | 2023.005 | pg | 100 |
| 43) o-Xylene | 16.99 | 106 | 88058 | 2110.764 | pg | 100 |
| 44) 1,1,2,2-Tetrachloroethane | 16.96 | 83 | 81573 | 2037.756 | pg | 100 |
| 46) 1,3,5-Trimethylbenzene | 18.26 | 105 | 185376 | 2112.696 | pg | 100 |
| 47) 1,2,4-Trimethylbenzene | 18.66 | 105 | 188211 | 2150.201 | pg | 100 |
| 48) 1,3-Dichlorobenzene | 18.80 | 146 | 117894 | 2061.640 | pg | 100 |
| 49) 1,4-Dichlorobenzene | 18.87 | 146 | 115064 | 2003.664 | pg | 100 |
| 50) 1,2-Dichlorobenzene | 19.20 | 146 | 115406 | 2102.996 | pg | 100 |
| 51) 1,2-Dibromo-3-chloropr... | 19.61 | 157 | 40737 | 2152.862 | pg | 98 |
| 52) 1,2,4-Trichlorobenzene | 20.82 | 182 | 71858 | 2211.929 | pg | 100 |
| 53) Naphthalene | 20.94 | 128 | 204388 | 1996.295 | pg | 100 |

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Data File : I:\MS19\DATA\2018_10\12\10121802.D
 Acq On : 12 Oct 2018 3:46
 Sample : CCV S19101218_1000pg
 Misc : S31-09241806/S31-09271802 (10/26)

Vial: 16
 Operator: WA
 Inst : MS19

Quant Time: Oct 12 09:03:14 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M

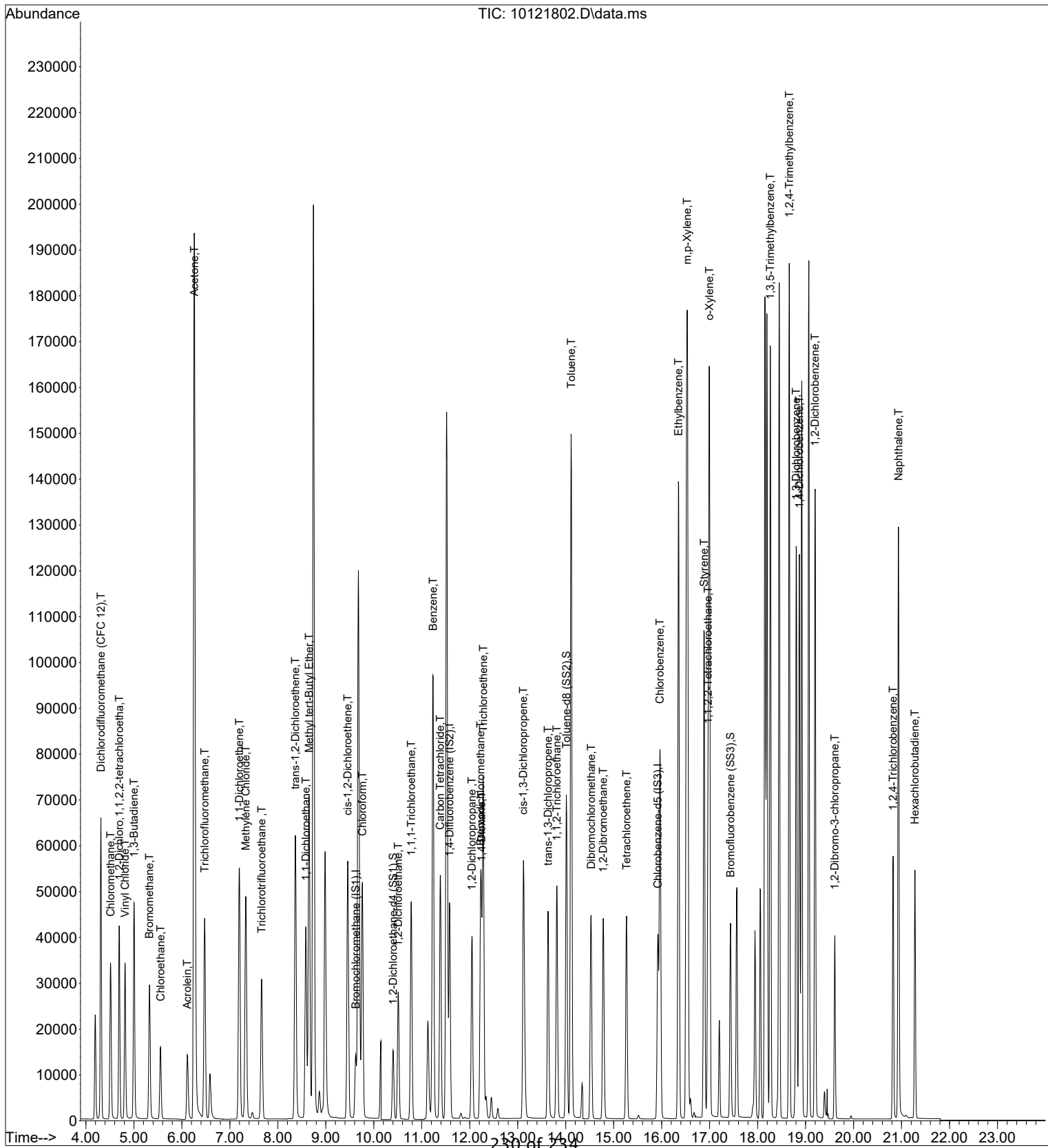
| Internal Standards | R.T. | QIon | Response | Conc | Units | Dev(Min) |
|-------------------------|-------|------|----------|----------|-------|----------|
| 54) Hexachlorobutadiene | 21.28 | 225 | 51345 | 2150.776 | pg | 100 |

(#) = qualifier out of range (m) = manual integration (+) = signals summed

Data File : I:\MS19\DATA\2018_10\12\10121802.D
 Acq On : 12 Oct 2018 3:46
 Sample : CCV S19101218_1000pg
 Misc : S31-09241806/S31-09271802 (10/26)

Vial: 16
 Operator: WA
 Inst : MS19

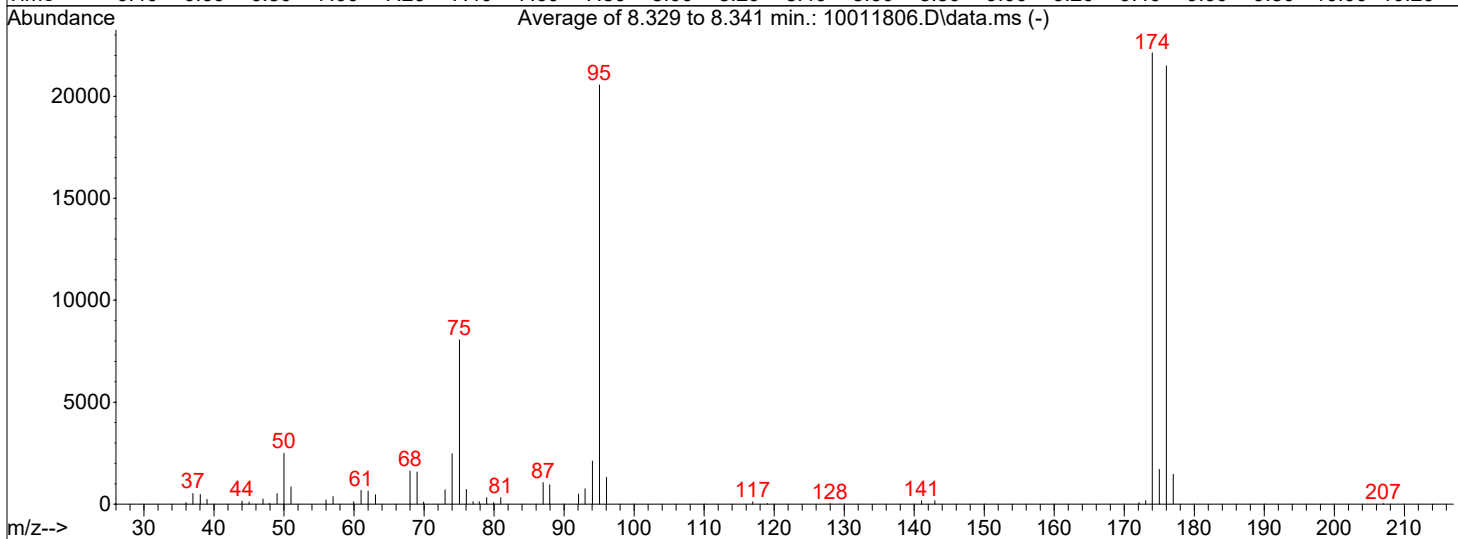
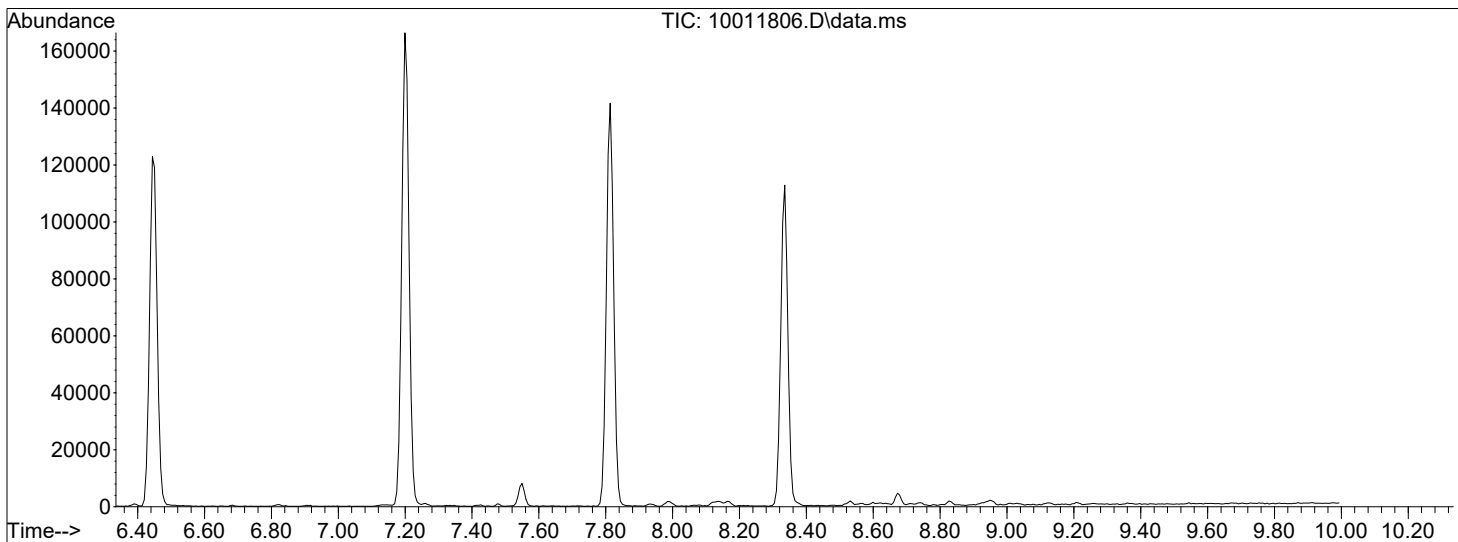
Quant Time: Oct 12 09:03:14 2018
 Quant Method : I:\MS19\METHODS\S19100118.M
 Quant Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 QLast Update : Tue Oct 02 06:45:50 2018
 Response via : Initial Calibration
 DataAcq Meth:TO15SIM.M



Data Path : I:\MS19\DATA\2018_10\01\
 Data File : 10011806.D
 Acq On : 1 Oct 2018 11:45
 Operator : WA
 Sample : BFB_S19100118
 Misc : S31-09241806
 ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : I:\MS19\METHODS\S19082418A.M
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 Last Update : Wed Sep 05 06:48:06 2018



AutoFind: Scans 691, 692, 693; Background Corrected with Scan 685

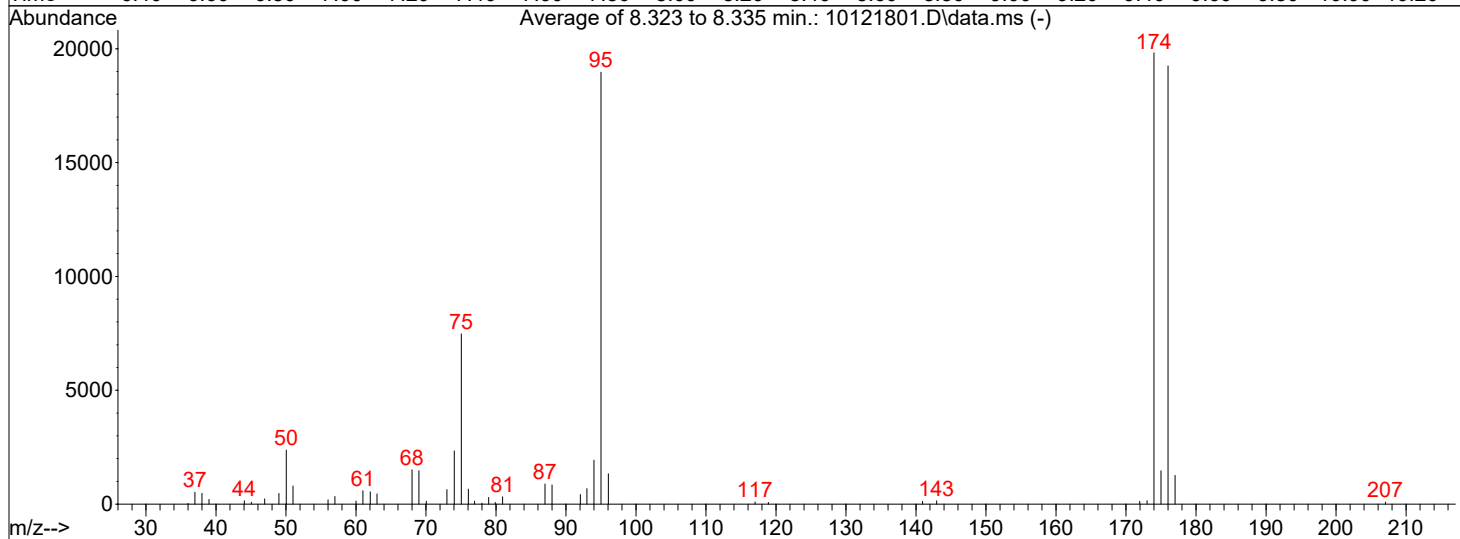
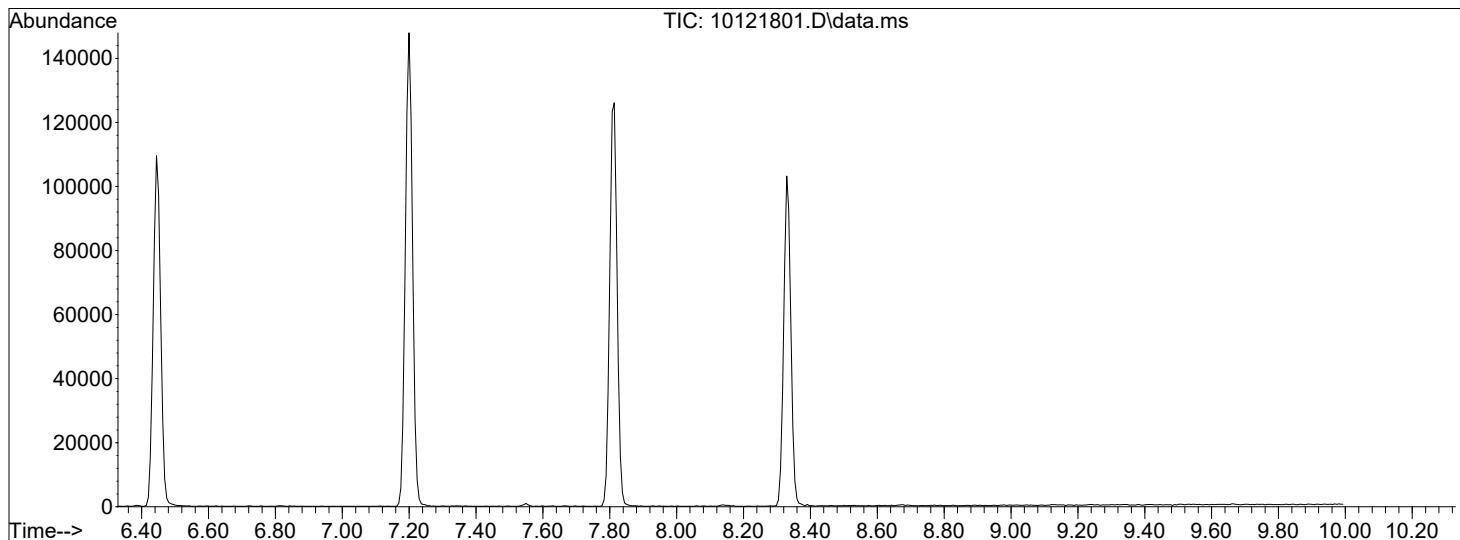
| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|-------------|--------------|--------------|--------------|-----------|---------|------------------|
| 50 | 95 | 8 | 40 | 12.1 | 2491 | PASS |
| 75 | 95 | 30 | 66 | 39.2 | 8057 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 20557 | PASS |
| 96 | 95 | 5 | 9 | 6.4 | 1310 | PASS |
| 173 | 174 | 0.00 | 2 | 0.8 | 171 | PASS |
| 174 | 95 | 50 | 120 | 107.7 | 22131 | PASS |
| 175 | 174 | 4 | 9 | 7.7 | 1702 | PASS |
| 176 | 174 | 93 | 101 | 97.1 | 21488 | PASS |
| 177 | 176 | 5 | 9 | 6.8 | 1469 | PASS |

~~WA~~ 10/1/18

Data Path : I:\MS19\DATA\2018_10\12\
 Data File : 10121801.D
 Acq On : 12 Oct 2018 3:26
 Operator : WA
 Sample : BFB_S19101218
 Misc : S31-09241806
 ALS Vial : 2 Sample Multiplier: 1

Integration File: rteint.p

Method : I:\MS19\METHODS\S19100118.M
 Title : EPA TO-15 per SOP VOA-TO15 (CASS TO-15/GC-MS)
 Last Update : Tue Oct 02 06:45:50 2018



AutoFind: Scans 690, 691, 692; Background Corrected with Scan 684

| Target Mass | Rel. to Mass | Lower Limit% | Upper Limit% | Rel. Abn% | Raw Abn | Result Pass/Fail |
|-------------|--------------|--------------|--------------|-----------|---------|------------------|
| 50 | 95 | 8 | 40 | 12.5 | 2375 | PASS |
| 75 | 95 | 30 | 66 | 39.4 | 7475 | PASS |
| 95 | 95 | 100 | 100 | 100.0 | 18973 | PASS |
| 96 | 95 | 5 | 9 | 7.0 | 1333 | PASS |
| 173 | 174 | 0.00 | 2 | 0.8 | 156 | PASS |
| 174 | 95 | 50 | 120 | 104.5 | 19821 | PASS |
| 175 | 174 | 4 | 9 | 7.4 | 1467 | PASS |
| 176 | 174 | 93 | 101 | 97.1 | 19247 | PASS |
| 177 | 176 | 5 | 9 | 6.6 | 1265 | PASS |

10/12/18

Injection Log

Directory: J:\MS19\DATA\2018_10\01\

| | Date/Time | File Name | Sample ID | Misc Info | Operator | Vial | Comment |
|--|---------------|------------|----------------------------|-----------------------------------|----------|-------------------|--------------------|
| 1 | 10/1/18 8:15 | 10011801.D | Blank | S31-09241806 | WA | 2 | |
| 2 | 10/1/18 8:46 | 10011802.D | Blank | S31-09241806 | WA | 2 | |
| 3 | 10/1/18 9:17 | 10011803.D | BFB_S19100118 | S31-07311807 | WA | 2 | |
| 4 | 10/1/18 9:37 | 10011804.D | Std check_1000pg | S31-07311807/S31-09181802 (10/16) | WA | 16 | |
| 5 | 10/1/18 10:14 | 10011805.D | Std check_1000pg | S31-07311807/S31-09181808 (10/16) | WA | 14 | |
| 6 | 10/1/18 11:45 | 10011806.D | BFB_S19100118 | S31-09241806 | WA | 2 | <i>passed</i> |
| 7 | 10/1/18 12:11 | 10011807.D | 20pg S19100118 ICAL Std | S31-09241806/S31-09271803 (10/26) | WA | 13 | <i>S19100118.M</i> |
| 8 | 10/1/18 13:09 | 10011808.D | 50pg S19100118 ICAL Std | S31-09241806/S31-09271803 (10/26) | WA | 13 | |
| 9 | 10/1/18 13:44 | 10011809.D | 100pg S19100118 ICAL Std | S31-09241806/S31-09271803 (10/26) | WA | 13 | |
| 10 | 10/1/18 14:21 | 10011810.D | 500pg S19100118 ICAL Std | S31-09241806/S31-09271803 (10/26) | WA | 13 | |
| 11 | 10/1/18 14:52 | 10011811.D | 1000pg S19100118 ICAL Std | S31-09241806/S31-09271802 (10/26) | WA | 14 | |
| 12 | 10/1/18 15:36 | 10011812.D | 2000pg S19100118 ICAL Std | S31-09241806/S31-09271802 (10/26) | WA | 14 | |
| 13 | 10/1/18 16:39 | 10011814.D | 10000pg S19100118 ICAL Std | S31-09241806/S31-09271802 (10/26) | WA | 14 | |
| 14 | 10/1/18 17:11 | 10011815.D | 25000pg S19100118 ICAL Std | S31-09241806/S31-08171802 | WA | 15 | |
| 15 | 10/1/18 17:43 | 10011816.D | 50000pg S19100118 ICAL Std | S31-09241806/S31-08171802 | WA | 15 | |
| 16 | 10/1/18 18:14 | 10011817.D | Blank | S31-09241806/S31-08171802 | WA | 2 | |
| 17 | 10/1/18 18:46 | 10011818.D | 1000pg S19100118 ICV Std | S31-09241806/S31-09171808 (10/16) | WA | 2 | <i>not used</i> |
| 18 | 10/1/18 19:18 | 10011819.D | 1000pg S19100118 ICV Std | S31-09241806/S31-09271801 (10/26) | WA | 9 | <i>passed</i> |
| <i>S19100118.M: ranges from 20pg ---> 50K pg, except: Acetone 500pg --> 125K pg and chloroform : 50pg ---> 50K pg</i> | | | | | | | |
| | | | | | | <i>WA</i> 10/4/18 | |

Injection Log

Directory: I:\MS19\DATA\2018_10\12\

| | Date/Time | File Name | Sample ID | Misc Info | Operator | Vial | Comment |
|----|----------------|------------|--------------------------|-----------------------------------|----------|------|------------------------|
| 1 | 10/12/18 3:26 | 10121801.D | BFB S19101218 | S31-09241806 | WA | 2 | Passed |
| 2 | 10/12/18 3:46 | 10121802.D | CCV S19101218_1000pg | S31-09241806/S31-09271802 (10/26) | WA | 16 | Passed |
| 3 | 10/12/18 4:17 | 10121803.D | Blank | S31-09241806 | WA | 2 | Passed |
| 4 | 10/12/18 4:49 | 10121804.D | MB S19101218_1000mL | S31-09241806_AS01329 | WA | 2 | Passed |
| 5 | 10/12/18 5:20 | 10121805.D | LCS S19101218_1000pg | S31-09241806/S31-10021801 (11/1) | WA | 2 | Passed |
| 6 | 10/12/18 5:52 | 10121806.D | LCSD S19101218_1000pg | S31-09241806/S31-10021801 (11/1) | WA | 2 | Passed |
| 7 | 10/12/18 11:45 | 10121807.D | P1805236-005 (400mL) | S31-09241806 | WA | 7 | |
| 8 | 10/12/18 12:17 | 10121808.D | P1805236-006 (400mL) | S31-09241806 | WA | 8 | |
| 9 | 10/12/18 13:19 | 10121809.D | P1805236-001 (400mL) | S31-09241806 | WA | 1 | |
| 10 | 10/12/18 13:51 | 10121810.D | P1805236-002 (400mL) | S31-09241806 | WA | 3 | |
| 11 | 10/12/18 14:22 | 10121811.D | P1805236-003 (400mL) | S31-09241806 | WA | 4 | |
| 12 | 10/12/18 14:53 | 10121812.D | P1805236-004 (400mL) | S31-09241806 | WA | 5 | |
| 13 | 10/12/18 16:17 | 10121813.D | P1805376-007 (1000mL) | S31-09241806 | WA | 8 | |
| 14 | 10/12/18 16:49 | 10121814.D | Br-BNZ _ 200pg | S31-09241806/S31-10121802 | WA | 14 | |
| 15 | 10/12/18 17:21 | 10121815.D | P1805376-001 (1000mL) | S31-09241806 | WA | 1 | |
| 16 | 10/12/18 17:52 | 10121816.D | P1805376-001dup (1000mL) | S31-09241806 | WA | 1 | Passed |
| 17 | 10/12/18 18:23 | 10121817.D | P1805376-002 (1000mL) | S31-09241806 | WA | 3 | |
| 18 | 10/12/18 18:55 | 10121818.D | P1805376-003 (1000mL) | S31-09241806 | WA | 4 | |
| 19 | 10/12/18 19:26 | 10121819.D | P1805376-004 (1000mL) | S31-09241806 | WA | 5 | |
| 20 | 10/12/18 19:57 | 10121820.D | P1805376-005 (1000mL) | S31-09241806 | WA | 6 | |
| 21 | 10/12/18 20:29 | 10121821.D | CCV T19101218_1000pg | S31-09241806/S31-10041805 | WA | 2 | Passed |
| 22 | 10/12/18 21:00 | 10121822.D | IDOC1 T19101218_200pg | S31-09241806/S31-10121802 | WA | 15 | |
| 23 | 10/12/18 21:32 | 10121823.D | IDOC2 T19101218_200pg | S31-09241806/S31-10121802 | WA | 15 | |
| 24 | 10/12/18 22:04 | 10121824.D | P1805376-006 (1000mL) | S31-09241806 | WA | 7 | |
| 25 | 10/12/18 22:36 | 10121826.D | P1805376-008 (1000mL) | S31-09241806 | WA | 9 | |
| 26 | 10/12/18 23:08 | 10121827.D | P1805376-009 (1000mL) | S31-09241806 | WA | 10 | |
| 27 | 10/12/18 23:39 | 10121828.D | IDOC3 T19101218_200pg | S31-09241806/S31-10121802 | WA | 15 | |
| 28 | 10/13/18 0:11 | 10121829.D | IDOC4 T19101218_200pg | S31-09241806/S31-10121802 | WA | 15 | |
| 29 | 10/13/18 0:42 | 10121830.D | P1805324-001 (400mL) | S31-09241806 | WA | 11 | |
| 30 | 10/13/18 1:13 | 10121831.D | P1805324-002 (400mL) | S31-09241806 | WA | 12 | |
| 31 | 10/13/18 1:45 | 10121832.D | P1805324-006 (400mL) | S31-09241806 | WA | 13 | |
| 32 | 10/13/18 2:16 | 10121833.D | Blank | S31-09241806 | WA | 2 | |
| | | | | | | | |
| | | | | | | | WA 10/15/18 |
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2655 Park Center Drive, Suite A
 Simi Valley, California 93065
 Phone (805) 526-7161
 Fax (805) 526-7270

Air - Chain of Custody Record & Analytical Service Request

ALS quote # 44579

Requested Turnaround Time in Business Days (Surcharges) please circle
 1 Day (100%) 2 Day (75%) 3 Day (50%) 4 Day (35%) 5 Day (25%) 10-Day-Standard

ALS Project No: F180523L

| Company Name & Address (Reporting Information) <u>Leidos</u> <u>18939 120th Ave NE, Suite 112</u> <u>Bothell, WA 98011</u> | | | | Project Name <u>Newman's Chevron</u> | | | | ALS Contact: | | | |
|--|----------------------|----------------|----------------|---|--|--------------------------------|--------------------------------|---|---|-------------------------------------|---|
| Project Manager <u>Russ Shropshire</u> | | | | Project Number <u>204117</u> | | | | Analysis Method | | | |
| Phone <u>425-482-3323</u> | | Fax | | P.O. # / Billing Information <u>PO 10215233</u> | | | | BTEX, MTBE, Naphthalene by TO-15 Modified H ₂ , CO, CO ₂ , Ne, CH ₄ , O ₂ by ASTM 2156 Helium using GC w/ TCD Modified-3L Mod | | | |
| Email Address for Result Reporting <u>shropshirer@leidos.com</u> | | | | Sampler (Print & Sign) <u>Russell Shropshire</u> | | | | | | | |
| Client Sample ID | Laboratory ID Number | Date Collected | Time Collected | Canister ID (Bar code # - AC, SC, etc.) | Flow Controller ID (Bar code # - FC #) | Canister Start Pressure "Hg | Canister End Pressure "Hg/psig | Sample Volume | | | |
| <u>1</u> SVP-1-092718 | <u>15C00712</u> | <u>9/27/18</u> | <u>10:10</u> | <u>15C00712</u> | <u>5M00082</u> | <u>29.96</u> | <u>-1</u> | <u>1L</u> | X | X | X |
| <u>2</u> SVP-2-092718 | <u>15C00522</u> | | <u>11:16</u> | <u>15C00522</u> | <u>5M00109</u> | <u>-30.07</u> | <u>-1.75</u> | <u>1L</u> | X | X | X |
| <u>3</u> SVP-3-092718 | <u>15C01378</u> | | <u>11:59</u> | <u>15C01378</u> | <u>5M00118</u> | <u>-30.02</u> | <u>-1</u> | <u>1L</u> | X | X | X |
| <u>4</u> DUP-1-092718 | <u>15C00702</u> | | | <u>15C00702</u> | | <u>-30.08</u> | | <u>1L</u> | X | X | X |
| <u>5</u> EB-1-092618 | | <u>9/26/18</u> | <u>14:20</u> | <u>15C00703</u> | <u>5M00076</u> | <u>-30.24</u> | <u>-10.49</u> | <u>1L</u> | X | X | X |
| <u>6</u> EB-1-092818 | | <u>9/28/18</u> | <u>11:26</u> | <u>15500042</u> | <u>5M00119</u> | <u>29.87</u> <u>-10-255</u> | <u>-9.33</u> | <u>1L</u> | X | X | X |
| Report Tier Levels - please select Tier I - Results (Default in not specified) _____ Tier II (Results + QC Summaries) _____ Tier III (Results + QC & Calibration Summaries) _____ Tier IV (Date Validation Package) 10% Surcharge <u>X</u> | | | | | | | | | | | |
| Relinquished by: (Signature) <u>R. Shropshire</u> | | | | Date: <u>9/28/18</u> | | Time: <u>11:40</u> | | Received by: (Signature) <u>[Signature]</u> | | Date: <u>10-2-18</u> | |
| Relinquished by: (Signature) | | | | Date: | | Time: | | Received by: (Signature) | | Time: <u>0830</u> | |
| Project Requirements (MRLs, QAPP) | | | | | | | | | | Cooler / Blank Temperature _____ °C | |



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron c/o Leidos, Inc.
6310 Allentown Blvd.
Suite 110
Harrisburg PA 17112

Report Date: August 13, 2019 18:25

Project: 204117

Account #: 13271
Group Number: 2056399
SDG: LDC06
PO Number: P010215249
Release Number: HETRICK
State of Sample Origin: WA

Electronic Copy To Leidos
Electronic Copy To EcoChem

Attn: Russ Shropshire
Attn: Christine Ransom

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/> . Historical copies may be requested through your project manager.



SAMPLE INFORMATION

| <u>Client Sample Description</u> | <u>Sample Collection Date/Time</u> | <u>ELLE#</u> |
|----------------------------------|--|--------------|
| SB-13-S-12.0-190724 Grab Soil | 07/24/2019 15:50 | 1114243 |
| SB-13-S-16.0-190724 Grab Soil | 07/24/2019 15:40 | 1114244 |
| SB-13-S-27.5-190724 Grab Soil | 07/24/2019 15:30 | 1114245 |
| QA-T-190724 Water | 07/24/2019 15:20 | 1114246 |
| SB-14-S-12.0-190724 Grab Soil | 07/24/2019 17:40 | 1114247 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: SB-13-S-12.0-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114243
ELLE Group #: 2056399
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 15:50
SDG#: LDC06-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|--|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.022 | 39.37 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.018 | 39.37 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.027 | 39.37 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.044 | 39.37 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | 460 | 8.4 | 808.48 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.5 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Target analytes were detected in the method blank associated with the samples as noted on the QC summary. The reported detection in the sample DUP matches the pattern in the method blank. | | | | | |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | N.D. | 0.544 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 11.1 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | V192193AA | 08/07/2019 17:10 | Stephen C Nolte | 39.37 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921454376 | 07/24/2019 15:50 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921454376 | 07/24/2019 15:50 | Client Supplied | 1 |

Sample Description: SB-13-S-12.0-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114243
ELLE Group #: 2056399
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 15:50
SDG#: LDC06-01

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 3 | 201921454376 | 07/24/2019 15:50 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 4 | 201921454376 | 07/24/2019 15:50 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921454376 | 07/24/2019 15:50 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 2 | 201921454376 | 07/24/2019 15:50 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19214SLI026 | 08/10/2019 02:15 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19214SLI026 | 08/05/2019 02:00 | Sherry L Morrow | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216A31B | 08/05/2019 21:15 | Jeremy C Giffin | 808.48 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921454376 | 07/24/2019 15:50 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192140026A | 08/06/2019 01:41 | Nicholas R Rossi | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192140026A | 08/04/2019 14:55 | Karen L Beyer | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404902 | 08/07/2019 13:17 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404902 | 08/02/2019 06:49 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19214820004A | 08/05/2019 10:57 | William C Schwebel | 1 |

Sample Description: SB-13-S-16.0-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114244
ELLE Group #: 2056399
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 15:40
SDG#: LDC06-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.84 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.84 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.84 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.84 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.4 | 38.49 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.79 | 0.558 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 7.3 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A192193AA | 08/07/2019 16:56 | Linda C Pape | 0.84 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921454376 | 07/24/2019 15:40 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921454376 | 07/24/2019 15:40 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921454376 | 07/24/2019 15:40 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19214SLI026 | 08/10/2019 02:40 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19214SLI026 | 08/05/2019 02:00 | Sherry L Morrow | 1 |

Sample Description: SB-13-S-16.0-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114244
ELLE Group #: 2056399
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 15:40
SDG#: LDC06-02

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216A31A | 08/04/2019 17:00 | Jeremy C Giffin | 38.49 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921454376 | 07/24/2019 15:40 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192140026A | 08/06/2019 02:46 | Nicholas R Rossi | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192140026A | 08/04/2019 14:55 | Karen L Beyer | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404903 | 08/07/2019 22:08 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404903 | 08/02/2019 06:59 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19214820004A | 08/05/2019 10:57 | William C Schwebel | 1 |

Sample Description: SB-13-S-27.5-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114245
ELLE Group #: 2056399
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 15:30
SDG#: LDC06-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.82 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.82 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.82 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.82 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 23.96 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.1 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 10 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.78 | 0.521 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 4.9 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A192193AA | 08/07/2019 17:18 | Linda C Pape | 0.82 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921454376 | 07/24/2019 15:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921454376 | 07/24/2019 15:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921454376 | 07/24/2019 15:30 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19214SLI026 | 08/10/2019 03:05 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19214SLI026 | 08/05/2019 02:00 | Sherry L Morrow | 1 |

Sample Description: SB-13-S-27.5-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114245
ELLE Group #: 2056399
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 15:30
SDG#: LDC06-03

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216A31A | 08/04/2019 17:36 | Jeremy C Giffin | 23.96 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921454376 | 07/24/2019 15:30 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192140026A | 08/06/2019 03:08 | Nicholas R Rossi | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192140026A | 08/04/2019 14:55 | Karen L Beyer | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404903 | 08/07/2019 21:29 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404903 | 08/02/2019 06:59 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19214820004A | 08/05/2019 10:57 | William C Schwebel | 1 |

Sample Description: QA-T-190724 Water
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 1114246
ELLE Group #: 2056399
Matrix: Water

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 15:20
SDG#: LDC06-04TB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|----------------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | Z192192AA | 08/07/2019 14:44 | Anita M Dale | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | Z192192AA | 08/07/2019 14:43 | Anita M Dale | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19213B20A | 08/02/2019 19:58 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 19213B20A | 08/02/2019 19:57 | Marie D Beamenderfer | 1 |

Sample Description: SB-14-S-12.0-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114247
ELLE Group #: 2056399
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 17:40
SDG#: LDC06-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.71 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.71 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.71 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0008 | 0.71 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | 0.051 | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 21.65 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.03 | 0.491 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 8.2 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A192193AA | 08/07/2019 17:41 | Linda C Pape | 0.71 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921454376 | 07/24/2019 17:40 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921454376 | 07/24/2019 17:40 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921454376 | 07/24/2019 17:40 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19214SLI026 | 08/10/2019 03:31 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19214SLI026 | 08/05/2019 02:00 | Sherry L Morrow | 1 |

Sample Description: SB-14-S-12.0-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114247
ELLE Group #: 2056399
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 17:40
SDG#: LDC06-05

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216B31A | 08/05/2019 09:48 | Jeremy C Giffin | 21.65 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921454376 | 07/24/2019 17:40 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192140026A | 08/06/2019 03:29 | Nicholas R Rossi | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192140026A | 08/04/2019 14:55 | Karen L Beyer | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404903 | 08/07/2019 22:01 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404903 | 08/02/2019 06:59 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19214820004A | 08/05/2019 10:57 | William C Schwebel | 1 |

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/13/2019 18:25

Group Number: 2056399

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

| Analysis Name | Result | MDL |
|-------------------------------|---|--------------|
| | mg/kg | mg/kg |
| Batch number: A192193AA | Sample number(s): 1114244-1114245,1114247 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| Batch number: V192193AA | Sample number(s): 1114243 | |
| Benzene | N.D. | 0.025 |
| Ethylbenzene | N.D. | 0.020 |
| Toluene | N.D. | 0.030 |
| Xylene (Total) | N.D. | 0.050 |
| | ug/l | ug/l |
| Batch number: Z192192AA | Sample number(s): 1114246 | |
| Benzene | N.D. | 0.2 |
| Ethylbenzene | N.D. | 0.4 |
| Toluene | N.D. | 0.2 |
| Xylene (Total) | N.D. | 1 |
| | mg/kg | mg/kg |
| Batch number: 19214SLI026 | Sample number(s): 1114243-1114245,1114247 | |
| Naphthalene | N.D. | 0.007 |
| Batch number: 19216A31A | Sample number(s): 1114244-1114245 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |
| Batch number: 19216A31B | Sample number(s): 1114243 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |
| Batch number: 19216B31A | Sample number(s): 1114247 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |
| | ug/l | ug/l |
| Batch number: 19213B20A | Sample number(s): 1114246 | |
| NWTPH-Gx water C7-C12 | N.D. | 19 |
| | mg/kg | mg/kg |
| Batch number: 192140026A | Sample number(s): 1114243-1114245,1114247 | |
| Diesel Range Organics C12-C24 | N.D. | 4.0 |
| Heavy Range Organics C24-C40 | 28 | 10 |
| Batch number: 192141404902 | Sample number(s): 1114243 | |
| Lead | N.D. | 0.600 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/13/2019 18:25

Group Number: 2056399

Method Blank (continued)

| Analysis Name | Result mg/kg | MDL mg/kg |
|----------------------------|-----------------|---|
| Batch number: 192141404903 | | Sample number(s): 1114244-1114245,1114247 |
| Lead | N.D. | 0.600 |

LCS/LCSD

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---------------------------|---|----------------------|------------------------------|-----------------------|-------------|--------------|--------------------|-----|------------|
| Batch number: A192193AA | Sample number(s): 1114244-1114245,1114247 | | | | | | | | |
| Benzene | 0.0200 | 0.0198 | 0.0200 | 0.0201 | 99 | 100 | 80-120 | 1 | 30 |
| Ethylbenzene | 0.0200 | 0.0203 | 0.0200 | 0.0205 | 102 | 102 | 78-120 | 1 | 30 |
| Toluene | 0.0200 | 0.0202 | 0.0200 | 0.0207 | 101 | 103 | 80-120 | 2 | 30 |
| Xylene (Total) | 0.0600 | 0.0612 | 0.0600 | 0.0619 | 102 | 103 | 75-120 | 1 | 30 |
| Batch number: V192193AA | Sample number(s): 1114243 | | | | | | | | |
| Benzene | 1.00 | 1.06 | 1.00 | 1.06 | 106 | 106 | 80-120 | 0 | 30 |
| Ethylbenzene | 1.00 | 1.04 | 1.00 | 1.03 | 104 | 103 | 78-120 | 0 | 30 |
| Toluene | 1.00 | 1.03 | 1.00 | 1.03 | 103 | 103 | 80-120 | 0 | 30 |
| Xylene (Total) | 3.00 | 3.11 | 3.00 | 3.11 | 104 | 104 | 75-120 | 0 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: Z192192AA | Sample number(s): 1114246 | | | | | | | | |
| Benzene | 20 | 20.87 | | | 104 | | 80-120 | | |
| Ethylbenzene | 20 | 20.37 | | | 102 | | 80-120 | | |
| Toluene | 20 | 21.09 | | | 105 | | 80-120 | | |
| Xylene (Total) | 60 | 64.7 | | | 108 | | 80-120 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 19214SLI026 | Sample number(s): 1114243-1114245,1114247 | | | | | | | | |
| Naphthalene | 1.67 | 1.20 | | | 72 | | 46-99 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 19216A31A | Sample number(s): 1114244-1114245 | | | | | | | | |
| NWTPH-GX Soil C7-C12 | 11 | 11.46 | 11 | 11.37 | 104 | 103 | 55-145 | 1 | 30 |
| Batch number: 19216A31B | Sample number(s): 1114243 | | | | | | | | |
| NWTPH-GX Soil C7-C12 | 11 | 11.46 | 11 | 11.37 | 104 | 103 | 55-145 | 1 | 30 |
| Batch number: 19216B31A | Sample number(s): 1114247 | | | | | | | | |
| NWTPH-GX Soil C7-C12 | 11 | 11.25 | 11 | 11.5 | 102 | 105 | 55-145 | 2 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/13/2019 18:25

Group Number: 2056399

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added ug/l | LCS Conc ug/l | LCSD Spike Added ug/l | LCSD Conc ug/l | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|--|---------------|-----------------------|----------------|----------|-----------|-----------------|-----|---------|
| Batch number: 19213B20A NWTPH-Gx water C7-C12 | Sample number(s): 1114246 1100 | 1134.39 | 1100 | 1121.55 | 103 | 102 | 64-131 | 1 | 30 |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 192140026A Diesel Range Organics C12-C24 | Sample number(s): 1114243-1114245,1114247 133.4 | 101.47 | | | 76 | | 61-115 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 192141404902 Lead | Sample number(s): 1114243 15 | 15.79 | | | 105 | | 90-115 | | |
| Batch number: 192141404903 Lead | Sample number(s): 1114244-1114245,1114247 15 | 14.59 | | | 97 | | 90-115 | | |
| | % | % | % | % | | | | | |
| Batch number: 19214820004A Moisture | Sample number(s): 1114243-1114245,1114247 89.5 | 89.46 | | | 100 | | 99-101 | | |

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

| Analysis Name | Unspiked Conc mg/kg | MS Spike Added mg/kg | MS Conc mg/kg | MSD Spike Added mg/kg | MSD Conc mg/kg | MS %Rec | MSD %Rec | MS/MSD Limits | RPD | RPD Max |
|---|--|----------------------|---------------|-----------------------|----------------|---------|----------|---------------|-----|---------|
| Batch number: 192140026A Diesel Range Organics C12-C24 | Sample number(s): 1114243-1114245,1114247 UNSPK: 1114243 N.D. | 132.87 | 96.56 | | | 73 | | 61-115 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 192141404903 Lead | Sample number(s): 1114244-1114245,1114247 UNSPK: 1114245 1.69 | 13.04 | 13.53 | 10.95 | 11.2 | 91 | 87 | 75-125 | 19 | 20 |

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | BKG Conc mg/kg | DUP Conc mg/kg | DUP RPD | DUP RPD Max |
|--------------------------|--|----------------|---------|-------------|
| Batch number: 192140026A | Sample number(s): 1114243-1114245,1114247 BKG: 1114243 | | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/13/2019 18:25

Group Number: 2056399

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | BKG Conc mg/kg | DUP Conc mg/kg | DUP RPD | DUP RPD Max |
|-------------------------------|--|-------------------|----------|-------------|
| Diesel Range Organics C12-C24 | N.D. | N.D. | 0 (1) | 20 |
| Heavy Range Organics C24-C40 | N.D. | 34.18 | 200* (1) | 20 |
| | mg/kg | mg/kg | | |
| Batch number: 192141404903 | Sample number(s): 1114244-1114245,1114247 BKG: 1114245 | | | |
| Lead | 1.69 | 1.99 | 16 (1) | 20 |

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260 Soil
Batch number: A192193AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114244 | 105 | 104 | 92 | 96 |
| 1114245 | 106 | 107 | 95 | 91 |
| 1114247 | 100 | 101 | 97 | 92 |
| Blank | 103 | 97 | 95 | 92 |
| LCS | 98 | 102 | 101 | 103 |
| LCSD | 98 | 96 | 101 | 102 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260 Soil
Batch number: V192193AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114243 | 88 | 91 | 93 | 108 |
| Blank | 96 | 101 | 95 | 95 |
| LCS | 102 | 103 | 98 | 98 |
| LCSD | 103 | 103 | 97 | 98 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260C
Batch number: Z192192AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114246 | 95 | 100 | 98 | 95 |
| Blank | 95 | 101 | 96 | 94 |
| LCS | 94 | 100 | 97 | 96 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/13/2019 18:25

Group Number: 2056399

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260C
Batch number: Z192192AA

Limits: 80-120 80-120 80-120 80-120

Analysis Name: Naphthalene 8270D
Batch number: 19214SLI026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 1114243 | 78 | 77 | 76 |
| 1114244 | 83 | 82 | 87 |
| 1114245 | 89 | 87 | 97 |
| 1114247 | 73 | 72 | 81 |
| Blank | 83 | 83 | 95 |
| LCS | 74 | 75 | 91 |

Limits: 14-115 22-122 23-141

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 19213B20A

| | Trifluorotoluene-F |
|---------|--------------------|
| 1114246 | 67 |
| Blank | 81 |
| LCS | 100 |
| LCSD | 96 |

Limits: 50-150

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 19216A31A

| | Trifluorotoluene-F |
|---------|--------------------|
| 1114244 | 87 |
| 1114245 | 95 |
| Blank | 94 |
| LCS | 99 |
| LCSD | 98 |

Limits: 50-150

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 19216A31B

| | Trifluorotoluene-F |
|---------|--------------------|
| 1114243 | 86 |
| Blank | 94 |
| LCS | 99 |
| LCSD | 98 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/13/2019 18:25

Group Number: 2056399

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 19216A31B

Limits: 50-150

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 19216B31A

Trifluorotoluene-F

| | |
|---------|----|
| 1114247 | 75 |
| Blank | 92 |
| LCS | 95 |
| LCSD | 96 |

Limits: 50-150

Analysis Name: NWTPH-Dx soil
Batch number: 192140026A

Orthoterphenyl

| | |
|---------|-----|
| 1114243 | 102 |
| 1114244 | 104 |
| 1114245 | 103 |
| 1114247 | 106 |
| Blank | 106 |
| DUP | 105 |
| LCS | 111 |
| MS | 107 |

Limits: 50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

Acct. # 13271 For Eurofins Lancaster Laboratories Environmental use only
 Group # 2056399 Sample # 1114243-47
Instructions on reverse side correspond with circled numbers.

| 1 Client Information | | | 4 Matrix | | | 5 Analyses Requested | | | | | | | | | | 6 Remarks | | | | | | | | | | | | | |
|--|--|--------------------|---|---|--------------|--|----------------|--------------|----------------------------|--------------|--------------|--------------|---------------------------------------|----------------|--------------|----------------|----------------------------------|-------------------------------------|---|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------------------------------|--|--|
| Facility # <u>204117</u> WBS | | | <input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Water <input type="checkbox"/> Air <input type="checkbox"/> Oil <input checked="" type="checkbox"/> Composite | | | Total Number of Containers BTEX + MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>COLIB</u> <u>Naphthalenes EPA 8270</u> | | | | | | | | | | SCR #: _____ | | | | | | | | | | | | | |
| Site Address <u>2021 6th St Bremerton, WA</u> | | | | | | | | | | | | | | | | | | | <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits | | | | | | | | | | |
| Chevron PM <u>Eric Hetrick</u> Lead Consultant | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Consultant/Office <u>Leidos-Bothell, WA</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Consultant Project Mgr. <u>Russ Shapshire</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Consultant Phone # <u>425-482-3323</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sampler <u>RAO/CMW</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 Sample Identification | | 3 Collected | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | Date | Time | Grab | Composite | Soil | Water | Oil | Total Number of Containers | BTEX + MTBE | 8021 | 8260 | Naphth | 8260 full scan | Oxygenates | NWTPH-Gx | NWTPH-Dx with Silica Gel Cleanup | NWTPH-Dx without Silica Gel Cleanup | WA VPH | WA EPH | Lead | Total | Diss. | Method | | | | | |
| SB-13-12.0-S-072419 | | 7/24/19 | 1550 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | Invoice to Leidos PO10229412 | | |
| SB-13-12.0-S-072419 | | 7/24/19 | 1550 | / | / | / | / | / | 12 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | | | |
| SB-13-16.0-S-072419 | | 7/24/19 | 1540 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | | | |
| SB-13-27.5-S-072419 | | 7/24/19 | 1530 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | | | |
| TB-4-072419 | | 7/24/19 | 1530 | / | / | / | / | / | 4 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | | | |
| SB-14-12.0-S-072419 | | 7/24/19 | 1740 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | | | |
| Auth | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 Turnaround Time Requested (TAT) (please circle) | | | | Relinquished by | | | Date | | | Time | | | Received by | | | Date | | | Time | | | | | | | | | | |
| Standard <u>5 day</u> 72 hour 48 hour 24 hour | | | | <u>Auth</u> | | | <u>7/29/19</u> | | | <u>1230</u> | | | | | | | | | | | | | | | | | | | |
| | | | | Relinquished by | | | Date | | | Time | | | Received by | | | Date | | | Time | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 Data Package (circle if required) | | | | Relinquished by Commercial Carrier: | | | Date | | | Time | | | Received by | | | Date | | | Time | | | | | | | | | | |
| Type I - Full <u>Type VI (Raw Data)</u> | | | | UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ | | | | | | | | | <u>Leidos</u> | | | <u>7/30/19</u> | | | <u>1015</u> | | | | | | | | | | |
| EDD (circle if required) CVX-RTBU-FI_05 (default) Other: _____ | | | | Temperature Upon Receipt <u>7.2</u> °C | | | | | | | | | Custody Seals Intact? <u>(Yes)</u> No | | | | | | | | | | | | | | | | |



Client: Leidos

Delivery and Receipt Information

| | | | |
|---------------------------|------------|---------------------|-------------------------|
| Delivery Method: | <u>UPS</u> | Arrival Timestamp: | <u>07/30/2019 10:15</u> |
| Number of Packages: | <u>1</u> | Number of Projects: | <u>1</u> |
| State/Province of Origin: | <u>WA</u> | | |

Arrival Condition Summary

| | | | |
|--------------------------------------|-----|-------------------------------------|-----|
| Shipping Container Sealed: | Yes | Sample IDs on COC match Containers: | Yes |
| Custody Seal Present: | Yes | Sample Date/Times match COC: | Yes |
| Custody Seal Intact: | Yes | Total Trip Blank Qty: | 4 |
| Samples Chilled: | Yes | Trip Blank Type: | HCI |
| Paperwork Enclosed: | Yes | Air Quality Samples Present: | No |
| Samples Intact: | Yes | | |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |

Unpacked by Simon Nies (25 112) at 12:18 on 07/30/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Elevated Temp? |
|----------|----------------|----------------|-------------|----------|--------------|---------------|----------------|
| 1 | DT42-01 | 1.2 | DT | Wet | Y | Bagged | N |

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

| | | | |
|-------------------------|--|-----------------|-------------------------------|
| BMQL | Below Minimum Quantitation Level | mL | milliliter(s) |
| C | degrees Celsius | MPN | Most Probable Number |
| cfu | colony forming units | N.D. | non-detect |
| CP Units | cobalt-chloroplatinate units | ng | nanogram(s) |
| F | degrees Fahrenheit | NTU | nephelometric turbidity units |
| g | gram(s) | pg/L | picogram/liter |
| IU | International Units | RL | Reporting Limit |
| kg | kilogram(s) | TNTC | Too Numerous To Count |
| L | liter(s) | µg | microgram(s) |
| lb. | pound(s) | µL | microliter(s) |
| m3 | cubic meter(s) | umhos/cm | micromhos/cm |
| meq | milliequivalents | MCL | Maximum Contamination Limit |
| mg | milligram(s) | | |
| < | less than | | |
| > | greater than | | |
| ppm | parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas. | | |
| ppb | parts per billion | | |
| Dry weight basis | Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis. | | |

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

| Qualifier | Definition |
|----------------|---|
| C | Result confirmed by reanalysis |
| D1 | Indicates for dual column analyses that the result is reported from column 1 |
| D2 | Indicates for dual column analyses that the result is reported from column 2 |
| E | Concentration exceeds the calibration range |
| K1 | Initial Calibration Blank is above the QC limit and the sample result is ND |
| K2 | Continuing Calibration Blank is above the QC limit and the sample result is ND |
| K3 | Initial Calibration Verification is above the QC limit and the sample result is ND |
| K4 | Continuing Calibration Verification is above the QC limit and the sample result is ND |
| J (or G, I, X) | Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL) |
| P | Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported. |
| P^ | Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported. |
| U | Analyte was not detected at the value indicated |
| V | Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference. |
| W | The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L. |
| Z | Laboratory Defined - see analysis report |

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron c/o Leidos, Inc.
6310 Allentown Blvd.
Suite 110
Harrisburg PA 17112

Report Date: September 05, 2019 14:17

Project: 204117

Account #: 13271
Group Number: 2056401
SDG: LDC07
PO Number: P010229412
Release Number: HETRICK
State of Sample Origin: WA

Electronic Copy To Leidos
Electronic Copy To EcoChem

Attn: Russ Shropshire
Attn: Christine Ransom

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/> . Historical copies may be requested through your project manager.



SAMPLE INFORMATION

| <u>Client Sample Description</u> | <u>Sample Collection Date/Time</u> | <u>ELLE#</u> |
|----------------------------------|------------------------------------|--------------|
| SB-15-S-8.0-190723 Grab Soil | 07/23/2019 16:15 | 1114252 |
| SB-15-S-13.0-190723 Grab Soil | 07/23/2019 16:10 | 1114253 |
| SB-15-S-22.5-190723 Grab Soil | 07/23/2019 16:00 | 1114254 |
| SB-16-S-9.0-190723 Grab Soil | 07/23/2019 13:35 | 1114255 |
| SB-16-S-13.0-190723 Grab Soil | 07/23/2019 14:25 | 1114256 |
| SB-16-S-22.5-190723 Grab Soil | 07/23/2019 14:10 | 1114257 |
| QA-T-190724 Water | 07/24/2019 14:00 | 1114258 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: SB-15-S-8.0-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114252
ELLE Group #: 2056401
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 16:15
SDG#: LDC07-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|--|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.85 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.85 |
| 11995 | Toluene | 108-88-3 | 0.001 | 0.0005 | 0.85 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.85 |
| The recovery for the sample internal standard is outside the QC acceptance limits. The following action was taken: The sample was re-analyzed outside the method holding time and the QC is again outside of the acceptance limits, indicating a matrix effect. The data is reported from the initial trial. | | | | | |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 3.1 | 0.2 | 23.25 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 290 | 42 | 10 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 100 | 10 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.25 | 0.464 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 5.6 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A192171AA | 08/05/2019 18:44 | Linda C Pape | 0.85 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921454376 | 07/23/2019 16:15 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921454376 | 07/23/2019 16:15 | Client Supplied | 1 |

Sample Description: SB-15-S-8.0-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114252
ELLE Group #: 2056401
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 16:15
SDG#: LDC07-01

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921454376 | 07/23/2019 16:15 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19214SLI026 | 08/10/2019 03:56 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19214SLI026 | 08/05/2019 02:00 | Sherry L Morrow | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216A31A | 08/04/2019 18:12 | Jeremy C Giffin | 23.25 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921454376 | 07/23/2019 16:15 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192140026A | 08/08/2019 10:56 | Nicholas R Rossi | 10 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192140026A | 08/04/2019 14:55 | Karen L Beyer | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404903 | 08/07/2019 21:49 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404903 | 08/02/2019 06:59 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19214820004A | 08/05/2019 10:57 | William C Schwebel | 1 |

Sample Description: SB-15-S-13.0-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114253
ELLE Group #: 2056401
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 16:10
SDG#: LDC07-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.73 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.73 |
| 11995 | Toluene | 108-88-3 | 0.0007 | 0.0005 | 0.73 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0008 | 0.73 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 3.2 | 0.2 | 21.06 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 1,100 | 85 | 20 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 210 | 20 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 3.36 | 0.586 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 6.9 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A192171AA | 08/05/2019 19:07 | Linda C Pape | 0.73 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921454376 | 07/23/2019 16:10 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921454376 | 07/23/2019 16:10 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921454376 | 07/23/2019 16:10 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19214SLI026 | 08/10/2019 04:21 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19214SLI026 | 08/05/2019 02:00 | Sherry L Morrow | 1 |

Sample Description: SB-15-S-13.0-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114253
ELLE Group #: 2056401
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 16:10
SDG#: LDC07-02

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216A31A | 08/04/2019 18:48 | Jeremy C Giffin | 21.06 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921454376 | 07/23/2019 16:10 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192140026A | 08/07/2019 02:50 | Nicholas R Rossi | 20 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192140026A | 08/04/2019 14:55 | Karen L Beyer | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404903 | 08/07/2019 22:04 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404903 | 08/02/2019 06:59 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19214820004A | 08/05/2019 10:57 | William C Schwebel | 1 |

Sample Description: SB-15-S-22.5-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114254
ELLE Group #: 2056401
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 16:00
SDG#: LDC07-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.88 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.88 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.88 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.88 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | 0.021 | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 1.2 | 0.2 | 21.75 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 18 | 4.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 10 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.77 | 0.558 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 4.9 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A192171AA | 08/05/2019 19:29 | Linda C Pape | 0.88 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921454376 | 07/23/2019 16:00 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921454376 | 07/23/2019 16:00 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921454376 | 07/23/2019 16:00 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19214SLI026 | 08/10/2019 04:47 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19214SLI026 | 08/05/2019 02:00 | Sherry L Morrow | 1 |

Sample Description: SB-15-S-22.5-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114254
ELLE Group #: 2056401
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 16:00
SDG#: LDC07-03

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216A31A | 08/04/2019 19:24 | Jeremy C Giffin | 21.75 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921454376 | 07/23/2019 16:00 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192140026A | 08/06/2019 04:34 | Nicholas R Rossi | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192140026A | 08/04/2019 14:55 | Karen L Beyer | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404903 | 08/07/2019 21:52 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404903 | 08/02/2019 06:59 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19214820004A | 08/05/2019 10:57 | William C Schwebel | 1 |

Sample Description: SB-16-S-9.0-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114255
ELLE Group #: 2056401
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 13:35
SDG#: LDC07-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.023 | 41.27 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.019 | 41.27 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.028 | 41.27 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.047 | 41.27 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | 1,500 | 18 | 1773.65 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 46 | 4.5 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.80 | 0.461 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 11.5 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | V192181AA | 08/06/2019 19:24 | Stephen C Nolte | 41.27 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921454376 | 07/23/2019 13:35 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921454376 | 07/23/2019 13:35 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921454376 | 07/23/2019 13:35 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19214SLI026 | 08/10/2019 05:13 | Brandon K Cordova | 1 |

Sample Description: SB-16-S-9.0-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114255
ELLE Group #: 2056401
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 13:35
SDG#: LDC07-04

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19214SLI026 | 08/05/2019 02:00 | Sherry L Morrow | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216A31B | 08/05/2019 21:51 | Jeremy C Giffin | 1773.65 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921454376 | 07/23/2019 13:35 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192140026A | 08/06/2019 04:56 | Nicholas R Rossi | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx | 1 | 192140026A | 08/04/2019 14:55 | Karen L Beyer | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404903 | 08/07/2019 22:11 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404903 | 08/02/2019 06:59 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19214820004A | 08/05/2019 10:57 | William C Schwebel | 1 |

Sample Description: SB-16-S-13.0-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114256
ELLE Group #: 2056401
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 14:25
SDG#: LDC07-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | 0.0005 | 0.0004 | 0.7 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.7 |
| 11995 | Toluene | 108-88-3 | 0.001 | 0.0005 | 0.7 |
| 11995 | Xylene (Total) | 1330-20-7 | 0.002 | 0.0008 | 0.7 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 78 | 1 | 95 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 760 | 44 | 10 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 110 | 10 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 11.7 | 0.497 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 8.6 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A192171AA | 08/05/2019 20:15 | Linda C Pape | 0.7 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921454376 | 07/23/2019 14:25 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921454376 | 07/23/2019 14:25 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921454376 | 07/23/2019 14:25 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19214SLI026 | 08/10/2019 05:38 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19214SLI026 | 08/05/2019 02:00 | Sherry L Morrow | 1 |

Sample Description: SB-16-S-13.0-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114256
ELLE Group #: 2056401
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 14:25
SDG#: LDC07-05

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216A31B | 08/06/2019 00:23 | Jeremy C Giffin | 95 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921454376 | 07/23/2019 14:25 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192140026A | 08/07/2019 03:12 | Nicholas R Rossi | 10 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192140026A | 08/04/2019 14:55 | Karen L Beyer | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404903 | 08/07/2019 22:14 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404903 | 08/02/2019 06:59 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19214820004A | 08/05/2019 10:57 | William C Schwebel | 1 |

Sample Description: SB-16-S-22.5-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114257
ELLE Group #: 2056401
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 14:10
SDG#: LDC07-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.8 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.8 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.8 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0008 | 0.8 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 20.13 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 10 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.56 | 0.523 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 5.1 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A192171AA | 08/05/2019 19:52 | Linda C Pape | 0.8 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921454376 | 07/23/2019 14:10 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921454376 | 07/23/2019 14:10 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921454376 | 07/23/2019 14:10 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19214SLI026 | 08/10/2019 06:04 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19214SLI026 | 08/05/2019 02:00 | Sherry L Morrow | 1 |

Sample Description: SB-16-S-22.5-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114257
ELLE Group #: 2056401
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 14:10
SDG#: LDC07-06

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216A31A | 08/04/2019 21:19 | Jeremy C Giffin | 20.13 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921454376 | 07/23/2019 14:10 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192140026A | 08/06/2019 05:39 | Nicholas R Rossi | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192140026A | 08/04/2019 14:55 | Karen L Beyer | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404903 | 08/07/2019 22:18 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404903 | 08/02/2019 06:59 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19214820004A | 08/05/2019 10:57 | William C Schwebel | 1 |

Sample Description: QA-T-190724 Water
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 1114258
ELLE Group #: 2056401
Matrix: Water

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 14:00
SDG#: LDC07-07TB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|----------------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | Z192192AA | 08/07/2019 15:09 | Anita M Dale | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | Z192192AA | 08/07/2019 15:08 | Anita M Dale | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19213B20A | 08/02/2019 20:25 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 19213B20A | 08/02/2019 20:24 | Marie D Beamenderfer | 1 |

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 09/05/2019 14:17

Group Number: 2056401

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

| Analysis Name | Result | MDL |
|-------------------------------|---|--------------|
| | mg/kg | mg/kg |
| Batch number: A192171AA | Sample number(s): 1114252-1114254,1114256-1114257 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| Batch number: V192181AA | Sample number(s): 1114255 | |
| Benzene | N.D. | 0.025 |
| Ethylbenzene | N.D. | 0.020 |
| Toluene | N.D. | 0.030 |
| Xylene (Total) | N.D. | 0.050 |
| | ug/l | ug/l |
| Batch number: Z192192AA | Sample number(s): 1114258 | |
| Benzene | N.D. | 0.2 |
| Ethylbenzene | N.D. | 0.4 |
| Toluene | N.D. | 0.2 |
| Xylene (Total) | N.D. | 1 |
| | mg/kg | mg/kg |
| Batch number: 19214SLI026 | Sample number(s): 1114252-1114257 | |
| Naphthalene | N.D. | 0.007 |
| Batch number: 19216A31A | Sample number(s): 1114252-1114254,1114257 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |
| Batch number: 19216A31B | Sample number(s): 1114255-1114256 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |
| | ug/l | ug/l |
| Batch number: 19213B20A | Sample number(s): 1114258 | |
| NWTPH-Gx water C7-C12 | N.D. | 19 |
| | mg/kg | mg/kg |
| Batch number: 192140026A | Sample number(s): 1114252-1114257 | |
| Diesel Range Organics C12-C24 | N.D. | 4.0 |
| Heavy Range Organics C24-C40 | 28 | 10 |
| Batch number: 192141404903 | Sample number(s): 1114252-1114257 | |
| Lead | N.D. | 0.600 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 09/05/2019 14:17

Group Number: 2056401

LCS/LCSD

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|-------------------------------|---|-------------------|---------------------------|--------------------|----------|-----------|-----------------|-----|---------|
| Batch number: A192171AA | Sample number(s): 1114252-1114254,1114256-1114257 | | | | | | | | |
| Benzene | 0.0200 | 0.0196 | 0.0200 | 0.0197 | 98 | 99 | 80-120 | 1 | 30 |
| Ethylbenzene | 0.0200 | 0.0202 | 0.0200 | 0.0200 | 101 | 100 | 78-120 | 1 | 30 |
| Toluene | 0.0200 | 0.0202 | 0.0200 | 0.0201 | 101 | 101 | 80-120 | 0 | 30 |
| Xylene (Total) | 0.0600 | 0.0613 | 0.0600 | 0.0610 | 102 | 102 | 75-120 | 0 | 30 |
| Batch number: V192181AA | Sample number(s): 1114255 | | | | | | | | |
| Benzene | 1.00 | 1.00 | 1.00 | 1.05 | 100 | 105 | 80-120 | 5 | 30 |
| Ethylbenzene | 1.00 | 0.991 | 1.00 | 1.05 | 99 | 105 | 78-120 | 6 | 30 |
| Toluene | 1.00 | 0.988 | 1.00 | 1.04 | 99 | 104 | 80-120 | 5 | 30 |
| Xylene (Total) | 3.00 | 2.98 | 3.00 | 3.14 | 99 | 105 | 75-120 | 5 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: Z192192AA | Sample number(s): 1114258 | | | | | | | | |
| Benzene | 20 | 20.87 | | | 104 | | 80-120 | | |
| Ethylbenzene | 20 | 20.37 | | | 102 | | 80-120 | | |
| Toluene | 20 | 21.09 | | | 105 | | 80-120 | | |
| Xylene (Total) | 60 | 64.7 | | | 108 | | 80-120 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 19214SLI026 | Sample number(s): 1114252-1114257 | | | | | | | | |
| Naphthalene | 1.67 | 1.20 | | | 72 | | 46-99 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 19216A31A | Sample number(s): 1114252-1114254,1114257 | | | | | | | | |
| NWTPH-GX Soil C7-C12 | 11 | 11.46 | 11 | 11.37 | 104 | 103 | 55-145 | 1 | 30 |
| Batch number: 19216A31B | Sample number(s): 1114255-1114256 | | | | | | | | |
| NWTPH-GX Soil C7-C12 | 11 | 11.46 | 11 | 11.37 | 104 | 103 | 55-145 | 1 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: 19213B20A | Sample number(s): 1114258 | | | | | | | | |
| NWTPH-Gx water C7-C12 | 1100 | 1134.39 | 1100 | 1121.55 | 103 | 102 | 64-131 | 1 | 30 |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 192140026A | Sample number(s): 1114252-1114257 | | | | | | | | |
| Diesel Range Organics C12-C24 | 133.4 | 101.47 | | | 76 | | 61-115 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 192141404903 | Sample number(s): 1114252-1114257 | | | | | | | | |
| Lead | 15 | 14.59 | | | 97 | | 90-115 | | |
| | % | % | % | % | | | | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 09/05/2019 14:17

Group Number: 2056401

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added % | LCS Conc % | LCSD Spike Added % | LCSD Conc % | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|----------------------------|-----------------------------------|------------|--------------------|-------------|----------|-----------|-----------------|-----|---------|
| Batch number: 19214820004A | Sample number(s): 1114252-1114257 | | | | | | | | |
| Moisture | 89.5 | 89.46 | | | 100 | | 99-101 | | |

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260 Soil
Batch number: A192171AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114252 | 131 | 135 | 92 | 55 |
| 1114253 | 103 | 106 | 102 | 76 |
| 1114254 | 103 | 103 | 97 | 87 |
| 1114256 | 100 | 101 | 94 | 99 |
| 1114257 | 101 | 105 | 95 | 95 |
| Blank | 100 | 100 | 96 | 92 |
| LCS | 97 | 100 | 100 | 102 |
| LCSD | 99 | 95 | 100 | 102 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260 Soil
Batch number: V192181AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114255 | 83 | 90 | 81 | 87 |
| Blank | 92 | 96 | 93 | 92 |
| LCS | 99 | 99 | 94 | 95 |
| LCSD | 104 | 103 | 99 | 100 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260C
Batch number: Z192192AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114258 | 95 | 99 | 98 | 94 |
| Blank | 95 | 101 | 96 | 94 |
| LCS | 94 | 100 | 97 | 96 |
| Limits: | 80-120 | 80-120 | 80-120 | 80-120 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 09/05/2019 14:17

Group Number: 2056401

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Naphthalene 8270D
Batch number: 19214SLI026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 1114252 | 75 | 69 | 88 |
| 1114253 | 70 | 76 | 90 |
| 1114254 | 82 | 83 | 95 |
| 1114255 | 74 | 70 | 81 |
| 1114256 | 54 | 81 | 89 |
| 1114257 | 78 | 79 | 88 |
| Blank | 83 | 83 | 95 |
| LCS | 74 | 75 | 91 |
| Limits: | 14-115 | 22-122 | 23-141 |

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 19213B20A

| | Trifluorotoluene-F |
|---------|--------------------|
| 1114258 | 81 |
| Blank | 81 |
| LCS | 100 |
| LCSD | 96 |
| Limits: | 50-150 |

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 19216A31A

| | Trifluorotoluene-F |
|---------|--------------------|
| 1114252 | 90 |
| 1114253 | 89 |
| 1114254 | 75 |
| 1114257 | 66 |
| Blank | 94 |
| LCS | 99 |
| LCSD | 98 |
| Limits: | 50-150 |

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 19216A31B

| | Trifluorotoluene-F |
|---------|--------------------|
| 1114255 | 118 |
| 1114256 | 84 |
| Blank | 94 |
| LCS | 99 |
| LCSD | 98 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 09/05/2019 14:17

Group Number: 2056401

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 19216A31B

Limits: 50-150

Analysis Name: NWTPH-Dx soil
Batch number: 192140026A

| | Orthoterphenyl |
|---------|----------------|
| 1114252 | 89 |
| 1114253 | 49* |
| 1114254 | 106 |
| 1114255 | 99 |
| 1114256 | 60 |
| 1114257 | 95 |
| Blank | 106 |
| LCS | 111 |

Limits: 50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

Acct. # 13271 For Eurofins Lancaster Laboratories Environmental use only
 Group # 2056401 Sample # 1114252-58
Instructions on reverse side correspond with circled numbers.

| 1 Client Information | | | 4 Matrix | | | 5 Analyses Requested | | | | | | | | | | 6 Remarks | | | | | | | |
|--|----------------|-------------|--|-------------------------------------|-------------------------------------|---|-------------------------------------|-------------------------------------|--|-------------------------------------|-------------------------------------|---|-------------------------------------|-------------------------------------|-------------------------------------|---|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|-------------------------------------|
| Facility # <u>WBS 204117</u> Site Address <u>2021 6th St, Bremerton, WA</u> Chevron PM <u>Eric Hetrick</u> Lead Consultant <u>Leidos</u> Consultant/Office <u>Leidos - Bothell WA</u> Consultant Project Mgr. <u>Russ Shropshire</u> Consultant Phone # <u>425-482-3323</u> Sampler <u>RAJ/CMW</u> | | | <input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> Air | | | Total Number of Containers <input type="checkbox"/> BTEX + MTBE 8021 <input checked="" type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead <input checked="" type="checkbox"/> Total <input type="checkbox"/> Diss. <input type="checkbox"/> Method <u>Naphthalenes EPA 8270</u> | | | | | | | | | | SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits | | | | | | | |
| 2 Sample Identification | | 3 Collected | | Grab | Composite | Soil | Water | Oil | Total Number of Containers | BTEX + MTBE 8021 | 8260 | Naphth | 8260 full scan | Oxygenates | NWTPH-Gx | NWTPH-Dx with Silica Gel Cleanup | NWTPH-Dx without Silica Gel Cleanup | WA VPH | WA EPH | Lead | Total | Diss. | Method |
| Date | Time | Date | Time | | | | | | | | | | | | | | | | | | | | |
| <u>SB-15-8.0-S-072319</u> | <u>7/23/19</u> | <u>1615</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>7</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <u>SB-15-13.0-S-072319</u> | <u>7/23/19</u> | <u>1610</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>7</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <u>SB-15-22.5-S-072319</u> | <u>7/23/19</u> | <u>1600</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>7</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <u>SB-16-9.0-S-072319</u> | <u>7/23/19</u> | <u>1535</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>7</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <u>SB-16-13.0-S-072319</u> | <u>7/23/19</u> | <u>1425</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>7</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <u>SB-16-22.5-S-072319</u> | <u>7/23/19</u> | <u>1410</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>7</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <u>TB-5-072419</u> | <u>7/24/19</u> | <u>1400</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>4</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <u>TB-5-072419</u> | <u>7/24/19</u> | <u>1400</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>4</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| <u>None</u> <u>7/29/19</u> | | | | | | | | | | | | | | | | | | | | | | | |
| 7 Turnaround Time Requested (TAT) (please circle) <input checked="" type="radio"/> Standard 5 day 4 day 72 hour 48 hour 24 hour | | | | | | Relinquished by <u>Ruth dlt</u> Date <u>7/29/19</u> Time <u>1230</u> | | | Received by _____ Date _____ Time _____ | | | 9 | | | | | | | | | | | |
| 8 Data Package (circle if required) <input checked="" type="radio"/> Type I - Full Type VI (Raw Data) | | | | | | EDD (circle if required) <input type="radio"/> CVX-RTBU-FI_05 (default) Other: _____ | | | Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ | | | Received by <u>[Signature]</u> Date <u>7/30/19</u> Time <u>1015</u> | | | | | | | | | | | |
| Temperature Upon Receipt <u>0.7</u> °C | | | | | | Custody Seals Intact? <input checked="" type="checkbox"/> (Yes) <input type="checkbox"/> No | | | | | | | | | | | | | | | | | |



Client: Leidos

Delivery and Receipt Information

Delivery Method: UPS Arrival Timestamp: 07/30/2019 10:15
 Number of Packages: 1 Number of Projects: 1
 State/Province of Origin: WA

Arrival Condition Summary

| | | | |
|--------------------------------------|-----|-------------------------------------|-----|
| Shipping Container Sealed: | Yes | Sample IDs on COC match Containers: | Yes |
| Custody Seal Present: | Yes | Sample Date/Times match COC: | Yes |
| Custody Seal Intact: | Yes | Total Trip Blank Qty: | 4 |
| Samples Chilled: | Yes | Trip Blank Type: | HCI |
| Paperwork Enclosed: | Yes | Air Quality Samples Present: | No |
| Samples Intact: | Yes | | |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |

Unpacked by Simon Nies (25 112) at 12:27 on 07/30/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Elevated Temp? |
|----------|----------------|----------------|-------------|----------|--------------|---------------|----------------|
| 1 | DT42-01 | 0.7 | DT | Wet | Y | Bagged | N |

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

| | | | |
|-------------------------|--|-----------------|-------------------------------|
| BMQL | Below Minimum Quantitation Level | mL | milliliter(s) |
| C | degrees Celsius | MPN | Most Probable Number |
| cfu | colony forming units | N.D. | non-detect |
| CP Units | cobalt-chloroplatinate units | ng | nanogram(s) |
| F | degrees Fahrenheit | NTU | nephelometric turbidity units |
| g | gram(s) | pg/L | picogram/liter |
| IU | International Units | RL | Reporting Limit |
| kg | kilogram(s) | TNTC | Too Numerous To Count |
| L | liter(s) | µg | microgram(s) |
| lb. | pound(s) | µL | microliter(s) |
| m3 | cubic meter(s) | umhos/cm | micromhos/cm |
| meq | milliequivalents | MCL | Maximum Contamination Limit |
| mg | milligram(s) | | |
| < | less than | | |
| > | greater than | | |
| ppm | parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas. | | |
| ppb | parts per billion | | |
| Dry weight basis | Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis. | | |

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

| Qualifier | Definition |
|----------------|---|
| C | Result confirmed by reanalysis |
| D1 | Indicates for dual column analyses that the result is reported from column 1 |
| D2 | Indicates for dual column analyses that the result is reported from column 2 |
| E | Concentration exceeds the calibration range |
| K1 | Initial Calibration Blank is above the QC limit and the sample result is ND |
| K2 | Continuing Calibration Blank is above the QC limit and the sample result is ND |
| K3 | Initial Calibration Verification is above the QC limit and the sample result is ND |
| K4 | Continuing Calibration Verification is above the QC limit and the sample result is ND |
| J (or G, I, X) | Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL) |
| P | Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported. |
| P^ | Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported. |
| U | Analyte was not detected at the value indicated |
| V | Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference. |
| W | The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L. |
| Z | Laboratory Defined - see analysis report |

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.

Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron c/o Leidos, Inc.
6310 Allentown Blvd.
Suite 110
Harrisburg PA 17112

Report Date: August 13, 2019 11:22

Project: 204117

Account #: 13271
Group Number: 2056413
SDG: LDC08
PO Number: P010215249
Release Number: HETRICK
State of Sample Origin: WA

Electronic Copy To Leidos
Electronic Copy To EcoChem

Attn: Russ Shropshire
Attn: Christine Ransom

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/> . Historical copies may be requested through your project manager.



SAMPLE INFORMATION

| <u>Client Sample Description</u> | <u>Sample Collection Date/Time</u> | <u>ELLE#</u> |
|----------------------------------|--|--------------|
| SB-18-S-8.0-190723 Grab Soil | 07/23/2019 15:00 | 1114303 |
| SB-18-S-18.0-190723 Grab Soil | 07/23/2019 15:20 | 1114304 |
| SB-18-S-22.5-190723 Grab Soil | 07/23/2019 14:55 | 1114305 |
| DUP-1-SD-190723 Grab Soil | 07/23/2019 11:05 | 1114306 |
| SB-19-S-8.0-190725 Grab Soil | 07/25/2019 12:05 | 1114307 |
| SB-19-S-14.0-190725 Grab Soil | 07/25/2019 11:50 | 1114308 |
| QA-T-190725 NA Water | 07/25/2019 12:00 | 1114309 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: SB-18-S-8.0-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114303
ELLE Group #: 2056413
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 15:00
SDG#: LDC08-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.69 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.69 |
| 11995 | Toluene | 108-88-3 | 0.0008 | 0.0004 | 0.69 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0007 | 0.69 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 0.3 | 0.2 | 22.07 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 85 | 4.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.91 | 0.603 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 7.0 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|---------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A192181AA | 08/06/2019 16:39 | Linda C Pape | 0.69 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554387 | 07/23/2019 15:00 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554387 | 07/23/2019 15:00 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554387 | 07/23/2019 15:00 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLA026 | 08/08/2019 15:07 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLA026 | 08/05/2019 16:20 | Elizabeth E Donovan | 1 |

Sample Description: SB-18-S-8.0-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114303
ELLE Group #: 2056413
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 15:00
SDG#: LDC08-01

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216A31A | 08/04/2019 21:55 | Jeremy C Giffin | 22.07 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554387 | 07/23/2019 15:00 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192140030A | 08/06/2019 07:05 | Nicholas R Rossi | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192140030A | 08/05/2019 07:00 | Joshua S Ruth | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404903 | 08/07/2019 22:21 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404903 | 08/02/2019 06:59 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820006A | 08/06/2019 11:53 | William C Schwebel | 1 |

Sample Description: SB-18-S-18.0-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114304
ELLE Group #: 2056413
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 15:20
SDG#: LDC08-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.75 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.75 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.75 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0008 | 0.75 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 21.89 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 8.1 | 4.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 41 | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 4.32 | 0.469 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 5.3 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|---------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A192181AA | 08/06/2019 17:01 | Linda C Pape | 0.75 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554387 | 07/23/2019 15:20 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554387 | 07/23/2019 15:20 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554387 | 07/23/2019 15:20 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLA026 | 08/08/2019 15:30 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLA026 | 08/05/2019 16:20 | Elizabeth E Donovan | 1 |

Sample Description: SB-18-S-18.0-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114304
ELLE Group #: 2056413
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 15:20
SDG#: LDC08-02

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216A31A | 08/04/2019 22:31 | Jeremy C Giffin | 21.89 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554387 | 07/23/2019 15:20 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192140030A | 08/06/2019 07:27 | Nicholas R Rossi | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192140030A | 08/05/2019 07:00 | Joshua S Ruth | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404903 | 08/07/2019 22:31 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404903 | 08/02/2019 06:59 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820006A | 08/06/2019 11:53 | William C Schwebel | 1 |

Sample Description: SB-18-S-22.5-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114305
ELLE Group #: 2056413
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 14:55
SDG#: LDC08-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.72 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.72 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.72 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0008 | 0.72 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 24.33 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.4 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.09 | 0.477 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 10.1 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|---------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A192181AA | 08/06/2019 17:24 | Linda C Pape | 0.72 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554387 | 07/23/2019 14:55 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554387 | 07/23/2019 14:55 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554387 | 07/23/2019 14:55 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLA026 | 08/08/2019 15:52 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLA026 | 08/05/2019 16:20 | Elizabeth E Donovan | 1 |

Sample Description: SB-18-S-22.5-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114305
ELLE Group #: 2056413
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 14:55
SDG#: LDC08-03

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216A31A | 08/04/2019 23:07 | Jeremy C Giffin | 24.33 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554387 | 07/23/2019 14:55 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192140030A | 08/06/2019 07:49 | Nicholas R Rossi | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192140030A | 08/05/2019 07:00 | Joshua S Ruth | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404904 | 08/07/2019 14:40 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404904 | 08/02/2019 07:09 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820006A | 08/06/2019 11:53 | William C Schwebel | 1 |

Sample Description: DUP-1-SD-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114306
ELLE Group #: 2056413
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 11:05
SDG#: LDC08-04FD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.024 | 43.83 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.019 | 43.83 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.029 | 43.83 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.048 | 43.83 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | 1,100 | 16 | 1592.57 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 730 | 44 | 10 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 140 | 110 | 10 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 4.46 | 0.495 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 8.8 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|---------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | V192181AA | 08/06/2019 19:46 | Stephen C Nolte | 43.83 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554387 | 07/23/2019 11:05 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554387 | 07/23/2019 11:05 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554387 | 07/23/2019 11:05 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLA026 | 08/08/2019 16:14 | Linda M Hartenstine | 1 |

Sample Description: DUP-1-SD-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114306
ELLE Group #: 2056413
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 11:05
SDG#: LDC08-04FD

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLA026 | 08/05/2019 16:20 | Elizabeth E Donovan | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216A31B | 08/05/2019 22:27 | Jeremy C Giffin | 1592.57 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554387 | 07/23/2019 11:05 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192140030A | 08/09/2019 16:36 | Heather E Williams | 10 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192140030A | 08/05/2019 07:00 | Joshua S Ruth | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404903 | 08/08/2019 15:11 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404903 | 08/02/2019 06:59 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820006A | 08/06/2019 11:53 | William C Schwebel | 1 |

Sample Description: SB-19-S-8.0-190725 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114307
ELLE Group #: 2056413
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 12:05
SDG#: LDC08-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.87 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.87 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.87 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.87 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 24.29 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.72 | 0.567 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 6.3 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|---------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | X192202AA | 08/08/2019 17:04 | Linda C Pape | 0.87 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554387 | 07/25/2019 12:05 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554387 | 07/25/2019 12:05 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554387 | 07/25/2019 12:05 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLA026 | 08/08/2019 16:36 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLA026 | 08/05/2019 16:20 | Elizabeth E Donovan | 1 |

Sample Description: SB-19-S-8.0-190725 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114307
ELLE Group #: 2056413
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 12:05
SDG#: LDC08-05

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216C31A | 08/06/2019 04:06 | Jeremy C Giffin | 24.29 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554387 | 07/25/2019 12:05 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192140030A | 08/06/2019 09:18 | Nicholas R Rossi | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192140030A | 08/05/2019 07:00 | Joshua S Ruth | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404903 | 08/07/2019 22:24 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404903 | 08/02/2019 06:59 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820006A | 08/06/2019 11:53 | William C Schwebel | 1 |

Sample Description: SB-19-S-14.0-190725 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114308
ELLE Group #: 2056413
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 11:50
SDG#: LDC08-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.77 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.77 |
| 11995 | Toluene | 108-88-3 | 0.0005 | 0.0005 | 0.77 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0008 | 0.77 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 22.96 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.37 | 0.526 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 8.7 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | X192202AA | 08/08/2019 17:27 | Linda C Pape | 0.77 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554387 | 07/25/2019 11:50 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554387 | 07/25/2019 11:50 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554387 | 07/25/2019 11:50 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLB026 | 08/07/2019 17:58 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLB026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |

Sample Description: SB-19-S-14.0-190725 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114308
ELLE Group #: 2056413
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 11:50
SDG#: LDC08-06

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|----------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216C31A | 08/06/2019 04:42 | Jeremy C Giffin | 22.96 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554387 | 07/25/2019 11:50 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192140030A | 08/06/2019 09:40 | Nicholas R Rossi | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192140030A | 08/05/2019 07:00 | Joshua S Ruth | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404903 | 08/07/2019 22:27 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404903 | 08/02/2019 06:59 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820006B | 08/06/2019 11:53 | William C Schwebel | 1 |

Sample Description: QA-T-190725 NA Water
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 1114309
ELLE Group #: 2056413
Matrix: Water

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 12:00
SDG#: LDC08-07TB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|----------------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | Z192202AA | 08/08/2019 10:39 | Anita M Dale | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | Z192202AA | 08/08/2019 10:38 | Anita M Dale | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19213B20A | 08/02/2019 20:52 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 19213B20A | 08/02/2019 20:51 | Marie D Beamenderfer | 1 |

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/13/2019 11:22

Group Number: 2056413

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

| Analysis Name | Result | MDL |
|---------------------------|-----------------------------------|--------------|
| | mg/kg | mg/kg |
| Batch number: A192181AA | Sample number(s): 1114303-1114305 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| Batch number: V192181AA | Sample number(s): 1114306 | |
| Benzene | N.D. | 0.025 |
| Ethylbenzene | N.D. | 0.020 |
| Toluene | N.D. | 0.030 |
| Xylene (Total) | N.D. | 0.050 |
| Batch number: X192202AA | Sample number(s): 1114307-1114308 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| | ug/l | ug/l |
| Batch number: Z192202AA | Sample number(s): 1114309 | |
| Benzene | N.D. | 0.2 |
| Ethylbenzene | N.D. | 0.4 |
| Toluene | N.D. | 0.2 |
| Xylene (Total) | N.D. | 1 |
| | mg/kg | mg/kg |
| Batch number: 19217SLA026 | Sample number(s): 1114303-1114307 | |
| Naphthalene | N.D. | 0.007 |
| Batch number: 19217SLB026 | Sample number(s): 1114308 | |
| Naphthalene | N.D. | 0.007 |
| Batch number: 19216A31A | Sample number(s): 1114303-1114305 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |
| Batch number: 19216A31B | Sample number(s): 1114306 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |
| Batch number: 19216C31A | Sample number(s): 1114307-1114308 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |
| | ug/l | ug/l |
| Batch number: 19213B20A | Sample number(s): 1114309 | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/13/2019 11:22

Group Number: 2056413

Method Blank (continued)

| Analysis Name | Result | MDL |
|-------------------------------|---|-------|
| | ug/l | ug/l |
| NWTPH-Gx water C7-C12 | N.D. | 19 |
| | mg/kg | mg/kg |
| Batch number: 192140030A | Sample number(s): 1114303-1114308 | |
| Diesel Range Organics C12-C24 | N.D. | 4.0 |
| Heavy Range Organics C24-C40 | N.D. | 10 |
| Batch number: 192141404903 | Sample number(s): 1114303-1114304,1114306-1114308 | |
| Lead | N.D. | 0.600 |
| Batch number: 192141404904 | Sample number(s): 1114305 | |
| Lead | N.D. | 0.600 |

LCS/LCSD

| Analysis Name | LCS Spike Added | LCS Conc | LCSD Spike Added | LCSD Conc | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|-------------------------|-----------------------------------|----------|------------------|-----------|----------|-----------|-----------------|-----|---------|
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: A192181AA | Sample number(s): 1114303-1114305 | | | | | | | | |
| Benzene | 0.0200 | 0.0204 | 0.0200 | 0.0205 | 102 | 103 | 80-120 | 1 | 30 |
| Ethylbenzene | 0.0200 | 0.0209 | 0.0200 | 0.0208 | 104 | 104 | 78-120 | 0 | 30 |
| Toluene | 0.0200 | 0.0208 | 0.0200 | 0.0210 | 104 | 105 | 80-120 | 1 | 30 |
| Xylene (Total) | 0.0600 | 0.0630 | 0.0600 | 0.0632 | 105 | 105 | 75-120 | 0 | 30 |
| Batch number: V192181AA | Sample number(s): 1114306 | | | | | | | | |
| Benzene | 1.00 | 1.00 | 1.00 | 1.05 | 100 | 105 | 80-120 | 5 | 30 |
| Ethylbenzene | 1.00 | 0.991 | 1.00 | 1.05 | 99 | 105 | 78-120 | 6 | 30 |
| Toluene | 1.00 | 0.988 | 1.00 | 1.04 | 99 | 104 | 80-120 | 5 | 30 |
| Xylene (Total) | 3.00 | 2.98 | 3.00 | 3.14 | 99 | 105 | 75-120 | 5 | 30 |
| Batch number: X192202AA | Sample number(s): 1114307-1114308 | | | | | | | | |
| Benzene | 0.0200 | 0.0204 | 0.0200 | 0.0211 | 102 | 105 | 80-120 | 3 | 30 |
| Ethylbenzene | 0.0200 | 0.0199 | 0.0200 | 0.0204 | 100 | 102 | 78-120 | 2 | 30 |
| Toluene | 0.0200 | 0.0201 | 0.0200 | 0.0208 | 101 | 104 | 80-120 | 3 | 30 |
| Xylene (Total) | 0.0600 | 0.0600 | 0.0600 | 0.0615 | 100 | 102 | 75-120 | 2 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: Z192202AA | Sample number(s): 1114309 | | | | | | | | |
| Benzene | 20 | 20.91 | | | 105 | | 80-120 | | |
| Ethylbenzene | 20 | 20.29 | | | 101 | | 80-120 | | |
| Toluene | 20 | 20.81 | | | 104 | | 80-120 | | |
| Xylene (Total) | 60 | 64.46 | | | 107 | | 80-120 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/13/2019 11:22

Group Number: 2056413

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|-------------------|---------------------------|--------------------|----------|-----------|-----------------|-----|---------|
| Batch number: 19217SLA026 Naphthalene | Sample number(s): 1114303-1114307 | | | | 74 | | 46-99 | | |
| Batch number: 19217SLB026 Naphthalene | Sample number(s): 1114308 | | | | 79 | | 46-99 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 19216A31A NWTPH-GX Soil C7-C12 | Sample number(s): 1114303-1114305 | | | | 104 | 103 | 55-145 | 1 | 30 |
| Batch number: 19216A31B NWTPH-GX Soil C7-C12 | Sample number(s): 1114306 | | | | 104 | 103 | 55-145 | 1 | 30 |
| Batch number: 19216C31A NWTPH-GX Soil C7-C12 | Sample number(s): 1114307-1114308 | | | | 104 | 104 | 55-145 | 0 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: 19213B20A NWTPH-Gx water C7-C12 | Sample number(s): 1114309 | | | | 103 | 102 | 64-131 | 1 | 30 |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 192140030A Diesel Range Organics C12-C24 | Sample number(s): 1114303-1114308 | | | | 76 | | 61-115 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 192141404903 Lead | Sample number(s): 1114303-1114304,1114306-1114308 | | | | 97 | | 90-115 | | |
| Batch number: 192141404904 Lead | Sample number(s): 1114305 | | | | 102 | | 90-115 | | |
| | % | % | % | % | | | | | |
| Batch number: 19217820006A Moisture | Sample number(s): 1114303-1114307 | | | | 100 | | 99-101 | | |
| Batch number: 19217820006B Moisture | Sample number(s): 1114308 | | | | 100 | | 99-101 | | |

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

| Analysis Name | Unspiked Conc | MS Spike Added | MS Conc | MSD Spike Added | MSD Conc | MS %Rec | MSD %Rec | MS/MSD Limits | RPD | RPD Max |
|---------------|---------------|----------------|---------|-----------------|----------|---------|----------|---------------|-----|---------|
|---------------|---------------|----------------|---------|-----------------|----------|---------|----------|---------------|-----|---------|

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/13/2019 11:22

Group Number: 2056413

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

| Analysis Name | Unspiked Conc mg/kg | MS Spike Added mg/kg | MS Conc mg/kg | MSD Spike Added mg/kg | MSD Conc mg/kg | MS %Rec | MSD %Rec | MS/MSD Limits | RPD | RPD Max |
|---|--|-------------------------|------------------|--------------------------|-------------------|----------|----------|---------------|-----|---------|
| Batch number: 192140030A Diesel Range Organics C12-C24 | Sample number(s): 1114303-1114308 UNSPK: 1114306 662.85 | 133.4 | 2886.35 | | | 1667 (2) | | 61-115 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 192141404904 Lead | Sample number(s): 1114305 UNSPK: 1114305 1.88 | 10.56 | 11.29 | 10.87 | 11.87 | 89 | 92 | 75-125 | 5 | 20 |

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | BKG Conc mg/kg | DUP Conc mg/kg | DUP RPD | DUP RPD Max |
|---|--|-------------------|------------------|-------------|
| Batch number: 192140030A Diesel Range Organics C12-C24 Heavy Range Organics C24-C40 | Sample number(s): 1114303-1114308 BKG: 1114306 662.85 124.03 | 3055.1 N.D. | 129* 200* (1) | 20 20 |
| | mg/kg | mg/kg | | |
| Batch number: 192141404904 Lead | Sample number(s): 1114305 BKG: 1114305 1.88 | 1.89 | 1 (1) | 20 |
| | % | % | | |
| Batch number: 19217820006A Moisture | Sample number(s): 1114303-1114307 BKG: 1114307 6.26 | 5.46 | 14* | 5 |

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260 Soil
Batch number: A192181AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114303 | 102 | 103 | 97 | 89 |
| 1114304 | 101 | 102 | 96 | 90 |
| 1114305 | 102 | 104 | 96 | 91 |
| Blank | 100 | 102 | 96 | 93 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/13/2019 11:22

Group Number: 2056413

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260 Soil
Batch number: A192181AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| LCS | 98 | 99 | 100 | 102 |
| LCSD | 97 | 96 | 101 | 101 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260 Soil
Batch number: V192181AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114306 | 81 | 85 | 81 | 89 |
| Blank | 92 | 96 | 93 | 92 |
| LCS | 99 | 99 | 94 | 95 |
| LCSD | 104 | 103 | 99 | 100 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260 Soil
Batch number: X192202AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114307 | 107 | 109 | 95 | 90 |
| 1114308 | 106 | 110 | 95 | 93 |
| Blank | 103 | 103 | 99 | 94 |
| LCS | 99 | 101 | 100 | 101 |
| LCSD | 99 | 99 | 100 | 101 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260C
Batch number: Z192202AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114309 | 96 | 100 | 97 | 94 |
| Blank | 96 | 99 | 98 | 95 |
| LCS | 94 | 100 | 98 | 96 |
| Limits: | 80-120 | 80-120 | 80-120 | 80-120 |

Analysis Name: Naphthalene 8270D
Batch number: 19217SLA026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 1114303 | 53 | 58 | 58 |
| 1114304 | 35 | 81 | 94 |
| 1114305 | 61 | 71 | 76 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/13/2019 11:22

Group Number: 2056413

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Naphthalene 8270D
Batch number: 19217SLA026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 1114306 | 74 | 65 | 89 |
| 1114307 | 25 | 66 | 52 |
| Blank | 70 | 84 | 103 |
| LCS | 66 | 79 | 93 |
| Limits: | 14-115 | 22-122 | 23-141 |

Analysis Name: Naphthalene 8270D
Batch number: 19217SLB026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 1114308 | 85 | 79 | 96 |
| Blank | 83 | 77 | 99 |
| LCS | 86 | 79 | 97 |
| Limits: | 14-115 | 22-122 | 23-141 |

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 19213B20A

| | Trifluorotoluene-F |
|---------|--------------------|
| 1114309 | 86 |
| Blank | 81 |
| LCS | 100 |
| LCSD | 96 |
| Limits: | 50-150 |

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 19216A31A

| | Trifluorotoluene-F |
|---------|--------------------|
| 1114303 | 64 |
| 1114304 | 74 |
| 1114305 | 79 |
| Blank | 94 |
| LCS | 99 |
| LCSD | 98 |
| Limits: | 50-150 |

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 19216A31B

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/13/2019 11:22

Group Number: 2056413

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-GX Soil C7-C12

Batch number: 19216A31B

| | Trifluorotoluene-F |
|---------|--------------------|
| 1114306 | 103 |
| Blank | 94 |
| LCS | 99 |
| LCSD | 98 |

Limits: 50-150

Analysis Name: NWTPH-GX Soil C7-C12

Batch number: 19216C31A

| | Trifluorotoluene-F |
|---------|--------------------|
| 1114307 | 78 |
| 1114308 | 74 |
| Blank | 95 |
| LCS | 98 |
| LCSD | 99 |

Limits: 50-150

Analysis Name: NWTPH-Dx soil

Batch number: 192140030A

| | Orthoterphenyl |
|---------|----------------|
| 1114303 | 91 |
| 1114304 | 101 |
| 1114305 | 94 |
| 1114306 | 133 |
| 1114307 | 96 |
| 1114308 | 101 |
| Blank | 107 |
| DUP | 153* |
| LCS | 104 |
| MS | 149 |

Limits: 50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

Acct. # 13271

For Eurofins Lancaster Laboratories Environmental use only
 Group # 2056413 Sample # 1114303-09
 Instructions on reverse side correspond with circled numbers.

| 1 Client Information | | | 4 Matrix | | | 5 Analyses Requested | | | | | | | | | | 6 Remarks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-----------|------|--|-----------|-----------|---|-----------|------|-------|-----|----------------------------|----------------------|------|------|--------|---|------------|----------|----------------------------------|-------------------------------------|--------|--------|------|-------|-------|--------|------|-------|--------------------|----------------------------|----------------------|------|------|--------|----------------|------------|----------|----------------------------------|-------------------------------------|--------|--------|------|-------|-------|--------|---|---|---|---|---|---|---|---|---------------------|---------|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------------------|---------|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------|---------|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------------|---------|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------------------|---------|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------------|---------|----|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------------|---------|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Facility # <u>204117</u> WBS | | | Sediment <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> | | | <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy's on highest hit <input type="checkbox"/> Run ___ oxy's on all hits | | | | | | | | | | SCR #: _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Site Address <u>2021 6th St, Bremerton, WA</u> | | | Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> | | | Total Number of Containers BTEX MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>GC/MS</u> <u>Naphthalenes EPA 8270</u> | | | | | | | | | | Submit invoice to Leidos P010229412 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chevron PM <u>Eric Hetrick</u> Lead Consultant | | | Oil <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Consultant/Office <u>Leidos - Bethell, WA</u> | | | Composite <input checked="" type="checkbox"/> | | | | | | | | | | | | | 7 Turnaround Time Requested (TAT) (please circle) <input checked="" type="radio"/> Standard 5 day 4 day 72 hour 48 hour 24 hour | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Consultant Project Mgr. <u>Russ Shropshire</u> | | | Soil <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Consultant Phone # <u>425-482-3323</u> | | | Water <input type="checkbox"/> | | | | | | | | | | | | | 8 Data Package (circle if required) <input checked="" type="radio"/> Type I - Full Type VI (Raw Data) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sampler <u>RAO/CMW</u> | | | Grab <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 Sample Identification <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Sample ID</th> <th colspan="2">Collected</th> <th rowspan="2">Grab</th> <th rowspan="2">Composite</th> <th rowspan="2">Soil</th> <th rowspan="2">Water</th> <th rowspan="2">Oil</th> <th rowspan="2">Total Number of Containers</th> <th rowspan="2">BTEX MTBE</th> <th rowspan="2">8021</th> <th rowspan="2">8260</th> <th rowspan="2">Naphth</th> <th rowspan="2">8260 full scan</th> <th rowspan="2">Oxygenates</th> <th rowspan="2">NWTPH-Gx</th> <th rowspan="2">NWTPH-Dx with Silica Gel Cleanup</th> <th rowspan="2">NWTPH-Dx without Silica Gel Cleanup</th> <th rowspan="2">WA VPH</th> <th rowspan="2">WA EPH</th> <th rowspan="2">Lead</th> <th rowspan="2">Total</th> <th rowspan="2">Diss.</th> <th rowspan="2">Method</th> </tr> <tr> <th>Date</th> <th>Time</th> </tr> </thead> <tbody> <tr><td>SB-18-8.0-S-072319</td><td>7/23/19</td><td>1500</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>7</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>SB-18-18.0-S-072319</td><td>7/23/19</td><td>1520</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>7</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>SB-18-22.5-S-072319</td><td>7/23/19</td><td>1455</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>7</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>DUP-1-072319</td><td>7/23/19</td><td>1105</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>7</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>SB-19-8.0-S-072519</td><td>7/25/19</td><td>1205</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>7</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>SB-19-14.0-S-072519</td><td>7/25/19</td><td>1150</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>7</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>EB-6-072319</td><td>7/23/19</td><td>RD</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>7</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>TB-6-072519</td><td>7/25/19</td><td>1200</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>4</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td></tr> </tbody> </table> | | | Sample ID | Collected | | Grab | Composite | Soil | Water | Oil | Total Number of Containers | BTEX MTBE | 8021 | 8260 | Naphth | 8260 full scan | Oxygenates | NWTPH-Gx | NWTPH-Dx with Silica Gel Cleanup | NWTPH-Dx without Silica Gel Cleanup | WA VPH | WA EPH | Lead | Total | Diss. | Method | Date | Time | SB-18-8.0-S-072319 | 7/23/19 | 1500 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | SB-18-18.0-S-072319 | 7/23/19 | 1520 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | SB-18-22.5-S-072319 | 7/23/19 | 1455 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | DUP-1-072319 | 7/23/19 | 1105 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | SB-19-8.0-S-072519 | 7/25/19 | 1205 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | SB-19-14.0-S-072519 | 7/25/19 | 1150 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | EB-6-072319 | 7/23/19 | RD | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | TB-6-072519 | 7/25/19 | 1200 | / | / | / | / | / | 4 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | 9 Relinquished by <u>[Signature]</u> Date <u>7/27/19</u> Time <u>1350</u> Received by _____ Date _____ Time _____ Relinquished by _____ Date _____ Time _____ Received by _____ Date _____ Time _____ | |
| Sample ID | Collected | | | Grab | Composite | | | | | | | | | | | | | | | | | | | | | | Soil | Water | Oil | Total Number of Containers | BTEX MTBE | 8021 | 8260 | Naphth | 8260 full scan | Oxygenates | NWTPH-Gx | NWTPH-Dx with Silica Gel Cleanup | NWTPH-Dx without Silica Gel Cleanup | WA VPH | WA EPH | Lead | Total | Diss. | Method | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Date | Time | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SB-18-8.0-S-072319 | 7/23/19 | 1500 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SB-18-18.0-S-072319 | 7/23/19 | 1520 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SB-18-22.5-S-072319 | 7/23/19 | 1455 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DUP-1-072319 | 7/23/19 | 1105 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SB-19-8.0-S-072519 | 7/25/19 | 1205 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SB-19-14.0-S-072519 | 7/25/19 | 1150 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EB-6-072319 | 7/23/19 | RD | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TB-6-072519 | 7/25/19 | 1200 | / | / | / | / | / | 4 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 Data Package (circle if required) <input checked="" type="radio"/> Type I - Full Type VI (Raw Data) | | | EDD (circle if required) CVX-RTBU-FI_05 (default) Other: _____ | | | Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ Temperature Upon Receipt <u>0.6</u> °C Custody Seals Intact? <input checked="" type="radio"/> Yes <input type="radio"/> No | | | | | | | | | | Date <u>7/30/19</u> Time <u>1015</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



Client: Leidos

Delivery and Receipt Information

| | | | |
|---------------------------|------------|---------------------|-------------------------|
| Delivery Method: | <u>UPS</u> | Arrival Timestamp: | <u>07/30/2019 10:15</u> |
| Number of Packages: | <u>1</u> | Number of Projects: | <u>1</u> |
| State/Province of Origin: | <u>WA</u> | | |

Arrival Condition Summary

| | | | |
|--------------------------------------|-----|-------------------------------------|-----|
| Shipping Container Sealed: | Yes | Sample IDs on COC match Containers: | Yes |
| Custody Seal Present: | Yes | Sample Date/Times match COC: | No |
| Custody Seal Intact: | Yes | Total Trip Blank Qty: | 4 |
| Samples Chilled: | Yes | Trip Blank Type: | HCI |
| Paperwork Enclosed: | Yes | Air Quality Samples Present: | No |
| Samples Intact: | Yes | | |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |

Unpacked by Simon Nies (25 112) at 12:43 on 07/30/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Elevated Temp? |
|----------|----------------|----------------|-------------|----------|--------------|---------------|----------------|
| 1 | DT42-01 | 0.6 | DT | Wet | Y | Bagged | N |

Sample Date/Time Discrepancy Details

| <u>Sample ID on COC</u> | <u>Date/Time on Label</u> | <u>Comments</u> |
|-------------------------|---------------------------|-----------------|
| SB-19-8.0-S-072519 | 7/25/2019 12:15 | |

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

| | | | |
|-------------------------|--|-----------------|-------------------------------|
| BMQL | Below Minimum Quantitation Level | mL | milliliter(s) |
| C | degrees Celsius | MPN | Most Probable Number |
| cfu | colony forming units | N.D. | non-detect |
| CP Units | cobalt-chloroplatinate units | ng | nanogram(s) |
| F | degrees Fahrenheit | NTU | nephelometric turbidity units |
| g | gram(s) | pg/L | picogram/liter |
| IU | International Units | RL | Reporting Limit |
| kg | kilogram(s) | TNTC | Too Numerous To Count |
| L | liter(s) | µg | microgram(s) |
| lb. | pound(s) | µL | microliter(s) |
| m3 | cubic meter(s) | umhos/cm | micromhos/cm |
| meq | milliequivalents | MCL | Maximum Contamination Limit |
| mg | milligram(s) | | |
| < | less than | | |
| > | greater than | | |
| ppm | parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas. | | |
| ppb | parts per billion | | |
| Dry weight basis | Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis. | | |

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

| Qualifier | Definition |
|----------------|---|
| C | Result confirmed by reanalysis |
| D1 | Indicates for dual column analyses that the result is reported from column 1 |
| D2 | Indicates for dual column analyses that the result is reported from column 2 |
| E | Concentration exceeds the calibration range |
| K1 | Initial Calibration Blank is above the QC limit and the sample result is ND |
| K2 | Continuing Calibration Blank is above the QC limit and the sample result is ND |
| K3 | Initial Calibration Verification is above the QC limit and the sample result is ND |
| K4 | Continuing Calibration Verification is above the QC limit and the sample result is ND |
| J (or G, I, X) | Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL) |
| P | Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported. |
| P^ | Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported. |
| U | Analyte was not detected at the value indicated |
| V | Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference. |
| W | The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L. |
| Z | Laboratory Defined - see analysis report |

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron c/o Leidos, Inc.
6310 Allentown Blvd.
Suite 110
Harrisburg PA 17112

Report Date: August 20, 2019 11:38

Project: 204117

Account #: 13271
Group Number: 2056414
SDG: LDC09
PO Number: P010229412
Release Number: HETRICK
State of Sample Origin: WA

Electronic Copy To Leidos
Electronic Copy To EcoChem

Attn: Russ Shropshire
Attn: Christine Ransom

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/> . Historical copies may be requested through your project manager.



SAMPLE INFORMATION

| <u>Client Sample Description</u> | <u>Sample Collection Date/Time</u> | <u>ELLE#</u> |
|----------------------------------|--|--------------|
| SB-19-S-22.5-190725 Grab Soil | 07/25/2019 11:45 | 1114310 |
| SB-19-S-27.5-190725 Grab Soil | 07/25/2019 11:40 | 1114311 |
| DUP-2-SD-190725 Grab Soil | 07/25/2019 12:15 | 1114312 |
| SB-20-S-8.0-190725 Grab Soil | 07/25/2019 13:40 | 1114313 |
| SB-20-S-14.0-190725 Grab Soil | 07/25/2019 13:30 | 1114314 |
| SB-20-S-22.5-190725 Grab Soil | 07/25/2019 13:20 | 1114315 |
| QA-T-190725 NA Water | 07/25/2019 11:00 | 1114316 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: SB-19-S-22.5-190725 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114310
ELLE Group #: 2056414
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 11:45
SDG#: LDC09-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | SW-846 8260C | | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0007 | 1.15 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0005 | 1.15 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0008 | 1.15 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 1.15 |
| GC/MS Semivolatiles | | | | | |
| | SW-846 8270D | | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | ECY 97-602 NWTPH-Gx | | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.4 | 35.72 |
| GC Petroleum Hydrocarbons | | | | | |
| | ECY 97-602 NWTPH-Dx modified | | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 120 | 4.5 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 20 | 11 | 1 |
| Metals | | | | | |
| | SW-846 6010D Rev.4, July 2014 | | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | N.D. | 0.539 | 1 |
| Wet Chemistry | | | | | |
| | SM 2540 G-2011 %Moisture Calc | | % | % | |
| 00111 | Moisture | n.a. | 11.6 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | X192202AA | 08/08/2019 17:51 | Linda C Pape | 1.15 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554388 | 07/25/2019 11:45 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554388 | 07/25/2019 11:45 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554388 | 07/25/2019 11:45 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLB026 | 08/07/2019 18:24 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLB026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |

Sample Description: SB-19-S-22.5-190725 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114310
ELLE Group #: 2056414
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 11:45
SDG#: LDC09-01

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216C31A | 08/06/2019 05:25 | Jeremy C Giffin | 35.72 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554388 | 07/25/2019 11:45 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192140030A | 08/06/2019 10:02 | Nicholas R Rossi | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192140030A | 08/05/2019 07:00 | Joshua S Ruth | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404902 | 08/07/2019 13:30 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404902 | 08/02/2019 06:49 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820006B | 08/06/2019 11:53 | William C Schwebel | 1 |

Sample Description: SB-19-S-27.5-190725 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114311
ELLE Group #: 2056414
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 11:40
SDG#: LDC09-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.8 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.8 |
| 11995 | Toluene | 108-88-3 | 0.001 | 0.0005 | 0.8 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.8 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 2.4 | 242.92 |
| Reporting limits were raised due to sample foaming. | | | | | |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 340 | 4.4 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 35 | 11 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | N.D. | 0.542 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 8.5 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | X192202AA | 08/08/2019 18:14 | Linda C Pape | 0.8 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554388 | 07/25/2019 11:40 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554388 | 07/25/2019 11:40 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554388 | 07/25/2019 11:40 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLB026 | 08/07/2019 18:49 | Edward C Monborne | 1 |

Sample Description: SB-19-S-27.5-190725 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114311
ELLE Group #: 2056414
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 11:40
SDG#: LDC09-02

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLB026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216C31A | 08/06/2019 20:06 | Jeremy C Giffin | 242.92 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554388 | 07/25/2019 11:40 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192140030A | 08/06/2019 10:23 | Nicholas R Rossi | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192140030A | 08/05/2019 07:00 | Joshua S Ruth | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404902 | 08/07/2019 12:56 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404902 | 08/02/2019 06:49 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820006B | 08/06/2019 11:53 | William C Schwebel | 1 |

Sample Description: DUP-2-SD-190725 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114312
ELLE Group #: 2056414
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 12:15
SDG#: LDC09-03FD

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.82 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.82 |
| 11995 | Toluene | 108-88-3 | 0.0009 | 0.0005 | 0.82 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0008 | 0.82 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 25.43 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 11 | 4.1 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 43 | 10 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 3.89 | 2.26 | 5 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 2.5 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | X192202AA | 08/08/2019 18:37 | Linda C Pape | 0.82 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554388 | 07/25/2019 12:15 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554388 | 07/25/2019 12:15 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554388 | 07/25/2019 12:15 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLB026 | 08/07/2019 19:15 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLB026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |

Sample Description: DUP-2-SD-190725 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114312
ELLE Group #: 2056414
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 12:15
SDG#: LDC09-03FD

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216C31A | 08/06/2019 18:54 | Jeremy C Giffin | 25.43 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554388 | 07/25/2019 12:15 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192140030A | 08/06/2019 10:45 | Nicholas R Rossi | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192140030A | 08/05/2019 07:00 | Joshua S Ruth | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404903 | 08/08/2019 16:01 | Cindy M Gehman | 5 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404903 | 08/02/2019 06:59 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820006B | 08/06/2019 11:53 | William C Schwebel | 1 |

Sample Description: SB-20-S-8.0-190725 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114313
ELLE Group #: 2056414
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 13:40
SDG#: LDC09-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | 0.001 | 0.0005 | 0.99 |
| 11995 | Ethylbenzene | 100-41-4 | 0.005 | 0.0004 | 0.99 |
| 11995 | Toluene | 108-88-3 | 0.007 | 0.0006 | 0.99 |
| 11995 | Xylene (Total) | 1330-20-7 | 0.037 | 0.001 | 0.99 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 46 | 1.2 | 115.98 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 10.2 | 0.580 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 8.4 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | X192202AA | 08/08/2019 19:00 | Linda C Pape | 0.99 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554388 | 07/25/2019 13:40 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554388 | 07/25/2019 13:40 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554388 | 07/25/2019 13:40 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLB026 | 08/07/2019 19:40 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLB026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |

Sample Description: SB-20-S-8.0-190725 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114313
ELLE Group #: 2056414
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 13:40
SDG#: LDC09-04

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216C31A | 08/06/2019 19:30 | Jeremy C Giffin | 115.98 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554388 | 07/25/2019 13:40 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192140030A | 08/06/2019 11:07 | Nicholas R Rossi | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192140030A | 08/05/2019 07:00 | Joshua S Ruth | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404903 | 08/08/2019 15:21 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404903 | 08/02/2019 06:59 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820006B | 08/06/2019 11:53 | William C Schwebel | 1 |

Sample Description: SB-20-S-14.0-190725 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114314
ELLE Group #: 2056414
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 13:30
SDG#: LDC09-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.034 | 63.13 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.027 | 63.13 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.041 | 63.13 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.068 | 63.13 |
| Reporting limits were raised to meet method hold time. | | | | | |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | 170 | 2.4 | 243.19 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 23 | 4.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 53 | 11 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 8.23 | 0.486 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 7.8 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | Q192201AA | 08/08/2019 14:43 | Stephen C Nolte | 63.13 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554388 | 07/25/2019 13:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554388 | 07/25/2019 13:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554388 | 07/25/2019 13:30 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLB026 | 08/07/2019 16:42 | Edward C Monborne | 1 |

Sample Description: SB-20-S-14.0-190725 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114314
ELLE Group #: 2056414
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 13:30
SDG#: LDC09-05

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLB026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216C31A | 08/06/2019 20:42 | Jeremy C Giffin | 243.19 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554388 | 07/25/2019 13:30 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192190015A | 08/09/2019 04:32 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192190015A | 08/07/2019 22:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404902 | 08/07/2019 13:20 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404902 | 08/02/2019 06:49 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820006B | 08/06/2019 11:53 | William C Schwebel | 1 |

Sample Description: SB-20-S-22.5-190725 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114315
ELLE Group #: 2056414
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 13:20
SDG#: LDC09-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.88 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.88 |
| 11995 | Toluene | 108-88-3 | 0.0007 | 0.0006 | 0.88 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.88 |
| Sample collection requirement for volatiles was not met. The VOA soil weight is outside the acceptable weight range. See the VOA Prep Summary Sheet for the affected sample(s). | | | | | |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 25.41 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.1 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 10 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 3.98 | 0.514 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 5.1 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | X192202AA | 08/08/2019 19:23 | Linda C Pape | 0.88 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554388 | 07/25/2019 13:20 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554388 | 07/25/2019 13:20 | Client Supplied | 1 |

Sample Description: SB-20-S-22.5-190725 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114315
ELLE Group #: 2056414
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 13:20
SDG#: LDC09-06

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554388 | 07/25/2019 13:20 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLB026 | 08/07/2019 20:05 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLB026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216C31A | 08/06/2019 07:13 | Jeremy C Giffin | 25.41 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554388 | 07/25/2019 13:20 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192190015A | 08/09/2019 04:54 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192190015A | 08/07/2019 22:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404903 | 08/08/2019 15:17 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404903 | 08/02/2019 06:59 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820006B | 08/06/2019 11:53 | William C Schwebel | 1 |

Sample Description: QA-T-190725 NA Water
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 1114316
ELLE Group #: 2056414
Matrix: Water

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 11:00
SDG#: LDC09-07TB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|----------------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | Z192202AA | 08/08/2019 11:03 | Anita M Dale | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | Z192202AA | 08/08/2019 11:02 | Anita M Dale | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19213B20A | 08/02/2019 21:20 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 19213B20A | 08/02/2019 21:19 | Marie D Beamenderfer | 1 |

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:38

Group Number: 2056414

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

| Analysis Name | Result mg/kg | MDL mg/kg |
|-------------------------------|---|--------------|
| Batch number: Q192201AA | Sample number(s): 1114314 | |
| Benzene | N.D. | 0.025 |
| Ethylbenzene | N.D. | 0.020 |
| Toluene | N.D. | 0.030 |
| Xylene (Total) | N.D. | 0.050 |
| Batch number: X192202AA | Sample number(s): 1114310-1114313,1114315 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| | ug/l | ug/l |
| Batch number: Z192202AA | Sample number(s): 1114316 | |
| Benzene | N.D. | 0.2 |
| Ethylbenzene | N.D. | 0.4 |
| Toluene | N.D. | 0.2 |
| Xylene (Total) | N.D. | 1 |
| | mg/kg | mg/kg |
| Batch number: 19217SLB026 | Sample number(s): 1114310-1114315 | |
| Naphthalene | N.D. | 0.007 |
| Batch number: 19216C31A | Sample number(s): 1114310-1114315 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |
| | ug/l | ug/l |
| Batch number: 19213B20A | Sample number(s): 1114316 | |
| NWTPH-Gx water C7-C12 | N.D. | 19 |
| | mg/kg | mg/kg |
| Batch number: 192140030A | Sample number(s): 1114310-1114313 | |
| Diesel Range Organics C12-C24 | N.D. | 4.0 |
| Heavy Range Organics C24-C40 | N.D. | 10 |
| Batch number: 192190015A | Sample number(s): 1114314-1114315 | |
| Diesel Range Organics C12-C24 | N.D. | 4.0 |
| Heavy Range Organics C24-C40 | N.D. | 10 |
| Batch number: 192141404902 | Sample number(s): 1114310-1114311,1114314 | |
| Lead | N.D. | 0.600 |
| Batch number: 192141404903 | Sample number(s): 1114312-1114313,1114315 | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:38

Group Number: 2056414

Method Blank (continued)

| Analysis Name | Result mg/kg | MDL mg/kg |
|---------------|-----------------|--------------|
| Lead | N.D. | 0.600 |

LCS/LCSD

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|-------------------------------|---|----------------------|------------------------------|-----------------------|-------------|--------------|--------------------|-----|------------|
| Batch number: Q192201AA | Sample number(s): 1114314 | | | | | | | | |
| Benzene | 1.00 | 0.980 | 1.00 | 1.01 | 98 | 101 | 80-120 | 3 | 30 |
| Ethylbenzene | 1.00 | 1.00 | 1.00 | 0.998 | 100 | 100 | 78-120 | 0 | 30 |
| Toluene | 1.00 | 0.992 | 1.00 | 1.00 | 99 | 100 | 80-120 | 1 | 30 |
| Xylene (Total) | 3.00 | 3.03 | 3.00 | 3.04 | 101 | 101 | 75-120 | 0 | 30 |
| Batch number: X192202AA | Sample number(s): 1114310-1114313,1114315 | | | | | | | | |
| Benzene | 0.0200 | 0.0204 | 0.0200 | 0.0211 | 102 | 105 | 80-120 | 3 | 30 |
| Ethylbenzene | 0.0200 | 0.0199 | 0.0200 | 0.0204 | 100 | 102 | 78-120 | 2 | 30 |
| Toluene | 0.0200 | 0.0201 | 0.0200 | 0.0208 | 101 | 104 | 80-120 | 3 | 30 |
| Xylene (Total) | 0.0600 | 0.0600 | 0.0600 | 0.0615 | 100 | 102 | 75-120 | 2 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: Z192202AA | Sample number(s): 1114316 | | | | | | | | |
| Benzene | 20 | 20.91 | | | 105 | | 80-120 | | |
| Ethylbenzene | 20 | 20.29 | | | 101 | | 80-120 | | |
| Toluene | 20 | 20.81 | | | 104 | | 80-120 | | |
| Xylene (Total) | 60 | 64.46 | | | 107 | | 80-120 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 19217SLB026 | Sample number(s): 1114310-1114315 | | | | | | | | |
| Naphthalene | 1.67 | 1.32 | | | 79 | | 46-99 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 19216C31A | Sample number(s): 1114310-1114315 | | | | | | | | |
| NWTPH-GX Soil C7-C12 | 11 | 11.49 | 11 | 11.46 | 104 | 104 | 55-145 | 0 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: 19213B20A | Sample number(s): 1114316 | | | | | | | | |
| NWTPH-Gx water C7-C12 | 1100 | 1134.39 | 1100 | 1121.55 | 103 | 102 | 64-131 | 1 | 30 |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 192140030A | Sample number(s): 1114310-1114313 | | | | | | | | |
| Diesel Range Organics C12-C24 | 133.4 | 101.08 | | | 76 | | 61-115 | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:38

Group Number: 2056414

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|----------------|------------------------|-----------------|----------|-----------|-----------------|-----|---------|
| Batch number: 192190015A Diesel Range Organics C12-C24 | Sample number(s): 1114314-1114315 | | | | | | | | |
| | 133.4 | 105.63 | | | 79 | | 61-115 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 192141404902 Lead | Sample number(s): 1114310-1114311,1114314 | | | | | | | | |
| | 15 | 15.79 | | | 105 | | 90-115 | | |
| Batch number: 192141404903 Lead | Sample number(s): 1114312-1114313,1114315 | | | | | | | | |
| | 15 | 14.59 | | | 97 | | 90-115 | | |
| | % | % | % | % | | | | | |
| Batch number: 19217820006B Moisture | Sample number(s): 1114310-1114315 | | | | | | | | |
| | 89.5 | 89.43 | | | 100 | | 99-101 | | |

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

| Analysis Name | Unspiked Conc mg/kg | MS Spike Added mg/kg | MS Conc mg/kg | MSD Spike Added mg/kg | MSD Conc mg/kg | MS %Rec | MSD %Rec | MS/MSD Limits | RPD | RPD Max |
|--|--|----------------------|---------------|-----------------------|----------------|---------|----------|---------------|-----|---------|
| Batch number: 19217SLB026 Naphthalene | Sample number(s): 1114310-1114315 UNSPK: 1114314 | | | | | | | | | |
| | N.D. | 1.66 | 1.29 | 1.66 | 1.35 | 78 | 81 | 46-99 | 4 | 30 |
| | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 192141404902 Lead | Sample number(s): 1114310-1114311,1114314 UNSPK: 1114311 | | | | | | | | | |
| | N.D. | 14.15 | 13.12 | 12.61 | 11.46 | 93 | 91 | 75-125 | 13 | 20 |

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | BKG Conc mg/kg | DUP Conc mg/kg | DUP RPD | DUP RPD Max |
|------------------------------------|--|----------------|---------|-------------|
| Batch number: 192141404902 Lead | Sample number(s): 1114310-1114311,1114314 BKG: 1114311 | | | |
| | N.D. | N.D. | 0 (1) | 20 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:38

Group Number: 2056414

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260 Soil
Batch number: Q192201AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114314 | 84 | 88 | 85 | 90 |
| Blank | 93 | 99 | 94 | 94 |
| LCS | 90 | 95 | 89 | 91 |
| LCSD | 92 | 95 | 91 | 92 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260 Soil
Batch number: X192202AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114310 | 104 | 105 | 94 | 94 |
| 1114311 | 104 | 104 | 97 | 88 |
| 1114312 | 105 | 109 | 94 | 92 |
| 1114313 | 96 | 99 | 99 | 106 |
| 1114315 | 103 | 108 | 94 | 94 |
| Blank | 103 | 103 | 99 | 94 |
| LCS | 99 | 101 | 100 | 101 |
| LCSD | 99 | 99 | 100 | 101 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260C
Batch number: Z192202AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114316 | 95 | 101 | 98 | 95 |
| Blank | 96 | 99 | 98 | 95 |
| LCS | 94 | 100 | 98 | 96 |
| Limits: | 80-120 | 80-120 | 80-120 | 80-120 |

Analysis Name: Naphthalene 8270D
Batch number: 19217SLB026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 1114310 | 88 | 84 | 93 |
| 1114311 | 77 | 79 | 90 |
| 1114312 | 90 | 88 | 95 |
| 1114313 | 74 | 75 | 92 |
| 1114314 | 83 | 81 | 96 |
| 1114315 | 90 | 85 | 101 |
| Blank | 83 | 77 | 99 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:38

Group Number: 2056414

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Naphthalene 8270D
Batch number: 19217SLB026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| LCS | 86 | 79 | 97 |
| MS | 82 | 77 | 91 |
| MSD | 85 | 82 | 95 |
| Limits: | 14-115 | 22-122 | 23-141 |

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 19213B20A

| | Trifluorotoluene-F |
|---------|--------------------|
| 1114316 | 68 |
| Blank | 81 |
| LCS | 100 |
| LCSD | 96 |
| Limits: | 50-150 |

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 19216C31A

| | Trifluorotoluene-F |
|---------|--------------------|
| 1114310 | 89 |
| 1114311 | 87 |
| 1114312 | 106 |
| 1114313 | 103 |
| 1114314 | 97 |
| 1114315 | 84 |
| Blank | 95 |
| LCS | 98 |
| LCSD | 99 |
| Limits: | 50-150 |

Analysis Name: NWTPH-Dx soil
Batch number: 192140030A

| | Orthoterphenyl |
|---------|----------------|
| 1114310 | 91 |
| 1114311 | 87 |
| 1114312 | 104 |
| 1114313 | 103 |
| Blank | 107 |
| LCS | 104 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:38

Group Number: 2056414

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Dx soil
Batch number: 192140030A

Limits: 50-150

Analysis Name: NWTPH-Dx soil
Batch number: 192190015A

| | Orthoterphenyl |
|---------|----------------|
| 1114314 | 102 |
| 1114315 | 104 |
| Blank | 102 |
| LCS | 109 |

Limits: 50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

Acct. # 13271 For Eurofins Lancaster Laboratories Environmental use only
 Group # 2086414 Sample # 1114310-16
 Instructions on reverse side correspond with circled numbers.

| ① Client Information | | | ④ Matrix | | | | ⑤ Analyses Requested | | | | | | | | | | ⑥ Remarks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-----------|------|---|-----------|--|------|--|------|---|-----|----------------------------|---|----------------|------------|----------|---|---|---|---|--------------------------|------|-------|---------------------|----------------------------|---|----------------|------------|----------|---|---|---|---|--------------------------|---|---|---|---|---|---|---|---------------------|--|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------------------------------|--|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--------------------|--|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------------------|--|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------------------|--|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|-------------|---|------|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---------------------|--|--|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|--|
| Facility # <u>204117</u> WBS | | | <input type="checkbox"/> Sediment <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input checked="" type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> Oil Total Number of Containers BTEX <input checked="" type="checkbox"/> MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>CA10B</u> <u>Naphthalenes 8270</u> | | | | SCR #: _____ | | | | | | | | | | <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Site Address <u>2021 6th St, Bremerton, WA</u> | | | | | | | ③ Composite <input checked="" type="checkbox"/> Grab <input type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> Oil | | NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>CA10B</u> <u>Naphthalenes 8270</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chevron PM <u>Eric Hetrick</u> Lead Consultant | | | | | | | | | Total Number of Containers BTEX <input checked="" type="checkbox"/> MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>CA10B</u> <u>Naphthalenes 8270</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Consultant/Office <u>Leidos - Bothell, WA</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Consultant Project Mgr. <u>Russ Shropshire</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Consultant Phone # <u>425-482-3323</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sampler <u>RAO/CMW</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ② Sample Identification <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th rowspan="2">Sample ID</th> <th colspan="2">Collected</th> <th rowspan="2">Grab</th> <th rowspan="2">Composite</th> <th rowspan="2">Soil</th> <th rowspan="2">Water</th> <th rowspan="2">Oil</th> <th rowspan="2">Total Number of Containers</th> <th rowspan="2">BTEX <input checked="" type="checkbox"/> MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth</th> <th rowspan="2">8260 full scan</th> <th rowspan="2">Oxygenates</th> <th rowspan="2">NWTPH-Gx</th> <th rowspan="2">NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/></th> <th rowspan="2">NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/></th> <th rowspan="2">WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/></th> <th rowspan="2">Lead Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>CA10B</u></th> <th rowspan="2"><u>Naphthalenes 8270</u></th> </tr> <tr> <th>Date</th> <th>Time</th> </tr> </thead> <tbody> <tr><td>SB-19-22.5-S-072519</td><td>7/25/19</td><td>1145</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>7</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>SB-19-27.5-S-072519</td><td></td><td>1140</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>7</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>SB-19-DUP-2-072519</td><td></td><td>1215</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>7</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>SB-20-8.0-S-072519</td><td></td><td>1340</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>7</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>SB-20-14.0-S-072519</td><td></td><td>1330</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>7</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>SB-20-22.5-S-072519</td><td></td><td>1320</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>7</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>TB-7-072519</td><td>↓</td><td>1100</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>7</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td></tr> <tr><td>Exp 2 20</td><td></td><td></td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>4</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td><td>/</td></tr> </tbody> </table> | | | Sample ID | Collected | | Grab | Composite | Soil | Water | Oil | Total Number of Containers | BTEX <input checked="" type="checkbox"/> MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth | 8260 full scan | Oxygenates | NWTPH-Gx | NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> | NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> | WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> | Lead Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>CA10B</u> | <u>Naphthalenes 8270</u> | Date | Time | SB-19-22.5-S-072519 | 7/25/19 | 1145 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | SB-19-27.5-S-072519 | | 1140 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | SB-19-DUP-2-072519 | | 1215 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | SB-20-8.0-S-072519 | | 1340 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | SB-20-14.0-S-072519 | | 1330 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | SB-20-22.5-S-072519 | | 1320 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | TB-7-072519 | ↓ | 1100 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | Exp 2 20 | | | / | / | / | / | / | 4 | / | / | / | / | / | / | / | / | / | Submit Invoice to Leidos PO10 229412 | |
| Sample ID | Collected | | | Grab | Composite | | | | | | | | | | | | | | | | Soil | Water | Oil | Total Number of Containers | BTEX <input checked="" type="checkbox"/> MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth | 8260 full scan | Oxygenates | NWTPH-Gx | NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> | NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> | WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> | Lead Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>CA10B</u> | <u>Naphthalenes 8270</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | Date | Time | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SB-19-22.5-S-072519 | 7/25/19 | 1145 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SB-19-27.5-S-072519 | | 1140 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SB-19-DUP-2-072519 | | 1215 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SB-20-8.0-S-072519 | | 1340 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SB-20-14.0-S-072519 | | 1330 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| SB-20-22.5-S-072519 | | 1320 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| TB-7-072519 | ↓ | 1100 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Exp 2 20 | | | / | / | / | / | / | 4 | / | / | / | / | / | / | / | / | / | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ⑦ Turnaround Time Requested (TAT) (please circle) Standard <u>5 day</u> 4 day 72 hour 48 hour 24 hour | | | Relinquished by <u>Ruth Aba</u> Date <u>7/29/19</u> Time <u>1430</u> | | Received by _____ Date _____ Time _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| ⑧ Data Package (circle if required) Type I - Full <u>Type VI (Raw Data)</u> | | | EDD (circle if required) CVX-RTBU-FI_05 (default) | | Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ | | Received by <u>[Signature]</u> Date <u>7/30/19</u> Time <u>1005</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Temperature Upon Receipt <u>0.8 °C</u> | | | Custody Seals Intact? <u>(Yes)</u> No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



Client: Leidos

Delivery and Receipt Information

| | | | |
|---------------------------|------------|---------------------|-------------------------|
| Delivery Method: | <u>UPS</u> | Arrival Timestamp: | <u>07/30/2019 10:15</u> |
| Number of Packages: | <u>1</u> | Number of Projects: | <u>1</u> |
| State/Province of Origin: | <u>WA</u> | | |

Arrival Condition Summary

| | | | |
|--------------------------------------|-----|-------------------------------------|-----|
| Shipping Container Sealed: | Yes | Sample IDs on COC match Containers: | Yes |
| Custody Seal Present: | Yes | Sample Date/Times match COC: | Yes |
| Custody Seal Intact: | Yes | Total Trip Blank Qty: | 4 |
| Samples Chilled: | Yes | Trip Blank Type: | HCl |
| Paperwork Enclosed: | Yes | Air Quality Samples Present: | No |
| Samples Intact: | Yes | | |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |

Unpacked by Simon Nies (25 112) at 12:54 on 07/30/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

| <u>Cooler #</u> | <u>Thermometer ID</u> | <u>Corrected Temp</u> | <u>Therm. Type</u> | <u>Ice Type</u> | <u>Ice Present?</u> | <u>Ice Container</u> | <u>Elevated Temp?</u> |
|-----------------|-----------------------|-----------------------|--------------------|-----------------|---------------------|----------------------|-----------------------|
| 1 | DT42-01 | 0.8 | DT | Wet | Y | Bagged | N |

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

| | | | |
|-------------------------|--|-----------------|-------------------------------|
| BMQL | Below Minimum Quantitation Level | mL | milliliter(s) |
| C | degrees Celsius | MPN | Most Probable Number |
| cfu | colony forming units | N.D. | non-detect |
| CP Units | cobalt-chloroplatinate units | ng | nanogram(s) |
| F | degrees Fahrenheit | NTU | nephelometric turbidity units |
| g | gram(s) | pg/L | picogram/liter |
| IU | International Units | RL | Reporting Limit |
| kg | kilogram(s) | TNTC | Too Numerous To Count |
| L | liter(s) | µg | microgram(s) |
| lb. | pound(s) | µL | microliter(s) |
| m3 | cubic meter(s) | umhos/cm | micromhos/cm |
| meq | milliequivalents | MCL | Maximum Contamination Limit |
| mg | milligram(s) | | |
| < | less than | | |
| > | greater than | | |
| ppm | parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas. | | |
| ppb | parts per billion | | |
| Dry weight basis | Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis. | | |

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

| Qualifier | Definition |
|----------------|---|
| C | Result confirmed by reanalysis |
| D1 | Indicates for dual column analyses that the result is reported from column 1 |
| D2 | Indicates for dual column analyses that the result is reported from column 2 |
| E | Concentration exceeds the calibration range |
| K1 | Initial Calibration Blank is above the QC limit and the sample result is ND |
| K2 | Continuing Calibration Blank is above the QC limit and the sample result is ND |
| K3 | Initial Calibration Verification is above the QC limit and the sample result is ND |
| K4 | Continuing Calibration Verification is above the QC limit and the sample result is ND |
| J (or G, I, X) | Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL) |
| P | Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported. |
| P^ | Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported. |
| U | Analyte was not detected at the value indicated |
| V | Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference. |
| W | The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L. |
| Z | Laboratory Defined - see analysis report |

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron c/o Leidos, Inc.
6310 Allentown Blvd.
Suite 110
Harrisburg PA 17112

Report Date: August 20, 2019 11:35

Project: 204117

Account #: 13271
Group Number: 2056415
SDG: LDC10
PO Number: P010229412
Release Number: HETRICK
State of Sample Origin: WA

Electronic Copy To Leidos
Electronic Copy To EcoChem

Attn: Russ Shropshire
Attn: Christine Ransom

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/> . Historical copies may be requested through your project manager.



SAMPLE INFORMATION

| <u>Client Sample Description</u> | <u>Sample Collection Date/Time</u> | <u>ELLE#</u> |
|----------------------------------|------------------------------------|--------------|
| SB-11-S-6.0-190723 Grab Soil | 07/23/2019 08:25 | 1114317 |
| SB-11-S-10.0-190724 Grab Soil | 07/24/2019 09:20 | 1114318 |
| SB-11-S-14.0-190724 Grab Soil | 07/24/2019 09:30 | 1114319 |
| SB-11-S-20.0-190724 Grab Soil | 07/24/2019 09:40 | 1114320 |
| SB-11-S-27.5-190724 Grab Soil | 07/24/2019 09:50 | 1114321 |
| QA-T-190724 NA Water | 07/24/2019 09:00 | 1114322 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: SB-11-S-6.0-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114317
ELLE Group #: 2056415
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 08:25
SDG#: LDC10-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0006 | 0.97 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0005 | 0.97 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0007 | 0.97 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.97 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.008 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 28.82 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.9 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 12 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 8.75 | 3.31 | 5 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 19.0 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A192181AA | 08/06/2019 17:46 | Linda C Pape | 0.97 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554389 | 07/23/2019 08:25 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554389 | 07/23/2019 08:25 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554389 | 07/23/2019 08:25 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLB026 | 08/07/2019 20:31 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLB026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |

Sample Description: SB-11-S-6.0-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114317
ELLE Group #: 2056415
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 08:25
SDG#: LDC10-01

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216A31A | 08/05/2019 00:26 | Jeremy C Giffin | 28.82 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554389 | 07/23/2019 08:25 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192180010A | 08/08/2019 23:06 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192180010A | 08/06/2019 20:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404903 | 08/08/2019 16:04 | Cindy M Gehman | 5 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404903 | 08/02/2019 06:59 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19214820004A | 08/05/2019 10:57 | William C Schwebel | 1 |

Sample Description: SB-11-S-10.0-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114318
ELLE Group #: 2056415
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 09:20
SDG#: LDC10-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|--------------------------------------|------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | SW-846 8260C | | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.79 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.79 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.79 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.79 |
| GC/MS Semivolatiles | | | | | |
| | SW-846 8270D | | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.009 | 1 |
| GC Volatiles | | | | | |
| | ECY 97-602 NWTPH-Gx | | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 1.0 | 0.3 | 26.78 |
| GC Petroleum Hydrocarbons | | | | | |
| | ECY 97-602 NWTPH-Dx modified | | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 5.1 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 13 | 1 |
| Metals | | | | | |
| | SW-846 6010D Rev.4, July 2014 | | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 7.28 | 0.690 | 1 |
| Wet Chemistry | | | | | |
| | SM 2540 G-2011 %Moisture Calc | | % | % | |
| 00111 | Moisture | n.a. | 22.4 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A192193AA | 08/07/2019 18:03 | Linda C Pape | 0.79 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554389 | 07/24/2019 09:20 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554389 | 07/24/2019 09:20 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554389 | 07/24/2019 09:20 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLB026 | 08/07/2019 20:56 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLB026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |

Sample Description: SB-11-S-10.0-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114318
ELLE Group #: 2056415
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 09:20
SDG#: LDC10-02

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216B31A | 08/05/2019 10:25 | Jeremy C Giffin | 26.78 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554389 | 07/24/2019 09:20 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192180010A | 08/08/2019 23:28 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192180010A | 08/06/2019 20:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404903 | 08/08/2019 15:27 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404903 | 08/02/2019 06:59 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19214820004A | 08/05/2019 10:57 | William C Schwebel | 1 |

Sample Description: SB-11-S-14.0-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114319
ELLE Group #: 2056415
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 09:30
SDG#: LDC10-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.73 |
| 11995 | Ethylbenzene | 100-41-4 | 0.001 | 0.0004 | 0.73 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.73 |
| 11995 | Xylene (Total) | 1330-20-7 | 0.011 | 0.0009 | 0.73 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.008 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 1.5 | 0.3 | 25.75 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 5.1 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 13 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 11.2 | 2.58 | 5 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 22.6 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A192193AA | 08/07/2019 18:26 | Linda C Pape | 0.73 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554389 | 07/24/2019 09:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554389 | 07/24/2019 09:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554389 | 07/24/2019 09:30 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLB026 | 08/07/2019 21:21 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLB026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |

Sample Description: SB-11-S-14.0-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114319
ELLE Group #: 2056415
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 09:30
SDG#: LDC10-03

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216B31A | 08/05/2019 11:01 | Jeremy C Giffin | 25.75 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554389 | 07/24/2019 09:30 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192180010A | 08/08/2019 23:50 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192180010A | 08/06/2019 20:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404903 | 08/08/2019 16:22 | Cindy M Gehman | 5 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404903 | 08/02/2019 06:59 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19214820004A | 08/05/2019 10:57 | William C Schwebel | 1 |

Sample Description: SB-11-S-20.0-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114320
ELLE Group #: 2056415
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 09:40
SDG#: LDC10-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.047 | 86.5 |
| 11995 | Ethylbenzene | 100-41-4 | 12 | 0.038 | 86.5 |
| 11995 | Toluene | 108-88-3 | 0.58 | 0.056 | 86.5 |
| 11995 | Xylene (Total) | 1330-20-7 | 100 | 0.94 | 865.04 |
| The holding time was not met. The client was notified and the data reported. | | | | | |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | 11 | 0.036 | 5 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 3,200 | 85 | 8469.13 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 55 | 4.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 24 | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.36 | 0.497 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 7.8 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | Q192201AA | 08/08/2019 20:24 | Stephen C Nolte | 86.5 |
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | Q192211AA | 08/09/2019 13:47 | Jennifer K Howe | 865.04 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554389 | 07/24/2019 09:40 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554389 | 07/24/2019 09:40 | Client Supplied | 1 |

Sample Description: SB-11-S-20.0-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114320
ELLE Group #: 2056415
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 09:40
SDG#: LDC10-04

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554389 | 07/24/2019 09:40 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLB026 | 08/08/2019 17:03 | Edward C Monborne | 5 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLB026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216B31A | 08/05/2019 12:20 | Jeremy C Giffin | 8469.13 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554389 | 07/24/2019 09:40 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192180010A | 08/09/2019 00:11 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192180010A | 08/06/2019 20:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404904 | 08/07/2019 15:00 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404904 | 08/02/2019 07:09 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19214820004A | 08/05/2019 10:57 | William C Schwebel | 1 |

Sample Description: SB-11-S-27.5-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114321
ELLE Group #: 2056415
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 09:50
SDG#: LDC10-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|------------------------|---------------------|------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | mg/kg | mg/kg | |
| | SW-846 8260C | | | | |
| 11995 | Benzene | 71-43-2 | 0.0005 | 0.0004 | 0.81 |
| 11995 | Ethylbenzene | 100-41-4 | 0.001 | 0.0003 | 0.81 |
| 11995 | Toluene | 108-88-3 | 0.004 | 0.0005 | 0.81 |
| 11995 | Xylene (Total) | 1330-20-7 | 0.009 | 0.0009 | 0.81 |

The recovery for the internal standard t-butyl alcohol-d10 is outside the QC acceptance limits high in the associated CCV. No compounds in this analysis are quantitated using that internal standard.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

The following action was taken: The client was contacted and the data reported.

| | | | | | |
|----------------------------------|--------------------------------------|---------|--------------|--------------|-------|
| GC/MS Semivolatiles | | | mg/kg | mg/kg | |
| | SW-846 8270D | | | | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | mg/kg | mg/kg | |
| | ECY 97-602 NWT PH-Gx | | | | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | 0.6 | 0.2 | 20.29 |
| GC Petroleum Hydrocarbons | | | mg/kg | mg/kg | |
| | ECY 97-602 NWT PH-Dx modified | | | | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |

| | | | | | |
|---------------|--------------------------------------|-----------|--------------|--------------|---|
| Metals | | | mg/kg | mg/kg | |
| | SW-846 6010D Rev.4, July 2014 | | | | |
| 06955 | Lead | 7439-92-1 | 2.06 | 0.445 | 1 |

| | | | | | |
|---|--------------------------------------|------|----------|----------|---|
| Wet Chemistry | | | % | % | |
| | SM 2540 G-2011 %Moisture Calc | | | | |
| 00111 | Moisture | n.a. | 7.0 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|--------|------------------------|---------|-----------------|

Sample Description: SB-11-S-27.5-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114321
ELLE Group #: 2056415
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 09:50
SDG#: LDC10-05

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | X192191AA | 08/07/2019 17:05 | Linda C Pape | 0.81 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554389 | 07/24/2019 09:50 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554389 | 07/24/2019 09:50 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554389 | 07/24/2019 09:50 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLB026 | 08/07/2019 22:12 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLB026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216B31A | 08/05/2019 11:37 | Jeremy C Giffin | 20.29 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554389 | 07/24/2019 09:50 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192190015A | 08/09/2019 05:16 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192190015A | 08/07/2019 22:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404904 | 08/07/2019 15:03 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404904 | 08/02/2019 07:09 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19214820004A | 08/05/2019 10:57 | William C Schwebel | 1 |

Sample Description: QA-T-190724 NA Water
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 1114322
ELLE Group #: 2056415
Matrix: Water

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 09:00
SDG#: LDC10-06TB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|----------------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | Z192192AA | 08/07/2019 15:33 | Anita M Dale | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | Z192192AA | 08/07/2019 15:32 | Anita M Dale | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19213B20A | 08/02/2019 21:48 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 19213B20A | 08/02/2019 21:47 | Marie D Beamenderfer | 1 |

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:35

Group Number: 2056415

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

| Analysis Name | Result | MDL |
|---------------------------|-----------------------------------|--------------|
| | mg/kg | mg/kg |
| Batch number: A192181AA | Sample number(s): 1114317 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| Batch number: A192193AA | Sample number(s): 1114318-1114319 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| Batch number: Q192201AA | Sample number(s): 1114320 | |
| Benzene | N.D. | 0.025 |
| Ethylbenzene | N.D. | 0.020 |
| Toluene | N.D. | 0.030 |
| Batch number: Q192211AA | Sample number(s): 1114320 | |
| Xylene (Total) | N.D. | 0.050 |
| Batch number: X192191AA | Sample number(s): 1114321 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | 0.002 | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| | ug/l | ug/l |
| Batch number: Z192192AA | Sample number(s): 1114322 | |
| Benzene | N.D. | 0.2 |
| Ethylbenzene | N.D. | 0.4 |
| Toluene | N.D. | 0.2 |
| Xylene (Total) | N.D. | 1 |
| | mg/kg | mg/kg |
| Batch number: 19217SLB026 | Sample number(s): 1114317-1114321 | |
| Naphthalene | N.D. | 0.007 |
| Batch number: 19216A31A | Sample number(s): 1114317 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |
| Batch number: 19216B31A | Sample number(s): 1114318-1114321 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:35

Group Number: 2056415

Method Blank (continued)

| Analysis Name | Result | MDL |
|---|---|-----------|
| | ug/l | ug/l |
| Batch number: 19213B20A NWTPH-Gx water C7-C12 | Sample number(s): 1114322 N.D. | 19 |
| | mg/kg | mg/kg |
| Batch number: 192180010A Diesel Range Organics C12-C24 Heavy Range Organics C24-C40 | Sample number(s): 1114317-1114320 N.D. N.D. | 4.0 10 |
| Batch number: 192190015A Diesel Range Organics C12-C24 Heavy Range Organics C24-C40 | Sample number(s): 1114321 N.D. N.D. | 4.0 10 |
| Batch number: 192141404903 Lead | Sample number(s): 1114317-1114319 N.D. | 0.600 |
| Batch number: 192141404904 Lead | Sample number(s): 1114320-1114321 N.D. | 0.600 |

LCS/LCSD

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|-------------------------|-----------------------------------|-------------------|---------------------------|--------------------|----------|-----------|-----------------|-----|---------|
| Batch number: A192181AA | Sample number(s): 1114317 | | | | | | | | |
| Benzene | 0.0200 | 0.0204 | 0.0200 | 0.0205 | 102 | 103 | 80-120 | 1 | 30 |
| Ethylbenzene | 0.0200 | 0.0209 | 0.0200 | 0.0208 | 104 | 104 | 78-120 | 0 | 30 |
| Toluene | 0.0200 | 0.0208 | 0.0200 | 0.0210 | 104 | 105 | 80-120 | 1 | 30 |
| Xylene (Total) | 0.0600 | 0.0630 | 0.0600 | 0.0632 | 105 | 105 | 75-120 | 0 | 30 |
| Batch number: A192193AA | Sample number(s): 1114318-1114319 | | | | | | | | |
| Benzene | 0.0200 | 0.0198 | 0.0200 | 0.0201 | 99 | 100 | 80-120 | 1 | 30 |
| Ethylbenzene | 0.0200 | 0.0203 | 0.0200 | 0.0205 | 102 | 102 | 78-120 | 1 | 30 |
| Toluene | 0.0200 | 0.0202 | 0.0200 | 0.0207 | 101 | 103 | 80-120 | 2 | 30 |
| Xylene (Total) | 0.0600 | 0.0612 | 0.0600 | 0.0619 | 102 | 103 | 75-120 | 1 | 30 |
| Batch number: Q192201AA | Sample number(s): 1114320 | | | | | | | | |
| Benzene | 1.00 | 0.980 | 1.00 | 1.01 | 98 | 101 | 80-120 | 3 | 30 |
| Ethylbenzene | 1.00 | 1.00 | 1.00 | 0.998 | 100 | 100 | 78-120 | 0 | 30 |
| Toluene | 1.00 | 0.992 | 1.00 | 1.00 | 99 | 100 | 80-120 | 1 | 30 |
| Batch number: Q192211AA | Sample number(s): 1114320 | | | | | | | | |
| Xylene (Total) | 3.00 | 3.36 | 3.00 | 2.96 | 112 | 99 | 75-120 | 13 | 30 |
| Batch number: X192191AA | Sample number(s): 1114321 | | | | | | | | |
| Benzene | 0.0200 | 0.0234 | 0.0200 | 0.0200 | 117 | 100 | 80-120 | 16 | 30 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:35

Group Number: 2056415

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|-------------------------------|-----------------------------------|-------------------|---------------------------|--------------------|----------|-----------|-----------------|-----|---------|
| Ethylbenzene | 0.0200 | 0.0226 | 0.0200 | 0.0189 | 113 | 95 | 78-120 | 18 | 30 |
| Toluene | 0.0200 | 0.0242 | 0.0200 | 0.0205 | 121* | 103 | 80-120 | 16 | 30 |
| Xylene (Total) | 0.0600 | 0.0669 | 0.0600 | 0.0557 | 112 | 93 | 75-120 | 18 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: Z192192AA | Sample number(s): 1114322 | | | | | | | | |
| Benzene | 20 | 20.87 | | | 104 | | 80-120 | | |
| Ethylbenzene | 20 | 20.37 | | | 102 | | 80-120 | | |
| Toluene | 20 | 21.09 | | | 105 | | 80-120 | | |
| Xylene (Total) | 60 | 64.7 | | | 108 | | 80-120 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 19217SLB026 | Sample number(s): 1114317-1114321 | | | | | | | | |
| Naphthalene | 1.67 | 1.32 | | | 79 | | 46-99 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 19216A31A | Sample number(s): 1114317 | | | | | | | | |
| NWTPH-GX Soil C7-C12 | 11 | 11.46 | 11 | 11.37 | 104 | 103 | 55-145 | 1 | 30 |
| Batch number: 19216B31A | Sample number(s): 1114318-1114321 | | | | | | | | |
| NWTPH-GX Soil C7-C12 | 11 | 11.25 | 11 | 11.5 | 102 | 105 | 55-145 | 2 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: 19213B20A | Sample number(s): 1114322 | | | | | | | | |
| NWTPH-Gx water C7-C12 | 1100 | 1134.39 | 1100 | 1121.55 | 103 | 102 | 64-131 | 1 | 30 |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 192180010A | Sample number(s): 1114317-1114320 | | | | | | | | |
| Diesel Range Organics C12-C24 | 133.4 | 108.3 | | | 81 | | 61-115 | | |
| Batch number: 192190015A | Sample number(s): 1114321 | | | | | | | | |
| Diesel Range Organics C12-C24 | 133.4 | 105.63 | | | 79 | | 61-115 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 192141404903 | Sample number(s): 1114317-1114319 | | | | | | | | |
| Lead | 15 | 14.59 | | | 97 | | 90-115 | | |
| Batch number: 192141404904 | Sample number(s): 1114320-1114321 | | | | | | | | |
| Lead | 15 | 15.24 | | | 102 | | 90-115 | | |
| | % | % | % | % | | | | | |
| Batch number: 19214820004A | Sample number(s): 1114317-1114321 | | | | | | | | |
| Moisture | 89.5 | 89.46 | | | 100 | | 99-101 | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:35

Group Number: 2056415

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

| Analysis Name | Unspiked Conc mg/kg | MS Spike Added mg/kg | MS Conc mg/kg | MSD Spike Added mg/kg | MSD Conc mg/kg | MS %Rec | MSD %Rec | MS/MSD Limits | RPD | RPD Max |
|---|---------------------|----------------------|---------------|-----------------------|----------------|---------|----------|---------------|-----|---------|
| Batch number: 192180010A Diesel Range Organics C12-C24 | 50.95 | 132.03 | 171.24 | | | 91 | | 61-115 | | |
| Sample number(s): 1114317-1114320 UNSPK: 1114320 | | | | | | | | | | |

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | BKG Conc mg/kg | DUP Conc mg/kg | DUP RPD | DUP RPD Max |
|---|----------------|----------------|-----------------|-------------|
| Batch number: 192180010A Diesel Range Organics C12-C24 Heavy Range Organics C24-C40 | 50.95 21.9 | 97.51 N.D. | 63* 200* (1) | 20 20 |
| Sample number(s): 1114317-1114320 BKG: 1114320 | | | | |

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260 Soil
Batch number: A192181AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114317 | 103 | 103 | 93 | 88 |
| Blank | 100 | 102 | 96 | 93 |
| LCS | 98 | 99 | 100 | 102 |
| LCSD | 97 | 96 | 101 | 101 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260 Soil
Batch number: A192193AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114318 | 101 | 100 | 93 | 112 |
| 1114319 | 102 | 104 | 94 | 98 |
| Blank | 103 | 97 | 95 | 92 |
| LCS | 98 | 102 | 101 | 103 |
| LCSD | 98 | 96 | 101 | 102 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:35

Group Number: 2056415

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260 Soil
Batch number: A192193AA

Limits: 50-141 54-135 52-141 50-131

Analysis Name: BTEX 8260 Soil
Batch number: Q192201AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114320 | 62 | 66 | 80 | 95 |
| Blank | 93 | 99 | 94 | 94 |
| LCS | 90 | 95 | 89 | 91 |
| LCSD | 92 | 95 | 91 | 92 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260 Soil
Batch number: X192191AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114321 | 96 | 107 | 99 | 102 |
| Blank | 95 | 103 | 100 | 101 |
| LCS | 95 | 98 | 102 | 103 |
| LCSD | 96 | 99 | 102 | 104 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260C
Batch number: Z192192AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114322 | 96 | 101 | 97 | 94 |
| Blank | 95 | 101 | 96 | 94 |
| LCS | 94 | 100 | 97 | 96 |
| Limits: | 80-120 | 80-120 | 80-120 | 80-120 |

Analysis Name: Naphthalene 8270D
Batch number: 19217SLB026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 1114317 | 76 | 75 | 91 |
| 1114318 | 87 | 80 | 94 |
| 1114319 | 76 | 74 | 93 |
| 1114320 | 100 | 90 | 100 |
| 1114321 | 90 | 85 | 97 |
| Blank | 83 | 77 | 99 |
| LCS | 86 | 79 | 97 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:35

Group Number: 2056415

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Naphthalene 8270D
Batch number: 19217SLB026

Limits: 14-115 22-122 23-141

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 19213B20A

Trifluorotoluene-F

| | |
|---------|-----|
| 1114322 | 81 |
| Blank | 81 |
| LCS | 100 |
| LCSD | 96 |

Limits: 50-150

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 19216A31A

Trifluorotoluene-F

| | |
|---------|----|
| 1114317 | 68 |
| Blank | 94 |
| LCS | 99 |
| LCSD | 98 |

Limits: 50-150

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 19216B31A

Trifluorotoluene-F

| | |
|---------|------|
| 1114318 | 65 |
| 1114319 | 65 |
| 1114320 | 186* |
| 1114321 | 77 |
| Blank | 92 |
| LCS | 95 |
| LCSD | 96 |

Limits: 50-150

Analysis Name: NWTPH-Dx soil
Batch number: 192180010A

Orthoterphenyl

| | |
|---------|-----|
| 1114317 | 101 |
| 1114318 | 102 |
| 1114319 | 102 |
| 1114320 | 106 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:35

Group Number: 2056415

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Dx soil
Batch number: 192180010A

Orthoterphenyl

| | |
|-------|-----|
| Blank | 104 |
| DUP | 112 |
| LCS | 111 |
| MS | 113 |

Limits: 50-150

Analysis Name: NWTPH-Dx soil
Batch number: 192190015A

Orthoterphenyl

| | |
|---------|-----|
| 1114321 | 103 |
| Blank | 102 |
| LCS | 109 |

Limits: 50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

Acct. # 13271

For Eurofins Lancaster Laboratories Environmental use only

Group # 2056415 Sample # 1114317-22

Instructions on reverse side correspond with circled numbers.

| 1 Client Information | | | | 4 Matrix | | | | 5 Analyses Requested | | | | | | | | | | 6 Remarks | | | | | | | | | | | | | | | |
|--|----------------|-------------|-------------------------------------|--|-------------------------------------|-------------------------------------|-------------------------------------|---|----------------------------|--|-------------------------------------|---|-------------------------------------|---|---|--|--|-------------------------------------|-------------------------------------|---|-------------------------------------|-------------------------------------|-------------------------------------|---|-------------------------------------|---|-------------------------------------|---|-------------------------------------|--|-------------------------------------|--|-------------------------------------|
| Facility # <u>204177</u> | | WBS | | Sediment <input type="checkbox"/> | | Ground <input type="checkbox"/> | | Surface <input type="checkbox"/> | | Oil <input type="checkbox"/> | | Air <input type="checkbox"/> | | Total Number of Containers | | BTEX <input checked="" type="checkbox"/> MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth | | 8260 full scan | | Oxygenates | | NWTPH-Gx | | NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> | | NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> | | WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> | | Lead <input type="checkbox"/> Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>CO10B</u> | | SCR #: _____ | |
| Site Address <u>2021 6th St Bremerton, WA</u> | | | | Chevron PM <u>Eric Hetrick</u> | | | | Lead Consultant <u>Leidos</u> | | | | Consultant/Office <u>Leidos - Bothell, WA</u> | | | | Consultant Project Mgr. <u>Russ Shropshire</u> | | | | Consultant Phone # <u>425-482-3323</u> | | | | Sampler <u>RA0/CMW</u> | | | | <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits | | | | | |
| 2 Sample Identification | | 3 Collected | | Grab | Composite | Soil | Water | Oil | Total Number of Containers | BTEX <input checked="" type="checkbox"/> MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth | 8260 full scan | Oxygenates | NWTPH-Gx | NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> | NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> | WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> | Lead <input type="checkbox"/> Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>CO10B</u> | Naphthalenes <u>EPA 8270</u> | | | | | | | | | | | | | | | |
| Date | Time | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>SB-11-6.0-S-072319</u> | <u>7/23/19</u> | <u>0835</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>7</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Submit Invoice to Leidos PO10229412 | |
| <u>SB-11-10.0-S-072419</u> | <u>7/23/19</u> | <u>0920</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>7</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| <u>SB-11-14.0-S-072419</u> | <u>7/24/19</u> | <u>0930</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>7</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| <u>SB-11-20.0-S-072419</u> | <u>7/23/19</u> | <u>0940</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>7</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | <input checked="" type="checkbox"/> |
| <u>SB-11-27.5-S-072419</u> | <u>7/24/19</u> | <u>0950</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>7</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | |
| <u>FB-3-072419</u> | <u>7/23/19</u> | <u>0900</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>4</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | |
| <u>FB-3-072419</u> | <u>7/24/19</u> | <u>0900</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>4</u> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | | |
| 7 Turnaround Time Requested (TAT) (please circle) | | | | Relinquished by <u>[Signature]</u> | | | | Date <u>7/27/19</u> | | Time <u>1440</u> | | Received by _____ | | | | Date _____ | | Time _____ | | | | | | | | | | | | | | | |
| Standard <input checked="" type="checkbox"/> 5 day 4 day 72 hour 48 hour 24 hour | | | | Relinquished by _____ | | | | Date _____ | | Time _____ | | Received by _____ | | | | Date _____ | | Time _____ | | | | | | | | | | | | | | | |
| 8 Data Package (circle if required) | | | | Relinquished by Commercial Carrier: | | | | Date _____ | | Time _____ | | Received by <u>[Signature]</u> | | | | Date <u>7/30/19</u> | | Time <u>1015</u> | | | | | | | | | | | | | | | |
| Type I - Full <input checked="" type="checkbox"/> Type VI (Raw Data) | | | | EDD (circle if required) CVX-RTBU-FI_05 (default) Other: _____ | | | | UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ | | Temperature Upon Receipt <u>1.0</u> °C | | Custody Seals Intact? <input checked="" type="checkbox"/> (Yes) <input type="checkbox"/> No | | | | | | | | | | | | | | | | | | | | | |



Client: Leidos

Delivery and Receipt Information

| | | | |
|---------------------------|------------|---------------------|-------------------------|
| Delivery Method: | <u>UPS</u> | Arrival Timestamp: | <u>07/30/2019 10:15</u> |
| Number of Packages: | <u>1</u> | Number of Projects: | <u>1</u> |
| State/Province of Origin: | <u>WA</u> | | |

Arrival Condition Summary

| | | | |
|--------------------------------------|-----|-------------------------------------|-----|
| Shipping Container Sealed: | Yes | Sample IDs on COC match Containers: | Yes |
| Custody Seal Present: | Yes | Sample Date/Times match COC: | Yes |
| Custody Seal Intact: | Yes | Total Trip Blank Qty: | 4 |
| Samples Chilled: | Yes | Trip Blank Type: | HCI |
| Paperwork Enclosed: | Yes | Air Quality Samples Present: | No |
| Samples Intact: | Yes | | |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |

Unpacked by Simon Nies (25 112) at 13:01 on 07/30/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Elevated Temp? |
|----------|----------------|----------------|-------------|----------|--------------|---------------|----------------|
| 1 | DT42-01 | 1.0 | DT | Wet | Y | Bagged | N |

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

| | | | |
|-------------------------|--|-----------------|-------------------------------|
| BMQL | Below Minimum Quantitation Level | mL | milliliter(s) |
| C | degrees Celsius | MPN | Most Probable Number |
| cfu | colony forming units | N.D. | non-detect |
| CP Units | cobalt-chloroplatinate units | ng | nanogram(s) |
| F | degrees Fahrenheit | NTU | nephelometric turbidity units |
| g | gram(s) | pg/L | picogram/liter |
| IU | International Units | RL | Reporting Limit |
| kg | kilogram(s) | TNTC | Too Numerous To Count |
| L | liter(s) | µg | microgram(s) |
| lb. | pound(s) | µL | microliter(s) |
| m3 | cubic meter(s) | umhos/cm | micromhos/cm |
| meq | milliequivalents | MCL | Maximum Contamination Limit |
| mg | milligram(s) | | |
| < | less than | | |
| > | greater than | | |
| ppm | parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas. | | |
| ppb | parts per billion | | |
| Dry weight basis | Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis. | | |

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

| Qualifier | Definition |
|----------------|---|
| C | Result confirmed by reanalysis |
| D1 | Indicates for dual column analyses that the result is reported from column 1 |
| D2 | Indicates for dual column analyses that the result is reported from column 2 |
| E | Concentration exceeds the calibration range |
| K1 | Initial Calibration Blank is above the QC limit and the sample result is ND |
| K2 | Continuing Calibration Blank is above the QC limit and the sample result is ND |
| K3 | Initial Calibration Verification is above the QC limit and the sample result is ND |
| K4 | Continuing Calibration Verification is above the QC limit and the sample result is ND |
| J (or G, I, X) | Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL) |
| P | Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported. |
| P^ | Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported. |
| U | Analyte was not detected at the value indicated |
| V | Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference. |
| W | The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L. |
| Z | Laboratory Defined - see analysis report |

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron c/o Leidos, Inc.
6310 Allentown Blvd.
Suite 110
Harrisburg PA 17112

Report Date: August 20, 2019 11:34

Project: 204117

Account #: 13271
Group Number: 2056416
SDG: LDC11
PO Number: P010229412
Release Number: HETRICK
State of Sample Origin: WA

Electronic Copy To Leidos
Electronic Copy To EcoChem

Attn: Russ Shropshire
Attn: Christine Ransom

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/> . Historical copies may be requested through your project manager.



SAMPLE INFORMATION

| <u>Client Sample Description</u> | <u>Sample Collection Date/Time</u> | <u>ELLE#</u> |
|----------------------------------|--|--------------|
| SB-20-S-27.5-190725 Grab Soil | 07/25/2019 13:10 | 1114323 |
| SB-14-S-20.0-190724 Grab Soil | 07/24/2019 17:30 | 1114324 |
| SB-14-S-27.5-190724 Grab Soil | 07/24/2019 17:25 | 1114325 |
| SB-12-S-6.0-190723 Grab Soil | 07/23/2019 09:00 | 1114326 |
| SB-12-S-14.5-190724 Grab Soil | 07/24/2019 14:10 | 1114327 |
| SB-12-S-20.0-190724 Grab Soil | 07/24/2019 14:00 | 1114328 |
| QA-T-190725 NA Water | 07/25/2019 13:00 | 1114329 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: SB-20-S-27.5-190725 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114323
ELLE Group #: 2056416
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 13:10
SDG#: LDC11-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.81 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.81 |
| 11995 | Toluene | 108-88-3 | 0.0007 | 0.0005 | 0.81 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0008 | 0.81 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 2.4 | 252.98 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 210 | 4.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 32 | 10 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.56 | 0.472 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 4.5 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|---------------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | X192202AA | 08/08/2019 19:46 | Linda C Pape | 0.81 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554390 | 07/25/2019 13:10 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554390 | 07/25/2019 13:10 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLB026 | 08/07/2019 22:38 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLB026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216C31A | 08/06/2019 21:18 | Jeremy C Giffin | 252.98 |

Sample Description: SB-20-S-27.5-190725 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114323
ELLE Group #: 2056416
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 13:10
SDG#: LDC11-01

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554390 | 07/25/2019 13:10 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192190015A | 08/09/2019 05:37 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192190015A | 08/07/2019 22:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404904 | 08/07/2019 15:13 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404904 | 08/02/2019 07:09 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820001A | 08/06/2019 08:31 | William C Schwebel | 1 |

Sample Description: SB-14-S-20.0-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114324
ELLE Group #: 2056416
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 17:30
SDG#: LDC11-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|------------------------|----------------|------------|---------------------|----------------------------|-----------------|
| GC/MS Volatiles | | | SW-846 8260C | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.82 |
| 11995 | Ethylbenzene | 100-41-4 | 0.0005 | 0.0003 | 0.82 |
| 11995 | Toluene | 108-88-3 | 0.001 | 0.0005 | 0.82 |
| 11995 | Xylene (Total) | 1330-20-7 | 0.003 | 0.0009 | 0.82 |

The recovery for the internal standard t-butyl alcohol-d10 is outside the QC acceptance limits high in the associated CCV. No compounds in this analysis are quantitated using that internal standard.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

The following action was taken: The client was contacted and the data reported.

| | | | | | |
|---|-----------------------|---------|-----------------------------|--------------|-------|
| GC/MS Semivolatiles | | | SW-846 8270D | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | ECY 97-602 NWTTPH-Gx | mg/kg | |
| 02005 | NWTTPH-GX Soil C7-C12 | n.a. | 29 | 2.1 | 210.1 |
| Reporting limits were raised due to sample foaming. | | | | | |

| | | | | | |
|----------------------------------|-------------------------------|------|--------------------------------------|--------------|---|
| GC Petroleum Hydrocarbons | | | ECY 97-602 NWTTPH-Dx modified | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 130 | 4.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 120 | 11 | 1 |

| | | | | | |
|---------------|------|-----------|--------------------------------------|--------------|---|
| Metals | | | SW-846 6010D Rev.4, July 2014 | mg/kg | |
| 06955 | Lead | 7439-92-1 | 6.65 | 0.501 | 1 |

| | | | | | |
|---|----------|------|--------------------------------------|----------|---|
| Wet Chemistry | | | SM 2540 G-2011 %Moisture Calc | % | |
| 00111 | Moisture | n.a. | 6.4 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|--------|------------------------|---------|-----------------|

Sample Description: SB-14-S-20.0-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114324
ELLE Group #: 2056416
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 17:30
SDG#: LDC11-02

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | X192191AA | 08/07/2019 20:56 | Linda C Pape | 0.82 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554390 | 07/24/2019 17:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554390 | 07/24/2019 17:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554390 | 07/24/2019 17:30 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLB026 | 08/07/2019 23:03 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLB026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216C31A | 08/06/2019 07:49 | Jeremy C Giffin | 210.1 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554390 | 07/24/2019 17:30 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192190015A | 08/09/2019 07:48 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192190015A | 08/07/2019 22:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404904 | 08/07/2019 15:16 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404904 | 08/02/2019 07:09 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820001A | 08/06/2019 08:31 | William C Schwebel | 1 |

Sample Description: SB-14-S-27.5-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114325
ELLE Group #: 2056416
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 17:25
SDG#: LDC11-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|------------------------|----------------|------------|---------------------|----------------------------|-----------------|
| GC/MS Volatiles | | | SW-846 8260C | | |
| | | | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.89 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.89 |
| 11995 | Toluene | 108-88-3 | 0.002 | 0.0006 | 0.89 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.89 |

The recovery for the internal standard t-butyl alcohol-d10 is outside the QC acceptance limits high in the associated CCV. No compounds in this analysis are quantitated using that internal standard.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

The following action was taken: The client was contacted and the data reported.

| | | | | | |
|----------------------------------|-------------------------------|---------|--------------------------------------|-------|-------|
| GC/MS Semivolatiles | | | SW-846 8270D | | |
| | | | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | ECY 97-602 NWT PH-Gx | | |
| | | | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 25.65 |
| GC Petroleum Hydrocarbons | | | ECY 97-602 NWT PH-Dx modified | | |
| | | | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 10 | 1 |

| | | | | | |
|---------------|------|-----------|--------------------------------------|-------|---|
| Metals | | | SW-846 6010D Rev.4, July 2014 | | |
| | | | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.74 | 0.458 | 1 |

| | | | | | |
|----------------------|---|------|--------------------------------------|------|---|
| Wet Chemistry | | | SM 2540 G-2011 %Moisture Calc | | |
| | | | % | % | |
| 00111 | Moisture | n.a. | 5.1 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|--------|------------------------|---------|-----------------|

Sample Description: SB-14-S-27.5-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114325
ELLE Group #: 2056416
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 17:25
SDG#: LDC11-03

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | X192191AA | 08/07/2019 17:28 | Linda C Pape | 0.89 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554390 | 07/24/2019 17:25 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554390 | 07/24/2019 17:25 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554390 | 07/24/2019 17:25 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLB026 | 08/07/2019 23:29 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLB026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216C31A | 08/06/2019 09:08 | Jeremy C Giffin | 25.65 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554390 | 07/24/2019 17:25 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192190015A | 08/09/2019 05:59 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192190015A | 08/07/2019 22:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404904 | 08/07/2019 15:20 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404904 | 08/02/2019 07:09 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820001A | 08/06/2019 08:31 | William C Schwebel | 1 |

Sample Description: SB-12-S-6.0-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114326
ELLE Group #: 2056416
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 09:00
SDG#: LDC11-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.75 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.75 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.75 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.75 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.009 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 25.14 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 5.1 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 13 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 16.9 | 3.21 | 5 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 22.2 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|---------------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A192181AA | 08/06/2019 18:09 | Linda C Pape | 0.75 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554390 | 07/23/2019 09:00 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554390 | 07/23/2019 09:00 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLB026 | 08/07/2019 23:54 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLB026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216A31A | 08/05/2019 01:03 | Jeremy C Giffin | 25.14 |

Sample Description: SB-12-S-6.0-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114326
ELLE Group #: 2056416
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 09:00
SDG#: LDC11-04

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554390 | 07/23/2019 09:00 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192180010A | 08/09/2019 01:16 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192180010A | 08/06/2019 20:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404904 | 08/09/2019 11:25 | Patrick J Engle | 5 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404904 | 08/02/2019 07:09 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820001A | 08/06/2019 08:31 | William C Schwebel | 1 |

Sample Description: SB-12-S-14.5-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114327
ELLE Group #: 2056416
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 14:10
SDG#: LDC11-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|------------------------|----------------|------------|---------------------|----------------------------|-----------------|
| GC/MS Volatiles | | | SW-846 8260C | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.8 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.8 |
| 11995 | Toluene | 108-88-3 | 0.002 | 0.0006 | 0.8 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.8 |

The recovery for the internal standard t-butyl alcohol-d10 is outside the QC acceptance limits high in the associated CCV. No compounds in this analysis are quantitated using that internal standard.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

The following action was taken: The client was contacted and the data reported.

| | | | | | |
|----------------------------------|-------------------------------|---------|--------------------------------------|--------------|-------|
| GC/MS Semivolatiles | | | SW-846 8270D | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.008 | 1 |
| GC Volatiles | | | ECY 97-602 NWT PH-Gx | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 26.57 |
| GC Petroleum Hydrocarbons | | | ECY 97-602 NWT PH-Dx modified | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 5.1 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 13 | 1 |

| | | | | | |
|---------------|------|-----------|--------------------------------------|--------------|---|
| Metals | | | SW-846 6010D Rev.4, July 2014 | mg/kg | |
| 06955 | Lead | 7439-92-1 | 18.8 | 0.693 | 1 |

| | | | | | |
|---|----------|------|--------------------------------------|----------|---|
| Wet Chemistry | | | SM 2540 G-2011 %Moisture Calc | % | |
| 00111 | Moisture | n.a. | 22.0 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|--------|------------------------|---------|-----------------|

Sample Description: SB-12-S-14.5-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114327
ELLE Group #: 2056416
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 14:10
SDG#: LDC11-05

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | X192191AA | 08/07/2019 17:51 | Linda C Pape | 0.8 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554390 | 07/24/2019 14:10 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554390 | 07/24/2019 14:10 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554390 | 07/24/2019 14:10 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLC026 | 08/09/2019 03:15 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLC026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216C31A | 08/06/2019 09:44 | Jeremy C Giffin | 26.57 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554390 | 07/24/2019 14:10 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192190015A | 08/09/2019 06:21 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192190015A | 08/07/2019 22:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404904 | 08/07/2019 15:26 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404904 | 08/02/2019 07:09 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820001A | 08/06/2019 08:31 | William C Schwebel | 1 |

Sample Description: SB-12-S-20.0-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114328
ELLE Group #: 2056416
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 14:00
SDG#: LDC11-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|------------------------|----------------|------------|---------------------|----------------------------|-----------------|
| GC/MS Volatiles | | | SW-846 8260C | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.76 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.76 |
| 11995 | Toluene | 108-88-3 | 0.001 | 0.0005 | 0.76 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0008 | 0.76 |

The recovery for the internal standard t-butyl alcohol-d10 is outside the QC acceptance limits high in the associated CCV. No compounds in this analysis are quantitated using that internal standard.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

The following action was taken: The client was contacted and the data reported.

| | | | | | |
|----------------------------------|-------------------------------|---------|--------------------------------------|--------------|-------|
| GC/MS Semivolatiles | | | SW-846 8270D | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | ECY 97-602 NWT PH-Gx | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 22.43 |
| GC Petroleum Hydrocarbons | | | ECY 97-602 NWT PH-Dx modified | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |

| | | | | | |
|---------------|------|-----------|--------------------------------------|--------------|---|
| Metals | | | SW-846 6010D Rev.4, July 2014 | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.42 | 0.555 | 1 |

| | | | | | |
|---|----------|------|--------------------------------------|----------|---|
| Wet Chemistry | | | SM 2540 G-2011 %Moisture Calc | % | |
| 00111 | Moisture | n.a. | 7.6 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|--------|------------------------|---------|-----------------|

Sample Description: SB-12-S-20.0-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114328
ELLE Group #: 2056416
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 14:00
SDG#: LDC11-06

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | X192191AA | 08/07/2019 18:14 | Linda C Pape | 0.76 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554390 | 07/24/2019 14:00 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554390 | 07/24/2019 14:00 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554390 | 07/24/2019 14:00 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLC026 | 08/09/2019 03:40 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLC026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216C31A | 08/06/2019 10:20 | Jeremy C Giffin | 22.43 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554390 | 07/24/2019 14:00 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192190015A | 08/09/2019 06:42 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192190015A | 08/07/2019 22:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404904 | 08/07/2019 15:29 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404904 | 08/02/2019 07:09 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820001A | 08/06/2019 08:31 | William C Schwebel | 1 |

Sample Description: QA-T-190725 NA Water
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 1114329
ELLE Group #: 2056416
Matrix: Water

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 13:00
SDG#: LDC11-07TB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|----------------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | Z192202AA | 08/08/2019 11:28 | Anita M Dale | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | Z192202AA | 08/08/2019 11:27 | Anita M Dale | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19213B20A | 08/02/2019 22:15 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 19213B20A | 08/02/2019 22:14 | Marie D Beamenderfer | 1 |

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:34

Group Number: 2056416

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

| Analysis Name | Result | MDL |
|--|---|--------------|
| Batch number: A192181AA | Sample number(s): 1114326 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| Batch number: X192191AA | Sample number(s): 1114324-1114325,1114327-1114328 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | 0.002 | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| Batch number: X192202AA | Sample number(s): 1114323 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| | ug/l | ug/l |
| Batch number: Z192202AA | Sample number(s): 1114329 | |
| Benzene | N.D. | 0.2 |
| Ethylbenzene | N.D. | 0.4 |
| Toluene | N.D. | 0.2 |
| Xylene (Total) | N.D. | 1 |
| | mg/kg | mg/kg |
| Batch number: 19217SLB026 | Sample number(s): 1114323-1114326 | |
| Naphthalene | N.D. | 0.007 |
| Batch number: 19217SLC026 | Sample number(s): 1114327-1114328 | |
| Naphthalene | N.D. | 0.007 |
| Batch number: 19216A31A NWTPH-GX Soil C7-C12 | Sample number(s): 1114326 | |
| | N.D. | 0.2 |
| Batch number: 19216C31A NWTPH-GX Soil C7-C12 | Sample number(s): 1114323-1114325,1114327-1114328 | |
| | N.D. | 0.2 |
| | ug/l | ug/l |
| Batch number: 19213B20A NWTPH-Gx water C7-C12 | Sample number(s): 1114329 | |
| | N.D. | 19 |
| | mg/kg | mg/kg |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:34

Group Number: 2056416

Method Blank (continued)

| Analysis Name | Result mg/kg | MDL mg/kg |
|-------------------------------|---|--------------|
| Batch number: 192180010A | Sample number(s): 1114326 | |
| Diesel Range Organics C12-C24 | N.D. | 4.0 |
| Heavy Range Organics C24-C40 | N.D. | 10 |
| Batch number: 192190015A | Sample number(s): 1114323-1114325,1114327-1114328 | |
| Diesel Range Organics C12-C24 | N.D. | 4.0 |
| Heavy Range Organics C24-C40 | N.D. | 10 |
| Batch number: 192141404904 | Sample number(s): 1114323-1114328 | |
| Lead | N.D. | 0.600 |

LCS/LCSD

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---------------------------|---|----------------------|------------------------------|-----------------------|-------------|--------------|--------------------|-----|------------|
| Batch number: A192181AA | Sample number(s): 1114326 | | | | | | | | |
| Benzene | 0.0200 | 0.0204 | 0.0200 | 0.0205 | 102 | 103 | 80-120 | 1 | 30 |
| Ethylbenzene | 0.0200 | 0.0209 | 0.0200 | 0.0208 | 104 | 104 | 78-120 | 0 | 30 |
| Toluene | 0.0200 | 0.0208 | 0.0200 | 0.0210 | 104 | 105 | 80-120 | 1 | 30 |
| Xylene (Total) | 0.0600 | 0.0630 | 0.0600 | 0.0632 | 105 | 105 | 75-120 | 0 | 30 |
| Batch number: X192191AA | Sample number(s): 1114324-1114325,1114327-1114328 | | | | | | | | |
| Benzene | 0.0200 | 0.0234 | 0.0200 | 0.0200 | 117 | 100 | 80-120 | 16 | 30 |
| Ethylbenzene | 0.0200 | 0.0226 | 0.0200 | 0.0189 | 113 | 95 | 78-120 | 18 | 30 |
| Toluene | 0.0200 | 0.0242 | 0.0200 | 0.0205 | 121* | 103 | 80-120 | 16 | 30 |
| Xylene (Total) | 0.0600 | 0.0669 | 0.0600 | 0.0557 | 112 | 93 | 75-120 | 18 | 30 |
| Batch number: X192202AA | Sample number(s): 1114323 | | | | | | | | |
| Benzene | 0.0200 | 0.0204 | 0.0200 | 0.0211 | 102 | 105 | 80-120 | 3 | 30 |
| Ethylbenzene | 0.0200 | 0.0199 | 0.0200 | 0.0204 | 100 | 102 | 78-120 | 2 | 30 |
| Toluene | 0.0200 | 0.0201 | 0.0200 | 0.0208 | 101 | 104 | 80-120 | 3 | 30 |
| Xylene (Total) | 0.0600 | 0.0600 | 0.0600 | 0.0615 | 100 | 102 | 75-120 | 2 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: Z192202AA | Sample number(s): 1114329 | | | | | | | | |
| Benzene | 20 | 20.91 | | | 105 | | 80-120 | | |
| Ethylbenzene | 20 | 20.29 | | | 101 | | 80-120 | | |
| Toluene | 20 | 20.81 | | | 104 | | 80-120 | | |
| Xylene (Total) | 60 | 64.46 | | | 107 | | 80-120 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 19217SLB026 | Sample number(s): 1114323-1114326 | | | | | | | | |
| Naphthalene | 1.67 | 1.32 | | | 79 | | 46-99 | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:34

Group Number: 2056416

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|---|----------------|------------------------|-----------------|----------|-----------|-----------------|-----|---------|
| Batch number: 19217SLC026 Naphthalene | Sample number(s): 1114327-1114328 | | | | | | | | |
| | 1.67 | 1.42 | | | 85 | | 46-99 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 19216A31A NWTPH-GX Soil C7-C12 | Sample number(s): 1114326 | | | | | | | | |
| | 11 | 11.46 | 11 | 11.37 | 104 | 103 | 55-145 | 1 | 30 |
| Batch number: 19216C31A NWTPH-GX Soil C7-C12 | Sample number(s): 1114323-1114325,1114327-1114328 | | | | | | | | |
| | 11 | 11.49 | 11 | 11.46 | 104 | 104 | 55-145 | 0 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: 19213B20A NWTPH-Gx water C7-C12 | Sample number(s): 1114329 | | | | | | | | |
| | 1100 | 1134.39 | 1100 | 1121.55 | 103 | 102 | 64-131 | 1 | 30 |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 192180010A Diesel Range Organics C12-C24 | Sample number(s): 1114326 | | | | | | | | |
| | 133.4 | 108.3 | | | 81 | | 61-115 | | |
| Batch number: 192190015A Diesel Range Organics C12-C24 | Sample number(s): 1114323-1114325,1114327-1114328 | | | | | | | | |
| | 133.4 | 105.63 | | | 79 | | 61-115 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 192141404904 Lead | Sample number(s): 1114323-1114328 | | | | | | | | |
| | 15 | 15.24 | | | 102 | | 90-115 | | |
| | % | % | % | % | | | | | |
| Batch number: 19217820001A Moisture | Sample number(s): 1114323-1114328 | | | | | | | | |
| | 89.5 | 89.41 | | | 100 | | 99-101 | | |

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

| Analysis Name | Unspiked Conc mg/kg | MS Spike Added mg/kg | MS Conc mg/kg | MSD Spike Added mg/kg | MSD Conc mg/kg | MS %Rec | MSD %Rec | MS/MSD Limits | RPD | RPD Max |
|---|--|----------------------|---------------|-----------------------|----------------|---------|----------|---------------|-----|---------|
| Batch number: 192190015A Diesel Range Organics C12-C24 | Sample number(s): 1114323-1114325,1114327-1114328 UNSPK: 1114324 | | | | | | | | | |
| | 117.11 | 131.73 | 166.46 | | | 37* | | 61-115 | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:34

Group Number: 2056416

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | BKG Conc mg/kg | DUP Conc mg/kg | DUP RPD | DUP RPD Max |
|-------------------------------|---|-------------------|---------|-------------|
| Batch number: 192190015A | Sample number(s): 1114323-1114325, 1114327-1114328 BKG: 1114324 | | | |
| Diesel Range Organics C12-C24 | 117.11 | 127.69 | 9 | 20 |
| Heavy Range Organics C24-C40 | 115.75 | 148.72 | 25* (1) | 20 |

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260 Soil
Batch number: A192181AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114326 | 100 | 106 | 95 | 92 |
| Blank | 100 | 102 | 96 | 93 |
| LCS | 98 | 99 | 100 | 102 |
| LCSD | 97 | 96 | 101 | 101 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260 Soil
Batch number: X192191AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114324 | 100 | 106 | 105 | 92 |
| 1114325 | 96 | 106 | 100 | 99 |
| 1114327 | 96 | 102 | 100 | 99 |
| 1114328 | 96 | 105 | 100 | 101 |
| Blank | 95 | 103 | 100 | 101 |
| LCS | 95 | 98 | 102 | 103 |
| LCSD | 96 | 99 | 102 | 104 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260 Soil
Batch number: X192202AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114323 | 102 | 104 | 95 | 94 |
| Blank | 103 | 103 | 99 | 94 |
| LCS | 99 | 101 | 100 | 101 |
| LCSD | 99 | 99 | 100 | 101 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:34

Group Number: 2056416

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260 Soil
Batch number: X192202AA

Limits: 50-141 54-135 52-141 50-131

Analysis Name: BTEX 8260C
Batch number: Z192202AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114329 | 97 | 101 | 97 | 93 |
| Blank | 96 | 99 | 98 | 95 |
| LCS | 94 | 100 | 98 | 96 |
| Limits: | 80-120 | 80-120 | 80-120 | 80-120 |

Analysis Name: Naphthalene 8270D
Batch number: 19217SLB026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 1114323 | 88 | 83 | 96 |
| 1114324 | 83 | 83 | 94 |
| 1114325 | 90 | 86 | 100 |
| 1114326 | 82 | 76 | 86 |
| Blank | 83 | 77 | 99 |
| LCS | 86 | 79 | 97 |
| Limits: | 14-115 | 22-122 | 23-141 |

Analysis Name: Naphthalene 8270D
Batch number: 19217SLC026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 1114327 | 77 | 73 | 81 |
| 1114328 | 93 | 87 | 97 |
| Blank | 95 | 89 | 103 |
| LCS | 89 | 85 | 92 |
| Limits: | 14-115 | 22-122 | 23-141 |

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 19213B20A

| | Trifluorotoluene-F |
|---------|--------------------|
| 1114329 | 87 |
| Blank | 81 |
| LCS | 100 |
| LCSD | 96 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:34

Group Number: 2056416

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 19213B20A

Limits: 50-150

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 19216A31A

Trifluorotoluene-F

| | |
|---------|----|
| 1114326 | 66 |
| Blank | 94 |
| LCS | 99 |
| LCSD | 98 |

Limits: 50-150

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 19216C31A

Trifluorotoluene-F

| | |
|---------|-----|
| 1114323 | 100 |
| 1114324 | 83 |
| 1114325 | 70 |
| 1114327 | 54 |
| 1114328 | 75 |
| Blank | 95 |
| LCS | 98 |
| LCSD | 99 |

Limits: 50-150

Analysis Name: NWTPH-Dx soil
Batch number: 192180010A

Orthoterphenyl

| | |
|---------|-----|
| 1114326 | 100 |
| Blank | 104 |
| LCS | 111 |

Limits: 50-150

Analysis Name: NWTPH-Dx soil
Batch number: 192190015A

Orthoterphenyl

| | |
|---------|-----|
| 1114323 | 101 |
| 1114324 | 106 |
| 1114325 | 103 |
| 1114327 | 100 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:34

Group Number: 2056416

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Dx soil
Batch number: 192190015A

| | Orthoterphenyl |
|---------|----------------|
| 1114328 | 105 |
| Blank | 102 |
| DUP | 108 |
| LCS | 109 |
| MS | 113 |
| Limits: | 50-150 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories

Acct. # 13271

For Lancaster Laboratories use only
 Group # 2056416 Sample # 1114323-29
Instructions on reverse side correspond with circled numbers.

| | | | | | | | | | | | | | | | | | | |
|---|--|--|----------------------------|-----------------------------------|---------------------------------|----------------------------------|----------------------------------|--------------------------------|------------------------------|------------------------------|--|----------------|------------|----------|--|--|---|------------------------------|
| 1 Client Information | | | 4 Matrix | | | 5 Analyses Requested | | | | | | | | | | | | |
| Facility # <u>204117</u> WBS | | | Total Number of Containers | Sediment <input type="checkbox"/> | Ground <input type="checkbox"/> | Surface <input type="checkbox"/> | Potable <input type="checkbox"/> | NPDES <input type="checkbox"/> | Air <input type="checkbox"/> | Oil <input type="checkbox"/> | BTEX <input checked="" type="checkbox"/> MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth <input type="checkbox"/> | 8260 full scan | Oxygenates | NWTPH GX | NWTPH DX <input checked="" type="checkbox"/> Silica Gel Cleanup <input type="checkbox"/> | Lead <input type="checkbox"/> Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>CO105</u> | WAVPH <input type="checkbox"/> WAEPH <input type="checkbox"/> | <u>Naphthalenes EPA 8270</u> |
| Site Address <u>2021 6th St, Bremerton, WA</u> | | | | | | | | | | | | | | | | | | |
| Chevron PM <u>Eric Hetrick</u> Lead Consultant | | | | | | | | | | | | | | | | | | |
| Consultant/Office <u>Leidas - Bothell, WA</u> | | | | | | | | | | | | | | | | | | |
| Consultant Project Mgr. <u>Russ Shropshire</u> | | | | | | | | | | | | | | | | | | |
| Consultant Phone # <u>425-482-3323</u> | | | | | | | | | | | | | | | | | | |
| Sampler <u>Ro/cw</u> | | | | | | | | | | | | | | | | | | |

SCR #: _____

- Results in Dry Weight
- J value reporting needed
- Must meet lowest detection limits possible for 8260 compounds
- 8021 MTBE Confirmation
- Confirm MTBE + Naphthalene
- Confirm highest hit by 8260
- Confirm all hits by 8260
- Run _____ oxy's on highest hit
- Run _____ oxy's on all hits

| 2 Sample Identification | | Collected | | 3 Grab | Composite | Soil | Water | Oil | Total Number of Containers | BTEX | 8260 | Oxygenates | NWTPH GX | NWTPH DX | Lead | WAVPH | WAEPH | Remarks | |
|--------------------------------|--------------------|-----------------|------|--------------|-----------|------|-------|-----|----------------------------|------|------|------------|----------|----------|------|-------|-------|---------|--|
| Date | Time | Date | Time | | | | | | | | | | | | | | | | |
| SB-20-27.5-S-072519 | 7/25/19 | 1310 | | / | | | | | 7 | | | | | | | | | | |
| SB-14-20.0-S-072519 | 7/24/19 | 1730 | | / | | | | | 7 | | | | | | | | | | |
| SB-14-27.5-S-072419 | 7/24/19 | 1725 | | / | | | | | 7 | | | | | | | | | | |
| SB-12-6.0-S-072319 | 7/23/19 | 0100 | | / | | | | | 7 | | | | | | | | | | |
| SB-12-17.5-S-072419 | 7/24/19 | 1410 | | / | | | | | 7 | | | | | | | | | | |
| SB-12-20.0-S-072419 | 7/24/19 | 1400 | | / | | | | | 7 | | | | | | | | | | |
| TB-8-072519 | 7/25/19 | 1300 | | / | | | | | 4 | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |

7 Turnaround Time Requested (TAT) (please circle)

Standard 5 day 4 day

72 hour 48 hour 24 hour

| | | | | | |
|---------------------------------------|------------------------|---------------------|----------------------|---------------|---------------|
| Relinquished by <u>[Signature]</u> | Date <u>7/29/19</u> | Time <u>1450</u> | Received by _____ | Date _____ | Time _____ |
| Relinquished by _____ | Date _____ | Time _____ | Received by _____ | Date _____ | Time _____ |

8 Data Package Options (please circle if required)

Type I - Full Type VI (Raw Data)

| | | | | | |
|---|-----------------|-----------------|-------------------------------------|------------------------|---------------------|
| Relinquished by Commerical Carrier: | | | Received by <u>[Signature]</u> | Date <u>7/30/19</u> | Time <u>1005</u> |
| UPS <input checked="" type="checkbox"/> | FedEx <u> </u> | Other <u> </u> | Custody Seals Intact? <u>Yes</u> No | | |
| Temperature Upon Receipt <u>0.9</u> °C | | | | | |



Client: Leidos

Delivery and Receipt Information

| | | | |
|---------------------------|------------|---------------------|-------------------------|
| Delivery Method: | <u>UPS</u> | Arrival Timestamp: | <u>07/30/2019 10:15</u> |
| Number of Packages: | <u>1</u> | Number of Projects: | <u>1</u> |
| State/Province of Origin: | <u>WA</u> | | |

Arrival Condition Summary

| | | | |
|--------------------------------------|-----|-------------------------------------|-----|
| Shipping Container Sealed: | Yes | Sample IDs on COC match Containers: | Yes |
| Custody Seal Present: | Yes | Sample Date/Times match COC: | Yes |
| Custody Seal Intact: | Yes | Total Trip Blank Qty: | 4 |
| Samples Chilled: | Yes | Trip Blank Type: | HCI |
| Paperwork Enclosed: | Yes | Air Quality Samples Present: | No |
| Samples Intact: | Yes | | |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |

Unpacked by Simon Nies (25 112) at 13:10 on 07/30/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Elevated Temp? |
|----------|----------------|----------------|-------------|----------|--------------|---------------|----------------|
| 1 | DT42-01 | 0.9 | DT | Wet | Y | Bagged | N |

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

| | | | |
|-------------------------|--|-----------------|-------------------------------|
| BMQL | Below Minimum Quantitation Level | mL | milliliter(s) |
| C | degrees Celsius | MPN | Most Probable Number |
| cfu | colony forming units | N.D. | non-detect |
| CP Units | cobalt-chloroplatinate units | ng | nanogram(s) |
| F | degrees Fahrenheit | NTU | nephelometric turbidity units |
| g | gram(s) | pg/L | picogram/liter |
| IU | International Units | RL | Reporting Limit |
| kg | kilogram(s) | TNTC | Too Numerous To Count |
| L | liter(s) | µg | microgram(s) |
| lb. | pound(s) | µL | microliter(s) |
| m3 | cubic meter(s) | umhos/cm | micromhos/cm |
| meq | milliequivalents | MCL | Maximum Contamination Limit |
| mg | milligram(s) | | |
| < | less than | | |
| > | greater than | | |
| ppm | parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas. | | |
| ppb | parts per billion | | |
| Dry weight basis | Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis. | | |

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

| Qualifier | Definition |
|----------------|---|
| C | Result confirmed by reanalysis |
| D1 | Indicates for dual column analyses that the result is reported from column 1 |
| D2 | Indicates for dual column analyses that the result is reported from column 2 |
| E | Concentration exceeds the calibration range |
| K1 | Initial Calibration Blank is above the QC limit and the sample result is ND |
| K2 | Continuing Calibration Blank is above the QC limit and the sample result is ND |
| K3 | Initial Calibration Verification is above the QC limit and the sample result is ND |
| K4 | Continuing Calibration Verification is above the QC limit and the sample result is ND |
| J (or G, I, X) | Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL) |
| P | Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported. |
| P^ | Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported. |
| U | Analyte was not detected at the value indicated |
| V | Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference. |
| W | The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L. |
| Z | Laboratory Defined - see analysis report |

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron c/o Leidos, Inc.
6310 Allentown Blvd.
Suite 110
Harrisburg PA 17112

Report Date: August 20, 2019 11:32

Project: 204117

Account #: 13271
Group Number: 2056417
SDG: LDC12
PO Number: P010229412
Release Number: HETRICK
State of Sample Origin: WA

Electronic Copy To Leidos
Electronic Copy To EcoChem

Attn: Russ Shropshire
Attn: Christine Ransom

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/> . Historical copies may be requested through your project manager.



SAMPLE INFORMATION

| <u>Client Sample Description</u> | <u>Sample Collection Date/Time</u> | <u>ELLE#</u> |
|----------------------------------|--|--------------|
| SB-10-S-27.5-190724 Grab Soil | 07/24/2019 11:55 | 1114330 |
| SB-10-S-20.0-190724 Grab Soil | 07/24/2019 12:00 | 1114331 |
| SB-10-S-14.0-190724 Grab Soil | 07/24/2019 12:10 | 1114332 |
| SB-10-S-8.0-190724 Grab Soil | 07/24/2019 12:20 | 1114333 |
| QA-T-190724 NA Water | 07/24/2019 11:00 | 1114334 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: SB-10-S-27.5-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114330
ELLE Group #: 2056417
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 11:55
SDG#: LDC12-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|------------------------|----------------|------------|---------------------|----------------------------|-----------------|
| GC/MS Volatiles | | | SW-846 8260C | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.88 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.88 |
| 11995 | Toluene | 108-88-3 | 0.002 | 0.0006 | 0.88 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.88 |

The recovery for the internal standard t-butyl alcohol-d10 is outside the QC acceptance limits high in the associated CCV. No compounds in this analysis are quantitated using that internal standard.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

The following action was taken: The client was contacted and the data reported.

| | | | | | |
|----------------------------------|-------------------------------|---------|-------------------------------------|--------------|-------|
| GC/MS Semivolatiles | | | SW-846 8270D | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | ECY 97-602 NWTPH-Gx | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 33.08 |
| GC Petroleum Hydrocarbons | | | ECY 97-602 NWTPH-Dx modified | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.4 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |

| | | | | | |
|---------------|------|-----------|--------------------------------------|--------------|---|
| Metals | | | SW-846 6010D Rev.4, July 2014 | mg/kg | |
| 06955 | Lead | 7439-92-1 | N.D. | 0.614 | 1 |

| | | | | | |
|---|----------|------|--------------------------------------|----------|---|
| Wet Chemistry | | | SM 2540 G-2011 %Moisture Calc | % | |
| 00111 | Moisture | n.a. | 9.5 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|--------|------------------------|---------|-----------------|

Sample Description: SB-10-S-27.5-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114330
ELLE Group #: 2056417
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 11:55
SDG#: LDC12-01

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | X192191AA | 08/07/2019 18:37 | Linda C Pape | 0.88 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554391 | 07/24/2019 11:55 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554391 | 07/24/2019 11:55 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554391 | 07/24/2019 11:55 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLC026 | 08/09/2019 04:06 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLC026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216C31A | 08/06/2019 10:56 | Jeremy C Giffin | 33.08 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554391 | 07/24/2019 11:55 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192190015A | 08/09/2019 07:04 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192190015A | 08/07/2019 22:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404902 | 08/07/2019 13:34 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404902 | 08/02/2019 06:49 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820006B | 08/06/2019 11:53 | William C Schwebel | 1 |

Sample Description: SB-10-S-20.0-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114331
ELLE Group #: 2056417
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 12:00
SDG#: LDC12-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|------------------------|----------------|------------|---------------------|----------------------------|-----------------|
| GC/MS Volatiles | | | SW-846 8260C | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.82 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.82 |
| 11995 | Toluene | 108-88-3 | 0.001 | 0.0005 | 0.82 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.82 |

The recovery for the internal standard t-butyl alcohol-d10 is outside the QC acceptance limits high in the associated CCV. No compounds in this analysis are quantitated using that internal standard.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

The following action was taken: The client was contacted and the data reported.

| | | | | | |
|----------------------------------|-------------------------------|---------|--------------------------------------|--------------|-------|
| GC/MS Semivolatiles | | | SW-846 8270D | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | ECY 97-602 NWT PH-Gx | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 25.17 |
| GC Petroleum Hydrocarbons | | | ECY 97-602 NWT PH-Dx modified | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |

| | | | | | |
|---------------|------|-----------|--------------------------------------|--------------|---|
| Metals | | | SW-846 6010D Rev.4, July 2014 | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.83 | 0.589 | 1 |

| | | | | | |
|---|----------|------|--------------------------------------|----------|---|
| Wet Chemistry | | | SM 2540 G-2011 %Moisture Calc | % | |
| 00111 | Moisture | n.a. | 7.4 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|--------|------------------------|---------|-----------------|

Sample Description: SB-10-S-20.0-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114331
ELLE Group #: 2056417
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 12:00
SDG#: LDC12-02

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | X192191AA | 08/07/2019 19:01 | Linda C Pape | 0.82 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554391 | 07/24/2019 12:00 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554391 | 07/24/2019 12:00 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554391 | 07/24/2019 12:00 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLC026 | 08/09/2019 05:22 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLC026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216C31A | 08/06/2019 11:39 | Jeremy C Giffin | 25.17 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554391 | 07/24/2019 12:00 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192190015A | 08/09/2019 07:26 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192190015A | 08/07/2019 22:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404902 | 08/07/2019 13:38 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404902 | 08/02/2019 06:49 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820006B | 08/06/2019 11:53 | William C Schwebel | 1 |

Sample Description: SB-10-S-14.0-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114332
ELLE Group #: 2056417
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 12:10
SDG#: LDC12-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|------------------------|----------------|------------|---------------------|----------------------------|-----------------|
| GC/MS Volatiles | | | SW-846 8260C | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.78 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.78 |
| 11995 | Toluene | 108-88-3 | 0.001 | 0.0006 | 0.78 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.78 |

The recovery for the internal standard t-butyl alcohol-d10 is outside the QC acceptance limits high in the associated CCV. No compounds in this analysis are quantitated using that internal standard.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

The following action was taken: The client was contacted and the data reported.

| | | | | | |
|----------------------------------|-------------------------------|---------|-------------------------------------|--------------|------|
| GC/MS Semivolatiles | | | SW-846 8270D | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.008 | 1 |
| GC Volatiles | | | ECY 97-602 NWTPH-Gx | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 25.7 |
| GC Petroleum Hydrocarbons | | | ECY 97-602 NWTPH-Dx modified | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.7 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 12 | 1 |

| | | | | | |
|---------------|------|-----------|--------------------------------------|--------------|---|
| Metals | | | SW-846 6010D Rev.4, July 2014 | mg/kg | |
| 06955 | Lead | 7439-92-1 | 4.05 | 0.518 | 1 |

| | | | | | |
|---|----------|------|--------------------------------------|----------|---|
| Wet Chemistry | | | SM 2540 G-2011 %Moisture Calc | % | |
| 00111 | Moisture | n.a. | 16.7 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|--------|------------------------|---------|-----------------|

Sample Description: SB-10-S-14.0-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114332
ELLE Group #: 2056417
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 12:10
SDG#: LDC12-03

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | X192191AA | 08/07/2019 19:24 | Linda C Pape | 0.78 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554391 | 07/24/2019 12:10 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554391 | 07/24/2019 12:10 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554391 | 07/24/2019 12:10 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLC026 | 08/09/2019 05:48 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLC026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216C31A | 08/06/2019 12:15 | Jeremy C Giffin | 25.7 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554391 | 07/24/2019 12:10 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192190016A | 08/09/2019 11:05 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192190016A | 08/07/2019 22:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404902 | 08/07/2019 14:31 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404902 | 08/02/2019 06:49 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820006B | 08/06/2019 11:53 | William C Schwebel | 1 |

Sample Description: SB-10-S-8.0-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114333
ELLE Group #: 2056417
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 12:20
SDG#: LDC12-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|------------------------|----------------|------------|---------------------|----------------------------|-----------------|
| GC/MS Volatiles | | | SW-846 8260C | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.74 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.74 |
| 11995 | Toluene | 108-88-3 | 0.001 | 0.0006 | 0.74 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.74 |

The recovery for the internal standard t-butyl alcohol-d10 is outside the QC acceptance limits high in the associated CCV. No compounds in this analysis are quantitated using that internal standard.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

The following action was taken: The client was contacted and the data reported.

| | | | | | |
|----------------------------------|-------------------------------|---------|--------------------------------------|--------------|-------|
| GC/MS Semivolatiles | | | SW-846 8270D | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.009 | 1 |
| GC Volatiles | | | ECY 97-602 NWT PH-Gx | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 26.28 |
| GC Petroleum Hydrocarbons | | | ECY 97-602 NWT PH-Dx modified | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 5.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 21 | 13 | 1 |

| | | | | | |
|---------------|------|-----------|--------------------------------------|--------------|---|
| Metals | | | SW-846 6010D Rev.4, July 2014 | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.95 | 0.559 | 1 |

| | | | | | |
|---|----------|------|--------------------------------------|----------|---|
| Wet Chemistry | | | SM 2540 G-2011 %Moisture Calc | % | |
| 00111 | Moisture | n.a. | 23.4 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|---------------|--------|--------|--------|------------------------|---------|-----------------|
|---------|---------------|--------|--------|--------|------------------------|---------|-----------------|

Sample Description: SB-10-S-8.0-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114333
ELLE Group #: 2056417
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 12:20
SDG#: LDC12-04

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | X192191AA | 08/07/2019 19:47 | Linda C Pape | 0.74 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554391 | 07/24/2019 12:20 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554391 | 07/24/2019 12:20 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554391 | 07/24/2019 12:20 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLC026 | 08/09/2019 06:13 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLC026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216C31A | 08/06/2019 12:51 | Jeremy C Giffin | 26.28 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554391 | 07/24/2019 12:20 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192190016A | 08/09/2019 11:27 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192190016A | 08/07/2019 22:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404902 | 08/07/2019 13:41 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404902 | 08/02/2019 06:49 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820006B | 08/06/2019 11:53 | William C Schwebel | 1 |

Sample Description: QA-T-190724 NA Water
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 1114334
ELLE Group #: 2056417
Matrix: Water

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 11:00
SDG#: LDC12-05TB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|---|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| The requirement for no headspace at the time of analysis was not met. The container used for the testing had headspace at the time of analysis. | | | | | |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|----------------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | Z192192AA | 08/07/2019 15:58 | Anita M Dale | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | Z192192AA | 08/07/2019 15:57 | Anita M Dale | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19213B20A | 08/02/2019 22:43 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 19213B20A | 08/02/2019 22:42 | Marie D Beamenderfer | 1 |

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:32

Group Number: 2056417

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

| Analysis Name | Result | MDL |
|-------------------------------|-----------------------------------|--------|
| | mg/kg | mg/kg |
| Batch number: X192191AA | Sample number(s): 1114330-1114333 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | 0.002 | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| | ug/l | ug/l |
| Batch number: Z192192AA | Sample number(s): 1114334 | |
| Benzene | N.D. | 0.2 |
| Ethylbenzene | N.D. | 0.4 |
| Toluene | N.D. | 0.2 |
| Xylene (Total) | N.D. | 1 |
| | mg/kg | mg/kg |
| Batch number: 19217SLC026 | Sample number(s): 1114330-1114333 | |
| Naphthalene | N.D. | 0.007 |
| Batch number: 19216C31A | Sample number(s): 1114330-1114333 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |
| | ug/l | ug/l |
| Batch number: 19213B20A | Sample number(s): 1114334 | |
| NWTPH-Gx water C7-C12 | N.D. | 19 |
| | mg/kg | mg/kg |
| Batch number: 192190015A | Sample number(s): 1114330-1114331 | |
| Diesel Range Organics C12-C24 | N.D. | 4.0 |
| Heavy Range Organics C24-C40 | N.D. | 10 |
| Batch number: 192190016A | Sample number(s): 1114332-1114333 | |
| Diesel Range Organics C12-C24 | N.D. | 4.0 |
| Heavy Range Organics C24-C40 | N.D. | 10 |
| Batch number: 192141404902 | Sample number(s): 1114330-1114333 | |
| Lead | N.D. | 0.600 |

LCS/LCSD

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:32

Group Number: 2056417

LCS/LCSD

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|-------------------------------|-----------------------------------|----------------|------------------------|-----------------|----------|-----------|-----------------|-----|---------|
| Batch number: X192191AA | Sample number(s): 1114330-1114333 | | | | | | | | |
| Benzene | 0.0200 | 0.0234 | 0.0200 | 0.0200 | 117 | 100 | 80-120 | 16 | 30 |
| Ethylbenzene | 0.0200 | 0.0226 | 0.0200 | 0.0189 | 113 | 95 | 78-120 | 18 | 30 |
| Toluene | 0.0200 | 0.0242 | 0.0200 | 0.0205 | 121* | 103 | 80-120 | 16 | 30 |
| Xylene (Total) | 0.0600 | 0.0669 | 0.0600 | 0.0557 | 112 | 93 | 75-120 | 18 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: Z192192AA | Sample number(s): 1114334 | | | | | | | | |
| Benzene | 20 | 20.87 | | | 104 | | 80-120 | | |
| Ethylbenzene | 20 | 20.37 | | | 102 | | 80-120 | | |
| Toluene | 20 | 21.09 | | | 105 | | 80-120 | | |
| Xylene (Total) | 60 | 64.7 | | | 108 | | 80-120 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 19217SLC026 | Sample number(s): 1114330-1114333 | | | | | | | | |
| Naphthalene | 1.67 | 1.42 | | | 85 | | 46-99 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 19216C31A | Sample number(s): 1114330-1114333 | | | | | | | | |
| NWTPH-GX Soil C7-C12 | 11 | 11.49 | 11 | 11.46 | 104 | 104 | 55-145 | 0 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: 19213B20A | Sample number(s): 1114334 | | | | | | | | |
| NWTPH-Gx water C7-C12 | 1100 | 1134.39 | 1100 | 1121.55 | 103 | 102 | 64-131 | 1 | 30 |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 192190015A | Sample number(s): 1114330-1114331 | | | | | | | | |
| Diesel Range Organics C12-C24 | 133.4 | 105.63 | | | 79 | | 61-115 | | |
| Batch number: 192190016A | Sample number(s): 1114332-1114333 | | | | | | | | |
| Diesel Range Organics C12-C24 | 133.4 | 104.44 | | | 78 | | 61-115 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 192141404902 | Sample number(s): 1114330-1114333 | | | | | | | | |
| Lead | 15 | 15.79 | | | 105 | | 90-115 | | |
| | % | % | % | % | | | | | |
| Batch number: 19217820006B | Sample number(s): 1114330-1114333 | | | | | | | | |
| Moisture | 89.5 | 89.43 | | | 100 | | 99-101 | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:32

Group Number: 2056417

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

| Analysis Name | Unspiked Conc mg/kg | MS Spike Added mg/kg | MS Conc mg/kg | MSD Spike Added mg/kg | MSD Conc mg/kg | MS %Rec | MSD %Rec | MS/MSD Limits | RPD | RPD Max |
|--|--|----------------------|---------------|-----------------------|----------------|---------|----------|---------------|-----|---------|
| Batch number: 19217SLC026 Naphthalene | Sample number(s): 1114330-1114333 UNSPK: 1114330 N.D. | 1.65 | 1.23 | 1.66 | 1.21 | 75 | 73 | 46-99 | 2 | 30 |

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | BKG Conc % | DUP Conc % | DUP RPD | DUP RPD Max |
|--|---|------------|---------|-------------|
| Batch number: 19217820006B Moisture | Sample number(s): 1114330-1114333 BKG: 1114332 16.73 | 17.18 | 3 | 5 |

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260 Soil
Batch number: X192191AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114330 | 96 | 106 | 99 | 102 |
| 1114331 | 97 | 105 | 99 | 100 |
| 1114332 | 97 | 106 | 99 | 102 |
| 1114333 | 98 | 108 | 98 | 102 |
| Blank | 95 | 103 | 100 | 101 |
| LCS | 95 | 98 | 102 | 103 |
| LCSD | 96 | 99 | 102 | 104 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260C
Batch number: Z192192AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114334 | 94 | 98 | 98 | 94 |
| Blank | 95 | 101 | 96 | 94 |
| LCS | 94 | 100 | 97 | 96 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:32

Group Number: 2056417

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260C
Batch number: Z192192AA

Limits: 80-120 80-120 80-120 80-120

Analysis Name: Naphthalene 8270D
Batch number: 19217SLC026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 1114330 | 92 | 85 | 101 |
| 1114331 | 84 | 83 | 93 |
| 1114332 | 71 | 67 | 67 |
| 1114333 | 56 | 54 | 54 |
| Blank | 95 | 89 | 103 |
| LCS | 89 | 85 | 92 |
| MS | 79 | 76 | 87 |
| MSD | 78 | 77 | 91 |

Limits: 14-115 22-122 23-141

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 19213B20A

| | Trifluorotoluene-F |
|---------|--------------------|
| 1114334 | 78 |
| Blank | 81 |
| LCS | 100 |
| LCSD | 96 |

Limits: 50-150

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 19216C31A

| | Trifluorotoluene-F |
|---------|--------------------|
| 1114330 | 84 |
| 1114331 | 84 |
| 1114332 | 80 |
| 1114333 | 53 |
| Blank | 95 |
| LCS | 98 |
| LCSD | 99 |

Limits: 50-150

Analysis Name: NWTPH-Dx soil
Batch number: 192190015A

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 11:32

Group Number: 2056417

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Dx soil
Batch number: 192190015A

| | Orthoterphenyl |
|---------|----------------|
| 1114330 | 101 |
| 1114331 | 101 |
| Blank | 102 |
| LCS | 109 |

Limits: 50-150

Analysis Name: NWTPH-Dx soil
Batch number: 192190016A

| | Orthoterphenyl |
|---------|----------------|
| 1114332 | 96 |
| 1114333 | 102 |
| Blank | 103 |
| LCS | 110 |

Limits: 50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

Acct. # 13271

For Eurofins Lancaster Laboratories Environmental use only

Group # 2056417 Sample # 1114330-34

Instructions on reverse side correspond with circled numbers.

| 1 Client Information | | | | 4 Matrix | | | | 5 Analyses Requested | | | | | | | | | | | | 6 Remarks | | | | |
|---|----------------|-------------|-------------------------------------|--|-----------|-------------------------------------|-------------------------------------|---|----------------------------|-------------------------------------|------|--|--------|------------|-------------------------------------|---|-------------------------------------|-------------------------------------|-------------------------------------|---|-------------------------------------|-------------------------------------|------------------------------------|--|
| Facility # <u>204117</u> WBS Site Address <u>2021 6th St, Bremerton, WA</u> Chevron PM <u>Eric Hetrick</u> Lead Consultant Consultant/Office <u>Leidos- Bothell, WA</u> Consultant Project Mgr. <u>Russ Shropshire</u> Consultant Phone # <u>425-482-3323</u> Sampler <u>RAO/CW</u> | | | | <input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> Air | | | | Total Number of Containers BTEX + WPE <input checked="" type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input type="checkbox"/> Naphth 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>6010B</u> <u>Naphthalenes EPA 8270</u> | | | | | | | | | | | | SCR #: _____ <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits | | | | |
| 2 Sample Identification | | 3 Collected | | Grab | Composite | Soil | Water | Oil | Total Number of Containers | BTEX + WPE | 8021 | 8260 | Naphth | Oxygenates | NWTPH-Gx | NWTPH-Dx with Silica Gel Cleanup | NWTPH-Dx without Silica Gel Cleanup | WA VPH | WA EPH | Lead | Diss. | Method | Remarks | |
| Date | Time | | | | | | | | | | | | | | | | | | | | | | | |
| <u>SB-10-27.5-S-072411</u> | <u>7/24/19</u> | <u>1155</u> | <input checked="" type="checkbox"/> | | | | | | <u>7</u> | <input checked="" type="checkbox"/> | | | | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | Invoice to Leidos P010229412 | |
| <u>SB-10-20.0-S-072419</u> | <u>7/24/19</u> | <u>1200</u> | <input checked="" type="checkbox"/> | | | | | | <u>7</u> | <input checked="" type="checkbox"/> | | | | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| <u>SB-10-17.0-S-072419</u> | <u>7/24/19</u> | <u>1210</u> | <input checked="" type="checkbox"/> | | | | | | <u>7</u> | <input checked="" type="checkbox"/> | | | | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| <u>SB-8-SB-10-8.0-S-072411</u> | <u>7/24/19</u> | <u>1220</u> | <input checked="" type="checkbox"/> | | | | | | <u>7</u> | <input checked="" type="checkbox"/> | | | | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| <u>TB-2-072419</u> | <u>7/24/19</u> | <u>1100</u> | <input checked="" type="checkbox"/> | | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | <u>4</u> | <input checked="" type="checkbox"/> | | | | | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | | |
| Turnaround Time Requested (TAT) (please circle) Standard <input checked="" type="radio"/> 5 day 4 day 72 hour 48 hour 24 hour | | | | Relinquished by <u>[Signature]</u> Date <u>7/29/19</u> Time <u>1430</u> | | | | Relinquished by _____ Date _____ Time _____ | | | | Received by _____ Date _____ Time _____ | | | | Received by _____ Date <u>7/30/19</u> Time <u>1015</u> | | | | | | | | |
| Data Package (circle if required) Type I - Full <input checked="" type="radio"/> Type VI (Raw Data) | | | | EDD (circle if required) CVX-RTBU-FL_05 (default) Other: _____ | | | | Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ | | | | Received by _____ Date _____ Time _____ | | | | Temperature Upon Receipt <u>0.9</u> °C Custody Seals Intact? <input checked="" type="radio"/> Yes <input type="radio"/> No | | | | | | | | |



Client: Leidos

Delivery and Receipt Information

Delivery Method: UPS Arrival Timestamp: 07/30/2019 10:15
 Number of Packages: 1 Number of Projects: 1
 State/Province of Origin: WA

Arrival Condition Summary

| | | | |
|--------------------------------------|-----|-------------------------------------|-----|
| Shipping Container Sealed: | Yes | Sample IDs on COC match Containers: | Yes |
| Custody Seal Present: | Yes | Sample Date/Times match COC: | Yes |
| Custody Seal Intact: | Yes | Total Trip Blank Qty: | 4 |
| Samples Chilled: | Yes | Trip Blank Type: | HCI |
| Paperwork Enclosed: | Yes | Air Quality Samples Present: | No |
| Samples Intact: | Yes | | |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |

Unpacked by Simon Nies (25 112) at 13:23 on 07/30/2019

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp)* *All Temperatures in °C.*

| <u>Cooler #</u> | <u>Thermometer ID</u> | <u>Corrected Temp</u> | <u>Therm. Type</u> | <u>Ice Type</u> | <u>Ice Present?</u> | <u>Ice Container</u> | <u>Elevated Temp?</u> |
|-----------------|-----------------------|-----------------------|--------------------|-----------------|---------------------|----------------------|-----------------------|
| 1 | DT42-01 | 0.9 | DT | Wet | Y | Bagged | N |

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

| | | | |
|-------------------------|--|-----------------|-------------------------------|
| BMQL | Below Minimum Quantitation Level | mL | milliliter(s) |
| C | degrees Celsius | MPN | Most Probable Number |
| cfu | colony forming units | N.D. | non-detect |
| CP Units | cobalt-chloroplatinate units | ng | nanogram(s) |
| F | degrees Fahrenheit | NTU | nephelometric turbidity units |
| g | gram(s) | pg/L | picogram/liter |
| IU | International Units | RL | Reporting Limit |
| kg | kilogram(s) | TNTC | Too Numerous To Count |
| L | liter(s) | µg | microgram(s) |
| lb. | pound(s) | µL | microliter(s) |
| m3 | cubic meter(s) | umhos/cm | micromhos/cm |
| meq | milliequivalents | MCL | Maximum Contamination Limit |
| mg | milligram(s) | | |
| < | less than | | |
| > | greater than | | |
| ppm | parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas. | | |
| ppb | parts per billion | | |
| Dry weight basis | Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis. | | |

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

| Qualifier | Definition |
|----------------|---|
| C | Result confirmed by reanalysis |
| D1 | Indicates for dual column analyses that the result is reported from column 1 |
| D2 | Indicates for dual column analyses that the result is reported from column 2 |
| E | Concentration exceeds the calibration range |
| K1 | Initial Calibration Blank is above the QC limit and the sample result is ND |
| K2 | Continuing Calibration Blank is above the QC limit and the sample result is ND |
| K3 | Initial Calibration Verification is above the QC limit and the sample result is ND |
| K4 | Continuing Calibration Verification is above the QC limit and the sample result is ND |
| J (or G, I, X) | Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL) |
| P | Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported. |
| P^ | Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported. |
| U | Analyte was not detected at the value indicated |
| V | Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference. |
| W | The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L. |
| Z | Laboratory Defined - see analysis report |

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron c/o Leidos, Inc.
6310 Allentown Blvd.
Suite 110
Harrisburg PA 17112

Report Date: August 13, 2019 11:22

Project: 204117

Account #: 13271
Group Number: 2056418
SDG: LDC13
PO Number: P010215249
Release Number: HETRICK
State of Sample Origin: WA

Electronic Copy To EcoChem
Electronic Copy To Leidos

Attn: Christine Ransom
Attn: Russ Shropshire

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/> . Historical copies may be requested through your project manager.



SAMPLE INFORMATION

| <u>Client Sample Description</u> | <u>Sample Collection Date/Time</u> | <u>ELLE#</u> |
|----------------------------------|--|--------------|
| SB-17-S-8.0-190723 Grab Soil | 07/23/2019 10:05 | 1114335 |
| SB-17-S-14.5-190723 Grab Soil | 07/23/2019 10:30 | 1114336 |
| SB-17-S-19.5-190723 Grab Soil | 07/23/2019 11:05 | 1114337 |
| QA-T-190723 NA Water | 07/23/2019 08:20 | 1114338 |
| SB-17-S-24.0-190723 Grab Soil | 07/23/2019 11:55 | 1114339 |
| SB-17-S-29.5-190723 Grab Soil | 07/23/2019 11:45 | 1114340 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: SB-17-S-8.0-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114335
ELLE Group #: 2056418
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 10:05
SDG#: LDC13-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.7 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.7 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.7 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0008 | 0.7 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 22.56 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.4 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.18 | 0.508 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 9.8 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A192181AA | 08/06/2019 18:32 | Linda C Pape | 0.7 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554392 | 07/23/2019 10:05 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554392 | 07/23/2019 10:05 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554392 | 07/23/2019 10:05 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLB026 | 08/08/2019 15:22 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLB026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |

Sample Description: SB-17-S-8.0-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114335
ELLE Group #: 2056418
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 10:05
SDG#: LDC13-01

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216A31A | 08/05/2019 01:39 | Jeremy C Giffin | 22.56 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554392 | 07/23/2019 10:05 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192180010A | 08/09/2019 01:38 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192180010A | 08/06/2019 20:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404904 | 08/07/2019 15:33 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404904 | 08/02/2019 07:09 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820001A | 08/06/2019 08:31 | William C Schwebel | 1 |

Sample Description: SB-17-S-14.5-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114336
ELLE Group #: 2056418
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 10:30
SDG#: LDC13-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|--|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.024 | 44.52 |
| 11995 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.019 | 44.52 |
| 11995 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.028 | 44.52 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.019 | 44.52 |
| 11995 | n-Hexane | 110-54-3 | N.D. | 0.024 | 44.52 |
| 11995 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.024 | 44.52 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.028 | 44.52 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.047 | 44.52 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D SIM | mg/kg | mg/kg | |
| 12969 | Benzo(a)anthracene | 56-55-3 | N.D. | 0.0007 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | N.D. | 0.0007 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | N.D. | 0.0007 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | N.D. | 0.0007 | 1 |
| 12969 | Chrysene | 218-01-9 | N.D. | 0.0004 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | N.D. | 0.0007 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | N.D. | 0.0007 | 1 |
| 12969 | Naphthalene | 91-20-3 | 0.003 | 0.001 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 210 | 2.6 | 261 |
| PCBs | | | | | |
| | | SW-846 8082A Feb 2007 Rev 1 | mg/kg | mg/kg | |
| 10885 | PCB-1016 | 12674-11-2 | N.D. D1 | 0.0038 | 1 |
| 10885 | PCB-1221 | 11104-28-2 | N.D. D1 | 0.0049 | 1 |
| 10885 | PCB-1232 | 11141-16-5 | N.D. D1 | 0.0085 | 1 |
| 10885 | PCB-1242 | 53469-21-9 | N.D. D1 | 0.0035 | 1 |
| 10885 | PCB-1248 | 12672-29-6 | N.D. D1 | 0.0035 | 1 |
| 10885 | PCB-1254 | 11097-69-1 | N.D. D1 | 0.0035 | 1 |
| 10885 | PCB-1260 | 11096-82-5 | N.D. D1 | 0.0052 | 1 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 610 | 8.5 | 2 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 25 | 21 | 2 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 6.76 | 2.66 | 5 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 6.0 | 0.50 | 1 |

Sample Description: SB-17-S-14.5-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114336
ELLE Group #: 2056418
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 10:30
SDG#: LDC13-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---------|---|-----------------------|------------|----------------------------|-----------------|
| | Wet Chemistry | SM 2540 G-2011 | % | % | |
| | | %Moisture Calc | | | |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 11995 | BTEX/MTBE/EDB/EDC/n-hexane | SW-846 8260C | 1 | V192181AA | 08/06/2019 14:37 | Stephen C Nolte | 44.52 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554392 | 07/23/2019 10:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554392 | 07/23/2019 10:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 3 | 201921554392 | 07/23/2019 10:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 4 | 201921554392 | 07/23/2019 10:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554392 | 07/23/2019 10:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 2 | 201921554392 | 07/23/2019 10:30 | Client Supplied | 1 |
| 12969 | SIM SVOAs 8270D (microwave) | SW-846 8270D SIM | 1 | 19214SLL026 | 08/04/2019 20:48 | William H Saadeh | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 19214SLL026 | 08/03/2019 09:30 | Joseph Underdonk | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216A31B | 08/05/2019 20:39 | Jeremy C Giffin | 261 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554392 | 07/23/2019 10:30 | Client Supplied | n.a. |
| 10885 | PCBs 8082A/3546 | SW-846 8082A Feb 2007 Rev 1 | 1 | 192170012A | 08/06/2019 20:38 | Covenant Mutuku | 1 |
| 10497 | PCB Microwave Soil Extraction | SW-846 3546 | 1 | 192170012A | 08/06/2019 07:00 | Joshua S Ruth | 1 |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192180010A | 08/09/2019 02:00 | Heather E Williams | 2 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192180010A | 08/06/2019 20:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404904 | 08/09/2019 11:28 | Patrick J Engle | 5 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404904 | 08/02/2019 07:09 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820001A | 08/06/2019 08:31 | William C Schwebel | 1 |

Sample Description: SB-17-S-19.5-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114337
ELLE Group #: 2056418
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 11:05
SDG#: LDC13-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.023 | 42.06 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.018 | 42.06 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.027 | 42.06 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.046 | 42.06 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | 1,400 | 19 | 1872.07 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 3,500 | 43 | 10 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 110 | 10 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 5.06 | 0.470 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 8.1 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | V192181AA | 08/06/2019 20:08 | Stephen C Nolte | 42.06 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554392 | 07/23/2019 11:05 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554392 | 07/23/2019 11:05 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554392 | 07/23/2019 11:05 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLB026 | 08/08/2019 15:47 | Edward C Monborne | 1 |

Sample Description: SB-17-S-19.5-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114337
ELLE Group #: 2056418
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 11:05
SDG#: LDC13-03

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLB026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216A31B | 08/05/2019 23:10 | Jeremy C Giffin | 1872.07 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554392 | 07/23/2019 11:05 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192180010A | 08/09/2019 02:21 | Heather E Williams | 10 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192180010A | 08/06/2019 20:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404904 | 08/07/2019 15:39 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404904 | 08/02/2019 07:09 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820001A | 08/06/2019 08:31 | William C Schwebel | 1 |

Sample Description: QA-T-190723 NA Water
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 1114338
ELLE Group #: 2056418
Matrix: Water

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 08:20
SDG#: LDC13-04TB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|----------------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | Z192182AA | 08/06/2019 10:52 | Anita M Dale | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | Z192182AA | 08/06/2019 10:51 | Anita M Dale | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19213B20A | 08/02/2019 23:10 | Marie D Beamenderfer | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 19213B20A | 08/02/2019 23:09 | Marie D Beamenderfer | 1 |

Sample Description: SB-17-S-24.0-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114339
ELLE Group #: 2056418
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 11:55
SDG#: LDC13-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.025 | 47.27 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.020 | 47.27 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.030 | 47.27 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.050 | 47.27 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | 140 | 2.5 | 254.11 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 2,800 | 41 | 10 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 110 | 100 | 10 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.19 | 0.444 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 4.9 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | V192181AA | 08/06/2019 14:59 | Stephen C Nolte | 47.27 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554392 | 07/23/2019 11:55 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554392 | 07/23/2019 11:55 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554392 | 07/23/2019 11:55 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLB026 | 08/08/2019 16:13 | Edward C Monborne | 1 |

Sample Description: SB-17-S-24.0-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114339
ELLE Group #: 2056418
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 11:55
SDG#: LDC13-05

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLB026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216A31B | 08/06/2019 00:59 | Jeremy C Giffin | 254.11 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554392 | 07/23/2019 11:55 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192180010A | 08/09/2019 02:43 | Heather E Williams | 10 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192180010A | 08/06/2019 20:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404904 | 08/07/2019 15:43 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404904 | 08/02/2019 07:09 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820001A | 08/06/2019 08:31 | William C Schwebel | 1 |

Sample Description: SB-17-S-29.5-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114340
ELLE Group #: 2056418
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 11:45
SDG#: LDC13-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.84 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.84 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.84 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.84 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 0.2 | 0.2 | 21.77 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.1 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 10 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.92 | 0.429 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 4.2 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A192181AA | 08/06/2019 18:54 | Linda C Pape | 0.84 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921554392 | 07/23/2019 11:45 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921554392 | 07/23/2019 11:45 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921554392 | 07/23/2019 11:45 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLB026 | 08/08/2019 16:38 | Edward C Monborne | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLB026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |

Sample Description: SB-17-S-29.5-190723 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1114340
ELLE Group #: 2056418
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 11:45
SDG#: LDC13-06

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|----------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216A31A | 08/05/2019 04:10 | Jeremy C Giffin | 21.77 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921554392 | 07/23/2019 11:45 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192180010A | 08/09/2019 03:05 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192180010A | 08/06/2019 20:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404904 | 08/07/2019 15:52 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404904 | 08/02/2019 07:09 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19217820001A | 08/06/2019 08:31 | William C Schwebel | 1 |

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/13/2019 11:22

Group Number: 2056418

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

| Analysis Name | Result | MDL |
|-----------------------------|---|--------------|
| | mg/kg | mg/kg |
| Batch number: A192181AA | Sample number(s): 1114335,1114340 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| Batch number: V192181AA | Sample number(s): 1114336-1114337,1114339 | |
| Benzene | N.D. | 0.025 |
| 1,2-Dibromoethane | N.D. | 0.020 |
| 1,2-Dichloroethane | N.D. | 0.030 |
| Ethylbenzene | N.D. | 0.020 |
| n-Hexane | N.D. | 0.025 |
| Methyl Tertiary Butyl Ether | N.D. | 0.025 |
| Toluene | N.D. | 0.030 |
| Xylene (Total) | N.D. | 0.050 |
| | ug/l | ug/l |
| Batch number: Z192182AA | Sample number(s): 1114338 | |
| Benzene | N.D. | 0.2 |
| Ethylbenzene | N.D. | 0.4 |
| Toluene | N.D. | 0.2 |
| Xylene (Total) | N.D. | 1 |
| | mg/kg | mg/kg |
| Batch number: 19214SLL026 | Sample number(s): 1114336 | |
| Benzo(a)anthracene | N.D. | 0.0007 |
| Benzo(a)pyrene | N.D. | 0.0007 |
| Benzo(b)fluoranthene | N.D. | 0.0007 |
| Benzo(k)fluoranthene | N.D. | 0.0007 |
| Chrysene | N.D. | 0.0003 |
| Dibenz(a,h)anthracene | N.D. | 0.0007 |
| Indeno(1,2,3-cd)pyrene | N.D. | 0.0007 |
| Naphthalene | N.D. | 0.001 |
| Batch number: 19217SLB026 | Sample number(s): 1114335,1114337,1114339-1114340 | |
| Naphthalene | N.D. | 0.007 |
| Batch number: 19216A31A | Sample number(s): 1114335,1114340 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |
| Batch number: 19216A31B | Sample number(s): 1114336-1114337,1114339 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/13/2019 11:22

Group Number: 2056418

Method Blank (continued)

| Analysis Name | Result | MDL |
|--|---|--------|
| | mg/kg | mg/kg |
| | ug/l | ug/l |
| Batch number: 19213B20A NWTPH-Gx water C7-C12 | N.D. | 19 |
| | mg/kg | mg/kg |
| Batch number: 192170012A | Sample number(s): 1114336 | |
| PCB-1016 | N.D. | 0.0036 |
| PCB-1221 | N.D. | 0.0046 |
| PCB-1232 | N.D. | 0.0080 |
| PCB-1242 | N.D. | 0.0033 |
| PCB-1248 | N.D. | 0.0033 |
| PCB-1254 | N.D. | 0.0033 |
| PCB-1260 | N.D. | 0.0049 |
| Batch number: 192180010A | Sample number(s): 1114335-1114337,1114339-1114340 | |
| Diesel Range Organics C12-C24 | N.D. | 4.0 |
| Heavy Range Organics C24-C40 | N.D. | 10 |
| Batch number: 192141404904 | Sample number(s): 1114335-1114337,1114339-1114340 | |
| Lead | N.D. | 0.600 |

LCS/LCSD

| Analysis Name | LCS Spike Added | LCS Conc | LCSD Spike Added | LCSD Conc | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|-----------------------------|---|----------|------------------|-----------|----------|-----------|-----------------|-----|---------|
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: A192181AA | Sample number(s): 1114335,1114340 | | | | | | | | |
| Benzene | 0.0200 | 0.0204 | 0.0200 | 0.0205 | 102 | 103 | 80-120 | 1 | 30 |
| Ethylbenzene | 0.0200 | 0.0209 | 0.0200 | 0.0208 | 104 | 104 | 78-120 | 0 | 30 |
| Toluene | 0.0200 | 0.0208 | 0.0200 | 0.0210 | 104 | 105 | 80-120 | 1 | 30 |
| Xylene (Total) | 0.0600 | 0.0630 | 0.0600 | 0.0632 | 105 | 105 | 75-120 | 0 | 30 |
| Batch number: V192181AA | Sample number(s): 1114336-1114337,1114339 | | | | | | | | |
| Benzene | 1.00 | 1.00 | 1.00 | 1.05 | 100 | 105 | 80-120 | 5 | 30 |
| 1,2-Dibromoethane | 1.00 | 0.995 | 1.00 | 0.998 | 99 | 100 | 76-120 | 0 | 30 |
| 1,2-Dichloroethane | 1.00 | 1.10 | 1.00 | 1.15 | 110 | 115 | 71-128 | 4 | 30 |
| Ethylbenzene | 1.00 | 0.991 | 1.00 | 1.05 | 99 | 105 | 78-120 | 6 | 30 |
| n-Hexane | 1.00 | 0.867 | 1.00 | 0.918 | 87 | 92 | 50-132 | 6 | 30 |
| Methyl Tertiary Butyl Ether | 1.00 | 0.985 | 1.00 | 1.01 | 99 | 101 | 72-120 | 2 | 30 |
| Toluene | 1.00 | 0.988 | 1.00 | 1.04 | 99 | 104 | 80-120 | 5 | 30 |
| Xylene (Total) | 3.00 | 2.98 | 3.00 | 3.14 | 99 | 105 | 75-120 | 5 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/13/2019 11:22

Group Number: 2056418

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added ug/l | LCS Conc ug/l | LCSD Spike Added ug/l | LCSD Conc ug/l | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|-------------------------------|---|---------------|-----------------------|----------------|----------|-----------|-----------------|-----|---------|
| Batch number: Z192182AA | Sample number(s): 1114338 | | | | | | | | |
| Benzene | 20 | 21.8 | | | 109 | | 80-120 | | |
| Ethylbenzene | 20 | 21.39 | | | 107 | | 80-120 | | |
| Toluene | 20 | 21.93 | | | 110 | | 80-120 | | |
| Xylene (Total) | 60 | 67.82 | | | 113 | | 80-120 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 19214SLL026 | Sample number(s): 1114336 | | | | | | | | |
| Benzo(a)anthracene | 0.0333 | 0.0297 | | | 89 | | 61-116 | | |
| Benzo(a)pyrene | 0.0333 | 0.0340 | | | 102 | | 67-124 | | |
| Benzo(b)fluoranthene | 0.0333 | 0.0366 | | | 110 | | 68-128 | | |
| Benzo(k)fluoranthene | 0.0333 | 0.0317 | | | 95 | | 61-119 | | |
| Chrysene | 0.0333 | 0.0301 | | | 90 | | 63-105 | | |
| Dibenz(a,h)anthracene | 0.0333 | 0.0333 | | | 100 | | 49-143 | | |
| Indeno(1,2,3-cd)pyrene | 0.0333 | 0.0342 | | | 103 | | 53-144 | | |
| Naphthalene | 0.0333 | 0.0308 | | | 92 | | 42-101 | | |
| Batch number: 19217SLB026 | Sample number(s): 1114335,1114337,1114339-1114340 | | | | | | | | |
| Naphthalene | 1.67 | 1.32 | | | 79 | | 46-99 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 19216A31A | Sample number(s): 1114335,1114340 | | | | | | | | |
| NWTPH-GX Soil C7-C12 | 11 | 11.46 | 11 | 11.37 | 104 | 103 | 55-145 | 1 | 30 |
| Batch number: 19216A31B | Sample number(s): 1114336-1114337,1114339 | | | | | | | | |
| NWTPH-GX Soil C7-C12 | 11 | 11.46 | 11 | 11.37 | 104 | 103 | 55-145 | 1 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: 19213B20A | Sample number(s): 1114338 | | | | | | | | |
| NWTPH-Gx water C7-C12 | 1100 | 1134.39 | 1100 | 1121.55 | 103 | 102 | 64-131 | 1 | 30 |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 192170012A | Sample number(s): 1114336 | | | | | | | | |
| PCB-1016 | 0.167 | 0.156 | | | 93 | | 76-121 | | |
| PCB-1260 | 0.168 | 0.169 | | | 101 | | 79-130 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 192180010A | Sample number(s): 1114335-1114337,1114339-1114340 | | | | | | | | |
| Diesel Range Organics C12-C24 | 133.4 | 108.3 | | | 81 | | 61-115 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 192141404904 | Sample number(s): 1114335-1114337,1114339-1114340 | | | | | | | | |
| Lead | 15 | 15.24 | | | 102 | | 90-115 | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/13/2019 11:22

Group Number: 2056418

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added % | LCS Conc % | LCSD Spike Added % | LCSD Conc % | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|----------------------------|---|------------|--------------------|-------------|----------|-----------|-----------------|-----|---------|
| Batch number: 19217820001A | Sample number(s): 1114335-1114337,1114339-1114340 | | | | | | | | |
| Moisture | 89.5 | 89.41 | | | 100 | | 99-101 | | |

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

| Analysis Name | Unspiked Conc mg/kg | MS Spike Added mg/kg | MS Conc mg/kg | MSD Spike Added mg/kg | MSD Conc mg/kg | MS %Rec | MSD %Rec | MS/MSD Limits | RPD | RPD Max |
|---------------------------|--|----------------------|---------------|-----------------------|----------------|---------|----------|---------------|-----|---------|
| Batch number: 19214SLL026 | Sample number(s): 1114336 UNSPK: 1114336 | | | | | | | | | |
| Benzo(a)anthracene | N.D. | 0.0333 | 0.0293 | 0.0331 | 0.0297 | 88 | 90 | 61-116 | 1 | 30 |
| Benzo(a)pyrene | N.D. | 0.0333 | 0.0320 | 0.0331 | 0.0321 | 96 | 97 | 67-124 | 0 | 30 |
| Benzo(b)fluoranthene | N.D. | 0.0333 | 0.0314 | 0.0331 | 0.0321 | 94 | 97 | 68-128 | 2 | 30 |
| Benzo(k)fluoranthene | N.D. | 0.0333 | 0.0290 | 0.0331 | 0.0288 | 87 | 87 | 61-119 | 1 | 30 |
| Chrysene | N.D. | 0.0333 | 0.0293 | 0.0331 | 0.0296 | 88 | 89 | 63-105 | 1 | 30 |
| Dibenz(a,h)anthracene | N.D. | 0.0333 | 0.0327 | 0.0331 | 0.0328 | 98 | 99 | 49-143 | 0 | 30 |
| Indeno(1,2,3-cd)pyrene | N.D. | 0.0333 | 0.0330 | 0.0331 | 0.0332 | 99 | 100 | 53-144 | 0 | 30 |
| Naphthalene | 0.00282 | 0.0333 | 0.0359 | 0.0331 | 0.0341 | 100 | 95 | 42-101 | 5 | 30 |

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260 Soil
Batch number: A192181AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114335 | 102 | 104 | 95 | 91 |
| 1114340 | 102 | 103 | 95 | 90 |
| Blank | 100 | 102 | 96 | 93 |
| LCS | 98 | 99 | 100 | 102 |
| LCSD | 97 | 96 | 101 | 101 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260 Soil
Batch number: V192181AA

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/13/2019 11:22

Group Number: 2056418

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260 Soil
Batch number: V192181AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114336 | 76 | 79 | 75 | 80 |
| 1114337 | 101 | 108 | 101 | 106 |
| 1114339 | 91 | 98 | 93 | 92 |
| Blank | 92 | 96 | 93 | 92 |
| LCS | 99 | 99 | 94 | 95 |
| LCS D | 104 | 103 | 99 | 100 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260C
Batch number: Z192182AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1114338 | 96 | 100 | 98 | 94 |
| Blank | 95 | 99 | 97 | 95 |
| LCS | 95 | 101 | 99 | 97 |
| Limits: | 80-120 | 80-120 | 80-120 | 80-120 |

Analysis Name: SIM SVOAs 8270D (microwave)
Batch number: 19214SLL026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---------|------------------|--------------------|-------------------------|
| 1114336 | 92 | 83 | 83 |
| Blank | 80 | 79 | 73 |
| LCS | 88 | 90 | 83 |
| MS | 91 | 86 | 99 |
| MSD | 91 | 88 | 99 |
| Limits: | 34-135 | 28-124 | 27-107 |

Analysis Name: Naphthalene 8270D
Batch number: 19217SLB026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 1114335 | 85 | 85 | 99 |
| 1114337 | 94 | 73 | 103 |
| 1114339 | 81 | 71 | 91 |
| 1114340 | 96 | 89 | 100 |
| Blank | 83 | 77 | 99 |
| LCS | 86 | 79 | 97 |
| Limits: | 14-115 | 22-122 | 23-141 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/13/2019 11:22

Group Number: 2056418

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 19213B20A

| | Trifluorotoluene-F |
|---------|--------------------|
| 1114338 | 86 |
| Blank | 81 |
| LCS | 100 |
| LCSD | 96 |

Limits: 50-150

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 19216A31A

| | Trifluorotoluene-F |
|---------|--------------------|
| 1114335 | 72 |
| 1114340 | 69 |
| Blank | 94 |
| LCS | 99 |
| LCSD | 98 |

Limits: 50-150

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 19216A31B

| | Trifluorotoluene-F |
|---------|--------------------|
| 1114336 | 97 |
| 1114337 | 121 |
| 1114339 | 84 |
| Blank | 94 |
| LCS | 99 |
| LCSD | 98 |

Limits: 50-150

Analysis Name: PCBs 8082A/3546
Batch number: 192170012A

| | Tetrachloro-m-xylene-D1 | Decachlorobiphenyl-D1 | Tetrachloro-m-xylene-D2 | Decachlorobiphenyl-D2 |
|---------|-------------------------|-----------------------|-------------------------|-----------------------|
| 1114336 | 70 | 87 | 69 | 85 |
| Blank | 104 | 105 | 96 | 114 |
| LCS | 94 | 103 | 89 | 105 |

Limits: 53-140 45-143 53-140 45-143

Analysis Name: NWTPH-Dx soil
Batch number: 192180010A

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/13/2019 11:22

Group Number: 2056418

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Dx soil
Batch number: 192180010A

| | Orthoterphenyl |
|---------|----------------|
| 1114335 | 100 |
| 1114336 | 108 |
| 1114337 | 150 |
| 1114339 | 129 |
| 1114340 | 103 |
| Blank | 104 |
| LCS | 111 |

Limits: 50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

Acct. # 13271

For Eurofins Lancaster Laboratories Environmental use only
 Group # 2056418 Sample # 1114335-40
 Instructions on reverse side correspond with circled numbers.

| 1 Client Information | | | 4 Matrix | | | 5 Analyses Requested | | | | | | | | | | 6 Remarks | | | | | | |
|---|----------------|--|--|--|--|--|-------------------------------------|---|----------------------------|---|--------------------------|--------------------------|--------------------------|---|---|---|--|--------------------------|-------------------------------|--------------------------|--------------------------|--------------------------|
| Facility # <u>204117</u> | | WBS | <input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> Air | <input checked="" type="checkbox"/> Composite <input type="checkbox"/> Grab | Total Number of Containers BTEX <input checked="" type="checkbox"/> MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphthn 8260 full scan Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>COB6</u> Naphthalenes EPA 8270 MTBE, EDB, EPC, N-hexane 8260 CPAAs 8270 SIM PCBs EPA 8082* | SCR #: _____ | | <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits | | | | | | | | | | | | | | |
| Site Address <u>2021 6th St, Bremerton, WA</u> | | | | | | | | | | | | | | | | | | | | | | |
| Chevron PM <u>Eric Hetrick</u> | | Lead Consultant <u>Leidos</u> | | | | | | | | | | | | | | | | | | | | |
| Consultant/Office <u>Leidos-Boothell, WA</u> | | | | | | | | | | | | | | | | | | | | | | |
| Consultant Project Mgr. <u>Russ Shropshire</u> | | | | | | | | | | | | | | | | | | | | | | |
| Consultant Phone # <u>425-482-3323</u> | | | | | | | | | | | | | | | | | | | | | | |
| Sampler <u>RAO/CMW</u> | | | | | | | | | | | | | | | | | | | | | | |
| 2 Sample Identification | | Collected | | Grab | Composite | Soil | Water | Oil | Total Number of Containers | BTEX <input checked="" type="checkbox"/> MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphthn | 8260 full scan | Oxygenates | NWTPH-Gx | NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> | NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> | WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> | Lead Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>COB6</u> | Naphthalenes EPA 8270 | MTBE, EDB, EPC, N-hexane 8260 | CPAAs 8270 SIM | PCBs EPA 8082* | |
| Date | Time | | | | | | | | | | | | | | | | | | | | | |
| <u>SB-17-8.0-S-072319</u> | <u>7/23/19</u> | <u>1005</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>7</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <u>SB-17-14.5-S-072319</u> | <u>7/23/19</u> | <u>1030</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>12</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <u>SB-17-19.5-S-072319</u> | <u>7/23/19</u> | <u>1105</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>7</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <u>TB-1-072319</u> | <u>7/23/19</u> | <u>0820</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>4</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <u>SB-17-24.0-S-072319</u> | <u>7/23/19</u> | <u>1155</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>7</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| <u>SB-17-29.5-S-072319</u> | <u>7/23/19</u> | <u>1145</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>7</u> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 7 Turnaround Time Requested (TAT) (please circle) | | Standard <input checked="" type="radio"/> 5 day 4 day 72 hour 48 hour 24 hour | | Relinquished by <u>[Signature]</u> Date <u>7/29/19</u> Time <u>1334</u> | | Relinquished by _____ Date _____ Time _____ | | Received by _____ Date _____ Time _____ | | Received by _____ Date _____ Time _____ | | | | | | | | | | | | |
| 8 Data Package (circle if required) | | EDD (circle if required) Type I - Full <input checked="" type="radio"/> Type VI (Raw Data) | | CVX-RTBU-FL_05 (default) Other: _____ | | Relinquished by Commercial Carrier: UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ | | Received by <u>[Signature]</u> Date <u>7/30/19</u> Time <u>1015</u> | | Temperature Upon Receipt <u>1.8</u> °C Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | | | | |



Client: Leidos

Delivery and Receipt Information

| | | | |
|---------------------------|------------|---------------------|-------------------------|
| Delivery Method: | <u>UPS</u> | Arrival Timestamp: | <u>07/30/2019 10:15</u> |
| Number of Packages: | <u>1</u> | Number of Projects: | <u>1</u> |
| State/Province of Origin: | <u>WA</u> | | |

Arrival Condition Summary

| | | | |
|--------------------------------------|-----|-------------------------------------|-----|
| Shipping Container Sealed: | Yes | Sample IDs on COC match Containers: | Yes |
| Custody Seal Present: | Yes | Sample Date/Times match COC: | Yes |
| Custody Seal Intact: | Yes | Total Trip Blank Qty: | 4 |
| Samples Chilled: | Yes | Trip Blank Type: | HCI |
| Paperwork Enclosed: | Yes | Air Quality Samples Present: | No |
| Samples Intact: | Yes | | |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |

Unpacked by Simon Nies (25 112) at 12:34 on 07/30/2019

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Elevated Temp? |
|----------|----------------|----------------|-------------|----------|--------------|---------------|----------------|
| 1 | DT42-01 | 1.8 | DT | Wet | Y | Bagged | N |

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

| | | | |
|-------------------------|--|-----------------|-------------------------------|
| BMQL | Below Minimum Quantitation Level | mL | milliliter(s) |
| C | degrees Celsius | MPN | Most Probable Number |
| cfu | colony forming units | N.D. | non-detect |
| CP Units | cobalt-chloroplatinate units | ng | nanogram(s) |
| F | degrees Fahrenheit | NTU | nephelometric turbidity units |
| g | gram(s) | pg/L | picogram/liter |
| IU | International Units | RL | Reporting Limit |
| kg | kilogram(s) | TNTC | Too Numerous To Count |
| L | liter(s) | µg | microgram(s) |
| lb. | pound(s) | µL | microliter(s) |
| m3 | cubic meter(s) | umhos/cm | micromhos/cm |
| meq | milliequivalents | MCL | Maximum Contamination Limit |
| mg | milligram(s) | | |
| < | less than | | |
| > | greater than | | |
| ppm | parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas. | | |
| ppb | parts per billion | | |
| Dry weight basis | Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis. | | |

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

| Qualifier | Definition |
|----------------|---|
| C | Result confirmed by reanalysis |
| D1 | Indicates for dual column analyses that the result is reported from column 1 |
| D2 | Indicates for dual column analyses that the result is reported from column 2 |
| E | Concentration exceeds the calibration range |
| K1 | Initial Calibration Blank is above the QC limit and the sample result is ND |
| K2 | Continuing Calibration Blank is above the QC limit and the sample result is ND |
| K3 | Initial Calibration Verification is above the QC limit and the sample result is ND |
| K4 | Continuing Calibration Verification is above the QC limit and the sample result is ND |
| J (or G, I, X) | Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL) |
| P | Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported. |
| P^ | Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported. |
| U | Analyte was not detected at the value indicated |
| V | Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference. |
| W | The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L. |
| Z | Laboratory Defined - see analysis report |

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods.

Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron c/o Leidos, Inc.
6310 Allentown Blvd.
Suite 110
Harrisburg PA 17112

Report Date: August 20, 2019 13:46

Project: 204117

Account #: 13271
Group Number: 2056642
SDG: LDC14
PO Number: P010229412
Release Number: HETRICK
State of Sample Origin: WA

Electronic Copy To EcoChem
Electronic Copy To Leidos

Attn: Christine Ransom
Attn: Russ Shropshire

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/> . Historical copies may be requested through your project manager.



SAMPLE INFORMATION

| <u>Client Sample Description</u> | <u>Sample Collection Date/Time</u> | <u>ELLE#</u> |
|---------------------------------------|--|--------------|
| USTSOUTH-CONTENTS-W-190725 Grab Water | 07/25/2019 14:30 | 1115414 |
| USTSOUTH-CONTENTS-W-190725 Grab Water | 07/25/2019 14:30 | 1115415 |
| USTSOUTH-CONTENTS-W-190725 Grab Water | 07/25/2019 14:30 | 1115416 |
| SB-12-S-27.5-190724 Grab Soil | 07/24/2019 13:40 | 1115417 |
| QA-T-190725 Water | 07/25/2019 14:15 | 1115418 |
| QA-2-O-190724 Grab Water | 07/24/2019 12:30 | 1115419 |
| QA-1-O-190723 Grab Water | 07/23/2019 08:15 | 1115420 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: USTSOUTH-CONTENTS-W-190725 Grab Water
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 1115414
ELLE Group #: 2056642
Matrix: Water

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 14:30
SDG#: LDC14-01

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|---|-----------------------------|--------------------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 2 | 10 |
| 13130 | 1,2-Dichloroethane | 107-06-2 | N.D. | 3 | 10 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 4 | 10 |
| 13130 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 2 | 10 |
| 13130 | Toluene | 108-88-3 | N.D. | 2 | 10 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 10 | 10 |
| The requirement for no headspace at the time of analysis was not met. The container used for the testing had headspace at the time of analysis. Reporting limits were raised due to sample foaming. | | | | | |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | ug/l | ug/l | |
| 14242 | Naphthalene | 91-20-3 | N.D. | 0.1 | 1 |
| The holding time was not met. | | | | | |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D SIM | ug/l | ug/l | |
| 14244 | Benzo(a)anthracene | 56-55-3 | N.D. | 0.01 | 1 |
| 14244 | Benzo(a)pyrene | 50-32-8 | N.D. | 0.01 | 1 |
| 14244 | Benzo(b)fluoranthene | 205-99-2 | N.D. | 0.01 | 1 |
| 14244 | Benzo(k)fluoranthene | 207-08-9 | N.D. | 0.01 | 1 |
| 14244 | Chrysene | 218-01-9 | N.D. | 0.01 | 1 |
| 14244 | Dibenz(a,h)anthracene | 53-70-3 | N.D. | 0.02 | 1 |
| 14244 | Indeno(1,2,3-cd)pyrene | 193-39-5 | N.D. | 0.01 | 1 |
| The holding time was not met. | | | | | |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | 84 | 19 | 1 |
| PCBs | | | | | |
| | | SW-846 8082A | ug/l | ug/l | |
| 10591 | PCB-1016 | 12674-11-2 | N.D. D1 | 0.10 | 1 |
| 10591 | PCB-1221 | 11104-28-2 | N.D. D1 | 0.10 | 1 |
| 10591 | PCB-1232 | 11141-16-5 | N.D. D1 | 0.20 | 1 |
| 10591 | PCB-1242 | 53469-21-9 | N.D. D1 | 0.10 | 1 |
| 10591 | PCB-1248 | 12672-29-6 | N.D. D1 | 0.10 | 1 |
| 10591 | PCB-1254 | 11097-69-1 | N.D. D1 | 0.10 | 1 |
| 10591 | PCB-1260 | 11096-82-5 | N.D. D1 | 0.15 | 1 |
| Volatiles by Extraction | | | | | |
| | | SW-846 8011 | ug/l | ug/l | |
| 10398 | Ethylene dibromide | 106-93-4 | N.D. D1 | 0.0095 | 1 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | ug/l | ug/l | |
| 12899 | DX DRO C12-C24 | n.a. | 1,400 | 45 | 1 |
| 12899 | DX HRO C24-C40 | n.a. | 160 | 100 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/l | mg/l | |
| 07035 | Arsenic | 7440-38-2 | N.D. | 0.0160 | 1 |

Sample Description: USTSOUTH-CONTENTS-W-190725 Grab Water
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 1115414
ELLE Group #: 2056642
Matrix: Water

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 14:30
SDG#: LDC14-01

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|---------------|---------------|--------------------------------------|-------------|------------------------|-----------------|
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/l | mg/l | |
| 07046 | Barium | 7440-39-3 | 0.0654 | 0.0010 | 1 |
| 07049 | Cadmium | 7440-43-9 | N.D. | 0.0010 | 1 |
| 07051 | Chromium | 7440-47-3 | N.D. | 0.0053 | 1 |
| 07055 | Lead | 7439-92-1 | N.D. | 0.0071 | 1 |
| 07036 | Selenium | 7782-49-2 | N.D. | 0.0210 | 1 |
| 07066 | Silver | 7440-22-4 | N.D. | 0.0050 | 1 |
| | | SW-846 7470A | mg/l | mg/l | |
| 00259 | Mercury | 7439-97-6 | N.D. | 0.000050 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 13130 | BTEX/MTBE/EDC 8260C | SW-846 8260C | 1 | Z192201AA | 08/08/2019 12:04 | Anita M Dale | 10 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | Z192201AA | 08/08/2019 12:03 | Anita M Dale | 10 |
| 14242 | Naphthalene 8270D | SW-846 8270D | 1 | 19214WAC026 | 08/03/2019 14:03 | Linda M Hartenstine | 1 |
| 14244 | SIM SVOAs 8270D MINI | SW-846 8270D SIM | 1 | 19214WAD026 | 08/06/2019 14:53 | Kira N Beck | 1 |
| 00813 | BNA Water Extraction | SW-846 3510C | 1 | 19214WAC026 | 08/02/2019 16:40 | Christine E Gleim | 1 |
| 10466 | BNA Water Extraction SIM | SW-846 3510C | 1 | 19214WAD026 | 08/02/2019 16:40 | Christine E Gleim | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19217D20A | 08/05/2019 19:10 | Jeremy C Giffin | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 19217D20A | 08/05/2019 19:09 | Jeremy C Giffin | 1 |
| 10591 | PCBs in Water 8082A | SW-846 8082A | 1 | 192140010A | 08/03/2019 00:39 | Jessica L Miller | 1 |
| 10398 | EDB by 8011 | SW-846 8011 | 1 | 192140006A | 08/05/2019 21:50 | Rachel Umberger | 1 |
| 11121 | PCB Waters Update IV Ext | SW-846 3510C | 1 | 192140010A | 08/02/2019 16:40 | Christine E Gleim | 1 |
| 07786 | EDB Extraction (8011) | SW-846 8011 | 1 | 192140006A | 08/03/2019 05:30 | Mathias Okpo | 1 |
| 12899 | NWTPH-Dx water | ECY 97-602 NWTPH-Dx modified | 1 | 192180014A | 08/07/2019 17:39 | Nicholas R Rossi | 1 |
| 12907 | Mini-extraction DRO DX (water) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192180014A | 08/07/2019 02:00 | Mathias Okpo | 1 |
| 07035 | Arsenic | SW-846 6010D Rev.4, July 2014 | 1 | 192141404402 | 08/06/2019 19:57 | Elaine F Stoltzfus | 1 |
| 07046 | Barium | SW-846 6010D Rev.4, July 2014 | 1 | 192141404402 | 08/07/2019 09:07 | Lisa J Cooke | 1 |
| 07049 | Cadmium | SW-846 6010D Rev.4, July 2014 | 1 | 192141404402 | 08/06/2019 19:57 | Elaine F Stoltzfus | 1 |
| 07051 | Chromium | SW-846 6010D Rev.4, July 2014 | 1 | 192141404402 | 08/06/2019 19:57 | Elaine F Stoltzfus | 1 |
| 07055 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404402 | 08/06/2019 19:57 | Elaine F Stoltzfus | 1 |

Sample Description: USTSOUTH-CONTENTS-W-190725 Grab Water
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 1115414
ELLE Group #: 2056642
Matrix: Water

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 14:30
SDG#: LDC14-01

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 07036 | Selenium | SW-846 6010D Rev.4, July 2014 | 1 | 192141404402 | 08/06/2019 19:57 | Elaine F Stoltzfus | 1 |
| 07066 | Silver | SW-846 6010D Rev.4, July 2014 | 1 | 192141404402 | 08/06/2019 19:57 | Elaine F Stoltzfus | 1 |
| 00259 | Mercury | SW-846 7470A | 1 | 192170571305 | 08/06/2019 09:22 | Damary Valentin | 1 |
| 14044 | ICP-WW, 3005A (tot rec) - U345 | SW-846 3005A | 1 | 192141404402 | 08/05/2019 18:00 | Barbara A Kane | 1 |
| 05713 | WW SW846 Hg Digest | SW-846 7470A | 1 | 192170571305 | 08/06/2019 05:50 | James L Mertz | 1 |

Sample Description: USTSOUTH-CONTENTS-W-190725 Grab Water
Facility# 204117 TCLP NVE
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: TL 1115415
ELLE Group #: 2056642
Matrix: Water

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 14:30
SDG#: LDC14-02

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|---|-----------------------|---------------------|-------------|------------------------|-----------------|
| GC/MS Semivolatiles | | SW-846 8270D | mg/l | mg/l | |
| 14252 | 1,4-Dichlorobenzene | 106-46-7 | N.D. | 0.003 | 1 |
| 14252 | 2,4-Dinitrotoluene | 121-14-2 | N.D. | 0.005 | 1 |
| 14252 | Hexachlorobenzene | 118-74-1 | N.D. | 0.0005 | 1 |
| 14252 | Hexachlorobutadiene | 87-68-3 | N.D. | 0.003 | 1 |
| 14252 | Hexachloroethane | 67-72-1 | N.D. | 0.005 | 1 |
| 14252 | 2-Methylphenol | 95-48-7 | N.D. | 0.003 | 1 |
| 14252 | 4-Methylphenol | 106-44-5 | N.D. | 0.003 | 1 |
| 3-Methylphenol and 4-methylphenol cannot be resolved under the chromatographic conditions used for sample analysis. The result reported for 4-methylphenol represents the combined total of both compounds. | | | | | |
| 14252 | Nitrobenzene | 98-95-3 | N.D. | 0.003 | 1 |
| 14252 | Pentachlorophenol | 87-86-5 | N.D. | 0.005 | 1 |
| 14252 | Pyridine | 110-86-1 | N.D. | 0.010 | 1 |
| 14252 | 2,4,5-Trichlorophenol | 95-95-4 | N.D. | 0.003 | 1 |
| 14252 | 2,4,6-Trichlorophenol | 88-06-2 | N.D. | 0.003 | 1 |

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary. No further action was taken.

Sample Comments

State of Washington Lab Certification No. C457

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------|--------------|--------|-----------------|------------------------|------------------|-----------------|
| 14252 | TCLP 8270D MINI | SW-846 8270D | 1 | 19219WAW026 | 08/15/2019 13:47 | Kira N Beck | 1 |
| 04731 | TCLP Leachate Extraction | SW-846 3510C | 1 | 19219WAW026 | 08/08/2019 09:00 | Logan M Brosemer | 1 |
| 01339 | Leachate Filtration | SW-846 1311 | 1 | 19218-9169-1339 | 08/06/2019 14:00 | Craig S Pfautz | n.a. |

Sample Description: USTSOUTH-CONTENTS-W-190725 Grab Water
Facility# 204117 TCLP ZHE
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: TL 1115416
ELLE Group #: 2056642
Matrix: Water

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 14:30
SDG#: LDC14-03

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|----------------------|---------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/l | mg/l | |
| 11997 | Benzene | 71-43-2 | N.D. | 0.004 | 20 |
| 11997 | 2-Butanone | 78-93-3 | N.D. | 0.006 | 20 |
| 11997 | Carbon Tetrachloride | 56-23-5 | N.D. | 0.004 | 20 |
| 11997 | Chlorobenzene | 108-90-7 | N.D. | 0.004 | 20 |
| 11997 | Chloroform | 67-66-3 | N.D. | 0.004 | 20 |
| 11997 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.006 | 20 |
| 11997 | 1,1-Dichloroethene | 75-35-4 | N.D. | 0.004 | 20 |
| 11997 | Tetrachloroethene | 127-18-4 | N.D. | 0.004 | 20 |
| 11997 | Trichloroethene | 79-01-6 | N.D. | 0.004 | 20 |
| 11997 | Vinyl Chloride | 75-01-4 | N.D. | 0.004 | 20 |

Sample Comments

State of Washington Lab Certification No. C457

If the analysis is for determination of Hazardous Waste Characteristics, see Table 1 in EPA Code of Federal Regulations 40 CFR 261.24.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|----------------------|--------------|--------|------------------|------------------------|--------------|-----------------|
| 11997 | TCLP VOCs 8260C | SW-846 8260C | 1 | 5192311AA | 08/19/2019 20:34 | Don V Viray | 20 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | 5192311AA | 08/19/2019 20:33 | Don V Viray | 20 |
| 01339 | Leachate Filtration | SW-846 1311 | 1 | 19218-30841-1339 | 08/06/2019 08:00 | Richard Lehr | n.a. |

Sample Description: SB-12-S-27.5-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1115417
ELLE Group #: 2056642
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 13:40
SDG#: LDC14-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|------------------------|---------------------|------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | mg/kg | mg/kg | |
| | SW-846 8260C | | | | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.87 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.87 |
| 11995 | Toluene | 108-88-3 | 0.001 | 0.0006 | 0.87 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.0009 | 0.87 |

The recovery for the internal standard t-butyl alcohol-d10 is outside the QC acceptance limits high in the associated CCV. No compounds in this analysis are quantitated using that internal standard.

The recovery for a target analyte(s) in the Laboratory Control Spike(s) is outside the QC acceptance limits as noted on the QC Summary.

The following action was taken: The client was contacted and the data reported.

| | | | | | |
|----------------------------------|---|-----------|--------------|--------------|-------|
| GC/MS Semivolatiles | | | mg/kg | mg/kg | |
| | SW-846 8270D | | | | |
| 10726 | Naphthalene | 91-20-3 | 3.2 | 0.007 | 1 |
| GC Volatiles | | | mg/kg | mg/kg | |
| | ECY 97-602 NWT PH-Gx | | | | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 21.38 |
| GC Petroleum Hydrocarbons | | | mg/kg | mg/kg | |
| | ECY 97-602 NWT PH-Dx modified | | | | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | mg/kg | mg/kg | |
| | SW-846 6010D Rev.4, July 2014 | | | | |
| 06955 | Lead | 7439-92-1 | 2.58 | 0.644 | 1 |
| Wet Chemistry | | | % | % | |
| | SM 2540 G-2011 %Moisture Calc | | | | |
| 00111 | Moisture | n.a. | 7.8 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|----------------|--------------|--------|-----------|------------------------|--------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | X192191AA | 08/07/2019 20:33 | Linda C Pape | 0.87 |

Sample Description: SB-12-S-27.5-190724 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1115417
ELLE Group #: 2056642
Matrix: Soil

Project Name: 204117

Submission Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 13:40
SDG#: LDC14-04

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 201921754400 | 07/24/2019 13:40 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 201921754400 | 07/24/2019 13:40 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 201921754400 | 07/24/2019 13:40 | Client Supplied | 1 |
| 10726 | Naphthalene 8270D | SW-846 8270D | 1 | 19217SLC026 | 08/09/2019 06:38 | Brandon K Cordova | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 19217SLC026 | 08/06/2019 01:15 | Sherry L Morrow | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19216C31A | 08/06/2019 13:27 | Jeremy C Giffin | 21.38 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 201921754400 | 07/24/2019 13:40 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 192190016A | 08/09/2019 11:49 | Heather E Williams | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 192190016A | 08/07/2019 22:30 | Bradley W VanLeuven | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 192141404907 | 08/08/2019 12:43 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 192141404907 | 08/05/2019 14:25 | JoElla L Rice | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 19214820001B | 08/02/2019 11:50 | William C Schwebel | 1 |

Sample Description: QA-T-190725 Water
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 1115418
ELLE Group #: 2056642
Matrix: Water

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/25/2019 14:15
SDG#: LDC14-05TB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|-----------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | Z192202AA | 08/08/2019 11:52 | Anita M Dale | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | Z192202AA | 08/08/2019 11:51 | Anita M Dale | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19217D20A | 08/05/2019 18:48 | Jeremy C Giffin | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 19217D20A | 08/05/2019 18:47 | Jeremy C Giffin | 1 |

Sample Description: QA-2-O-190724 Grab Water
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 1115419
ELLE Group #: 2056642
Matrix: Water

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/24/2019 12:30
SDG#: LDC14-06

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|---|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| The requirement for no headspace at the time of analysis was not met. The container used for the testing had headspace at the time of analysis. | | | | | |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|-----------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | Z192192AA | 08/07/2019 16:23 | Anita M Dale | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | Z192192AA | 08/07/2019 16:22 | Anita M Dale | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19217D20A | 08/05/2019 19:32 | Jeremy C Giffin | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 19217D20A | 08/05/2019 19:31 | Jeremy C Giffin | 1 |

Sample Description: QA-1-O-190723 Grab Water
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 1115420
ELLE Group #: 2056642
Matrix: Water

Project Name: 204117

Submittal Date/Time: 07/30/2019 10:15
Collection Date/Time: 07/23/2019 08:15
SDG#: LDC14-07

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|-----------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | Z192182AA | 08/06/2019 12:55 | Anita M Dale | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | Z192182AA | 08/06/2019 12:54 | Anita M Dale | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 19217D20A | 08/05/2019 19:54 | Jeremy C Giffin | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 19217D20A | 08/05/2019 19:53 | Jeremy C Giffin | 1 |

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 13:46

Group Number: 2056642

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

| Analysis Name | Result | MDL |
|-----------------------------|---------------------------|-------------|
| Batch number: X192191AA | Sample number(s): 1115417 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | 0.002 | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| | mg/l | mg/l |
| Batch number: 5192311AA | Sample number(s): 1115416 | |
| Benzene | N.D. | 0.0002 |
| 2-Butanone | N.D. | 0.0003 |
| Carbon Tetrachloride | N.D. | 0.0002 |
| Chlorobenzene | N.D. | 0.0002 |
| Chloroform | N.D. | 0.0002 |
| 1,2-Dichloroethane | N.D. | 0.0003 |
| 1,1-Dichloroethene | N.D. | 0.0002 |
| Tetrachloroethene | N.D. | 0.0002 |
| Trichloroethene | N.D. | 0.0002 |
| Vinyl Chloride | N.D. | 0.0002 |
| | ug/l | ug/l |
| Batch number: Z192182AA | Sample number(s): 1115420 | |
| Benzene | N.D. | 0.2 |
| Ethylbenzene | N.D. | 0.4 |
| Toluene | N.D. | 0.2 |
| Xylene (Total) | N.D. | 1 |
| Batch number: Z192192AA | Sample number(s): 1115419 | |
| Benzene | N.D. | 0.2 |
| Ethylbenzene | N.D. | 0.4 |
| Toluene | N.D. | 0.2 |
| Xylene (Total) | N.D. | 1 |
| Batch number: Z192201AA | Sample number(s): 1115414 | |
| Benzene | N.D. | 0.2 |
| 1,2-Dichloroethane | N.D. | 0.3 |
| Ethylbenzene | N.D. | 0.4 |
| Methyl Tertiary Butyl Ether | N.D. | 0.2 |
| Toluene | N.D. | 0.2 |
| Xylene (Total) | N.D. | 1 |
| Batch number: Z192202AA | Sample number(s): 1115418 | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 13:46

Group Number: 2056642

Method Blank (continued)

| Analysis Name | Result | MDL |
|---------------------------|---|--------------|
| | ug/l | ug/l |
| Benzene | N.D. | 0.2 |
| Ethylbenzene | N.D. | 0.4 |
| Toluene | N.D. | 0.2 |
| Xylene (Total) | N.D. | 1 |
| | mg/kg | mg/kg |
| Batch number: 19217SLC026 | Sample number(s): 1115417 | |
| Naphthalene | N.D. | 0.007 |
| | mg/l | mg/l |
| Batch number: 19219WAW026 | Sample number(s): 1115415 | |
| 1,4-Dichlorobenzene | N.D. | 0.003 |
| 2,4-Dinitrotoluene | N.D. | 0.005 |
| Hexachlorobenzene | N.D. | 0.0005 |
| Hexachlorobutadiene | N.D. | 0.003 |
| Hexachloroethane | N.D. | 0.005 |
| 2-Methylphenol | N.D. | 0.003 |
| 4-Methylphenol | N.D. | 0.003 |
| Nitrobenzene | N.D. | 0.003 |
| Pentachlorophenol | N.D. | 0.005 |
| Pyridine | N.D. | 0.010 |
| 2,4,5-Trichlorophenol | N.D. | 0.003 |
| 2,4,6-Trichlorophenol | N.D. | 0.003 |
| | ug/l | ug/l |
| Batch number: 19214WAC026 | Sample number(s): 1115414 | |
| Naphthalene | N.D. | 0.1 |
| Batch number: 19214WAD026 | Sample number(s): 1115414 | |
| Benzo(a)anthracene | N.D. | 0.01 |
| Benzo(a)pyrene | N.D. | 0.01 |
| Benzo(b)fluoranthene | N.D. | 0.01 |
| Benzo(k)fluoranthene | N.D. | 0.01 |
| Chrysene | N.D. | 0.01 |
| Dibenz(a,h)anthracene | N.D. | 0.02 |
| Indeno(1,2,3-cd)pyrene | N.D. | 0.01 |
| | mg/kg | mg/kg |
| Batch number: 19216C31A | Sample number(s): 1115417 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |
| | ug/l | ug/l |
| Batch number: 19217D20A | Sample number(s): 1115414,1115418-1115420 | |
| NWTPH-Gx water C7-C12 | N.D. | 19 |
| Batch number: 192140010A | Sample number(s): 1115414 | |
| PCB-1016 | N.D. | 0.10 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 13:46

Group Number: 2056642

Method Blank (continued)

| Analysis Name | Result | MDL |
|-------------------------------|---------------------------|--------------|
| | ug/l | ug/l |
| PCB-1221 | N.D. | 0.10 |
| PCB-1232 | N.D. | 0.20 |
| PCB-1242 | N.D. | 0.10 |
| PCB-1248 | N.D. | 0.10 |
| PCB-1254 | N.D. | 0.10 |
| PCB-1260 | N.D. | 0.15 |
| Batch number: 192140006A | Sample number(s): 1115414 | |
| Ethylene dibromide | N.D. | 0.010 |
| | mg/kg | mg/kg |
| Batch number: 192190016A | Sample number(s): 1115417 | |
| Diesel Range Organics C12-C24 | N.D. | 4.0 |
| Heavy Range Organics C24-C40 | N.D. | 10 |
| | ug/l | ug/l |
| Batch number: 192180014A | Sample number(s): 1115414 | |
| DX DRO C12-C24 | N.D. | 45 |
| DX HRO C24-C40 | N.D. | 100 |
| | mg/kg | mg/kg |
| Batch number: 192141404907 | Sample number(s): 1115417 | |
| Lead | N.D. | 0.600 |
| | mg/l | mg/l |
| Batch number: 192141404402 | Sample number(s): 1115414 | |
| Arsenic | N.D. | 0.0160 |
| Barium | N.D. | 0.0010 |
| Cadmium | N.D. | 0.0010 |
| Chromium | N.D. | 0.0053 |
| Lead | N.D. | 0.0071 |
| Selenium | N.D. | 0.0210 |
| Silver | N.D. | 0.0050 |
| Batch number: 192170571305 | Sample number(s): 1115414 | |
| Mercury | N.D. | 0.000050 |

LCS/LCSD

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|-------------------------|---------------------------|-------------------|---------------------------|--------------------|----------|-----------|-----------------|-----|---------|
| Batch number: X192191AA | Sample number(s): 1115417 | | | | | | | | |
| Benzene | 0.0200 | 0.0234 | 0.0200 | 0.0200 | 117 | 100 | 80-120 | 16 | 30 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 13:46

Group Number: 2056642

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|-----------------------------|---------------------------|-------------------|---------------------------|--------------------|----------|-----------|-----------------|-----|---------|
| Ethylbenzene | 0.0200 | 0.0226 | 0.0200 | 0.0189 | 113 | 95 | 78-120 | 18 | 30 |
| Toluene | 0.0200 | 0.0242 | 0.0200 | 0.0205 | 121* | 103 | 80-120 | 16 | 30 |
| Xylene (Total) | 0.0600 | 0.0669 | 0.0600 | 0.0557 | 112 | 93 | 75-120 | 18 | 30 |
| | mg/l | mg/l | mg/l | mg/l | | | | | |
| Batch number: 5192311AA | Sample number(s): 1115416 | | | | | | | | |
| Benzene | 0.0200 | 0.0206 | | | 103 | | 80-120 | | |
| 2-Butanone | 0.150 | 0.130 | | | 87 | | 59-135 | | |
| Carbon Tetrachloride | 0.0200 | 0.0209 | | | 105 | | 64-134 | | |
| Chlorobenzene | 0.0200 | 0.0210 | | | 105 | | 80-120 | | |
| Chloroform | 0.0200 | 0.0211 | | | 105 | | 80-120 | | |
| 1,2-Dichloroethane | 0.0200 | 0.0212 | | | 106 | | 73-124 | | |
| 1,1-Dichloroethene | 0.0200 | 0.0217 | | | 109 | | 80-131 | | |
| Tetrachloroethene | 0.0200 | 0.0210 | | | 105 | | 80-120 | | |
| Trichloroethene | 0.0200 | 0.0211 | | | 105 | | 80-120 | | |
| Vinyl Chloride | 0.0200 | 0.0184 | | | 92 | | 56-120 | | |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: Z192182AA | Sample number(s): 1115420 | | | | | | | | |
| Benzene | 20 | 21.8 | | | 109 | | 80-120 | | |
| Ethylbenzene | 20 | 21.39 | | | 107 | | 80-120 | | |
| Toluene | 20 | 21.93 | | | 110 | | 80-120 | | |
| Xylene (Total) | 60 | 67.82 | | | 113 | | 80-120 | | |
| Batch number: Z192192AA | Sample number(s): 1115419 | | | | | | | | |
| Benzene | 20 | 20.87 | | | 104 | | 80-120 | | |
| Ethylbenzene | 20 | 20.37 | | | 102 | | 80-120 | | |
| Toluene | 20 | 21.09 | | | 105 | | 80-120 | | |
| Xylene (Total) | 60 | 64.7 | | | 108 | | 80-120 | | |
| Batch number: Z192201AA | Sample number(s): 1115414 | | | | | | | | |
| Benzene | 20 | 20.85 | | | 104 | | 80-120 | | |
| 1,2-Dichloroethane | 20 | 18.84 | | | 94 | | 73-124 | | |
| Ethylbenzene | 20 | 20.12 | | | 101 | | 80-120 | | |
| Methyl Tertiary Butyl Ether | 20 | 18.1 | | | 90 | | 69-122 | | |
| Toluene | 20 | 20.91 | | | 105 | | 80-120 | | |
| Xylene (Total) | 60 | 63.76 | | | 106 | | 80-120 | | |
| Batch number: Z192202AA | Sample number(s): 1115418 | | | | | | | | |
| Benzene | 20 | 20.91 | | | 105 | | 80-120 | | |
| Ethylbenzene | 20 | 20.29 | | | 101 | | 80-120 | | |
| Toluene | 20 | 20.81 | | | 104 | | 80-120 | | |
| Xylene (Total) | 60 | 64.46 | | | 107 | | 80-120 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 13:46

Group Number: 2056642

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|--|---|----------------|------------------------|-----------------|----------|-----------|-----------------|-----|---------|
| Batch number: 19217SLC026 Naphthalene | Sample number(s): 1115417 1.67 | 1.42 | | | 85 | | 46-99 | | |
| | mg/l | mg/l | mg/l | mg/l | | | | | |
| Batch number: 19219WAW026 | Sample number(s): 1115415 | | | | | | | | |
| 1,4-Dichlorobenzene | 0.250 | 0.106 | 0.250 | 0.186 | 43 | 74 | 34-97 | 54* | 30 |
| 2,4-Dinitrotoluene | 0.250 | 0.137 | 0.250 | 0.235 | 55* | 94 | 64-112 | 53* | 30 |
| Hexachlorobenzene | 0.250 | 0.161 | 0.250 | 0.217 | 64 | 87 | 60-117 | 30 | 30 |
| Hexachlorobutadiene | 0.250 | 0.119 | 0.250 | 0.206 | 48 | 82 | 20-108 | 53* | 30 |
| Hexachloroethane | 0.250 | 0.0944 | 0.250 | 0.169 | 38 | 68 | 23-95 | 57* | 30 |
| 2-Methylphenol | 0.250 | 0.192 | 0.250 | 0.193 | 77 | 77 | 53-107 | 1 | 30 |
| 4-Methylphenol | 0.250 | 0.178 | 0.250 | 0.177 | 71 | 71 | 49-108 | 1 | 30 |
| Nitrobenzene | 0.250 | 0.121 | 0.250 | 0.212 | 49 | 85 | 49-113 | 54* | 30 |
| Pentachlorophenol | 0.250 | 0.195 | 0.250 | 0.207 | 78 | 83 | 54-131 | 6 | 30 |
| Pyridine | 0.250 | 0.0805 | 0.250 | 0.105 | 32 | 42 | 21-61 | 26 | 30 |
| 2,4,5-Trichlorophenol | 0.250 | 0.241 | 0.250 | 0.242 | 97 | 97 | 66-118 | 0 | 30 |
| 2,4,6-Trichlorophenol | 0.250 | 0.244 | 0.250 | 0.241 | 98 | 96 | 69-122 | 1 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: 19214WAC026 Naphthalene | Sample number(s): 1115414 50 | 36.34 | 50 | 34.8 | 73 | 70 | 53-99 | 4 | 30 |
| Batch number: 19214WAD026 | Sample number(s): 1115414 | | | | | | | | |
| Benzo(a)anthracene | 1.00 | 0.733 | 1.00 | 0.759 | 73 | 76 | 69-126 | 4 | 30 |
| Benzo(a)pyrene | 1.00 | 0.862 | 1.00 | 0.870 | 86 | 87 | 78-130 | 1 | 30 |
| Benzo(b)fluoranthene | 1.00 | 0.885 | 1.00 | 0.897 | 88 | 90 | 72-143 | 1 | 30 |
| Benzo(k)fluoranthene | 1.00 | 0.925 | 1.00 | 0.935 | 92 | 93 | 70-134 | 1 | 30 |
| Chrysene | 1.00 | 0.767 | 1.00 | 0.787 | 77 | 79 | 70-114 | 3 | 30 |
| Dibenz(a,h)anthracene | 1.00 | 0.775 | 1.00 | 0.886 | 77 | 89 | 72-138 | 13 | 30 |
| Indeno(1,2,3-cd)pyrene | 1.00 | 0.848 | 1.00 | 0.906 | 85 | 91 | 73-147 | 7 | 30 |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 19216C31A NWTPH-GX Soil C7-C12 | Sample number(s): 1115417 11 | 11.49 | 11 | 11.46 | 104 | 104 | 55-145 | 0 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: 19217D20A NWTPH-Gx water C7-C12 | Sample number(s): 1115414,1115418-1115420 1100 | 1316.68 | 1100 | 1211.34 | 120 | 110 | 64-131 | 8 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: 192140010A PCB-1016 | Sample number(s): 1115414 5.02 | 3.59 | 5.02 | 3.97 | 71 | 79 | 60-117 | 10 | 30 |
| PCB-1260 | 5.05 | 3.83 | 5.05 | 4.03 | 76 | 80 | 57-134 | 5 | 30 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 13:46

Group Number: 2056642

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added ug/l | LCS Conc ug/l | LCSD Spike Added ug/l | LCSD Conc ug/l | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|----------------------|---------------|-----------------------|----------------|----------|-----------|-----------------|-----|---------|
| Batch number: 192140006A Ethylene dibromide | 0.128 | 0.145 | | | 113 | | 60-140 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 192190016A Diesel Range Organics C12-C24 | 133.4 | 104.44 | | | 78 | | 61-115 | | |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: 192180014A DX DRO C12-C24 | 600.29 | 309.55 | 600.29 | 245.67 | 52 | 41 | 11-115 | 23* | 20 |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 192141404907 Lead | 15 | 14.58 | | | 97 | | 90-115 | | |
| | mg/l | mg/l | mg/l | mg/l | | | | | |
| Batch number: 192141404402 Arsenic | 0.150 | 0.160 | | | 107 | | 86-120 | | |
| Barium | 2.00 | 1.93 | | | 96 | | 87-111 | | |
| Cadmium | 0.0500 | 0.0510 | | | 102 | | 90-111 | | |
| Chromium | 0.200 | 0.195 | | | 97 | | 87-110 | | |
| Lead | 0.150 | 0.151 | | | 100 | | 87-113 | | |
| Selenium | 0.150 | 0.142 | | | 95 | | 80-120 | | |
| Silver | 0.0500 | 0.0480 | | | 96 | | 80-120 | | |
| Batch number: 192170571305 Mercury | 0.00100 | 0.000841 | | | 84 | | 80-110 | | |
| | % | % | % | % | | | | | |
| Batch number: 19214820001B Moisture | 89.5 | 89.45 | | | 100 | | 99-101 | | |

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

| Analysis Name | Unspiked Conc mg/kg | MS Spike Added mg/kg | MS Conc mg/kg | MSD Spike Added mg/kg | MSD Conc mg/kg | MS %Rec | MSD %Rec | MS/MSD Limits | RPD | RPD Max |
|---|---------------------|----------------------|---------------|-----------------------|----------------|---------|----------|---------------|-----|---------|
| Batch number: 192190016A Diesel Range Organics C12-C24 | N.D. | 132.47 | 105.31 | UNSPK: 1115417 | | 79 | | 61-115 | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 13:46

Group Number: 2056642

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | BKG Conc mg/kg | DUP Conc mg/kg | DUP RPD | DUP RPD Max |
|-------------------------------|--|-------------------|---------|-------------|
| Batch number: 192190016A | Sample number(s): 1115417 BKG: 1115417 | | | |
| Diesel Range Organics C12-C24 | N.D. | N.D. | 0 (1) | 20 |
| Heavy Range Organics C24-C40 | N.D. | N.D. | 0 (1) | 20 |

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TCLP VOCs 8260C
Batch number: 5192311AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1115416 | 102 | 101 | 100 | 103 |
| Blank | 99 | 99 | 101 | 100 |
| LCS | 99 | 98 | 101 | 100 |
| Limits: | 80-120 | 80-120 | 80-120 | 80-120 |

Analysis Name: BTEX 8260 Soil
Batch number: X192191AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1115417 | 98 | 109 | 99 | 101 |
| Blank | 95 | 103 | 100 | 101 |
| LCS | 95 | 98 | 102 | 103 |
| LCSD | 96 | 99 | 102 | 104 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260C
Batch number: Z192182AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1115420 | 95 | 100 | 97 | 94 |
| Blank | 95 | 99 | 97 | 95 |
| LCS | 95 | 101 | 99 | 97 |
| Limits: | 80-120 | 80-120 | 80-120 | 80-120 |

Analysis Name: BTEX 8260C
Batch number: Z192192AA

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 13:46

Group Number: 2056642

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260C
Batch number: Z192192AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1115419 | 96 | 101 | 97 | 95 |
| Blank | 95 | 101 | 96 | 94 |
| LCS | 94 | 100 | 97 | 96 |
| Limits: | 80-120 | 80-120 | 80-120 | 80-120 |

Analysis Name: BTEX/MTBE/EDC 8260C
Batch number: Z192201AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1115414 | 96 | 101 | 97 | 93 |
| Blank | 95 | 100 | 97 | 93 |
| LCS | 94 | 99 | 97 | 95 |
| Limits: | 80-120 | 80-120 | 80-120 | 80-120 |

Analysis Name: BTEX 8260C
Batch number: Z192202AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1115418 | 97 | 101 | 98 | 93 |
| Blank | 96 | 99 | 98 | 95 |
| LCS | 94 | 100 | 98 | 96 |
| Limits: | 80-120 | 80-120 | 80-120 | 80-120 |

Analysis Name: Naphthalene 8270D
Batch number: 19214WAC026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 1115414 | 57 | 61 | 77 |
| Blank | 63 | 61 | 79 |
| LCS | 68 | 70 | 79 |
| LCSD | 66 | 60 | 75 |
| Limits: | 35-107 | 44-102 | 33-126 |

Analysis Name: SIM SVOAs 8270D MINI
Batch number: 19214WAD026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---------|------------------|--------------------|-------------------------|
| 1115414 | 75 | 76 | 61 |
| Blank | 79 | 87 | 74 |
| LCS | 75 | 88 | 67 |
| LCSD | 76 | 86 | 71 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 13:46

Group Number: 2056642

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: SIM SVOAs 8270D MINI
Batch number: 19214WAD026

Limits: 48-128 18-129 30-114

Analysis Name: Naphthalene 8270D
Batch number: 19217SLC026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 1115417 | 87 | 82 | 98 |
| Blank | 95 | 89 | 103 |
| LCS | 89 | 85 | 92 |
| Limits: | 14-115 | 22-122 | 23-141 |

Analysis Name: TCLP 8270D MINI
Batch number: 19219WAW026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 | Phenol-d6 | 2-Fluorophenol | 2,4,6-Tribromophenol |
|---------|-----------------|------------------|---------------|-----------|----------------|----------------------|
| 1115415 | 75 | 71 | 78 | 33 | 47 | 73 |
| Blank | 85 | 86 | 103 | 36 | 53 | 99 |
| LCS | 45 | 46 | 76 | 38 | 54 | 93 |
| LCSD | 74 | 72 | 88 | 35 | 50 | 90 |
| Limits: | 33-113 | 44-102 | 39-125 | 10-67 | 10-84 | 23-135 |

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 19216C31A

| | Trifluorotoluene-F |
|---------|--------------------|
| 1115417 | 90 |
| Blank | 95 |
| LCS | 98 |
| LCSD | 99 |
| Limits: | 50-150 |

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 19217D20A

| | Trifluorotoluene-F |
|---------|--------------------|
| 1115414 | 93 |
| 1115418 | 118 |
| 1115419 | 108 |
| 1115420 | 106 |
| Blank | 87 |
| LCS | 106 |
| LCSD | 100 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 13:46

Group Number: 2056642

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 19217D20A

Limits: 50-150

Analysis Name: EDB by 8011
Batch number: 192140006A

| | 1,1,2,2-Tetrachloroethane-D1 | 1,1,2,2-Tetrachloroethane-D2 |
|---------|------------------------------|------------------------------|
| 1115414 | 92 | 103 |
| Blank | 116 | 121 |
| LCS | 112 | 113 |

Limits: 46-136 46-136

Analysis Name: PCBs in Water 8082A
Batch number: 192140010A

| | Tetrachloro-m-xylene-D1 | Decachlorobiphenyl-D1 | Tetrachloro-m-xylene-D2 | Decachlorobiphenyl-D2 |
|---------|-------------------------|-----------------------|-------------------------|-----------------------|
| 1115414 | 77 | 84 | 70 | 81 |
| Blank | 68 | 25 | 63 | 25 |
| LCS | 38 | 34 | 35 | 36 |
| LCSD | 48 | 46 | 43 | 47 |

Limits: 33-137 10-148 33-137 10-148

Analysis Name: NWTPH-Dx water
Batch number: 192180014A

| | Orthoterphenyl |
|---------|----------------|
| 1115414 | 81 |
| Blank | 96 |
| LCS | 90 |
| LCSD | 84 |

Limits: 50-150

Analysis Name: NWTPH-Dx soil
Batch number: 192190016A

| | Orthoterphenyl |
|---------|----------------|
| 1115417 | 105 |
| Blank | 103 |
| DUP | 102 |
| LCS | 110 |
| MS | 109 |

Limits: 50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 08/20/2019 13:46

Group Number: 2056642

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

Acct. # 13271 For Eurofins Lancaster Laboratories Environmental use only
 Group # 2056642 Sample # 1115414-20
Instructions on reverse side correspond with circled numbers.

| 1 Client Information | | | | 4 Matrix | | | 5 Analyses Requested | | | | | | | | | | 6 Remarks | | | | | | | | | | | | | | | | | | | | | |
|---|--|----------------------------------|------|--|-----------|-----------|--|-----------------------------|----------------------------|---------------------|------|---|--|----------------|---|------------|----------------------|-----------------|----------------------------------|------------------------------------|-------------------------------------|-------------------------------------|-------|-------|---------------|---------------|------------|---|---------------------------------------|----------------------|-------------|------------------------|----------------------------|--|--|---|---|---|
| Facility # 204117 | | WBS | | <input type="checkbox"/> Sediment <input type="checkbox"/> Potable <input type="checkbox"/> Ground <input type="checkbox"/> NPDES <input type="checkbox"/> Surface <input type="checkbox"/> Water <input type="checkbox"/> Air <input type="checkbox"/> Oil Total Number of Containers | | | BTEX - MTBE <input type="checkbox"/> 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth 8260 full scan <input checked="" type="checkbox"/> CPAHS by 8270 SIM Oxygenates <input checked="" type="checkbox"/> PCBs by 808Z NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> BTEX 8260 NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WAWPH <input type="checkbox"/> WAEPH <input type="checkbox"/> RCRA 8 Metals 6010 and 7470 Lead Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method 6010B Naphthalenes by 8270 EDB by 8011 TCLP Volatiles by 8260 TCLP Semivolatiles by 8270 | | | | | | | | | | SCR #: <u>246268</u> | | | | | | | | | | | | | | | | | | | | | |
| Site Address 2021 6th St, Bremerton, WA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Chevron PM Eric Hetrick | | Lead Consultant Leidos | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Consultant/Office Leidos-Bothell, WA | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Consultant Project Mgr. Russ Shakespeare | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Consultant Phone # 425-482-3323 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sampler RA0/CMW | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 Sample Identification | | 3 Collected | | Grab | | Composite | | | | | | | | | | | | 6 Remarks | | | | | | | | | | | | | | | | | | | | |
| | | Date | Time | Grab | Composite | Soil | Water | Oil | Total Number of Containers | BTEX - MTBE | 8021 | 8260 | <input checked="" type="checkbox"/> Naphth | 8260 full scan | <input checked="" type="checkbox"/> CPAHS by 8270 SIM | Oxygenates | PCBs by 808Z | NWTPH-Gx | NWTPH-Dx with Silica Gel Cleanup | <input type="checkbox"/> BTEX 8260 | NWTPH-Dx without Silica Gel Cleanup | <input checked="" type="checkbox"/> | WAWPH | WAEPH | RCRA 8 Metals | 6010 and 7470 | Lead Total | <input checked="" type="checkbox"/> Diss. | <input type="checkbox"/> Method 6010B | Naphthalenes by 8270 | EDB by 8011 | TCLP Volatiles by 8260 | TCLP Semivolatiles by 8270 | BTEX, MTBE, and EDC by 8260 for water sample UST South-Contents-072519 Submit invoice to Leidos PO10229412 | | | | |
| UST South-Contents-072519 | | 7/25/19 | 1430 | / | / | / | / | / | 19 | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | | X | X | X |
| SB-12-273-S-072419 | | 7/24/19 | 1340 | / | / | / | / | / | 7 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | | | / | / | |
| TB-1-072519 | | 7/25/19 | 1415 | / | / | / | / | / | 4 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | | | / | / | |
| ER-2-072419 | | 7/24/19 | 1230 | / | / | / | / | / | 6 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | | | / | / | |
| ER-1-072319 | | 7/23/19 | 0815 | / | / | / | / | / | 6 | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | / | | | / | / | / |
| None | | | | None | | | | None | | | | | | | | | | None | | | | | | | | | | | | | | | | | | | | |
| 7 Turnaround Time Requested (TAT) (please circle) | | | | Relinquished by <i>[Signature]</i> | | | | Date 7/17/19 | | Time 4:20 | | Received by <i>[Signature]</i> | | | | Date | | Time | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="radio"/> Standard 5 day 4 day 72 hour 48 hour 24 hour | | | | Relinquished by <i>[Signature]</i> | | | | Date 1530 7/29/19 | | Time 1530 | | Received by <i>[Signature]</i> | | | | Date | | Time | | | | | | | | | | | | | | | | | | | | |
| 8 Data Package (circle if required) | | | | Relinquished by Commercial Carrier: | | | | Date | | Time | | Received by | | | | Date | | Time | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="radio"/> Type I - Full Type VI (Raw Data) | | | | <input checked="" type="radio"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other | | | | Date 7/30/19 | | Time 1015 | | Received by <i>[Signature]</i> | | | | Date | | Time | | | | | | | | | | | | | | | | | | | | |
| EDD (circle if required) <input type="checkbox"/> CVX-RTBU-FL_05 (default) Other: | | | | Temperature Upon Receipt <u>0.4</u> °C | | | | Date | | Time | | Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | Date | | Time | | | | | | | | | | | | | | | | | | | | |



Client: Leidos

Delivery and Receipt Information

Delivery Method: UPS Arrival Timestamp: 07/30/2019 10:15
 Number of Packages: 1 Number of Projects: 1
 State/Province of Origin: WA

Arrival Condition Summary

| | | | |
|--------------------------------------|-----|-------------------------------------|-----|
| Shipping Container Sealed: | Yes | Sample IDs on COC match Containers: | Yes |
| Custody Seal Present: | Yes | Sample Date/Times match COC: | Yes |
| Custody Seal Intact: | Yes | Total Trip Blank Qty: | 4 |
| Samples Chilled: | Yes | Trip Blank Type: | HCl |
| Paperwork Enclosed: | Yes | Air Quality Samples Present: | No |
| Samples Intact: | No | | |
| Missing Samples: | No | | |
| Extra Samples: | No | | |
| Discrepancy in Container Qty on COC: | No | | |

Unpacked by Simon Nies (25 112) at 13:35 on 07/30/2019

Samples Chilled Details

Thermometer Types: *DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp)* *All Temperatures in °C.*

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Elevated Temp? |
|----------|----------------|----------------|-------------|----------|--------------|---------------|----------------|
| 1 | DT42-01 | 0.8 | DT | Wet | Y | Bagged | N |

Samples Not Intact Details

| Sample ID on Label | Bottle Code | Bottle Quantity | Container Salvageable? | Comments |
|--------------------|--------------------------------|-----------------|------------------------|-----------------|
| ER-2-072419 | 40 ml glass vial (GC/MS) - HCl | 4 | N | Received broken |

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

| | | | |
|-------------------------|--|-----------------|-------------------------------|
| BMQL | Below Minimum Quantitation Level | mL | milliliter(s) |
| C | degrees Celsius | MPN | Most Probable Number |
| cfu | colony forming units | N.D. | non-detect |
| CP Units | cobalt-chloroplatinate units | ng | nanogram(s) |
| F | degrees Fahrenheit | NTU | nephelometric turbidity units |
| g | gram(s) | pg/L | picogram/liter |
| IU | International Units | RL | Reporting Limit |
| kg | kilogram(s) | TNTC | Too Numerous To Count |
| L | liter(s) | µg | microgram(s) |
| lb. | pound(s) | µL | microliter(s) |
| m3 | cubic meter(s) | umhos/cm | micromhos/cm |
| meq | milliequivalents | MCL | Maximum Contamination Limit |
| mg | milligram(s) | | |
| < | less than | | |
| > | greater than | | |
| ppm | parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas. | | |
| ppb | parts per billion | | |
| Dry weight basis | Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis. | | |

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

| Qualifier | Definition |
|----------------|---|
| C | Result confirmed by reanalysis |
| D1 | Indicates for dual column analyses that the result is reported from column 1 |
| D2 | Indicates for dual column analyses that the result is reported from column 2 |
| E | Concentration exceeds the calibration range |
| K1 | Initial Calibration Blank is above the QC limit and the sample result is ND |
| K2 | Continuing Calibration Blank is above the QC limit and the sample result is ND |
| K3 | Initial Calibration Verification is above the QC limit and the sample result is ND |
| K4 | Continuing Calibration Verification is above the QC limit and the sample result is ND |
| J (or G, I, X) | Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL) |
| P | Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported. |
| P^ | Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported. |
| U | Analyte was not detected at the value indicated |
| V | Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference. |
| W | The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L. |
| Z | Laboratory Defined - see analysis report |

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron c/o Leidos, Inc.
6310 Allentown Blvd.
Suite 110
Harrisburg PA 17112

Report Date: March 12, 2020 17:02

Project: 204117

Account #: 13271
Group Number: 2090355
SDG: LDC15
PO Number: P010229412
Release Number: KIERNAN
State of Sample Origin: WA

Electronic Copy To EcoChem
Electronic Copy To Leidos

Attn: Christine Ransom
Attn: Russ Shropshire

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/> . Historical copies may be requested through your project manager.



SAMPLE INFORMATION

| <u>Client Sample Description</u> | <u>Sample Collection Date/Time</u> | <u>ELLE#</u> |
|----------------------------------|------------------------------------|--------------|
| SB-21-S-8-200224 Grab Soil | 02/24/2020 14:10 | 1271114 |
| SB-22-S-8-200224 Grab Soil | 02/24/2020 15:50 | 1271115 |
| SB-21-S-16-200225 Grab Soil | 02/25/2020 09:00 | 1271116 |
| SB-21-S-18-200225 Grab Soil | 02/25/2020 09:15 | 1271117 |
| SB-21-S-20.5-200225 Grab Soil | 02/25/2020 09:30 | 1271118 |
| SB-23-S-8-200225 Grab Soil | 02/25/2020 09:45 | 1271119 |
| SB-23-S-16-200225 Grab Soil | 02/25/2020 10:30 | 1271120 |
| SB-23-S-23-200225 Grab Soil | 02/25/2020 11:20 | 1271121 |
| SB-23-S-19.5-200225 Grab Soil | 02/25/2020 10:50 | 1271122 |
| SB-24-S-8-200225 Grab Soil | 02/25/2020 12:15 | 1271123 |
| SB-24-S-14-200225 Grab Soil | 02/25/2020 12:45 | 1271124 |
| SB-24-S-17.5-200225 Grab Soil | 02/25/2020 13:10 | 1271125 |
| SB-24-S-22-200225 Grab Soil | 02/25/2020 13:30 | 1271126 |
| SB-24-S-29-200225 Grab Soil | 02/25/2020 14:15 | 1271127 |
| SB-22-S-16-200226 Grab Soil | 02/26/2020 09:00 | 1271128 |
| SB-26-S-8-200226 Grab Soil | 02/26/2020 09:30 | 1271129 |
| SB-26-S-15.5-200226 Grab Soil | 02/26/2020 11:00 | 1271130 |
| SB-26-S-20-200226 Grab Soil | 02/26/2020 11:30 | 1271131 |
| SB-27-S-8-200226 Grab Soil | 02/26/2020 12:00 | 1271132 |
| SB-25-S-8.5-200226 Grab Soil | 02/26/2020 13:20 | 1271133 |
| SB-25-S-12-200226 Grab Soil | 02/26/2020 13:40 | 1271134 |
| SB-25-S-19-200226 Grab Soil | 02/26/2020 14:00 | 1271135 |
| SB-27-S-15.5-200226 Grab Soil | 02/26/2020 15:30 | 1271136 |
| SB-29-S-8-200226 Grab Soil | 02/26/2020 16:00 | 1271137 |
| SB-27-S-22-200226 Grab Soil | 02/26/2020 16:40 | 1271138 |
| SB-27-S-26-200226 Grab Soil | 02/26/2020 16:45 | 1271139 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: SB-21-S-8-200224 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271114
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/24/2020 14:10
SDG#: LDC15-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.7 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.7 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.7 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.7 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 0.8 | 0.5 | 50.36 |
| Reporting limits were raised due to limited sample volume. | | | | | |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.4 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 12 | 11 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.03 | 0.639 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 10.6 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200644AA | 03/04/2020 23:12 | Laura Green | 0.7 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/24/2020 14:10 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/24/2020 14:10 | Client Supplied | 1 |

Sample Description: SB-21-S-8-200224 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271114
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/24/2020 14:10
SDG#: LDC15-01

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/24/2020 14:10 | Client Supplied | 1 |
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLH026 | 03/09/2020 16:44 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLH026 | 03/05/2020 09:30 | Carolin Mejia | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20063E16A | 03/05/2020 13:35 | Jeremy C Giffin | 50.36 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/24/2020 14:10 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640017A | 03/06/2020 00:23 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640017A | 03/05/2020 10:40 | Joshua S Ruth | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404904 | 03/06/2020 10:31 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404904 | 03/05/2020 05:15 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820005A | 03/05/2020 08:49 | Larry E Bevins | 1 |

Sample Description: SB-22-S-8-200224 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271115
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/24/2020 15:50
SDG#: LDC15-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.68 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.68 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.68 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.68 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.005 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.005 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.009 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 27.04 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 5.4 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 13 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 6.02 | 0.639 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 26.6 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200644AA | 03/04/2020 23:34 | Laura Green | 0.68 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/24/2020 15:50 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/24/2020 15:50 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/24/2020 15:50 | Client Supplied | 1 |

Sample Description: SB-22-S-8-200224 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271115
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/24/2020 15:50
SDG#: LDC15-02

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|--------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLB026 | 03/10/2020 01:29 | Sylvester Williams | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLB026 | 03/04/2020 17:30 | Oswaldo R Sanchez | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20063E16A | 03/05/2020 14:13 | Jeremy C Giffin | 27.04 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/24/2020 15:50 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640017A | 03/06/2020 00:45 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640017A | 03/05/2020 10:40 | Joshua S Ruth | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404904 | 03/06/2020 10:35 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404904 | 03/05/2020 05:15 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820005A | 03/05/2020 08:49 | Larry E Bevins | 1 |

Sample Description: SB-21-S-16-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271116
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 09:00
SDG#: LDC15-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|------------------------|-----------------------------|---------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.025 | 44.59 |
| 11995 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.020 | 44.59 |
| 11995 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.030 | 44.59 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.020 | 44.59 |
| 11995 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.025 | 44.59 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.030 | 44.59 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.069 | 44.59 |

Reporting limits were raised due to interference from the sample matrix.

| | | | | | |
|----------------------------|------------------------|-------------------------|--------------|--------------|---|
| GC/MS Semivolatiles | | SW-846 8270D SIM | mg/kg | mg/kg | |
| 12969 | Benzo(a)anthracene | 56-55-3 | N.D. | 0.0007 | 1 |
| 12969 | Benzo(a)pyrene | 50-32-8 | N.D. | 0.0007 | 1 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | N.D. | 0.0007 | 1 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | N.D. | 0.0007 | 1 |
| 12969 | Chrysene | 218-01-9 | 0.0004 | 0.0004 | 1 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | N.D. | 0.0007 | 1 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | N.D. | 0.0007 | 1 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.020 | 0.0007 | 1 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.001 | 1 |
| 12969 | Naphthalene | 91-20-3 | N.D. | 0.001 | 1 |

| | | | | | |
|---------------------|----------------------|----------------------------|--------------|--------------|--------|
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 150 | 4.3 | 420.16 |

| | | | | | |
|----------------------------------|-------------------------------|-------------------------------------|--------------|--------------|---|
| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 29 | 4.4 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |

| | | | | | |
|---------------|------|--------------------------------------|--------------|--------------|---|
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.00 | 0.601 | 1 |

| | | | | | |
|----------------------|----------|--------------------------------------|----------|----------|---|
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 10.1 | 0.50 | 1 |

Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis.

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Sample Description: SB-21-S-16-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271116
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 09:00
SDG#: LDC15-03

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | VOCs- Solid by 8260C/D | SW-846 8260C | 1 | V200681AA | 03/08/2020 17:16 | Stephen C Nolte | 44.59 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/25/2020 09:00 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/25/2020 09:00 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/25/2020 09:00 | Client Supplied | 1 |
| 12969 | SIM SVOAs 8270D (microwave) | SW-846 8270D SIM | 1 | 20064SLA026 | 03/05/2020 11:37 | Joseph M Gambler | 1 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 20064SLA026 | 03/04/2020 17:30 | Osvaldo R Sanchez | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A16A | 03/06/2020 10:40 | Jeremy C Giffin | 420.16 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/25/2020 09:00 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640007A | 03/05/2020 18:58 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640007A | 03/04/2020 16:25 | Scott Crawford | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404902 | 03/05/2020 19:08 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404902 | 03/05/2020 05:05 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820005A | 03/05/2020 08:49 | Larry E Bevins | 1 |

Sample Description: SB-21-S-18-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271117
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 09:15
SDG#: LDC15-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0006 | 1.1 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0005 | 1.1 |
| 11995 | Toluene | 108-88-3 | 0.0008 | 0.0007 | 1.1 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.002 | 1.1 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | 0.005 | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | 3.0 | 0.3 | 24.92 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | N.D. | 2.37 | 5 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 8.8 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200644AA | 03/04/2020 23:57 | Laura Green | 1.1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/25/2020 09:15 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/25/2020 09:15 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/25/2020 09:15 | Client Supplied | 1 |

Sample Description: SB-21-S-18-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271117
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 09:15
SDG#: LDC15-04

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|-------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLB026 | 03/08/2020 01:49 | William H Saadeh | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLB026 | 03/04/2020 17:30 | Osvaldo R Sanchez | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20063E16A | 03/05/2020 14:51 | Jeremy C Giffin | 24.92 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/25/2020 09:15 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640007A | 03/05/2020 19:20 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640007A | 03/04/2020 16:25 | Scott Crawford | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404902 | 03/05/2020 20:22 | Cindy M Gehman | 5 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404902 | 03/05/2020 05:05 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820005A | 03/05/2020 08:49 | Larry E Bevins | 1 |

Sample Description: SB-21-S-20.5-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271118
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 09:30
SDG#: LDC15-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | 0.0004 | 0.0004 | 0.68 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.68 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0004 | 0.68 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.68 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.018 | 5 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.018 | 5 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.036 | 5 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 5.3 | 0.2 | 19.66 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 82 | 4.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 160 | 11 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 6.53 | 2.44 | 5 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 8.3 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200644AA | 03/05/2020 00:19 | Laura Green | 0.68 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/25/2020 09:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/25/2020 09:30 | Client Supplied | 1 |

Sample Description: SB-21-S-20.5-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271118
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 09:30
SDG#: LDC15-05

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|-------------------|-----------------|
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/25/2020 09:30 | Client Supplied | 1 |
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLB026 | 03/08/2020 03:12 | William H Saadeh | 5 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLB026 | 03/04/2020 17:30 | Osvaldo R Sanchez | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20063E16A | 03/05/2020 15:29 | Jeremy C Giffin | 19.66 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/25/2020 09:30 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640017A | 03/06/2020 03:17 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640017A | 03/05/2020 10:40 | Joshua S Ruth | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404902 | 03/05/2020 20:25 | Cindy M Gehman | 5 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404902 | 03/05/2020 05:05 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820005A | 03/05/2020 08:49 | Larry E Bevins | 1 |

Sample Description: SB-23-S-8-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271119
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 09:45
SDG#: LDC15-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.68 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.68 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.68 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.68 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 22.17 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.5 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.59 | 0.633 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 12.3 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200644AA | 03/05/2020 00:42 | Laura Green | 0.68 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/25/2020 09:45 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/25/2020 09:45 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/25/2020 09:45 | Client Supplied | 1 |

Sample Description: SB-23-S-8-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271119
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 09:45
SDG#: LDC15-06

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLH026 | 03/09/2020 17:06 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLH026 | 03/05/2020 09:30 | Carolin Mejia | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20063E16A | 03/05/2020 16:08 | Jeremy C Giffin | 22.17 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/25/2020 09:45 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640007A | 03/05/2020 19:42 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640007A | 03/04/2020 16:25 | Scott Crawford | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404902 | 03/05/2020 19:19 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404902 | 03/05/2020 05:05 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820005A | 03/05/2020 08:49 | Larry E Bevins | 1 |

Sample Description: SB-23-S-16-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271120
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 10:30
SDG#: LDC15-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | 0.0005 | 0.0004 | 0.73 |
| 11995 | Ethylbenzene | 100-41-4 | 0.0007 | 0.0003 | 0.73 |
| 11995 | Toluene | 108-88-3 | 0.002 | 0.0005 | 0.73 |
| 11995 | Xylene (Total) | 1330-20-7 | 0.004 | 0.001 | 0.73 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 6.7 | 0.2 | 19.21 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 110 | 22 | 5 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 1,300 | 54 | 5 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.35 | 0.483 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 8.0 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200644AA | 03/05/2020 01:05 | Laura Green | 0.73 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/25/2020 10:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/25/2020 10:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/25/2020 10:30 | Client Supplied | 1 |

Sample Description: SB-23-S-16-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271120
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 10:30
SDG#: LDC15-07

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLH026 | 03/09/2020 17:29 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLH026 | 03/05/2020 09:30 | Carolin Mejia | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20063E16A | 03/05/2020 16:46 | Jeremy C Giffin | 19.21 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/25/2020 10:30 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640007A | 03/06/2020 20:53 | Bridget Kovacs | 5 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640007A | 03/04/2020 16:25 | Scott Crawford | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404902 | 03/05/2020 19:22 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404902 | 03/05/2020 05:05 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820005A | 03/05/2020 08:49 | Larry E Bevins | 1 |

Sample Description: SB-23-S-23-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271121
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 11:20
SDG#: LDC15-08

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.7 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.7 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.7 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.7 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | 0.009 | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | 0.011 | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 0.4 | 0.2 | 19.67 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 4.6 | 4.4 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 54 | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.98 | 0.513 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 9.4 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200644AA | 03/05/2020 01:27 | Laura Green | 0.7 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/25/2020 11:20 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/25/2020 11:20 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/25/2020 11:20 | Client Supplied | 1 |

Sample Description: SB-23-S-23-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271121
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 11:20
SDG#: LDC15-08

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLH026 | 03/09/2020 17:52 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLH026 | 03/05/2020 09:30 | Carolin Mejia | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20063E16A | 03/05/2020 17:24 | Jeremy C Giffin | 19.67 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/25/2020 11:20 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640007A | 03/05/2020 22:35 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640007A | 03/04/2020 16:25 | Scott Crawford | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404902 | 03/05/2020 19:25 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404902 | 03/05/2020 05:05 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820005A | 03/05/2020 08:49 | Larry E Bevins | 1 |

Sample Description: SB-23-S-19.5-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271122
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 10:50
SDG#: LDC15-09

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.83 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.83 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.83 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.83 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | 0.3 | 0.2 | 23.64 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.4 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.96 | 0.518 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 9.5 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200644AA | 03/05/2020 01:50 | Laura Green | 0.83 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/25/2020 10:50 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/25/2020 10:50 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/25/2020 10:50 | Client Supplied | 1 |

Sample Description: SB-23-S-19.5-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271122
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 10:50
SDG#: LDC15-09

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLH026 | 03/09/2020 18:14 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLH026 | 03/05/2020 09:30 | Carolin Mejia | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20063E16A | 03/05/2020 18:02 | Jeremy C Giffin | 23.64 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/25/2020 10:50 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640007A | 03/05/2020 20:03 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640007A | 03/04/2020 16:25 | Scott Crawford | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404902 | 03/05/2020 19:29 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404902 | 03/05/2020 05:05 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820005A | 03/05/2020 08:49 | Larry E Bevins | 1 |

Sample Description: SB-24-S-8-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271123
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 12:15
SDG#: LDC15-10

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.77 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.77 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.77 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.77 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 23.23 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 2,100 | 22 | 5 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 75 | 56 | 5 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.81 | 2.45 | 5 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 11.2 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200644AA | 03/05/2020 02:12 | Laura Green | 0.77 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/25/2020 12:15 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/25/2020 12:15 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/25/2020 12:15 | Client Supplied | 1 |

Sample Description: SB-24-S-8-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271123
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 12:15
SDG#: LDC15-10

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLH026 | 03/09/2020 18:37 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLH026 | 03/05/2020 09:30 | Carolin Mejia | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20063E16A | 03/05/2020 19:19 | Jeremy C Giffin | 23.23 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/25/2020 12:15 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640007A | 03/06/2020 20:31 | Bridget Kovacs | 5 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640007A | 03/04/2020 16:25 | Scott Crawford | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404902 | 03/05/2020 20:28 | Cindy M Gehman | 5 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404902 | 03/05/2020 05:05 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820005A | 03/05/2020 08:49 | Larry E Bevins | 1 |

Sample Description: SB-24-S-14-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271124
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 12:45
SDG#: LDC15-11

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.66 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.66 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.66 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.66 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.008 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 20.67 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.7 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 12 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.93 | 0.627 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 14.6 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200644AA | 03/05/2020 02:35 | Laura Green | 0.66 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/25/2020 12:45 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/25/2020 12:45 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/25/2020 12:45 | Client Supplied | 1 |

Sample Description: SB-24-S-14-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271124
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 12:45
SDG#: LDC15-11

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLH026 | 03/09/2020 19:00 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLH026 | 03/05/2020 09:30 | Carolin Mejia | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20063E16A | 03/05/2020 19:58 | Jeremy C Giffin | 20.67 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/25/2020 12:45 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640007A | 03/05/2020 21:30 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640007A | 03/04/2020 16:25 | Scott Crawford | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404902 | 03/05/2020 19:35 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404902 | 03/05/2020 05:05 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820005B | 03/05/2020 08:49 | Larry E Bevins | 1 |

Sample Description: SB-24-S-17.5-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271125
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 13:10
SDG#: LDC15-12

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|------------------------|-----------------------------|---------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.023 | 41.54 |
| 11995 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.018 | 41.54 |
| 11995 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.028 | 41.54 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.018 | 41.54 |
| 11995 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.023 | 41.54 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.028 | 41.54 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.065 | 41.54 |

Reporting limits were raised due to interference from the sample matrix.

| | | | | | |
|----------------------------|------------------------|-------------------------|--------------|--------------|----|
| GC/MS Semivolatiles | | SW-846 8270D SIM | mg/kg | mg/kg | |
| 12969 | Benzo(a)anthracene | 56-55-3 | N.D. | 0.007 | 10 |
| 12969 | Benzo(a)pyrene | 50-32-8 | N.D. | 0.007 | 10 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | N.D. | 0.007 | 10 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | N.D. | 0.007 | 10 |
| 12969 | Chrysene | 218-01-9 | 0.019 | 0.004 | 10 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | N.D. | 0.007 | 10 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | N.D. | 0.007 | 10 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.60 | 0.007 | 10 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.011 | 10 |
| 12969 | Naphthalene | 91-20-3 | N.D. | 0.015 | 10 |

Reporting limits were raised due to interference from the sample matrix.

| | | | | | |
|---------------------|----------------------|----------------------------|--------------|--------------|---------|
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 930 | 39 | 3854.02 |

| | | | | | |
|----------------------------------|-------------------------------|-------------------------------------|--------------|--------------|---|
| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 6.0 | 4.4 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |

| | | | | | |
|---------------|------|--------------------------------------|--------------|--------------|---|
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.81 | 0.444 | 1 |

| | | | | | |
|---|----------|--------------------------------------|----------|----------|---|
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 9.9 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Sample Description: SB-24-S-17.5-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271125
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 13:10
SDG#: LDC15-12

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | VOCs- Solid by 8260C/D | SW-846 8260C | 1 | V200681AA | 03/08/2020 15:48 | Stephen C Nolte | 41.54 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/25/2020 13:10 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/25/2020 13:10 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/25/2020 13:10 | Client Supplied | 1 |
| 12969 | SIM SVOAs 8270D (microwave) | SW-846 8270D SIM | 1 | 20064SLA026 | 03/05/2020 16:31 | Joseph M Gambler | 10 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 20064SLA026 | 03/04/2020 17:30 | Osvaldo R Sanchez | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A16A | 03/06/2020 11:18 | Jeremy C Giffin | 3854.02 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/25/2020 13:10 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640007A | 03/05/2020 21:51 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640007A | 03/04/2020 16:25 | Scott Crawford | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404902 | 03/05/2020 19:39 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404902 | 03/05/2020 05:05 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820005B | 03/05/2020 08:49 | Larry E Bevins | 1 |

Sample Description: SB-24-S-22-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271126
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 13:30
SDG#: LDC15-13

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.75 |
| 11995 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.0003 | 0.75 |
| 11995 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.0005 | 0.75 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.75 |
| 11995 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.0004 | 0.75 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.75 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.75 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D SIM | mg/kg | mg/kg | |
| 12969 | Benzo(a)anthracene | 56-55-3 | N.D. | 0.004 | 5 |
| 12969 | Benzo(a)pyrene | 50-32-8 | N.D. | 0.004 | 5 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | N.D. | 0.004 | 5 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | N.D. | 0.004 | 5 |
| 12969 | Chrysene | 218-01-9 | 0.005 | 0.002 | 5 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | N.D. | 0.004 | 5 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | N.D. | 0.004 | 5 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.011 | 0.004 | 5 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.01 | 0.006 | 5 |
| 12969 | Naphthalene | 91-20-3 | N.D. | 0.007 | 5 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 25.46 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 430 | 4.4 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 96 | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 3.00 | 0.500 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 10.4 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Sample Description: SB-24-S-22-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271126
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 13:30
SDG#: LDC15-13

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|-------------------|-----------------|
| 11995 | VOCs- Solid by 8260C/D | SW-846 8260C | 1 | A200661AA | 03/06/2020 11:01 | Jennifer K Howe | 0.75 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/25/2020 13:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/25/2020 13:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/25/2020 13:30 | Client Supplied | 1 |
| 12969 | SIM SVOAs 8270D (microwave) | SW-846 8270D SIM | 1 | 20064SLA026 | 03/05/2020 12:41 | Joseph M Gambler | 5 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 20064SLA026 | 03/04/2020 17:30 | Osvaldo R Sanchez | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20063E16A | 03/05/2020 20:36 | Jeremy C Giffin | 25.46 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/25/2020 13:30 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640007A | 03/05/2020 22:13 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640007A | 03/04/2020 16:25 | Scott Crawford | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404902 | 03/05/2020 19:48 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404902 | 03/05/2020 05:05 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820005B | 03/05/2020 08:49 | Larry E Bevins | 1 |

Sample Description: SB-24-S-29-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271127
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 14:15
SDG#: LDC15-14

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0006 | 1.06 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 1.06 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0007 | 1.06 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.002 | 1.06 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 25.89 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 10 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.79 | 0.492 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 5.5 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200644AA | 03/05/2020 02:57 | Laura Green | 1.06 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/25/2020 14:15 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/25/2020 14:15 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/25/2020 14:15 | Client Supplied | 1 |

Sample Description: SB-24-S-29-200225 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271127
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/25/2020 14:15
SDG#: LDC15-14

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLH026 | 03/09/2020 19:22 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLH026 | 03/05/2020 09:30 | Carolin Mejia | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20063E16A | 03/05/2020 21:14 | Jeremy C Giffin | 25.89 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/25/2020 14:15 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640008A | 03/06/2020 03:38 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640008A | 03/04/2020 16:25 | Scott Crawford | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404902 | 03/05/2020 19:51 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404902 | 03/05/2020 05:05 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820005B | 03/05/2020 08:49 | Larry E Bevins | 1 |

Sample Description: SB-22-S-16-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271128
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 09:00
SDG#: LDC15-15

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.68 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.68 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.68 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.68 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | 0.018 | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | 0.029 | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | 0.027 | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 2.3 | 224.47 |
| Reporting limits were raised due to sample foaming. | | | | | |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 180 | 4.4 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 280 | 11 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 4.11 | 0.646 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 10.7 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200644AA | 03/05/2020 03:20 | Laura Green | 0.68 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/26/2020 09:00 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/26/2020 09:00 | Client Supplied | 1 |

Sample Description: SB-22-S-16-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271128
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 09:00
SDG#: LDC15-15

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/26/2020 09:00 | Client Supplied | 1 |
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLH026 | 03/09/2020 19:45 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLH026 | 03/05/2020 09:30 | Carolin Mejia | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20063E16A | 03/05/2020 21:53 | Jeremy C Giffin | 224.47 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/26/2020 09:00 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640008A | 03/06/2020 05:48 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640008A | 03/04/2020 16:25 | Scott Crawford | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404902 | 03/05/2020 19:54 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404902 | 03/05/2020 05:05 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820005B | 03/05/2020 08:49 | Larry E Bevins | 1 |

Sample Description: SB-26-S-8-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271129
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 09:30
SDG#: LDC15-16

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.74 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.74 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.74 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.74 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.008 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 23.85 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.6 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.23 | 0.609 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 12.8 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200644AA | 03/05/2020 03:43 | Laura Green | 0.74 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/26/2020 09:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/26/2020 09:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/26/2020 09:30 | Client Supplied | 1 |

Sample Description: SB-26-S-8-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271129
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 09:30
SDG#: LDC15-16

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLH026 | 03/09/2020 20:08 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLH026 | 03/05/2020 09:30 | Carolin Mejia | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20063E16A | 03/05/2020 22:31 | Jeremy C Giffin | 23.85 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/26/2020 09:30 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640008A | 03/06/2020 04:00 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640008A | 03/04/2020 16:25 | Scott Crawford | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404901 | 03/04/2020 18:40 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404901 | 03/04/2020 05:55 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820005B | 03/05/2020 08:49 | Larry E Bevins | 1 |

Sample Description: SB-26-S-15.5-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271130
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 11:00
SDG#: LDC15-17

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.76 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.76 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.76 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.76 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | 0.012 | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | 0.020 | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 25.24 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.74 | 0.548 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 8.0 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200644AA | 03/05/2020 04:05 | Laura Green | 0.76 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/26/2020 11:00 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/26/2020 11:00 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/26/2020 11:00 | Client Supplied | 1 |

Sample Description: SB-26-S-15.5-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271130
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 11:00
SDG#: LDC15-17

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLH026 | 03/09/2020 20:30 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLH026 | 03/05/2020 09:30 | Carolin Mejia | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20063E16A | 03/05/2020 23:10 | Jeremy C Giffin | 25.24 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/26/2020 11:00 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640008A | 03/06/2020 04:22 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640008A | 03/04/2020 16:25 | Scott Crawford | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404901 | 03/04/2020 18:43 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404901 | 03/04/2020 05:55 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820005B | 03/05/2020 08:49 | Larry E Bevins | 1 |

Sample Description: SB-26-S-20-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271131
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 11:30
SDG#: LDC15-18

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | 0.0005 | 0.0005 | 0.96 |
| 11995 | Ethylbenzene | 100-41-4 | 0.001 | 0.0004 | 0.96 |
| 11995 | Toluene | 108-88-3 | 0.003 | 0.0006 | 0.96 |
| 11995 | Xylene (Total) | 1330-20-7 | 0.010 | 0.001 | 0.96 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | 0.24 | 0.018 | 5 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | 0.31 | 0.018 | 5 |
| 10726 | Naphthalene | 91-20-3 | 0.082 | 0.035 | 5 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | 34 | 0.9 | 94.58 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 340 | 21 | 5 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 760 | 53 | 5 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 14.2 | 0.626 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 6.9 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200651AA | 03/05/2020 19:20 | Stephen C Nolte | 0.96 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/26/2020 11:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/26/2020 11:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/26/2020 11:30 | Client Supplied | 1 |

Sample Description: SB-26-S-20-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271131
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 11:30
SDG#: LDC15-18

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLH026 | 03/10/2020 18:12 | Linda M Hartenstine | 5 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLH026 | 03/05/2020 09:30 | Carolin Mejia | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20063E16A | 03/06/2020 01:05 | Jeremy C Giffin | 94.58 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/26/2020 11:30 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640017A | 03/10/2020 06:37 | Bridget Kovacs | 5 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640017A | 03/05/2020 10:40 | Joshua S Ruth | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404901 | 03/04/2020 18:53 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404901 | 03/04/2020 05:55 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820005B | 03/05/2020 08:49 | Larry E Bevins | 1 |

Sample Description: SB-27-S-8-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271132
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 12:00
SDG#: LDC15-19

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.78 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.78 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.78 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.78 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.009 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 27.34 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 5.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 13 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 6.36 | 0.684 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 23.0 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200661AA | 03/06/2020 11:24 | Jennifer K Howe | 0.78 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456359 | 02/26/2020 12:00 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456359 | 02/26/2020 12:00 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456359 | 02/26/2020 12:00 | Client Supplied | 1 |

Sample Description: SB-27-S-8-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271132
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 12:00
SDG#: LDC15-19

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLH026 | 03/06/2020 18:43 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLH026 | 03/05/2020 09:30 | Carolin Mejia | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20063E16A | 03/05/2020 23:48 | Jeremy C Giffin | 27.34 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456359 | 02/26/2020 12:00 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640017A | 03/06/2020 01:50 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640017A | 03/05/2020 10:40 | Joshua S Ruth | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404902 | 03/05/2020 19:58 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404902 | 03/05/2020 05:05 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820005B | 03/05/2020 08:49 | Larry E Bevins | 1 |

Sample Description: SB-25-S-8.5-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271133
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 13:20
SDG#: LDC15-20

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.72 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.72 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.72 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.72 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.009 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 25.43 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 10 | 5.1 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 43 | 13 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 18.5 | 0.684 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 22.4 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200661AA | 03/06/2020 11:46 | Jennifer K Howe | 0.72 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456359 | 02/26/2020 13:20 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456359 | 02/26/2020 13:20 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456359 | 02/26/2020 13:20 | Client Supplied | 1 |

Sample Description: SB-25-S-8.5-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271133
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 13:20
SDG#: LDC15-20

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLH026 | 03/10/2020 15:50 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLH026 | 03/05/2020 09:30 | Carolin Mejia | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20063E16A | 03/06/2020 00:27 | Jeremy C Giffin | 25.43 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456359 | 02/26/2020 13:20 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640017A | 03/06/2020 02:11 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640017A | 03/05/2020 10:40 | Joshua S Ruth | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404902 | 03/05/2020 20:01 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404902 | 03/05/2020 05:05 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820005B | 03/05/2020 08:49 | Larry E Bevins | 1 |

Sample Description: SB-25-S-12-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271134
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 13:40
SDG#: LDC15-21

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.64 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.64 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0004 | 0.64 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.64 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 0.3 | 0.2 | 22.6 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.5 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 0.836 | 0.662 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 10.3 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200661AA | 03/06/2020 12:09 | Jennifer K Howe | 0.64 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456359 | 02/26/2020 13:40 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456359 | 02/26/2020 13:40 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456359 | 02/26/2020 13:40 | Client Supplied | 1 |

Sample Description: SB-25-S-12-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271134
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 13:40
SDG#: LDC15-21

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLH026 | 03/10/2020 16:14 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLH026 | 03/05/2020 09:30 | Carolin Mejia | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A16A | 03/06/2020 08:07 | Jeremy C Giffin | 22.6 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456359 | 02/26/2020 13:40 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640017A | 03/06/2020 02:33 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640017A | 03/05/2020 10:40 | Joshua S Ruth | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404901 | 03/04/2020 18:21 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404901 | 03/04/2020 05:55 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820002B | 03/04/2020 12:58 | Stephanie A Sanchez | 1 |

Sample Description: SB-25-S-19-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271135
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 14:00
SDG#: LDC15-22

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.79 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.79 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.79 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.79 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 20.66 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.34 | 0.644 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 6.9 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200651AA | 03/05/2020 12:33 | Stephen C Nolte | 0.79 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/26/2020 14:00 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/26/2020 14:00 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/26/2020 14:00 | Client Supplied | 1 |

Sample Description: SB-25-S-19-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271135
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 14:00
SDG#: LDC15-22

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLH026 | 03/10/2020 16:38 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLH026 | 03/05/2020 09:30 | Carolin Mejia | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A16A | 03/06/2020 08:46 | Jeremy C Giffin | 20.66 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/26/2020 14:00 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640017A | 03/06/2020 02:55 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640017A | 03/05/2020 10:40 | Joshua S Ruth | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404901 | 03/04/2020 18:57 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404901 | 03/04/2020 05:55 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820002B | 03/04/2020 12:58 | Stephanie A Sanchez | 1 |

Sample Description: SB-27-S-15.5-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271136
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 15:30
SDG#: LDC15-23

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|------------------------|-----------------------------|---------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.034 | 56.72 |
| 11995 | 1,2-Dibromoethane | 106-93-4 | N.D. | 0.027 | 56.72 |
| 11995 | 1,2-Dichloroethane | 107-06-2 | N.D. | 0.040 | 56.72 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.027 | 56.72 |
| 11995 | Methyl Tertiary Butyl Ether | 1634-04-4 | N.D. | 0.034 | 56.72 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.040 | 56.72 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.094 | 56.72 |

Reporting limits were raised due to interference from the sample matrix.

| | | | | | |
|----------------------------|------------------------|-------------------------|--------------|--------------|----|
| GC/MS Semivolatiles | | SW-846 8270D SIM | mg/kg | mg/kg | |
| 12969 | Benzo(a)anthracene | 56-55-3 | N.D. | 0.016 | 20 |
| 12969 | Benzo(a)pyrene | 50-32-8 | 0.024 | 0.016 | 20 |
| 12969 | Benzo(b)fluoranthene | 205-99-2 | N.D. | 0.016 | 20 |
| 12969 | Benzo(k)fluoranthene | 207-08-9 | N.D. | 0.016 | 20 |
| 12969 | Chrysene | 218-01-9 | 0.047 | 0.008 | 20 |
| 12969 | Dibenz(a,h)anthracene | 53-70-3 | N.D. | 0.016 | 20 |
| 12969 | Indeno(1,2,3-cd)pyrene | 193-39-5 | N.D. | 0.016 | 20 |
| 12969 | 1-Methylnaphthalene | 90-12-0 | 0.25 | 0.016 | 20 |
| 12969 | 2-Methylnaphthalene | 91-57-6 | 0.32 | 0.023 | 20 |
| 12969 | Naphthalene | 91-20-3 | N.D. | 0.031 | 20 |

Reporting limits were raised due to interference from the sample matrix.

| | | | | | |
|---------------------|----------------------|----------------------------|--------------|--------------|--------|
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 96 | 2.1 | 189.43 |

| | | | | | |
|----------------------------------|-------------------------------|-------------------------------------|--------------|--------------|----|
| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 590 | 47 | 10 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 2,000 | 120 | 10 |

| | | | | | |
|---------------|------|--------------------------------------|--------------|--------------|---|
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 19.7 | 0.690 | 1 |

| | | | | | |
|---|----------|--------------------------------------|----------|----------|---|
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 15.6 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Sample Description: SB-27-S-15.5-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271136
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 15:30
SDG#: LDC15-23

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 11995 | VOCs- Solid by 8260C/D | SW-846 8260C | 1 | V200681AA | 03/08/2020 16:10 | Stephen C Nolte | 56.72 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456359 | 02/26/2020 15:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456359 | 02/26/2020 15:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456359 | 02/26/2020 15:30 | Client Supplied | 1 |
| 12969 | SIM SVOAs 8270D (microwave) | SW-846 8270D SIM | 1 | 20064SLA026 | 03/05/2020 13:12 | Joseph M Gambler | 20 |
| 10811 | BNA Soil Microwave SIM | SW-846 3546 | 1 | 20064SLA026 | 03/04/2020 17:30 | Osvaldo R Sanchez | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20070A16A | 03/10/2020 13:48 | Jeremy C Giffin | 189.43 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456359 | 02/26/2020 15:30 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640017A | 03/06/2020 21:36 | Bridget Kovacs | 10 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640017A | 03/05/2020 10:40 | Joshua S Ruth | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404901 | 03/04/2020 19:00 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404901 | 03/04/2020 05:55 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820002B | 03/04/2020 12:58 | Stephanie A Sanchez | 1 |

Sample Description: SB-29-S-8-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271137
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 16:00
SDG#: LDC15-24

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.72 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.72 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.72 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.72 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.008 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 24.82 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.8 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 12 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 3.83 | 0.634 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 16.2 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200661AA | 03/06/2020 12:32 | Jennifer K Howe | 0.72 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456359 | 02/26/2020 16:00 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456359 | 02/26/2020 16:00 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456359 | 02/26/2020 16:00 | Client Supplied | 1 |

Sample Description: SB-29-S-8-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271137
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 16:00
SDG#: LDC15-24

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLH026 | 03/10/2020 17:01 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLH026 | 03/05/2020 09:30 | Carolin Mejia | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A16A | 03/06/2020 09:24 | Jeremy C Giffin | 24.82 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456359 | 02/26/2020 16:00 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640008A | 03/06/2020 04:44 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640008A | 03/04/2020 16:25 | Scott Crawford | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404901 | 03/04/2020 19:03 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404901 | 03/04/2020 05:55 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 2 | 20065820005A | 03/06/2020 09:33 | Larry E Bevins | 1 |

Sample Description: SB-27-S-22-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271138
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 16:40
SDG#: LDC15-25

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | 0.0009 | 0.0006 | 0.93 |
| 11995 | Ethylbenzene | 100-41-4 | 0.0009 | 0.0005 | 0.93 |
| 11995 | Toluene | 108-88-3 | 0.003 | 0.0007 | 0.93 |
| 11995 | Xylene (Total) | 1330-20-7 | 0.007 | 0.002 | 0.93 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.020 | 5 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | 0.14 | 0.020 | 5 |
| 10726 | Naphthalene | 91-20-3 | 0.048 | 0.040 | 5 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 4.6 | 0.3 | 28.35 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 570 | 49 | 10 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 1,000 | 120 | 10 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 16.1 | 0.696 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 18.7 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200661AA | 03/06/2020 12:54 | Jennifer K Howe | 0.93 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456359 | 02/26/2020 16:40 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456359 | 02/26/2020 16:40 | Client Supplied | 1 |

Sample Description: SB-27-S-22-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271138
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 16:40
SDG#: LDC15-25

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456359 | 02/26/2020 16:40 | Client Supplied | 1 |
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLH026 | 03/10/2020 17:25 | Linda M Hartenstine | 5 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLH026 | 03/05/2020 09:30 | Carolin Mejia | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A16A | 03/06/2020 10:02 | Jeremy C Giffin | 28.35 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456359 | 02/26/2020 16:40 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640017A | 03/06/2020 21:59 | Bridget Kovacs | 10 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640017A | 03/05/2020 10:40 | Joshua S Ruth | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404904 | 03/06/2020 10:45 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404904 | 03/05/2020 05:15 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820002B | 03/04/2020 12:58 | Stephanie A Sanchez | 1 |

Sample Description: SB-27-S-26-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271139
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 16:45
SDG#: LDC15-26

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.033 | 52.5 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.027 | 52.5 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.040 | 52.5 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.094 | 52.5 |
| Reporting limits were raised due to interference from the sample matrix. | | | | | |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | 0.15 | 0.021 | 5 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | 0.26 | 0.021 | 5 |
| 10726 | Naphthalene | 91-20-3 | 0.077 | 0.042 | 5 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | 210 | 6.0 | 512.88 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 210 | 5.1 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 440 | 13 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 27.1 | 0.689 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 21.5 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | V200681AA | 03/08/2020 16:32 | Stephen C Nolte | 52.5 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456359 | 02/26/2020 16:45 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456359 | 02/26/2020 16:45 | Client Supplied | 1 |

Sample Description: SB-27-S-26-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271139
ELLE Group #: 2090355
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 16:45
SDG#: LDC15-26

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456359 | 02/26/2020 16:45 | Client Supplied | 1 |
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLH026 | 03/10/2020 17:49 | Linda M Hartenstine | 5 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLH026 | 03/05/2020 09:30 | Carolin Mejia | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20070A16A | 03/10/2020 14:27 | Jeremy C Giffin | 512.88 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456359 | 02/26/2020 16:45 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640018A | 03/07/2020 03:01 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640018A | 03/06/2020 01:50 | Sherry L Morrow | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404904 | 03/06/2020 10:48 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404904 | 03/05/2020 05:15 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820002B | 03/04/2020 12:58 | Stephanie A Sanchez | 1 |

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 03/12/2020 17:02

Group Number: 2090355

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

| Analysis Name | Result mg/kg | MDL mg/kg |
|-----------------------------|---|--------------|
| Batch number: A200644AA | Sample number(s): 1271114-1271115,1271117-1271124,1271127-1271130 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| Batch number: A200651AA | Sample number(s): 1271131,1271135 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| Batch number: A200661AA | Sample number(s): 1271126,1271132-1271134,1271137-1271138 | |
| Benzene | N.D. | 0.0005 |
| 1,2-Dibromoethane | N.D. | 0.0004 |
| 1,2-Dichloroethane | N.D. | 0.0006 |
| Ethylbenzene | N.D. | 0.0004 |
| Methyl Tertiary Butyl Ether | N.D. | 0.0005 |
| Toluene | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| Batch number: V200681AA | Sample number(s): 1271116,1271125,1271136,1271139 | |
| Benzene | N.D. | 0.025 |
| 1,2-Dibromoethane | N.D. | 0.020 |
| 1,2-Dichloroethane | N.D. | 0.030 |
| Ethylbenzene | N.D. | 0.020 |
| Methyl Tertiary Butyl Ether | N.D. | 0.025 |
| Toluene | N.D. | 0.030 |
| Xylene (Total) | N.D. | 0.070 |
| Batch number: 20064SLA026 | Sample number(s): 1271116,1271125-1271126,1271136 | |
| Benzo(a)anthracene | N.D. | 0.0007 |
| Benzo(a)pyrene | N.D. | 0.0007 |
| Benzo(b)fluoranthene | N.D. | 0.0007 |
| Benzo(k)fluoranthene | N.D. | 0.0007 |
| Chrysene | N.D. | 0.0003 |
| Dibenz(a,h)anthracene | N.D. | 0.0007 |
| Indeno(1,2,3-cd)pyrene | N.D. | 0.0007 |
| 1-Methylnaphthalene | N.D. | 0.0007 |
| 2-Methylnaphthalene | N.D. | 0.001 |
| Naphthalene | 0.002 | 0.001 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 03/12/2020 17:02

Group Number: 2090355

Method Blank (continued)

| Analysis Name | Result mg/kg | MDL mg/kg |
|-------------------------------|---|--------------|
| Batch number: 20064SLB026 | Sample number(s): 1271115,1271117-1271118 | |
| 1-Methylnaphthalene | N.D. | 0.003 |
| 2-Methylnaphthalene | N.D. | 0.003 |
| Naphthalene | N.D. | 0.007 |
| Batch number: 20064SLH026 | Sample number(s): 1271114,1271119-1271124,1271127-1271135,1271137-1271139 | |
| 1-Methylnaphthalene | N.D. | 0.003 |
| 2-Methylnaphthalene | N.D. | 0.003 |
| Naphthalene | N.D. | 0.007 |
| Batch number: 20063E16A | Sample number(s): 1271114-1271115,1271117-1271124,1271126-1271133 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |
| Batch number: 20065A16A | Sample number(s): 1271116,1271125,1271134-1271135,1271137-1271138 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |
| Batch number: 20070A16A | Sample number(s): 1271136,1271139 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |
| Batch number: 200640007A | Sample number(s): 1271116-1271117,1271119-1271126 | |
| Diesel Range Organics C12-C24 | N.D. | 4.0 |
| Heavy Range Organics C24-C40 | N.D. | 10 |
| Batch number: 200640008A | Sample number(s): 1271127-1271130,1271137 | |
| Diesel Range Organics C12-C24 | N.D. | 4.0 |
| Heavy Range Organics C24-C40 | N.D. | 10 |
| Batch number: 200640017A | Sample number(s): 1271114-1271115,1271118,1271131-1271136,1271138 | |
| Diesel Range Organics C12-C24 | N.D. | 4.0 |
| Heavy Range Organics C24-C40 | N.D. | 10 |
| Batch number: 200640018A | Sample number(s): 1271139 | |
| Diesel Range Organics C12-C24 | N.D. | 4.0 |
| Heavy Range Organics C24-C40 | N.D. | 10 |
| Batch number: 200641404901 | Sample number(s): 1271129-1271131,1271134-1271137 | |
| Lead | N.D. | 0.600 |
| Batch number: 200641404902 | Sample number(s): 1271116-1271128,1271132-1271133 | |
| Lead | N.D. | 0.600 |
| Batch number: 200641404904 | Sample number(s): 1271114-1271115,1271138-1271139 | |
| Lead | N.D. | 0.600 |

LCS/LCSD

| Analysis Name | LCS Spike Added | LCS Conc | LCSD Spike Added | LCSD Conc | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---------------|--------------------|-------------|---------------------|--------------|-------------|--------------|--------------------|-----|------------|
|---------------|--------------------|-------------|---------------------|--------------|-------------|--------------|--------------------|-----|------------|

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 03/12/2020 17:02

Group Number: 2090355

LCS/LCSD

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|-----------------------------|---|----------------|------------------------|-----------------|----------|-----------|-----------------|-----|---------|
| Batch number: A200644AA | Sample number(s): 1271114-1271115,1271117-1271124,1271127-1271130 | | | | | | | | |
| Benzene | 0.0200 | 0.0187 | 0.0200 | 0.0182 | 93 | 91 | 80-120 | 2 | 30 |
| Ethylbenzene | 0.0200 | 0.0198 | 0.0200 | 0.0193 | 99 | 97 | 78-120 | 2 | 30 |
| Toluene | 0.0200 | 0.0190 | 0.0200 | 0.0188 | 95 | 94 | 80-120 | 1 | 30 |
| Xylene (Total) | 0.0600 | 0.0600 | 0.0600 | 0.0591 | 100 | 99 | 75-120 | 1 | 30 |
| Batch number: A200651AA | Sample number(s): 1271131,1271135 | | | | | | | | |
| Benzene | 0.0200 | 0.0187 | 0.0200 | 0.0185 | 93 | 93 | 80-120 | 1 | 30 |
| Ethylbenzene | 0.0200 | 0.0199 | 0.0200 | 0.0195 | 99 | 97 | 78-120 | 2 | 30 |
| Toluene | 0.0200 | 0.0192 | 0.0200 | 0.0188 | 96 | 94 | 80-120 | 2 | 30 |
| Xylene (Total) | 0.0600 | 0.0596 | 0.0600 | 0.0587 | 99 | 98 | 75-120 | 2 | 30 |
| Batch number: A200661AA | Sample number(s): 1271126,1271132-1271134,1271137-1271138 | | | | | | | | |
| Benzene | 0.0200 | 0.0194 | 0.0200 | 0.0195 | 97 | 98 | 80-120 | 1 | 30 |
| 1,2-Dibromoethane | 0.0200 | 0.0190 | 0.0200 | 0.0190 | 95 | 95 | 76-120 | 0 | 30 |
| 1,2-Dichloroethane | 0.0200 | 0.0209 | 0.0200 | 0.0207 | 104 | 103 | 71-128 | 1 | 30 |
| Ethylbenzene | 0.0200 | 0.0206 | 0.0200 | 0.0203 | 103 | 101 | 78-120 | 2 | 30 |
| Methyl Tertiary Butyl Ether | 0.0200 | 0.0189 | 0.0200 | 0.0188 | 94 | 94 | 72-120 | 0 | 30 |
| Toluene | 0.0200 | 0.0198 | 0.0200 | 0.0196 | 99 | 98 | 80-120 | 1 | 30 |
| Xylene (Total) | 0.0600 | 0.0621 | 0.0600 | 0.0615 | 103 | 103 | 75-120 | 1 | 30 |
| Batch number: V200681AA | Sample number(s): 1271116,1271125,1271136,1271139 | | | | | | | | |
| Benzene | 1.00 | 0.998 | 1.00 | 0.995 | 100 | 100 | 80-120 | 0 | 30 |
| 1,2-Dibromoethane | 1.00 | 1.01 | 1.00 | 1.02 | 101 | 102 | 76-120 | 0 | 30 |
| 1,2-Dichloroethane | 1.00 | 1.03 | 1.00 | 1.03 | 103 | 103 | 71-128 | 0 | 30 |
| Ethylbenzene | 1.00 | 1.00 | 1.00 | 0.998 | 100 | 100 | 78-120 | 1 | 30 |
| Methyl Tertiary Butyl Ether | 1.00 | 1.01 | 1.00 | 1.01 | 101 | 101 | 72-120 | 0 | 30 |
| Toluene | 1.00 | 1.01 | 1.00 | 1.00 | 101 | 100 | 80-120 | 1 | 30 |
| Xylene (Total) | 3.00 | 3.00 | 3.00 | 3.00 | 100 | 100 | 75-120 | 0 | 30 |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 20064SLA026 | Sample number(s): 1271116,1271125-1271126,1271136 | | | | | | | | |
| Benzo(a)anthracene | 0.0333 | 0.0336 | | | 101 | | 66-114 | | |
| Benzo(a)pyrene | 0.0333 | 0.0331 | | | 99 | | 67-124 | | |
| Benzo(b)fluoranthene | 0.0333 | 0.0348 | | | 104 | | 74-126 | | |
| Benzo(k)fluoranthene | 0.0333 | 0.0323 | | | 97 | | 68-113 | | |
| Chrysene | 0.0333 | 0.0301 | | | 90 | | 65-113 | | |
| Dibenz(a,h)anthracene | 0.0333 | 0.0320 | | | 96 | | 66-119 | | |
| Indeno(1,2,3-cd)pyrene | 0.0333 | 0.0330 | | | 99 | | 69-123 | | |
| 1-Methylnaphthalene | 0.0333 | 0.0262 | | | 79 | | 53-101 | | |
| 2-Methylnaphthalene | 0.0333 | 0.0281 | | | 84 | | 55-109 | | |
| Naphthalene | 0.0333 | 0.0254 | | | 76 | | 50-106 | | |
| Batch number: 20064SLB026 | Sample number(s): 1271115,1271117-1271118 | | | | | | | | |
| 1-Methylnaphthalene | 1.67 | 1.39 | | | 83 | | 59-94 | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 03/12/2020 17:02

Group Number: 2090355

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|-------------------------------|---|-------------------|---------------------------|--------------------|----------|-----------|-----------------|-----|---------|
| 2-Methylnaphthalene | 1.67 | 1.53 | | | 92 | | 52-104 | | |
| Naphthalene | 1.67 | 1.39 | | | 83 | | 49-104 | | |
| Batch number: 20064SLH026 | Sample number(s): 1271114,1271119-1271124,1271127-1271135,1271137-1271139 | | | | | | | | |
| 1-Methylnaphthalene | 1.67 | 1.34 | | | 81 | | 59-94 | | |
| 2-Methylnaphthalene | 1.67 | 1.41 | | | 85 | | 52-104 | | |
| Naphthalene | 1.67 | 1.35 | | | 81 | | 49-104 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 20063E16A | Sample number(s): 1271114-1271115,1271117-1271124,1271126-1271133 | | | | | | | | |
| NWTPH-GX Soil C7-C12 | 11 | 11.52 | 11 | 11.81 | 105 | 107 | 55-145 | 2 | 30 |
| Batch number: 20065A16A | Sample number(s): 1271116,1271125,1271134-1271135,1271137-1271138 | | | | | | | | |
| NWTPH-GX Soil C7-C12 | 11 | 11 | 11 | 11 | 100 | 100 | 55-145 | 0 | 30 |
| Batch number: 20070A16A | Sample number(s): 1271136,1271139 | | | | | | | | |
| NWTPH-GX Soil C7-C12 | 11 | 11.86 | 11 | 11.93 | 108 | 108 | 55-145 | 1 | 30 |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 200640007A | Sample number(s): 1271116-1271117,1271119-1271126 | | | | | | | | |
| Diesel Range Organics C12-C24 | 133.34 | 106.7 | | | 80 | | 61-115 | | |
| Batch number: 200640008A | Sample number(s): 1271127-1271130,1271137 | | | | | | | | |
| Diesel Range Organics C12-C24 | 133.34 | 97.06 | | | 73 | | 61-115 | | |
| Batch number: 200640017A | Sample number(s): 1271114-1271115,1271118,1271131-1271136,1271138 | | | | | | | | |
| Diesel Range Organics C12-C24 | 133.34 | 100.06 | | | 75 | | 61-115 | | |
| Batch number: 200640018A | Sample number(s): 1271139 | | | | | | | | |
| Diesel Range Organics C12-C24 | 133.34 | 101.68 | | | 76 | | 61-115 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 200641404901 | Sample number(s): 1271129-1271131,1271134-1271137 | | | | | | | | |
| Lead | 3.00 | 3.17 | | | 106 | | 80-120 | | |
| Batch number: 200641404902 | Sample number(s): 1271116-1271128,1271132-1271133 | | | | | | | | |
| Lead | 3.00 | 3.42 | | | 114 | | 80-120 | | |
| Batch number: 200641404904 | Sample number(s): 1271114-1271115,1271138-1271139 | | | | | | | | |
| Lead | 3.00 | 3.20 | | | 107 | | 80-120 | | |
| | % | % | % | % | | | | | |
| Batch number: 20064820002B | Sample number(s): 1271134-1271136,1271138-1271139 | | | | | | | | |
| Moisture | 89.5 | 89.38 | | | 100 | | 99-101 | | |
| Batch number: 20064820005A | Sample number(s): 1271114-1271123 | | | | | | | | |
| Moisture | 89.5 | 89.46 | | | 100 | | 99-101 | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 03/12/2020 17:02

Group Number: 2090355

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added % | LCS Conc % | LCSD Spike Added % | LCSD Conc % | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|--|-----------------------------------|------------|--------------------|-------------|----------|-----------|-----------------|-----|---------|
| Batch number: 20064820005B Moisture | Sample number(s): 1271124-1271133 | | | | | | 99-101 | | |
| | 89.5 | 89.46 | | | 100 | | | | |
| Batch number: 20065820005A Moisture | Sample number(s): 1271137 | | | | | | 99-101 | | |
| | 89.5 | 89.45 | | | 100 | | | | |

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

| Analysis Name | Unspiked Conc mg/kg | MS Spike Added mg/kg | MS Conc mg/kg | MSD Spike Added mg/kg | MSD Conc mg/kg | MS %Rec | MSD %Rec | MS/MSD Limits | RPD | RPD Max |
|---|--|----------------------|---------------|-----------------------|----------------|---------|----------|---------------|-----|---------|
| Batch number: A200644AA Benzene | Sample number(s): 1271114-1271115,1271117-1271124,1271127-1271130 UNSPK: 1271114 | | | | | | | | | |
| | N.D. | 0.0131 | 0.0140 | | | 107 | | 80-120 | | |
| Ethylbenzene | N.D. | 0.0131 | 0.0150 | | | 115 | | 78-120 | | |
| Toluene | N.D. | 0.0131 | 0.0147 | | | 112 | | 80-120 | | |
| Xylene (Total) | N.D. | 0.0392 | 0.0450 | | | 115 | | 75-120 | | |
| Batch number: A200651AA Benzene | Sample number(s): 1271131,1271135 UNSPK: 1271135 | | | | | | | | | |
| | N.D. | 0.0152 | 0.0154 | | | 101 | | 80-120 | | |
| Ethylbenzene | N.D. | 0.0152 | 0.0148 | | | 98 | | 78-120 | | |
| Toluene | N.D. | 0.0152 | 0.0152 | | | 100 | | 80-120 | | |
| Xylene (Total) | N.D. | 0.0455 | 0.0444 | | | 98 | | 75-120 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 20064SLH026 1-Methylnaphthalene | Sample number(s): 1271114,1271119-1271124,1271127-1271135,1271137-1271139 UNSPK: 1271132 | | | | | | | | | |
| | N.D. | 1.64 | 1.19 | 1.66 | 1.11 | 72 | 67 | 59-94 | 7 | 30 |
| 2-Methylnaphthalene | N.D. | 1.64 | 1.26 | 1.66 | 1.23 | 76 | 74 | 52-104 | 2 | 30 |
| Naphthalene | N.D. | 1.64 | 1.12 | 1.66 | 1.13 | 68 | 68 | 49-104 | 1 | 30 |
| | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 200640007A Diesel Range Organics C12-C24 | Sample number(s): 1271116-1271117,1271119-1271126 UNSPK: 1271122 | | | | | | | | | |
| | N.D. | 132.95 | 102.74 | | | 77 | | 61-115 | | |
| Batch number: 200640008A Diesel Range Organics C12-C24 | Sample number(s): 1271127-1271130,1271137 UNSPK: 1271137 | | | | | | | | | |
| | N.D. | 133.21 | 82.91 | | | 62 | | 61-115 | | |
| Batch number: 200640017A Diesel Range Organics C12-C24 | Sample number(s): 1271114-1271115,1271118,1271131-1271136,1271138 UNSPK: 1271115 | | | | | | | | | |
| | N.D. | 132.9 | 83.07 | | | 63 | | 61-115 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 03/12/2020 17:02

Group Number: 2090355

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

| Analysis Name | Unspiked Conc mg/kg | MS Spike Added mg/kg | MS Conc mg/kg | MSD Spike Added mg/kg | MSD Conc mg/kg | MS %Rec | MSD %Rec | MS/MSD Limits | RPD | RPD Max |
|------------------------------------|---------------------|----------------------|---------------|-----------------------|----------------|---------|----------|---------------|-----|---------|
| Batch number: 200641404901 Lead | 0.750 | 2.86 | 3.98 | 2.36 | 3.19 | 113 | 103 | 75-125 | 22* | 20 |

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | BKG Conc mg/kg | DUP Conc mg/kg | DUP RPD | DUP RPD Max |
|---|----------------|----------------|----------|-------------|
| Batch number: 200640007A Diesel Range Organics C12-C24 Heavy Range Organics C24-C40 | N.D. | N.D. | 0 (1) | 20 |
| Batch number: 200640008A Diesel Range Organics C12-C24 Heavy Range Organics C24-C40 | N.D. | 24.7 | 200* (1) | 20 |
| Batch number: 200640017A Diesel Range Organics C12-C24 Heavy Range Organics C24-C40 | N.D. | N.D. | 0 (1) | 20 |
| Batch number: 200641404901 Lead | 0.750 | 1.17 | 44* (1) | 20 |
| Batch number: 20064820002B Moisture | 9.53 | 11.65 | 20* | 5 |
| Batch number: 20064820005A Moisture | 7.99 | 8.15 | 2 | 5 |
| Batch number: 20064820005B Moisture | 10.68 | 9.19 | 15* | 5 |
| Batch number: 20065820005A Moisture | 16.24 | 16.47 | 1 | 5 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 03/12/2020 17:02

Group Number: 2090355

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260 Soil
Batch number: A200644AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1271114 | 99 | 103 | 99 | 95 |
| 1271115 | 99 | 104 | 99 | 93 |
| 1271117 | 100 | 105 | 99 | 100 |
| 1271118 | 100 | 105 | 98 | 97 |
| 1271119 | 102 | 105 | 97 | 95 |
| 1271120 | 100 | 102 | 101 | 91 |
| 1271121 | 101 | 103 | 98 | 95 |
| 1271122 | 101 | 103 | 97 | 95 |
| 1271123 | 100 | 103 | 98 | 92 |
| 1271124 | 103 | 108 | 96 | 95 |
| 1271127 | 102 | 105 | 97 | 94 |
| 1271128 | 102 | 106 | 102 | 86 |
| 1271129 | 101 | 102 | 97 | 94 |
| 1271130 | 103 | 104 | 97 | 94 |
| Blank | 101 | 99 | 98 | 93 |
| LCS | 101 | 98 | 100 | 98 |
| LCSD | 100 | 99 | 101 | 99 |
| MS | 101 | 103 | 101 | 97 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260 Soil
Batch number: A200651AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1271131 | 103 | 102 | 99 | 91 |
| 1271135 | 102 | 103 | 97 | 93 |
| Blank | 102 | 100 | 96 | 94 |
| LCS | 100 | 102 | 100 | 98 |
| LCSD | 99 | 99 | 100 | 98 |
| MS | 102 | 107 | 99 | 98 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260 Soil
Batch number: A200661AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1271126 | 103 | 106 | 98 | 92 |
| 1271132 | 102 | 103 | 96 | 93 |
| 1271133 | 104 | 106 | 95 | 94 |
| 1271134 | 101 | 98 | 96 | 94 |
| 1271137 | 103 | 104 | 98 | 91 |
| 1271138 | 104 | 103 | 99 | 88 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 03/12/2020 17:02

Group Number: 2090355

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260 Soil
Batch number: A200661AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| Blank | 102 | 98 | 96 | 93 |
| LCS | 101 | 102 | 99 | 98 |
| LCSD | 103 | 100 | 100 | 99 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: VOCs- Solid by 8260C/D
Batch number: V200681AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1271116 | 109 | 114 | 117 | 123 |
| 1271125 | 107 | 116 | 111 | 114 |
| 1271136 | 93 | 98 | 94 | 97 |
| 1271139 | 91 | 94 | 94 | 97 |
| Blank | 99 | 105 | 102 | 102 |
| LCS | 99 | 102 | 102 | 101 |
| LCSD | 100 | 102 | 101 | 101 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: SIM SVOAs 8270D (microwave)
Batch number: 20064SLA026

| | Fluoranthene-d10 | Benzo(a)pyrene-d12 | 1-Methylnaphthalene-d10 |
|---------|------------------|--------------------|-------------------------|
| 1271116 | 95 | 82 | 85 |
| 1271125 | 94 | 74 | 255* |
| 1271126 | 97 | 85 | 92 |
| 1271136 | 99 | 74 | 179* |
| Blank | 104 | 93 | 96 |
| LCS | 102 | 92 | 90 |
| Limits: | 21-120 | 17-112 | 27-107 |

Analysis Name: Naph, 1-MN, 2-MN
Batch number: 20064SLB026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 1271115 | 79 | 85 | 96 |
| 1271117 | 81 | 81 | 94 |
| 1271118 | 41 | 47 | 58 |
| Blank | 78 | 69 | 98 |
| LCS | 84 | 80 | 100 |
| Limits: | 23-115 | 34-117 | 35-135 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 03/12/2020 17:02

Group Number: 2090355

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Naph, 1-MN, 2-MN
Batch number: 20064SLH026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 1271114 | 83 | 77 | 98 |
| 1271119 | 79 | 74 | 88 |
| 1271120 | 78 | 78 | 91 |
| 1271121 | 85 | 79 | 86 |
| 1271122 | 84 | 79 | 95 |
| 1271123 | 80 | 74 | 67 |
| 1271124 | 83 | 77 | 104 |
| 1271127 | 88 | 83 | 105 |
| 1271128 | 52 | 68 | 72 |
| 1271129 | 73 | 67 | 69 |
| 1271130 | 74 | 78 | 95 |
| 1271131 | 44 | 54 | 87 |
| 1271132 | 52 | 51 | 42 |
| 1271133 | 66 | 74 | 93 |
| 1271134 | 64 | 64 | 85 |
| 1271135 | 65 | 68 | 106 |
| 1271137 | 66 | 74 | 100 |
| 1271138 | 42 | 60 | 83 |
| 1271139 | 47 | 64 | 84 |
| Blank | 79 | 83 | 108 |
| LCS | 78 | 79 | 103 |
| MS | 62 | 69 | 81 |
| MSD | 75 | 66 | 83 |
| Limits: | 23-115 | 34-117 | 35-135 |

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 20063E16A

| | Trifluorotoluene-F |
|---------|--------------------|
| 1271114 | 109 |
| 1271115 | 66 |
| 1271117 | 96 |
| 1271118 | 95 |
| 1271119 | 76 |
| 1271120 | 76 |
| 1271121 | 79 |
| 1271122 | 106 |
| 1271123 | 70 |
| 1271124 | 112 |
| 1271126 | 84 |
| 1271127 | 107 |
| 1271128 | 124 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 03/12/2020 17:02

Group Number: 2090355

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-GX Soil C7-C12

Batch number: 20063E16A

| Trifluorotoluene-F | |
|--------------------|-----|
| 1271129 | 116 |
| 1271130 | 121 |
| 1271131 | 138 |
| 1271132 | 71 |
| 1271133 | 83 |
| Blank | 95 |
| LCS | 104 |
| LCSD | 104 |

Limits: 50-150

Analysis Name: NWTPH-GX Soil C7-C12

Batch number: 20065A16A

| Trifluorotoluene-F | |
|--------------------|------|
| 1271116 | 134 |
| 1271125 | 242* |
| 1271134 | 91 |
| 1271135 | 90 |
| 1271137 | 96 |
| 1271138 | 110 |
| Blank | 97 |
| LCS | 98 |
| LCSD | 98 |

Limits: 50-150

Analysis Name: NWTPH-GX Soil C7-C12

Batch number: 20070A16A

| Trifluorotoluene-F | |
|--------------------|-----|
| 1271136 | 110 |
| 1271139 | 102 |
| Blank | 100 |
| LCS | 103 |
| LCSD | 103 |

Limits: 50-150

Analysis Name: NWTPH-Dx soil

Batch number: 200640007A

| Orthoterphenyl | |
|----------------|-----|
| 1271116 | 100 |
| 1271117 | 102 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 03/12/2020 17:02

Group Number: 2090355

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Dx soil
Batch number: 200640007A

| | Orthoterphenyl |
|---------|----------------|
| 1271119 | 101 |
| 1271120 | 108 |
| 1271121 | 98 |
| 1271122 | 102 |
| 1271123 | 127 |
| 1271124 | 102 |
| 1271125 | 100 |
| 1271126 | 86 |
| Blank | 103 |
| DUP | 102 |
| LCS | 106 |
| MS | 103 |

Limits: 50-150

Analysis Name: NWTPH-Dx soil
Batch number: 200640008A

| | Orthoterphenyl |
|---------|----------------|
| 1271127 | 97 |
| 1271128 | 97 |
| 1271129 | 97 |
| 1271130 | 99 |
| 1271137 | 100 |
| Blank | 101 |
| DUP | 102 |
| LCS | 103 |
| MS | 101 |

Limits: 50-150

Analysis Name: NWTPH-Dx soil
Batch number: 200640017A

| | Orthoterphenyl |
|---------|----------------|
| 1271114 | 90 |
| 1271115 | 94 |
| 1271118 | 102 |
| 1271131 | 110 |
| 1271132 | 92 |
| 1271133 | 98 |
| 1271134 | 97 |
| 1271135 | 99 |
| 1271136 | 413* |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 03/12/2020 17:02

Group Number: 2090355

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Dx soil
Batch number: 200640017A

| | Orthoterphenyl |
|---------|----------------|
| 1271138 | 96 |
| Blank | 97 |
| DUP | 94 |
| LCS | 104 |
| MS | 102 |

Limits: 50-150

Analysis Name: NWTPH-Dx soil
Batch number: 200640018A

| | Orthoterphenyl |
|---------|----------------|
| 1271139 | 101 |
| Blank | 107 |
| LCS | 105 |

Limits: 50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

Acct. # 13271

For Eurofins Lancaster Laboratories Environmental use only
Group # 2090355 Sample # 1271114-39
Instructions on reverse side correspond with circled numbers.

Page 1 of 4

| 1 Client Information | | | | 4 Matrix | | | | 5 Analyses Requested | | | | | | | | | | 6 Remarks | | | | | | | | | | | | | |
|--|--|----------------------------------|--|---|--|------------------------------------|--|--|--|--|--|--|--|------|--|------|--|------------------------------------|--|--|--|--|--|------------------------------------|--|--|--|------|--|------|--|
| Facility # <u>204117</u> | | WBS | | Sediment <input type="checkbox"/> | | Ground <input type="checkbox"/> | | Surface <input type="checkbox"/> | | Total Number of Containers 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth 8260 444-8888 <input checked="" type="checkbox"/> MTBE + EPB + EDC Oxygenates NWTPH-GX NWTPH-DX with Silica Gel Cleanup <input type="checkbox"/> NWTPH-DX without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input checked="" type="checkbox"/> Diss: <input type="checkbox"/> Method <u>6010B</u> 3 Naphthalenes (8270) carc. PAHs (8270-SIM) | | | | | | | | | | SCR #: _____ | | | | | | | | | | | |
| Site Address <u>2021 6th Street, Bremerton, WA</u> | | | | Potable <input type="checkbox"/> | | NPDES <input type="checkbox"/> | | Air <input type="checkbox"/> | | | | | | | | | | | | Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits <input type="checkbox"/> | | 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits <input type="checkbox"/> | | | | | | | | | |
| Chevron PM <u>James Kiernan</u> | | Lead Consultant <u>Leidos</u> | | Oil <input type="checkbox"/> | | Water | | Grab <input type="checkbox"/> | | | | | | | | | | | | | | | | Composite <input type="checkbox"/> | | Soil <input checked="" type="checkbox"/> | | Date | | Time | |
| Consultant/Office <u>Leidos / Bothell, WA</u> | | | | Grab <input type="checkbox"/> | | Composite <input type="checkbox"/> | | Soil <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | Date | | Time | | Date | | Time | |
| Consultant Project Mgr. <u>Russ Shropshire</u> | | | | Date | | Time | | Date | | Time | | Date | | Time | | Date | | Time | | | | | | | | | | | | | |
| Consultant Phone # <u>425-482-3323</u> | | | | Date | | Time | | Date | | Time | | Date | | Time | | Date | | Time | | | | | | | | | | | | | |
| Sampler <u>CMW / TED</u> | | | | Date | | Time | | Date | | Time | | Date | | Time | | Date | | Time | | | | | | | | | | | | | |
| 2 Sample Identification | | | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | | | | | | | | | | | | | | |
| SB-21-8 | | 2/24/20 1410 | | X | | X | | 7 | | X | | X | | X | | X | | Invoice to Leidos PO10229412 | | | | | | | | | | | | | |
| SB-22-8 | | 2/24 1550 | | X | | X | | 7 | | X | | X | | X | | X | | | | | | | | | | | | | | | |
| SB-21-16 | | 2/25 0900 | | X | | X | | 7 | | X | | X | | X | | X | | | | | | | | | | | | | | | |
| SB-21-18 | | 2/25 0915 | | X | | X | | 7 | | X | | X | | X | | X | | | | | | | | | | | | | | | |
| SB-21-20.5 | | 2/25 0930 | | X | | X | | 7 | | X | | X | | X | | X | | | | | | | | | | | | | | | |
| SB-23-8 | | 2/25 0945 | | X | | X | | 7 | | X | | X | | X | | X | | | | | | | | | | | | | | | |
| SB-23-16 | | 2/25 1030 | | X | | X | | 7 | | X | | X | | X | | X | | | | | | | | | | | | | | | |
| SB-23-23 | | 2/25 1120 | | X | | X | | 7 | | X | | X | | X | | X | | | | | | | | | | | | | | | |
| SB-23-19.5 | | 2/25 1050 | | X | | X | | 7 | | X | | X | | X | | X | | | | | | | | | | | | | | | |
| SB-24-8 | | 2/25 1215 | | X | | X | | 7 | | X | | X | | X | | X | | | | | | | | | | | | | | | |
| SB-24-14 | | 2/25 1245 | | X | | X | | 7 | | X | | X | | X | | X | | | | | | | | | | | | | | | |
| SB-24-17.5 | | 2/25 1310 | | X | | X | | 7 | | X | | X | | X | | X | | | | | | | | | | | | | | | |
| SB-24-22 | | 2/25 1330 | | X | | X | | 7 | | X | | X | | X | | X | | | | | | | | | | | | | | | |
| 7 Turnaround Time Requested (TAT) (please circle) | | | | Relinquished by | | | | Date | | Time | | Received by | | Date | | Time | | | | | | | | | | | | | | | |
| <input checked="" type="radio"/> Standard 5 day 4 day 72 hour 48 hour 24 hour | | | | <u>Thomas Duke</u> | | | | 3-2-20 | | 1515 | | | | | | | | | | | | | | | | | | | | | |
| 8 Data Package (circle if required) | | | | Relinquished by Commercial Carrier: | | | | Date | | Time | | Received by | | Date | | Time | | | | | | | | | | | | | | | |
| <input checked="" type="radio"/> Type I - Full Type VI (Raw Data) | | | | UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ | | | | 3/2/20 | | 950 | | <input checked="" type="checkbox"/> Custody Seals Intact? Yes No | | | | | | | | | | | | | | | | | | | |
| <input type="checkbox"/> Type I - Full Type VI (Raw Data) | | | | CVX-RTBU-FL_05 (default) Other: _____ | | | | Temperature Upon Receipt <u>09/31</u> °C | | | | | | | | | | | | | | | | | | | | | | | |

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories Environmental

Acct. # 13271 For Eurofins Lancaster Laboratories Environmental use only
 Group # 2090355 Sample # 12.7.1114-39
Instructions on reverse side correspond with circled numbers.

Page 2 of 4

| 1 Client Information | | | | 4 Matrix | | | | 5 Analyses Requested | | | | | | | | | | 6 Remarks | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|--|----------------------------------|--|--|--|---------------------------------|--|---|--|--|--|---|--|----------------------------|--|---|--|-----------|--|--|--|---|--|--------------------------------|--|----------------------|--|----------------------------------|--|-------------------------------------|--|----------|--|----------|--|----------|--|----------|--|----------|--|--------|--|
| Facility # <u>204117</u> | | WBS | | Sediment <input type="checkbox"/> | | Ground <input type="checkbox"/> | | Surface <input type="checkbox"/> | | Total Number of Containers BTEX-MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> 8260 full scan - MTBE + EPB + EDC Oxygenates NWTPH-Gx NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> Lead Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <u>6010 B</u> 3 Naphthalenes (8270) Carc. PAHs (8270) | | | | | | | | | | SCR #: _____ | | | | | | | | | | | | | | | | | | | | | | | |
| Site Address <u>2021 6th Street, Bremerton, WA</u> | | | | Potable <input type="checkbox"/> | | NPDES <input type="checkbox"/> | | Air <input type="checkbox"/> | | | | | | | | | | | | Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy's on highest hit <input type="checkbox"/> Run ___ oxy's on all hits <input type="checkbox"/> | | <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy's on highest hit <input type="checkbox"/> Run ___ oxy's on all hits | | | | | | | | | | | | | | | | | | | | | |
| Chevron PM <u>James Kiernan</u> | | Lead Consultant <u>Leidos</u> | | Soil <input checked="" type="checkbox"/> | | Water <input type="checkbox"/> | | Oil <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Consultant/Office <u>Leidos / Bothell, WA</u> | | | | Composite <input type="checkbox"/> | | Grab <input type="checkbox"/> | | Total <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | Diss. <input type="checkbox"/> | | Method <u>6010 B</u> | | | | | | | | | | | | | | | | | |
| Consultant Project Mgr. <u>Russ Shropshire</u> | | | | Soil <input type="checkbox"/> | | Water <input type="checkbox"/> | | Oil <input type="checkbox"/> | | Lead <input type="checkbox"/> | | Diss. <input type="checkbox"/> | | Method <u>6010 B</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Consultant Phone # <u>425-482-3323</u> | | | | Soil <input type="checkbox"/> | | Water <input type="checkbox"/> | | Oil <input type="checkbox"/> | | Lead <input type="checkbox"/> | | Diss. <input type="checkbox"/> | | Method <u>6010 B</u> | | Invoice to Leidos PO16229412 | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sampler <u>CMW / AED</u> | | | | Soil <input type="checkbox"/> | | Water <input type="checkbox"/> | | Oil <input type="checkbox"/> | | Lead <input type="checkbox"/> | | Diss. <input type="checkbox"/> | | Method <u>6010 B</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 Sample Identification | | 3 Collected | | Grab | | Composite | | Soil | | Water | | Oil | | Total Number of Containers | | | | BTEX-MTBE | | 8260 | | Naphth | | Oxygenates | | NWTPH-Gx | | NWTPH-Dx with Silica Gel Cleanup | | NWTPH-Dx without Silica Gel Cleanup | | WA VPH | | WA EPH | | Lead | | Total | | Diss. | | Method | |
| <u>SB-24-29</u> | | <u>2/25 1415</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>7</u> | | | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | | |
| <u>SB-22-16</u> | | <u>2/26 0900</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>7</u> | | | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | | |
| <u>SB-26-8</u> | | <u>2/26 0930</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>7</u> | | | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | | |
| <u>SB-26-15.5</u> | | <u>2/26 1100</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>7</u> | | | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | | |
| <u>SB-26-20</u> | | <u>2/26 1130</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>7</u> | | | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | | |
| <u>SB-27-8</u> | | <u>2/26 1200</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>7</u> | | | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | | |
| <u>SB-25-8.5</u> | | <u>2/26 1320</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>7</u> | | | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | | |
| <u>SB-25-12</u> | | <u>2/26 1340</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>7</u> | | | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | | |
| <u>SB-25-19</u> | | <u>2/26 1400</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>7</u> | | | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | | |
| <u>SB-27-15.5</u> | | <u>2/26 1530</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>7</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | | | | |
| <u>SB-29-8</u> | | <u>2/26 1600</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>7</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | | | | |
| <u>SB-27-22</u> | | <u>2/26 1640</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>7</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | | | | |
| <u>SB-27-26</u> | | <u>2/26 1645</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>7</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | <u>X</u> | | | | | |
| 7 Turnaround Time Requested (TAT) (please circle) | | | | Relinquished by | | | | Date | | | | Time | | | | Received by | | | | Date | | | | Time | | | | | | | | | | | | | | | | | | | |
| Standard 5 day 4 day | | | | <u>Thomas Duber</u> | | | | <u>3-2-20</u> | | | | <u>1515</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 72 hour 48 hour 24 hour | | | | Relinquished by | | | | Date | | | | Time | | | | Received by | | | | Date | | | | Time | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 Data Package (circle if required) | | | | EDD (circle if required) | | | | Relinquished by Commercial Carrier: | | | | Received by | | | | Date | | | | Time | | | | | | | | | | | | | | | | | | | | | | | |
| Type I - Full | | | | CVX-RTBU-FI_05 (default) | | | | UPS <input checked="" type="checkbox"/> FedEx _____ Other _____ | | | | <u>[Signature]</u> | | | | <u>3/2/20</u> | | | | <u>950</u> | | | | | | | | | | | | | | | | | | | | | | | |
| Type VI (Raw Data) | | | | Other: _____ | | | | Temperature Upon Receipt <u>09/3.1</u> °C | | | | Custody Seals Intact? <input checked="" type="checkbox"/> | | | | Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | |



Client: CHEVRON NORTHWEST REGION

Delivery and Receipt Information

Delivery Method: UPS Arrival Date: 03/03/2020
 Number of Packages: 4 Number of Projects: 1

Arrival Condition Summary

| | | | |
|--------------------------------------|-----|-------------------------------------|-----|
| Shipping Container Sealed: | Yes | Sample IDs on COC match Containers: | Yes |
| Custody Seal Present: | Yes | Sample Date/Times match COC: | Yes |
| Custody Seal Intact: | Yes | Total Trip Blank Qty: | 16 |
| Samples Chilled: | Yes | Trip Blank Type: | HCI |
| Paperwork Enclosed: | Yes | Air Quality Samples Present: | No |
| Samples Intact: | Yes | | |
| Missing Samples: | No | | |
| Extra Samples: | Yes | | |
| Discrepancy in Container Qty on COC: | No | | |

Unpacked by Jessenia Colon Martinez

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Elevated Temp? |
|----------|----------------|----------------|-------------|----------|--------------|---------------|----------------|
| 1 | DT146 | 1.1 | DT | Wet | Y | Bagged | N |
| 2 | DT146 | 1.0 | DT | Wet | Y | Bagged | N |
| 3 | DT146 | 0.9 | DT | Wet | Y | Bagged | N |
| 4 | DT146 | 3.1 | DT | Wet | Y | Bagged | N |

Extra Sample Details

| | | | |
|---------------------------|-----------------------------------|----------------------|-----------------|
| <u>Sample ID on Label</u> | <u>Number of Extra Containers</u> | <u>Date on Label</u> | <u>Comments</u> |
| SB30-11.5 | 7 | 3/25/2020 10:45 | |

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

| | | | |
|-------------------------|--|-----------------|-------------------------------|
| BMQL | Below Minimum Quantitation Level | mL | milliliter(s) |
| C | degrees Celsius | MPN | Most Probable Number |
| cfu | colony forming units | N.D. | non-detect |
| CP Units | cobalt-chloroplatinate units | ng | nanogram(s) |
| F | degrees Fahrenheit | NTU | nephelometric turbidity units |
| g | gram(s) | pg/L | picogram/liter |
| IU | International Units | RL | Reporting Limit |
| kg | kilogram(s) | TNTC | Too Numerous To Count |
| L | liter(s) | µg | microgram(s) |
| lb. | pound(s) | µL | microliter(s) |
| m3 | cubic meter(s) | umhos/cm | micromhos/cm |
| meq | milliequivalents | MCL | Maximum Contamination Limit |
| mg | milligram(s) | | |
| < | less than | | |
| > | greater than | | |
| ppm | parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas. | | |
| ppb | parts per billion | | |
| Dry weight basis | Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis. | | |

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

| Qualifier | Definition |
|----------------|---|
| C | Result confirmed by reanalysis |
| D1 | Indicates for dual column analyses that the result is reported from column 1 |
| D2 | Indicates for dual column analyses that the result is reported from column 2 |
| E | Concentration exceeds the calibration range |
| K1 | Initial Calibration Blank is above the QC limit and the sample result is ND |
| K2 | Continuing Calibration Blank is above the QC limit and the sample result is ND |
| K3 | Initial Calibration Verification is above the QC limit and the sample result is ND |
| K4 | Continuing Calibration Verification is above the QC limit and the sample result is ND |
| J (or G, I, X) | Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL) |
| P | Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported. |
| P^ | Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported. |
| U | Analyte was not detected at the value indicated |
| V | Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference. |
| W | The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L. |
| Z | Laboratory Defined - see analysis report |

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.



ANALYSIS REPORT

Prepared by:

Eurofins Lancaster Laboratories Environmental
2425 New Holland Pike
Lancaster, PA 17601

Prepared for:

Chevron c/o Leidos, Inc.
6310 Allentown Blvd.
Suite 110
Harrisburg PA 17112

Report Date: March 12, 2020 17:02

Project: 204117

Account #: 13271
Group Number: 2090356
SDG: LDC16
PO Number: P010229412
Release Number: KIERNAN
State of Sample Origin: WA

Electronic Copy To EcoChem
Electronic Copy To Leidos

Attn: Christine Ransom
Attn: Russ Shropshire

Respectfully Submitted,



Amek Carter
Specialist

(717) 556-7252

To view our laboratory's current scopes of accreditation please go to <https://www.eurofinsus.com/environment-testing/laboratories/eurofins-lancaster-laboratories-environmental/certifications-and-accreditations-eurofins-lancaster-laboratories-environmental/>. Historical copies may be requested through your project manager.



SAMPLE INFORMATION

| <u>Client Sample Description</u> | <u>Sample Collection Date/Time</u> | <u>ELLE#</u> |
|----------------------------------|--|--------------|
| SB-27-S-29-200226 Grab Soil | 02/26/2020 16:50 | 1271140 |
| SB-29-S-16-200227 Grab Soil | 02/27/2020 09:00 | 1271141 |
| SB-29-S-18-200227 Grab Soil | 02/27/2020 09:15 | 1271142 |
| SB-28-S-8-200227 Grab Soil | 02/27/2020 09:30 | 1271143 |
| DUP-1-SD-200227 Grab Soil | 02/27/2020 10:00 | 1271144 |
| DUP-2-SD-200227 Grab Soil | 02/27/2020 10:10 | 1271145 |
| SB-29-S-22-200227 Grab Soil | 02/27/2020 10:30 | 1271146 |
| SVP-4-S-5-200227 Grab Soil | 02/27/2020 11:00 | 1271147 |
| SB-28-S-14-200227 Grab Soil | 02/27/2020 13:40 | 1271148 |
| SVP-5-S-5-200227 Grab Soil | 02/27/2020 14:00 | 1271149 |
| SB-28-S-19.5-200227 Grab Soil | 02/27/2020 14:10 | 1271150 |
| SB-28-S-24.5-200227 Grab Soil | 02/27/2020 14:15 | 1271151 |
| QA-1-O-200227 Grab Water | 02/27/2020 15:10 | 1271152 |
| QA-2-O-200227 Grab Water | 02/27/2020 15:20 | 1271153 |
| SB-30-S-8-200228 Grab Soil | 02/28/2020 09:50 | 1271154 |
| SVP-6-S-5-200228 Grab Soil | 02/28/2020 11:30 | 1271155 |
| SB-30-S-15.5-200228 Grab Soil | 02/28/2020 11:40 | 1271156 |
| QA-1-T-200224 Water | 02/24/2020 12:00 | 1271157 |
| QA-2-T-200224 Water | 02/24/2020 13:00 | 1271158 |
| QA-3-T-200224 Water | 02/24/2020 14:00 | 1271159 |
| QA-4-T-200224 Water | 02/24/2020 15:00 | 1271160 |
| SB-30-S-11.5-200228 Grab Soil | 02/28/2020 10:45 | 1271161 |

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

Sample Description: SB-27-S-29-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271140
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 16:50
SDG#: LDC16-01

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.72 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.72 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.72 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.72 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.003 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.003 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 27.66 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 10 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.64 | 0.496 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 4.7 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200661AA | 03/06/2020 13:17 | Jennifer K Howe | 0.72 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456361 | 02/26/2020 16:50 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456361 | 02/26/2020 16:50 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456361 | 02/26/2020 16:50 | Client Supplied | 1 |

Sample Description: SB-27-S-29-200226 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271140
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/26/2020 16:50
SDG#: LDC16-01

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20065SLA026 | 03/09/2020 12:57 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20065SLA026 | 03/05/2020 00:00 | Laura Duquette | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A31A | 03/05/2020 16:32 | Jeremy C Giffin | 27.66 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456361 | 02/26/2020 16:50 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640018A | 03/06/2020 23:25 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640018A | 03/06/2020 01:50 | Sherry L Morrow | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404904 | 03/06/2020 10:51 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404904 | 03/05/2020 05:15 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820003A | 03/05/2020 09:21 | Larry E Bevins | 1 |

Sample Description: SB-29-S-16-200227 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271141
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 09:00
SDG#: LDC16-02

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.67 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.67 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0004 | 0.67 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.67 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | 0.037 | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | 0.047 | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | 0.009 | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | 37 | 0.8 | 79.04 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 350 | 43 | 10 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 700 | 110 | 10 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.59 | 0.516 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 7.0 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200661AA | 03/06/2020 13:39 | Jennifer K Howe | 0.67 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456361 | 02/27/2020 09:00 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456361 | 02/27/2020 09:00 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456361 | 02/27/2020 09:00 | Client Supplied | 1 |

Sample Description: SB-29-S-16-200227 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271141
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 09:00
SDG#: LDC16-02

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20065SLA026 | 03/09/2020 13:23 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20065SLA026 | 03/05/2020 00:00 | Laura Duquette | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A31A | 03/05/2020 22:11 | Jeremy C Giffin | 79.04 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456361 | 02/27/2020 09:00 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640018A | 03/10/2020 06:59 | Bridget Kovacs | 10 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640018A | 03/06/2020 01:50 | Sherry L Morrow | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404904 | 03/06/2020 10:55 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404904 | 03/05/2020 05:15 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820003A | 03/05/2020 09:21 | Larry E Bevins | 1 |

Sample Description: SB-29-S-18-200227 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271142
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 09:15
SDG#: LDC16-03

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.76 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.76 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.76 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.76 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | 0.004 | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | 0.009 | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | 0.014 | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 28.92 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.5 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.68 | 0.557 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 10.2 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|---------------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200681AA | 03/08/2020 21:24 | Laura Green | 0.76 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456361 | 02/27/2020 09:15 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456361 | 02/27/2020 09:15 | Client Supplied | 1 |
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20065SLA026 | 03/09/2020 13:47 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20065SLA026 | 03/05/2020 00:00 | Laura Duquette | 1 |

Sample Description: SB-29-S-18-200227 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271142
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 09:15
SDG#: LDC16-03

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|-----------------|-----------------|
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A31A | 03/05/2020 17:08 | Jeremy C Giffin | 28.92 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456361 | 02/27/2020 09:15 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640018A | 03/07/2020 00:30 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640018A | 03/06/2020 01:50 | Sherry L Morrow | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404904 | 03/06/2020 10:59 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404904 | 03/05/2020 05:15 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820003A | 03/05/2020 09:21 | Larry E Bevins | 1 |

Sample Description: SB-28-S-8-200227 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271143
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 09:30
SDG#: LDC16-04

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.72 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.72 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.72 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.72 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.009 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 27.7 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 5.4 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 13 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 5.63 | 0.597 | 1 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 25.6 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200661AA | 03/06/2020 14:24 | Jennifer K Howe | 0.72 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456361 | 02/27/2020 09:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456361 | 02/27/2020 09:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456361 | 02/27/2020 09:30 | Client Supplied | 1 |

Sample Description: SB-28-S-8-200227 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271143
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 09:30
SDG#: LDC16-04

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20065SLA026 | 03/09/2020 14:10 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20065SLA026 | 03/05/2020 00:00 | Laura Duquette | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A31A | 03/05/2020 17:44 | Jeremy C Giffin | 27.7 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456361 | 02/27/2020 09:30 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640018A | 03/07/2020 00:51 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640018A | 03/06/2020 01:50 | Sherry L Morrow | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404904 | 03/06/2020 11:02 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404904 | 03/05/2020 05:15 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820003A | 03/05/2020 09:21 | Larry E Bevins | 1 |

Sample Description: DUP-1-SD-200227 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271144
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 10:00
SDG#: LDC16-05

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.74 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.74 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.74 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.74 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 23.19 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.4 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.92 | 0.446 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 9.7 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200661AA | 03/06/2020 14:47 | Jennifer K Howe | 0.74 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456361 | 02/27/2020 10:00 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456361 | 02/27/2020 10:00 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456361 | 02/27/2020 10:00 | Client Supplied | 1 |

Sample Description: DUP-1-SD-200227 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271144
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 10:00
SDG#: LDC16-05

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20066SLB026 | 03/09/2020 16:12 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20066SLB026 | 03/06/2020 17:45 | Laura Duquette | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A31A | 03/05/2020 18:20 | Jeremy C Giffin | 23.19 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456361 | 02/27/2020 10:00 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640018A | 03/07/2020 01:13 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640018A | 03/06/2020 01:50 | Sherry L Morrow | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404904 | 03/06/2020 11:06 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404904 | 03/05/2020 05:15 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820003A | 03/05/2020 09:21 | Larry E Bevins | 1 |

Sample Description: DUP-2-SD-200227 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271145
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 10:10
SDG#: LDC16-06

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.71 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.71 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.71 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.71 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.005 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.005 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.01 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.4 | 29.65 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 5.7 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 14 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 5.73 | 0.868 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 30.9 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200661AA | 03/06/2020 15:09 | Jennifer K Howe | 0.71 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456361 | 02/27/2020 10:10 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456361 | 02/27/2020 10:10 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456361 | 02/27/2020 10:10 | Client Supplied | 1 |

Sample Description: DUP-2-SD-200227 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271145
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 10:10
SDG#: LDC16-06

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20071SLD026 | 03/11/2020 19:32 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 2 | 20071SLD026 | 03/11/2020 09:30 | Carolin Mejia | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A31A | 03/05/2020 19:03 | Jeremy C Giffin | 29.65 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456361 | 02/27/2020 10:10 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640018A | 03/07/2020 01:34 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640018A | 03/06/2020 01:50 | Sherry L Morrow | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404904 | 03/06/2020 11:09 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404904 | 03/05/2020 05:15 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820003A | 03/05/2020 09:21 | Larry E Bevins | 1 |

Sample Description: SB-29-S-22-200227 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271146
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 10:30
SDG#: LDC16-07

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.8 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.8 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.8 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.8 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | 0.004 | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | 0.006 | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 26.44 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.03 | 0.486 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 6.4 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200661AA | 03/06/2020 15:32 | Jennifer K Howe | 0.8 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456361 | 02/27/2020 10:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456361 | 02/27/2020 10:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456361 | 02/27/2020 10:30 | Client Supplied | 1 |

Sample Description: SB-29-S-22-200227 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271146
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 10:30
SDG#: LDC16-07

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20066SLB026 | 03/09/2020 16:59 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20066SLB026 | 03/06/2020 17:45 | Laura Duquette | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A31A | 03/05/2020 19:39 | Jeremy C Giffin | 26.44 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456361 | 02/27/2020 10:30 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640018A | 03/07/2020 01:56 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640018A | 03/06/2020 01:50 | Sherry L Morrow | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404904 | 03/06/2020 11:13 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404904 | 03/05/2020 05:15 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820003A | 03/05/2020 09:21 | Larry E Bevins | 1 |

Sample Description: SVP-4-S-5-200227 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271147
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 11:00
SDG#: LDC16-08

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.74 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.74 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.74 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.74 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | 0.004 | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | 0.007 | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.009 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.4 | 29.62 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 5.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 13 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 7.22 | 0.752 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 25.4 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200661AA | 03/06/2020 15:55 | Jennifer K Howe | 0.74 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456361 | 02/27/2020 11:00 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456361 | 02/27/2020 11:00 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456361 | 02/27/2020 11:00 | Client Supplied | 1 |

Sample Description: SVP-4-S-5-200227 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271147
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 11:00
SDG#: LDC16-08

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20066SLB026 | 03/09/2020 17:23 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20066SLB026 | 03/06/2020 17:45 | Laura Duquette | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A31A | 03/05/2020 20:15 | Jeremy C Giffin | 29.62 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456361 | 02/27/2020 11:00 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640018A | 03/07/2020 02:17 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640018A | 03/06/2020 01:50 | Sherry L Morrow | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404904 | 03/06/2020 10:11 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404904 | 03/05/2020 05:15 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820003A | 03/05/2020 09:21 | Larry E Bevins | 1 |

Sample Description: SB-28-S-14-200227 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271148
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 13:40
SDG#: LDC16-09

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.73 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.73 |
| 11995 | Toluene | 108-88-3 | 0.0007 | 0.0005 | 0.73 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.73 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | 0.006 | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | 0.18 | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | 4.3 | 0.2 | 20.55 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 13 | 4.4 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.37 | 0.571 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 8.7 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200661AA | 03/06/2020 16:17 | Jennifer K Howe | 0.73 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456361 | 02/27/2020 13:40 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456361 | 02/27/2020 13:40 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456361 | 02/27/2020 13:40 | Client Supplied | 1 |

Sample Description: SB-28-S-14-200227 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271148
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 13:40
SDG#: LDC16-09

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20066SLB026 | 03/09/2020 17:47 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20066SLB026 | 03/06/2020 17:45 | Laura Duquette | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A31A | 03/05/2020 20:52 | Jeremy C Giffin | 20.55 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456361 | 02/27/2020 13:40 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200640018A | 03/07/2020 02:39 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200640018A | 03/06/2020 01:50 | Sherry L Morrow | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404904 | 03/06/2020 11:16 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404904 | 03/05/2020 05:15 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820003A | 03/05/2020 09:21 | Larry E Bevins | 1 |

Sample Description: SVP-5-S-5-200227 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271149
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 14:00
SDG#: LDC16-10

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0007 | 1 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0005 | 1 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0008 | 1 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.002 | 1 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | 0.018 | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | 0.034 | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | 0.016 | 0.009 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | mg/kg | mg/kg | |
| 02005 | NWTPH-GX Soil C7-C12 | n.a. | N.D. | 0.4 | 30.75 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWTPH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 5.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 13 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 5.18 | 0.719 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 24.8 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200661AA | 03/06/2020 16:40 | Jennifer K Howe | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456361 | 02/27/2020 14:00 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456361 | 02/27/2020 14:00 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456361 | 02/27/2020 14:00 | Client Supplied | 1 |

Sample Description: SVP-5-S-5-200227 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271149
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 14:00
SDG#: LDC16-10

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20066SLB026 | 03/09/2020 18:10 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20066SLB026 | 03/06/2020 17:45 | Laura Duquette | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A31A | 03/05/2020 21:28 | Jeremy C Giffin | 30.75 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456361 | 02/27/2020 14:00 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200660015A | 03/10/2020 03:21 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200660015A | 03/07/2020 08:40 | Joseph Underdonk | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404904 | 03/06/2020 11:26 | Patrick J Engle | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404904 | 03/05/2020 05:15 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820003A | 03/05/2020 09:21 | Larry E Bevins | 1 |

Sample Description: SB-28-S-19.5-200227 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271150
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 14:10
SDG#: LDC16-11

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.71 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.71 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.71 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.71 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 21.09 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.4 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 1.55 | 0.649 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 9.3 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200651AA | 03/05/2020 13:18 | Stephen C Nolte | 0.71 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/27/2020 14:10 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/27/2020 14:10 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/27/2020 14:10 | Client Supplied | 1 |

Sample Description: SB-28-S-19.5-200227 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271150
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 14:10
SDG#: LDC16-11

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20066SLB026 | 03/09/2020 18:34 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20066SLB026 | 03/06/2020 17:45 | Laura Duquette | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A31A | 03/05/2020 12:49 | Jeremy C Giffin | 21.09 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/27/2020 14:10 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200660015A | 03/10/2020 03:43 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200660015A | 03/07/2020 08:40 | Joseph Underdonk | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404901 | 03/04/2020 19:07 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404901 | 03/04/2020 05:55 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820003A | 03/05/2020 09:21 | Larry E Bevins | 1 |

Sample Description: SB-28-S-24.5-200227 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271151
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 14:15
SDG#: LDC16-12

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|----------------------------------|---|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | | | | |
| | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.79 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.79 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.79 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.79 |
| GC/MS Semivolatiles | | | | | |
| | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.003 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.003 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | | | | |
| | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 22.73 |
| GC Petroleum Hydrocarbons | | | | | |
| | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.2 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 10 | 1 |
| Metals | | | | | |
| | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | N.D. | 3.08 | 5 |
| Wet Chemistry | | | | | |
| | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 4.4 | 0.50 | 1 |
| | Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200651AA | 03/05/2020 13:41 | Stephen C Nolte | 0.79 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/27/2020 14:15 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/27/2020 14:15 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/27/2020 14:15 | Client Supplied | 1 |

Sample Description: SB-28-S-24.5-200227 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271151
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 14:15
SDG#: LDC16-12

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20066SLB026 | 03/09/2020 18:58 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20066SLB026 | 03/06/2020 17:45 | Laura Duquette | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A31A | 03/05/2020 13:25 | Jeremy C Giffin | 22.73 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/27/2020 14:15 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200660015A | 03/10/2020 04:05 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200660015A | 03/07/2020 08:40 | Joseph Underdonk | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404902 | 03/06/2020 11:36 | Patrick J Engle | 5 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404902 | 03/05/2020 05:05 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820003A | 03/05/2020 09:21 | Larry E Bevins | 1 |

Sample Description: QA-1-O-200227 Grab Water
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 1271152
ELLE Group #: 2090356
Matrix: Water

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 15:10
SDG#: LDC16-13EB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|---------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | F200661AA | 03/06/2020 14:48 | Anita M Dale | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | F200661AA | 03/06/2020 14:47 | Anita M Dale | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A20A | 03/05/2020 18:38 | Erin E Durkaj | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 20065A20A | 03/05/2020 18:37 | Erin E Durkaj | 1 |

Sample Description: QA-2-O-200227 Grab Water
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 1271153
ELLE Group #: 2090356
Matrix: Water

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/27/2020 15:20
SDG#: LDC16-14EB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|---------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | F200661AA | 03/06/2020 15:10 | Anita M Dale | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | F200661AA | 03/06/2020 15:09 | Anita M Dale | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A20A | 03/05/2020 19:02 | Erin E Durkaj | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 20065A20A | 03/05/2020 19:01 | Erin E Durkaj | 1 |

Sample Description: SB-30-S-8-200228 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271154
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/28/2020 09:50
SDG#: LDC16-15

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.76 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.76 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.76 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.76 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | 0.22 | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | 0.50 | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | 0.35 | 0.009 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 26.85 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 5.1 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 13 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.35 | 0.597 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 22.7 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200651AA | 03/05/2020 14:04 | Stephen C Nolte | 0.76 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/28/2020 09:50 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/28/2020 09:50 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/28/2020 09:50 | Client Supplied | 1 |

Sample Description: SB-30-S-8-200228 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271154
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/28/2020 09:50
SDG#: LDC16-15

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20066SLB026 | 03/09/2020 19:21 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20066SLB026 | 03/06/2020 17:45 | Laura Duquette | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A31A | 03/05/2020 14:01 | Jeremy C Giffin | 26.85 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/28/2020 09:50 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200660015A | 03/10/2020 05:10 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200660015A | 03/07/2020 08:40 | Joseph Underdonk | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404901 | 03/04/2020 19:10 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404901 | 03/04/2020 05:55 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820003A | 03/05/2020 09:21 | Larry E Bevins | 1 |

Sample Description: SVP-6-S-5-200228 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271155
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/28/2020 11:30
SDG#: LDC16-16

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | 0.0006 | 0.0005 | 0.79 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.79 |
| 11995 | Toluene | 108-88-3 | 0.0007 | 0.0006 | 0.79 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.79 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | 0.030 | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | 0.036 | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | 0.033 | 0.008 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.3 | 27.17 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.9 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 12 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 3.56 | 0.655 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 18.9 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200651AA | 03/05/2020 14:26 | Stephen C Nolte | 0.79 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/28/2020 11:30 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/28/2020 11:30 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/28/2020 11:30 | Client Supplied | 1 |

Sample Description: SVP-6-S-5-200228 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271155
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/28/2020 11:30
SDG#: LDC16-16

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20066SLB026 | 03/09/2020 19:45 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20066SLB026 | 03/06/2020 17:45 | Laura Duquette | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A31A | 03/05/2020 14:37 | Jeremy C Giffin | 27.17 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/28/2020 11:30 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200660015A | 03/10/2020 05:32 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200660015A | 03/07/2020 08:40 | Joseph Underdonk | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404901 | 03/04/2020 19:13 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404901 | 03/04/2020 05:55 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820003A | 03/05/2020 09:21 | Larry E Bevins | 1 |

Sample Description: SB-30-S-15.5-200228 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271156
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/28/2020 11:40
SDG#: LDC16-17

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0005 | 0.93 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0004 | 0.93 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0006 | 0.93 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.93 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | 0.006 | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | 0.010 | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 22.01 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | 4.3 | 4.3 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | 25 | 11 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 3.88 | 0.500 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 7.7 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200651AA | 03/05/2020 14:49 | Stephen C Nolte | 0.93 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/28/2020 11:40 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/28/2020 11:40 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/28/2020 11:40 | Client Supplied | 1 |

Sample Description: SB-30-S-15.5-200228 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271156
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/28/2020 11:40
SDG#: LDC16-17

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|---------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20066SLB026 | 03/09/2020 20:09 | Linda M Hartenstine | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20066SLB026 | 03/06/2020 17:45 | Laura Duquette | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A31A | 03/05/2020 15:13 | Jeremy C Giffin | 22.01 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/28/2020 11:40 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200660015A | 03/10/2020 06:15 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200660015A | 03/07/2020 08:40 | Joseph Underdonk | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404902 | 03/05/2020 18:56 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404902 | 03/05/2020 05:05 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820003A | 03/05/2020 09:21 | Larry E Bevins | 1 |

Sample Description: QA-1-T-200224 Water
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 1271157
ELLE Group #: 2090356
Matrix: Water

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/24/2020 12:00
SDG#: LDC16-18TB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|---------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | F200661AA | 03/06/2020 15:32 | Anita M Dale | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | F200661AA | 03/06/2020 15:31 | Anita M Dale | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A20A | 03/05/2020 19:26 | Erin E Durkaj | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 20065A20A | 03/05/2020 19:25 | Erin E Durkaj | 1 |

Sample Description: QA-2-T-200224 Water
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 1271158
ELLE Group #: 2090356
Matrix: Water

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/24/2020 13:00
SDG#: LDC16-19TB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|---------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | F200661AA | 03/06/2020 15:54 | Anita M Dale | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | F200661AA | 03/06/2020 15:53 | Anita M Dale | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A20A | 03/05/2020 19:50 | Erin E Durkaj | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 20065A20A | 03/05/2020 19:49 | Erin E Durkaj | 1 |

Sample Description: QA-3-T-200224 Water
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 1271159
ELLE Group #: 2090356
Matrix: Water

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/24/2020 14:00
SDG#: LDC16-20TB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|---------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | D200662AA | 03/06/2020 07:42 | Anita M Dale | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | D200662AA | 03/06/2020 07:41 | Anita M Dale | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A20A | 03/05/2020 20:14 | Erin E Durkaj | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 20065A20A | 03/05/2020 20:13 | Erin E Durkaj | 1 |

Sample Description: QA-4-T-200224 Water
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: WW 1271160
ELLE Group #: 2090356
Matrix: Water

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/24/2020 15:00
SDG#: LDC16-21TB

| CAT No. | Analysis Name | CAS Number | Result | Method Detection Limit | Dilution Factor |
|------------------------|-----------------------|----------------------------|-------------|------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | ug/l | ug/l | |
| 13130 | Benzene | 71-43-2 | N.D. | 0.2 | 1 |
| 13130 | Ethylbenzene | 100-41-4 | N.D. | 0.4 | 1 |
| 13130 | Toluene | 108-88-3 | N.D. | 0.2 | 1 |
| 13130 | Xylene (Total) | 1330-20-7 | N.D. | 1 | 1 |
| GC Volatiles | | ECY 97-602 NWTPH-Gx | ug/l | ug/l | |
| 08273 | NWTPH-Gx water C7-C12 | n.a. | N.D. | 19 | 1 |

Sample Comments

State of Washington Lab Certification No. C457

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------|---------------------|--------|-----------|------------------------|---------------|-----------------|
| 13130 | BTEX 8260C | SW-846 8260C | 1 | F200661AA | 03/06/2020 07:26 | Anita M Dale | 1 |
| 01163 | GC/MS VOA Water Prep | SW-846 5030C | 1 | F200661AA | 03/06/2020 07:25 | Anita M Dale | 1 |
| 08273 | NWTPH-Gx water C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A20A | 03/05/2020 20:37 | Erin E Durkaj | 1 |
| 01146 | GC VOA Water Prep | SW-846 5030C | 1 | 20065A20A | 03/05/2020 20:36 | Erin E Durkaj | 1 |

Sample Description: SB-30-S-11.5-200228 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271161
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submission Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/28/2020 10:45
SDG#: LDC16-22

| CAT No. | Analysis Name | CAS Number | Dry Result | Dry Method Detection Limit | Dilution Factor |
|---|-------------------------------|--------------------------------------|--------------|----------------------------|-----------------|
| GC/MS Volatiles | | SW-846 8260C | mg/kg | mg/kg | |
| 11995 | Benzene | 71-43-2 | N.D. | 0.0004 | 0.7 |
| 11995 | Ethylbenzene | 100-41-4 | N.D. | 0.0003 | 0.7 |
| 11995 | Toluene | 108-88-3 | N.D. | 0.0005 | 0.7 |
| 11995 | Xylene (Total) | 1330-20-7 | N.D. | 0.001 | 0.7 |
| GC/MS Semivolatiles | | SW-846 8270D | mg/kg | mg/kg | |
| 10726 | 1-Methylnaphthalene | 90-12-0 | N.D. | 0.004 | 1 |
| 10726 | 2-Methylnaphthalene | 91-57-6 | N.D. | 0.004 | 1 |
| 10726 | Naphthalene | 91-20-3 | N.D. | 0.007 | 1 |
| GC Volatiles | | ECY 97-602 NWT PH-Gx | mg/kg | mg/kg | |
| 02005 | NWT PH-GX Soil C7-C12 | n.a. | N.D. | 0.2 | 21.41 |
| GC Petroleum Hydrocarbons | | ECY 97-602 NWT PH-Dx modified | mg/kg | mg/kg | |
| 08272 | Diesel Range Organics C12-C24 | n.a. | N.D. | 4.5 | 1 |
| 08272 | Heavy Range Organics C24-C40 | n.a. | N.D. | 11 | 1 |
| Metals | | SW-846 6010D Rev.4, July 2014 | mg/kg | mg/kg | |
| 06955 | Lead | 7439-92-1 | 2.01 | 0.558 | 1 |
| Wet Chemistry | | SM 2540 G-2011 %Moisture Calc | % | % | |
| 00111 | Moisture | n.a. | 10.4 | 0.50 | 1 |
| Moisture represents the loss in weight of the sample after oven drying at 103 - 105 degrees Celsius. The moisture result reported is on an as-received basis. | | | | | |

Sample Comments

State of Washington Lab Certification No. C457
Carcinogenic PAHs have been reported for this sample.

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|--------------------------------|--------------|--------|--------------|------------------------|-----------------|-----------------|
| 11995 | BTEX 8260 Soil | SW-846 8260C | 1 | A200651AA | 03/05/2020 15:11 | Stephen C Nolte | 0.7 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 1 | 202006456355 | 02/25/2020 10:45 | Client Supplied | 1 |
| 02392 | GC/MS - Field Preserved NaHSO4 | SW-846 5035A | 2 | 202006456355 | 02/25/2020 10:45 | Client Supplied | 1 |
| 07579 | GC/MS-5g Field Preserv.MeOH-NC | SW-846 5035A | 1 | 202006456355 | 02/25/2020 10:45 | Client Supplied | 1 |

Sample Description: SB-30-S-11.5-200228 Grab Soil
Facility# 204117
2021 6th Street-Bremerton, WA

Chevron c/o Leidos, Inc.
ELLE Sample #: SW 1271161
ELLE Group #: 2090356
Matrix: Soil

Project Name: 204117

Submittal Date/Time: 03/03/2020 09:50
Collection Date/Time: 02/28/2020 10:45
SDG#: LDC16-22

Laboratory Sample Analysis Record

| CAT No. | Analysis Name | Method | Trial# | Batch# | Analysis Date and Time | Analyst | Dilution Factor |
|---------|-----------------------------|-------------------------------|--------|--------------|------------------------|-------------------|-----------------|
| 10726 | Naph, 1-MN, 2-MN | SW-846 8270D | 1 | 20064SLB026 | 03/08/2020 04:47 | William H Saadeh | 1 |
| 10813 | BNA Soil Microwave APP IX | SW-846 3546 | 1 | 20064SLB026 | 03/04/2020 17:30 | Osvaldo R Sanchez | 1 |
| 02005 | NWTPH-GX Soil C7-C12 | ECY 97-602 NWTPH-Gx | 1 | 20065A31A | 03/05/2020 12:13 | Jeremy C Giffin | 21.41 |
| 06647 | GC-5g Field Preserved MeOH | SW-846 5035A | 1 | 202006456355 | 02/25/2020 10:45 | Client Supplied | n.a. |
| 08272 | NWTPH-Dx soil | ECY 97-602 NWTPH-Dx modified | 1 | 200660015A | 03/10/2020 05:53 | Bridget Kovacs | 1 |
| 11234 | WA DRO NW DX Soils (Non SG) | ECY 97-602 NWTPH-Dx 06/97 | 1 | 200660015A | 03/07/2020 08:40 | Joseph Underdonk | 1 |
| 06955 | Lead | SW-846 6010D Rev.4, July 2014 | 1 | 200641404902 | 03/05/2020 18:59 | Cindy M Gehman | 1 |
| 14049 | ICP/ICPMS-SW, 3050B - U345 | SW-846 3050B | 1 | 200641404902 | 03/05/2020 05:05 | Annamaria Kuhns | 1 |
| 00111 | Moisture | SM 2540 G-2011 %Moisture Calc | 1 | 20064820003A | 03/05/2020 09:21 | Larry E Bevins | 1 |

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 03/12/2020 17:02

Group Number: 2090356

Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

All Inorganic Initial Calibration and Continuing Calibration Blanks met acceptable method criteria unless otherwise noted on the Analysis Report.

Method Blank

| Analysis Name | Result | MDL |
|---------------------------|---|--------------|
| | mg/kg | mg/kg |
| Batch number: A200651AA | Sample number(s): 1271150-1271151,1271154-1271156,1271161 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| Batch number: A200661AA | Sample number(s): 1271140-1271141,1271143-1271149 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| Batch number: A200681AA | Sample number(s): 1271142 | |
| Benzene | N.D. | 0.0005 |
| Ethylbenzene | N.D. | 0.0004 |
| Toluene | N.D. | 0.0006 |
| Xylene (Total) | N.D. | 0.001 |
| | ug/l | ug/l |
| Batch number: D200662AA | Sample number(s): 1271159 | |
| Benzene | N.D. | 0.2 |
| Ethylbenzene | N.D. | 0.4 |
| Toluene | N.D. | 0.2 |
| Xylene (Total) | N.D. | 1 |
| Batch number: F200661AA | Sample number(s): 1271152-1271153,1271157-1271158,1271160 | |
| Benzene | N.D. | 0.2 |
| Ethylbenzene | N.D. | 0.4 |
| Toluene | N.D. | 0.2 |
| Xylene (Total) | N.D. | 1 |
| | mg/kg | mg/kg |
| Batch number: 20064SLB026 | Sample number(s): 1271161 | |
| 1-Methylnaphthalene | N.D. | 0.003 |
| 2-Methylnaphthalene | N.D. | 0.003 |
| Naphthalene | N.D. | 0.007 |
| Batch number: 20065SLA026 | Sample number(s): 1271140-1271143 | |
| 1-Methylnaphthalene | N.D. | 0.003 |
| 2-Methylnaphthalene | N.D. | 0.003 |
| Naphthalene | N.D. | 0.007 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 03/12/2020 17:02

Group Number: 2090356

Method Blank (continued)

| Analysis Name | Result | MDL |
|-------------------------------|---|-------|
| | mg/kg | mg/kg |
| Batch number: 20066SLB026 | Sample number(s): 1271144,1271146-1271151,1271154-1271156 | |
| 1-Methylnaphthalene | N.D. | 0.003 |
| 2-Methylnaphthalene | N.D. | 0.003 |
| Naphthalene | N.D. | 0.007 |
| Batch number: 20071SLD026 | Sample number(s): 1271145 | |
| 1-Methylnaphthalene | N.D. | 0.003 |
| 2-Methylnaphthalene | N.D. | 0.003 |
| Naphthalene | N.D. | 0.007 |
| Batch number: 20065A31A | Sample number(s): 1271140-1271151,1271154-1271156,1271161 | |
| NWTPH-GX Soil C7-C12 | N.D. | 0.2 |
| | ug/l | ug/l |
| Batch number: 20065A20A | Sample number(s): 1271152-1271153,1271157-1271160 | |
| NWTPH-Gx water C7-C12 | N.D. | 19 |
| | mg/kg | mg/kg |
| Batch number: 200640018A | Sample number(s): 1271140-1271148 | |
| Diesel Range Organics C12-C24 | N.D. | 4.0 |
| Heavy Range Organics C24-C40 | N.D. | 10 |
| Batch number: 200660015A | Sample number(s): 1271149-1271151,1271154-1271156,1271161 | |
| Diesel Range Organics C12-C24 | N.D. | 4.0 |
| Heavy Range Organics C24-C40 | N.D. | 10 |
| Batch number: 200641404901 | Sample number(s): 1271150,1271154-1271155 | |
| Lead | N.D. | 0.600 |
| Batch number: 200641404902 | Sample number(s): 1271151,1271156,1271161 | |
| Lead | N.D. | 0.600 |
| Batch number: 200641404904 | Sample number(s): 1271140-1271149 | |
| Lead | N.D. | 0.600 |

LCS/LCSD

| Analysis Name | LCS Spike Added | LCS Conc | LCSD Spike Added | LCSD Conc | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|-------------------------|---|----------|------------------|-----------|----------|-----------|-----------------|-----|---------|
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: A200651AA | Sample number(s): 1271150-1271151,1271154-1271156,1271161 | | | | | | | | |
| Benzene | 0.0200 | 0.0187 | 0.0200 | 0.0185 | 93 | 93 | 80-120 | 1 | 30 |
| Ethylbenzene | 0.0200 | 0.0199 | 0.0200 | 0.0195 | 99 | 97 | 78-120 | 2 | 30 |
| Toluene | 0.0200 | 0.0192 | 0.0200 | 0.0188 | 96 | 94 | 80-120 | 2 | 30 |
| Xylene (Total) | 0.0600 | 0.0596 | 0.0600 | 0.0587 | 99 | 98 | 75-120 | 2 | 30 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 03/12/2020 17:02

Group Number: 2090356

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---------------------------|---|----------------|------------------------|-----------------|----------|-----------|-----------------|-----|---------|
| Batch number: A200661AA | Sample number(s): 1271140-1271141,1271143-1271149 | | | | | | | | |
| Benzene | 0.0200 | 0.0194 | 0.0200 | 0.0195 | 97 | 98 | 80-120 | 1 | 30 |
| Ethylbenzene | 0.0200 | 0.0206 | 0.0200 | 0.0203 | 103 | 101 | 78-120 | 2 | 30 |
| Toluene | 0.0200 | 0.0198 | 0.0200 | 0.0196 | 99 | 98 | 80-120 | 1 | 30 |
| Xylene (Total) | 0.0600 | 0.0621 | 0.0600 | 0.0615 | 103 | 103 | 75-120 | 1 | 30 |
| Batch number: A200681AA | Sample number(s): 1271142 | | | | | | | | |
| Benzene | 0.0200 | 0.0194 | 0.0200 | 0.0188 | 97 | 94 | 80-120 | 3 | 30 |
| Ethylbenzene | 0.0200 | 0.0205 | 0.0200 | 0.0198 | 103 | 99 | 78-120 | 4 | 30 |
| Toluene | 0.0200 | 0.0198 | 0.0200 | 0.0191 | 99 | 96 | 80-120 | 3 | 30 |
| Xylene (Total) | 0.0600 | 0.0622 | 0.0600 | 0.0598 | 104 | 100 | 75-120 | 4 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: D200662AA | Sample number(s): 1271159 | | | | | | | | |
| Benzene | 20 | 20.2 | 20 | 22.5 | 101 | 113 | 80-120 | 11 | 30 |
| Ethylbenzene | 20 | 19.59 | 20 | 21.66 | 98 | 108 | 80-120 | 10 | 30 |
| Toluene | 20 | 20.67 | 20 | 22.67 | 103 | 113 | 80-120 | 9 | 30 |
| Xylene (Total) | 60 | 60.28 | 60 | 66.73 | 100 | 111 | 80-120 | 10 | 30 |
| Batch number: F200661AA | Sample number(s): 1271152-1271153,1271157-1271158,1271160 | | | | | | | | |
| Benzene | 20 | 21.01 | | | 105 | | 80-120 | | |
| Ethylbenzene | 20 | 19.72 | | | 99 | | 80-120 | | |
| Toluene | 20 | 20.13 | | | 101 | | 80-120 | | |
| Xylene (Total) | 60 | 59.97 | | | 100 | | 80-120 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 20064SLB026 | Sample number(s): 1271161 | | | | | | | | |
| 1-Methylnaphthalene | 1.67 | 1.39 | | | 83 | | 59-94 | | |
| 2-Methylnaphthalene | 1.67 | 1.53 | | | 92 | | 52-104 | | |
| Naphthalene | 1.67 | 1.39 | | | 83 | | 49-104 | | |
| Batch number: 20065SLA026 | Sample number(s): 1271140-1271143 | | | | | | | | |
| 1-Methylnaphthalene | 1.67 | 1.28 | | | 77 | | 59-94 | | |
| 2-Methylnaphthalene | 1.67 | 1.32 | | | 79 | | 52-104 | | |
| Naphthalene | 1.67 | 1.25 | | | 75 | | 49-104 | | |
| Batch number: 20066SLB026 | Sample number(s): 1271144,1271146-1271151,1271154-1271156 | | | | | | | | |
| 1-Methylnaphthalene | 1.67 | 1.35 | | | 81 | | 59-94 | | |
| 2-Methylnaphthalene | 1.67 | 1.41 | | | 85 | | 52-104 | | |
| Naphthalene | 1.67 | 1.34 | | | 80 | | 49-104 | | |
| Batch number: 20071SLD026 | Sample number(s): 1271145 | | | | | | | | |
| 1-Methylnaphthalene | 1.67 | 1.13 | | | 68 | | 59-94 | | |
| 2-Methylnaphthalene | 1.67 | 1.26 | | | 76 | | 52-104 | | |
| Naphthalene | 1.67 | 1.23 | | | 74 | | 49-104 | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 03/12/2020 17:02

Group Number: 2090356

LCS/LCSD (continued)

| Analysis Name | LCS Spike Added mg/kg | LCS Conc mg/kg | LCSD Spike Added mg/kg | LCSD Conc mg/kg | LCS %REC | LCSD %REC | LCS/LCSD Limits | RPD | RPD Max |
|---|--------------------------|-------------------|---------------------------|--------------------|----------|-----------|-----------------|-----|---------|
| Batch number: 20065A31A NWTPH-GX Soil C7-C12 | 11 | 11.31 | 11 | 11.24 | 103 | 102 | 55-145 | 1 | 30 |
| | ug/l | ug/l | ug/l | ug/l | | | | | |
| Batch number: 20065A20A NWTPH-Gx water C7-C12 | 1100 | 1078.89 | | | 98 | | 64-131 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 200640018A Diesel Range Organics C12-C24 | 133.34 | 101.68 | | | 76 | | 61-115 | | |
| Batch number: 200660015A Diesel Range Organics C12-C24 | 133.34 | 97.65 | | | 73 | | 61-115 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 200641404901 Lead | 3.00 | 3.17 | | | 106 | | 80-120 | | |
| Batch number: 200641404902 Lead | 3.00 | 3.42 | | | 114 | | 80-120 | | |
| Batch number: 200641404904 Lead | 3.00 | 3.20 | | | 107 | | 80-120 | | |
| | % | % | % | % | | | | | |
| Batch number: 20064820003A Moisture | 89.5 | 89.45 | | | 100 | | 99-101 | | |

MS/MSD

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

| Analysis Name | Unspiked Conc mg/kg | MS Spike Added mg/kg | MS Conc mg/kg | MSD Spike Added mg/kg | MSD Conc mg/kg | MS %Rec | MSD %Rec | MS/MSD Limits | RPD | RPD Max |
|---------------------------|------------------------|-------------------------|------------------|--------------------------|-------------------|---------|----------|---------------|-----|---------|
| Batch number: 20065SLA026 | | | | | | | | | | |
| 1-Methylnaphthalene | N.D. | 1.66 | 1.24 | 1.65 | 1.23 | 74 | 75 | 59-94 | 0 | 30 |
| 2-Methylnaphthalene | N.D. | 1.66 | 1.31 | 1.65 | 1.29 | 79 | 78 | 52-104 | 2 | 30 |
| Naphthalene | N.D. | 1.66 | 1.19 | 1.65 | 1.21 | 71 | 73 | 49-104 | 2 | 30 |
| | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 200640018A | | | | | | | | | | |
| | | | | | | | | | | |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 03/12/2020 17:02

Group Number: 2090356

MS/MSD (continued)

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike

| Analysis Name | Unspiked Conc mg/kg | MS Spike Added mg/kg | MS Conc mg/kg | MSD Spike Added mg/kg | MSD Conc mg/kg | MS %Rec | MSD %Rec | MS/MSD Limits | RPD | RPD Max |
|-------------------------------|--|-------------------------|------------------|--------------------------|-------------------|---------|----------|---------------|-----|---------|
| Diesel Range Organics C12-C24 | N.D. | 131.16 | 95.56 | | | 73 | | 61-115 | | |
| Batch number: 200660015A | Sample number(s): 1271149-1271151,1271154-1271156,1271161 UNSPK: 1271151 | | | | | | | | | |
| Diesel Range Organics C12-C24 | N.D. | 132.9 | 98.32 | | | 74 | | 61-115 | | |
| | mg/kg | mg/kg | mg/kg | mg/kg | mg/kg | | | | | |
| Batch number: 200641404902 | Sample number(s): 1271151,1271156,1271161 UNSPK: 1271151 | | | | | | | | | |
| Lead | N.D. | 2.17 | 5.07 | 2.52 | 4.92 | 233* | 195* | 75-125 | 3 | 20 |
| Batch number: 200641404904 | Sample number(s): 1271140-1271149 UNSPK: 1271147 | | | | | | | | | |
| Lead | 5.39 | 2.10 | 6.56 | 2.48 | 7.09 | 56* | 69* | 75-125 | 8 | 20 |

Laboratory Duplicate

Background (BKG) = the sample used in conjunction with the duplicate

| Analysis Name | BKG Conc mg/kg | DUP Conc mg/kg | DUP RPD | DUP RPD Max |
|-------------------------------|--|-------------------|---------|-------------|
| Batch number: 200640018A | Sample number(s): 1271140-1271148 BKG: 1271140 | | | |
| Diesel Range Organics C12-C24 | N.D. | N.D. | 0 (1) | 20 |
| Heavy Range Organics C24-C40 | N.D. | N.D. | 0 (1) | 20 |
| Batch number: 200660015A | Sample number(s): 1271149-1271151,1271154-1271156,1271161 BKG: 1271151 | | | |
| Diesel Range Organics C12-C24 | N.D. | N.D. | 0 (1) | 20 |
| Heavy Range Organics C24-C40 | N.D. | N.D. | 0 (1) | 20 |
| | mg/kg | mg/kg | | |
| Batch number: 200641404902 | Sample number(s): 1271151,1271156,1271161 BKG: 1271151 | | | |
| Lead | N.D. | N.D. | 0 (1) | 20 |
| Batch number: 200641404904 | Sample number(s): 1271140-1271149 BKG: 1271147 | | | |
| Lead | 5.39 | 4.92 | 9 (1) | 20 |

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 03/12/2020 17:02

Group Number: 2090356

Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260 Soil
Batch number: A200651AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1271150 | 98 | 103 | 97 | 94 |
| 1271151 | 101 | 102 | 96 | 94 |
| 1271154 | 102 | 100 | 96 | 94 |
| 1271155 | 102 | 100 | 96 | 92 |
| 1271156 | 101 | 103 | 97 | 94 |
| 1271161 | 102 | 100 | 96 | 94 |
| Blank | 102 | 100 | 96 | 94 |
| LCS | 100 | 102 | 100 | 98 |
| LCSD | 99 | 99 | 100 | 98 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260 Soil
Batch number: A200661AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1271140 | 103 | 103 | 96 | 92 |
| 1271141 | 102 | 106 | 95 | 96 |
| 1271143 | 104 | 103 | 94 | 91 |
| 1271144 | 103 | 103 | 95 | 93 |
| 1271145 | 104 | 100 | 95 | 92 |
| 1271146 | 103 | 102 | 95 | 93 |
| 1271147 | 104 | 104 | 95 | 92 |
| 1271148 | 104 | 103 | 94 | 92 |
| 1271149 | 103 | 104 | 95 | 92 |
| Blank | 102 | 98 | 96 | 93 |
| LCS | 101 | 102 | 99 | 98 |
| LCSD | 103 | 100 | 100 | 99 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260 Soil
Batch number: A200681AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1271142 | 102 | 103 | 96 | 96 |
| Blank | 101 | 99 | 97 | 92 |
| LCS | 102 | 99 | 100 | 99 |
| LCSD | 101 | 104 | 100 | 99 |
| Limits: | 50-141 | 54-135 | 52-141 | 50-131 |

Analysis Name: BTEX 8260C
Batch number: D200662AA

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 03/12/2020 17:02

Group Number: 2090356

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: BTEX 8260C
Batch number: D200662AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1271159 | 97 | 93 | 102 | 92 |
| Blank | 97 | 92 | 102 | 91 |
| LCS | 95 | 96 | 102 | 95 |
| LCSD | 94 | 97 | 102 | 94 |
| Limits: | 80-120 | 80-120 | 80-120 | 80-120 |

Analysis Name: BTEX 8260C
Batch number: F200661AA

| | Dibromofluoromethane | 1,2-Dichloroethane-d4 | Toluene-d8 | 4-Bromofluorobenzene |
|---------|----------------------|-----------------------|------------|----------------------|
| 1271152 | 99 | 95 | 98 | 95 |
| 1271153 | 99 | 96 | 98 | 96 |
| 1271157 | 100 | 96 | 99 | 96 |
| 1271158 | 98 | 97 | 98 | 96 |
| 1271160 | 97 | 94 | 99 | 95 |
| Blank | 99 | 95 | 99 | 95 |
| LCS | 97 | 98 | 99 | 98 |
| Limits: | 80-120 | 80-120 | 80-120 | 80-120 |

Analysis Name: Naph, 1-MN, 2-MN
Batch number: 20064SLB026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 1271161 | 70 | 84 | 79 |
| Blank | 78 | 69 | 98 |
| LCS | 84 | 80 | 100 |
| Limits: | 23-115 | 34-117 | 35-135 |

Analysis Name: Naph, 1-MN, 2-MN
Batch number: 20065SLA026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 1271140 | 90 | 93 | 105 |
| 1271141 | 82 | 90 | 103 |
| 1271142 | 83 | 85 | 89 |
| 1271143 | 50 | 52 | 45 |
| Blank | 85 | 86 | 104 |
| LCS | 75 | 81 | 93 |
| MS | 73 | 75 | 81 |
| MSD | 76 | 79 | 87 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 03/12/2020 17:02

Group Number: 2090356

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: Naph, 1-MN, 2-MN
Batch number: 20065SLA026

Limits: 23-115 34-117 35-135

Analysis Name: Naph, 1-MN, 2-MN
Batch number: 20066SLB026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 1271144 | 84 | 84 | 99 |
| 1271146 | 86 | 90 | 100 |
| 1271147 | 74 | 79 | 79 |
| 1271148 | 74 | 77 | 69 |
| 1271149 | 78 | 82 | 93 |
| 1271150 | 68 | 81 | 89 |
| 1271151 | 82 | 85 | 101 |
| 1271154 | 79 | 81 | 94 |
| 1271155 | 77 | 81 | 95 |
| 1271156 | 49 | 85 | 98 |
| Blank | 84 | 88 | 104 |
| LCS | 82 | 86 | 97 |

Limits: 23-115 34-117 35-135

Analysis Name: Naph, 1-MN, 2-MN
Batch number: 20071SLD026

| | Nitrobenzene-d5 | 2-Fluorobiphenyl | Terphenyl-d14 |
|---------|-----------------|------------------|---------------|
| 1271145 | 71 | 72 | 91 |
| Blank | 71 | 75 | 89 |
| LCS | 73 | 73 | 89 |

Limits: 23-115 34-117 35-135

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 20065A20A

| | Trifluorotoluene-F |
|---------|--------------------|
| 1271152 | 80 |
| 1271153 | 78 |
| 1271157 | 80 |
| 1271158 | 78 |
| 1271159 | 82 |
| 1271160 | 76 |
| Blank | 78 |
| LCS | 90 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 03/12/2020 17:02

Group Number: 2090356

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Gx water C7-C12
Batch number: 20065A20A

Limits: 50-150

Analysis Name: NWTPH-GX Soil C7-C12
Batch number: 20065A31A

| | Trifluorotoluene-F |
|---------|--------------------|
| 1271140 | 122 |
| 1271141 | 106 |
| 1271142 | 106 |
| 1271143 | 82 |
| 1271144 | 79 |
| 1271145 | 74 |
| 1271146 | 89 |
| 1271147 | 69 |
| 1271148 | 84 |
| 1271149 | 92 |
| 1271150 | 120 |
| 1271151 | 95 |
| 1271154 | 83 |
| 1271155 | 92 |
| 1271156 | 84 |
| 1271161 | 107 |
| Blank | 95 |
| LCS | 108 |
| LCSD | 108 |

Limits: 50-150

Analysis Name: NWTPH-Dx soil
Batch number: 200640018A

| | Orthoterphenyl |
|---------|----------------|
| 1271140 | 105 |
| 1271141 | 109 |
| 1271142 | 103 |
| 1271143 | 100 |
| 1271144 | 105 |
| 1271145 | 96 |
| 1271146 | 104 |
| 1271147 | 99 |
| 1271148 | 105 |
| Blank | 107 |
| DUP | 103 |
| LCS | 105 |

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o Leidos, Inc.
Reported: 03/12/2020 17:02

Group Number: 2090356

Surrogate Quality Control (continued)

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: NWTPH-Dx soil

Batch number: 200640018A

Orthoterphenyl

| | |
|----|-----|
| MS | 100 |
|----|-----|

Limits: 50-150

Analysis Name: NWTPH-Dx soil

Batch number: 200660015A

Orthoterphenyl

| | |
|---------|-----|
| 1271149 | 89 |
| 1271150 | 104 |
| 1271151 | 101 |
| 1271154 | 93 |
| 1271155 | 98 |
| 1271156 | 99 |
| 1271161 | 93 |
| Blank | 99 |
| DUP | 99 |
| LCS | 104 |
| MS | 102 |

Limits: 50-150

*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The unspiked result was more than four times the spike added.

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

Acct. # 13271 For Eurofins Lancaster Laboratories Environmental use only
Group # 2090356 Sample # 1271140-61
Instructions on reverse side correspond with circled numbers.

Page 3 of 4

| 1 Client Information | | | | 4 Matrix | | | | 5 Analyses Requested | | | | | | | | | | 6 Remarks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|-------------|------------------------------------|----------|---|-----------|--|----------|---|----------------------------|---|-------------------------------|---|----------------|-----------------|----------|---|---|---------------------------------|---------------------------------|--|--------------------------------|-------------------------------|-----------------------|---|---|---|---|---------------------------------|---|---------------------------------|---|--|---|---|---|---|---|---------------------------------|---|---------------------------------|---|--|--|--------------------------------|--|---------------------|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--|--------------|--|
| Facility # <u>204117</u> | | WBS | | Sediment <input type="checkbox"/> | | Ground <input type="checkbox"/> | | Surface <input type="checkbox"/> | | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td colspan="2">Total Number of Containers</td> <td colspan="2">8021 <input type="checkbox"/></td> <td colspan="2">8260 <input type="checkbox"/></td> <td colspan="2">Naphth <input type="checkbox"/></td> <td colspan="2">8260 full scan</td> <td colspan="2">Oxygenates</td> <td colspan="2">NWTPH-Gx</td> <td colspan="2">NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/></td> <td colspan="2">NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/></td> <td colspan="2">WA VPH <input type="checkbox"/></td> <td colspan="2">WA EPH <input type="checkbox"/></td> <td colspan="2">Lead Total <input checked="" type="checkbox"/></td> <td colspan="2">Diss. <input type="checkbox"/></td> <td colspan="2">Method <u>6010B</u></td> </tr> <tr> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> </tr> <tr> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> </tr> <tr> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> <td colspan="2"></td> </tr> </table> | | | | | | | | | | Total Number of Containers | | 8021 <input type="checkbox"/> | | 8260 <input type="checkbox"/> | | Naphth <input type="checkbox"/> | | 8260 full scan | | Oxygenates | | NWTPH-Gx | | NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> | | NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> | | WA VPH <input type="checkbox"/> | | WA EPH <input type="checkbox"/> | | Lead Total <input checked="" type="checkbox"/> | | Diss. <input type="checkbox"/> | | Method <u>6010B</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | SCR #: _____ | |
| Total Number of Containers | | 8021 <input type="checkbox"/> | | 8260 <input type="checkbox"/> | | Naphth <input type="checkbox"/> | | 8260 full scan | | | | | | | | | | | | Oxygenates | | NWTPH-Gx | | NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> | | NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> | | WA VPH <input type="checkbox"/> | | WA EPH <input type="checkbox"/> | | Lead Total <input checked="" type="checkbox"/> | | Diss. <input type="checkbox"/> | | Method <u>6010B</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
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| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Site Address <u>2021 6th Street, Bremerton, WA</u> | | Chevron PM <u>James Kiernan</u> | | Lead Consultant <u>Leidos</u> | | Consultant/Office <u>Leidos / Bothell, WA</u> | | Consultant Project Mgr. <u>Russ Shropshire</u> | | Consultant Phone # <u>425-482-3323</u> | | Sampler <u>CMW / TED</u> | | 3 | | Composite <input checked="" type="checkbox"/> | | Soil <input type="checkbox"/> | | Water <input type="checkbox"/> | | Oil <input type="checkbox"/> | | Air <input type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 2 Sample Identification | | Collected | | Grab | Composite | Soil | Water | Oil | Total Number of Containers | 8021 <input checked="" type="checkbox"/> | 8260 <input type="checkbox"/> | Naphth <input type="checkbox"/> | 8260 full scan | Oxygenates | NWTPH-Gx | NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> | NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> | WA VPH <input type="checkbox"/> | WA EPH <input type="checkbox"/> | Lead Total <input checked="" type="checkbox"/> | Diss. <input type="checkbox"/> | Method <u>6010B</u> | 3 Naphthalenes (8270) | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Date | Time | X | X | | | | | | | | | | | | | | | | | | | | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>SB-27-29</u> | <u>2/26</u> | <u>1650</u> | <u>X</u> | | <u>X</u> | | | | <u>7</u> | <u>X</u> | | | | <u>X</u> | | <u>X</u> | <u>X</u> | | | <u>X</u> | <u>X</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>SB-29-16</u> | <u>2/27</u> | <u>0900</u> | <u>X</u> | | <u>X</u> | | | | <u>7</u> | <u>X</u> | | | | <u>X</u> | | <u>X</u> | <u>X</u> | | | <u>X</u> | <u>X</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>SB-29-18</u> | <u>2/27</u> | <u>0915</u> | <u>X</u> | | <u>X</u> | | | | <u>7</u> | <u>X</u> | | | | <u>X</u> | | <u>X</u> | <u>X</u> | | | <u>X</u> | <u>X</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>SB-28-8</u> | <u>2/27</u> | <u>0930</u> | <u>X</u> | | <u>X</u> | | | | <u>7</u> | <u>X</u> | | | | <u>X</u> | | <u>X</u> | <u>X</u> | | | <u>X</u> | <u>X</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>DUP-1-022720</u> | <u>2/27</u> | <u>1000</u> | <u>X</u> | | <u>X</u> | | | | <u>7</u> | <u>X</u> | | | | <u>X</u> | | <u>X</u> | <u>X</u> | | | <u>X</u> | <u>X</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>DUP-2-022720</u> | <u>2/27</u> | <u>1010</u> | <u>X</u> | | <u>X</u> | | | | <u>7</u> | <u>X</u> | | | | <u>X</u> | | <u>X</u> | <u>X</u> | | | <u>X</u> | <u>X</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>SB-29-22</u> | <u>2/27</u> | <u>1030</u> | <u>X</u> | | <u>X</u> | | | | <u>7</u> | <u>X</u> | | | | <u>X</u> | | <u>X</u> | <u>X</u> | | | <u>X</u> | <u>X</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>SVP-4-5</u> | <u>2/27</u> | <u>1100</u> | <u>X</u> | | <u>X</u> | | | | <u>7</u> | <u>X</u> | | | | <u>X</u> | | <u>X</u> | <u>X</u> | | | <u>X</u> | <u>X</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>SVP-28-14</u> | <u>2/27</u> | <u>1340</u> | <u>X</u> | | <u>X</u> | | | | <u>7</u> | <u>X</u> | | | | <u>X</u> | | <u>X</u> | <u>X</u> | | | <u>X</u> | <u>X</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>SVP-5-5</u> | <u>2/27</u> | <u>1400</u> | <u>X</u> | | <u>X</u> | | | | <u>7</u> | <u>X</u> | | | | <u>X</u> | | <u>X</u> | <u>X</u> | | | <u>X</u> | <u>X</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>SB-28-19.5</u> | <u>2/27</u> | <u>1410</u> | <u>X</u> | | <u>X</u> | | | | <u>7</u> | <u>X</u> | | | | <u>X</u> | | <u>X</u> | <u>X</u> | | | <u>X</u> | <u>X</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>SB-28-24.5</u> | <u>2/27</u> | <u>1415</u> | <u>X</u> | | <u>X</u> | | | | <u>7</u> | <u>X</u> | | | | <u>X</u> | | <u>X</u> | <u>X</u> | | | <u>X</u> | <u>X</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>ER-1-022720</u> | <u>2/27</u> | <u>1510</u> | <u>X</u> | | | | <u>X</u> | | <u>6</u> | <u>X</u> | | | | <u>X</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 Turnaround Time Requested (TAT) (please circle) | | | | Relinquished by <u>Thomas Dite</u> | | | | Date <u>3-20-20</u> | | Time <u>1515</u> | | Received by _____ | | | | Date _____ | | Time _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="radio"/> Standard 5 day 4 day <input type="radio"/> 72 hour 48 hour 24 hour | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 Data Package (circle if required) | | | | Relinquished by Commercial Carrier: | | | | Received by _____ | | | | Date <u>3/2/20</u> | | Time <u>950</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="radio"/> Type I - Full <input type="radio"/> Type VI (Raw Data) | | | | <input checked="" type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other _____ | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| EDD (circle if required) | | | | CVX-RTBU-FI_05 (default) | | | | Temperature Upon Receipt <u>0.9/3.1</u> °C | | | | Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |

Chevron Northwest Region Analysis Request/Chain of Custody



Lancaster Laboratories
Environmental

Act. # 13271 For Eurofins Lancaster Laboratories Environmental use only
Group # 2090354 Sample # 1271140-61
Instructions on reverse side correspond with circled numbers.

Page 4 of 4

| 1 Client Information | | | | 4 Matrix | | | | 5 Analyses Requested | | | | | | | | | | 6 Remarks | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|---|-------------|-------------|-------------------------------------|--|-------------------------------------|---|-------|----------------------------------|----------------------------|-------------------------------------|------|--|--------|------------------------------|------------|---|----------------------------------|-------------------------------------|--------|---|------------|-------------------------------|--------|-------------------------------|--|---------------------------------|--|---|--|------------|--|----------|--|---|--|---|--|---------------------------------|--|---------------------------------|--|--|--|--------------------------------|--|---------------------|--|-----------------------|--|--------------|--|
| Facility # <u>204117</u> | | WBS | | Sediment <input type="checkbox"/> | | Ground <input type="checkbox"/> | | Surface <input type="checkbox"/> | | Potable <input type="checkbox"/> | | NPDES <input type="checkbox"/> | | Air <input type="checkbox"/> | | Oil <input type="checkbox"/> | | Total Number of Containers | | BTX + MTBE <input type="checkbox"/> | | 8021 <input type="checkbox"/> | | 8260 <input type="checkbox"/> | | Naphth <input type="checkbox"/> | | 8260 full scan | | Oxygenates | | NWTPH-Gx | | NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> | | NWTPH-Dx without Silica Gel Cleanup <input checked="" type="checkbox"/> | | WA VPH <input type="checkbox"/> | | WA EPH <input type="checkbox"/> | | Lead Total <input checked="" type="checkbox"/> | | Diss. <input type="checkbox"/> | | Method <u>6010B</u> | | 3 Naphthalenes (8270) | | SCR #: _____ | |
| Site Address <u>2021 6th Street, Bremerton, WA</u> | | | | Chevron PM <u>James Kiernan</u> | | | | Lead Consultant <u>Leidos</u> | | | | Consultant/Office <u>Leidos / Bothell, WA</u> | | | | Consultant Project Mgr. <u>Russ Shropshire</u> | | | | Consultant Phone # <u>425-482-3323</u> | | | | Sampler <u>CMW/JED</u> | | | | <input type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy's on highest hit <input type="checkbox"/> Run ___ oxy's on all hits | | | | | | | | | | | | | | | | | | | | | | | |
| 2 Sample Identification | | Collected | | 3 Grab | Composite | Soil | Water | Oil | Total Number of Containers | BTX + MTBE | 8021 | 8260 | Naphth | 8260 full scan | Oxygenates | NWTPH-Gx | NWTPH-Dx with Silica Gel Cleanup | NWTPH-Dx without Silica Gel Cleanup | WA VPH | WA EPH | Lead Total | Diss. | Method | 3 Naphthalenes (8270) | 6 Remarks | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Date | Time | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>ER-2-022720</u> | <u>2/27</u> | <u>1520</u> | <input checked="" type="checkbox"/> | | | | | | <u>6</u> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | Invoice to Leidos P010229412 | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>SB-30-8</u> | <u>2/28</u> | <u>0950</u> | <input checked="" type="checkbox"/> | | <input checked="" type="checkbox"/> | | | | <u>7</u> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>SVP-6-5</u> | <u>2/28</u> | <u>1130</u> | <input checked="" type="checkbox"/> | | <input checked="" type="checkbox"/> | | | | <u>7</u> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>SB-30-15.5</u> | <u>2/28</u> | <u>1140</u> | <input checked="" type="checkbox"/> | | <input checked="" type="checkbox"/> | | | | <u>7</u> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>TB-1-022420</u> | <u>2/24</u> | <u>1700</u> | <input checked="" type="checkbox"/> | | | <input checked="" type="checkbox"/> | | | <u>4</u> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>TB-2-022420</u> | <u>2/24</u> | <u>1300</u> | <input checked="" type="checkbox"/> | | | <input checked="" type="checkbox"/> | | | <u>4</u> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>TB-3-022420</u> | <u>2/24</u> | <u>1400</u> | <input checked="" type="checkbox"/> | | | <input checked="" type="checkbox"/> | | | <u>4</u> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>TB-4-022420</u> | <u>2/24</u> | <u>1500</u> | <input checked="" type="checkbox"/> | | | <input checked="" type="checkbox"/> | | | <u>4</u> | <input checked="" type="checkbox"/> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| <u>Thomas Dube</u> | | | | 7 Turnaround Time Requested (TAT) (please circle) | | Relinquished by | | Date | | Time | | Received by | | Date | | Time | | 9 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | <input checked="" type="radio"/> Standard 5 day 4 day <input type="radio"/> 72 hour 48 hour 24 hour | | <u>Thomas Dube</u> | | <u>3-2-20</u> | | <u>1515</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 8 Data Package (circle if required) | | Relinquished by Commercial Carrier: | | Date | | Time | | Received by | | Date | | Time | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | <input checked="" type="radio"/> Type I - Full <input type="radio"/> Type VI (Raw Data) | | <input checked="" type="checkbox"/> UPS <input type="checkbox"/> FedEx <input type="checkbox"/> Other | | | | | | <u>[Signature]</u> | | <u>3/3/2020</u> | | <u>950</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | 9 EDD (circle if required) | | Temperature Upon Receipt | | Custody Seals Intact? | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | <input type="checkbox"/> CVX-RTBU-FI_05 (default) Other: _____ | | <u>0.9/3.1 °C</u> | | <u>Yes</u> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



Client: CHEVRON NORTHWEST REGION

Delivery and Receipt Information

Delivery Method: UPS Arrival Date: 03/03/2020
 Number of Packages: 4 Number of Projects: 1

Arrival Condition Summary

| | | | |
|--------------------------------------|-----|-------------------------------------|-----|
| Shipping Container Sealed: | Yes | Sample IDs on COC match Containers: | Yes |
| Custody Seal Present: | Yes | Sample Date/Times match COC: | Yes |
| Custody Seal Intact: | Yes | Total Trip Blank Qty: | 16 |
| Samples Chilled: | Yes | Trip Blank Type: | HCI |
| Paperwork Enclosed: | Yes | Air Quality Samples Present: | No |
| Samples Intact: | Yes | | |
| Missing Samples: | No | | |
| Extra Samples: | Yes | | |
| Discrepancy in Container Qty on COC: | No | | |

Unpacked by Jessenia Colon Martinez

Samples Chilled Details

Thermometer Types: DT = Digital (Temp. Bottle) IR = Infrared (Surface Temp) All Temperatures in °C.

| Cooler # | Thermometer ID | Corrected Temp | Therm. Type | Ice Type | Ice Present? | Ice Container | Elevated Temp? |
|----------|----------------|----------------|-------------|----------|--------------|---------------|----------------|
| 1 | DT146 | 1.1 | DT | Wet | Y | Bagged | N |
| 2 | DT146 | 1.0 | DT | Wet | Y | Bagged | N |
| 3 | DT146 | 0.9 | DT | Wet | Y | Bagged | N |
| 4 | DT146 | 3.1 | DT | Wet | Y | Bagged | N |

Extra Sample Details

| Sample ID on Label | Number of Extra Containers | Date on Label | Comments |
|--------------------|----------------------------|-----------------|----------|
| SB30-11.5 | 7 | 3/25/2020 10:45 | |

Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

| | | | |
|-------------------------|--|-----------------|-------------------------------|
| BMQL | Below Minimum Quantitation Level | mL | milliliter(s) |
| C | degrees Celsius | MPN | Most Probable Number |
| cfu | colony forming units | N.D. | non-detect |
| CP Units | cobalt-chloroplatinate units | ng | nanogram(s) |
| F | degrees Fahrenheit | NTU | nephelometric turbidity units |
| g | gram(s) | pg/L | picogram/liter |
| IU | International Units | RL | Reporting Limit |
| kg | kilogram(s) | TNTC | Too Numerous To Count |
| L | liter(s) | µg | microgram(s) |
| lb. | pound(s) | µL | microliter(s) |
| m3 | cubic meter(s) | umhos/cm | micromhos/cm |
| meq | milliequivalents | MCL | Maximum Contamination Limit |
| mg | milligram(s) | | |
| < | less than | | |
| > | greater than | | |
| ppm | parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg) or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter per liter of gas. | | |
| ppb | parts per billion | | |
| Dry weight basis | Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis. | | |

Analytical test results meet all requirements of the associated regulatory program (i.e., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis.

Measurement uncertainty values, as applicable, are available upon request.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff.

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Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" are not performed within 15 minutes.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. THE FOREGOING EXPRESS WARRANTY IS EXCLUSIVE AND IS GIVEN IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED. WE DISCLAIM ANY OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING A WARRANTY OF FITNESS FOR PARTICULAR PURPOSE AND WARRANTY OF MERCHANTABILITY. IN NO EVENT SHALL EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL, LLC BE LIABLE FOR INDIRECT, SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES INCLUDING, BUT NOT LIMITED TO, DAMAGES FOR LOSS OF PROFIT OR GOODWILL REGARDLESS OF (A) THE NEGLIGENCE (EITHER SOLE OR CONCURRENT) OF EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL AND (B) WHETHER EUROFINS LANCASTER LABORATORIES ENVIRONMENTAL HAS BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. We accept no legal responsibility for the purposes for which the client uses the test results. No purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Data Qualifiers

| Qualifier | Definition |
|----------------|---|
| C | Result confirmed by reanalysis |
| D1 | Indicates for dual column analyses that the result is reported from column 1 |
| D2 | Indicates for dual column analyses that the result is reported from column 2 |
| E | Concentration exceeds the calibration range |
| K1 | Initial Calibration Blank is above the QC limit and the sample result is ND |
| K2 | Continuing Calibration Blank is above the QC limit and the sample result is ND |
| K3 | Initial Calibration Verification is above the QC limit and the sample result is ND |
| K4 | Continuing Calibration Verification is above the QC limit and the sample result is ND |
| J (or G, I, X) | Estimated value \geq the Method Detection Limit (MDL or DL) and $<$ the Limit of Quantitation (LOQ or RL) |
| P | Concentration difference between the primary and confirmation column $>40\%$. The lower result is reported. |
| P^ | Concentration difference between the primary and confirmation column $> 40\%$. The higher result is reported. |
| U | Analyte was not detected at the value indicated |
| V | Concentration difference between the primary and confirmation column $>100\%$. The reporting limit is raised due to this disparity and evident interference. |
| W | The dissolved oxygen uptake for the unseeded blank is greater than 0.20 mg/L. |
| Z | Laboratory Defined - see analysis report |

Additional Organic and Inorganic CLP qualifiers may be used with Form 1 reports as defined by the CLP methods. Qualifiers specific to Dioxin/Furans and PCB Congeners are detailed on the individual Analysis Report.

07 April 2020

Russ Shropshire
Leidos -WA
18939 120th Ave NE, Ste 112
Bothell, WA 98011

H&P Project: LD033020-11
Client Project: 204117 / Bremerton, WA

Dear Russ Shropshire:



Enclosed is the analytical report for the above referenced project. The data herein applies to samples as received by H&P Mobile Geochemistry, Inc. on 30-Mar-20 which were analyzed in accordance with the attached Chain of Custody record(s).

The results for all sample analyses and required QA/QC analyses are presented in the following sections and summarized in the documents:

- Sample Summary
- Case Narrative (if applicable)
- Sample Results
- Quality Control Summary
- Notes and Definitions / Appendix
- Chain of Custody
- Sampling Logs (if applicable)

Unless otherwise noted, I certify that all analyses were performed and reviewed in compliance with our Quality Systems Manual and Standard Operating Procedures. This report shall not be reproduced, except in full, without the written approval of H&P Mobile Geochemistry, Inc.

We at H&P Mobile Geochemistry, Inc. sincerely appreciate the opportunity to provide analytical services to you on this project. If you have any questions or concerns regarding this analytical report, please contact me at your convenience at 760-804-9678.

Sincerely,

A handwritten signature in blue ink that reads 'Janis La Roux'.

Janis La Roux
Laboratory Director

H&P Mobile Geochemistry, Inc. is certified under the California ELAP and the National Environmental Laboratory Accreditation Conference (NELAC). H&P is approved as an Environmental Testing Laboratory and Mobile Laboratory in accordance with the DoD-ELAP Program and ISO/IEC 17025:2005 programs, accreditation number 69070 for EPA Method TO-15, H&P Method TO-15, EPA Method 8260B and H&P 8260SV.

Leidos -WA
18939 120th Ave NE, Ste 112
Bothell, WA 98011

Project: LD033020-11
Project Number: 204117 / Bremerton, WA
Project Manager: Russ Shropshire

Reported:
07-Apr-20 13:13

ANALYTICAL REPORT FOR SAMPLES

| Sample ID | Laboratory ID | Matrix | Date Sampled | Date Received |
|--------------|---------------|--------|--------------|---------------|
| EB-1-032420 | E003092-01 | Vapor | 24-Mar-20 | 30-Mar-20 |
| SVP-4-032520 | E003092-02 | Vapor | 25-Mar-20 | 30-Mar-20 |
| SVP-5-032520 | E003092-03 | Vapor | 25-Mar-20 | 30-Mar-20 |
| SVP-6-032520 | E003092-04 | Vapor | 25-Mar-20 | 30-Mar-20 |
| DUP-1-032520 | E003092-05 | Vapor | 25-Mar-20 | 30-Mar-20 |

Leidos -WA
18939 120th Ave NE, Ste 112
Bothell, WA 98011

Project: LD033020-11
Project Number: 204117 / Bremerton, WA
Project Manager: Russ Shropshire

Reported:
07-Apr-20 13:13

Soil Vapor/Air Analysis by ASTM D1945

H&P Mobile Geochemistry, Inc.

| Analyte | Result | MDL | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|--------|-----|-----------------|-------|-----------------|---------|-----------|-----------|------------|-------|
| EB-1-032420 (E003092-01) Vapor Sampled: 24-Mar-20 Received: 30-Mar-20 | | | | | | | | | | |
| Carbon dioxide | ND | | 0.20 | % | 1 | ED00114 | 01-Apr-20 | 01-Apr-20 | ASTM D1945 | |
| Oxygen | 11 | | 0.20 | " | " | " | " | " | " | |
| Nitrogen | 89 | | 0.20 | " | " | " | " | " | " | |
| Methane | ND | | 1.0 | " | " | " | " | " | " | |
| SVP-4-032520 (E003092-02) Vapor Sampled: 25-Mar-20 Received: 30-Mar-20 | | | | | | | | | | |
| Carbon dioxide | 1.8 | | 0.20 | % | 1 | ED00114 | 01-Apr-20 | 01-Apr-20 | ASTM D1945 | |
| Oxygen | 16 | | 0.20 | " | " | " | " | " | " | |
| Nitrogen | 82 | | 0.20 | " | " | " | " | " | " | |
| Methane | ND | | 1.0 | " | " | " | " | " | " | |
| SVP-5-032520 (E003092-03) Vapor Sampled: 25-Mar-20 Received: 30-Mar-20 | | | | | | | | | | |
| Carbon dioxide | 1.2 | | 0.20 | % | 1 | ED00114 | 01-Apr-20 | 01-Apr-20 | ASTM D1945 | |
| Oxygen | 19 | | 0.20 | " | " | " | " | " | " | |
| Nitrogen | 80 | | 0.20 | " | " | " | " | " | " | |
| Methane | ND | | 1.0 | " | " | " | " | " | " | |
| SVP-6-032520 (E003092-04) Vapor Sampled: 25-Mar-20 Received: 30-Mar-20 | | | | | | | | | | |
| Carbon dioxide | 1.4 | | 0.20 | % | 1 | ED00114 | 01-Apr-20 | 01-Apr-20 | ASTM D1945 | |
| Oxygen | 19 | | 0.20 | " | " | " | " | " | " | |
| Nitrogen | 80 | | 0.20 | " | " | " | " | " | " | |
| Methane | ND | | 1.0 | " | " | " | " | " | " | |
| DUP-1-032520 (E003092-05) Vapor Sampled: 25-Mar-20 Received: 30-Mar-20 | | | | | | | | | | |
| Carbon dioxide | 1.1 | | 0.20 | % | 1 | ED00114 | 01-Apr-20 | 01-Apr-20 | ASTM D1945 | |
| Oxygen | 20 | | 0.20 | " | " | " | " | " | " | |
| Nitrogen | 79 | | 0.20 | " | " | " | " | " | " | |
| Methane | ND | | 1.0 | " | " | " | " | " | " | |

Leidos -WA
18939 120th Ave NE, Ste 112
Bothell, WA 98011

Project: LD033020-11
Project Number: 204117 / Bremerton, WA
Project Manager: Russ Shropshire

Reported:
07-Apr-20 13:13

Soil Vapor/Air Analysis by ASTM D1945M

H&P Mobile Geochemistry, Inc.

| Analyte | Result | MDL | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|--------|-----|--------------------|-------|--------------------|---------|-----------|-----------|-------------|-------|
| EB-1-032420 (E003092-01) Vapor Sampled: 24-Mar-20 Received: 30-Mar-20 | | | | | | | | | | |
| Helium (LCC) | ND | | 0.10 | % | 1 | ED00114 | 01-Apr-20 | 01-Apr-20 | ASTM D1945M | |
| SVP-4-032520 (E003092-02) Vapor Sampled: 25-Mar-20 Received: 30-Mar-20 | | | | | | | | | | |
| Helium (LCC) | ND | | 0.10 | % | 1 | ED00114 | 01-Apr-20 | 01-Apr-20 | ASTM D1945M | |
| SVP-5-032520 (E003092-03) Vapor Sampled: 25-Mar-20 Received: 30-Mar-20 | | | | | | | | | | |
| Helium (LCC) | ND | | 0.10 | % | 1 | ED00114 | 01-Apr-20 | 01-Apr-20 | ASTM D1945M | |
| SVP-6-032520 (E003092-04) Vapor Sampled: 25-Mar-20 Received: 30-Mar-20 | | | | | | | | | | |
| Helium (LCC) | ND | | 0.10 | % | 1 | ED00114 | 01-Apr-20 | 01-Apr-20 | ASTM D1945M | |
| DUP-1-032520 (E003092-05) Vapor Sampled: 25-Mar-20 Received: 30-Mar-20 | | | | | | | | | | |
| Helium (LCC) | ND | | 0.10 | % | 1 | ED00114 | 01-Apr-20 | 01-Apr-20 | ASTM D1945M | |

Leidos -WA
18939 120th Ave NE, Ste 112
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Project: LD033020-11
Project Number: 204117 / Bremerton, WA
Project Manager: Russ Shropshire

Reported:
07-Apr-20 13:13

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

| Analyte | Result | MDL | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|---|------------|-----|-----------------|---------------|-----------------|----------|-----------|-----------|-----------|-------|
| EB-1-032420 (E003092-01) Vapor Sampled: 24-Mar-20 Received: 30-Mar-20 | | | | | | | | | | |
| J- Report | | | | | | | | | | |
| Methyl tertiary-butyl ether (MTBE) | ND | 0.3 | 2.9 | ug/m3 | 1 | ED00302 | 03-Apr-20 | 03-Apr-20 | EPA TO-15 | |
| Benzene | 0.6 | 0.1 | 0.6 | " | " | " | " | " | " | J |
| Toluene | 8.3 | 0.2 | 3.1 | " | " | " | " | " | " | J |
| Ethylbenzene | 1.4 | 0.2 | 1.8 | " | " | " | " | " | " | J |
| m,p-Xylene | 7.1 | 0.2 | 1.8 | " | " | " | " | " | " | J |
| o-Xylene | 2.5 | 0.2 | 1.8 | " | " | " | " | " | " | J |
| Naphthalene | 0.9 | 0.2 | 2.1 | " | " | " | " | " | " | J |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | | | <i>118 %</i> | <i>76-134</i> | | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | |
| <i>Surrogate: Toluene-d8</i> | | | <i>101 %</i> | <i>78-125</i> | | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | | | <i>90.1 %</i> | <i>77-127</i> | | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | |
| SVP-4-032520 (E003092-02) Vapor Sampled: 25-Mar-20 Received: 30-Mar-20 | | | | | | | | | | |
| J- Report | | | | | | | | | | |
| Methyl tertiary-butyl ether (MTBE) | ND | 0.3 | 2.9 | ug/m3 | 1 | ED00302 | 03-Apr-20 | 03-Apr-20 | EPA TO-15 | |
| Benzene | 4.9 | 0.1 | 0.6 | " | " | " | " | " | " | J |
| Toluene | 50 | 0.2 | 3.1 | " | " | " | " | " | " | J |
| Ethylbenzene | 13 | 0.2 | 1.8 | " | " | " | " | " | " | J |
| m,p-Xylene | 67 | 0.2 | 1.8 | " | " | " | " | " | " | J |
| o-Xylene | 26 | 0.2 | 1.8 | " | " | " | " | " | " | J |
| Naphthalene | 1.4 | 0.2 | 2.1 | " | " | " | " | " | " | J |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | | | <i>119 %</i> | <i>76-134</i> | | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | |
| <i>Surrogate: Toluene-d8</i> | | | <i>107 %</i> | <i>78-125</i> | | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | | | <i>90.6 %</i> | <i>77-127</i> | | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | |
| SVP-5-032520 (E003092-03) Vapor Sampled: 25-Mar-20 Received: 30-Mar-20 | | | | | | | | | | |
| J- Report | | | | | | | | | | |
| Methyl tertiary-butyl ether (MTBE) | ND | 0.3 | 2.9 | ug/m3 | 1 | ED00302 | 03-Apr-20 | 03-Apr-20 | EPA TO-15 | |
| Benzene | 0.3 | 0.1 | 0.6 | " | " | " | " | " | " | J |
| Toluene | 1.6 | 0.2 | 3.1 | " | " | " | " | " | " | J |
| Ethylbenzene | 0.3 | 0.2 | 1.8 | " | " | " | " | " | " | J |
| m,p-Xylene | 0.9 | 0.2 | 1.8 | " | " | " | " | " | " | J |
| o-Xylene | 0.3 | 0.2 | 1.8 | " | " | " | " | " | " | J |
| Naphthalene | ND | 0.2 | 2.1 | " | " | " | " | " | " | J |
| <i>Surrogate: 1,2-Dichloroethane-d4</i> | | | <i>118 %</i> | <i>76-134</i> | | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | |
| <i>Surrogate: Toluene-d8</i> | | | <i>104 %</i> | <i>78-125</i> | | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | |
| <i>Surrogate: 4-Bromofluorobenzene</i> | | | <i>88.6 %</i> | <i>77-127</i> | | <i>"</i> | <i>"</i> | <i>"</i> | <i>"</i> | |

Leidos -WA
18939 120th Ave NE, Ste 112
Bothell, WA 98011

Project: LD033020-11
Project Number: 204117 / Bremerton, WA
Project Manager: Russ Shropshire

Reported:
07-Apr-20 13:13

Volatile Organic Compounds by EPA TO-15

H&P Mobile Geochemistry, Inc.

| Analyte | Result | MDL | Reporting Limit | Units | Dilution Factor | Batch | Prepared | Analyzed | Method | Notes |
|--|------------|-----|-----------------|-------|-----------------|---------|-----------|-----------|-----------|------------------|
| SVP-6-032520 (E003092-04) Vapor | | | | | | | | | | J- Report |
| Sampled: 25-Mar-20 Received: 30-Mar-20 | | | | | | | | | | |
| Methyl tertiary-butyl ether (MTBE) | ND | 0.3 | 2.9 | ug/m3 | 1 | ED00302 | 03-Apr-20 | 03-Apr-20 | EPA TO-15 | |
| Benzene | 0.9 | 0.1 | 0.6 | " | " | " | " | " | " | |
| Toluene | 4.6 | 0.2 | 3.1 | " | " | " | " | " | " | |
| Ethylbenzene | 1.0 | 0.2 | 1.8 | " | " | " | " | " | " | J |
| m,p-Xylene | 2.0 | 0.2 | 1.8 | " | " | " | " | " | " | |
| o-Xylene | 0.9 | 0.2 | 1.8 | " | " | " | " | " | " | J |
| Naphthalene | 0.3 | 0.2 | 2.1 | " | " | " | " | " | " | J |

| | | | | | | | | | | |
|----------------------------------|--|--|--------|--------|---|---|---|---|---|--|
| Surrogate: 1,2-Dichloroethane-d4 | | | 121 % | 76-134 | " | " | " | " | " | |
| Surrogate: Toluene-d8 | | | 105 % | 78-125 | " | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | | 85.7 % | 77-127 | " | " | " | " | " | |

| | | | | | | | | | | |
|--|------------|-----|-----|-------|---|---------|-----------|-----------|-----------|------------------|
| DUP-1-032520 (E003092-05) Vapor | | | | | | | | | | J- Report |
| Sampled: 25-Mar-20 Received: 30-Mar-20 | | | | | | | | | | |
| Methyl tertiary-butyl ether (MTBE) | ND | 0.3 | 2.9 | ug/m3 | 1 | ED00302 | 03-Apr-20 | 03-Apr-20 | EPA TO-15 | |
| Benzene | 4.6 | 0.1 | 0.6 | " | " | " | " | " | " | |
| Toluene | 50 | 0.2 | 3.1 | " | " | " | " | " | " | |
| Ethylbenzene | 16 | 0.2 | 1.8 | " | " | " | " | " | " | |
| m,p-Xylene | 79 | 0.2 | 1.8 | " | " | " | " | " | " | |
| o-Xylene | 33 | 0.2 | 1.8 | " | " | " | " | " | " | |
| Naphthalene | 3.1 | 0.2 | 2.1 | " | " | " | " | " | " | |

| | | | | | | | | | | |
|----------------------------------|--|--|--------|--------|---|---|---|---|---|--|
| Surrogate: 1,2-Dichloroethane-d4 | | | 120 % | 76-134 | " | " | " | " | " | |
| Surrogate: Toluene-d8 | | | 107 % | 78-125 | " | " | " | " | " | |
| Surrogate: 4-Bromofluorobenzene | | | 87.6 % | 77-127 | " | " | " | " | " | |

| | | |
|--|--|------------------------------|
| Leidos -WA 18939 120th Ave NE, Ste 112 Bothell, WA 98011 | Project: LD033020-11 Project Number: 204117 / Bremerton, WA Project Manager: Russ Shropshire | Reported: 07-Apr-20 13:13 |
|--|--|------------------------------|

Soil Vapor/Air Analysis by ASTM D1945 - Quality Control
H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

Batch ED00114 - GC

Blank (ED00114-BLK1)

Prepared & Analyzed: 01-Apr-20

| | | | | | | | | | | |
|----------------|----|------|---|--|--|--|--|--|--|--|
| Carbon dioxide | ND | 0.20 | % | | | | | | | |
| Methane | ND | 1.0 | " | | | | | | | |

| | | |
|--|--|------------------------------|
| Leidos -WA 18939 120th Ave NE, Ste 112 Bothell, WA 98011 | Project: LD033020-11 Project Number: 204117 / Bremerton, WA Project Manager: Russ Shropshire | Reported: 07-Apr-20 13:13 |
|--|--|------------------------------|

Soil Vapor/Air Analysis by ASTM D1945M - Quality Control
H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|
|---------|--------|--------------------|-------|----------------|------------------|------|----------------|-----|--------------|-------|

Batch ED00114 - GC

Blank (ED00114-BLK1)

Prepared & Analyzed: 01-Apr-20

| | | | | | | | | | | |
|--------------|----|------|---|--|--|--|--|--|--|--|
| Helium (LCC) | ND | 0.10 | % | | | | | | | |
|--------------|----|------|---|--|--|--|--|--|--|--|

Leidos -WA
18939 120th Ave NE, Ste 112
Bothell, WA 98011

Project: LD033020-11
Project Number: 204117 / Bremerton, WA
Project Manager: Russ Shropshire

Reported:
07-Apr-20 13:13

Volatile Organic Compounds by EPA TO-15 - Quality Control
H&P Mobile Geochemistry, Inc.

| Analyte | Result | Reporting Limit | Units | Spike Level | Source Result | %REC | %REC Limits | RPD | RPD Limit | Notes |
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|
|---------|--------|-----------------|-------|-------------|---------------|------|-------------|-----|-----------|-------|

Batch ED00302 - TO-15

Blank (ED00302-BLK1)

Prepared & Analyzed: 03-Apr-20

| | | | | | | | | | | |
|------------------------------------|----|-----|-------|--|--|--|--|--|--|--|
| Methyl tertiary-butyl ether (MTBE) | ND | 2.9 | ug/m3 | | | | | | | |
| Benzene | ND | 0.6 | " | | | | | | | |
| Toluene | ND | 3.1 | " | | | | | | | |
| Ethylbenzene | ND | 1.8 | " | | | | | | | |
| m,p-Xylene | ND | 1.8 | " | | | | | | | |
| o-Xylene | ND | 1.8 | " | | | | | | | |
| Naphthalene | ND | 2.1 | " | | | | | | | |

| | | | | | | | | | | |
|----------------------------------|------|--|---|------|--|------|--------|--|--|--|
| Surrogate: 1,2-Dichloroethane-d4 | 49.8 | | " | 42.7 | | 117 | 76-134 | | | |
| Surrogate: Toluene-d8 | 42.2 | | " | 41.6 | | 102 | 78-125 | | | |
| Surrogate: 4-Bromofluorobenzene | 64.5 | | " | 72.6 | | 88.9 | 77-127 | | | |

LCS (ED00302-BS1)

Prepared & Analyzed: 03-Apr-20

| | | | | | | | | | | |
|--------------|----|-----|-------|------|--|------|--------|--|--|--|
| Benzene | 11 | 0.6 | ug/m3 | 13.0 | | 87.1 | 69-119 | | | |
| Toluene | 13 | 3.1 | " | 15.4 | | 86.2 | 66-119 | | | |
| Ethylbenzene | 16 | 1.8 | " | 17.7 | | 89.8 | 70-124 | | | |
| m,p-Xylene | 15 | 1.8 | " | 17.7 | | 85.8 | 61-134 | | | |
| o-Xylene | 15 | 1.8 | " | 17.7 | | 82.3 | 67-125 | | | |

| | | | | | | | | | | |
|----------------------------------|------|--|---|------|--|------|--------|--|--|--|
| Surrogate: 1,2-Dichloroethane-d4 | 48.4 | | " | 42.7 | | 113 | 76-134 | | | |
| Surrogate: Toluene-d8 | 40.7 | | " | 41.6 | | 98.0 | 78-125 | | | |
| Surrogate: 4-Bromofluorobenzene | 67.9 | | " | 72.6 | | 93.5 | 77-127 | | | |

LCS Dup (ED00302-BSD1)

Prepared & Analyzed: 03-Apr-20

| | | | | | | | | | | |
|--------------|----|-----|-------|------|--|------|--------|-------|----|--|
| Benzene | 12 | 0.6 | ug/m3 | 13.0 | | 90.9 | 69-119 | 4.21 | 25 | |
| Toluene | 13 | 3.1 | " | 15.4 | | 84.7 | 66-119 | 1.74 | 25 | |
| Ethylbenzene | 16 | 1.8 | " | 17.7 | | 87.8 | 70-124 | 2.24 | 25 | |
| m,p-Xylene | 15 | 1.8 | " | 17.7 | | 82.8 | 61-134 | 3.54 | 25 | |
| o-Xylene | 15 | 1.8 | " | 17.7 | | 82.1 | 67-125 | 0.303 | 25 | |

| | | | | | | | | | | |
|----------------------------------|------|--|---|------|--|------|--------|--|--|--|
| Surrogate: 1,2-Dichloroethane-d4 | 48.3 | | " | 42.7 | | 113 | 76-134 | | | |
| Surrogate: Toluene-d8 | 40.5 | | " | 41.6 | | 97.4 | 78-125 | | | |
| Surrogate: 4-Bromofluorobenzene | 65.6 | | " | 72.6 | | 90.4 | 77-127 | | | |

Leidos -WA

18939 120th Ave NE, Ste 112

Bothell, WA 98011

Project: LD033020-11

Project Number: 204117 / Bremerton, WA

Project Manager: Russ Shropshire

Reported:

07-Apr-20 13:13

Notes and Definitions

J- Report This sample is reported to the MDL or LOD determined for this method. All confirmed hits above the listed MDL or LOD value and below the RL/LOQ, will be flagged with a "J" result. If an MDL or LOD is not listed, the analyte is ND at the RL.

J Detected but below the RL/LOQ; therefore, result is an estimated concentration.

LCC Leak Check Compound

ND Analyte NOT DETECTED at or above the reporting limit

MDL Method Detection Limit

%REC Percent Recovery

RPD Relative Percent Difference

All soil results are reported in wet weight.

Appendix

H&P Mobile Geochemistry, Inc. is approved as an Environmental Testing Laboratory and Mobile Laboratory in accordance with the DoD-ELAP Program and ISO/IEC 17025:2005 programs through PJLA, accreditation number 69070 for EPA Method TO-15, H&P Method TO-15, EPA Method 8260B and H&P 8260SV.

H&P is approved by the State of California as an Environmental Laboratory and Mobile Laboratory in conformance with the Environmental Laboratory Accreditation Program (ELAP) for the category of Volatile and Semi-Volatile Organic Chemistry of Hazardous Waste, certification numbers 2740, 2741, 2743 & 2745.

H&P is approved by the State of Louisiana Department of Environmental Quality under the National Environmental Laboratory Accreditation Conference (NELAC) certification number 04138.

The complete list of stationary and mobile laboratory certifications along with the fields of testing (FOTs) and analyte lists are available at www.handpmg.com/about/certifications.

| Lab Client and Project Information | | |
|---|--|---|
| Lab Client/Consultant: <u>Leidos</u> | Project Name / #: <u>204117</u> | |
| Lab Client Project Manager: <u>Russ Shropshire</u> | Project Location: <u>Bremerton, WA</u> | |
| Lab Client Address: <u>18939 120th Ave NE, Suite 112</u> | Report E-Mail(s): <u>shropshirer@Leidos.com</u> | |
| Lab Client City, State, Zip: <u>Bothell, WA 98011</u> | <u>cransom@leidosecochem.net</u> | |
| Phone Number: <u>206-321-2387</u> | | |
| Reporting Requirements | Turnaround Time | Sampler Information |
| <input type="checkbox"/> Standard Report <input checked="" type="checkbox"/> Level III <input type="checkbox"/> Level IV <input type="checkbox"/> Excel EDD <input type="checkbox"/> Other EDD: _____ <input type="checkbox"/> CA Geotracker Global ID: _____ | <input checked="" type="checkbox"/> Standard (7 days for preliminary report, 10 days for final report) <input type="checkbox"/> Rush (specify): _____ | Sampler(s): <u>RSS / TED</u> Signature: _____ Date: _____ |

| Sample Receipt (Lab Use Only) | |
|---|-----------------------------|
| Date Rec'd: <u>3/30/20</u> | Control #: <u>200262.01</u> |
| H&P Project # <u>LD033020-11</u> | |
| Lab Work Order # <u>E003092</u> | |
| Sample Intact: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> See Notes Below | |
| Receipt Gauge ID: <u>70020</u> | Temp: <u>RT</u> |
| Outside Lab: | |
| Receipt Notes/Tracking #: <u>1293TT619049443973</u> | |
| Lab PM Initials: <u>KB</u> | |

Additional Instructions to Laboratory: MDL report for all analytes, IRLS - KB 3/30
TO-15 - Report BTEX, MTBE, and Naphthalene only
 * Preferred VOC units (please choose one):
 µg/L µg/m³ ppbv ppmv
Report CH₄ by ASTM method - KB 3/30

| SAMPLE NAME | FIELD POINT NAME (if applicable) | DATE mm/dd/yy | TIME 24hr clock | SAMPLE TYPE Indoor Air (IA), Ambient Air (AA), Subslab (SS), Soil Vapor (SV) | CONTAINER SIZE & TYPE 400mL/1L/6L Summa, Tedlar, Tube, etc. | CONTAINER ID (###) | Lab use only: Receipt Vac | VOCs Standard Full List | | VOCs Short List (Project List) | | Oxygenates | Naphthalene | TPHV as Gas | Aromatic/Aliphatic Fractions | Leak Check Compound | Methane by EPA 8015m | Fixed Gases by ASTM D1945 | Helium/Methane |
|---------------------|----------------------------------|-----------------|-----------------|---|--|--------------------|---------------------------|--|---|--|--|--------------------------|--------------------------|--------------------------|------------------------------|--------------------------|-------------------------------------|-------------------------------------|----------------|
| | | | | | | | | <input type="checkbox"/> 8260SV <input type="checkbox"/> TO-15 | <input type="checkbox"/> 8260SV <input checked="" type="checkbox"/> TO-15 | <input type="checkbox"/> 8260SV <input type="checkbox"/> TO-15 | <input type="checkbox"/> 8260SVm <input type="checkbox"/> TO-15m | | | | | | | | |
| <u>EB-1-032420</u> | <u>NA</u> | <u>03/24/20</u> | <u>1717</u> | <u>SV</u> | <u>1L Summa</u> | <u>424</u> | <u>-2.54</u> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | <u>01945</u> |
| <u>SVP-4-032520</u> | <u>SVP-4</u> | <u>3/25/20</u> | <u>12521</u> | ↓ | ↓ | <u>437</u> | <u>0.05</u> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | ↓ |
| <u>SVP-5-032520</u> | <u>SVP-5</u> | ↓ | <u>1301</u> | ↓ | ↓ | <u>441</u> | <u>0.25</u> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | ↓ |
| <u>SVP-6-032520</u> | <u>SVP-6</u> | ↓ | <u>1108</u> | ↓ | ↓ | <u>748</u> | <u>0.30</u> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | ↓ |
| <u>DUP-1-032520</u> | <u>NA</u> | ↓ | <u>-</u> | ↓ | ↓ | <u>434</u> | <u>0.10</u> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> | ↓ |
| <u>7-25-2020</u> | | | | | | | | | | | | | | | | | | | |

| | | | | | | | |
|--|------------------------|------------------------|-------------------|----------------------------------|-------------------------|----------------------|----------------------|
| Approved/Relinquished by: <u>Russ Shropshire</u> | Company: <u>Leidos</u> | Date: <u>3-25-2020</u> | Time: <u>1545</u> | Received by: <u>Jen Unsworth</u> | Company: <u>H&P</u> | Date: <u>3/30/20</u> | Time: <u>12:45pm</u> |
| Approved/Relinquished by: | Company: | Date: | Time: | Received by: | Company: | Date: | Time: |
| Approved/Relinquished by: | Company: | Date: | Time: | Received by: | Company: | Date: | Time: |

8/27/2020

Mr. Russ Shropshire

Leidos

18939 120th Ave NE

Ste 112

Bothell WA 98011

Project Name: Newman's Chevron

Project #: 204117

Workorder #: 2008555A

Dear Mr. Russ Shropshire

The following report includes the data for the above referenced project for sample(s) received on 8/21/2020 at Air Toxics Ltd.

The data and associated QC analyzed by Modified TO-15 SIM are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Alexandra Winslow at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Alexandra Winslow

Project Manager

WORK ORDER #: 2008555A

Work Order Summary

| | | | |
|------------------------|---|------------------|--|
| CLIENT: | Mr. Russ Shropshire Leidos 18939 120th Ave NE Ste 112 Bothell, WA 98011 | BILL TO: | Accounts Payable - Bothell Leidos 18939 120th Ave NE Ste 112 Bothell, WA 98011 |
| PHONE: | 425-485-5800 | P.O. # | P010242812 |
| FAX: | | PROJECT # | 204117 Newman's Chevron |
| DATE RECEIVED: | 08/21/2020 | CONTACT: | Alexandra Winslow |
| DATE COMPLETED: | 08/27/2020 | | |

| <u>FRACTION #</u> | <u>NAME</u> | <u>TEST</u> | <u>RECEIPT VAC./PRES.</u> | <u>FINAL PRESSURE</u> |
|-------------------|--------------|--------------------|-------------------------------|---------------------------|
| 01A | SVP-4-081920 | Modified TO-15 SIM | 3.5 "Hg | 5 psi |
| 02A | SVP-5-081920 | Modified TO-15 SIM | 4.5 "Hg | 5 psi |
| 03A | SVP-6-081920 | Modified TO-15 SIM | 3.0 "Hg | 5 psi |
| 04A | DUP-1-081920 | Modified TO-15 SIM | 4.5 "Hg | 5 psi |
| 05A | AMB-1-081920 | Modified TO-15 SIM | 4.0 "Hg | 5 psi |
| 06A | EB-1-081920 | Modified TO-15 SIM | 3.5 "Hg | 5 psi |
| 07A | Lab Blank | Modified TO-15 SIM | NA | NA |
| 07B | Lab Blank | Modified TO-15 SIM | NA | NA |
| 08A | CCV | Modified TO-15 SIM | NA | NA |
| 08B | CCV | Modified TO-15 SIM | NA | NA |
| 09A | LCS | Modified TO-15 SIM | NA | NA |
| 09AA | LCSD | Modified TO-15 SIM | NA | NA |
| 09B | LCS | Modified TO-15 SIM | NA | NA |
| 09BB | LCSD | Modified TO-15 SIM | NA | NA |

CERTIFIED BY: 
 Technical Director

DATE: 08/27/20

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209219, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-19-14, UT NELAP – CA009332019-12, VA NELAP - 10615, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
 Accreditation number: CA300005-013, Effective date: 10/18/2019, Expiration date: 10/17/2020.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
 (916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
Modified TO-15 SIM
Leidos
Workorder# 2008555A

Six 6 Liter Summa Canister (SIM Certified) samples were received on August 21, 2020. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications.

| <i>Requirement</i> | <i>TO-15</i> | <i>ATL Modifications</i> |
|-------------------------------|--|---|
| ICAL %RSD acceptance criteria | $\leq 30\%$ RSD with 2 compounds allowed out to <math>< 40\%</math> RSD | Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD |
| Daily Calibration | +/- 30% Difference | Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$; flag and narrate outliers |
| Blank and standards | Zero air | Nitrogen |
| Method Detection Limit | Follow 40CFR Pt.136 App. B | The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases |

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: SVP-4-081920

Lab ID#: 2008555A-01A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------|-------------------|---------------|--------------------|----------------|
| Naphthalene | 0.076 | 0.36 | 0.40 | 1.9 |

Client Sample ID: SVP-5-081920

Lab ID#: 2008555A-02A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------|-------------------|---------------|--------------------|----------------|
| Toluene | 0.079 | 0.091 | 0.30 | 0.34 |
| Ethyl Benzene | 0.032 | 0.043 | 0.14 | 0.19 |
| Naphthalene | 0.079 | 0.83 | 0.41 | 4.4 |

Client Sample ID: SVP-6-081920

Lab ID#: 2008555A-03A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------|-------------------|---------------|--------------------|----------------|
| Toluene | 0.074 | 0.081 | 0.28 | 0.31 |
| Ethyl Benzene | 0.030 | 0.21 | 0.13 | 0.91 |
| Naphthalene | 0.074 | 0.90 | 0.39 | 4.7 |

Client Sample ID: DUP-1-081920

Lab ID#: 2008555A-04A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------|-------------------|---------------|--------------------|----------------|
| Benzene | 0.079 | 0.084 | 0.25 | 0.27 |
| Ethyl Benzene | 0.032 | 0.035 | 0.14 | 0.15 |
| Naphthalene | 0.079 | 0.84 | 0.41 | 4.4 |

Client Sample ID: AMB-1-081920

Lab ID#: 2008555A-05A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------|-------------------|---------------|--------------------|----------------|
| Toluene | 0.078 | 0.26 | 0.29 | 0.96 |
| Ethyl Benzene | 0.031 | 0.046 | 0.13 | 0.20 |



Air Toxics

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: AMB-1-081920

Lab ID#: 2008555A-05A

| | | | | |
|------------|-------|-------|------|------|
| m,p-Xylene | 0.062 | 0.16 | 0.27 | 0.68 |
| o-Xylene | 0.031 | 0.052 | 0.13 | 0.23 |

Client Sample ID: EB-1-081920

Lab ID#: 2008555A-06A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------|----------------------|------------------|-----------------------|-------------------|
| Toluene | 0.076 | 0.32 | 0.29 | 1.2 |
| Ethyl Benzene | 0.030 | 0.052 | 0.13 | 0.23 |
| m,p-Xylene | 0.061 | 0.18 | 0.26 | 0.77 |
| o-Xylene | 0.030 | 0.063 | 0.13 | 0.27 |



Air Toxics

Client Sample ID: SVP-4-081920

Lab ID#: 2008555A-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | | |
|--------------|-------------|---------------------|------------------|
| File Name: | 20082517sim | Date of Collection: | 8/19/20 15:03:00 |
| Dil. Factor: | 1.52 | Date of Analysis: | 8/25/20 06:40 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------------------|-------------------|---------------|--------------------|----------------|
| Benzene | 0.076 | Not Detected | 0.24 | Not Detected |
| Toluene | 0.076 | Not Detected | 0.29 | Not Detected |
| Ethyl Benzene | 0.030 | Not Detected | 0.13 | Not Detected |
| m,p-Xylene | 0.061 | Not Detected | 0.26 | Not Detected |
| o-Xylene | 0.030 | Not Detected | 0.13 | Not Detected |
| Methyl tert-butyl ether | 0.15 | Not Detected | 0.55 | Not Detected |
| Naphthalene | 0.076 | 0.36 | 0.40 | 1.9 |

Container Type: 6 Liter Summa Canister (SIM Certified)

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 112 | 70-130 |
| Toluene-d8 | 115 | 70-130 |
| 4-Bromofluorobenzene | 95 | 70-130 |



Air Toxics

Client Sample ID: SVP-5-081920

Lab ID#: 2008555A-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | |
|---------------------|--------------------|---|
| File Name: | 20082518sim | Date of Collection: 8/19/20 13:00:00 |
| Dil. Factor: | 1.58 | Date of Analysis: 8/25/20 07:19 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------------------|--------------------------|----------------------|---------------------------|-----------------------|
| Benzene | 0.079 | Not Detected | 0.25 | Not Detected |
| Toluene | 0.079 | 0.091 | 0.30 | 0.34 |
| Ethyl Benzene | 0.032 | 0.043 | 0.14 | 0.19 |
| m,p-Xylene | 0.063 | Not Detected | 0.27 | Not Detected |
| o-Xylene | 0.032 | Not Detected | 0.14 | Not Detected |
| Methyl tert-butyl ether | 0.16 | Not Detected | 0.57 | Not Detected |
| Naphthalene | 0.079 | 0.83 | 0.41 | 4.4 |

Container Type: 6 Liter Summa Canister (SIM Certified)

| Surrogates | %Recovery | Method Limits |
|-----------------------|------------------|----------------------|
| 1,2-Dichloroethane-d4 | 116 | 70-130 |
| Toluene-d8 | 112 | 70-130 |
| 4-Bromofluorobenzene | 96 | 70-130 |



Air Toxics

Client Sample ID: SVP-6-081920

Lab ID#: 2008555A-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | | |
|--------------|-------------|---------------------|------------------|
| File Name: | 20082608sim | Date of Collection: | 8/19/20 10:50:00 |
| Dil. Factor: | 1.49 | Date of Analysis: | 8/26/20 11:52 AM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------------------|-------------------|---------------|--------------------|----------------|
| Benzene | 0.074 | Not Detected | 0.24 | Not Detected |
| Toluene | 0.074 | 0.081 | 0.28 | 0.31 |
| Ethyl Benzene | 0.030 | 0.21 | 0.13 | 0.91 |
| m,p-Xylene | 0.060 | Not Detected | 0.26 | Not Detected |
| o-Xylene | 0.030 | Not Detected | 0.13 | Not Detected |
| Methyl tert-butyl ether | 0.15 | Not Detected | 0.54 | Not Detected |
| Naphthalene | 0.074 | 0.90 | 0.39 | 4.7 |

Container Type: 6 Liter Summa Canister (SIM Certified)

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 130 | 70-130 |
| Toluene-d8 | 113 | 70-130 |
| 4-Bromofluorobenzene | 97 | 70-130 |



Air Toxics

Client Sample ID: DUP-1-081920

Lab ID#: 2008555A-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | | |
|--------------|-------------|---------------------|------------------|
| File Name: | 20082520sim | Date of Collection: | 8/19/20 |
| Dil. Factor: | 1.58 | Date of Analysis: | 8/25/20 08:38 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------------------|-------------------|---------------|--------------------|----------------|
| Benzene | 0.079 | 0.084 | 0.25 | 0.27 |
| Toluene | 0.079 | Not Detected | 0.30 | Not Detected |
| Ethyl Benzene | 0.032 | 0.035 | 0.14 | 0.15 |
| m,p-Xylene | 0.063 | Not Detected | 0.27 | Not Detected |
| o-Xylene | 0.032 | Not Detected | 0.14 | Not Detected |
| Methyl tert-butyl ether | 0.16 | Not Detected | 0.57 | Not Detected |
| Naphthalene | 0.079 | 0.84 | 0.41 | 4.4 |

Container Type: 6 Liter Summa Canister (SIM Certified)

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 115 | 70-130 |
| Toluene-d8 | 114 | 70-130 |
| 4-Bromofluorobenzene | 98 | 70-130 |



Air Toxics

Client Sample ID: AMB-1-081920

Lab ID#: 2008555A-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | | |
|--------------|-------------|---------------------|------------------|
| File Name: | 20082521sim | Date of Collection: | 8/19/20 16:46:00 |
| Dil. Factor: | 1.55 | Date of Analysis: | 8/25/20 09:17 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------------------|-------------------|---------------|--------------------|----------------|
| Benzene | 0.078 | Not Detected | 0.25 | Not Detected |
| Toluene | 0.078 | 0.26 | 0.29 | 0.96 |
| Ethyl Benzene | 0.031 | 0.046 | 0.13 | 0.20 |
| m,p-Xylene | 0.062 | 0.16 | 0.27 | 0.68 |
| o-Xylene | 0.031 | 0.052 | 0.13 | 0.23 |
| Methyl tert-butyl ether | 0.16 | Not Detected | 0.56 | Not Detected |
| Naphthalene | 0.078 | Not Detected | 0.41 | Not Detected |

Container Type: 6 Liter Summa Canister (SIM Certified)

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 99 | 70-130 |
| Toluene-d8 | 113 | 70-130 |
| 4-Bromofluorobenzene | 97 | 70-130 |



Air Toxics

Client Sample ID: EB-1-081920

Lab ID#: 2008555A-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | | |
|--------------|-------------|---------------------|------------------|
| File Name: | 20082609sim | Date of Collection: | 8/19/20 16:46:00 |
| Dil. Factor: | 1.52 | Date of Analysis: | 8/26/20 12:48 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------------------|-------------------|---------------|--------------------|----------------|
| Benzene | 0.076 | Not Detected | 0.24 | Not Detected |
| Toluene | 0.076 | 0.32 | 0.29 | 1.2 |
| Ethyl Benzene | 0.030 | 0.052 | 0.13 | 0.23 |
| m,p-Xylene | 0.061 | 0.18 | 0.26 | 0.77 |
| o-Xylene | 0.030 | 0.063 | 0.13 | 0.27 |
| Methyl tert-butyl ether | 0.15 | Not Detected | 0.55 | Not Detected |
| Naphthalene | 0.076 | Not Detected | 0.40 | Not Detected |

Container Type: 6 Liter Summa Canister (SIM Certified)

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 109 | 70-130 |
| Toluene-d8 | 114 | 70-130 |
| 4-Bromofluorobenzene | 97 | 70-130 |



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2008555A-07A

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | | |
|--------------|-------------|---------------------|------------------|
| File Name: | 20082506sim | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 8/25/20 10:03 AM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------------------|-------------------|---------------|--------------------|----------------|
| Benzene | 0.050 | Not Detected | 0.16 | Not Detected |
| Toluene | 0.050 | Not Detected | 0.19 | Not Detected |
| Ethyl Benzene | 0.020 | Not Detected | 0.087 | Not Detected |
| m,p-Xylene | 0.040 | Not Detected | 0.17 | Not Detected |
| o-Xylene | 0.020 | Not Detected | 0.087 | Not Detected |
| Methyl tert-butyl ether | 0.10 | Not Detected | 0.36 | Not Detected |
| Naphthalene | 0.050 | Not Detected | 0.26 | Not Detected |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 105 | 70-130 |
| Toluene-d8 | 111 | 70-130 |
| 4-Bromofluorobenzene | 91 | 70-130 |



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2008555A-07B

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | | |
|--------------|-------------|---------------------|------------------|
| File Name: | 20082607sim | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 8/26/20 10:35 AM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------------------|-------------------|---------------|--------------------|----------------|
| Benzene | 0.050 | Not Detected | 0.16 | Not Detected |
| Toluene | 0.050 | Not Detected | 0.19 | Not Detected |
| Ethyl Benzene | 0.020 | Not Detected | 0.087 | Not Detected |
| m,p-Xylene | 0.040 | Not Detected | 0.17 | Not Detected |
| o-Xylene | 0.020 | Not Detected | 0.087 | Not Detected |
| Methyl tert-butyl ether | 0.10 | Not Detected | 0.36 | Not Detected |
| Naphthalene | 0.050 | Not Detected | 0.26 | Not Detected |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 101 | 70-130 |
| Toluene-d8 | 112 | 70-130 |
| 4-Bromofluorobenzene | 96 | 70-130 |



Air Toxics

Client Sample ID: CCV

Lab ID#: 2008555A-08A

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | |
|--------------|-------------|------------------------------------|
| File Name: | 20082502sim | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 8/25/20 06:41 AM |

| Compound | %Recovery |
|-------------------------|-----------|
| Benzene | 96 |
| Toluene | 100 |
| Ethyl Benzene | 98 |
| m,p-Xylene | 98 |
| o-Xylene | 97 |
| Methyl tert-butyl ether | 94 |
| Naphthalene | 79 |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 90 | 70-130 |
| Toluene-d8 | 110 | 70-130 |
| 4-Bromofluorobenzene | 84 | 70-130 |



Air Toxics

Client Sample ID: CCV

Lab ID#: 2008555A-08B

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | |
|--------------|-------------|------------------------------------|
| File Name: | 20082602sim | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 8/26/20 06:34 AM |

| Compound | %Recovery |
|-------------------------|-----------|
| Benzene | 100 |
| Toluene | 108 |
| Ethyl Benzene | 100 |
| m,p-Xylene | 100 |
| o-Xylene | 98 |
| Methyl tert-butyl ether | 95 |
| Naphthalene | 95 |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 91 | 70-130 |
| Toluene-d8 | 119 | 70-130 |
| 4-Bromofluorobenzene | 85 | 70-130 |



Air Toxics

Client Sample ID: LCS

Lab ID#: 2008555A-09A

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | |
|--------------|-------------|------------------------------------|
| File Name: | 20082503sim | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 8/25/20 07:28 AM |

| Compound | %Recovery | Method Limits |
|-------------------------|-----------|---------------|
| Benzene | 99 | 70-130 |
| Toluene | 108 | 70-130 |
| Ethyl Benzene | 94 | 70-130 |
| m,p-Xylene | 93 | 70-130 |
| o-Xylene | 92 | 70-130 |
| Methyl tert-butyl ether | 91 | 70-130 |
| Naphthalene | 89 | 60-140 |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 89 | 70-130 |
| Toluene-d8 | 124 | 70-130 |
| 4-Bromofluorobenzene | 85 | 70-130 |



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2008555A-09AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | |
|--------------|-------------|------------------------------------|
| File Name: | 20082504sim | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 8/25/20 08:07 AM |

| Compound | %Recovery | Method Limits |
|-------------------------|-----------|---------------|
| Benzene | 92 | 70-130 |
| Toluene | 94 | 70-130 |
| Ethyl Benzene | 93 | 70-130 |
| m,p-Xylene | 91 | 70-130 |
| o-Xylene | 90 | 70-130 |
| Methyl tert-butyl ether | 89 | 70-130 |
| Naphthalene | 89 | 60-140 |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 90 | 70-130 |
| Toluene-d8 | 109 | 70-130 |
| 4-Bromofluorobenzene | 84 | 70-130 |



Air Toxics

Client Sample ID: LCS

Lab ID#: 2008555A-09B

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | |
|--------------|-------------|------------------------------------|
| File Name: | 20082603sim | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 8/26/20 07:21 AM |

| Compound | %Recovery | Method Limits |
|-------------------------|-----------|---------------|
| Benzene | 93 | 70-130 |
| Toluene | 96 | 70-130 |
| Ethyl Benzene | 95 | 70-130 |
| m,p-Xylene | 94 | 70-130 |
| o-Xylene | 93 | 70-130 |
| Methyl tert-butyl ether | 84 | 70-130 |
| Naphthalene | 88 | 60-140 |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 85 | 70-130 |
| Toluene-d8 | 112 | 70-130 |
| 4-Bromofluorobenzene | 84 | 70-130 |



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2008555A-09BB

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | |
|--------------|-------------|------------------------------------|
| File Name: | 20082604sim | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 8/26/20 08:01 AM |

| Compound | %Recovery | Method Limits |
|-------------------------|-----------|---------------|
| Benzene | 92 | 70-130 |
| Toluene | 95 | 70-130 |
| Ethyl Benzene | 95 | 70-130 |
| m,p-Xylene | 94 | 70-130 |
| o-Xylene | 93 | 70-130 |
| Methyl tert-butyl ether | 84 | 70-130 |
| Naphthalene | 81 | 60-140 |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 85 | 70-130 |
| Toluene-d8 | 111 | 70-130 |
| 4-Bromofluorobenzene | 85 | 70-130 |

8/28/2020

Mr. Russ Shropshire

Leidos

18939 120th Ave NE

Ste 112

Bothell WA 98011

Project Name: Newman's Chevron

Project #: 204117

Workorder #: 2008555B

Dear Mr. Russ Shropshire

The following report includes the data for the above referenced project for sample(s) received on 8/21/2020 at Air Toxics Ltd.

The data and associated QC analyzed by Modified ASTM D-1946 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics Inc. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Alexandra Winslow at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Alexandra Winslow

Project Manager

WORK ORDER #: 2008555B

Work Order Summary

| | | | |
|------------------------|---|------------------|--|
| CLIENT: | Mr. Russ Shropshire Leidos 18939 120th Ave NE Ste 112 Bothell, WA 98011 | BILL TO: | Accounts Payable - Bothell Leidos 18939 120th Ave NE Ste 112 Bothell, WA 98011 |
| PHONE: | 425-485-5800 | P.O. # | P010242812 |
| FAX: | | PROJECT # | 204117 Newman's Chevron |
| DATE RECEIVED: | 08/21/2020 | CONTACT: | Alexandra Winslow |
| DATE COMPLETED: | 08/28/2020 | | |

| <u>FRACTION #</u> | <u>NAME</u> | <u>TEST</u> | <u>RECEIPT VAC./PRES.</u> | <u>FINAL PRESSURE</u> |
|-------------------|--------------|----------------------|-------------------------------|---------------------------|
| 01A | SVP-4-081920 | Modified ASTM D-1946 | 3.5 "Hg | 5 psi |
| 02A | SVP-5-081920 | Modified ASTM D-1946 | 4.5 "Hg | 5 psi |
| 03A | SVP-6-081920 | Modified ASTM D-1946 | 3.0 "Hg | 5 psi |
| 04A | DUP-1-081920 | Modified ASTM D-1946 | 4.5 "Hg | 5 psi |
| 05A | AMB-1-081920 | Modified ASTM D-1946 | 4.0 "Hg | 5 psi |
| 06A | EB-1-081920 | Modified ASTM D-1946 | 3.5 "Hg | 5 psi |
| 07A | Lab Blank | Modified ASTM D-1946 | NA | NA |
| 07B | Lab Blank | Modified ASTM D-1946 | NA | NA |
| 08A | LCS | Modified ASTM D-1946 | NA | NA |
| 08AA | LCSD | Modified ASTM D-1946 | NA | NA |
| 08B | LCS | Modified ASTM D-1946 | NA | NA |
| 08BB | LCSD | Modified ASTM D-1946 | NA | NA |

CERTIFIED BY: 

 Technical Director

DATE: 08/28/20

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209219, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-19-14, UT NELAP – CA009332019-12, VA NELAP - 10615, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005-013, Effective date: 10/18/2019, Expiration date: 10/17/2020.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
 (916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
Modified ASTM D-1946
Leidos
Workorder# 2008555B

Six 6 Liter Summa Canister (SIM Certified) samples were received on August 21, 2020. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Since Nitrogen is used to pressurize samples, the reported Nitrogen values are calculated by adding all the sample components and subtracting from 100%.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications.

| <i>Requirement</i> | <i>ASTM D-1946</i> | <i>ATL Modifications</i> |
|-------------------------|--|--|
| Calibration | A single point calibration is performed using a reference standard closely matching the composition of the unknown. | A minimum of 5-point calibration curve is performed. Quantitation is based on average Response Factor. |
| Reference Standard | The composition of any reference standard must be known to within 0.01 mol % for any component. | The standards used by ATL are blended to a $\geq 95\%$ accuracy. |
| Sample Injection Volume | Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL. | The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum. |
| Normalization | Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%. | Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix. |
| Precision | Precision requirements established at each concentration level. | Duplicates should agree within 25% RPD for detections > 5 X's the RL. |

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Summary of Detected Compounds

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: SVP-4-081920

Lab ID#: 2008555B-01A

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|------------|
| Oxygen | 0.15 | 18 |
| Nitrogen | 0.15 | 79 |
| Carbon Dioxide | 0.015 | 2.7 |

Client Sample ID: SVP-5-081920

Lab ID#: 2008555B-02A

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|------------|
| Oxygen | 0.16 | 17 |
| Nitrogen | 0.16 | 80 |
| Carbon Dioxide | 0.016 | 3.2 |

Client Sample ID: SVP-6-081920

Lab ID#: 2008555B-03A

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|------------|
| Oxygen | 0.15 | 16 |
| Nitrogen | 0.15 | 79 |
| Carbon Dioxide | 0.015 | 5.4 |

Client Sample ID: DUP-1-081920

Lab ID#: 2008555B-04A

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|------------|
| Oxygen | 0.16 | 17 |
| Nitrogen | 0.16 | 80 |
| Carbon Dioxide | 0.016 | 3.2 |

Client Sample ID: AMB-1-081920

Lab ID#: 2008555B-05A

| Compound | Rpt. Limit (%) | Amount (%) |
|----------|----------------|------------|
|----------|----------------|------------|



Air Toxics

Summary of Detected Compounds
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: AMB-1-081920

Lab ID#: 2008555B-05A

| Compound | Rpt. Limit (%) | Amount (%) |
|-----------------|-----------------------|-------------------|
| Oxygen | 0.16 | 21 |
| Methane | 0.00016 | 0.00019 |
| Nitrogen | 0.16 | 79 |
| Carbon Dioxide | 0.016 | 0.044 |

Client Sample ID: EB-1-081920

Lab ID#: 2008555B-06A

| Compound | Rpt. Limit (%) | Amount (%) |
|-----------------|-----------------------|-------------------|
| Oxygen | 0.15 | 21 |
| Methane | 0.00015 | 0.00019 |
| Nitrogen | 0.15 | 79 |
| Carbon Dioxide | 0.015 | 0.044 |



Air Toxics

Client Sample ID: SVP-4-081920

Lab ID#: 2008555B-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|--------------------|
| File Name: | 10082622 | Date of Collection: | 8/19/20 3:03:00 PM |
| Dil. Factor: | 1.52 | Date of Analysis: | 8/27/20 08:20 AM |

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|--------------|
| Oxygen | 0.15 | 18 |
| Methane | 0.00015 | Not Detected |
| Helium | 0.076 | Not Detected |
| Hydrogen | 0.015 | Not Detected |
| Nitrogen | 0.15 | 79 |
| Carbon Dioxide | 0.015 | 2.7 |

Container Type: 6 Liter Summa Canister (SIM Certified)



Air Toxics

Client Sample ID: SVP-5-081920

Lab ID#: 2008555B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|--------------------|
| File Name: | 10082623 | Date of Collection: | 8/19/20 1:00:00 PM |
| Dil. Factor: | 1.58 | Date of Analysis: | 8/27/20 08:43 AM |

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|--------------|
| Oxygen | 0.16 | 17 |
| Methane | 0.00016 | Not Detected |
| Helium | 0.079 | Not Detected |
| Hydrogen | 0.016 | Not Detected |
| Nitrogen | 0.16 | 80 |
| Carbon Dioxide | 0.016 | 3.2 |

Container Type: 6 Liter Summa Canister (SIM Certified)



Air Toxics

Client Sample ID: SVP-6-081920

Lab ID#: 2008555B-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|---------------------|
| File Name: | 10082624 | Date of Collection: | 8/19/20 10:50:00 AM |
| Dil. Factor: | 1.49 | Date of Analysis: | 8/27/20 09:08 AM |

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|--------------|
| Oxygen | 0.15 | 16 |
| Methane | 0.00015 | Not Detected |
| Helium | 0.074 | Not Detected |
| Hydrogen | 0.015 | Not Detected |
| Nitrogen | 0.15 | 79 |
| Carbon Dioxide | 0.015 | 5.4 |

Container Type: 6 Liter Summa Canister (SIM Certified)



Air Toxics

Client Sample ID: DUP-1-081920

Lab ID#: 2008555B-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|------------------|
| File Name: | 10082625 | Date of Collection: | 8/19/20 |
| Dil. Factor: | 1.58 | Date of Analysis: | 8/27/20 09:32 AM |

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|--------------|
| Oxygen | 0.16 | 17 |
| Methane | 0.00016 | Not Detected |
| Helium | 0.079 | Not Detected |
| Hydrogen | 0.016 | Not Detected |
| Nitrogen | 0.16 | 80 |
| Carbon Dioxide | 0.016 | 3.2 |

Container Type: 6 Liter Summa Canister (SIM Certified)



Air Toxics

Client Sample ID: AMB-1-081920

Lab ID#: 2008555B-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|--------------------|
| File Name: | 10082626 | Date of Collection: | 8/19/20 4:46:00 PM |
| Dil. Factor: | 1.55 | Date of Analysis: | 8/27/20 09:55 AM |

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|--------------|
| Oxygen | 0.16 | 21 |
| Methane | 0.00016 | 0.00019 |
| Helium | 0.078 | Not Detected |
| Hydrogen | 0.016 | Not Detected |
| Nitrogen | 0.16 | 79 |
| Carbon Dioxide | 0.016 | 0.044 |

Container Type: 6 Liter Summa Canister (SIM Certified)



Air Toxics

Client Sample ID: EB-1-081920

Lab ID#: 2008555B-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|--------------------|
| File Name: | 10082627 | Date of Collection: | 8/19/20 4:46:00 PM |
| Dil. Factor: | 1.52 | Date of Analysis: | 8/27/20 10:31 AM |

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|--------------|
| Oxygen | 0.15 | 21 |
| Methane | 0.00015 | 0.00019 |
| Helium | 0.076 | Not Detected |
| Hydrogen | 0.015 | Not Detected |
| Nitrogen | 0.15 | 79 |
| Carbon Dioxide | 0.015 | 0.044 |

Container Type: 6 Liter Summa Canister (SIM Certified)



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2008555B-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|------------------|
| File Name: | 10082605 | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 8/26/20 04:18 PM |

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|--------------|
| Oxygen | 0.10 | Not Detected |
| Methane | 0.00010 | Not Detected |
| Nitrogen | 0.10 | Not Detected |
| Carbon Dioxide | 0.010 | Not Detected |

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2008555B-07B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|-----------|---------------------|------------------|
| File Name: | 10082604c | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 8/26/20 03:55 PM |

| Compound | Rpt. Limit (%) | Amount (%) |
|----------|----------------|--------------|
| Helium | 0.050 | Not Detected |
| Hydrogen | 0.010 | Not Detected |

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCS

Lab ID#: 2008555B-08A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | |
|--------------|----------|------------------------------------|
| File Name: | 10082602 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 8/26/20 02:59 PM |

| Compound | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Oxygen | 98 | 85-115 |
| Methane | 108 | 85-115 |
| Helium | 99 | 85-115 |
| Nitrogen | 97 | 85-115 |
| Carbon Dioxide | 109 | 85-115 |

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2008555B-08AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | |
|--------------|----------|------------------------------------|
| File Name: | 10082630 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 8/27/20 12:18 PM |

| Compound | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Oxygen | 98 | 85-115 |
| Methane | 109 | 85-115 |
| Helium | 98 | 85-115 |
| Nitrogen | 97 | 85-115 |
| Carbon Dioxide | 109 | 85-115 |

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCS

Lab ID#: 2008555B-08B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | |
|--------------|-----------|------------------------------------|
| File Name: | 10082628c | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 8/27/20 11:13 AM |

| Compound | %Recovery | Method Limits |
|----------|-----------|---------------|
| Hydrogen | 102 | 85-115 |

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2008555B-08BB

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | |
|--------------|-----------|------------------------------------|
| File Name: | 10082629c | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 8/27/20 11:41 AM |

| Compound | %Recovery | Method Limits |
|----------|-----------|---------------|
| Hydrogen | 98 | 85-115 |

Container Type: NA - Not Applicable

ANALYTICAL REPORT

Eurofins TestAmerica, Burlington
30 Community Drive
Suite 11
South Burlington, VT 05403
Tel: (802)660-1990

Laboratory Job ID: 200-54945-1
Laboratory Sample Delivery Group: 200-54945-1
Client Project/Site: Newman's Chevron
Revision: 1

For:
Eurofins Air Toxics, Inc.
180 Blue Ravine Road
Suite B
Folsom, California 95630

Attn: Alexandra Winslow



Authorized for release by:
9/17/2020 10:16:12 AM

Elizabeth Nye, Project Manager I
(802)660-1990
Elizabeth.Nye@Eurofinset.com

LINKS

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www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-54945-1
SDG: 200-54945-1

Qualifiers

Air - GC/MS VOA

| Qualifier | Qualifier Description |
|-----------|--|
| U | Indicates the analyte was analyzed for but not detected. |

Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|----------------|---|
| α | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

Case Narrative

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-54945-1
SDG: 200-54945-1

Job ID: 200-54945-1

Laboratory: Eurofins TestAmerica, Burlington

Narrative

CASE NARRATIVE

Client: Eurofins Air Toxics, Inc.

Project: Newman's Chevron

Report Number: 200-54945-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

REVISION SUMMARY

This report was revised on 09/17/2020 to apply the dilution factor to the samples.

RECEIPT

The samples were received on 08/31/2020; the samples arrived in good condition.

PETROLEUM HYDROCARBON

Samples SVP-4-081920, SVP-5-081920, SVP-6-081920, DUP-1-081920, AMB-1-081920 and EB-1-081920 were analyzed for petroleum hydrocarbon in accordance with MADEP APH. The samples were analyzed on 09/08/2020.

No analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-54945-1
SDG: 200-54945-1

Client Sample ID: SVP-4-081920

Lab Sample ID: 200-54945-1

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|------------------------------|--------|-----------|-----|-----|-------|---------|---|--------|-----------|
| Naphthalene | 2.7 | | 1.6 | 1.6 | ug/m3 | 1.51 | | APH | Total/NA |
| C5-C8 Aliphatics (adjusted) | 18 | | 14 | 14 | ug/m3 | 1.51 | | APH | Total/NA |
| C9-C12 Aliphatics (adjusted) | 11 | | 11 | 11 | ug/m3 | 1.51 | | APH | Total/NA |

Client Sample ID: SVP-5-081920

Lab Sample ID: 200-54945-2

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|------------------------------|--------|-----------|-----|-----|-------|---------|---|--------|-----------|
| Naphthalene | 4.1 | | 1.7 | 1.7 | ug/m3 | 1.58 | | APH | Total/NA |
| C5-C8 Aliphatics (adjusted) | 99 | | 14 | 14 | ug/m3 | 1.58 | | APH | Total/NA |
| C9-C12 Aliphatics (adjusted) | 15 | | 11 | 11 | ug/m3 | 1.58 | | APH | Total/NA |

Client Sample ID: SVP-6-081920

Lab Sample ID: 200-54945-3

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|------------------------------|--------|-----------|-----|-----|-------|---------|---|--------|-----------|
| Naphthalene | 4.3 | | 1.6 | 1.6 | ug/m3 | 1.49 | | APH | Total/NA |
| C5-C8 Aliphatics (adjusted) | 410 | | 14 | 14 | ug/m3 | 1.49 | | APH | Total/NA |
| C9-C12 Aliphatics (adjusted) | 39 | | 11 | 11 | ug/m3 | 1.49 | | APH | Total/NA |

Client Sample ID: DUP-1-081920

Lab Sample ID: 200-54945-4

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|------------------------------|--------|-----------|-----|-----|-------|---------|---|--------|-----------|
| Naphthalene | 3.9 | | 1.7 | 1.7 | ug/m3 | 1.58 | | APH | Total/NA |
| C5-C8 Aliphatics (adjusted) | 95 | | 14 | 14 | ug/m3 | 1.58 | | APH | Total/NA |
| C9-C12 Aliphatics (adjusted) | 13 | | 11 | 11 | ug/m3 | 1.58 | | APH | Total/NA |

Client Sample ID: AMB-1-081920

Lab Sample ID: 200-54945-5

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|-----------------------------|--------|-----------|----|----|-------|---------|---|--------|-----------|
| C5-C8 Aliphatics (adjusted) | 22 | | 13 | 13 | ug/m3 | 1.47 | | APH | Total/NA |

Client Sample ID: EB-1-081920

Lab Sample ID: 200-54945-6

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|-----------------------------|--------|-----------|----|----|-------|---------|---|--------|-----------|
| C5-C8 Aliphatics (adjusted) | 25 | | 14 | 14 | ug/m3 | 1.52 | | APH | Total/NA |

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Burlington

Client Sample Results

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-54945-1
SDG: 200-54945-1

Client Sample ID: SVP-4-081920

Lab Sample ID: 200-54945-1

Date Collected: 08/19/20 15:03

Matrix: Air

Date Received: 08/31/20 09:48

Sample Container: Summa Canister 6L

Method: APH - Air Phase Petroleum Hydrocarbons

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------------------|------------|-----------|------|------|-------|---|----------|----------------|---------|
| Butadiene | 0.66 | U | 0.66 | 0.66 | ug/m3 | | | 09/08/20 13:55 | 1.51 |
| Methyl tert-butyl ether | 1.1 | U | 1.1 | 1.1 | ug/m3 | | | 09/08/20 13:55 | 1.51 |
| Benzene | 0.97 | U | 0.97 | 0.97 | ug/m3 | | | 09/08/20 13:55 | 1.51 |
| Toluene | 1.1 | U | 1.1 | 1.1 | ug/m3 | | | 09/08/20 13:55 | 1.51 |
| Ethylbenzene | 1.3 | U | 1.3 | 1.3 | ug/m3 | | | 09/08/20 13:55 | 1.51 |
| m-Xylene & p-Xylene | 1.3 | U | 1.3 | 1.3 | ug/m3 | | | 09/08/20 13:55 | 1.51 |
| o-Xylene | 1.3 | U | 1.3 | 1.3 | ug/m3 | | | 09/08/20 13:55 | 1.51 |
| Naphthalene | 2.7 | | 1.6 | 1.6 | ug/m3 | | | 09/08/20 13:55 | 1.51 |
| C9-C10 Aromatics | 7.6 | U | 7.6 | 7.6 | ug/m3 | | | 09/08/20 13:55 | 1.51 |
| C5-C8 Aliphatics (adjusted) | 18 | | 14 | 14 | ug/m3 | | | 09/08/20 13:55 | 1.51 |
| C9-C12 Aliphatics (adjusted) | 11 | | 11 | 11 | ug/m3 | | | 09/08/20 13:55 | 1.51 |

Client Sample ID: SVP-5-081920

Lab Sample ID: 200-54945-2

Date Collected: 08/19/20 13:00

Matrix: Air

Date Received: 08/31/20 09:48

Sample Container: Summa Canister 6L

Method: APH - Air Phase Petroleum Hydrocarbons

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------------------|------------|-----------|------|------|-------|---|----------|----------------|---------|
| Butadiene | 0.70 | U | 0.70 | 0.70 | ug/m3 | | | 09/08/20 14:48 | 1.58 |
| Methyl tert-butyl ether | 1.1 | U | 1.1 | 1.1 | ug/m3 | | | 09/08/20 14:48 | 1.58 |
| Benzene | 1.0 | U | 1.0 | 1.0 | ug/m3 | | | 09/08/20 14:48 | 1.58 |
| Toluene | 1.2 | U | 1.2 | 1.2 | ug/m3 | | | 09/08/20 14:48 | 1.58 |
| Ethylbenzene | 1.4 | U | 1.4 | 1.4 | ug/m3 | | | 09/08/20 14:48 | 1.58 |
| m-Xylene & p-Xylene | 1.4 | U | 1.4 | 1.4 | ug/m3 | | | 09/08/20 14:48 | 1.58 |
| o-Xylene | 1.4 | U | 1.4 | 1.4 | ug/m3 | | | 09/08/20 14:48 | 1.58 |
| Naphthalene | 4.1 | | 1.7 | 1.7 | ug/m3 | | | 09/08/20 14:48 | 1.58 |
| C9-C10 Aromatics | 7.9 | U | 7.9 | 7.9 | ug/m3 | | | 09/08/20 14:48 | 1.58 |
| C5-C8 Aliphatics (adjusted) | 99 | | 14 | 14 | ug/m3 | | | 09/08/20 14:48 | 1.58 |
| C9-C12 Aliphatics (adjusted) | 15 | | 11 | 11 | ug/m3 | | | 09/08/20 14:48 | 1.58 |

Client Sample ID: SVP-6-081920

Lab Sample ID: 200-54945-3

Date Collected: 08/19/20 10:50

Matrix: Air

Date Received: 08/31/20 09:48

Sample Container: Summa Canister 6L

Method: APH - Air Phase Petroleum Hydrocarbons

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------------------|------------|-----------|------|------|-------|---|----------|----------------|---------|
| Butadiene | 0.66 | U | 0.66 | 0.66 | ug/m3 | | | 09/08/20 15:42 | 1.49 |
| Methyl tert-butyl ether | 1.1 | U | 1.1 | 1.1 | ug/m3 | | | 09/08/20 15:42 | 1.49 |
| Benzene | 0.95 | U | 0.95 | 0.95 | ug/m3 | | | 09/08/20 15:42 | 1.49 |
| Toluene | 1.1 | U | 1.1 | 1.1 | ug/m3 | | | 09/08/20 15:42 | 1.49 |
| Ethylbenzene | 1.3 | U | 1.3 | 1.3 | ug/m3 | | | 09/08/20 15:42 | 1.49 |
| m-Xylene & p-Xylene | 1.3 | U | 1.3 | 1.3 | ug/m3 | | | 09/08/20 15:42 | 1.49 |
| o-Xylene | 1.3 | U | 1.3 | 1.3 | ug/m3 | | | 09/08/20 15:42 | 1.49 |
| Naphthalene | 4.3 | | 1.6 | 1.6 | ug/m3 | | | 09/08/20 15:42 | 1.49 |
| C9-C10 Aromatics | 7.5 | U | 7.5 | 7.5 | ug/m3 | | | 09/08/20 15:42 | 1.49 |
| C5-C8 Aliphatics (adjusted) | 410 | | 14 | 14 | ug/m3 | | | 09/08/20 15:42 | 1.49 |
| C9-C12 Aliphatics (adjusted) | 39 | | 11 | 11 | ug/m3 | | | 09/08/20 15:42 | 1.49 |

Eurofins TestAmerica, Burlington

Client Sample Results

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-54945-1
SDG: 200-54945-1

Client Sample ID: DUP-1-081920

Lab Sample ID: 200-54945-4

Date Collected: 08/19/20 00:00

Matrix: Air

Date Received: 08/31/20 09:48

Sample Container: Summa Canister 6L

Method: APH - Air Phase Petroleum Hydrocarbons

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------------------|------------|-----------|------|------|-------|---|----------|----------------|---------|
| Butadiene | 0.70 | U | 0.70 | 0.70 | ug/m3 | | | 09/08/20 16:34 | 1.58 |
| Methyl tert-butyl ether | 1.1 | U | 1.1 | 1.1 | ug/m3 | | | 09/08/20 16:34 | 1.58 |
| Benzene | 1.0 | U | 1.0 | 1.0 | ug/m3 | | | 09/08/20 16:34 | 1.58 |
| Toluene | 1.2 | U | 1.2 | 1.2 | ug/m3 | | | 09/08/20 16:34 | 1.58 |
| Ethylbenzene | 1.4 | U | 1.4 | 1.4 | ug/m3 | | | 09/08/20 16:34 | 1.58 |
| m-Xylene & p-Xylene | 1.4 | U | 1.4 | 1.4 | ug/m3 | | | 09/08/20 16:34 | 1.58 |
| o-Xylene | 1.4 | U | 1.4 | 1.4 | ug/m3 | | | 09/08/20 16:34 | 1.58 |
| Naphthalene | 3.9 | | 1.7 | 1.7 | ug/m3 | | | 09/08/20 16:34 | 1.58 |
| C9-C10 Aromatics | 7.9 | U | 7.9 | 7.9 | ug/m3 | | | 09/08/20 16:34 | 1.58 |
| C5-C8 Aliphatics (adjusted) | 95 | | 14 | 14 | ug/m3 | | | 09/08/20 16:34 | 1.58 |
| C9-C12 Aliphatics (adjusted) | 13 | | 11 | 11 | ug/m3 | | | 09/08/20 16:34 | 1.58 |

Client Sample ID: AMB-1-081920

Lab Sample ID: 200-54945-5

Date Collected: 08/19/20 16:46

Matrix: Air

Date Received: 08/31/20 09:48

Sample Container: Summa Canister 6L

Method: APH - Air Phase Petroleum Hydrocarbons

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------------|-----------|-----------|------|------|-------|---|----------|----------------|---------|
| Butadiene | 0.65 | U | 0.65 | 0.65 | ug/m3 | | | 09/08/20 17:26 | 1.47 |
| Methyl tert-butyl ether | 1.1 | U | 1.1 | 1.1 | ug/m3 | | | 09/08/20 17:26 | 1.47 |
| Benzene | 0.94 | U | 0.94 | 0.94 | ug/m3 | | | 09/08/20 17:26 | 1.47 |
| Toluene | 1.1 | U | 1.1 | 1.1 | ug/m3 | | | 09/08/20 17:26 | 1.47 |
| Ethylbenzene | 1.3 | U | 1.3 | 1.3 | ug/m3 | | | 09/08/20 17:26 | 1.47 |
| m-Xylene & p-Xylene | 1.3 | U | 1.3 | 1.3 | ug/m3 | | | 09/08/20 17:26 | 1.47 |
| o-Xylene | 1.3 | U | 1.3 | 1.3 | ug/m3 | | | 09/08/20 17:26 | 1.47 |
| Naphthalene | 1.5 | U | 1.5 | 1.5 | ug/m3 | | | 09/08/20 17:26 | 1.47 |
| C9-C10 Aromatics | 7.4 | U | 7.4 | 7.4 | ug/m3 | | | 09/08/20 17:26 | 1.47 |
| C5-C8 Aliphatics (adjusted) | 22 | | 13 | 13 | ug/m3 | | | 09/08/20 17:26 | 1.47 |
| C9-C12 Aliphatics (adjusted) | 10 | U | 10 | 10 | ug/m3 | | | 09/08/20 17:26 | 1.47 |

Client Sample ID: EB-1-081920

Lab Sample ID: 200-54945-6

Date Collected: 08/19/20 16:46

Matrix: Air

Date Received: 08/31/20 09:48

Sample Container: Summa Canister 6L

Method: APH - Air Phase Petroleum Hydrocarbons

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------------|-----------|-----------|------|------|-------|---|----------|----------------|---------|
| Butadiene | 0.67 | U | 0.67 | 0.67 | ug/m3 | | | 09/08/20 18:17 | 1.52 |
| Methyl tert-butyl ether | 1.1 | U | 1.1 | 1.1 | ug/m3 | | | 09/08/20 18:17 | 1.52 |
| Benzene | 0.97 | U | 0.97 | 0.97 | ug/m3 | | | 09/08/20 18:17 | 1.52 |
| Toluene | 1.1 | U | 1.1 | 1.1 | ug/m3 | | | 09/08/20 18:17 | 1.52 |
| Ethylbenzene | 1.3 | U | 1.3 | 1.3 | ug/m3 | | | 09/08/20 18:17 | 1.52 |
| m-Xylene & p-Xylene | 1.3 | U | 1.3 | 1.3 | ug/m3 | | | 09/08/20 18:17 | 1.52 |
| o-Xylene | 1.3 | U | 1.3 | 1.3 | ug/m3 | | | 09/08/20 18:17 | 1.52 |
| Naphthalene | 1.6 | U | 1.6 | 1.6 | ug/m3 | | | 09/08/20 18:17 | 1.52 |
| C9-C10 Aromatics | 7.6 | U | 7.6 | 7.6 | ug/m3 | | | 09/08/20 18:17 | 1.52 |
| C5-C8 Aliphatics (adjusted) | 25 | | 14 | 14 | ug/m3 | | | 09/08/20 18:17 | 1.52 |
| C9-C12 Aliphatics (adjusted) | 11 | U | 11 | 11 | ug/m3 | | | 09/08/20 18:17 | 1.52 |

Eurofins TestAmerica, Burlington

QC Sample Results

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-54945-1
SDG: 200-54945-1

Method: APH - Air Phase Petroleum Hydrocarbons

Lab Sample ID: MB 200-158609/5
Matrix: Air
Analysis Batch: 158609

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB MB | | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------|--------|-----------|------|------|-------|---|----------|----------------|---------|
| | Result | Qualifier | | | | | | | |
| Butadiene | 0.44 | U | 0.44 | 0.44 | ug/m3 | | | 09/08/20 13:03 | 1 |
| Methyl tert-butyl ether | 0.72 | U | 0.72 | 0.72 | ug/m3 | | | 09/08/20 13:03 | 1 |
| Benzene | 0.64 | U | 0.64 | 0.64 | ug/m3 | | | 09/08/20 13:03 | 1 |
| Toluene | 0.75 | U | 0.75 | 0.75 | ug/m3 | | | 09/08/20 13:03 | 1 |
| Ethylbenzene | 0.87 | U | 0.87 | 0.87 | ug/m3 | | | 09/08/20 13:03 | 1 |
| m-Xylene & p-Xylene | 0.87 | U | 0.87 | 0.87 | ug/m3 | | | 09/08/20 13:03 | 1 |
| o-Xylene | 0.87 | U | 0.87 | 0.87 | ug/m3 | | | 09/08/20 13:03 | 1 |
| Naphthalene | 1.1 | U | 1.1 | 1.1 | ug/m3 | | | 09/08/20 13:03 | 1 |
| C9-C10 Aromatics | 5.0 | U | 5.0 | 5.0 | ug/m3 | | | 09/08/20 13:03 | 1 |
| C5-C8 Aliphatics (adjusted) | 9.1 | U | 9.1 | 9.1 | ug/m3 | | | 09/08/20 13:03 | 1 |
| C9-C12 Aliphatics (adjusted) | 7.1 | U | 7.1 | 7.1 | ug/m3 | | | 09/08/20 13:03 | 1 |

Lab Sample ID: LCS 200-158609/3
Matrix: Air
Analysis Batch: 158609

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|-------------------------|-------------|------------|---------------|-------|---|------|--------------|
| | | | | | | | |
| Methyl tert-butyl ether | 90.4 | 85.0 | | ug/m3 | | 94 | 70 - 130 |
| Benzene | 79.9 | 71.0 | | ug/m3 | | 89 | 70 - 130 |
| Toluene | 94.4 | 87.2 | | ug/m3 | | 92 | 70 - 130 |
| Ethylbenzene | 109 | 89.9 | | ug/m3 | | 83 | 70 - 130 |
| m-Xylene & p-Xylene | 109 | 92.6 | | ug/m3 | | 85 | 70 - 130 |
| o-Xylene | 109 | 98.2 | | ug/m3 | | 90 | 70 - 130 |
| Naphthalene | 131 | 127 | | ug/m3 | | 97 | 50 - 150 |
| C9-C10 Aromatics | 630 | 587 | | ug/m3 | | 93 | 70 - 130 |
| n-Heptane | 103 | 102 | | ug/m3 | | 99 | 70 - 130 |
| n-Decane | 146 | 151 | | ug/m3 | | 103 | 70 - 130 |
| 1,3,5-Trimethylbenzene | 123 | 115 | | ug/m3 | | 94 | 70 - 130 |

QC Association Summary

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-54945-1
SDG: 200-54945-1

Air - GC/MS VOA

Analysis Batch: 158609

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|------------------|--------------------|-----------|--------|--------|------------|
| 200-54945-1 | SVP-4-081920 | Total/NA | Air | APH | |
| 200-54945-2 | SVP-5-081920 | Total/NA | Air | APH | |
| 200-54945-3 | SVP-6-081920 | Total/NA | Air | APH | |
| 200-54945-4 | DUP-1-081920 | Total/NA | Air | APH | |
| 200-54945-5 | AMB-1-081920 | Total/NA | Air | APH | |
| 200-54945-6 | EB-1-081920 | Total/NA | Air | APH | |
| MB 200-158609/5 | Method Blank | Total/NA | Air | APH | |
| LCS 200-158609/3 | Lab Control Sample | Total/NA | Air | APH | |

Lab Chronicle

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-54945-1
SDG: 200-54945-1

Client Sample ID: SVP-4-081920

Lab Sample ID: 200-54945-1

Date Collected: 08/19/20 15:03

Matrix: Air

Date Received: 08/31/20 09:48

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | APH | | 1.51 | 158609 | 09/08/20 13:55 | GGG | TAL BUR |

Client Sample ID: SVP-5-081920

Lab Sample ID: 200-54945-2

Date Collected: 08/19/20 13:00

Matrix: Air

Date Received: 08/31/20 09:48

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | APH | | 1.58 | 158609 | 09/08/20 14:48 | GGG | TAL BUR |

Client Sample ID: SVP-6-081920

Lab Sample ID: 200-54945-3

Date Collected: 08/19/20 10:50

Matrix: Air

Date Received: 08/31/20 09:48

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | APH | | 1.49 | 158609 | 09/08/20 15:42 | GGG | TAL BUR |

Client Sample ID: DUP-1-081920

Lab Sample ID: 200-54945-4

Date Collected: 08/19/20 00:00

Matrix: Air

Date Received: 08/31/20 09:48

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | APH | | 1.58 | 158609 | 09/08/20 16:34 | GGG | TAL BUR |

Client Sample ID: AMB-1-081920

Lab Sample ID: 200-54945-5

Date Collected: 08/19/20 16:46

Matrix: Air

Date Received: 08/31/20 09:48

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | APH | | 1.47 | 158609 | 09/08/20 17:26 | GGG | TAL BUR |

Client Sample ID: EB-1-081920

Lab Sample ID: 200-54945-6

Date Collected: 08/19/20 16:46

Matrix: Air

Date Received: 08/31/20 09:48

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | APH | | 1.52 | 158609 | 09/08/20 18:17 | GGG | TAL BUR |

Laboratory References:

TAL BUR = Eurofins TestAmerica, Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Accreditation/Certification Summary

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-54945-1
SDG: 200-54945-1

Laboratory: Eurofins TestAmerica, Burlington

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|-----------------------------------|-----------------------|-----------------------|-----------------|
| ANAB | Dept. of Defense ELAP | L2336 | 02-25-23 |
| Connecticut | State | PH-0751 | 09-30-21 |
| DE Haz. Subst. Cleanup Act (HSCA) | State | N/A | 05-16-21 |
| Florida | NELAP | E87467 | 06-30-21 |
| Minnesota | NELAP | 050-999-436 | 12-31-20 |
| New Hampshire | NELAP | 2006 | 12-18-20 |
| New Jersey | NELAP | VT972 | 06-30-21 |
| New York | NELAP | 10391 | 04-01-21 |
| Pennsylvania | NELAP | 68-00489 | 04-30-21 |
| Rhode Island | State | LAO00298 | 12-30-20 |
| US Fish & Wildlife | US Federal Programs | 058448 | 07-31-21 |
| Vermont | State | VT4000 | 12-31-20 |
| Virginia | NELAP | 460209 | 12-14-20 |
| Wisconsin | State | 399133350 | 08-31-21 |

Method Summary

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-54945-1
SDG: 200-54945-1

| Method | Method Description | Protocol | Laboratory |
|--------|----------------------------------|----------|------------|
| APH | Air Phase Petroleum Hydrocarbons | MA DEP | TAL BUR |

Protocol References:

MA DEP = Massachusetts Department Of Environmental Protection

Laboratory References:

TAL BUR = Eurofins TestAmerica, Burlington, 30 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

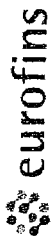


Sample Summary

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-54945-1
SDG: 200-54945-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---------------|------------------|--------|----------------|----------------|----------|
| 200-54945-1 | SVP-4-081920 | Air | 08/19/20 15:03 | 08/31/20 09:48 | |
| 200-54945-2 | SVP-5-081920 | Air | 08/19/20 13:00 | 08/31/20 09:48 | |
| 200-54945-3 | SVP-6-081920 | Air | 08/19/20 10:50 | 08/31/20 09:48 | |
| 200-54945-4 | DUP-1-081920 | Air | 08/19/20 00:00 | 08/31/20 09:48 | |
| 200-54945-5 | AMB-1-081920 | Air | 08/19/20 16:46 | 08/31/20 09:48 | |
| 200-54945-6 | EB-1-081920 | Air | 08/19/20 16:46 | 08/31/20 09:48 | |



Analysis Request / Canister Chain of Custody

Air Toxics

180 Blue Ravine Rd. Suite B, Folsom, CA 95630
Phone (800) 985-5955; Fax (916) 351-8279


PID: _____

Workorder #: _____

2008555

CH₄, CO₂, H₂, H₂O, He, N₂ and O₂

page - of - -

| Lab ID | Field Sample Identification (Location) | Can # | Flow Controller # | Start Sampling Information | | Stop Sampling Information | | Initial (in Hg) | Final (in Hg) | Receipt | Final (psi/g) Gas: N ₂ /He | Canister Vacuum/Pressure | | Requested Analyses |
|---|--|-----------|-------------------|--------------------------------------|------|---------------------------|------|-----------------|---------------|---------|---------------------------------------|--------------------------|------|--|
| | | | | Date | Time | Date | Time | | | | | Standard | Rush | |
| 01A | SVP-4-081920 | N2531 | 30956 | 8-19-20 | 1358 | 8-19-20 | 1503 | 29 | 1.5 | | | | | Mass APH S199 EPA TO-15 ASTM D-1946 |
| 02A | SVP-5-081920 | 09313 | 25034 | 8-19-20 | 1150 | 8-19-20 | 1300 | 28.5 | 1.5 | | | | | X |
| 03A | SVP-6-081920 | N 9224 | 24582 | 8-19-20 | 1010 | 8-19-20 | 1050 | 30 | 2 | | | | | X |
| 04A | DUP-1-081920 | 9224 | - | 8-19-20 | NA | 8-19-20 | NA | - | - | | | | | X |
| 05A | AMB-1-081920 | 04926 | 30750 | 8-19-20 | 1543 | 8-19-20 | 1646 | 30 | 2 | | | | | X |
| 06A | EB-1-081920 | N4291 | 30641 | 8-19-20 | 1543 | 8-19-20 | 1646 | 29 | 3.5 | | | | | X |
|  200-54945 Chain of Custody | | | | | | | | | | | | | | |
| Relinquished by: (Signature/Affiliation) | | Date | Time | Received by: (Signature/Affiliation) | | Date | Time | Lab Use Only | | | | | | |
| Thomas Dube / Leidos | | 8-19-20 | 17:00 | JMD / GAT | | 8-19-20 | 1036 | | | | | | | |
| Relinquished by: (Signature/Affiliation) | | Date | Time | Received by: (Signature/Affiliation) | | Date | Time | | | | | | | |
| [Signature] | | 8/19/2020 | | [Signature] | | 8/19/2020 | 0948 | | | | | | | |
| Relinquished by: (Signature/Affiliation) | | Date | Time | Received by: (Signature/Affiliation) | | Date | Time | | | | | | | |
| [Signature] | | | | [Signature] | | | | | | | | | | |

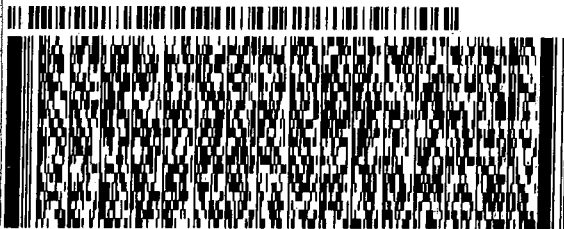
8/26/20



ORIGIN ID:MHRA (916) 605-3336
SHIPPING
EUROFINS AIR TOXICS INC
180 BLUE RAVINE RD STE B
FOLSOM, CA 95630
UNITED STATES US

SHIP DATE: 28AUG20
ACTWGT: 27.00 LB MAN
CAD: 0488499/CAFES312
DIMS: 19x19x17 IN
BILL SENDER

TO **DON DAWICKI**
EUROFINS TEST AMERICA
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 923-1026
REF: 133941

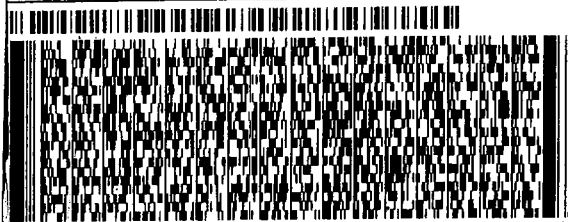


585CE77709/05A2

ORIGIN ID:MHRA (916) 605-3336
SHIPPING
EUROFINS AIR TOXICS INC
180 BLUE RAVINE RD STE B
FOLSOM, CA 95630
UNITED STATES US

ACTWGT:
CAD: 0488499/CAFES312
DIMS: 16x15x8 IN
BILL SENDER

TO **DON DAWICKI**
EUROFINS TEST AMERICA
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403
(802) 923-1026
REF: 133941

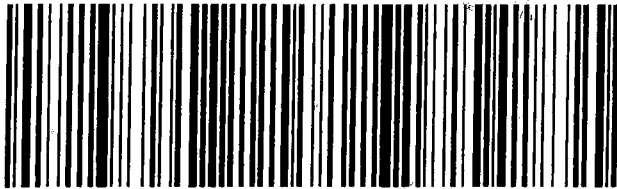


2 of 2
MPS# 9028 0547 1509
0263
Mstr# 9028 0547 1494

MON - 31 AUG 3:00P
STANDARD OVERNIGHT

XH BTVA

05403
VT-US BTV



1 of 2
TRK# 9028 0547 1494
0201
MASTER

MON - 31 AUG 3:00P
STANDARD OVERNIGHT

XH BTVA

0540
VT-US BT



Login Sample Receipt Checklist

Client: Eurofins Air Toxics, Inc.

Job Number: 200-54945-1
SDG Number: 200-54945-1

Login Number: 54945

List Number: 1

Creator: McNabb, Robert W

List Source: Eurofins TestAmerica, Burlington

| Question | Answer | Comment |
|---|--------|--|
| Radioactivity wasn't checked or is \leq background as measured by a survey meter. | N/A | Lab does not accept radioactive samples. |
| The cooler's custody seal, if present, is intact. | True | Not present |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | Thermal preservation not required. |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | N/A | Thermal preservation not required. |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | RSS/TED |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | N/A | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

Summa Canister Dilution Worksheet

Client: Eurofins Air Toxics, Inc.
 Project/Site: Newman's Chevron

Job No.: 200-54945-1
 SDG No.: 200-54945-1

| Lab Sample ID | Canister Volume (L) | Preadjusted Pressure ("Hg) | Preadjusted Pressure (atm) | Preadjusted Volume (L) | Adjusted Pressure (psig) | Adjusted Pressure (atm) | Adjusted Volume (L) | Initial Volume (mL) | Dilution Factor | Final Dilution Factor | Pressure Gauge ID | Date | Analyst Initials |
|---------------|---------------------|----------------------------|----------------------------|------------------------|--------------------------|-------------------------|---------------------|---------------------|-----------------|-----------------------|-------------------|----------------|------------------|
| 200-54945-1 | 6 | -3.45 | 0.88 | 5.31 | 5 | 1.34 | 8.04 | | 1.51 | 1.51 | na | 09/16/20 15:05 | GGG |
| 200-54945-2 | 6 | -4.5 | 0.85 | 5.10 | 5 | 1.34 | 8.04 | | 1.58 | 1.58 | | 09/16/20 15:06 | GGG |
| 200-54945-3 | 6 | -3.0 | 0.90 | 5.40 | 5 | 1.34 | 8.04 | | 1.49 | 1.49 | | 09/16/20 15:07 | GGG |
| 200-54945-4 | 6 | -4.5 | 0.85 | 5.10 | 5 | 1.34 | 8.04 | | 1.58 | 1.58 | na | 09/16/20 15:07 | GGG |
| 200-54945-5 | 6 | -4.0 | 0.87 | 5.20 | 4.0 | 1.27 | 7.63 | | 1.47 | 1.47 | na | 09/16/20 15:08 | GGG |
| 200-54945-6 | 6 | -3.5 | 0.88 | 5.30 | 5 | 1.34 | 8.04 | | 1.52 | 1.52 | na | 09/16/20 15:09 | GGG |

Formulae:

- Preadjusted Volume (L) = (Preadjusted Pressure ("Hg) + 29.92 "Hg * Vol L) / 29.92 "Hg
- Adjusted Volume (L) = (Adjusted Pressure (psig) + 14.7 psig * Vol L) / 14.7 psig
- Dilution Factor = Adjusted Volume (L) / Preadjusted Volume (L)

Where:

- 29.92 "Hg = Standard atmospheric pressure in inches of Mercury ("Hg)
- 14.7 psig = Standard atmospheric pressure in pounds per square inch gauge (psig)





Air Toxics

Analysis Request / Canister Chain of Custody

180 Blue Ravine Rd. Suite B, Folsom, CA 95630
Phone (800) 985-5955; Fax (916) 351-8279

PID: _____ Workorder #: **2008555**

CH₄, CO₂, H₂, He, N₂ and O₂

page--of---

| | | |
|---|---|---|
| Client: <u>Leidos</u> | Special Instructions/Notes: <u>Invoice Leidos Task order No. PO10242812</u> | Turnaround Time (Rush surcharges may apply) |
| Project Name: <u>Newman's Chevron</u> | Report <u>BTEX, MTBE, and Naphthalene only for TO-15 SIM</u> | Standard <input checked="" type="checkbox"/> Rush _____ (specify) |
| Project Manager: <u>R. Shropshire</u> Project # <u>204117</u> | | Canister Vacuum/Pressure |
| Sampler: <u>RSS / TED</u> | | Requested Analyses |
| Site Name: <u>Newman's Chevron</u> | | Lab Use Only |

| Lab ID | Field Sample Identification(Location) | Can # | Flow Controller # | Start Sampling Information | | Stop Sampling Information | | Initial (in Hg) | Final (in Hg) | Receipt | Final (psig) Gas: N ₂ / He | Requested Analyses | | |
|-------------------------------|---------------------------------------|-----------------------------|-------------------|----------------------------|------|---------------------------|------|-----------------|---------------|---------|---------------------------------------|--------------------|----------|-------------|
| | | | | Date | Time | Date | Time | | | | | EPA TO-15 SIM | Mass APH | ASTM D-1946 |
| 01A | SVP-4-081920 | N2531 | 30956 | 8-19-20 | 1358 | 8-19-20 | 1503 | 29 | 1.5 | | | X | X | X |
| 02A | SVP-5-081920 | 04313 | 25034 | 8-19-20 | 1150 | 8-19-20 | 1300 | 28.5 | 1.5 | | | X | X | X |
| 03A | SVP-6-081920 | N 92242827 24582 | 24582 | 8-19-20 | 1010 | 8-19-20 | 1050 | 30 | 2 | | | X | X | X |
| 04A | DUP-1-081920 | 9224 | - | 8-19-20 | NA | 8-19-20 | NA | - | - | | | X | X | X |
| 05A | AMB-1-081920 | 04926 | 30750 | 8-19-20 | 1543 | 8-19-20 | 1646 | 30 | 2 | | | X | X | X |
| 06A | EB-1-081920 | N4291 | 30641 | 8-19-20 | 1543 | 8-19-20 | 1646 | 29 | 3.5 | | | X | X | X |
| <i>Thomas Dubé</i> 8-19-20 | | | | | | | | | | | | | | |

| | | | | | |
|---|-----------------|---------------|--|-----------------|--------------|
| Relinquished by: (Signature/Affiliation) <u>Thomas Dubé / Leidos</u> | Date 8-19-20 | Time 17:00 | Received by: (Signature/Affiliation) <u>Juan Garcia</u> | Date 8/19/20 | Time 1036 |
| Relinquished by: (Signature/Affiliation) | Date | Time | Received by: (Signature/Affiliation) | Date | Time |
| Relinquished by: (Signature/Affiliation) | Date | Time | Received by: (Signature/Affiliation) | Date | Time |

Lab Use Only

Shipper Name: Felix Custody Seals Intact? Yes No None Good

Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, of shipping of samples. D.O.T Hotline (800) 467-4922

12/15/2020
Mr. Russ Shropshire
Leidos
18939 120th Ave NE
Ste 112
Bothell WA 98011

Project Name: Newman's Chevron
Project #: 204117
Workorder #: 2012224A

Dear Mr. Russ Shropshire

The following report includes the data for the above referenced project for sample(s) received on 12/9/2020 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified TO-15 SIM are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Alexandra Winslow at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Alexandra Winslow
Project Manager

WORK ORDER #: 2012224A

Work Order Summary

| | | | |
|------------------------|---|------------------|--|
| CLIENT: | Mr. Russ Shropshire Leidos 18939 120th Ave NE Ste 112 Bothell, WA 98011 | BILL TO: | Accounts Payable - Bothell Leidos 18939 120th Ave NE Ste 112 Bothell, WA 98011 |
| PHONE: | 425-485-5800 | P.O. # | P010242812 |
| FAX: | | PROJECT # | 204117 Newman's Chevron |
| DATE RECEIVED: | 12/09/2020 | CONTACT: | Alexandra Winslow |
| DATE COMPLETED: | 12/15/2020 | | |

| <u>FRACTION #</u> | <u>NAME</u> | <u>TEST</u> | <u>RECEIPT VAC./PRES.</u> | <u>FINAL PRESSURE</u> |
|-------------------|--------------|--------------------|-------------------------------|---------------------------|
| 01A | SVP-1-120420 | Modified TO-15 SIM | 0.5 "Hg | 5 psi |
| 02A | SVP-2-120420 | Modified TO-15 SIM | 0.5 "Hg | 5 psi |
| 03A | SVP-3-120420 | Modified TO-15 SIM | 0.4 psi | 5 psi |
| 04A | SVP-4-120420 | Modified TO-15 SIM | 0.0 "Hg | 5 psi |
| 05A | SVP-5-120420 | Modified TO-15 SIM | 0.0 "Hg | 5 psi |
| 06A | SVP-6-120420 | Modified TO-15 SIM | 0.5 "Hg | 5 psi |
| 07A | OA-1-120420 | Modified TO-15 SIM | 1.0 "Hg | 5 psi |
| 08A | OA-2-120420 | Modified TO-15 SIM | 4.0 "Hg | 5 psi |
| 09A | OA-3-120420 | Modified TO-15 SIM | 1.0 "Hg | 5 psi |
| 10A | DUP-1-120420 | Modified TO-15 SIM | 0.0 "Hg | 5 psi |
| 11A | Lab Blank | Modified TO-15 SIM | NA | NA |
| 12A | CCV | Modified TO-15 SIM | NA | NA |
| 13A | LCS | Modified TO-15 SIM | NA | NA |
| 13AA | LCSD | Modified TO-15 SIM | NA | NA |

CERTIFIED BY: 

 Technical Director

DATE: 12/15/20

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209220, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-20-16, UT NELAP – CA009332020-12, VA NELAP - 10615, WA NELAP - C935
 Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
 Accreditation number: CA300005-014, Effective date: 10/18/2020, Expiration date: 10/17/2021.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
 (916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
Modified TO-15 SIM
Leidos
Workorder# 2012224A

Ten 6 Liter Summa Canister (SIM Certified) samples were received on December 09, 2020. The laboratory performed analysis via modified EPA Method TO-15 using GC/MS in the SIM acquisition mode.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications.

| <i>Requirement</i> | <i>TO-15</i> | <i>ATL Modifications</i> |
|-------------------------------|--|---|
| ICAL %RSD acceptance criteria | $\leq 30\%$ RSD with 2 compounds allowed out to <math>< 40\%</math> RSD | Project specific; default criteria is $\leq 30\%$ RSD with 10% of compounds allowed out to <math>< 40\%</math> RSD |
| Daily Calibration | +/- 30% Difference | Project specific; default criteria is $\leq 30\%$ Difference with 10% of compounds allowed out up to $\leq 40\%$; flag and narrate outliers |
| Blank and standards | Zero air | Nitrogen |
| Method Detection Limit | Follow 40CFR Pt.136 App. B | The MDL met all relevant requirements in Method TO-15 (statistical MDL less than the LOQ). The concentration of the spiked replicate may have exceeded 10X the calculated MDL in some cases |

Receiving Notes

Despite the use of flow controllers for sample collection, the final canister vacuum for samples SVP-3-120420, SVP-4-120420, SVP-5-120420 and DUP-1-120420 were measured at ambient pressure at the laboratory.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Eight qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in laboratory blank greater than reporting limit (background subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Air Toxics

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: SVP-1-120420

Lab ID#: 2012224A-01A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------|-------------------|---------------|--------------------|----------------|
| Naphthalene | 0.068 | 1.1 | 0.36 | 5.8 |

Client Sample ID: SVP-2-120420

Lab ID#: 2012224A-02A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------|-------------------|---------------|--------------------|----------------|
| Naphthalene | 0.068 | 1.2 | 0.36 | 6.6 |

Client Sample ID: SVP-3-120420

Lab ID#: 2012224A-03A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------|-------------------|---------------|--------------------|----------------|
| Naphthalene | 0.065 | 0.45 | 0.34 | 2.4 |

Client Sample ID: SVP-4-120420

Lab ID#: 2012224A-04A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------|-------------------|---------------|--------------------|----------------|
| Toluene | 0.067 | 0.20 | 0.25 | 0.74 |
| Ethyl Benzene | 0.027 | 0.078 | 0.12 | 0.34 |
| m,p-Xylene | 0.054 | 1.4 | 0.23 | 6.2 |
| o-Xylene | 0.027 | 0.45 | 0.12 | 2.0 |
| Naphthalene | 0.067 | 0.19 | 0.35 | 1.0 |

Client Sample ID: SVP-5-120420

Lab ID#: 2012224A-05A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------|-------------------|---------------|--------------------|----------------|
| Naphthalene | 0.067 | 0.18 | 0.35 | 0.93 |

Client Sample ID: SVP-6-120420

Lab ID#: 2012224A-06A



Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: SVP-6-120420

Lab ID#: 2012224A-06A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------|-------------------|---------------|--------------------|----------------|
| Ethyl Benzene | 0.027 | 0.044 | 0.12 | 0.19 |
| Naphthalene | 0.068 | 0.22 | 0.36 | 1.2 |

Client Sample ID: OA-1-120420

Lab ID#: 2012224A-07A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------|-------------------|---------------|--------------------|----------------|
| Benzene | 0.070 | 0.52 | 0.22 | 1.7 |
| Toluene | 0.070 | 0.95 | 0.26 | 3.6 |
| Ethyl Benzene | 0.028 | 0.13 | 0.12 | 0.55 |
| m,p-Xylene | 0.056 | 0.43 | 0.24 | 1.9 |
| o-Xylene | 0.028 | 0.15 | 0.12 | 0.63 |

Client Sample ID: OA-2-120420

Lab ID#: 2012224A-08A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------|-------------------|---------------|--------------------|----------------|
| Benzene | 0.078 | 0.47 | 0.25 | 1.5 |
| Toluene | 0.078 | 0.85 | 0.29 | 3.2 |
| Ethyl Benzene | 0.031 | 0.12 | 0.13 | 0.53 |
| m,p-Xylene | 0.062 | 0.41 | 0.27 | 1.8 |
| o-Xylene | 0.031 | 0.14 | 0.13 | 0.60 |

Client Sample ID: OA-3-120420

Lab ID#: 2012224A-09A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------|-------------------|---------------|--------------------|----------------|
| Benzene | 0.070 | 0.50 | 0.22 | 1.6 |
| Toluene | 0.070 | 0.88 | 0.26 | 3.3 |
| Ethyl Benzene | 0.028 | 0.12 | 0.12 | 0.52 |
| m,p-Xylene | 0.056 | 0.40 | 0.24 | 1.8 |
| o-Xylene | 0.028 | 0.14 | 0.12 | 0.60 |



Air Toxics

Summary of Detected Compounds MODIFIED EPA METHOD TO-15 GC/MS SIM

Client Sample ID: DUP-1-120420

Lab ID#: 2012224A-10A

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|---------------|-------------------|---------------|--------------------|----------------|
| Toluene | 0.067 | 0.42 | 0.25 | 1.6 |
| Ethyl Benzene | 0.027 | 0.14 | 0.12 | 0.62 |
| m,p-Xylene | 0.054 | 2.7 | 0.23 | 12 |
| o-Xylene | 0.027 | 0.80 | 0.12 | 3.5 |
| Naphthalene | 0.067 | 0.20 | 0.35 | 1.1 |



Air Toxics

Client Sample ID: SVP-1-120420

Lab ID#: 2012224A-01A

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | | |
|--------------|-------------|---------------------|--------------------|
| File Name: | 21121413sim | Date of Collection: | 12/4/20 6:33:00 PM |
| Dil. Factor: | 1.36 | Date of Analysis: | 12/14/20 05:21 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------------------|-------------------|---------------|--------------------|----------------|
| Benzene | 0.068 | Not Detected | 0.22 | Not Detected |
| Toluene | 0.068 | Not Detected | 0.26 | Not Detected |
| Ethyl Benzene | 0.027 | Not Detected | 0.12 | Not Detected |
| m,p-Xylene | 0.054 | Not Detected | 0.24 | Not Detected |
| o-Xylene | 0.027 | Not Detected | 0.12 | Not Detected |
| Methyl tert-butyl ether | 0.14 | Not Detected | 0.49 | Not Detected |
| Naphthalene | 0.068 | 1.1 | 0.36 | 5.8 |

Container Type: 6 Liter Summa Canister (SIM Certified)

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 117 | 70-130 |
| Toluene-d8 | 100 | 70-130 |
| 4-Bromofluorobenzene | 97 | 70-130 |



Air Toxics

Client Sample ID: SVP-2-120420

Lab ID#: 2012224A-02A

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | | |
|--------------|-------------|---------------------|--------------------|
| File Name: | 21121412sim | Date of Collection: | 12/4/20 4:53:00 PM |
| Dil. Factor: | 1.36 | Date of Analysis: | 12/14/20 04:44 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------------------|-------------------|---------------|--------------------|----------------|
| Benzene | 0.068 | Not Detected | 0.22 | Not Detected |
| Toluene | 0.068 | Not Detected | 0.26 | Not Detected |
| Ethyl Benzene | 0.027 | Not Detected | 0.12 | Not Detected |
| m,p-Xylene | 0.054 | Not Detected | 0.24 | Not Detected |
| o-Xylene | 0.027 | Not Detected | 0.12 | Not Detected |
| Methyl tert-butyl ether | 0.14 | Not Detected | 0.49 | Not Detected |
| Naphthalene | 0.068 | 1.2 | 0.36 | 6.6 |

Container Type: 6 Liter Summa Canister (SIM Certified)

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 117 | 70-130 |
| Toluene-d8 | 98 | 70-130 |
| 4-Bromofluorobenzene | 100 | 70-130 |



Air Toxics

Client Sample ID: SVP-3-120420

Lab ID#: 2012224A-03A

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | | |
|--------------|-------------|---------------------|--------------------|
| File Name: | 21121414sim | Date of Collection: | 12/4/20 3:51:00 PM |
| Dil. Factor: | 1.30 | Date of Analysis: | 12/14/20 05:58 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------------------|-------------------|---------------|--------------------|----------------|
| Benzene | 0.065 | Not Detected | 0.21 | Not Detected |
| Toluene | 0.065 | Not Detected | 0.24 | Not Detected |
| Ethyl Benzene | 0.026 | Not Detected | 0.11 | Not Detected |
| m,p-Xylene | 0.052 | Not Detected | 0.22 | Not Detected |
| o-Xylene | 0.026 | Not Detected | 0.11 | Not Detected |
| Methyl tert-butyl ether | 0.13 | Not Detected | 0.47 | Not Detected |
| Naphthalene | 0.065 | 0.45 | 0.34 | 2.4 |

Container Type: 6 Liter Summa Canister (SIM Certified)

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 115 | 70-130 |
| Toluene-d8 | 99 | 70-130 |
| 4-Bromofluorobenzene | 98 | 70-130 |



Air Toxics

Client Sample ID: SVP-4-120420

Lab ID#: 2012224A-04A

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | | |
|--------------|-------------|---------------------|--------------------|
| File Name: | 21121415sim | Date of Collection: | 12/4/20 2:44:00 PM |
| Dil. Factor: | 1.34 | Date of Analysis: | 12/14/20 06:35 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------------------|-------------------|---------------|--------------------|----------------|
| Benzene | 0.067 | Not Detected | 0.21 | Not Detected |
| Toluene | 0.067 | 0.20 | 0.25 | 0.74 |
| Ethyl Benzene | 0.027 | 0.078 | 0.12 | 0.34 |
| m,p-Xylene | 0.054 | 1.4 | 0.23 | 6.2 |
| o-Xylene | 0.027 | 0.45 | 0.12 | 2.0 |
| Methyl tert-butyl ether | 0.13 | Not Detected | 0.48 | Not Detected |
| Naphthalene | 0.067 | 0.19 | 0.35 | 1.0 |

Container Type: 6 Liter Summa Canister (SIM Certified)

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 116 | 70-130 |
| Toluene-d8 | 99 | 70-130 |
| 4-Bromofluorobenzene | 100 | 70-130 |



Air Toxics

Client Sample ID: SVP-5-120420

Lab ID#: 2012224A-05A

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | | |
|--------------|-------------|---------------------|---------------------|
| File Name: | 21121416sim | Date of Collection: | 12/4/20 10:36:00 AM |
| Dil. Factor: | 1.34 | Date of Analysis: | 12/14/20 07:12 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------------------|-------------------|---------------|--------------------|----------------|
| Benzene | 0.067 | Not Detected | 0.21 | Not Detected |
| Toluene | 0.067 | Not Detected | 0.25 | Not Detected |
| Ethyl Benzene | 0.027 | Not Detected | 0.12 | Not Detected |
| m,p-Xylene | 0.054 | Not Detected | 0.23 | Not Detected |
| o-Xylene | 0.027 | Not Detected | 0.12 | Not Detected |
| Methyl tert-butyl ether | 0.13 | Not Detected | 0.48 | Not Detected |
| Naphthalene | 0.067 | 0.18 | 0.35 | 0.93 |

Container Type: 6 Liter Summa Canister (SIM Certified)

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 112 | 70-130 |
| Toluene-d8 | 98 | 70-130 |
| 4-Bromofluorobenzene | 98 | 70-130 |



Air Toxics

Client Sample ID: SVP-6-120420

Lab ID#: 2012224A-06A

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | |
|---------------------|-------------|--|
| File Name: | 21121417sim | Date of Collection: 12/4/20 12:39:00 PM |
| Dil. Factor: | 1.36 | Date of Analysis: 12/14/20 07:49 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------------------|-------------------|---------------|--------------------|----------------|
| Benzene | 0.068 | Not Detected | 0.22 | Not Detected |
| Toluene | 0.068 | Not Detected | 0.26 | Not Detected |
| Ethyl Benzene | 0.027 | 0.044 | 0.12 | 0.19 |
| m,p-Xylene | 0.054 | Not Detected | 0.24 | Not Detected |
| o-Xylene | 0.027 | Not Detected | 0.12 | Not Detected |
| Methyl tert-butyl ether | 0.14 | Not Detected | 0.49 | Not Detected |
| Naphthalene | 0.068 | 0.22 | 0.36 | 1.2 |

Container Type: 6 Liter Summa Canister (SIM Certified)

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 125 | 70-130 |
| Toluene-d8 | 98 | 70-130 |
| 4-Bromofluorobenzene | 100 | 70-130 |



Air Toxics

Client Sample ID: OA-1-120420

Lab ID#: 2012224A-07A

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | | |
|--------------|-------------|---------------------|--------------------|
| File Name: | 21121418sim | Date of Collection: | 12/4/20 7:22:00 PM |
| Dil. Factor: | 1.39 | Date of Analysis: | 12/14/20 09:05 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------------------|-------------------|---------------|--------------------|----------------|
| Benzene | 0.070 | 0.52 | 0.22 | 1.7 |
| Toluene | 0.070 | 0.95 | 0.26 | 3.6 |
| Ethyl Benzene | 0.028 | 0.13 | 0.12 | 0.55 |
| m,p-Xylene | 0.056 | 0.43 | 0.24 | 1.9 |
| o-Xylene | 0.028 | 0.15 | 0.12 | 0.63 |
| Methyl tert-butyl ether | 0.14 | Not Detected | 0.50 | Not Detected |
| Naphthalene | 0.070 | Not Detected | 0.36 | Not Detected |

Container Type: 6 Liter Summa Canister (SIM Certified)

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 116 | 70-130 |
| Toluene-d8 | 99 | 70-130 |
| 4-Bromofluorobenzene | 98 | 70-130 |



Air Toxics

Client Sample ID: OA-2-120420

Lab ID#: 2012224A-08A

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | | |
|--------------|-------------|---------------------|--------------------|
| File Name: | 21121419sim | Date of Collection: | 12/4/20 7:24:00 PM |
| Dil. Factor: | 1.55 | Date of Analysis: | 12/14/20 09:42 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------------------|-------------------|---------------|--------------------|----------------|
| Benzene | 0.078 | 0.47 | 0.25 | 1.5 |
| Toluene | 0.078 | 0.85 | 0.29 | 3.2 |
| Ethyl Benzene | 0.031 | 0.12 | 0.13 | 0.53 |
| m,p-Xylene | 0.062 | 0.41 | 0.27 | 1.8 |
| o-Xylene | 0.031 | 0.14 | 0.13 | 0.60 |
| Methyl tert-butyl ether | 0.16 | Not Detected | 0.56 | Not Detected |
| Naphthalene | 0.078 | Not Detected | 0.41 | Not Detected |

Container Type: 6 Liter Summa Canister (SIM Certified)

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 113 | 70-130 |
| Toluene-d8 | 98 | 70-130 |
| 4-Bromofluorobenzene | 102 | 70-130 |



Air Toxics

Client Sample ID: OA-3-120420

Lab ID#: 2012224A-09A

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | | |
|--------------|-------------|---------------------|--------------------|
| File Name: | 21121420sim | Date of Collection: | 12/4/20 7:26:00 PM |
| Dil. Factor: | 1.39 | Date of Analysis: | 12/14/20 10:19 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------------------|-------------------|---------------|--------------------|----------------|
| Benzene | 0.070 | 0.50 | 0.22 | 1.6 |
| Toluene | 0.070 | 0.88 | 0.26 | 3.3 |
| Ethyl Benzene | 0.028 | 0.12 | 0.12 | 0.52 |
| m,p-Xylene | 0.056 | 0.40 | 0.24 | 1.8 |
| o-Xylene | 0.028 | 0.14 | 0.12 | 0.60 |
| Methyl tert-butyl ether | 0.14 | Not Detected | 0.50 | Not Detected |
| Naphthalene | 0.070 | Not Detected | 0.36 | Not Detected |

Container Type: 6 Liter Summa Canister (SIM Certified)

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 115 | 70-130 |
| Toluene-d8 | 100 | 70-130 |
| 4-Bromofluorobenzene | 99 | 70-130 |



Air Toxics

Client Sample ID: DUP-1-120420

Lab ID#: 2012224A-10A

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | | |
|--------------|-------------|---------------------|-------------------|
| File Name: | 21121421sim | Date of Collection: | 12/4/20 |
| Dil. Factor: | 1.34 | Date of Analysis: | 12/14/20 10:56 PM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------------------|-------------------|---------------|--------------------|----------------|
| Benzene | 0.067 | Not Detected | 0.21 | Not Detected |
| Toluene | 0.067 | 0.42 | 0.25 | 1.6 |
| Ethyl Benzene | 0.027 | 0.14 | 0.12 | 0.62 |
| m,p-Xylene | 0.054 | 2.7 | 0.23 | 12 |
| o-Xylene | 0.027 | 0.80 | 0.12 | 3.5 |
| Methyl tert-butyl ether | 0.13 | Not Detected | 0.48 | Not Detected |
| Naphthalene | 0.067 | 0.20 | 0.35 | 1.1 |

Container Type: 6 Liter Summa Canister (SIM Certified)

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 117 | 70-130 |
| Toluene-d8 | 99 | 70-130 |
| 4-Bromofluorobenzene | 101 | 70-130 |



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2012224A-11A

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | | |
|--------------|-------------|---------------------|-------------------|
| File Name: | 21121406sim | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 12/14/20 11:19 AM |

| Compound | Rpt. Limit (ppbv) | Amount (ppbv) | Rpt. Limit (ug/m3) | Amount (ug/m3) |
|-------------------------|-------------------|---------------|--------------------|----------------|
| Benzene | 0.050 | Not Detected | 0.16 | Not Detected |
| Toluene | 0.050 | Not Detected | 0.19 | Not Detected |
| Ethyl Benzene | 0.020 | Not Detected | 0.087 | Not Detected |
| m,p-Xylene | 0.040 | Not Detected | 0.17 | Not Detected |
| o-Xylene | 0.020 | Not Detected | 0.087 | Not Detected |
| Methyl tert-butyl ether | 0.10 | Not Detected | 0.36 | Not Detected |
| Naphthalene | 0.050 | Not Detected | 0.26 | Not Detected |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 116 | 70-130 |
| Toluene-d8 | 99 | 70-130 |
| 4-Bromofluorobenzene | 101 | 70-130 |



Air Toxics

Client Sample ID: CCV

Lab ID#: 2012224A-12A

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | |
|--------------|-------------|-------------------------------------|
| File Name: | 21121402sim | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 12/14/20 08:26 AM |

| Compound | %Recovery |
|-------------------------|-----------|
| Benzene | 101 |
| Toluene | 96 |
| Ethyl Benzene | 96 |
| m,p-Xylene | 94 |
| o-Xylene | 91 |
| Methyl tert-butyl ether | 99 |
| Naphthalene | 75 |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 107 | 70-130 |
| Toluene-d8 | 108 | 70-130 |
| 4-Bromofluorobenzene | 109 | 70-130 |

Client Sample ID: LCS

Lab ID#: 2012224A-13A

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | |
|---------------------|--------------------|--|
| File Name: | 21121403sim | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 12/14/20 09:12 AM |

| Compound | %Recovery | Method Limits |
|-------------------------|------------------|----------------------|
| Benzene | 107 | 70-130 |
| Toluene | 100 | 70-130 |
| Ethyl Benzene | 101 | 70-130 |
| m,p-Xylene | 102 | 70-130 |
| o-Xylene | 98 | 70-130 |
| Methyl tert-butyl ether | 105 | 70-130 |
| Naphthalene | 82 | 60-140 |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|------------------|----------------------|
| 1,2-Dichloroethane-d4 | 108 | 70-130 |
| Toluene-d8 | 109 | 70-130 |
| 4-Bromofluorobenzene | 112 | 70-130 |



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2012224A-13AA

MODIFIED EPA METHOD TO-15 GC/MS SIM

| | | |
|--------------|-------------|-------------------------------------|
| File Name: | 21121404sim | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 12/14/20 10:00 AM |

| Compound | %Recovery | Method Limits |
|-------------------------|-----------|---------------|
| Benzene | 106 | 70-130 |
| Toluene | 99 | 70-130 |
| Ethyl Benzene | 99 | 70-130 |
| m,p-Xylene | 99 | 70-130 |
| o-Xylene | 95 | 70-130 |
| Methyl tert-butyl ether | 106 | 70-130 |
| Naphthalene | 84 | 60-140 |

Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|-----------------------|-----------|---------------|
| 1,2-Dichloroethane-d4 | 108 | 70-130 |
| Toluene-d8 | 107 | 70-130 |
| 4-Bromofluorobenzene | 110 | 70-130 |

12/16/2020
Mr. Russ Shropshire
Leidos
18939 120th Ave NE
Ste 112
Bothell WA 98011

Project Name: Newman's Chevron
Project #: 204117
Workorder #: 2012224B

Dear Mr. Russ Shropshire

The following report includes the data for the above referenced project for sample(s) received on 12/9/2020 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified ASTM D-1946 are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Alexandra Winslow at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Alexandra Winslow
Project Manager

WORK ORDER #: 2012224B

Work Order Summary

| | | | |
|------------------------|---|------------------|--|
| CLIENT: | Mr. Russ Shropshire Leidos 18939 120th Ave NE Ste 112 Bothell, WA 98011 | BILL TO: | Accounts Payable - Bothell Leidos 18939 120th Ave NE Ste 112 Bothell, WA 98011 |
| PHONE: | 425-485-5800 | P.O. # | P010242812 |
| FAX: | | PROJECT # | 204117 Newman's Chevron |
| DATE RECEIVED: | 12/09/2020 | CONTACT: | Alexandra Winslow |
| DATE COMPLETED: | 12/16/2020 | | |

| <u>FRACTION #</u> | <u>NAME</u> | <u>TEST</u> | <u>RECEIPT VAC./PRES.</u> | <u>FINAL PRESSURE</u> |
|-------------------|--------------|----------------------|-------------------------------|---------------------------|
| 01A | SVP-1-120420 | Modified ASTM D-1946 | 0.5 "Hg | 5 psi |
| 02A | SVP-2-120420 | Modified ASTM D-1946 | 0.5 "Hg | 5 psi |
| 03A | SVP-3-120420 | Modified ASTM D-1946 | 0.4 psi | 5 psi |
| 04A | SVP-4-120420 | Modified ASTM D-1946 | 0.0 "Hg | 5 psi |
| 05A | SVP-5-120420 | Modified ASTM D-1946 | 0.0 "Hg | 5 psi |
| 06A | SVP-6-120420 | Modified ASTM D-1946 | 0.5 "Hg | 5 psi |
| 07A | OA-1-120420 | Modified ASTM D-1946 | 1.0 "Hg | 5 psi |
| 08A | OA-2-120420 | Modified ASTM D-1946 | 4.0 "Hg | 5 psi |
| 09A | OA-3-120420 | Modified ASTM D-1946 | 1.0 "Hg | 5 psi |
| 10A | DUP-1-120420 | Modified ASTM D-1946 | 0.0 "Hg | 5 psi |
| 11A | Lab Blank | Modified ASTM D-1946 | NA | NA |
| 11B | Lab Blank | Modified ASTM D-1946 | NA | NA |
| 12A | LCS | Modified ASTM D-1946 | NA | NA |
| 12AA | LCSD | Modified ASTM D-1946 | NA | NA |
| 12B | LCS | Modified ASTM D-1946 | NA | NA |
| 12BB | LCSD | Modified ASTM D-1946 | NA | NA |

CERTIFIED BY: 

 Technical Director

DATE: 12/16/20

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209220, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-20-16, UT NELAP – CA009332020-12, VA NELAP - 10615, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005-014, Effective date: 10/18/2020, Expiration date: 10/17/2021.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
 (916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
Modified ASTM D-1946
Leidos
Workorder# 2012224B

Ten 6 Liter Summa Canister (SIM Certified) samples were received on December 09, 2020. The laboratory performed analysis via Modified ASTM Method D-1946 for Methane and fixed gases in air using GC/FID or GC/TCD. The method involves direct injection of 1.0 mL of sample.

On the analytical column employed for this analysis, Oxygen coelutes with Argon. The corresponding peak is quantitated as Oxygen.

Since Nitrogen is used to pressurize samples, the reported Nitrogen values are calculated by adding all the sample components and subtracting from 100%.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications.

| <i>Requirement</i> | <i>ASTM D-1946</i> | <i>ATL Modifications</i> |
|-------------------------|--|--|
| Calibration | A single point calibration is performed using a reference standard closely matching the composition of the unknown. | A minimum of 5-point calibration curve is performed. Quantitation is based on average Response Factor. |
| Reference Standard | The composition of any reference standard must be known to within 0.01 mol % for any component. | The standards used by ATL are blended to a $\geq 95\%$ accuracy. |
| Sample Injection Volume | Components whose concentrations are in excess of 5 % should not be analyzed by using sample volumes greater than 0.5 mL. | The sample container is connected directly to a fixed volume sample loop of 1.0 mL on the GC. Linear range is defined by the calibration curve. Bags are loaded by vacuum. |
| Normalization | Normalize the mole percent values by multiplying each value by 100 and dividing by the sum of the original values. The sum of the original values should not differ from 100% by more than 1.0%. | Results are not normalized. The sum of the reported values can differ from 100% by as much as 15%, either due to analytical variability or an unusual sample matrix. |
| Precision | Precision requirements established at each concentration level. | Duplicates should agree within 25% RPD for detections > 5 X's the RL. |

Receiving Notes

Despite the use of flow controllers for sample collection, the final canister vacuum for samples SVP-3-120420, SVP-4-120420, SVP-5-120420 and DUP-1-120420 were measured at ambient pressure at the laboratory.

Analytical Notes

There were no analytical discrepancies.

Definition of Data Qualifying Flags

Seven qualifiers may have been used on the data analysis sheets and indicate as follows:

B - Compound present in laboratory blank greater than reporting limit.

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the detection limit.

M - Reported value may be biased due to apparent matrix interferences.

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue



Air Toxics

Summary of Detected Compounds NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: SVP-1-120420

Lab ID#: 2012224B-01A

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|------------|
| Oxygen | 0.14 | 11 |
| Nitrogen | 0.14 | 82 |
| Carbon Dioxide | 0.014 | 7.5 |

Client Sample ID: SVP-2-120420

Lab ID#: 2012224B-02A

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|------------|
| Oxygen | 0.14 | 14 |
| Nitrogen | 0.14 | 79 |
| Carbon Dioxide | 0.014 | 7.3 |

Client Sample ID: SVP-3-120420

Lab ID#: 2012224B-03A

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|------------|
| Oxygen | 0.13 | 16 |
| Nitrogen | 0.13 | 80 |
| Carbon Dioxide | 0.013 | 4.4 |

Client Sample ID: SVP-4-120420

Lab ID#: 2012224B-04A

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|------------|
| Oxygen | 0.13 | 19 |
| Nitrogen | 0.13 | 79 |
| Carbon Dioxide | 0.013 | 2.3 |

Client Sample ID: SVP-5-120420

Lab ID#: 2012224B-05A

| Compound | Rpt. Limit (%) | Amount (%) |
|----------|----------------|------------|
|----------|----------------|------------|

Summary of Detected Compounds NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: SVP-5-120420

Lab ID#: 2012224B-05A

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|------------|
| Oxygen | 0.13 | 18 |
| Nitrogen | 0.13 | 80 |
| Carbon Dioxide | 0.013 | 2.3 |

Client Sample ID: SVP-6-120420

Lab ID#: 2012224B-06A

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|------------|
| Oxygen | 0.14 | 17 |
| Nitrogen | 0.14 | 80 |
| Carbon Dioxide | 0.014 | 3.0 |

Client Sample ID: OA-1-120420

Lab ID#: 2012224B-07A

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|------------|
| Oxygen | 0.14 | 21 |
| Methane | 0.00014 | 0.00021 |
| Nitrogen | 0.14 | 79 |
| Carbon Dioxide | 0.014 | 0.051 |

Client Sample ID: OA-2-120420

Lab ID#: 2012224B-08A

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|------------|
| Oxygen | 0.16 | 22 |
| Methane | 0.00016 | 0.00020 |
| Nitrogen | 0.16 | 78 |
| Carbon Dioxide | 0.016 | 0.052 |

Client Sample ID: OA-3-120420

Lab ID#: 2012224B-09A



Air Toxics

Summary of Detected Compounds
NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

Client Sample ID: OA-3-120420

Lab ID#: 2012224B-09A

| Compound | Rpt. Limit (%) | Amount (%) |
|-----------------|-----------------------|-------------------|
| Oxygen | 0.14 | 21 |
| Methane | 0.00014 | 0.00022 |
| Nitrogen | 0.14 | 79 |
| Carbon Dioxide | 0.014 | 0.052 |

Client Sample ID: DUP-1-120420

Lab ID#: 2012224B-10A

| Compound | Rpt. Limit (%) | Amount (%) |
|-----------------|-----------------------|-------------------|
| Oxygen | 0.13 | 19 |
| Nitrogen | 0.13 | 79 |
| Carbon Dioxide | 0.013 | 2.3 |



Air Toxics

Client Sample ID: SVP-1-120420

Lab ID#: 2012224B-01A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|--------------------|
| File Name: | 10121108 | Date of Collection: | 12/4/20 6:33:00 PM |
| Dil. Factor: | 1.36 | Date of Analysis: | 12/12/20 08:52 AM |

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|--------------|
| Oxygen | 0.14 | 11 |
| Methane | 0.00014 | Not Detected |
| Helium | 0.068 | Not Detected |
| Hydrogen | 0.014 | Not Detected |
| Nitrogen | 0.14 | 82 |
| Carbon Dioxide | 0.014 | 7.5 |

Container Type: 6 Liter Summa Canister (SIM Certified)



Air Toxics

Client Sample ID: SVP-2-120420

Lab ID#: 2012224B-02A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|--------------------|
| File Name: | 10121109 | Date of Collection: | 12/4/20 4:53:00 PM |
| Dil. Factor: | 1.36 | Date of Analysis: | 12/12/20 09:24 AM |

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|--------------|
| Oxygen | 0.14 | 14 |
| Methane | 0.00014 | Not Detected |
| Helium | 0.068 | Not Detected |
| Hydrogen | 0.014 | Not Detected |
| Nitrogen | 0.14 | 79 |
| Carbon Dioxide | 0.014 | 7.3 |

Container Type: 6 Liter Summa Canister (SIM Certified)



Air Toxics

Client Sample ID: SVP-3-120420

Lab ID#: 2012224B-03A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|--------------------|
| File Name: | 10121110 | Date of Collection: | 12/4/20 3:51:00 PM |
| Dil. Factor: | 1.30 | Date of Analysis: | 12/12/20 09:55 AM |

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|--------------|
| Oxygen | 0.13 | 16 |
| Methane | 0.00013 | Not Detected |
| Helium | 0.065 | Not Detected |
| Hydrogen | 0.013 | Not Detected |
| Nitrogen | 0.13 | 80 |
| Carbon Dioxide | 0.013 | 4.4 |

Container Type: 6 Liter Summa Canister (SIM Certified)



Air Toxics

Client Sample ID: SVP-4-120420

Lab ID#: 2012224B-04A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|--------------------|
| File Name: | 10121111 | Date of Collection: | 12/4/20 2:44:00 PM |
| Dil. Factor: | 1.34 | Date of Analysis: | 12/12/20 10:31 AM |

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|--------------|
| Oxygen | 0.13 | 19 |
| Methane | 0.00013 | Not Detected |
| Helium | 0.067 | Not Detected |
| Hydrogen | 0.013 | Not Detected |
| Nitrogen | 0.13 | 79 |
| Carbon Dioxide | 0.013 | 2.3 |

Container Type: 6 Liter Summa Canister (SIM Certified)



Air Toxics

Client Sample ID: SVP-5-120420

Lab ID#: 2012224B-05A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|---------------------|
| File Name: | 10121112 | Date of Collection: | 12/4/20 10:36:00 AM |
| Dil. Factor: | 1.34 | Date of Analysis: | 12/12/20 10:57 AM |

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|--------------|
| Oxygen | 0.13 | 18 |
| Methane | 0.00013 | Not Detected |
| Helium | 0.067 | Not Detected |
| Hydrogen | 0.013 | Not Detected |
| Nitrogen | 0.13 | 80 |
| Carbon Dioxide | 0.013 | 2.3 |

Container Type: 6 Liter Summa Canister (SIM Certified)



Air Toxics

Client Sample ID: SVP-6-120420

Lab ID#: 2012224B-06A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|---------------------|
| File Name: | 10121113 | Date of Collection: | 12/4/20 12:39:00 PM |
| Dil. Factor: | 1.36 | Date of Analysis: | 12/12/20 11:27 AM |

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|--------------|
| Oxygen | 0.14 | 17 |
| Methane | 0.00014 | Not Detected |
| Helium | 0.068 | Not Detected |
| Hydrogen | 0.014 | Not Detected |
| Nitrogen | 0.14 | 80 |
| Carbon Dioxide | 0.014 | 3.0 |

Container Type: 6 Liter Summa Canister (SIM Certified)



Air Toxics

Client Sample ID: OA-1-120420

Lab ID#: 2012224B-07A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|--------------------|
| File Name: | 10121114 | Date of Collection: | 12/4/20 7:22:00 PM |
| Dil. Factor: | 1.39 | Date of Analysis: | 12/12/20 11:55 AM |

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|--------------|
| Oxygen | 0.14 | 21 |
| Methane | 0.00014 | 0.00021 |
| Helium | 0.070 | Not Detected |
| Hydrogen | 0.014 | Not Detected |
| Nitrogen | 0.14 | 79 |
| Carbon Dioxide | 0.014 | 0.051 |

Container Type: 6 Liter Summa Canister (SIM Certified)



Air Toxics

Client Sample ID: OA-2-120420

Lab ID#: 2012224B-08A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|--------------------|
| File Name: | 10121115 | Date of Collection: | 12/4/20 7:24:00 PM |
| Dil. Factor: | 1.55 | Date of Analysis: | 12/12/20 12:19 PM |

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|--------------|
| Oxygen | 0.16 | 22 |
| Methane | 0.00016 | 0.00020 |
| Helium | 0.078 | Not Detected |
| Hydrogen | 0.016 | Not Detected |
| Nitrogen | 0.16 | 78 |
| Carbon Dioxide | 0.016 | 0.052 |

Container Type: 6 Liter Summa Canister (SIM Certified)



Air Toxics

Client Sample ID: OA-3-120420

Lab ID#: 2012224B-09A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|--------------------|
| File Name: | 10121116 | Date of Collection: | 12/4/20 7:26:00 PM |
| Dil. Factor: | 1.39 | Date of Analysis: | 12/12/20 12:56 PM |

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|--------------|
| Oxygen | 0.14 | 21 |
| Methane | 0.00014 | 0.00022 |
| Helium | 0.070 | Not Detected |
| Hydrogen | 0.014 | Not Detected |
| Nitrogen | 0.14 | 79 |
| Carbon Dioxide | 0.014 | 0.052 |

Container Type: 6 Liter Summa Canister (SIM Certified)



Air Toxics

Client Sample ID: DUP-1-120420

Lab ID#: 2012224B-10A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|-------------------|
| File Name: | 10121117 | Date of Collection: | 12/4/20 |
| Dil. Factor: | 1.34 | Date of Analysis: | 12/12/20 01:21 PM |

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|--------------|
| Oxygen | 0.13 | 19 |
| Methane | 0.00013 | Not Detected |
| Helium | 0.067 | Not Detected |
| Hydrogen | 0.013 | Not Detected |
| Nitrogen | 0.13 | 79 |
| Carbon Dioxide | 0.013 | 2.3 |

Container Type: 6 Liter Summa Canister (SIM Certified)



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2012224B-11A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|-------------------|
| File Name: | 10121107 | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 12/12/20 08:19 AM |

| Compound | Rpt. Limit (%) | Amount (%) |
|----------------|----------------|--------------|
| Oxygen | 0.10 | Not Detected |
| Methane | 0.00010 | Not Detected |
| Nitrogen | 0.10 | Not Detected |
| Carbon Dioxide | 0.010 | Not Detected |

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2012224B-11B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|-----------|---------------------|-------------------|
| File Name: | 10121106c | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 12/12/20 07:51 AM |

| Compound | Rpt. Limit (%) | Amount (%) |
|----------|----------------|--------------|
| Helium | 0.050 | Not Detected |
| Hydrogen | 0.010 | Not Detected |

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCS

Lab ID#: 2012224B-12A

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|----------|---------------------|-------------------|
| File Name: | 10121102 | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 12/11/20 09:39 PM |

| Compound | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Oxygen | 99 | 85-115 |
| Methane | 97 | 85-115 |
| Helium | 100 | 85-115 |
| Nitrogen | 98 | 85-115 |
| Carbon Dioxide | 111 | 85-115 |

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2012224B-12AA

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | |
|--------------|----------|-------------------------------------|
| File Name: | 10121103 | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 12/11/20 10:05 PM |

| Compound | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Oxygen | 99 | 85-115 |
| Methane | 96 | 85-115 |
| Helium | 100 | 85-115 |
| Nitrogen | 98 | 85-115 |
| Carbon Dioxide | 111 | 85-115 |

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCS

Lab ID#: 2012224B-12B

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | |
|--------------|-----------|-------------------------------------|
| File Name: | 10121105c | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 12/11/20 11:19 PM |

| Compound | %Recovery | Method Limits |
|----------|-----------|---------------|
| Hydrogen | 103 | 85-115 |

Container Type: NA - Not Applicable



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2012224B-12BB

NATURAL GAS ANALYSIS BY MODIFIED ASTM D-1946

| | | | |
|--------------|-----------|---------------------|-------------------|
| File Name: | 10121123c | Date of Collection: | NA |
| Dil. Factor: | 1.00 | Date of Analysis: | 12/12/20 04:03 PM |

| Compound | %Recovery | Method Limits |
|----------|-----------|---------------|
| Hydrogen | 103 | 85-115 |

Container Type: NA - Not Applicable

ANALYTICAL REPORT

Eurofins TestAmerica, Burlington
530 Community Drive
Suite 11
South Burlington, VT 05403
Tel: (802)660-1990

Laboratory Job ID: 200-56561-1
Laboratory Sample Delivery Group: 200-56561-1
Client Project/Site: Newman's Chevron

For:
Eurofins Air Toxics, Inc.
180 Blue Ravine Road
Suite B
Folsom, California 95630

Attn: Alexandra Winslow

Elizabeth A. Nye

Authorized for release by:
12/30/2020 1:02:40 PM

Elizabeth Nye, Project Manager I
(802)660-1990
Elizabeth.Nye@Eurofinset.com

LINKS

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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



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Definitions/Glossary

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-56561-1
SDG: 200-56561-1

Qualifiers

Air - GC/MS VOA

| Qualifier | Qualifier Description |
|-----------|--|
| B | Compound was found in the blank and sample. |
| U | Indicates the analyte was analyzed for but not detected. |

Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|----------------|---|
| α | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

Case Narrative

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-56561-1
SDG: 200-56561-1

Job ID: 200-56561-1

Laboratory: Eurofins TestAmerica, Burlington

Narrative

CASE NARRATIVE

Client: Eurofins Air Toxics, Inc.

Project: Newman's Chevron

Report Number: 200-56561-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

RECEIPT

The samples were received on 12/16/2020; the samples arrived in good condition.

PETROLEUM HYDROCARBON

Samples SVP-1-120420, SVP-2-120420, SVP-3-120420, SVP-4-120420, SVP-5-120420, SVP-6-120420, OA-1-120420, OA-2-120420, OA-3-120420 and DUP-1-120420 were analyzed for petroleum hydrocarbon in accordance with MADEP APH. The samples were analyzed on 12/23/2020 and 12/24/2020.

Naphthalene was detected in method blank MB 200-162429/5 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been flagged.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

Detection Summary

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-56561-1
SDG: 200-56561-1

Client Sample ID: SVP-1-120420

Lab Sample ID: 200-56561-1

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|-----------------------------|--------|-----------|------|------|-------|---------|---|--------|-----------|
| Naphthalene | 4.2 | B | 0.77 | 0.77 | ug/m3 | 1 | | APH | Total/NA |
| C5-C8 Aliphatics (adjusted) | 73 | | 6.7 | 6.7 | ug/m3 | 1 | | APH | Total/NA |

Client Sample ID: SVP-2-120420

Lab Sample ID: 200-56561-2

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|-----------------------------|--------|-----------|------|------|-------|---------|---|--------|-----------|
| Naphthalene | 5.6 | B | 0.77 | 0.77 | ug/m3 | 1 | | APH | Total/NA |
| C5-C8 Aliphatics (adjusted) | 30 | | 6.7 | 6.7 | ug/m3 | 1 | | APH | Total/NA |

Client Sample ID: SVP-3-120420

Lab Sample ID: 200-56561-3

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|-----------------------------|--------|-----------|------|------|-------|---------|---|--------|-----------|
| Naphthalene | 2.5 | B | 0.77 | 0.77 | ug/m3 | 1 | | APH | Total/NA |
| C5-C8 Aliphatics (adjusted) | 68 | | 6.7 | 6.7 | ug/m3 | 1 | | APH | Total/NA |

Client Sample ID: SVP-4-120420

Lab Sample ID: 200-56561-4

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|-----------------------------|--------|-----------|------|------|-------|---------|---|--------|-----------|
| Toluene | 0.59 | | 0.56 | 0.56 | ug/m3 | 1 | | APH | Total/NA |
| m-Xylene & p-Xylene | 6.0 | | 0.65 | 0.65 | ug/m3 | 1 | | APH | Total/NA |
| o-Xylene | 2.1 | | 0.65 | 0.65 | ug/m3 | 1 | | APH | Total/NA |
| Naphthalene | 2.0 | B | 0.78 | 0.78 | ug/m3 | 1 | | APH | Total/NA |
| C9-C10 Aromatics | 9.6 | | 3.8 | 3.8 | ug/m3 | 1 | | APH | Total/NA |
| C5-C8 Aliphatics (adjusted) | 11 | | 6.8 | 6.8 | ug/m3 | 1 | | APH | Total/NA |

Client Sample ID: SVP-5-120420

Lab Sample ID: 200-56561-5

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|-----------------------------|--------|-----------|------|------|-------|---------|---|--------|-----------|
| Naphthalene | 1.4 | B | 0.78 | 0.78 | ug/m3 | 1 | | APH | Total/NA |
| C5-C8 Aliphatics (adjusted) | 58 | | 6.8 | 6.8 | ug/m3 | 1 | | APH | Total/NA |

Client Sample ID: SVP-6-120420

Lab Sample ID: 200-56561-6

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|------------------------------|--------|-----------|------|------|-------|---------|---|--------|-----------|
| Naphthalene | 1.9 | B | 0.77 | 0.77 | ug/m3 | 1 | | APH | Total/NA |
| C5-C8 Aliphatics (adjusted) | 170 | | 6.7 | 6.7 | ug/m3 | 1 | | APH | Total/NA |
| C9-C12 Aliphatics (adjusted) | 35 | | 5.2 | 5.2 | ug/m3 | 1 | | APH | Total/NA |

Client Sample ID: OA-1-120420

Lab Sample ID: 200-56561-7

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|-----------------------------|--------|-----------|------|------|-------|---------|---|--------|-----------|
| Benzene | 1.0 | | 0.46 | 0.46 | ug/m3 | 1 | | APH | Total/NA |
| Toluene | 2.6 | | 0.54 | 0.54 | ug/m3 | 1 | | APH | Total/NA |
| m-Xylene & p-Xylene | 1.8 | | 0.63 | 0.63 | ug/m3 | 1 | | APH | Total/NA |
| o-Xylene | 0.67 | | 0.63 | 0.63 | ug/m3 | 1 | | APH | Total/NA |
| Naphthalene | 1.1 | B | 0.75 | 0.75 | ug/m3 | 1 | | APH | Total/NA |
| C5-C8 Aliphatics (adjusted) | 24 | | 6.6 | 6.6 | ug/m3 | 1 | | APH | Total/NA |

Client Sample ID: OA-2-120420

Lab Sample ID: 200-56561-8

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|---------------------|--------|-----------|------|------|-------|---------|---|--------|-----------|
| Benzene | 0.84 | | 0.41 | 0.41 | ug/m3 | 1 | | APH | Total/NA |
| Toluene | 2.1 | | 0.48 | 0.48 | ug/m3 | 1 | | APH | Total/NA |
| m-Xylene & p-Xylene | 1.6 | | 0.56 | 0.56 | ug/m3 | 1 | | APH | Total/NA |

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Burlington

Detection Summary

Client: Eurofins Air Toxics, Inc.
 Project/Site: Newman's Chevron

Job ID: 200-56561-1
 SDG: 200-56561-1

Client Sample ID: OA-2-120420 (Continued)

Lab Sample ID: 200-56561-8

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|-----------------------------|--------|-----------|------|------|-------|---------|---|--------|-----------|
| o-Xylene | 0.58 | | 0.56 | 0.56 | ug/m3 | 1 | | APH | Total/NA |
| Naphthalene | 1.0 | B | 0.68 | 0.68 | ug/m3 | 1 | | APH | Total/NA |
| C5-C8 Aliphatics (adjusted) | 18 | | 5.9 | 5.9 | ug/m3 | 1 | | APH | Total/NA |

Client Sample ID: OA-3-120420

Lab Sample ID: 200-56561-9

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|-----------------------------|--------|-----------|------|------|-------|---------|---|--------|-----------|
| Benzene | 0.97 | | 0.46 | 0.46 | ug/m3 | 1 | | APH | Total/NA |
| Toluene | 2.4 | | 0.54 | 0.54 | ug/m3 | 1 | | APH | Total/NA |
| m-Xylene & p-Xylene | 1.7 | | 0.63 | 0.63 | ug/m3 | 1 | | APH | Total/NA |
| o-Xylene | 0.63 | | 0.63 | 0.63 | ug/m3 | 1 | | APH | Total/NA |
| Naphthalene | 1.2 | B | 0.75 | 0.75 | ug/m3 | 1 | | APH | Total/NA |
| C5-C8 Aliphatics (adjusted) | 22 | | 6.6 | 6.6 | ug/m3 | 1 | | APH | Total/NA |

Client Sample ID: DUP-1-120420

Lab Sample ID: 200-56561-10

| Analyte | Result | Qualifier | RL | RL | Unit | Dil Fac | D | Method | Prep Type |
|------------------------------|--------|-----------|------|------|-------|---------|---|--------|-----------|
| Toluene | 1.2 | | 0.56 | 0.56 | ug/m3 | 1 | | APH | Total/NA |
| m-Xylene & p-Xylene | 11 | | 0.65 | 0.65 | ug/m3 | 1 | | APH | Total/NA |
| o-Xylene | 3.6 | | 0.65 | 0.65 | ug/m3 | 1 | | APH | Total/NA |
| Naphthalene | 5.0 | B | 0.78 | 0.78 | ug/m3 | 1 | | APH | Total/NA |
| C9-C10 Aromatics | 15 | | 3.8 | 3.8 | ug/m3 | 1 | | APH | Total/NA |
| C5-C8 Aliphatics (adjusted) | 12 | | 6.8 | 6.8 | ug/m3 | 1 | | APH | Total/NA |
| C9-C12 Aliphatics (adjusted) | 7.9 | | 5.3 | 5.3 | ug/m3 | 1 | | APH | Total/NA |

This Detection Summary does not include radiochemical test results.

Eurofins TestAmerica, Burlington

Client Sample Results

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-56561-1
SDG: 200-56561-1

Client Sample ID: SVP-1-120420

Lab Sample ID: 200-56561-1

Date Collected: 12/04/20 18:33

Matrix: Air

Date Received: 12/16/20 11:15

Sample Container: Summa Canister 6L

Method: APH - Air Phase Petroleum Hydrocarbons

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------------|------------|-----------|------|------|-------|---|----------|----------------|---------|
| Butadiene | 0.32 | U | 0.32 | 0.32 | ug/m3 | | | 12/23/20 22:46 | 1 |
| Methyl tert-butyl ether | 0.53 | U | 0.53 | 0.53 | ug/m3 | | | 12/23/20 22:46 | 1 |
| Benzene | 0.47 | U | 0.47 | 0.47 | ug/m3 | | | 12/23/20 22:46 | 1 |
| Toluene | 0.55 | U | 0.55 | 0.55 | ug/m3 | | | 12/23/20 22:46 | 1 |
| Ethylbenzene | 0.64 | U | 0.64 | 0.64 | ug/m3 | | | 12/23/20 22:46 | 1 |
| m-Xylene & p-Xylene | 0.64 | U | 0.64 | 0.64 | ug/m3 | | | 12/23/20 22:46 | 1 |
| o-Xylene | 0.64 | U | 0.64 | 0.64 | ug/m3 | | | 12/23/20 22:46 | 1 |
| Naphthalene | 4.2 | B | 0.77 | 0.77 | ug/m3 | | | 12/23/20 22:46 | 1 |
| C9-C10 Aromatics | 3.7 | U | 3.7 | 3.7 | ug/m3 | | | 12/23/20 22:46 | 1 |
| C5-C8 Aliphatics (adjusted) | 73 | | 6.7 | 6.7 | ug/m3 | | | 12/23/20 22:46 | 1 |
| C9-C12 Aliphatics (adjusted) | 5.2 | U | 5.2 | 5.2 | ug/m3 | | | 12/23/20 22:46 | 1 |

Client Sample ID: SVP-2-120420

Lab Sample ID: 200-56561-2

Date Collected: 12/04/20 16:53

Matrix: Air

Date Received: 12/16/20 11:15

Sample Container: Summa Canister 6L

Method: APH - Air Phase Petroleum Hydrocarbons

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------------|------------|-----------|------|------|-------|---|----------|----------------|---------|
| Butadiene | 0.32 | U | 0.32 | 0.32 | ug/m3 | | | 12/23/20 23:38 | 1 |
| Methyl tert-butyl ether | 0.53 | U | 0.53 | 0.53 | ug/m3 | | | 12/23/20 23:38 | 1 |
| Benzene | 0.47 | U | 0.47 | 0.47 | ug/m3 | | | 12/23/20 23:38 | 1 |
| Toluene | 0.55 | U | 0.55 | 0.55 | ug/m3 | | | 12/23/20 23:38 | 1 |
| Ethylbenzene | 0.64 | U | 0.64 | 0.64 | ug/m3 | | | 12/23/20 23:38 | 1 |
| m-Xylene & p-Xylene | 0.64 | U | 0.64 | 0.64 | ug/m3 | | | 12/23/20 23:38 | 1 |
| o-Xylene | 0.64 | U | 0.64 | 0.64 | ug/m3 | | | 12/23/20 23:38 | 1 |
| Naphthalene | 5.6 | B | 0.77 | 0.77 | ug/m3 | | | 12/23/20 23:38 | 1 |
| C9-C10 Aromatics | 3.7 | U | 3.7 | 3.7 | ug/m3 | | | 12/23/20 23:38 | 1 |
| C5-C8 Aliphatics (adjusted) | 30 | | 6.7 | 6.7 | ug/m3 | | | 12/23/20 23:38 | 1 |
| C9-C12 Aliphatics (adjusted) | 5.2 | U | 5.2 | 5.2 | ug/m3 | | | 12/23/20 23:38 | 1 |

Client Sample ID: SVP-3-120420

Lab Sample ID: 200-56561-3

Date Collected: 12/04/20 15:51

Matrix: Air

Date Received: 12/16/20 11:15

Sample Container: Summa Canister 6L

Method: APH - Air Phase Petroleum Hydrocarbons

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------------|------------|-----------|------|------|-------|---|----------|----------------|---------|
| Butadiene | 0.32 | U | 0.32 | 0.32 | ug/m3 | | | 12/24/20 00:30 | 1 |
| Methyl tert-butyl ether | 0.53 | U | 0.53 | 0.53 | ug/m3 | | | 12/24/20 00:30 | 1 |
| Benzene | 0.47 | U | 0.47 | 0.47 | ug/m3 | | | 12/24/20 00:30 | 1 |
| Toluene | 0.55 | U | 0.55 | 0.55 | ug/m3 | | | 12/24/20 00:30 | 1 |
| Ethylbenzene | 0.64 | U | 0.64 | 0.64 | ug/m3 | | | 12/24/20 00:30 | 1 |
| m-Xylene & p-Xylene | 0.64 | U | 0.64 | 0.64 | ug/m3 | | | 12/24/20 00:30 | 1 |
| o-Xylene | 0.64 | U | 0.64 | 0.64 | ug/m3 | | | 12/24/20 00:30 | 1 |
| Naphthalene | 2.5 | B | 0.77 | 0.77 | ug/m3 | | | 12/24/20 00:30 | 1 |
| C9-C10 Aromatics | 3.7 | U | 3.7 | 3.7 | ug/m3 | | | 12/24/20 00:30 | 1 |
| C5-C8 Aliphatics (adjusted) | 68 | | 6.7 | 6.7 | ug/m3 | | | 12/24/20 00:30 | 1 |
| C9-C12 Aliphatics (adjusted) | 5.2 | U | 5.2 | 5.2 | ug/m3 | | | 12/24/20 00:30 | 1 |

Eurofins TestAmerica, Burlington

Client Sample Results

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-56561-1
SDG: 200-56561-1

Client Sample ID: SVP-4-120420

Lab Sample ID: 200-56561-4

Date Collected: 12/04/20 14:44

Matrix: Air

Date Received: 12/16/20 11:15

Sample Container: Summa Canister 6L

Method: APH - Air Phase Petroleum Hydrocarbons

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------------|-------------|-----------|------|------|-------|---|----------|----------------|---------|
| Butadiene | 0.33 | U | 0.33 | 0.33 | ug/m3 | | | 12/24/20 01:23 | 1 |
| Methyl tert-butyl ether | 0.54 | U | 0.54 | 0.54 | ug/m3 | | | 12/24/20 01:23 | 1 |
| Benzene | 0.48 | U | 0.48 | 0.48 | ug/m3 | | | 12/24/20 01:23 | 1 |
| Toluene | 0.59 | | 0.56 | 0.56 | ug/m3 | | | 12/24/20 01:23 | 1 |
| Ethylbenzene | 0.65 | U | 0.65 | 0.65 | ug/m3 | | | 12/24/20 01:23 | 1 |
| m-Xylene & p-Xylene | 6.0 | | 0.65 | 0.65 | ug/m3 | | | 12/24/20 01:23 | 1 |
| o-Xylene | 2.1 | | 0.65 | 0.65 | ug/m3 | | | 12/24/20 01:23 | 1 |
| Naphthalene | 2.0 | B | 0.78 | 0.78 | ug/m3 | | | 12/24/20 01:23 | 1 |
| C9-C10 Aromatics | 9.6 | | 3.8 | 3.8 | ug/m3 | | | 12/24/20 01:23 | 1 |
| C5-C8 Aliphatics (adjusted) | 11 | | 6.8 | 6.8 | ug/m3 | | | 12/24/20 01:23 | 1 |
| C9-C12 Aliphatics (adjusted) | 5.3 | U | 5.3 | 5.3 | ug/m3 | | | 12/24/20 01:23 | 1 |

Client Sample ID: SVP-5-120420

Lab Sample ID: 200-56561-5

Date Collected: 12/04/20 10:36

Matrix: Air

Date Received: 12/16/20 11:15

Sample Container: Summa Canister 6L

Method: APH - Air Phase Petroleum Hydrocarbons

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------------|------------|-----------|------|------|-------|---|----------|----------------|---------|
| Butadiene | 0.33 | U | 0.33 | 0.33 | ug/m3 | | | 12/24/20 02:15 | 1 |
| Methyl tert-butyl ether | 0.54 | U | 0.54 | 0.54 | ug/m3 | | | 12/24/20 02:15 | 1 |
| Benzene | 0.48 | U | 0.48 | 0.48 | ug/m3 | | | 12/24/20 02:15 | 1 |
| Toluene | 0.56 | U | 0.56 | 0.56 | ug/m3 | | | 12/24/20 02:15 | 1 |
| Ethylbenzene | 0.65 | U | 0.65 | 0.65 | ug/m3 | | | 12/24/20 02:15 | 1 |
| m-Xylene & p-Xylene | 0.65 | U | 0.65 | 0.65 | ug/m3 | | | 12/24/20 02:15 | 1 |
| o-Xylene | 0.65 | U | 0.65 | 0.65 | ug/m3 | | | 12/24/20 02:15 | 1 |
| Naphthalene | 1.4 | B | 0.78 | 0.78 | ug/m3 | | | 12/24/20 02:15 | 1 |
| C9-C10 Aromatics | 3.8 | U | 3.8 | 3.8 | ug/m3 | | | 12/24/20 02:15 | 1 |
| C5-C8 Aliphatics (adjusted) | 58 | | 6.8 | 6.8 | ug/m3 | | | 12/24/20 02:15 | 1 |
| C9-C12 Aliphatics (adjusted) | 5.3 | U | 5.3 | 5.3 | ug/m3 | | | 12/24/20 02:15 | 1 |

Client Sample ID: SVP-6-120420

Lab Sample ID: 200-56561-6

Date Collected: 12/04/20 12:39

Matrix: Air

Date Received: 12/16/20 11:15

Sample Container: Summa Canister 6L

Method: APH - Air Phase Petroleum Hydrocarbons

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------------------|------------|-----------|------|------|-------|---|----------|----------------|---------|
| Butadiene | 0.32 | U | 0.32 | 0.32 | ug/m3 | | | 12/24/20 03:08 | 1 |
| Methyl tert-butyl ether | 0.53 | U | 0.53 | 0.53 | ug/m3 | | | 12/24/20 03:08 | 1 |
| Benzene | 0.47 | U | 0.47 | 0.47 | ug/m3 | | | 12/24/20 03:08 | 1 |
| Toluene | 0.55 | U | 0.55 | 0.55 | ug/m3 | | | 12/24/20 03:08 | 1 |
| Ethylbenzene | 0.64 | U | 0.64 | 0.64 | ug/m3 | | | 12/24/20 03:08 | 1 |
| m-Xylene & p-Xylene | 0.64 | U | 0.64 | 0.64 | ug/m3 | | | 12/24/20 03:08 | 1 |
| o-Xylene | 0.64 | U | 0.64 | 0.64 | ug/m3 | | | 12/24/20 03:08 | 1 |
| Naphthalene | 1.9 | B | 0.77 | 0.77 | ug/m3 | | | 12/24/20 03:08 | 1 |
| C9-C10 Aromatics | 3.7 | U | 3.7 | 3.7 | ug/m3 | | | 12/24/20 03:08 | 1 |
| C5-C8 Aliphatics (adjusted) | 170 | | 6.7 | 6.7 | ug/m3 | | | 12/24/20 03:08 | 1 |
| C9-C12 Aliphatics (adjusted) | 35 | | 5.2 | 5.2 | ug/m3 | | | 12/24/20 03:08 | 1 |

Eurofins TestAmerica, Burlington

Client Sample Results

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-56561-1
SDG: 200-56561-1

Client Sample ID: OA-1-120420

Lab Sample ID: 200-56561-7

Date Collected: 12/04/20 19:22

Matrix: Air

Date Received: 12/16/20 11:15

Sample Container: Summa Canister 6L

Method: APH - Air Phase Petroleum Hydrocarbons

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------------|--------------|-----------|------|------|-------|---|----------|----------------|---------|
| Butadiene | 0.32 | U | 0.32 | 0.32 | ug/m3 | | | 12/24/20 04:00 | 1 |
| Methyl tert-butyl ether | 0.52 | U | 0.52 | 0.52 | ug/m3 | | | 12/24/20 04:00 | 1 |
| Benzene | 1.0 | | 0.46 | 0.46 | ug/m3 | | | 12/24/20 04:00 | 1 |
| Toluene | 2.6 | | 0.54 | 0.54 | ug/m3 | | | 12/24/20 04:00 | 1 |
| Ethylbenzene | 0.63 | U | 0.63 | 0.63 | ug/m3 | | | 12/24/20 04:00 | 1 |
| m-Xylene & p-Xylene | 1.8 | | 0.63 | 0.63 | ug/m3 | | | 12/24/20 04:00 | 1 |
| o-Xylene | 0.67 | | 0.63 | 0.63 | ug/m3 | | | 12/24/20 04:00 | 1 |
| Naphthalene | 1.1 B | | 0.75 | 0.75 | ug/m3 | | | 12/24/20 04:00 | 1 |
| C9-C10 Aromatics | 3.6 | U | 3.6 | 3.6 | ug/m3 | | | 12/24/20 04:00 | 1 |
| C5-C8 Aliphatics (adjusted) | 24 | | 6.6 | 6.6 | ug/m3 | | | 12/24/20 04:00 | 1 |
| C9-C12 Aliphatics (adjusted) | 5.1 | U | 5.1 | 5.1 | ug/m3 | | | 12/24/20 04:00 | 1 |

Client Sample ID: OA-2-120420

Lab Sample ID: 200-56561-8

Date Collected: 12/04/20 19:24

Matrix: Air

Date Received: 12/16/20 11:15

Sample Container: Summa Canister 6L

Method: APH - Air Phase Petroleum Hydrocarbons

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------------|--------------|-----------|------|------|-------|---|----------|----------------|---------|
| Butadiene | 0.28 | U | 0.28 | 0.28 | ug/m3 | | | 12/24/20 04:52 | 1 |
| Methyl tert-butyl ether | 0.46 | U | 0.46 | 0.46 | ug/m3 | | | 12/24/20 04:52 | 1 |
| Benzene | 0.84 | | 0.41 | 0.41 | ug/m3 | | | 12/24/20 04:52 | 1 |
| Toluene | 2.1 | | 0.48 | 0.48 | ug/m3 | | | 12/24/20 04:52 | 1 |
| Ethylbenzene | 0.56 | U | 0.56 | 0.56 | ug/m3 | | | 12/24/20 04:52 | 1 |
| m-Xylene & p-Xylene | 1.6 | | 0.56 | 0.56 | ug/m3 | | | 12/24/20 04:52 | 1 |
| o-Xylene | 0.58 | | 0.56 | 0.56 | ug/m3 | | | 12/24/20 04:52 | 1 |
| Naphthalene | 1.0 B | | 0.68 | 0.68 | ug/m3 | | | 12/24/20 04:52 | 1 |
| C9-C10 Aromatics | 3.2 | U | 3.2 | 3.2 | ug/m3 | | | 12/24/20 04:52 | 1 |
| C5-C8 Aliphatics (adjusted) | 18 | | 5.9 | 5.9 | ug/m3 | | | 12/24/20 04:52 | 1 |
| C9-C12 Aliphatics (adjusted) | 4.6 | U | 4.6 | 4.6 | ug/m3 | | | 12/24/20 04:52 | 1 |

Client Sample ID: OA-3-120420

Lab Sample ID: 200-56561-9

Date Collected: 12/04/20 19:26

Matrix: Air

Date Received: 12/16/20 11:15

Sample Container: Summa Canister 6L

Method: APH - Air Phase Petroleum Hydrocarbons

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------------|--------------|-----------|------|------|-------|---|----------|----------------|---------|
| Butadiene | 0.32 | U | 0.32 | 0.32 | ug/m3 | | | 12/24/20 05:45 | 1 |
| Methyl tert-butyl ether | 0.52 | U | 0.52 | 0.52 | ug/m3 | | | 12/24/20 05:45 | 1 |
| Benzene | 0.97 | | 0.46 | 0.46 | ug/m3 | | | 12/24/20 05:45 | 1 |
| Toluene | 2.4 | | 0.54 | 0.54 | ug/m3 | | | 12/24/20 05:45 | 1 |
| Ethylbenzene | 0.63 | U | 0.63 | 0.63 | ug/m3 | | | 12/24/20 05:45 | 1 |
| m-Xylene & p-Xylene | 1.7 | | 0.63 | 0.63 | ug/m3 | | | 12/24/20 05:45 | 1 |
| o-Xylene | 0.63 | | 0.63 | 0.63 | ug/m3 | | | 12/24/20 05:45 | 1 |
| Naphthalene | 1.2 B | | 0.75 | 0.75 | ug/m3 | | | 12/24/20 05:45 | 1 |
| C9-C10 Aromatics | 3.6 | U | 3.6 | 3.6 | ug/m3 | | | 12/24/20 05:45 | 1 |
| C5-C8 Aliphatics (adjusted) | 22 | | 6.6 | 6.6 | ug/m3 | | | 12/24/20 05:45 | 1 |
| C9-C12 Aliphatics (adjusted) | 5.1 | U | 5.1 | 5.1 | ug/m3 | | | 12/24/20 05:45 | 1 |

Eurofins TestAmerica, Burlington

Client Sample Results

Client: Eurofins Air Toxics, Inc.
 Project/Site: Newman's Chevron

Job ID: 200-56561-1
 SDG: 200-56561-1

Client Sample ID: DUP-1-120420

Lab Sample ID: 200-56561-10

Date Collected: 12/04/20 00:00

Matrix: Air

Date Received: 12/16/20 11:15

Sample Container: Summa Canister 6L

Method: APH - Air Phase Petroleum Hydrocarbons

| Analyte | Result | Qualifier | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------------------|--------------|-----------|------|------|-------|---|----------|----------------|---------|
| Butadiene | 0.33 | U | 0.33 | 0.33 | ug/m3 | | | 12/24/20 06:38 | 1 |
| Methyl tert-butyl ether | 0.54 | U | 0.54 | 0.54 | ug/m3 | | | 12/24/20 06:38 | 1 |
| Benzene | 0.48 | U | 0.48 | 0.48 | ug/m3 | | | 12/24/20 06:38 | 1 |
| Toluene | 1.2 | | 0.56 | 0.56 | ug/m3 | | | 12/24/20 06:38 | 1 |
| Ethylbenzene | 0.65 | U | 0.65 | 0.65 | ug/m3 | | | 12/24/20 06:38 | 1 |
| m-Xylene & p-Xylene | 11 | | 0.65 | 0.65 | ug/m3 | | | 12/24/20 06:38 | 1 |
| o-Xylene | 3.6 | | 0.65 | 0.65 | ug/m3 | | | 12/24/20 06:38 | 1 |
| Naphthalene | 5.0 B | | 0.78 | 0.78 | ug/m3 | | | 12/24/20 06:38 | 1 |
| C9-C10 Aromatics | 15 | | 3.8 | 3.8 | ug/m3 | | | 12/24/20 06:38 | 1 |
| C5-C8 Aliphatics (adjusted) | 12 | | 6.8 | 6.8 | ug/m3 | | | 12/24/20 06:38 | 1 |
| C9-C12 Aliphatics (adjusted) | 7.9 | | 5.3 | 5.3 | ug/m3 | | | 12/24/20 06:38 | 1 |

QC Sample Results

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-56561-1
SDG: 200-56561-1

Method: APH - Air Phase Petroleum Hydrocarbons

Lab Sample ID: MB 200-162429/5
Matrix: Air
Analysis Batch: 162429

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB MB | | RL | RL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------|--------|-----------|------|------|-------|---|----------|----------------|---------|
| | Result | Qualifier | | | | | | | |
| Butadiene | 0.44 | U | 0.44 | 0.44 | ug/m3 | | | 12/23/20 13:12 | 1 |
| Methyl tert-butyl ether | 0.72 | U | 0.72 | 0.72 | ug/m3 | | | 12/23/20 13:12 | 1 |
| Benzene | 0.64 | U | 0.64 | 0.64 | ug/m3 | | | 12/23/20 13:12 | 1 |
| Toluene | 0.75 | U | 0.75 | 0.75 | ug/m3 | | | 12/23/20 13:12 | 1 |
| Ethylbenzene | 0.87 | U | 0.87 | 0.87 | ug/m3 | | | 12/23/20 13:12 | 1 |
| m-Xylene & p-Xylene | 0.87 | U | 0.87 | 0.87 | ug/m3 | | | 12/23/20 13:12 | 1 |
| o-Xylene | 0.87 | U | 0.87 | 0.87 | ug/m3 | | | 12/23/20 13:12 | 1 |
| Naphthalene | 2.23 | | 1.1 | 1.1 | ug/m3 | | | 12/23/20 13:12 | 1 |
| C9-C10 Aromatics | 5.0 | U | 5.0 | 5.0 | ug/m3 | | | 12/23/20 13:12 | 1 |
| C5-C8 Aliphatics (adjusted) | 9.1 | U | 9.1 | 9.1 | ug/m3 | | | 12/23/20 13:12 | 1 |
| C9-C12 Aliphatics (adjusted) | 7.1 | U | 7.1 | 7.1 | ug/m3 | | | 12/23/20 13:12 | 1 |

Lab Sample ID: LCS 200-162429/4
Matrix: Air
Analysis Batch: 162429

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|-------------------------|-------------|------------|---------------|-------|---|------|-------------|
| | | | | | | | |
| Methyl tert-butyl ether | 90.4 | 90.2 | | ug/m3 | | 100 | 70 - 130 |
| Benzene | 79.9 | 74.1 | | ug/m3 | | 93 | 70 - 130 |
| Toluene | 94.4 | 95.4 | | ug/m3 | | 101 | 70 - 130 |
| Ethylbenzene | 109 | 110 | | ug/m3 | | 102 | 70 - 130 |
| m-Xylene & p-Xylene | 109 | 111 | | ug/m3 | | 102 | 70 - 130 |
| o-Xylene | 109 | 116 | | ug/m3 | | 107 | 70 - 130 |
| Naphthalene | 131 | 166 | | ug/m3 | | 127 | 50 - 150 |
| C9-C10 Aromatics | 630 | 793 | | ug/m3 | | 126 | 70 - 130 |
| n-Heptane | 103 | 93.6 | | ug/m3 | | 91 | 70 - 130 |
| n-Decane | 146 | 156 | | ug/m3 | | 107 | 70 - 130 |
| 1,3,5-Trimethylbenzene | 123 | 137 | | ug/m3 | | 111 | 70 - 130 |

QC Association Summary

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-56561-1
SDG: 200-56561-1

Air - GC/MS VOA

Analysis Batch: 162429

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|------------------|--------------------|-----------|--------|--------|------------|
| 200-56561-1 | SVP-1-120420 | Total/NA | Air | APH | |
| 200-56561-2 | SVP-2-120420 | Total/NA | Air | APH | |
| 200-56561-3 | SVP-3-120420 | Total/NA | Air | APH | |
| 200-56561-4 | SVP-4-120420 | Total/NA | Air | APH | |
| 200-56561-5 | SVP-5-120420 | Total/NA | Air | APH | |
| 200-56561-6 | SVP-6-120420 | Total/NA | Air | APH | |
| 200-56561-7 | OA-1-120420 | Total/NA | Air | APH | |
| 200-56561-8 | OA-2-120420 | Total/NA | Air | APH | |
| 200-56561-9 | OA-3-120420 | Total/NA | Air | APH | |
| 200-56561-10 | DUP-1-120420 | Total/NA | Air | APH | |
| MB 200-162429/5 | Method Blank | Total/NA | Air | APH | |
| LCS 200-162429/4 | Lab Control Sample | Total/NA | Air | APH | |

Lab Chronicle

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-56561-1
SDG: 200-56561-1

Client Sample ID: SVP-1-120420

Lab Sample ID: 200-56561-1

Date Collected: 12/04/20 18:33

Matrix: Air

Date Received: 12/16/20 11:15

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | APH | | 1 | 162429 | 12/23/20 22:46 | GGG | TAL BUR |

Client Sample ID: SVP-2-120420

Lab Sample ID: 200-56561-2

Date Collected: 12/04/20 16:53

Matrix: Air

Date Received: 12/16/20 11:15

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | APH | | 1 | 162429 | 12/23/20 23:38 | GGG | TAL BUR |

Client Sample ID: SVP-3-120420

Lab Sample ID: 200-56561-3

Date Collected: 12/04/20 15:51

Matrix: Air

Date Received: 12/16/20 11:15

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | APH | | 1 | 162429 | 12/24/20 00:30 | GGG | TAL BUR |

Client Sample ID: SVP-4-120420

Lab Sample ID: 200-56561-4

Date Collected: 12/04/20 14:44

Matrix: Air

Date Received: 12/16/20 11:15

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | APH | | 1 | 162429 | 12/24/20 01:23 | GGG | TAL BUR |

Client Sample ID: SVP-5-120420

Lab Sample ID: 200-56561-5

Date Collected: 12/04/20 10:36

Matrix: Air

Date Received: 12/16/20 11:15

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | APH | | 1 | 162429 | 12/24/20 02:15 | GGG | TAL BUR |

Client Sample ID: SVP-6-120420

Lab Sample ID: 200-56561-6

Date Collected: 12/04/20 12:39

Matrix: Air

Date Received: 12/16/20 11:15

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | APH | | 1 | 162429 | 12/24/20 03:08 | GGG | TAL BUR |

Client Sample ID: OA-1-120420

Lab Sample ID: 200-56561-7

Date Collected: 12/04/20 19:22

Matrix: Air

Date Received: 12/16/20 11:15

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | APH | | 1 | 162429 | 12/24/20 04:00 | GGG | TAL BUR |

Lab Chronicle

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-56561-1
SDG: 200-56561-1

Client Sample ID: OA-2-120420

Lab Sample ID: 200-56561-8

Date Collected: 12/04/20 19:24

Matrix: Air

Date Received: 12/16/20 11:15

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | APH | | 1 | 162429 | 12/24/20 04:52 | GGG | TAL BUR |

Client Sample ID: OA-3-120420

Lab Sample ID: 200-56561-9

Date Collected: 12/04/20 19:26

Matrix: Air

Date Received: 12/16/20 11:15

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | APH | | 1 | 162429 | 12/24/20 05:45 | GGG | TAL BUR |

Client Sample ID: DUP-1-120420

Lab Sample ID: 200-56561-10

Date Collected: 12/04/20 00:00

Matrix: Air

Date Received: 12/16/20 11:15

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|---------|
| Total/NA | Analysis | APH | | 1 | 162429 | 12/24/20 06:38 | GGG | TAL BUR |

Laboratory References:

TAL BUR = Eurofins TestAmerica, Burlington, 530 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990

Accreditation/Certification Summary

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-56561-1
SDG: 200-56561-1

Laboratory: Eurofins TestAmerica, Burlington

All accreditations/certifications held by this laboratory are listed. Not all accreditations/certifications are applicable to this report.

| Authority | Program | Identification Number | Expiration Date |
|-----------------------------------|-----------------------|-----------------------|-----------------|
| ANAB | Dept. of Defense ELAP | L2336 | 02-25-23 |
| Connecticut | State | PH-0751 | 09-30-21 |
| DE Haz. Subst. Cleanup Act (HSCA) | State | N/A | 05-16-21 |
| Florida | NELAP | E87467 | 06-30-21 |
| Minnesota | NELAP | 050-999-436 | 12-31-21 |
| New Hampshire | NELAP | 2006 | 12-18-21 |
| New Jersey | NELAP | VT972 | 06-30-21 |
| New York | NELAP | 10391 | 04-01-21 |
| Pennsylvania | NELAP | 68-00489 | 04-30-21 |
| Rhode Island | State | LAO00298 | 12-30-20 |
| US Fish & Wildlife | US Federal Programs | 058448 | 07-31-21 |
| USDA | US Federal Programs | P330-17-00272 | 10-30-23 |
| Vermont | State | VT4000 | 12-31-20 |
| Virginia | NELAP | 460209 | 12-14-21 |
| Wisconsin | State | 399133350 | 08-31-21 |

Method Summary

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-56561-1
SDG: 200-56561-1

| Method | Method Description | Protocol | Laboratory |
|--------|----------------------------------|----------|------------|
| APH | Air Phase Petroleum Hydrocarbons | MA DEP | TAL BUR |

Protocol References:

MA DEP = Massachusetts Department Of Environmental Protection

Laboratory References:

TAL BUR = Eurofins TestAmerica, Burlington, 530 Community Drive, Suite 11, South Burlington, VT 05403, TEL (802)660-1990



Sample Summary

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job ID: 200-56561-1
SDG: 200-56561-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received | Asset ID |
|---------------|------------------|--------|----------------|----------------|----------|
| 200-56561-1 | SVP-1-120420 | Air | 12/04/20 18:33 | 12/16/20 11:15 | |
| 200-56561-2 | SVP-2-120420 | Air | 12/04/20 16:53 | 12/16/20 11:15 | |
| 200-56561-3 | SVP-3-120420 | Air | 12/04/20 15:51 | 12/16/20 11:15 | |
| 200-56561-4 | SVP-4-120420 | Air | 12/04/20 14:44 | 12/16/20 11:15 | |
| 200-56561-5 | SVP-5-120420 | Air | 12/04/20 10:36 | 12/16/20 11:15 | |
| 200-56561-6 | SVP-6-120420 | Air | 12/04/20 12:39 | 12/16/20 11:15 | |
| 200-56561-7 | OA-1-120420 | Air | 12/04/20 19:22 | 12/16/20 11:15 | |
| 200-56561-8 | OA-2-120420 | Air | 12/04/20 19:24 | 12/16/20 11:15 | |
| 200-56561-9 | OA-3-120420 | Air | 12/04/20 19:26 | 12/16/20 11:15 | |
| 200-56561-10 | DUP-1-120420 | Air | 12/04/20 00:00 | 12/16/20 11:15 | |



Air Toxics

180 Blue Ravine Rd. Suite B, Folsom, CA 95630
Phone (800) 985-5955; Fax (916) 351-8279

PID: _____

Workorder #: 2012224


Analysis Request / Canister Chain of Custody

For Laboratory Use Only

Workorder #: 2012224

page-of-1

CH₄, CO₂, H₂, He, N₂ and O₂

| Lab ID | Field Sample Identification (Location) | Can # | Flow Controller # | Start Sampling Information | | Stop Sampling Information | | Initial (in Hg) | Final (in Hg) | Receipt | Lab Use Only | | Requested Analyses | | |
|---|--|--------------|-------------------|----------------------------|---------|---------------------------|------|--------------------------------------|---------------|----------------|--------------|--------------------------|--------------------------------------|------|------|
| | | | | Date | Time | Date | Time | | | | Final (psig) | Gas: N ₂ / He | | | |
| 01A | SVP-1-120420 | N2805/641694 | 20163 | 12-4-20 | 1723 | 12-4-20 | 1833 | 30" | 30" | | | | EPA 70-15 Mass APH ASTM D-1746 | | |
| 02A | SVP-2-120420 | 00522/640133 | 22543 | 1613 | 1506 | 1551 | 1653 | 29" | 0.5" | | | | | | |
| 03A | SVP-3-120420 | 9224 | 22351 | 1319 | 0931 | 1444 | 1551 | 28.5" | 1" | | | | | | |
| 04A | SVP-4-120420 | N3516/641826 | 25048 | 1129 | 0822 | 1036 | 1444 | 30" | 1.5" | | | | | | |
| 05A | SVP-5-120420 | 00583/640218 | 21470 | 0825 | 0825 | 1239 | 1036 | 30" | 1" | | | | | | |
| 06A | SVP-6-120420 | N0098/641208 | 20535 | 0827 | 0827 | 1922 | 1239 | 29" | 3.5" | | | | | | |
| 07A | OA-1-120420 | 12044/1500 | 25185 | | | 1924 | 1922 | 30" | 6.5" | | | | | | |
| 08A | OA-2-120420 | N0429/64336 | 23423 | | | 1926 | 1924 | 28" | 3" | | | | | | |
| 09A | OA-3-120420 | N1594/640806 | 23460 | | | | 1926 | 30" | 1" | | | | | | |
| 10A | DUP-1-120420 | 1561/2269 | | | | | | | | | | | | | |
|  200-56561 COC | | | | | | | | | | | | | | | |
| Relinquished by: (Signature/Affiliation) | R. Shropshire Leidos | | | Date | 12-5-20 | Time | 1630 | Received by: (Signature/Affiliation) | | M. [Signature] | | Date | 12/9/20 | Time | 1045 |
| Relinquished by: (Signature/Affiliation) | [Signature] | | | Date | 12/5/20 | Time | | Received by: (Signature/Affiliation) | | [Signature] | | Date | | Time | |
| Relinquished by: (Signature/Affiliation) | [Signature] | | | Date | | Time | | Received by: (Signature/Affiliation) | | [Signature] | | Date | 12/16/20 | Time | 1115 |

Turnaround Time (Rush surcharges may apply) _____ (specify) _____

Standard Rush _____

Canister Vacuum Pressure _____

Lab Use Only

Shipper Name: Leidos Custody Seals Intact? Yes No

Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T Hotline (800) 467-4922





Air Toxics

PACKING SLIP

Prepared For: Leidos

Ship Date: 12/15/20

Ship ID: AMW135923

| Item ID Code | Quantity | Description | QC Control |
|--------------|----------|------------------------|--------------------------|
| N2805 | 1 | 6 Liter Summa Canister | <input type="checkbox"/> |
| 6L1208 | 1 | 6 Liter Summa Canister | <input type="checkbox"/> |
| 1561 | 1 | 6 Liter Summa Canister | <input type="checkbox"/> |
| N1594 | 1 | 6 Liter Summa Canister | <input type="checkbox"/> |
| O0583 | 1 | 6 Liter Summa Canister | <input type="checkbox"/> |
| N3516 | 1 | 6 Liter Summa Canister | <input type="checkbox"/> |
| 9224ta | 1 | 6 Liter Summa Canister | <input type="checkbox"/> |
| N0429 | 1 | 6 Liter Summa Canister | <input type="checkbox"/> |
| 12044 | 1 | 6 Liter Summa Canister | <input type="checkbox"/> |
| O0522 | 1 | 6 Liter Summa Canister | <input type="checkbox"/> |
| | 1 | Chain of Custody | <input type="checkbox"/> |

IMPORTANT! The preparation and certification charges for the above equipment will be billed upon return to the laboratory for analysis. This equipment is part of an analytical service and must not be transferred to any other party unless approved by Air Toxics Ltd. Any equipment not returned within 30 days will be billed as indicated above. We appreciate your doing business with Air Toxics Ltd.

Air Toxics Limited will ensure that any substances and/or containers shipped to Client for purposes of sampling, are shipped in compliance with all applicable local, State and Federal regulations. Client bears sole responsibility for determining the applicability of and compliance with all regulations applicable to the shipment of samples back to the laboratory. Air Toxics Limited assumes no liability with respect to the collection, handling, or shipping of samples. Client agrees to hold harmless, defend, and indemnify Air Toxics Limited against any claim, demand, or action of any kind related to the collection, handling, or shipping of samples. D.O.T. HAZMAT Hotline (800) 467-4922

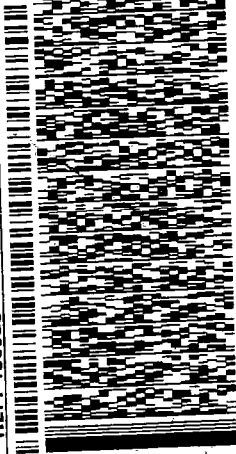
180-B Blue Ravine Road, Folsom, CA 95630
 (916) 985-1000 - (800)985-5955 - FAX (916)985-1020

SHIP DATE: 15DEC20

ORIGIN ID:MHRA (916) 605-3336
SHIPPING AIR TOXICS INC
EUROFINS AIR TOXICS INC
180 BLUE RAVINE RD STE B
FOLSOM, CA 95630
UNITED STATES US

TO DON DAWICKI
EUROFINS TEST AMERICA
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403

(802) 923-1026
REF: 135923



WED - 16 DEC 10:30
PRIORITY OVERNIGHT

3 of 3

MPS# 9487 1148 3172

Mstr# 9487 1148 3150

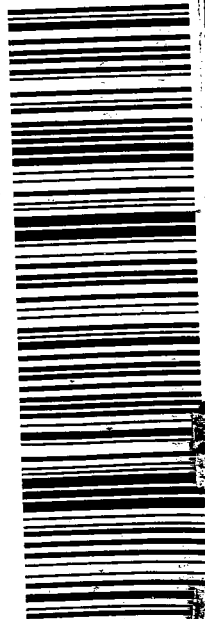
XH BTVA

0201

0540

VT-US

BT

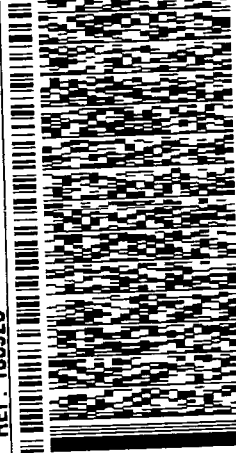


SHIP DATE: 15DEC20

ORIGIN ID:MHRA (916) 605-3336
SHIPPING AIR TOXICS INC
EUROFINS AIR TOXICS INC
180 BLUE RAVINE RD STE B
FOLSOM, CA 95630
UNITED STATES US

TO DON DAWICKI
EUROFINS TEST AMERICA
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403

(802) 923-1026
REF: 135923



WED - 16 DEC 10:30A
PRIORITY OVERNIGHT

2 of 3

MPS# 9487 1148 3161

Mstr# 9487 1148 3150

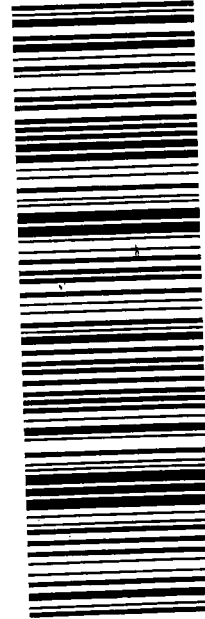
XH BTVA

0201

05403

VT-US

BTV



55DC2/9196/0582

SHIP DATE: 15DEC20
ACTWGT: 34.10 LB MAN
CAD: 0488489/CAFE3407
DIHS: 19X19X17 IN
BILL SENDER

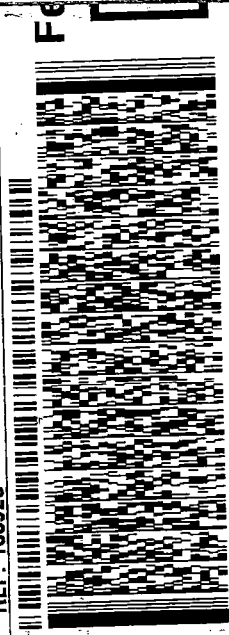
BILL SENDER

ORIGIN: TD/HRH (816) 605-3336
SHIPPING AIR TOXICS INC
180 BLUE RAVINE RD STE B
FOLSOM, CA 95630
UNITED STATES US

SHIP DATE: 15DEC20
ACTWT: 34.10 LB M
CAD: 0488499/CAFES
DIMS: 19x19x17 IN
BILL SENDER

TO **DON DAWICKI**
EUROFINS TEST AMERICA
30 COMMUNITY DRIVE
SUITE 11
SOUTH BURLINGTON VT 05403

(802) 923-1026
REF: 135923

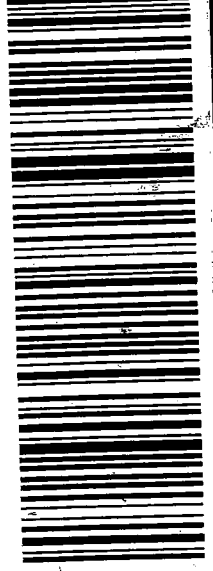


WED - 16 DEC
PRIORITY OVER

1 of 3
TRK# 9487 1148 3150
MASTER

XH BTVA

VT-US



Login Sample Receipt Checklist

Client: Eurofins Air Toxics, Inc.

Job Number: 200-56561-1
SDG Number: 200-56561-1

Login Number: 56561

List Number: 1

Creator: Lavigne, Scott M

List Source: Eurofins TestAmerica, Burlington

| Question | Answer | Comment |
|---|--------|--|
| Radioactivity wasn't checked or is \leq background as measured by a survey meter. | True | Lab does not accept radioactive samples. |
| The cooler's custody seal, if present, is intact. | True | Not present |
| Sample custody seals, if present, are intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | N/A | Thermal preservation not required. |
| Cooler Temperature is acceptable. | True | |
| Cooler Temperature is recorded. | N/A | Thermal preservation not required. |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| Is the Field Sampler's name present on COC? | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Samples are received within Holding Time (excluding tests with immediate HTs) | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | N/A | |
| Sample Preservation Verified. | True | |
| There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs | True | |
| Containers requiring zero headspace have no headspace or bubble is <math><6\text{mm}</math> (1/4"). | True | |
| Multiphasic samples are not present. | True | |
| Samples do not require splitting or compositing. | True | |
| Residual Chlorine Checked. | N/A | |

Summa Canister Dilution Worksheet

Client: Eurofins Air Toxics, Inc.
Project/Site: Newman's Chevron

Job No.: 200-56561-1
SDG No.: 200-56561-1

| Lab Sample ID | Canister Volume (L) | Preadjusted Pressure ("Hg) | Preadjusted Pressure (atm) | Preadjusted Volume (L) | Adjusted Pressure (psig) | Adjusted Pressure (atm) | Adjusted Volume (L) | Initial Volume (mL) | Dilution Factor | Final Dilution Factor | Pressure Gauge ID | Date | Analyst Initials |
|---------------|---------------------|----------------------------|----------------------------|------------------------|--------------------------|-------------------------|---------------------|---------------------|-----------------|-----------------------|-------------------|----------------|------------------|
| 200-56561-1 | 6 | -0.5 | 0.98 | 5.90 | 5 | 1.34 | 8.04 | | 1.36 | 1.36 | na | 12/23/20 17:45 | GGG |
| 200-56561-2 | 6 | -0.4 | 0.99 | 5.92 | 5 | 1.34 | 8.04 | | 1.36 | 1.36 | na | 12/23/20 17:46 | GGG |
| 200-56561-3 | 6 | -0.4 | 0.99 | 5.92 | 5 | 1.34 | 8.04 | | 1.36 | 1.36 | NA | 12/23/20 17:46 | GGG |
| 200-56561-4 | 6 | 0 | 1.00 | 6.00 | 5 | 1.34 | 8.04 | | 1.34 | 1.34 | NA | 12/23/20 17:46 | GGG |
| 200-56561-5 | 6 | 0 | 1.00 | 6.00 | 5 | 1.34 | 8.04 | | 1.34 | 1.34 | NA | 12/23/20 17:47 | GGG |
| 200-56561-6 | 6 | -0.5 | 0.98 | 5.90 | 5 | 1.34 | 8.04 | | 1.36 | 1.36 | NA | 12/23/20 17:48 | GGG |
| 200-56561-7 | 6 | -1 | 0.97 | 5.80 | 5 | 1.34 | 8.04 | | 1.39 | 1.39 | NA | 12/23/20 17:48 | GGG |
| 200-56561-8 | 6 | -4.0 | 0.87 | 5.20 | 5 | 1.34 | 8.04 | | 1.55 | 1.55 | NA | 12/23/20 17:49 | GGG |
| 200-56561-9 | 6 | -1.0 | 0.97 | 5.80 | 5 | 1.34 | 8.04 | | 1.39 | 1.39 | NA | 12/23/20 17:52 | GGG |
| 200-56561-10 | 6 | 0 | 1.00 | 6.00 | 5 | 1.34 | 8.04 | | 1.34 | 1.34 | NA | 12/23/20 17:52 | GGG |

Formulae:

- Preadjusted Volume (L) = (Preadjusted Pressure ("Hg) + 29.92 "Hg * Vol L) / 29.92 "Hg
- Adjusted Volume (L) = (Adjusted Pressure (psig) + 14.7 psig * Vol L) / 14.7 psig
- Dilution Factor = Adjusted Volume (L) / Preadjusted Volume (L)

Where:

- 29.92 "Hg = Standard atmospheric pressure in inches of Mercury ("Hg)
- 14.7 psig = Standard atmospheric pressure in pounds per square inch gauge (psig)



Air Toxics

Analysis Request / Canister Chain of Custody

For Laboratory Use Only

PID: _____ Workorder #: 2012224

CH₄, CO₂, H₂, He, N₂ and O₂
page 1 of 1

180 Blue Ravine Rd. Suite B, Folsom, CA 95630
Phone (800) 985-5955; Fax (916) 351-8279

Client: Leidos Special Instructions/Notes: Invoice Leidos Task order No. PO10242812
 Project Name: Newman's Chevron Report BTEX, MTBE, and Naphthalene only for TO-15 SIM.
 Project Manager: R. Shropshire Project # 204117
 Sampler: RSS / TED
 Site Name: Newman's Chevron

Turnaround Time (Rush surcharges may apply)
 Standard Rush _____ (specify)

Canister Vacuum/Pressure _____ Requested Analyses _____

| Lab ID | Field Sample Identification (Location) | Can # | Flow Controller # | Start Sampling Information | | Stop Sampling Information | | Initial (in Hg) | Final (in Hg) | Receipt | Lab Use Only Final (psig) Gas: N ₂ / He | EPA TO-15 SIM | Mass APH | ASTM D-1946 |
|--------|--|--------------|-------------------|----------------------------|------|---------------------------|------|-----------------|---------------|---------|--|------------------|----------|-------------|
| | | | | Date | Time | Date | Time | | | | | | | |
| 01A | SVP-1-120420 | N2805/6L1694 | 20163 | 12-4-20 | 1723 | 12-4-20 | 1833 | 30" | | | | X | X | X |
| 02A | SVP-2-120420 | 00522/6L0133 | 22543 | | 1613 | | 1653 | 29" | 0.5" | | | X | X | X |
| 03A | SVP-3-120420 | 9224 | 22351 | | 1506 | | 1551 | 29.5" | 1" | | | X | X | X |
| 04A | SVP-4-120420 | N3516/6L1826 | 25048 | | 1319 | | 1444 | 30" | 1.5" | | | X | X | X |
| 05A | SVP-5-120420 | 00583/6L0218 | 21470 | | 0931 | | 1036 | 30" | 1" | | | X | X | X |
| 06A | SVP-6-120420 | N0098/6L1208 | 20535 | | 1129 | | 1239 | 29.5" | 2" | | | X | X | X |
| 07A | OA-1-120420 | 12044/1500 | 25185 | | 0822 | | 1922 | 29" | 3.5" | | | X | X | X |
| 08A | OA-2-120420 | N0429/6L1336 | 23423 | | 0825 | | 1924 | 30" | 6.5" | | | X | X | X |
| 09A | OA-3-120420 | N1594/6L0806 | 23460 | | 0827 | | 1926 | 28" | 3" | | | X | X | X |
| 10A | DUP-1-120420 | 1561/2269 | --- | ↓ | --- | ↓ | --- | 30" | 1" | | | X | X | X |
| | | | | | | 12-5-20 | | | | | | | | |

Relinquished by: (Signature/Affiliation) R. Shropshire Leidos Date 12-5-20 Time 1630
 Relinquished by: (Signature/Affiliation) _____ Date _____ Time _____
 Relinquished by: (Signature/Affiliation) _____ Date _____ Time _____

Received by: (Signature/Affiliation) _____ Date 12/9/20 Time 1040
 Received by: (Signature/Affiliation) _____ Date _____ Time _____
 Received by: (Signature/Affiliation) _____ Date _____ Time _____

Lab Use Only
 Shipper Name: FedEx Custody Seals Intact? Yes No None

Sample Transportation Notice: Relinquishing signature on this document indicates that samples are shipped in compliance with all applicable local, State, Federal, and international laws, regulations, and ordinances of any kind. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins Air Toxics against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T Hotline (800) 467-4922

7/7/2021

Mr. Russ Shropshire
Leidos
11824 N Creek Parkway North
Ste 101
Bothell WA 98011

Project Name: Newman's Chevron
Project #: 204117
Workorder #: 2106570

Dear Mr. Russ Shropshire

The following report includes the data for the above referenced project for sample(s) received on 6/24/2021 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified TO-17 VI are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Monica Tran at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Monica Tran
Project Manager

WORK ORDER #: 2106570

Work Order Summary

| | | | |
|------------------------|--|------------------|---|
| CLIENT: | Mr. Russ Shropshire Leidos 11824 N Creek Parkway North Ste 101 Bothell, WA 98011 | BILL TO: | Accounts Payable - Bothell Leidos 11824 N Creek Parkway North Ste 101 Bothell, WA 98011 |
| PHONE: | 425-485-5800 | P.O. # | P010242812 |
| FAX: | | PROJECT # | 204117 Newman's Chevron |
| DATE RECEIVED: | 06/24/2021 | CONTACT: | Monica Tran |
| DATE COMPLETED: | 07/07/2021 | | |

| <u>FRACTION #</u> | <u>NAME</u> | <u>TEST</u> |
|-------------------|--------------|-------------------|
| 01A | SVP-1-062221 | Modified TO-17 VI |
| 02A | SVP-2-062221 | Modified TO-17 VI |
| 03A | SVP-3-062221 | Modified TO-17 VI |
| 04A | SVP-4-062221 | Modified TO-17 VI |
| 05A | SVP-5-062221 | Modified TO-17 VI |
| 06A | SVP-6-062221 | Modified TO-17 VI |
| 07A | FB-1-062221 | Modified TO-17 VI |
| 08A | Lab Blank | Modified TO-17 VI |
| 09A | CCV | Modified TO-17 VI |
| 10A | LCS | Modified TO-17 VI |
| 10AA | LCSD | Modified TO-17 VI |

CERTIFIED BY: 
 Technical Director

DATE: 07/07/21

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209220, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-20-16, UT NELAP – CA009332020-12, VA NELAP - 10615, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005-014, Effective date: 10/18/2020, Expiration date: 10/17/2021.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
 (916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
Modified EPA Method TO-17 (VI Tubes)
Leidos
Workorder# 2106570

Seven TO-17 VI Tube samples were received on June 24, 2021. The laboratory performed the analysis via modified EPA Method TO-17 using GC/MS in the full scan mode. TO-17 'VI' sorbent tubes are thermally desorbed onto a secondary trap. The trap is thermally desorbed to elute the components into the GC/MS system for compound separation and detection.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications.

| <i>Requirement</i> | <i>TO-17</i> | <i>ATL Modifications</i> |
|--------------------------------------|---|--|
| Verification of Safe Sampling Volume | Collect Distributed Volume Pairs at uncharacterized sites and/or utilize field test method to evaluate breakthrough by sampling tubes in series at different air volumes. | Field surrogates are spiked onto each tube prior to deployment in the field. Recoveries are used to monitor method performance from sample collection through analysis for each sample tube. |

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

A sampling volume of 0.800 L was used to convert ng to ug/m3 for the associated Lab Blank and sample FB-1-062221.

Definition of Data Qualifying Flags

Nine qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in blank (subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

CN - See case narrative

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Summary of Detected Compounds EPA METHOD TO-17

Client Sample ID: SVP-1-062221

Lab ID#: 2106570-01A

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|-------------|----------------|
| Naphthalene | 1.0 | 1.2 | 12 | 14 |

Client Sample ID: SVP-2-062221

Lab ID#: 2106570-02A

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|-------------|----------------|
| Naphthalene | 1.0 | 1.2 | 19 | 23 |

Client Sample ID: SVP-3-062221

Lab ID#: 2106570-03A

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|-------------|----------------|
| Naphthalene | 1.0 | 1.2 | 7.2 | 9.0 |

Client Sample ID: SVP-4-062221

Lab ID#: 2106570-04A

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|-------------|----------------|
| Naphthalene | 1.0 | 1.2 | 2.3 | 2.9 |

Client Sample ID: SVP-5-062221

Lab ID#: 2106570-05A

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|-------------|----------------|
| Naphthalene | 1.0 | 1.2 | 3.9 | 4.9 |

Client Sample ID: SVP-6-062221

Lab ID#: 2106570-06A

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|-------------|----------------|
| Naphthalene | 1.0 | 1.2 | 3.1 | 3.9 |

**Summary of Detected Compounds
EPA METHOD TO-17**

Client Sample ID: FB-1-062221

Lab ID#: 2106570-07A

No Detections Were Found.



Air Toxics

Client Sample ID: SVP-1-062221

Lab ID#: 2106570-01A

EPA METHOD TO-17

| | | | |
|--------------|---------|------------------------------------|--|
| File Name: | 9062513 | Date of Extraction: NA | Date of Collection: 6/22/21 9:23:00 AM |
| Dil. Factor: | 1.00 | Date of Analysis: 6/25/21 06:39 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|-------------|----------------|
| Naphthalene | 1.0 | 1.2 | 12 | 14 |

Air Sample Volume(L): 0.800
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 96 | 50-150 |



Client Sample ID: SVP-2-062221

Lab ID#: 2106570-02A

EPA METHOD TO-17

| | | | |
|--------------|---------|------------------------------------|---|
| File Name: | 9062514 | Date of Extraction: NA | Date of Collection: 6/22/21 10:06:00 AM |
| Dil. Factor: | 1.00 | Date of Analysis: 6/25/21 07:21 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|-------------|----------------|
| Naphthalene | 1.0 | 1.2 | 19 | 23 |

Air Sample Volume(L): 0.800
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 84 | 50-150 |



Air Toxics

Client Sample ID: SVP-3-062221

Lab ID#: 2106570-03A

EPA METHOD TO-17

| | | | |
|--------------|---------|------------------------------------|---|
| File Name: | 9062515 | Date of Extraction: NA | Date of Collection: 6/22/21 10:47:00 AM |
| Dil. Factor: | 1.00 | Date of Analysis: 6/25/21 08:03 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|--------------------|-----------------------|----------------|-------------------|
| Naphthalene | 1.0 | 1.2 | 7.2 | 9.0 |

Air Sample Volume(L): 0.800
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|------------------|
| Naphthalene-d8 | 106 | 50-150 |



Air Toxics

Client Sample ID: SVP-4-062221

Lab ID#: 2106570-04A

EPA METHOD TO-17

| | | | |
|--------------|---------|------------------------------------|---|
| File Name: | 9062516 | Date of Extraction: NA | Date of Collection: 6/22/21 12:33:00 PM |
| Dil. Factor: | 1.00 | Date of Analysis: 6/25/21 08:44 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|-------------|----------------|
| Naphthalene | 1.0 | 1.2 | 2.3 | 2.9 |

Air Sample Volume(L): 0.800
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 101 | 50-150 |



Air Toxics

Client Sample ID: SVP-5-062221

Lab ID#: 2106570-05A

EPA METHOD TO-17

| | | | |
|--------------|---------|------------------------------------|--|
| File Name: | 9062517 | Date of Extraction: NA | Date of Collection: 6/22/21 1:30:00 PM |
| Dil. Factor: | 1.00 | Date of Analysis: 6/25/21 09:25 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|-------------|----------------|
| Naphthalene | 1.0 | 1.2 | 3.9 | 4.9 |

Air Sample Volume(L): 0.800
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 94 | 50-150 |



Air Toxics

Client Sample ID: SVP-6-062221

Lab ID#: 2106570-06A

EPA METHOD TO-17

| | | | |
|--------------|---------|------------------------------------|--|
| File Name: | 9062518 | Date of Extraction: NA | Date of Collection: 6/22/21 1:58:00 PM |
| Dil. Factor: | 1.00 | Date of Analysis: 6/25/21 10:07 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|-------------|----------------|
| Naphthalene | 1.0 | 1.2 | 3.1 | 3.9 |

Air Sample Volume(L): 0.800
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 75 | 50-150 |



Air Toxics

Client Sample ID: FB-1-062221

Lab ID#: 2106570-07A

EPA METHOD TO-17

| | | | |
|--------------|---------|------------------------------------|---|
| File Name: | 9062512 | Date of Extraction: NA | Date of Collection: 6/22/21 11:02:00 AM |
| Dil. Factor: | 1.00 | Date of Analysis: 6/25/21 05:57 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|--------------|----------------|
| Naphthalene | 1.0 | 1.2 | Not Detected | Not Detected |

Air Sample Volume(L): 0.800
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 93 | 50-150 |



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2106570-08A

EPA METHOD TO-17

| | | | |
|--------------|---------|------------------------------------|------------------------|
| File Name: | 9062508 | Date of Extraction: NA | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 6/25/21 02:26 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|--------------------|-----------------------|----------------|-------------------|
| Naphthalene | 1.0 | 1.2 | Not Detected | Not Detected |

Air Sample Volume(L): 0.800
Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|------------------|
| Naphthalene-d8 | 82 | 50-150 |



Air Toxics

Client Sample ID: CCV

Lab ID#: 2106570-09A

EPA METHOD TO-17

| | | | |
|--------------|---------|------------------------------------|------------------------|
| File Name: | 9062505 | Date of Extraction: NA | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 6/25/21 11:54 AM | |

| Compound | %Recovery |
|-------------|-----------|
| Naphthalene | 89 |

Air Sample Volume(L): 1.00
Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 95 | 50-150 |



Air Toxics

Client Sample ID: LCS

Lab ID#: 2106570-10A

EPA METHOD TO-17

| | | | |
|--------------|---------|------------------------------------|------------------------|
| File Name: | 9062506 | Date of Extraction: NA | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 6/25/21 12:36 PM | |

| Compound | %Recovery | Method Limits |
|-------------|-----------|---------------|
| Naphthalene | 103 | 70-130 |

Air Sample Volume(L): 1.00
Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 104 | 50-150 |



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2106570-10AA

EPA METHOD TO-17

| | | | |
|--------------|---------|------------------------------------|------------------------|
| File Name: | 9062507 | Date of Extraction: NA | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 6/25/21 01:17 PM | |

| Compound | %Recovery | Method Limits |
|-------------|-----------|---------------|
| Naphthalene | 103 | 70-130 |

Air Sample Volume(L): 1.00
Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 104 | 50-150 |

TO-17 SAMPLE COLLECTION



Air Toxics

Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Eurofins assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922.

180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630
(916) 985-1000 FAX (916) 985-1020

Page 1 of 1

CHAIN-OF-CUSTODY RECORD

Project Manager Russ Shropshire
 Collected by: (Print and Sign) Russ Shropshire
 Company Leidos Email shropshirec@leidos.com
 Address 11824 North Creek Parkway City Bothell State WA Zip 98011
 Phone (206) 321-2387 Fax _____

| | | |
|---|--|--|
| Project Info: P.O. # <u>P010242812</u> Project # <u>204117</u> Project Name <u>Newman's Chevron</u> | Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush specify _____ | Reporting Units: <input type="checkbox"/> ppmv <input type="checkbox"/> ppbv <input checked="" type="checkbox"/> µg/m3 <input type="checkbox"/> mg/m3 |
|---|--|--|

| Lab I.D. | Field Sample I.D. (Location) | Engraved or Stamped Tube # | Date of Collection (mm/dd/yy) | Start Time (hr:min) | Date of Retrieval (mm/dd/yy) | End Time (hr:min) | Pre-Test Flow Rate | Post-Test Flow Rate | Volume | Indoor Air | Outdoor Air | Soil Vapor | Other () |
|----------|------------------------------|----------------------------|-------------------------------|---------------------|------------------------------|-------------------|--------------------|---------------------|--------|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 01A | SVP-1-062221 | | 06/22/21 | 09:21 | 06/22/21 09:23 | 09:23 | NA | NA | 800ml | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 02A | SVP-2-062221 | | ↓ | 10:04 | 10:06 | 10:06 | ↓ | ↓ | ↓ | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 03A | SVP-3-062221 | | | 10:45 | 10:47 | 10:47 | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 04A | SVP-4-062221 | | | 12:30 | 12:33 | 12:33 | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 05A | SVP-5-062221 | | | 13:28 | 13:30 | 13:30 | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 06A | SVP-6-062221 | | | 13:56 | 13:58 | 13:58 | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 07A | FB-1-062221 | | | 11:01 | 11:02 | 11:02 | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| | | | | | | | | | | | | | |

| | | |
|--|---|-------------------------------------|
| Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>6/23/21 14:00</u> | Received by: (signature) <u>[Signature]</u> Date/Time <u>6-24-21 1001</u> | Notes: <u>Fed Ex 7740 8029 0790</u> |
| Relinquished by: (signature) _____ Date/Time _____ | Received by: (signature) _____ Date/Time _____ | |
| Relinquished by: (signature) _____ Date/Time _____ | Received by: (signature) _____ Date/Time _____ | |

| | | | | | | |
|--------------|---------------|------------|--------------|-------------|-----------------------|----------------------------------|
| Lab Use Only | Shipper Name | Air Bill # | Temp (°C) | Condition | Custody Seals Intact? | Work Order # |
| | <u>Fed Ex</u> | | <u>2.0°C</u> | <u>GOOD</u> | Yes No <u>(None)</u> | <u>2106570</u> <u>2106570</u> |

ANALYTICAL REPORT

Eurofins Lancaster Laboratories Env, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-61781-1
Client Project/Site: 204117 - Bremerton, WA

For:
Leidos Engineering, LLC
11824 North Creek Parkway N
Suite 101
Bothell, Washington 98011

Attn: Russ Shropshire



Authorized for release by:
11/17/2021 11:13:46 AM

Amek Carter, Project Manager
(717)556-7252
Loran.Carter@eurofinset.com

LINKS

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results through
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The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
 - Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
 - Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
- Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

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A handwritten signature in black ink that reads "Amek Carter".

Amek Carter
Project Manager
11/17/2021 11:13:46 AM



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Definitions/Glossary

Client: Leidos Engineering, LLC
Project/Site: 204117 - Bremerton, WA

Job ID: 410-61781-1

Qualifiers

GC/MS VOA

| Qualifier | Qualifier Description |
|-----------|--|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

GC/MS Semi VOA

| Qualifier | Qualifier Description |
|-----------|--|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

GC VOA

| Qualifier | Qualifier Description |
|-----------|--|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

GC Semi VOA

| Qualifier | Qualifier Description |
|-----------|---|
| *- | LCS and/or LCSD is outside acceptance limits, low biased. |
| F1 | MS and/or MSD recovery exceeds control limits. |

Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|----------------|---|
| α | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| 1C | Result is from the primary column on a dual-column method. |
| 2C | Result is from the confirmation column on a dual-column method. |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

Case Narrative

Client: Leidos Engineering, LLC
Project/Site: 204117 - Bremerton, WA

Job ID: 410-61781-1

Job ID: 410-61781-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Narrative

Job Narrative 410-61781-1

Receipt

The sample was received on 11/3/2021 10:45 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.4°C

GC/MS VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC/MS Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

Method NWTPH_Dx: The laboratory control sample (LCS) for preparation batch 410-194569 and analytical batch 410-194880 recovered outside control limits for the following analytes: C12-C24. The associated sample was re-prepared outside holding time. Both sets of data have been reported. SVP-7-3-6.5-211101 (410-61781-1), (410-61781-B-1-C DU) and (410-61781-B-1-B MS)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.



Detection Summary

Client: Leidos Engineering, LLC
Project/Site: 204117 - Bremerton, WA

Job ID: 410-61781-1

Client Sample ID: SVP-7-3-6.5-211101

Lab Sample ID: 410-61781-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|---------------------|--------|-----------|-----|------|-------|-----|-----|---|----------|-----------|
| Toluene | 0.79 | J | 5.8 | 0.69 | ug/Kg | 1 | * | * | 8260D | Total/NA |
| 1-Methylnaphthalene | 36 | | 22 | 4.3 | ug/Kg | 1 | * | * | 8270E | Total/NA |
| 2-Methylnaphthalene | 49 | | 22 | 6.5 | ug/Kg | 1 | * | * | 8270E | Total/NA |
| Naphthalene | 17 | J | 22 | 8.7 | ug/Kg | 1 | * | * | 8270E | Total/NA |
| C7-C12 (1C) | 0.52 | J | 8.0 | 0.37 | mg/Kg | 25 | * | * | NWTPH-Gx | Total/NA |
| Lead | 4.6 | | 1.8 | 0.72 | mg/Kg | 1 | * | * | 6010D | Total/NA |

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Env, LLC

Client Sample Results

Client: Leidos Engineering, LLC
 Project/Site: 204117 - Bremerton, WA

Job ID: 410-61781-1

Client Sample ID: SVP-7-3-6.5-211101

Lab Sample ID: 410-61781-1

Date Collected: 11/01/21 10:50

Matrix: Solid

Date Received: 11/03/21 10:45

Percent Solids: 77.0

Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------|-------------|-----------|-----|------|-------|---|----------------|----------------|---------|
| Benzene | ND | | 5.8 | 0.58 | ug/Kg | ☼ | 11/09/21 22:53 | 11/11/21 14:25 | 1 |
| Ethylbenzene | ND | | 5.8 | 0.46 | ug/Kg | ☼ | 11/09/21 22:53 | 11/11/21 14:25 | 1 |
| Toluene | 0.79 | J | 5.8 | 0.69 | ug/Kg | ☼ | 11/09/21 22:53 | 11/11/21 14:25 | 1 |
| Xylenes, Total | ND | | 12 | 1.6 | ug/Kg | ☼ | 11/09/21 22:53 | 11/11/21 14:25 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 1,2-Dichloroethane-d4 (Surr) | 111 | | 54 - 135 | 11/09/21 22:53 | 11/11/21 14:25 | 1 |
| Dibromofluoromethane (Surr) | 113 | | 50 - 141 | 11/09/21 22:53 | 11/11/21 14:25 | 1 |
| 4-Bromofluorobenzene (Surr) | 94 | | 50 - 131 | 11/09/21 22:53 | 11/11/21 14:25 | 1 |
| Toluene-d8 (Surr) | 92 | | 52 - 141 | 11/09/21 22:53 | 11/11/21 14:25 | 1 |

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------------------|-----------|-----------|----|-----|-------|---|----------------|----------------|---------|
| 1-Methylnaphthalene | 36 | | 22 | 4.3 | ug/Kg | ☼ | 11/09/21 16:05 | 11/12/21 01:03 | 1 |
| 2-Methylnaphthalene | 49 | | 22 | 6.5 | ug/Kg | ☼ | 11/09/21 16:05 | 11/12/21 01:03 | 1 |
| Naphthalene | 17 | J | 22 | 8.7 | ug/Kg | ☼ | 11/09/21 16:05 | 11/12/21 01:03 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|----------------|----------------|---------|
| 2-Fluorobiphenyl (Surr) | 77 | | 39 - 100 | 11/09/21 16:05 | 11/12/21 01:03 | 1 |
| Nitrobenzene-d5 (Surr) | 70 | | 32 - 97 | 11/09/21 16:05 | 11/12/21 01:03 | 1 |
| p-Terphenyl-d14 (Surr) | 95 | | 45 - 108 | 11/09/21 16:05 | 11/12/21 01:03 | 1 |

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------------|-------------|-----------|-----|------|-------|---|----------------|----------------|---------|
| C7-C12 (1C) | 0.52 | J | 8.0 | 0.37 | mg/Kg | ☼ | 11/09/21 22:54 | 11/11/21 19:07 | 25 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|-----------------------------------|-----------|-----------|----------|----------------|----------------|---------|
| a,a,a-Trifluorotoluene (fid) (1C) | 135 | | 50 - 150 | 11/09/21 22:54 | 11/11/21 19:07 | 25 |

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|--------|-----------|----|-----|-------|---|----------------|----------------|---------|
| C12-C24 | ND | F1 *- | 13 | 5.2 | mg/Kg | ☼ | 11/14/21 11:03 | 11/15/21 15:29 | 1 |
| C24-C40 | ND | | 39 | 13 | mg/Kg | ☼ | 11/14/21 11:03 | 11/15/21 15:29 | 1 |

| Surrogate | %Recovery | Qualifier | Limits | Prepared | Analyzed | Dil Fac |
|--------------------|-----------|-----------|----------|----------------|----------------|---------|
| o-terphenyl (Surr) | 93 | | 50 - 150 | 11/14/21 11:03 | 11/15/21 15:29 | 1 |

Method: 6010D - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------|------------|-----------|-----|------|-------|---|----------------|----------------|---------|
| Lead | 4.6 | | 1.8 | 0.72 | mg/Kg | ☼ | 11/10/21 12:24 | 11/11/21 11:17 | 1 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|-------------|-----------|-----|-----|------|---|----------|----------------|---------|
| Percent Moisture | 23.0 | | 1.0 | 1.0 | % | | | 11/10/21 08:18 | 1 |

Surrogate Summary

Client: Leidos Engineering, LLC
 Project/Site: 204117 - Bremerton, WA

Job ID: 410-61781-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) | | | |
|------------------|------------------------|--|------------------|-----------------|-----------------|
| | | DCA (54-135) | DBFM (50-141) | BFB (50-131) | TOL (52-141) |
| 410-61781-1 | SVP-7-3-6.5-211101 | 111 | 113 | 94 | 92 |
| LCS 410-193527/4 | Lab Control Sample | 105 | 106 | 101 | 99 |
| LCS 410-193527/5 | Lab Control Sample Dup | 102 | 105 | 100 | 99 |
| MB 410-193527/7 | Method Blank | 105 | 108 | 93 | 95 |

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
 DBFM = Dibromofluoromethane (Surr)
 BFB = 4-Bromofluorobenzene (Surr)
 TOL = Toluene-d8 (Surr)

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) | | |
|--------------------|--------------------|--|----------------|--------------------|
| | | FBP (39-100) | NBZ (32-97) | TPHd14 (45-108) |
| 410-61781-1 | SVP-7-3-6.5-211101 | 77 | 70 | 95 |
| LCS 410-192690/2-A | Lab Control Sample | 84 | 75 | 95 |
| MB 410-192690/1-A | Method Blank | 93 | 82 | 105 |

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 TPHd14 = p-Terphenyl-d14 (Surr)

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Matrix: Solid

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) |
|------------------|------------------------|--|
| | | TFT-F1 (50-150) |
| 410-61781-1 | SVP-7-3-6.5-211101 | 135 |
| LCS 410-193555/5 | Lab Control Sample | 110 |
| LCS 410-193555/6 | Lab Control Sample Dup | 104 |
| MB 410-193555/4 | Method Blank | 106 |

Surrogate Legend

TFT-F = a,a,a-Trifluorotoluene (fid)

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Matrix: Solid

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) |
|--------------------|--------------------|--|
| | | OTP (50-150) |
| 410-61781-1 | SVP-7-3-6.5-211101 | 93 |
| 410-61781-1 DU | SVP-7-3-6.5-211101 | 92 |
| 410-61781-1 MS | SVP-7-3-6.5-211101 | 95 |
| LCS 410-194569/2-A | Lab Control Sample | 98 |
| MB 410-194569/1-A | Method Blank | 93 |

Surrogate Legend

Surrogate Summary

Client: Leidos Engineering, LLC
Project/Site: 204117 - Bremerton, WA
OTP = o- terphenyl (Surr)

Job ID: 410-61781-1

1

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QC Sample Results

Client: Leidos Engineering, LLC
 Project/Site: 204117 - Bremerton, WA

Job ID: 410-61781-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 410-193527/7

Matrix: Solid

Analysis Batch: 193527

Client Sample ID: Method Blank

Prep Type: Total/NA

| Analyte | MB | MB | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------|--------|-----------|-----|------|-------|---|----------|----------------|---------|
| | Result | Qualifier | | | | | | | |
| Benzene | ND | | 5.0 | 0.50 | ug/Kg | | | 11/11/21 11:38 | 1 |
| Ethylbenzene | ND | | 5.0 | 0.40 | ug/Kg | | | 11/11/21 11:38 | 1 |
| Toluene | ND | | 5.0 | 0.60 | ug/Kg | | | 11/11/21 11:38 | 1 |
| Xylenes, Total | ND | | 10 | 1.4 | ug/Kg | | | 11/11/21 11:38 | 1 |

| Surrogate | MB | MB | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| | %Recovery | Qualifier | | | | |
| 1,2-Dichloroethane-d4 (Surr) | 105 | | 54 - 135 | | 11/11/21 11:38 | 1 |
| Dibromofluoromethane (Surr) | 108 | | 50 - 141 | | 11/11/21 11:38 | 1 |
| 4-Bromofluorobenzene (Surr) | 93 | | 50 - 131 | | 11/11/21 11:38 | 1 |
| Toluene-d8 (Surr) | 95 | | 52 - 141 | | 11/11/21 11:38 | 1 |

Lab Sample ID: LCS 410-193527/4

Matrix: Solid

Analysis Batch: 193527

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

| Analyte | Spike Added | LCS | LCS | Unit | D | %Rec | %Rec. Limits |
|----------------|-------------|--------|-----------|-------|---|------|--------------|
| | | Result | Qualifier | | | | |
| Benzene | 20.0 | 20.8 | | ug/Kg | | 104 | 80 - 120 |
| Ethylbenzene | 20.0 | 21.3 | | ug/Kg | | 107 | 78 - 120 |
| Toluene | 20.0 | 20.4 | | ug/Kg | | 102 | 80 - 120 |
| Xylenes, Total | 60.0 | 64.3 | | ug/Kg | | 107 | 75 - 120 |

| Surrogate | LCS | LCS | Limits |
|------------------------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| 1,2-Dichloroethane-d4 (Surr) | 105 | | 54 - 135 |
| Dibromofluoromethane (Surr) | 106 | | 50 - 141 |
| 4-Bromofluorobenzene (Surr) | 101 | | 50 - 131 |
| Toluene-d8 (Surr) | 99 | | 52 - 141 |

Lab Sample ID: LCSD 410-193527/5

Matrix: Solid

Analysis Batch: 193527

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

| Analyte | Spike Added | LCSD | LCSD | Unit | D | %Rec | %Rec. Limits | RPD | Limit |
|----------------|-------------|--------|-----------|-------|---|------|--------------|-----|-------|
| | | Result | Qualifier | | | | | | |
| Benzene | 20.0 | 20.8 | | ug/Kg | | 104 | 80 - 120 | 0 | 30 |
| Ethylbenzene | 20.0 | 21.4 | | ug/Kg | | 107 | 78 - 120 | 0 | 30 |
| Toluene | 20.0 | 20.4 | | ug/Kg | | 102 | 80 - 120 | 0 | 30 |
| Xylenes, Total | 60.0 | 63.9 | | ug/Kg | | 107 | 75 - 120 | 1 | 30 |

| Surrogate | LCSD | LCSD | Limits |
|------------------------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| 1,2-Dichloroethane-d4 (Surr) | 102 | | 54 - 135 |
| Dibromofluoromethane (Surr) | 105 | | 50 - 141 |
| 4-Bromofluorobenzene (Surr) | 100 | | 50 - 131 |
| Toluene-d8 (Surr) | 99 | | 52 - 141 |

QC Sample Results

Client: Leidos Engineering, LLC
 Project/Site: 204117 - Bremerton, WA

Job ID: 410-61781-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 410-192690/1-A
Matrix: Solid
Analysis Batch: 193316

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 192690

| Analyte | MB | MB | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|-----|-------|----------------|----------------|----------------|---------|
| | Result | Qualifier | | | | | | | |
| 1-Methylnaphthalene | ND | | 17 | 3.3 | ug/Kg | | 11/09/21 16:05 | 11/10/21 22:46 | 1 |
| 2-Methylnaphthalene | ND | | 17 | 5.0 | ug/Kg | | 11/09/21 16:05 | 11/10/21 22:46 | 1 |
| Naphthalene | ND | | 17 | 6.7 | ug/Kg | | 11/09/21 16:05 | 11/10/21 22:46 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | Prepared | Analyzed | Dil Fac | |
| 2-Fluorobiphenyl (Surr) | 93 | | 39 - 100 | | | 11/09/21 16:05 | 11/10/21 22:46 | 1 | |
| Nitrobenzene-d5 (Surr) | 82 | | 32 - 97 | | | 11/09/21 16:05 | 11/10/21 22:46 | 1 | |
| p-Terphenyl-d14 (Surr) | 105 | | 45 - 108 | | | 11/09/21 16:05 | 11/10/21 22:46 | 1 | |

Lab Sample ID: LCS 410-192690/2-A
Matrix: Solid
Analysis Batch: 193316

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 192690

| Analyte | Spike Added | LCS | LCS | Unit | D | %Rec | %Rec. Limits | | |
|-------------------------|-------------|-----------|-----------|-------|---|----------|--------------|---------|--|
| | | Result | Qualifier | | | | | | |
| 1-Methylnaphthalene | 1670 | 1310 | | ug/Kg | | 79 | 59 - 120 | | |
| 2-Methylnaphthalene | 1670 | 1290 | | ug/Kg | | 77 | 63 - 120 | | |
| Naphthalene | 1670 | 1280 | | ug/Kg | | 77 | 60 - 120 | | |
| Surrogate | %Recovery | Qualifier | Limits | | | Prepared | Analyzed | Dil Fac | |
| 2-Fluorobiphenyl (Surr) | 84 | | 39 - 100 | | | | | | |
| Nitrobenzene-d5 (Surr) | 75 | | 32 - 97 | | | | | | |
| p-Terphenyl-d14 (Surr) | 95 | | 45 - 108 | | | | | | |

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 410-193555/4
Matrix: Solid
Analysis Batch: 193555

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB | MB | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------------------------|-----------|-----------|----------|------|-------|----------|----------------|----------------|---------|
| | Result | Qualifier | | | | | | | |
| C7-C12 (1C) | ND | | 5.0 | 0.23 | mg/Kg | | | 11/11/21 14:39 | 25 |
| Surrogate | %Recovery | Qualifier | Limits | | | Prepared | Analyzed | Dil Fac | |
| a,a,a-Trifluorotoluene (fid) (1C) | 106 | | 50 - 150 | | | | 11/11/21 14:39 | 25 | |

Lab Sample ID: LCS 410-193555/5
Matrix: Solid
Analysis Batch: 193555

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS | LCS | Unit | D | %Rec | %Rec. Limits | | |
|-----------------------------------|-------------|-----------|-----------|-------|---|----------|--------------|---------|--|
| | | Result | Qualifier | | | | | | |
| C7-C12 (1C) | 11.0 | 11.0 | | mg/Kg | | 100 | 55 - 145 | | |
| Surrogate | %Recovery | Qualifier | Limits | | | Prepared | Analyzed | Dil Fac | |
| a,a,a-Trifluorotoluene (fid) (1C) | 110 | | 50 - 150 | | | | | | |

QC Sample Results

Client: Leidos Engineering, LLC
 Project/Site: 204117 - Bremerton, WA

Job ID: 410-61781-1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 410-193555/6
Matrix: Solid
Analysis Batch: 193555

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec. Limits | RPD | RPD Limit |
|--|------------------|-----------------------|----------------|-------|---|------|--------------|-----|-----------|
| C7-C12 (1C) | 11.0 | 10.3 | | mg/Kg | | 94 | 55 - 145 | 7 | 30 |
| Surrogate | %Recovery | LCSD Qualifier | Limits | | | | | | |
| <i>a,a,a-Trifluorotoluene (fid) (1C)</i> | 104 | | 50 - 150 | | | | | | |

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 410-194569/1-A
Matrix: Solid
Analysis Batch: 194880

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 194569

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------------|------------------|---------------------|---------------|-----|-------|---|-----------------|-----------------|----------------|
| C12-C24 | ND | | 10 | 4.0 | mg/Kg | | 11/14/21 11:03 | 11/15/21 14:49 | 1 |
| C24-C40 | ND | | 30 | 10 | mg/Kg | | 11/14/21 11:03 | 11/15/21 14:49 | 1 |
| Surrogate | %Recovery | MB Qualifier | Limits | | | | | | |
| <i>o-terphenyl (Surr)</i> | 93 | | 50 - 150 | | | | | | |
| | | | | | | | Prepared | Analyzed | Dil Fac |
| | | | | | | | 11/14/21 11:03 | 11/15/21 14:49 | 1 |

Lab Sample ID: LCS 410-194569/2-A
Matrix: Solid
Analysis Batch: 194880

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 194569

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---------------------------|------------------|----------------------|---------------|-------|---|------|--------------|
| C12-C24 | 133 | 91.2 | *- | mg/Kg | | 68 | 74 - 115 |
| Surrogate | %Recovery | LCS Qualifier | Limits | | | | |
| <i>o-terphenyl (Surr)</i> | 98 | | 50 - 150 | | | | |

Lab Sample ID: 410-61781-1 MS
Matrix: Solid
Analysis Batch: 194880

Client Sample ID: SVP-7-3-6.5-211101
Prep Type: Total/NA
Prep Batch: 194569

| Analyte | Sample Result | Sample Qualifier | Spike Added | MS Result | MS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---------------------------|------------------|---------------------|---------------|-----------|--------------|-------|---|------|--------------|
| C12-C24 | ND | F1 *- | 172 | 118 | F1 | mg/Kg | ☼ | 69 | 74 - 115 |
| Surrogate | %Recovery | MS Qualifier | Limits | | | | | | |
| <i>o-terphenyl (Surr)</i> | 95 | | 50 - 150 | | | | | | |

Lab Sample ID: 410-61781-1 DU
Matrix: Solid
Analysis Batch: 194880

Client Sample ID: SVP-7-3-6.5-211101
Prep Type: Total/NA
Prep Batch: 194569

| Analyte | Sample Result | Sample Qualifier | DU Result | DU Qualifier | Unit | D | RPD | RPD Limit |
|---------|---------------|------------------|-----------|--------------|-------|---|-----|-----------|
| C12-C24 | ND | F1 *- | ND | *- | mg/Kg | ☼ | NC | 20 |
| C24-C40 | ND | | ND | | mg/Kg | ☼ | NC | 20 |

QC Sample Results

Client: Leidos Engineering, LLC
 Project/Site: 204117 - Bremerton, WA

Job ID: 410-61781-1

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: 410-61781-1 DU
 Matrix: Solid
 Analysis Batch: 194880

Client Sample ID: SVP-7-3-6.5-211101
 Prep Type: Total/NA
 Prep Batch: 194569

| Surrogate | %Recovery | DU DU Qualifier | Limits |
|---------------------------|-----------|--------------------|----------|
| <i>o-terphenyl (Surr)</i> | 92 | | 50 - 150 |

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 410-193109/1-A
 Matrix: Solid
 Analysis Batch: 193663

Client Sample ID: Method Blank
 Prep Type: Total/NA
 Prep Batch: 193109

| Analyte | MB MB Result Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|---------------------------|-----|------|-------|---|----------------|----------------|---------|
| Lead | ND | 1.5 | 0.60 | mg/Kg | | 11/10/21 12:24 | 11/11/21 10:57 | 1 |

Lab Sample ID: LCS 410-193109/2-A
 Matrix: Solid
 Analysis Batch: 193663

Client Sample ID: Lab Control Sample
 Prep Type: Total/NA
 Prep Batch: 193109

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec. Limits |
|---------|----------------|---------------|------------------|-------|---|------|-----------------|
| Lead | 5.00 | 4.76 | | mg/Kg | | 95 | 80 - 120 |

QC Association Summary

Client: Leidos Engineering, LLC
 Project/Site: 204117 - Bremerton, WA

Job ID: 410-61781-1

GC/MS VOA

Prep Batch: 192807

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|--------------------|-----------|--------|--------|------------|
| 410-61781-1 | SVP-7-3-6.5-211101 | Total/NA | Solid | 5035 | |

Analysis Batch: 193527

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------------|-----------|--------|--------|------------|
| 410-61781-1 | SVP-7-3-6.5-211101 | Total/NA | Solid | 8260D | 192807 |
| MB 410-193527/7 | Method Blank | Total/NA | Solid | 8260D | |
| LCS 410-193527/4 | Lab Control Sample | Total/NA | Solid | 8260D | |
| LCSD 410-193527/5 | Lab Control Sample Dup | Total/NA | Solid | 8260D | |

GC/MS Semi VOA

Prep Batch: 192690

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 410-61781-1 | SVP-7-3-6.5-211101 | Total/NA | Solid | 3546 | |
| MB 410-192690/1-A | Method Blank | Total/NA | Solid | 3546 | |
| LCS 410-192690/2-A | Lab Control Sample | Total/NA | Solid | 3546 | |

Analysis Batch: 193316

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| MB 410-192690/1-A | Method Blank | Total/NA | Solid | 8270E | 192690 |
| LCS 410-192690/2-A | Lab Control Sample | Total/NA | Solid | 8270E | 192690 |

Analysis Batch: 193914

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|--------------------|-----------|--------|--------|------------|
| 410-61781-1 | SVP-7-3-6.5-211101 | Total/NA | Solid | 8270E | 192690 |

GC VOA

Prep Batch: 192832

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|--------------------|-----------|--------|--------|------------|
| 410-61781-1 | SVP-7-3-6.5-211101 | Total/NA | Solid | 5035 | |

Analysis Batch: 193555

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------------|-----------|--------|----------|------------|
| 410-61781-1 | SVP-7-3-6.5-211101 | Total/NA | Solid | NWTPH-Gx | 192832 |
| MB 410-193555/4 | Method Blank | Total/NA | Solid | NWTPH-Gx | |
| LCS 410-193555/5 | Lab Control Sample | Total/NA | Solid | NWTPH-Gx | |
| LCSD 410-193555/6 | Lab Control Sample Dup | Total/NA | Solid | NWTPH-Gx | |

GC Semi VOA

Prep Batch: 194569

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 410-61781-1 | SVP-7-3-6.5-211101 | Total/NA | Solid | 3550C | |
| MB 410-194569/1-A | Method Blank | Total/NA | Solid | 3550C | |
| LCS 410-194569/2-A | Lab Control Sample | Total/NA | Solid | 3550C | |
| 410-61781-1 MS | SVP-7-3-6.5-211101 | Total/NA | Solid | 3550C | |
| 410-61781-1 DU | SVP-7-3-6.5-211101 | Total/NA | Solid | 3550C | |

Analysis Batch: 194880

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|--------------------|-----------|--------|----------|------------|
| 410-61781-1 | SVP-7-3-6.5-211101 | Total/NA | Solid | NWTPH-Dx | 194569 |

Eurofins Lancaster Laboratories Env, LLC

QC Association Summary

Client: Leidos Engineering, LLC
 Project/Site: 204117 - Bremerton, WA

Job ID: 410-61781-1

GC Semi VOA (Continued)

Analysis Batch: 194880 (Continued)

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|----------|------------|
| MB 410-194569/1-A | Method Blank | Total/NA | Solid | NWTPH-Dx | 194569 |
| LCS 410-194569/2-A | Lab Control Sample | Total/NA | Solid | NWTPH-Dx | 194569 |
| 410-61781-1 MS | SVP-7-3-6.5-211101 | Total/NA | Solid | NWTPH-Dx | 194569 |
| 410-61781-1 DU | SVP-7-3-6.5-211101 | Total/NA | Solid | NWTPH-Dx | 194569 |

Prep Batch: 195612

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------------|--------------------|-----------|--------|--------|------------|
| 410-61781-1 - RE | SVP-7-3-6.5-211101 | Total/NA | Solid | 3550C | |
| MB 410-195612/1-A | Method Blank | Total/NA | Solid | 3550C | |
| LCS 410-195612/2-A | Lab Control Sample | Total/NA | Solid | 3550C | |
| 410-61781-1 MS - RE | SVP-7-3-6.5-211101 | Total/NA | Solid | 3550C | |
| 410-61781-1 DU - RE | SVP-7-3-6.5-211101 | Total/NA | Solid | 3550C | |

Analysis Batch: 195806

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------------|--------------------|-----------|--------|----------|------------|
| 410-61781-1 - RE | SVP-7-3-6.5-211101 | Total/NA | Solid | NWTPH-Dx | 195612 |
| MB 410-195612/1-A | Method Blank | Total/NA | Solid | NWTPH-Dx | 195612 |
| LCS 410-195612/2-A | Lab Control Sample | Total/NA | Solid | NWTPH-Dx | 195612 |
| 410-61781-1 MS - RE | SVP-7-3-6.5-211101 | Total/NA | Solid | NWTPH-Dx | 195612 |
| 410-61781-1 DU - RE | SVP-7-3-6.5-211101 | Total/NA | Solid | NWTPH-Dx | 195612 |

Metals

Prep Batch: 193109

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 410-61781-1 | SVP-7-3-6.5-211101 | Total/NA | Solid | 3050B | |
| MB 410-193109/1-A | Method Blank | Total/NA | Solid | 3050B | |
| LCS 410-193109/2-A | Lab Control Sample | Total/NA | Solid | 3050B | |

Analysis Batch: 193663

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 410-61781-1 | SVP-7-3-6.5-211101 | Total/NA | Solid | 6010D | 193109 |
| MB 410-193109/1-A | Method Blank | Total/NA | Solid | 6010D | 193109 |
| LCS 410-193109/2-A | Lab Control Sample | Total/NA | Solid | 6010D | 193109 |

General Chemistry

Analysis Batch: 192926

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|--------------------|-----------|--------|----------|------------|
| 410-61781-1 | SVP-7-3-6.5-211101 | Total/NA | Solid | Moisture | |

Lab Chronicle

Client: Leidos Engineering, LLC
 Project/Site: 204117 - Bremerton, WA

Job ID: 410-61781-1

Client Sample ID: SVP-7-3-6.5-211101

Lab Sample ID: 410-61781-1

Date Collected: 11/01/21 10:50

Matrix: Solid

Date Received: 11/03/21 10:45

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|------|
| Total/NA | Analysis | Moisture | | 1 | 192926 | 11/10/21 08:18 | UWC1 | ELLE |

Client Sample ID: SVP-7-3-6.5-211101

Lab Sample ID: 410-61781-1

Date Collected: 11/01/21 10:50

Matrix: Solid

Date Received: 11/03/21 10:45

Percent Solids: 77.0

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Prepared or Analyzed | Analyst | Lab |
|-----------|------------|--------------|-----|-----------------|--------------|----------------------|---------|------|
| Total/NA | Prep | 5035 | | | 192807 | 11/09/21 22:53 | D8NM | ELLE |
| Total/NA | Analysis | 8260D | | 1 | 193527 | 11/11/21 14:25 | UCB5 | ELLE |
| Total/NA | Prep | 3546 | | | 192690 | 11/09/21 16:05 | FTV5 | ELLE |
| Total/NA | Analysis | 8270E | | 1 | 193914 | 11/12/21 01:03 | DZ6A | ELLE |
| Total/NA | Prep | 5035 | | | 192832 | 11/09/21 22:54 | UK30 | ELLE |
| Total/NA | Analysis | NWTPH-Gx | | 25 | 193555 | 11/11/21 19:07 | JJT8 | ELLE |
| Total/NA | Prep | 3550C | | | 194569 | 11/14/21 11:03 | FTV5 | ELLE |
| Total/NA | Analysis | NWTPH-Dx | | 1 | 194880 | 11/15/21 15:29 | IUSB | ELLE |
| Total/NA | Prep | 3550C | RE | | 195612 | 11/17/21 01:06 | USL7 | ELLE |
| Total/NA | Analysis | NWTPH-Dx | RE | 1 | 195806 | 11/17/21 10:53 | KP5X | ELLE |
| Total/NA | Prep | 3050B | | | 193109 | 11/10/21 12:24 | UJLA | ELLE |
| Total/NA | Analysis | 6010D | | 1 | 193663 | 11/11/21 11:17 | WJM9 | ELLE |

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Accreditation/Certification Summary

Client: Leidos Engineering, LLC
Project/Site: 204117 - Bremerton, WA

Job ID: 410-61781-1

Laboratory: Eurofins Lancaster Laboratories Env, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | Identification Number | Expiration Date |
|------------|---------|-----------------------|-----------------|
| Washington | State | C457 | 04-12-22 |

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|-----------------|-------------|--------|------------------|
| Moisture | | Solid | Percent Moisture |

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Method Summary

Client: Leidos Engineering, LLC
Project/Site: 204117 - Bremerton, WA

Job ID: 410-61781-1

| Method | Method Description | Protocol | Laboratory |
|----------|---|----------|------------|
| 8260D | Volatile Organic Compounds by GC/MS | SW846 | ELLE |
| 8270E | Semivolatile Organic Compounds (GC/MS) | SW846 | ELLE |
| NWTPH-Gx | Northwest - Volatile Petroleum Products (GC) | NWTPH | ELLE |
| NWTPH-Dx | Northwest - Semi-Volatile Petroleum Products (GC) | NWTPH | ELLE |
| 6010D | Metals (ICP) | SW846 | ELLE |
| Moisture | Percent Moisture | EPA | ELLE |
| 3050B | Preparation, Metals | SW846 | ELLE |
| 3546 | Microwave Extraction | SW846 | ELLE |
| 3550C | Ultrasonic Extraction | SW846 | ELLE |
| 5035 | Closed System Purge and Trap | SW846 | ELLE |

Protocol References:

EPA = US Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Env, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300

Sample Summary

Client: Leidos Engineering, LLC
Project/Site: 204117 - Bremerton, WA

Job ID: 410-61781-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---------------|--------------------|--------|----------------|----------------|
| 410-61781-1 | SVP-7-3-6.5-211101 | Solid | 11/01/21 10:50 | 11/03/21 10:45 |

1

2

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4

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12

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14

15



Lancaster Laboratories

Acct. i 410-61781 Chain of Custody

Laboratories use only

Sample #

Correspond with circled numbers.

| 1 Client Information | | | | 4 Matrix | | | 5 Analyses Requested | | | | | | | | | | 6 Remarks | | | | | | | | | | | | | | | | | | | |
|--|--|--|--|--|--|------------|--|----------|---------------------|--|-----------------------------|--|------------------------|--|------|--|--|--|--|--|----------------|--|------------|--|----------|--|--|--|--|--|--|--|--|--|--------------|--|
| Facility # 204117 | | WBS | | Sediment <input type="checkbox"/> Ground <input type="checkbox"/> Surface <input type="checkbox"/> | | | <table border="1"> <tr> <td colspan="2">Total Number of Containers</td> <td colspan="2">BTEX+MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/></td> <td colspan="2">8260 full scan</td> <td colspan="2">Oxygenates</td> <td colspan="2">NWTPH GX</td> <td colspan="2">NWTPH DX <input checked="" type="checkbox"/> Silica Gel Cleanup <input type="checkbox"/></td> <td colspan="2">Lead Total <input checked="" type="checkbox"/> Method <input type="checkbox"/></td> <td colspan="2">WAVPH <input type="checkbox"/> WAEPPH <input type="checkbox"/></td> <td colspan="2"> 3 Naphthalenes <i>i-methyl-naphthalene</i> by 8270 <i>i-naphthalene</i> </td> </tr> </table> | | | | | | | | | | Total Number of Containers | | BTEX+MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> | | 8260 full scan | | Oxygenates | | NWTPH GX | | NWTPH DX <input checked="" type="checkbox"/> Silica Gel Cleanup <input type="checkbox"/> | | Lead Total <input checked="" type="checkbox"/> Method <input type="checkbox"/> | | WAVPH <input type="checkbox"/> WAEPPH <input type="checkbox"/> | | 3 Naphthalenes <i>i-methyl-naphthalene</i> by 8270 <i>i-naphthalene</i> | | SCR #: _____ | |
| Total Number of Containers | | BTEX+MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth <input type="checkbox"/> | | 8260 full scan | | Oxygenates | | NWTPH GX | | NWTPH DX <input checked="" type="checkbox"/> Silica Gel Cleanup <input type="checkbox"/> | | Lead Total <input checked="" type="checkbox"/> Method <input type="checkbox"/> | | WAVPH <input type="checkbox"/> WAEPPH <input type="checkbox"/> | | 3 Naphthalenes <i>i-methyl-naphthalene</i> by 8270 <i>i-naphthalene</i> | | | | | | | | | | | | | | | | | | | | |
| Site Address 2021 6th Street Bremerton WA | | | | Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Air <input type="checkbox"/> | | | | | | | | | | | | | <input checked="" type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy's on highest hit <input type="checkbox"/> Run ___ oxy's on all hits | | | | | | | | | | | | | | | | | | | |
| Chevron PM James Kiernan | | Lead Consultant Leidos | | Oil <input type="checkbox"/> | | | | | | | | | | | | | <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy's on highest hit <input type="checkbox"/> Run ___ oxy's on all hits | | | | | | | | | | | | | | | | | | | |
| Consultant/Office Leidos - Bothell WA | | | | Composite <input checked="" type="checkbox"/> | | | | | | | | | | | | | <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy's on highest hit <input type="checkbox"/> Run ___ oxy's on all hits | | | | | | | | | | | | | | | | | | | |
| Consultant Project Mgr. Russ Shapshire | | | | Grab <input checked="" type="checkbox"/> | | | | | | | | | | | | | <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy's on highest hit <input type="checkbox"/> Run ___ oxy's on all hits | | | | | | | | | | | | | | | | | | | |
| Consultant Phone # 425-482-3323 | | | | Soil <input checked="" type="checkbox"/> | | | | | | | | | | | | | <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run ___ oxy's on highest hit <input type="checkbox"/> Run ___ oxy's on all hits | | | | | | | | | | | | | | | | | | | |
| Sampler T. Dubé | | Collected Date 11-1-21 | | Time 10:50 | | Water | | 7 | | X | | X | | X | | X | | Submit invoice to Leidos PO10229412 | | | | | | | | | | | | | | | | | | |
| 2 Sample Identification SVP-7-9-6.5-21101 | | | | 3 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 Turnaround Time Requested (TAT) (please circle) | | | | Relinquished by Russ Shapshire | | | Date 11-2-21 | | Time 1500 | | Received by FedEx | | Date 11-2-21 | | Time | | 9 | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> Standard 5 day 4 day <input type="checkbox"/> 72 hour 48 hour 24 hour | | | | Relinquished by | | | Date | | Time | | Received by | | Date | | Time | | | | | | | | | | | | | | | | | | | | | |
| 8 Data Package Options (please circle if required) | | | | Relinquished by Commercial Carrier: | | | Date | | Time | | Received by | | Date | | Time | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="checkbox"/> Type I - Full <input type="checkbox"/> Type VI (Raw Data) | | | | UPS ___ FedEx <input checked="" type="checkbox"/> Other ___ | | | Date | | Time | | Received by | | Date | | Time | | | | | | | | | | | | | | | | | | | | | |
| | | | | Temperature Upon Receipt 2.4 °C | | | | | | | Custody Seals Intact? | | Yes | | No | | | | | | | | | | | | | | | | | | | | | |



Login Sample Receipt Checklist

Client: Leidos Engineering, LLC

Job Number: 410-61781-1

Login Number: 61781

List Source: Eurofins Lancaster Laboratories Env, LLC

List Number: 1

Creator: Jeremiah, Cory T

| Question | Answer | Comment |
|---|--------|---------|
| The cooler's custody seal is intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen). | True | |
| Cooler Temperature is recorded. | True | |
| WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen). | N/A | |
| WV: Container Temperature is recorded. | N/A | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| There is sufficient vol. for all requested analyses. | True | |
| Is the Field Sampler's name present on COC? | True | |
| Sample custody seals are intact. | N/A | |

3/7/2022

Mr. Russ Shropshire
Leidos
11824 N Creek Parkway North
Ste 101
Bothell WA 98011

Project Name: Newman's Chevron
Project #: 204117
Workorder #: 2202501

Dear Mr. Russ Shropshire

The following report includes the data for the above referenced project for sample(s) received on 2/22/2022 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified TO-17 VI are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Monica Tran at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Monica Tran
Project Manager

WORK ORDER #: 2202501

Work Order Summary

CLIENT: Mr. Russ Shropshire
Leidos
11824 N Creek Parkway North
Ste 101
Bothell, WA 98011

BILL TO: Accounts Payable - Bothell
Leidos
11824 N Creek Parkway North
Ste 101
Bothell, WA 98011

PHONE: 425-485-5800

P.O. # P010242812

FAX:

PROJECT # 204117 Newman's Chevron

DATE RECEIVED: 02/22/2022

CONTACT: Monica Tran

DATE COMPLETED: 03/07/2022

| <u>FRACTION #</u> | <u>NAME</u> | <u>TEST</u> |
|-------------------|--------------|-------------------|
| 01A | SVP-7-021822 | Modified TO-17 VI |
| 02A | FB-1-021822 | Modified TO-17 VI |
| 03A | Lab Blank | Modified TO-17 VI |
| 04A | CCV | Modified TO-17 VI |
| 05A | LCS | Modified TO-17 VI |
| 05AA | LCSD | Modified TO-17 VI |

CERTIFIED BY: _____



Technical Director

DATE: 03/07/22

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209221, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-21-17, UT NELAP – CA009332021-13, VA NELAP - 10615, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)

Accreditation number: CA300005-015, Effective date: 10/18/2021, Expiration date: 10/17/2022.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630

(916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
Modified EPA Method TO-17 (VI Tubes)
Leidos
Workorder# 2202501

Two TO-17 VI Tube samples were received on February 22, 2022. The laboratory performed the analysis via modified EPA Method TO-17 using GC/MS in the full scan mode. TO-17 'VI' sorbent tubes are thermally desorbed onto a secondary trap. The trap is thermally desorbed to elute the components into the GC/MS system for compound separation and detection.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications.

| <i>Requirement</i> | <i>TO-17</i> | <i>ATL Modifications</i> |
|--------------------------------------|---|--|
| Verification of Safe Sampling Volume | Collect Distributed Volume Pairs at uncharacterized sites and/or utilize field test method to evaluate breakthrough by sampling tubes in series at different air volumes. | Field surrogates are spiked onto each tube prior to deployment in the field. Recoveries are used to monitor method performance from sample collection through analysis for each sample tube. |

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

A sampling volume of 0.8 L was used to convert ng to ug/m³ for the associated Lab Blank.

Definition of Data Qualifying Flags

Nine qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in blank (subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

CN - See case narrative

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

**Summary of Detected Compounds
EPA METHOD TO-17**

Client Sample ID: SVP-7-021822

Lab ID#: 2202501-01A

No Detections Were Found.

Client Sample ID: FB-1-021822

Lab ID#: 2202501-02A

No Detections Were Found.



Air Toxics

Client Sample ID: SVP-7-021822

Lab ID#: 2202501-01A

EPA METHOD TO-17

| | | | |
|--------------|---------|------------------------------------|---|
| File Name: | 6022313 | Date of Extraction: NA | Date of Collection: 2/18/22 10:38:00 AM |
| Dil. Factor: | 1.00 | Date of Analysis: 2/23/22 06:42 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|--------------|----------------|
| Naphthalene | 1.0 | 1.2 | Not Detected | Not Detected |

Air Sample Volume(L): 0.800
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 124 | 50-150 |



Air Toxics

Client Sample ID: FB-1-021822

Lab ID#: 2202501-02A

EPA METHOD TO-17

| | | | |
|--------------|---------|------------------------------------|---|
| File Name: | 6022312 | Date of Extraction: NA | Date of Collection: 2/18/22 10:50:00 AM |
| Dil. Factor: | 1.00 | Date of Analysis: 2/23/22 06:01 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|--------------|----------------|
| Naphthalene | 1.0 | 1.2 | Not Detected | Not Detected |

Air Sample Volume(L): 0.800
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 98 | 50-150 |



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2202501-03A

EPA METHOD TO-17

| | | | |
|--------------|---------|------------------------------------|------------------------|
| File Name: | 6022307 | Date of Extraction: NA | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 2/23/22 01:45 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|--------------|----------------|
| Naphthalene | 1.0 | 1.2 | Not Detected | Not Detected |

Air Sample Volume(L): 0.800
Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 110 | 50-150 |



Air Toxics

Client Sample ID: CCV

Lab ID#: 2202501-04A

EPA METHOD TO-17

| | | | |
|--------------|---------|------------------------------------|------------------------|
| File Name: | 6022304 | Date of Extraction: NA | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 2/23/22 11:07 AM | |

| Compound | %Recovery |
|-------------|-----------|
| Naphthalene | 94 |

Air Sample Volume(L): 1.00
Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 110 | 50-150 |



Air Toxics

Client Sample ID: LCS

Lab ID#: 2202501-05A

EPA METHOD TO-17

| | | | |
|--------------|---------|------------------------------------|------------------------|
| File Name: | 6022302 | Date of Extraction: NA | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 2/23/22 09:45 AM | |

| Compound | %Recovery | Method Limits |
|-------------|-----------|---------------|
| Naphthalene | 119 | 70-130 |

Air Sample Volume(L): 1.00
Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 122 | 50-150 |



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2202501-05AA

EPA METHOD TO-17

| | | | |
|--------------|---------|------------------------------------|------------------------|
| File Name: | 6022303 | Date of Extraction: NA | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 2/23/22 10:26 AM | |

| Compound | %Recovery | Method Limits |
|-------------|-----------|---------------|
| Naphthalene | 115 | 70-130 |

Air Sample Volume(L): 1.00
Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 114 | 50-150 |

TO-17 SAMPLE COLLECTION



Air Toxics

Sample Transportation Notice

Relinquishing signature on this document indicates that sample is being shipped in compliance with all applicable local, State, Federal, national, and international laws, regulations and ordinances of any kind. Eurofins assumes no liability with respect to the collection, handling or shipping of these samples. Relinquishing signature also indicates agreement to hold harmless, defend, and indemnify Eurofins against any claim, demand, or action, of any kind, related to the collection, handling, or shipping of samples. D.O.T. Hotline (800) 467-4922.

**180 BLUE RAVINE ROAD, SUITE B
FOLSOM, CA 95630
(916) 985-1000 FAX (916) 985-1020**

Page 1 of 1

CHAIN-OF-CUSTODY RECORD

Project Manager Russ Shropshire

Collected by: (Print and Sign) Russ Shropshire

Company Leidos Email shropshire@leidos.com

Address 11824 Northrock Parkway City Bothell State WA Zip 98011

Phone 206-321-2387 Fax _____

| | | | | | | |
|---|--|--|------------|-------------|------------|-----------|
| Project Info: P.O. # <u>P010242812</u> Project # <u>204117</u> Project Name <u>Newman's Chevron</u> | Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush specify _____ | Reporting Units: <input type="checkbox"/> ppmv <input type="checkbox"/> ppbv <input checked="" type="checkbox"/> µg/m3 <input type="checkbox"/> mg/m3 | Indoor Air | Outdoor Air | Soil Vapor | Other () |
| | | | | | | |

| Lab I.D. | Field Sample I.D. (Location) | Engraved or Stamped Tube # | Date of Collection (mm/dd/yy) | Start Time (hr:min) | Date of Retrieval (mm/dd/yy) | End Time (hr:min) | Pre-Test Flow Rate | Post-Test Flow Rate | Volume | Indoor Air | Outdoor Air | Soil Vapor | Other () |
|----------|------------------------------|----------------------------|-------------------------------|---------------------|------------------------------|-------------------|--------------------|---------------------|--------|--------------------------|--------------------------|-------------------------------------|--------------------------|
| 01A | SVP-7-021822 | G0150839 | 02/18/22 | 10:36 | 2/18/22 | 10:38 | NA | NA | 800 mL | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 02A | FB-1-021822 | G0139969 | 02/18/22 | 10:49 | 2/18/22 | 10:50 | NA | NA | 800 mL | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| | | | | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| | | | | | | | | | | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| | | |
|--|--|--------|
| Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>2/18/22 15:12</u> | Received by: (signature) <u>Thomas Dube</u> Date/Time <u>2/18/22 15:12</u> | Notes: |
| Relinquished by: (signature) <u>Thomas Dube</u> Date/Time <u>2/21/22 14:30</u> | Received by: (signature) <u>[Signature]</u> Date/Time <u>2-22-22 1020</u> | |
| Relinquished by: (signature) _____ Date/Time _____ | Received by: (signature) _____ Date/Time _____ | |

| Lab Use Only | Shipper Name | Air Bill # | Temp (°C) | Condition | Custody Seals Intact? | Work Order # |
|--------------|---------------|------------|---------------|-------------|--|----------------|
| | <u>Leidos</u> | | <u>5.10°C</u> | <u>G000</u> | <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> None | <u>2202501</u> |

ANALYTICAL REPORT

Eurofins Lancaster Laboratories Environment Testing, LLC
2425 New Holland Pike
Lancaster, PA 17601
Tel: (717)656-2300

Laboratory Job ID: 410-96601-1

Client Project/Site: 204117 - Bremerton, WA

For:

Leidos Engineering, LLC
11824 North Creek Parkway N
Suite 101
Bothell, Washington 98011

Attn: Russ Shropshire



Authorized for release by:
9/19/2022 3:42:56 AM

Amek Carter, Project Manager
(717)556-7252

Loran.Carter@et.eurofinsus.com

LINKS

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results through



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www.eurofinsus.com/Env

The test results in this report meet all 2003 NELAC, 2009 TNI, and 2016 TNI requirements for accredited parameters, exceptions are noted in this report. This report may not be reproduced except in full, and with written approval from the laboratory. For questions please contact the Project Manager at the e-mail address or telephone number listed on this page.

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.



Analytical test results meet all requirements of the associated regulatory program (e.g., NELAC (TNI), DoD, and ISO 17025) unless otherwise noted under the individual analysis. Data qualifiers are applied to note exceptions. Noncompliant quality control (QC) is further explained in narrative comments.

- QC results that exceed the upper limits and are associated with non-detect samples are qualified but further narration is not required since the bias is high and does not change a non-detect result. Further narration is also not required with QC blank detection when the associated sample concentration is non-detect or more than ten times the level in the blank.
 - Matrix QC may not be reported if insufficient sample or site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD is performed, unless otherwise specified in the method.
 - Surrogate and/or isotope dilution analyte recoveries (if applicable) which are outside of the QC window are confirmed unless attributed to a dilution or otherwise noted in the narrative.
- Regulated compliance samples (e.g. SDWA, NPDES) must comply with the associated agency requirements/permits.

Measurement uncertainty values, as applicable, are available upon request.

Test results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. Times are local to the area of activity. Parameters listed in the 40 CFR Part 136 Table II as "analyze immediately" and tested in the laboratory are not performed within 15 minutes of collection.

This report shall not be reproduced except in full, without the written approval of the laboratory.

WARRANTY AND LIMITS OF LIABILITY - In accepting analytical work, we warrant the accuracy of test results for the sample as submitted. The foregoing express warranty is exclusive and is given in lieu of all other warranties, expressed or implied, except as otherwise agreed. We disclaim any other warranties, expressed or implied, including a warranty of fitness for particular purpose and warranty of merchantability. In no event shall Eurofins Lancaster Laboratories Environmental, LLC be liable for indirect, special, consequential, or incidental damages including, but not limited to, damages for loss of profit or goodwill regardless of (A) the negligence (either sole or concurrent) of Eurofins Lancaster Laboratories Environmental and (B) whether Eurofins Lancaster Laboratories Environmental has been informed of the possibility of such damages. We accept no legal responsibility for the purposes for which the client uses the test results. Except as otherwise agreed, no purchase order or other order for work shall be accepted by Eurofins Lancaster Laboratories Environmental which includes any conditions that vary from the Standard Terms and Conditions, and Eurofins Lancaster Laboratories Environmental hereby objects to any conflicting terms contained in any acceptance or order submitted by client.

Amek Carter
Project Manager
9/19/2022 3:42:56 AM



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Definitions/Glossary

Client: Leidos Engineering, LLC
Project/Site: 204117 - Bremerton, WA

Job ID: 410-96601-1

Qualifiers

GC/MS VOA

| Qualifier | Qualifier Description |
|-----------|--|
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |

GC VOA

| Qualifier | Qualifier Description |
|-----------|--|
| cn | Refer to Case Narrative for further detail |
| J | Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value. |
| S1+ | Surrogate recovery exceeds control limits, high biased. |

Glossary

| Abbreviation | These commonly used abbreviations may or may not be present in this report. |
|----------------|---|
| □ | Listed under the "D" column to designate that the result is reported on a dry weight basis |
| %R | Percent Recovery |
| 1C | Result is from the primary column on a dual-column method. |
| 2C | Result is from the confirmation column on a dual-column method. |
| CFL | Contains Free Liquid |
| CFU | Colony Forming Unit |
| CNF | Contains No Free Liquid |
| DER | Duplicate Error Ratio (normalized absolute difference) |
| Dil Fac | Dilution Factor |
| DL | Detection Limit (DoD/DOE) |
| DL, RA, RE, IN | Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample |
| DLC | Decision Level Concentration (Radiochemistry) |
| EDL | Estimated Detection Limit (Dioxin) |
| LOD | Limit of Detection (DoD/DOE) |
| LOQ | Limit of Quantitation (DoD/DOE) |
| MCL | EPA recommended "Maximum Contaminant Level" |
| MDA | Minimum Detectable Activity (Radiochemistry) |
| MDC | Minimum Detectable Concentration (Radiochemistry) |
| MDL | Method Detection Limit |
| ML | Minimum Level (Dioxin) |
| MPN | Most Probable Number |
| MQL | Method Quantitation Limit |
| NC | Not Calculated |
| ND | Not Detected at the reporting limit (or MDL or EDL if shown) |
| NEG | Negative / Absent |
| POS | Positive / Present |
| PQL | Practical Quantitation Limit |
| PRES | Presumptive |
| QC | Quality Control |
| RER | Relative Error Ratio (Radiochemistry) |
| RL | Reporting Limit or Requested Limit (Radiochemistry) |
| RPD | Relative Percent Difference, a measure of the relative difference between two points |
| TEF | Toxicity Equivalent Factor (Dioxin) |
| TEQ | Toxicity Equivalent Quotient (Dioxin) |
| TNTC | Too Numerous To Count |

Case Narrative

Client: Leidos Engineering, LLC
Project/Site: 204117 - Bremerton, WA

Job ID: 410-96601-1

Job ID: 410-96601-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Narrative

Job Narrative
410-96601-1

Receipt

The sample was received on 9/2/2022 10:10 AM. Unless otherwise noted below, the sample arrived in good condition, and, where required, properly preserved and on ice. The temperature of the cooler at receipt time was 2.7°C

GC/MS VOA

Method 8260D: <Client Label Added>SVP-8-S-5-220826 (410-96601-1)

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC/MS Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC VOA

Method NWTPH_Gx: <Client Label Added>SVP-8-S-5-220826 (410-96601-1)

Method NWTPH_Gx: Elevated reporting limits are provided for the following sample due to insufficient sample provided for analysis: SVP-8-S-5-220826 (410-96601-1).

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

GC Semi VOA

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Metals

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

General Chemistry

No additional analytical or quality issues were noted, other than those described above or in the Definitions/ Glossary page.

Detection Summary

Client: Leidos Engineering, LLC
Project/Site: 204117 - Bremerton, WA

Job ID: 410-96601-1

Client Sample ID: SVP-8-S-5-220826

Lab Sample ID: 410-96601-1

| Analyte | Result | Qualifier | RL | MDL | Unit | Dil | Fac | D | Method | Prep Type |
|-------------|--------|-----------|-----|------|-------|-----|-----|---|----------|-----------|
| Toluene | 1.0 | J | 5.1 | 0.61 | ug/Kg | 1 | | ✱ | 8260D | Total/NA |
| C7-C12 (1C) | 1.0 | J cn | 15 | 0.67 | mg/Kg | 50 | | ✱ | NWTPH-Gx | Total/NA |
| Lead | 4.1 | | 1.6 | 0.65 | mg/Kg | 1 | | ✱ | 6010D | Total/NA |

This Detection Summary does not include radiochemical test results.

Eurofins Lancaster Laboratories Environment Testing, LLC

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Client Sample Results

Client: Leidos Engineering, LLC
 Project/Site: 204117 - Bremerton, WA

Job ID: 410-96601-1

Client Sample ID: SVP-8-S-5-220826

Lab Sample ID: 410-96601-1

Date Collected: 08/26/22 09:55

Matrix: Solid

Date Received: 09/02/22 10:10

Percent Solids: 78.8

Method: 8260D - Volatile Organic Compounds by GC/MS

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|------------------------------|------------|-----------|----------|------|-------|---|----------------|----------------|---------|
| Benzene | ND | | 5.1 | 0.51 | ug/Kg | ☼ | 09/04/22 16:23 | 09/08/22 14:32 | 1 |
| Ethylbenzene | ND | | 5.1 | 0.41 | ug/Kg | ☼ | 09/04/22 16:23 | 09/08/22 14:32 | 1 |
| Toluene | 1.0 | J | 5.1 | 0.61 | ug/Kg | ☼ | 09/04/22 16:23 | 09/08/22 14:32 | 1 |
| Xylenes, Total | ND | | 10 | 1.4 | ug/Kg | ☼ | 09/04/22 16:23 | 09/08/22 14:32 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 1,2-Dichloroethane-d4 (Surr) | 106 | | 54 - 135 | | | | 09/04/22 16:23 | 09/08/22 14:32 | 1 |
| Dibromofluoromethane (Surr) | 99 | | 50 - 141 | | | | 09/04/22 16:23 | 09/08/22 14:32 | 1 |
| 4-Bromofluorobenzene (Surr) | 96 | | 50 - 131 | | | | 09/04/22 16:23 | 09/08/22 14:32 | 1 |
| Toluene-d8 (Surr) | 99 | | 52 - 141 | | | | 09/04/22 16:23 | 09/08/22 14:32 | 1 |

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|-----|-------|---|----------------|----------------|---------|
| 1-Methylnaphthalene | ND | | 21 | 4.2 | ug/Kg | ☼ | 09/09/22 09:41 | 09/12/22 18:27 | 1 |
| 2-Methylnaphthalene | ND | | 21 | 6.2 | ug/Kg | ☼ | 09/09/22 09:41 | 09/12/22 18:27 | 1 |
| Naphthalene | ND | | 21 | 8.3 | ug/Kg | ☼ | 09/09/22 09:41 | 09/12/22 18:27 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| 2-Fluorobiphenyl (Surr) | 79 | | 27 - 120 | | | | 09/09/22 09:41 | 09/12/22 18:27 | 1 |
| Nitrobenzene-d5 (Surr) | 75 | | 15 - 120 | | | | 09/09/22 09:41 | 09/12/22 18:27 | 1 |
| p-Terphenyl-d14 (Surr) | 89 | | 31 - 132 | | | | 09/09/22 09:41 | 09/12/22 18:27 | 1 |

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------------------------|------------|-------------|----------|------|-------|---|----------------|----------------|---------|
| C7-C12 (1C) | 1.0 | J cn | 15 | 0.67 | mg/Kg | ☼ | 09/04/22 20:20 | 09/09/22 14:47 | 50 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| a,a,a-Trifluorotoluene (fid) (1C) | 165 | S1+ cn | 50 - 150 | | | | 09/04/22 20:20 | 09/09/22 14:47 | 50 |

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|--------------------|-----------|-----------|----------|-----|-------|---|----------------|----------------|---------|
| C12-C24 | ND | | 13 | 5.0 | mg/Kg | ☼ | 09/07/22 21:41 | 09/08/22 12:34 | 1 |
| C24-C40 | ND | | 38 | 13 | mg/Kg | ☼ | 09/07/22 21:41 | 09/08/22 12:34 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | | Prepared | Analyzed | Dil Fac |
| o-terphenyl (Surr) | 89 | | 50 - 150 | | | | 09/07/22 21:41 | 09/08/22 12:34 | 1 |

Method: 6010D - Metals (ICP)

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------|------------|-----------|-----|------|-------|---|----------------|----------------|---------|
| Lead | 4.1 | | 1.6 | 0.65 | mg/Kg | ☼ | 09/07/22 20:44 | 09/16/22 05:44 | 1 |

General Chemistry

| Analyte | Result | Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|-------------|-----------|-----|-----|------|---|----------|----------------|---------|
| Percent Moisture | 21.2 | | 1.0 | 1.0 | % | | | 09/06/22 06:07 | 1 |

Surrogate Summary

Client: Leidos Engineering, LLC
 Project/Site: 204117 - Bremerton, WA

Job ID: 410-96601-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Matrix: Solid

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) | | | |
|-------------------|------------------------|--|------------------|-----------------|-----------------|
| | | DCA (54-135) | DBFM (50-141) | BFB (50-131) | TOL (52-141) |
| 410-96601-1 | SVP-8-S-5-220826 | 106 | 99 | 96 | 99 |
| LCS 410-293779/4 | Lab Control Sample | 101 | 99 | 102 | 102 |
| LCSD 410-293779/5 | Lab Control Sample Dup | 105 | 101 | 100 | 103 |
| MB 410-293779/7 | Method Blank | 105 | 100 | 97 | 99 |

Surrogate Legend

DCA = 1,2-Dichloroethane-d4 (Surr)
 DBFM = Dibromofluoromethane (Surr)
 BFB = 4-Bromofluorobenzene (Surr)
 TOL = Toluene-d8 (Surr)

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Matrix: Solid

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) | | |
|--------------------|--------------------|--|-----------------|--------------------|
| | | FBP (27-120) | NBZ (15-120) | TPHd14 (31-132) |
| 410-96601-1 | SVP-8-S-5-220826 | 79 | 75 | 89 |
| LCS 410-294174/2-A | Lab Control Sample | 73 | 71 | 83 |
| MB 410-294174/1-A | Method Blank | 82 | 79 | 93 |

Surrogate Legend

FBP = 2-Fluorobiphenyl (Surr)
 NBZ = Nitrobenzene-d5 (Surr)
 TPHd14 = p-Terphenyl-d14 (Surr)

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Matrix: Solid

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) |
|-------------------|------------------------|--|
| | | TFT-F1 (50-150) |
| 410-96601-1 | SVP-8-S-5-220826 | 165 S1+ cn |
| LCS 410-294313/6 | Lab Control Sample | 88 |
| LCSD 410-294313/7 | Lab Control Sample Dup | 89 |
| MB 410-294313/5 | Method Blank | 93 |

Surrogate Legend

TFT-F = a,a,a-Trifluorotoluene (fid)

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Matrix: Solid

Prep Type: Total/NA

| Lab Sample ID | Client Sample ID | Percent Surrogate Recovery (Acceptance Limits) |
|--------------------|--------------------|--|
| | | OTP (50-150) |
| 410-96601-1 | SVP-8-S-5-220826 | 89 |
| LCS 410-293686/2-A | Lab Control Sample | 108 |
| MB 410-293686/1-A | Method Blank | 96 |

Surrogate Legend

OTP = o- terphenyl (Surr)

QC Sample Results

Client: Leidos Engineering, LLC
 Project/Site: 204117 - Bremerton, WA

Job ID: 410-96601-1

Method: 8260D - Volatile Organic Compounds by GC/MS

Lab Sample ID: MB 410-293779/7

Matrix: Solid

Analysis Batch: 293779

Client Sample ID: Method Blank

Prep Type: Total/NA

| Analyte | MB | MB | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|----------------|--------|-----------|-----|------|-------|---|----------|----------------|---------|
| | Result | Qualifier | | | | | | | |
| Benzene | ND | | 5.0 | 0.50 | ug/Kg | | | 09/08/22 11:54 | 1 |
| Ethylbenzene | ND | | 5.0 | 0.40 | ug/Kg | | | 09/08/22 11:54 | 1 |
| Toluene | ND | | 5.0 | 0.60 | ug/Kg | | | 09/08/22 11:54 | 1 |
| Xylenes, Total | ND | | 10 | 1.4 | ug/Kg | | | 09/08/22 11:54 | 1 |

| Surrogate | MB | MB | Limits | Prepared | Analyzed | Dil Fac |
|------------------------------|-----------|-----------|----------|----------|----------------|---------|
| | %Recovery | Qualifier | | | | |
| 1,2-Dichloroethane-d4 (Surr) | 105 | | 54 - 135 | | 09/08/22 11:54 | 1 |
| Dibromofluoromethane (Surr) | 100 | | 50 - 141 | | 09/08/22 11:54 | 1 |
| 4-Bromofluorobenzene (Surr) | 97 | | 50 - 131 | | 09/08/22 11:54 | 1 |
| Toluene-d8 (Surr) | 99 | | 52 - 141 | | 09/08/22 11:54 | 1 |

Lab Sample ID: LCS 410-293779/4

Matrix: Solid

Analysis Batch: 293779

Client Sample ID: Lab Control Sample

Prep Type: Total/NA

| Analyte | Spike Added | LCS | LCS | Unit | D | %Rec | %Rec Limits |
|----------------|-------------|--------|-----------|-------|---|------|-------------|
| | | Result | Qualifier | | | | |
| Benzene | 20.0 | 19.7 | | ug/Kg | | 98 | 80 - 120 |
| Ethylbenzene | 20.0 | 19.2 | | ug/Kg | | 96 | 78 - 120 |
| Toluene | 20.0 | 19.3 | | ug/Kg | | 97 | 80 - 120 |
| Xylenes, Total | 60.0 | 57.2 | | ug/Kg | | 95 | 75 - 120 |

| Surrogate | LCS | LCS | Limits |
|------------------------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| 1,2-Dichloroethane-d4 (Surr) | 101 | | 54 - 135 |
| Dibromofluoromethane (Surr) | 99 | | 50 - 141 |
| 4-Bromofluorobenzene (Surr) | 102 | | 50 - 131 |
| Toluene-d8 (Surr) | 102 | | 52 - 141 |

Lab Sample ID: LCSD 410-293779/5

Matrix: Solid

Analysis Batch: 293779

Client Sample ID: Lab Control Sample Dup

Prep Type: Total/NA

| Analyte | Spike Added | LCSD | LCSD | Unit | D | %Rec | %Rec Limits | RPD | Limit |
|----------------|-------------|--------|-----------|-------|---|------|-------------|-----|-------|
| | | Result | Qualifier | | | | | | |
| Benzene | 20.0 | 19.4 | | ug/Kg | | 97 | 80 - 120 | 1 | 30 |
| Ethylbenzene | 20.0 | 18.7 | | ug/Kg | | 94 | 78 - 120 | 2 | 30 |
| Toluene | 20.0 | 18.9 | | ug/Kg | | 95 | 80 - 120 | 2 | 30 |
| Xylenes, Total | 60.0 | 55.3 | | ug/Kg | | 92 | 75 - 120 | 3 | 30 |

| Surrogate | LCSD | LCSD | Limits |
|------------------------------|-----------|-----------|----------|
| | %Recovery | Qualifier | |
| 1,2-Dichloroethane-d4 (Surr) | 105 | | 54 - 135 |
| Dibromofluoromethane (Surr) | 101 | | 50 - 141 |
| 4-Bromofluorobenzene (Surr) | 100 | | 50 - 131 |
| Toluene-d8 (Surr) | 103 | | 52 - 141 |

QC Sample Results

Client: Leidos Engineering, LLC
 Project/Site: 204117 - Bremerton, WA

Job ID: 410-96601-1

Method: 8270E - Semivolatile Organic Compounds (GC/MS)

Lab Sample ID: MB 410-294174/1-A
Matrix: Solid
Analysis Batch: 294860

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 294174

| Analyte | MB | MB | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-------------------------|-----------|-----------|----------|-----|-------|----------------|----------------|----------------|---------|
| | Result | Qualifier | | | | | | | |
| 1-Methylnaphthalene | ND | | 17 | 3.3 | ug/Kg | | 09/09/22 09:41 | 09/12/22 12:30 | 1 |
| 2-Methylnaphthalene | ND | | 17 | 5.0 | ug/Kg | | 09/09/22 09:41 | 09/12/22 12:30 | 1 |
| Naphthalene | ND | | 17 | 6.7 | ug/Kg | | 09/09/22 09:41 | 09/12/22 12:30 | 1 |
| Surrogate | %Recovery | Qualifier | Limits | | | Prepared | Analyzed | Dil Fac | |
| 2-Fluorobiphenyl (Surr) | 82 | | 27 - 120 | | | 09/09/22 09:41 | 09/12/22 12:30 | 1 | |
| Nitrobenzene-d5 (Surr) | 79 | | 15 - 120 | | | 09/09/22 09:41 | 09/12/22 12:30 | 1 | |
| p-Terphenyl-d14 (Surr) | 93 | | 31 - 132 | | | 09/09/22 09:41 | 09/12/22 12:30 | 1 | |

Lab Sample ID: LCS 410-294174/2-A
Matrix: Solid
Analysis Batch: 294860

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 294174

| Analyte | Spike Added | LCS | LCS | Unit | D | %Rec | %Rec Limits | |
|-------------------------|-------------|-----------|-----------|-------|---|----------|-------------|---------|
| | | Result | Qualifier | | | | | |
| 1-Methylnaphthalene | 1670 | 1210 | | ug/Kg | | 72 | 67 - 120 | |
| 2-Methylnaphthalene | 1670 | 1150 | | ug/Kg | | 69 | 61 - 120 | |
| Naphthalene | 1670 | 1200 | | ug/Kg | | 72 | 62 - 120 | |
| Surrogate | %Recovery | Qualifier | Limits | | | Prepared | Analyzed | Dil Fac |
| 2-Fluorobiphenyl (Surr) | 73 | | 27 - 120 | | | | | |
| Nitrobenzene-d5 (Surr) | 71 | | 15 - 120 | | | | | |
| p-Terphenyl-d14 (Surr) | 83 | | 31 - 132 | | | | | |

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC)

Lab Sample ID: MB 410-294313/5
Matrix: Solid
Analysis Batch: 294313

Client Sample ID: Method Blank
Prep Type: Total/NA

| Analyte | MB | MB | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|-----------------------------------|-----------|-----------|----------|------|-------|----------|----------------|----------------|---------|
| | Result | Qualifier | | | | | | | |
| C7-C12 (1C) | ND | | 5.0 | 0.23 | mg/Kg | | | 09/09/22 12:14 | 25 |
| Surrogate | %Recovery | Qualifier | Limits | | | Prepared | Analyzed | Dil Fac | |
| a,a,a-Trifluorotoluene (fid) (1C) | 93 | | 50 - 150 | | | | 09/09/22 12:14 | 25 | |

Lab Sample ID: LCS 410-294313/6
Matrix: Solid
Analysis Batch: 294313

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

| Analyte | Spike Added | LCS | LCS | Unit | D | %Rec | %Rec Limits | |
|-----------------------------------|-------------|-----------|-----------|-------|---|----------|-------------|---------|
| | | Result | Qualifier | | | | | |
| C7-C12 (1C) | 11.0 | 10.5 | | mg/Kg | | 95 | 55 - 145 | |
| Surrogate | %Recovery | Qualifier | Limits | | | Prepared | Analyzed | Dil Fac |
| a,a,a-Trifluorotoluene (fid) (1C) | 88 | | 50 - 150 | | | | | |

QC Sample Results

Client: Leidos Engineering, LLC
 Project/Site: 204117 - Bremerton, WA

Job ID: 410-96601-1

Method: NWTPH-Gx - Northwest - Volatile Petroleum Products (GC) (Continued)

Lab Sample ID: LCSD 410-294313/7
Matrix: Solid
Analysis Batch: 294313

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

| Analyte | Spike Added | LCSD Result | LCSD Qualifier | Unit | D | %Rec | %Rec Limits | RPD | RPD Limit |
|--|------------------|-----------------------|----------------|-------|---|------|-------------|-----|-----------|
| C7-C12 (1C) | 11.0 | 10.6 | | mg/Kg | | 96 | 55 - 145 | 1 | 30 |
| Surrogate | %Recovery | LCSD Qualifier | Limits | | | | | | |
| <i>a,a,a-Trifluorotoluene (fid) (1C)</i> | 89 | | 50 - 150 | | | | | | |

Method: NWTPH-Dx - Northwest - Semi-Volatile Petroleum Products (GC)

Lab Sample ID: MB 410-293686/1-A
Matrix: Solid
Analysis Batch: 293801

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 293686

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------------------------|------------------|---------------------|---------------|-----|-------|---|----------------|----------------|---------|
| C12-C24 | ND | | 10 | 4.0 | mg/Kg | | 09/07/22 21:41 | 09/08/22 11:54 | 1 |
| C24-C40 | ND | | 30 | 10 | mg/Kg | | 09/07/22 21:41 | 09/08/22 11:54 | 1 |
| Surrogate | %Recovery | MB Qualifier | Limits | | | | | | |
| <i>o-terphenyl (Surr)</i> | 96 | | 50 - 150 | | | | | | |

Lab Sample ID: LCS 410-293686/2-A
Matrix: Solid
Analysis Batch: 293801

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 293686

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------------------------|------------------|----------------------|---------------|-------|---|------|-------------|
| C12-C24 | 133 | 98.9 | | mg/Kg | | 74 | 74 - 115 |
| Surrogate | %Recovery | LCS Qualifier | Limits | | | | |
| <i>o-terphenyl (Surr)</i> | 108 | | 50 - 150 | | | | |

Method: 6010D - Metals (ICP)

Lab Sample ID: MB 410-293647/1-A
Matrix: Solid
Analysis Batch: 296770

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 293647

| Analyte | MB Result | MB Qualifier | RL | MDL | Unit | D | Prepared | Analyzed | Dil Fac |
|---------|-----------|--------------|-----|------|-------|---|----------------|----------------|---------|
| Lead | ND | | 1.5 | 0.60 | mg/Kg | | 09/07/22 20:44 | 09/16/22 04:07 | 1 |

Lab Sample ID: LCS 410-293647/2-A
Matrix: Solid
Analysis Batch: 296770

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 293647

| Analyte | Spike Added | LCS Result | LCS Qualifier | Unit | D | %Rec | %Rec Limits |
|---------|-------------|------------|---------------|-------|---|------|-------------|
| Lead | 5.00 | 4.89 | | mg/Kg | | 98 | 80 - 120 |

QC Association Summary

Client: Leidos Engineering, LLC
Project/Site: 204117 - Bremerton, WA

Job ID: 410-96601-1

GC/MS VOA

Prep Batch: 292717

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|------------------|-----------|--------|--------|------------|
| 410-96601-1 | SVP-8-S-5-220826 | Total/NA | Solid | 5035 | |

Analysis Batch: 293779

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------------|-----------|--------|--------|------------|
| 410-96601-1 | SVP-8-S-5-220826 | Total/NA | Solid | 8260D | 292717 |
| MB 410-293779/7 | Method Blank | Total/NA | Solid | 8260D | |
| LCS 410-293779/4 | Lab Control Sample | Total/NA | Solid | 8260D | |
| LCSD 410-293779/5 | Lab Control Sample Dup | Total/NA | Solid | 8260D | |

GC/MS Semi VOA

Prep Batch: 294174

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 410-96601-1 | SVP-8-S-5-220826 | Total/NA | Solid | 3546 | |
| MB 410-294174/1-A | Method Blank | Total/NA | Solid | 3546 | |
| LCS 410-294174/2-A | Lab Control Sample | Total/NA | Solid | 3546 | |

Analysis Batch: 294860

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 410-96601-1 | SVP-8-S-5-220826 | Total/NA | Solid | 8270E | 294174 |
| MB 410-294174/1-A | Method Blank | Total/NA | Solid | 8270E | 294174 |
| LCS 410-294174/2-A | Lab Control Sample | Total/NA | Solid | 8270E | 294174 |

GC VOA

Prep Batch: 292735

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|------------------|-----------|--------|--------|------------|
| 410-96601-1 | SVP-8-S-5-220826 | Total/NA | Solid | 5035 | |

Analysis Batch: 294313

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|-------------------|------------------------|-----------|--------|----------|------------|
| 410-96601-1 | SVP-8-S-5-220826 | Total/NA | Solid | NWTPH-Gx | 292735 |
| MB 410-294313/5 | Method Blank | Total/NA | Solid | NWTPH-Gx | |
| LCS 410-294313/6 | Lab Control Sample | Total/NA | Solid | NWTPH-Gx | |
| LCSD 410-294313/7 | Lab Control Sample Dup | Total/NA | Solid | NWTPH-Gx | |

GC Semi VOA

Prep Batch: 293686

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 410-96601-1 | SVP-8-S-5-220826 | Total/NA | Solid | 3550C | |
| MB 410-293686/1-A | Method Blank | Total/NA | Solid | 3550C | |
| LCS 410-293686/2-A | Lab Control Sample | Total/NA | Solid | 3550C | |

Analysis Batch: 293801

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|----------|------------|
| 410-96601-1 | SVP-8-S-5-220826 | Total/NA | Solid | NWTPH-Dx | 293686 |
| MB 410-293686/1-A | Method Blank | Total/NA | Solid | NWTPH-Dx | 293686 |
| LCS 410-293686/2-A | Lab Control Sample | Total/NA | Solid | NWTPH-Dx | 293686 |

QC Association Summary

Client: Leidos Engineering, LLC
Project/Site: 204117 - Bremerton, WA

Job ID: 410-96601-1

Metals

Prep Batch: 293647

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 410-96601-1 | SVP-8-S-5-220826 | Total/NA | Solid | 3050B | |
| MB 410-293647/1-A | Method Blank | Total/NA | Solid | 3050B | |
| LCS 410-293647/2-A | Lab Control Sample | Total/NA | Solid | 3050B | |

Analysis Batch: 296770

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|--------------------|--------------------|-----------|--------|--------|------------|
| 410-96601-1 | SVP-8-S-5-220826 | Total/NA | Solid | 6010D | 293647 |
| MB 410-293647/1-A | Method Blank | Total/NA | Solid | 6010D | 293647 |
| LCS 410-293647/2-A | Lab Control Sample | Total/NA | Solid | 6010D | 293647 |

General Chemistry

Analysis Batch: 292814

| Lab Sample ID | Client Sample ID | Prep Type | Matrix | Method | Prep Batch |
|---------------|------------------|-----------|--------|----------|------------|
| 410-96601-1 | SVP-8-S-5-220826 | Total/NA | Solid | Moisture | |

Lab Chronicle

Client: Leidos Engineering, LLC
 Project/Site: 204117 - Bremerton, WA

Job ID: 410-96601-1

Client Sample ID: SVP-8-S-5-220826

Lab Sample ID: 410-96601-1

Date Collected: 08/26/22 09:55

Matrix: Solid

Date Received: 09/02/22 10:10

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Batch Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------------|------|----------------------|
| Total/NA | Analysis | Moisture | | 1 | 292814 | UWC1 | ELLE | 09/06/22 06:07 |

Client Sample ID: SVP-8-S-5-220826

Lab Sample ID: 410-96601-1

Date Collected: 08/26/22 09:55

Matrix: Solid

Date Received: 09/02/22 10:10

Percent Solids: 78.8

| Prep Type | Batch Type | Batch Method | Run | Dilution Factor | Batch Number | Batch Analyst | Lab | Prepared or Analyzed |
|-----------|------------|--------------|-----|-----------------|--------------|---------------|------|----------------------|
| Total/NA | Prep | 5035 | | | 292717 | D8NM | ELLE | 09/04/22 16:23 |
| Total/NA | Analysis | 8260D | | 1 | 293779 | L8QZ | ELLE | 09/08/22 14:32 |
| Total/NA | Prep | 3546 | | | 294174 | U9KU | ELLE | 09/09/22 09:41 |
| Total/NA | Analysis | 8270E | | 1 | 294860 | P7EB | ELLE | 09/12/22 18:27 |
| Total/NA | Prep | 5035 | | | 292735 | D8NM | ELLE | 09/04/22 20:20 |
| Total/NA | Analysis | NWTPH-Gx | | 50 | 294313 | NND8 | ELLE | 09/09/22 14:47 |
| Total/NA | Prep | 3550C | | | 293686 | UKL2 | ELLE | 09/07/22 21:41 |
| Total/NA | Analysis | NWTPH-Dx | | 1 | 293801 | IUSB | ELLE | 09/08/22 12:34 |
| Total/NA | Prep | 3050B | | | 293647 | UJLA | ELLE | 09/07/22 20:44 |
| Total/NA | Analysis | 6010D | | 1 | 296770 | T8CQ | ELLE | 09/16/22 05:44 |

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



Accreditation/Certification Summary

Client: Leidos Engineering, LLC
Project/Site: 204117 - Bremerton, WA

Job ID: 410-96601-1

Laboratory: Eurofins Lancaster Laboratories Environment Testing, LLC

Unless otherwise noted, all analytes for this laboratory were covered under each accreditation/certification below.

| Authority | Program | Identification Number | Expiration Date |
|------------|---------|-----------------------|-----------------|
| Washington | State | C457 | 04-11-23 |

The following analytes are included in this report, but the laboratory is not certified by the governing authority. This list may include analytes for which the agency does not offer certification.

| Analysis Method | Prep Method | Matrix | Analyte |
|-----------------|-------------|--------|------------------|
| Moisture | | Solid | Percent Moisture |

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15

Method Summary

Client: Leidos Engineering, LLC
Project/Site: 204117 - Bremerton, WA

Job ID: 410-96601-1

| Method | Method Description | Protocol | Laboratory |
|----------|---|----------|------------|
| 8260D | Volatile Organic Compounds by GC/MS | SW846 | ELLE |
| 8270E | Semivolatile Organic Compounds (GC/MS) | SW846 | ELLE |
| NWTPH-Gx | Northwest - Volatile Petroleum Products (GC) | NWTPH | ELLE |
| NWTPH-Dx | Northwest - Semi-Volatile Petroleum Products (GC) | NWTPH | ELLE |
| 6010D | Metals (ICP) | SW846 | ELLE |
| Moisture | Percent Moisture | EPA | ELLE |
| 3050B | Preparation, Metals | SW846 | ELLE |
| 3546 | Microwave Extraction | SW846 | ELLE |
| 3550C | Ultrasonic Extraction | SW846 | ELLE |
| 5035 | Closed System Purge and Trap | SW846 | ELLE |

Protocol References:

EPA = US Environmental Protection Agency

NWTPH = Northwest Total Petroleum Hydrocarbon

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

ELLE = Eurofins Lancaster Laboratories Environment Testing, LLC, 2425 New Holland Pike, Lancaster, PA 17601, TEL (717)656-2300



Sample Summary

Client: Leidos Engineering, LLC
Project/Site: 204117 - Bremerton, WA

Job ID: 410-96601-1

| Lab Sample ID | Client Sample ID | Matrix | Collected | Received |
|---------------|------------------|--------|----------------|----------------|
| 410-96601-1 | SVP-8-S-5-220826 | Solid | 08/26/22 09:55 | 09/02/22 10:10 |

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| 1 Client Information | | | | 4 Matrix | | | | 5 Analyses Requested | | | | | | | | | | | | 6 Remarks | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|--|---|--|--|--|--------------------------------------|--|---|--|---|--|--|--|--------------------------------|--|---|--|---|--|---|--|------------------------------|--|---|--|--|--|---|--|--|--|--|--|---|--|--|--|---|--|--|--|-------------------------------|--|--------------|--|
| Facility # <u>204177 204117</u> | | WBS | | Sediment <input type="checkbox"/> | | Ground <input type="checkbox"/> | | Surface <input type="checkbox"/> | | <table border="1"> <tr> <td colspan="4">Total Number of Containers</td> <td colspan="2">BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth</td> <td colspan="2">8260 full scan</td> <td colspan="2">Oxygenates</td> <td colspan="2">NWTPH-Gx</td> <td colspan="2">NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/></td> <td colspan="2">NWTPH-Dx without Silica Gel Cleanup <input type="checkbox"/></td> <td colspan="2">WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/></td> <td colspan="2">Lead <input type="checkbox"/> Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <input type="checkbox"/></td> <td colspan="2"><i>Naphthalenes * by 8270</i></td> </tr> </table> | | | | | | | | | | | | Total Number of Containers | | | | BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth | | 8260 full scan | | Oxygenates | | NWTPH-Gx | | NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> | | NWTPH-Dx without Silica Gel Cleanup <input type="checkbox"/> | | WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> | | Lead <input type="checkbox"/> Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <input type="checkbox"/> | | <i>Naphthalenes * by 8270</i> | | SCR #: _____ | |
| Total Number of Containers | | | | BTEX + MTBE 8021 <input type="checkbox"/> 8260 <input checked="" type="checkbox"/> Naphth | | 8260 full scan | | Oxygenates | | | | | | | | | | | | | | NWTPH-Gx | | NWTPH-Dx with Silica Gel Cleanup <input type="checkbox"/> | | NWTPH-Dx without Silica Gel Cleanup <input type="checkbox"/> | | WA VPH <input type="checkbox"/> WA EPH <input type="checkbox"/> | | Lead <input type="checkbox"/> Total <input checked="" type="checkbox"/> Diss. <input type="checkbox"/> Method <input type="checkbox"/> | | <i>Naphthalenes * by 8270</i> | | | | | | | | | | | | | |
| Site Address <u>2021 6th Street Bremerton, WA</u> | | | | Potable <input type="checkbox"/> | | Water NPDES <input type="checkbox"/> | | Oil <input type="checkbox"/> | | | | | | | | | | | | | | Air <input type="checkbox"/> | | Lead <input type="checkbox"/> | | Total <input checked="" type="checkbox"/> | | Diss. <input type="checkbox"/> | | Method <input type="checkbox"/> | | <input checked="" type="checkbox"/> Results in Dry Weight <input type="checkbox"/> J value reporting needed <input type="checkbox"/> Must meet lowest detection limits possible for 8260 compounds <input type="checkbox"/> 8021 MTBE Confirmation <input type="checkbox"/> Confirm MTBE + Naphthalene <input type="checkbox"/> Confirm highest hit by 8260 <input type="checkbox"/> Confirm all hits by 8260 <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits | | | | | | | | | | | | | |
| Chevron PM <u>James Kiernan</u> | | Lead Consultant <u>Leidos</u> | | Soil <input checked="" type="checkbox"/> | | Water <input type="checkbox"/> | | Oil <input type="checkbox"/> | | | | | | | | | | | | | | Air <input type="checkbox"/> | | Lead <input type="checkbox"/> | | Total <input checked="" type="checkbox"/> | | Diss. <input type="checkbox"/> | | Method <input type="checkbox"/> | | <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits | | | | | | | | | | | | | |
| Consultant/Office <u>Leidos Bothell, WA</u> | | Consultant Project Mgr. <u>Russ Shropshire</u> | | Grab <input checked="" type="checkbox"/> | | Composite <input type="checkbox"/> | | Soil <input checked="" type="checkbox"/> | | Water <input type="checkbox"/> | | Oil <input type="checkbox"/> | | Air <input type="checkbox"/> | | Lead <input type="checkbox"/> | | Total <input checked="" type="checkbox"/> | | <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits | | | | | | | | | | | | | | | | | | | | | | | | | |
| Consultant Phone # <u>425-482-3323</u> | | Sampler <u>T. Dubé</u> | | Date <u>8-26-22</u> | | Time <u>0955</u> | | Grab <input checked="" type="checkbox"/> | | Composite <input type="checkbox"/> | | Soil <input checked="" type="checkbox"/> | | Water <input type="checkbox"/> | | Oil <input type="checkbox"/> | | Air <input type="checkbox"/> | | <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sample Identification <u>SYP-8-5-5-220826</u> | | | | Date <u>8-26-22</u> | | Time <u>0955</u> | | Grab <input checked="" type="checkbox"/> | | Composite <input type="checkbox"/> | | Soil <input checked="" type="checkbox"/> | | Water <input type="checkbox"/> | | Oil <input type="checkbox"/> | | Air <input type="checkbox"/> | | <input type="checkbox"/> Run _____ oxy's on highest hit <input type="checkbox"/> Run _____ oxy's on all hits | | | | | | | | | | | | | | | | | | | | | | | | | |
| 7 Turnaround Time Requested (TAT) (please circle) | | | | Relinquished by <u>Russ Shropshire</u> | | | | Date <u>8-31-22</u> | | | | Time <u>1500</u> | | | | Received by <u>FedEx</u> | | | | Date <u>8-31-22</u> | | | | Time <u>8155 283 054 79</u> | | | | | | | | | | | | | | | | | | | | | |
| <input checked="" type="radio"/> Standard 5 day 4 day <input type="radio"/> 72 hour 48 hour 24 hour | | | | Relinquished by Commercial Carrier: | | | | UPS _____ FedEx <input checked="" type="checkbox"/> Other _____ | | | | Temperature Upon Receipt <u>2.7</u> °C | | | | Custody Seals Intact? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 8 Data Package (circle if required) | | | | EDD (circle if required) | | | | CVX-RTBU-FI_05 (default) | | | | Other: _____ | | | | Type I - Full | | | | Type VI (Raw Data) | | | | | | | | | | | | | | | | | | | | | | | | | |

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Login Sample Receipt Checklist

Client: Leidos Engineering, LLC

Job Number: 410-96601-1

Login Number: 96601

List Source: Eurofins Lancaster Laboratories Environment Testing, LLC

List Number: 1

Creator: McBeth, Jessica

| Question | Answer | Comment |
|--|--------|---------|
| The cooler's custody seal is intact. | True | |
| The cooler or samples do not appear to have been compromised or tampered with. | True | |
| Samples were received on ice. | True | |
| Cooler Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen). | True | |
| Cooler Temperature is recorded. | True | |
| WV: Container Temperature is acceptable ($\leq 6^{\circ}\text{C}$, not frozen). | N/A | |
| WV: Container Temperature is recorded. | N/A | |
| COC is present. | True | |
| COC is filled out in ink and legible. | True | |
| COC is filled out with all pertinent information. | True | |
| There are no discrepancies between the containers received and the COC. | True | |
| Sample containers have legible labels. | True | |
| Containers are not broken or leaking. | True | |
| Sample collection date/times are provided. | True | |
| Appropriate sample containers are used. | True | |
| Sample bottles are completely filled. | True | |
| There is sufficient vol. for all requested analyses. | True | |
| Is the Field Sampler's name present on COC? | True | |
| Sample custody seals are intact. | N/A | |
| VOA sample vials do not have headspace $>6\text{mm}$ in diameter (none, if from WV)? | N/A | |

10/24/2022

Mr. Russ Shropshire

Leidos

11824 N Creek Parkway North

Ste 101

Bothell WA 98011

Project Name: Newman's Chevron

Project #: 204117

Workorder #: 2210220

Dear Mr. Russ Shropshire

The following report includes the data for the above referenced project for sample(s) received on 10/11/2022 at Eurofins Air Toxics LLC.

The data and associated QC analyzed by Modified TO-17 VI are compliant with the project requirements or laboratory criteria with the exception of the deviations noted in the attached case narrative.

Thank you for choosing Eurofins Air Toxics LLC. for your air analysis needs. Eurofins Air Toxics Inc. is committed to providing accurate data of the highest quality. Please feel free to contact the Project Manager: Monica Tran at 916-985-1000 if you have any questions regarding the data in this report.

Regards,



Monica Tran

Project Manager

WORK ORDER #: 2210220

Work Order Summary

| | | | |
|------------------------|--|------------------|---|
| CLIENT: | Mr. Russ Shropshire Leidos 11824 N Creek Parkway North Ste 101 Bothell, WA 98011 | BILL TO: | Accounts Payable - Bothell Leidos 11824 N Creek Parkway North Ste 101 Bothell, WA 98011 |
| PHONE: | 425-485-5800 | P.O. # | P010242812 |
| FAX: | | PROJECT # | 204117 Newman's Chevron |
| DATE RECEIVED: | 10/11/2022 | CONTACT: | Monica Tran |
| DATE COMPLETED: | 10/24/2022 | | |

| <u>FRACTION #</u> | <u>NAME</u> | <u>TEST</u> |
|-------------------|---------------|-------------------|
| 01A | OA-1-100622 | Modified TO-17 VI |
| 02A | OA-2-100622 | Modified TO-17 VI |
| 03A | OA-3-100622 | Modified TO-17 VI |
| 04A | IA-1-100622 | Modified TO-17 VI |
| 05A | IA-2-100622 | Modified TO-17 VI |
| 06A | IA-3-100622 | Modified TO-17 VI |
| 07A | CSA-1-100622 | Modified TO-17 VI |
| 08A | CSA-2-100622 | Modified TO-17 VI |
| 09A | CSA-B-100622 | Modified TO-17 VI |
| 10A | FB-1-100622 | Modified TO-17 VI |
| 11A | SSVP-1-100622 | Modified TO-17 VI |
| 12A | SSVP-2-100622 | Modified TO-17 VI |
| 13A | SSVP-3-100622 | Modified TO-17 VI |
| 14A | SVP-8-100622 | Modified TO-17 VI |
| 15A | FB-2-100622 | Modified TO-17 VI |
| 16A | Lab Blank | Modified TO-17 VI |
| 17A | CCV | Modified TO-17 VI |
| 18A | LCS | Modified TO-17 VI |
| 18AA | LCS D | Modified TO-17 VI |

CERTIFIED BY: 

 Technical Director

DATE: 10/24/22

Certification numbers: AZ Licensure AZ0775, FL NELAP – E87680, LA NELAP – 02089, NH NELAP - 209221, NJ NELAP - CA016, NY NELAP - 11291, TX NELAP - T104704434-21-17, UT NELAP – CA009332021-13, VA NELAP - 10615, WA NELAP - C935

Name of Accreditation Body: NELAP/ORELAP (Oregon Environmental Laboratory Accreditation Program)
 Accreditation number: CA300005-015, Effective date: 10/18/2021, Expiration date: 10/17/2022.

Eurofins Air Toxics, LLC certifies that the test results contained in this report meet all requirements of the NELAC standards

This report shall not be reproduced, except in full, without the written approval of Eurofins Air Toxics, LLC.

180 BLUE RAVINE ROAD, SUITE B FOLSOM, CA - 95630
 (916) 985-1000 . (800) 985-5955 . FAX (916) 351-8279

LABORATORY NARRATIVE
Modified EPA Method TO-17 (VI Tubes)
Leidos
Workorder# 2210220

Fifteen TO-17 VI Tube samples were received on October 11, 2022. The laboratory performed the analysis via modified EPA Method TO-17 using GC/MS in the full scan mode. TO-17 'VI' sorbent tubes are thermally desorbed onto a secondary trap. The trap is thermally desorbed to elute the components into the GC/MS system for compound separation and detection.

Method modifications taken to run these samples are summarized in the table below. Specific project requirements may over-ride the EATL modifications.

| <i>Requirement</i> | <i>TO-17</i> | <i>ATL Modifications</i> |
|--------------------------------------|---|--|
| Verification of Safe Sampling Volume | Collect Distributed Volume Pairs at uncharacterized sites and/or utilize field test method to evaluate breakthrough by sampling tubes in series at different air volumes. | Field surrogates are spiked onto each tube prior to deployment in the field. Recoveries are used to monitor method performance from sample collection through analysis for each sample tube. |

Receiving Notes

There were no receiving discrepancies.

Analytical Notes

A sampling volume of 17.8 L was used to convert ng to ug/m3 for the associated Lab Blank and samples FB-1-100622 and FB-2-100622.

Definition of Data Qualifying Flags

Nine qualifiers may have been used on the data analysis sheets and indicates as follows:

B - Compound present in blank (subtraction not performed).

J - Estimated value.

E - Exceeds instrument calibration range.

S - Saturated peak.

Q - Exceeds quality control limits.

U - Compound analyzed for but not detected above the reporting limit, LOD, or MDL value. See data page for project specific U-flag definition.

UJ- Non-detected compound associated with low bias in the CCV

N - The identification is based on presumptive evidence.

CN - See case narrative

File extensions may have been used on the data analysis sheets and indicates as follows:

a-File was requantified

b-File was quantified by a second column and detector

r1-File was requantified for the purpose of reissue

Summary of Detected Compounds EPA METHOD TO-17

Client Sample ID: OA-1-100622

Lab ID#: 2210220-01A

No Detections Were Found.

Client Sample ID: OA-2-100622

Lab ID#: 2210220-02A

No Detections Were Found.

Client Sample ID: OA-3-100622

Lab ID#: 2210220-03A

No Detections Were Found.

Client Sample ID: IA-1-100622

Lab ID#: 2210220-04A

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|-------------|----------------|
| Naphthalene | 1.0 | 0.069 | 1.4 | 0.099 |

Client Sample ID: IA-2-100622

Lab ID#: 2210220-05A

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|-------------|----------------|
| Naphthalene | 1.0 | 0.064 | 1.6 | 0.10 |

Client Sample ID: IA-3-100622

Lab ID#: 2210220-06A

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|-------------|----------------|
| Naphthalene | 1.0 | 0.071 | 6.7 | 0.48 |

Client Sample ID: CSA-1-100622

Lab ID#: 2210220-07A

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|-------------|----------------|
| Naphthalene | 1.0 | 0.061 | 1.2 | 0.072 |



Summary of Detected Compounds EPA METHOD TO-17

Client Sample ID: CSA-2-100622

Lab ID#: 2210220-08A

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-----------------|----------------------------|-------------------------------|------------------------|---------------------------|
| Naphthalene | 1.0 | 0.063 | 1.9 | 0.12 |

Client Sample ID: CSA-B-100622

Lab ID#: 2210220-09A

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-----------------|----------------------------|-------------------------------|------------------------|---------------------------|
| Naphthalene | 1.0 | 0.062 | 1.0 | 0.064 |

Client Sample ID: FB-1-100622

Lab ID#: 2210220-10A

No Detections Were Found.

Client Sample ID: SSVP-1-100622

Lab ID#: 2210220-11A

No Detections Were Found.

Client Sample ID: SSVP-2-100622

Lab ID#: 2210220-12A

No Detections Were Found.

Client Sample ID: SSVP-3-100622

Lab ID#: 2210220-13A

No Detections Were Found.

Client Sample ID: SVP-8-100622

Lab ID#: 2210220-14A

No Detections Were Found.

Client Sample ID: FB-2-100622

Lab ID#: 2210220-15A

**Summary of Detected Compounds
EPA METHOD TO-17**

Client Sample ID: FB-2-100622

Lab ID#: 2210220-15A

No Detections Were Found.



Air Toxics

Client Sample ID: OA-1-100622

Lab ID#: 2210220-01A

EPA METHOD TO-17

| | | | |
|--------------|---------|-------------------------------------|--|
| File Name: | 9102010 | Date of Extraction: NA | Date of Collection: 10/6/22 8:54:00 PM |
| Dil. Factor: | 1.00 | Date of Analysis: 10/20/22 04:36 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|--------------|----------------|
| Naphthalene | 1.0 | 0.057 | Not Detected | Not Detected |

Air Sample Volume(L): 17.4
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 99 | 50-150 |



Air Toxics

Client Sample ID: OA-2-100622

Lab ID#: 2210220-02A

EPA METHOD TO-17

| | | | |
|--------------|---------|-------------------------------------|--|
| File Name: | 9102011 | Date of Extraction: NA | Date of Collection: 10/6/22 8:59:00 PM |
| Dil. Factor: | 1.00 | Date of Analysis: 10/20/22 05:17 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|--------------|----------------|
| Naphthalene | 1.0 | 0.056 | Not Detected | Not Detected |

Air Sample Volume(L): 17.8
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 84 | 50-150 |



Air Toxics

Client Sample ID: OA-3-100622

Lab ID#: 2210220-03A

EPA METHOD TO-17

| | | | |
|--------------|---------|-------------------------------------|--|
| File Name: | 9102012 | Date of Extraction: NA | Date of Collection: 10/6/22 9:06:00 PM |
| Dil. Factor: | 1.00 | Date of Analysis: 10/20/22 05:57 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|--------------|----------------|
| Naphthalene | 1.0 | 0.058 | Not Detected | Not Detected |

Air Sample Volume(L): 17.2
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 97 | 50-150 |



Air Toxics

Client Sample ID: IA-1-100622

Lab ID#: 2210220-04A

EPA METHOD TO-17

| | | | |
|--------------|---------|-------------------------------------|--|
| File Name: | 9102013 | Date of Extraction: NA | Date of Collection: 10/6/22 7:18:00 PM |
| Dil. Factor: | 1.00 | Date of Analysis: 10/20/22 06:38 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|-------------|----------------|
| Naphthalene | 1.0 | 0.069 | 1.4 | 0.099 |

Air Sample Volume(L): 14.4
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 106 | 50-150 |



Air Toxics

Client Sample ID: IA-2-100622

Lab ID#: 2210220-05A

EPA METHOD TO-17

| | | | |
|--------------|---------|-------------------------------------|--|
| File Name: | 9102014 | Date of Extraction: NA | Date of Collection: 10/6/22 8:18:00 PM |
| Dil. Factor: | 1.00 | Date of Analysis: 10/20/22 07:19 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|-------------|----------------|
| Naphthalene | 1.0 | 0.064 | 1.6 | 0.10 |

Air Sample Volume(L): 15.5
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 104 | 50-150 |



Air Toxics

Client Sample ID: IA-3-100622

Lab ID#: 2210220-06A

EPA METHOD TO-17

| | | | |
|--------------|---------|-------------------------------------|--|
| File Name: | 9102015 | Date of Extraction: NA | Date of Collection: 10/6/22 7:11:00 PM |
| Dil. Factor: | 1.00 | Date of Analysis: 10/20/22 08:00 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|-------------|----------------|
| Naphthalene | 1.0 | 0.071 | 6.7 | 0.48 |

Air Sample Volume(L): 14.0
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 90 | 50-150 |



Air Toxics

Client Sample ID: CSA-1-100622

Lab ID#: 2210220-07A

EPA METHOD TO-17

| | | | |
|--------------|---------|-------------------------------------|--|
| File Name: | 9102016 | Date of Extraction: NA | Date of Collection: 10/6/22 8:37:00 PM |
| Dil. Factor: | 1.00 | Date of Analysis: 10/20/22 08:40 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|--------------------|-----------------------|----------------|-------------------|
| Naphthalene | 1.0 | 0.061 | 1.2 | 0.072 |

Air Sample Volume(L): 16.4
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|------------------|
| Naphthalene-d8 | 129 | 50-150 |



Air Toxics

Client Sample ID: CSA-2-100622

Lab ID#: 2210220-08A

EPA METHOD TO-17

| | | | |
|--------------|---------|-------------------------------------|--|
| File Name: | 9102017 | Date of Extraction: NA | Date of Collection: 10/6/22 8:45:00 PM |
| Dil. Factor: | 1.00 | Date of Analysis: 10/20/22 09:21 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|-------------|----------------|
| Naphthalene | 1.0 | 0.063 | 1.9 | 0.12 |

Air Sample Volume(L): 15.8
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 107 | 50-150 |



Air Toxics

Client Sample ID: CSA-B-100622

Lab ID#: 2210220-09A

EPA METHOD TO-17

| | | | |
|--------------|---------|-------------------------------------|--|
| File Name: | 9102018 | Date of Extraction: NA | Date of Collection: 10/6/22 8:30:00 PM |
| Dil. Factor: | 1.00 | Date of Analysis: 10/20/22 10:02 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|-------------|----------------|
| Naphthalene | 1.0 | 0.062 | 1.0 | 0.064 |

Air Sample Volume(L): 16.1
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 82 | 50-150 |



Air Toxics

Client Sample ID: FB-1-100622

Lab ID#: 2210220-10A

EPA METHOD TO-17

| | | | |
|--------------|---------|-------------------------------------|---|
| File Name: | 9102008 | Date of Extraction: NA | Date of Collection: 10/6/22 12:59:00 PM |
| Dil. Factor: | 1.00 | Date of Analysis: 10/20/22 03:14 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|--------------|----------------|
| Naphthalene | 1.0 | 0.056 | Not Detected | Not Detected |

Air Sample Volume(L): 17.8
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 79 | 50-150 |



Air Toxics

Client Sample ID: SSVP-1-100622

Lab ID#: 2210220-11A

EPA METHOD TO-17

| | | | |
|--------------|---------|-------------------------------------|--|
| File Name: | 9102019 | Date of Extraction: NA | Date of Collection: 10/6/22 8:10:00 PM |
| Dil. Factor: | 1.00 | Date of Analysis: 10/20/22 10:43 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|--------------|----------------|
| Naphthalene | 1.0 | 1.2 | Not Detected | Not Detected |

Air Sample Volume(L): 0.800
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 100 | 50-150 |



Air Toxics

Client Sample ID: SSVP-2-100622

Lab ID#: 2210220-12A

EPA METHOD TO-17

| | | | |
|--------------|---------|-------------------------------------|--|
| File Name: | 9102020 | Date of Extraction: NA | Date of Collection: 10/6/22 9:25:00 PM |
| Dil. Factor: | 1.00 | Date of Analysis: 10/20/22 11:24 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|--------------|----------------|
| Naphthalene | 1.0 | 1.2 | Not Detected | Not Detected |

Air Sample Volume(L): 0.800
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 80 | 50-150 |



Air Toxics

Client Sample ID: SSVP-3-100622

Lab ID#: 2210220-13A

EPA METHOD TO-17

| | | | |
|--------------|---------|-------------------------------------|--|
| File Name: | 9102021 | Date of Extraction: NA | Date of Collection: 10/6/22 7:50:00 PM |
| Dil. Factor: | 1.00 | Date of Analysis: 10/21/22 12:05 AM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|--------------|----------------|
| Naphthalene | 1.0 | 1.2 | Not Detected | Not Detected |

Air Sample Volume(L): 0.800
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 103 | 50-150 |



Air Toxics

Client Sample ID: SVP-8-100622

Lab ID#: 2210220-14A

EPA METHOD TO-17

| | | | |
|--------------|---------|-------------------------------------|--|
| File Name: | 9102022 | Date of Extraction: NA | Date of Collection: 10/6/22 2:25:00 PM |
| Dil. Factor: | 1.00 | Date of Analysis: 10/21/22 12:45 AM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|--------------|----------------|
| Naphthalene | 1.0 | 1.2 | Not Detected | Not Detected |

Air Sample Volume(L): 0.800
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 89 | 50-150 |



Air Toxics

Client Sample ID: FB-2-100622

Lab ID#: 2210220-15A

EPA METHOD TO-17

| | | | |
|--------------|---------|-------------------------------------|--|
| File Name: | 9102009 | Date of Extraction: NA | Date of Collection: 10/6/22 5:05:00 PM |
| Dil. Factor: | 1.00 | Date of Analysis: 10/20/22 03:55 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|--------------|----------------|
| Naphthalene | 1.0 | 0.056 | Not Detected | Not Detected |

Air Sample Volume(L): 17.8
Container Type: TO-17 VI Tube

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 105 | 50-150 |



Air Toxics

Client Sample ID: Lab Blank

Lab ID#: 2210220-16A

EPA METHOD TO-17

| | | | |
|--------------|---------|-------------------------------------|------------------------|
| File Name: | 9102007 | Date of Extraction: NA | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 10/20/22 02:01 PM | |

| Compound | Rpt. Limit (ng) | Rpt. Limit (ug/m3) | Amount (ng) | Amount (ug/m3) |
|-------------|-----------------|--------------------|--------------|----------------|
| Naphthalene | 1.0 | 0.056 | Not Detected | Not Detected |

Air Sample Volume(L): 17.8
Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 113 | 50-150 |



Air Toxics

Client Sample ID: CCV

Lab ID#: 2210220-17A

EPA METHOD TO-17

| | | | |
|--------------|---------|-------------------------------------|------------------------|
| File Name: | 9102006 | Date of Extraction: NA | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 10/20/22 01:20 PM | |

| Compound | %Recovery |
|-------------|-----------|
| Naphthalene | 103 |

Air Sample Volume(L): 1.00
Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 103 | 50-150 |



Air Toxics

Client Sample ID: LCS

Lab ID#: 2210220-18A

EPA METHOD TO-17

| | | | |
|--------------|---------|-------------------------------------|------------------------|
| File Name: | 9102004 | Date of Extraction: NA | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 10/20/22 11:58 AM | |

| Compound | %Recovery | Method Limits |
|-------------|-----------|---------------|
| Naphthalene | 116 | 70-130 |

Air Sample Volume(L): 1.00
Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 114 | 50-150 |



Air Toxics

Client Sample ID: LCSD

Lab ID#: 2210220-18AA

EPA METHOD TO-17

| | | | |
|--------------|---------|-------------------------------------|------------------------|
| File Name: | 9102005 | Date of Extraction: NA | Date of Collection: NA |
| Dil. Factor: | 1.00 | Date of Analysis: 10/20/22 12:39 PM | |

| Compound | %Recovery | Method Limits |
|-------------|-----------|---------------|
| Naphthalene | 114 | 70-130 |

Air Sample Volume(L): 1.00
Container Type: NA - Not Applicable

| Surrogates | %Recovery | Method Limits |
|----------------|-----------|---------------|
| Naphthalene-d8 | 114 | 50-150 |



Air Toxics

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FOLSOM, CA 95630
(916) 985-1000 FAX (916) 985-1020

CHAIN-OF-CUSTODY RECORD

Project Manager Russ Shropshire
 Collected by: (Print and Sign) Russ Shropshire
 Company Leidos Email shropshirer@leidos.com
 Address 11824 North Creek Pkwy N City Bothell State WA Zip 98011
 Phone 206-321-2387 Fax _____

| | | | | | | | | |
|--------------------------------------|-------------------------|--|-------------------------|------------|-------------|------------|-----------|---|
| Project Info: | | Turn Around Time: | Reporting Units: | Indoor Air | Outdoor Air | Soil Vapor | Other () | |
| P.O. # <u>P010242812</u> | Project # <u>204117</u> | <input checked="" type="checkbox"/> Normal | | | | | | <input type="checkbox"/> ppmv |
| Project Name <u>Newman's Chevron</u> | specify _____ | <input type="checkbox"/> Rush | | | | | | <input checked="" type="checkbox"/> µg/m3 <input type="checkbox"/> mg/m3 |

| Lab I.D. | Field Sample I.D. (Location) | Engraved or Stamped Tube # | Date of Collection (mm/dd/yy) | Start Time (hr : min) | Date of Retrieval (mm/dd/yy) | End Time (hr : min) | Pre-Test Flow Rate | Post-Test Flow Rate | Volume | Indoor Air | Outdoor Air | Soil Vapor | Other () |
|----------|------------------------------|----------------------------|-------------------------------|-----------------------|------------------------------|---------------------|--------------------|---------------------|--------|-------------------------------------|-------------------------------------|--------------------------|--------------------------|
| 01A | OA-1-100622 | G0149671 | 10/06/22 | 10:53 | 10/06/22 | 20:54 | 30 ml/min | 28 ml/min | | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 02A | OA-2-100622 | C14605 | 10/06/22 | 10:56 | 10/06/22 | 20:59 | 31 ml/min | 28 ml/min | | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 03A | OA-3-100622 | G0153670 | 10/06/22 | 11:01 | 10/06/22 | 21:06 | 30 ml/min | 27 ml/min | | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 04A | IA-1-100622 | G0148916 | 10/06/22 | 11:11 | 10/06/22 | 19:18 | 30 ml/min | 29 ml/min | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 05A | IA-2-100622 | G0149598 | 10/06/22 | 11:15 | 10/06/22 | 20:18 | 30 ml/min | 27 ml/min | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 06A | IA-3-100622 | G0152248 | 10/06/22 | 11:07 | 10/06/22 | 19:11 | 30 ml/min | 28 ml/min | | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 07A | CSA-1-100622 | G0141769 | 10/06/22 | 11:29 | 10/06/22 | 20:37 | 30 ml/min | 29 ml/min | | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 08A | CSA-2-100622 | G0143668 | 10/06/22 | 11:35 | 10/06/22 | 20:45 | 30 ml/min | 29 ml/min | | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 09A | CSA-B-100622 | G0152285 | 10/06/22 | 11:23 | 10/06/22 | 20:30 | 30 ml/min | 28 ml/min | | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 10A | FB-1-100622 | G0153850 | 10/06/22 | 12:57 | 10/06/22 | 12:59 | NA | NA | NA | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

| | | |
|---|---|------------------------------------|
| Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>10/10/22 15:00</u> | Received by: (signature) <u>[Signature]</u> Date/Time <u>10/11/22 10:06</u> | Notes: <u>FedEx 5662 0998 6294</u> |
| Relinquished by: (signature) _____ Date/Time _____ | Received by: (signature) _____ Date/Time _____ | |
| Relinquished by: (signature) _____ Date/Time _____ | Received by: (signature) _____ Date/Time _____ | |

| Lab Use Only | Shipper Name | Air Bill # | Temp (°C) | Condition | Custody Seals Intact? | Work Order # |
|--------------|--------------|------------|-------------|-------------|-----------------------|----------------|
| | <u>Prox</u> | | <u>28°C</u> | <u>Good</u> | Yes No <u>None</u> | <u>2210220</u> |



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180 BLUE RAVINE ROAD, SUITE B
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 (916) 985-1000 FAX (916) 985-1020

CHAIN-OF-CUSTODY RECORD

Project Manager Russ Shropshire
 Collected by: (Print and Sign) Russ Shropshire
 Company Leidos Email shropshire@leidos.com
 Address 11824 North Creek Pkwy N City Bothell State WA Zip 98011
 Phone 206-321-2387 Fax _____

| | | | | | | |
|---|--|--|------------|-------------|------------|-----------|
| Project Info: P.O. # <u>P01024281Z</u> Project # <u>204117</u> Project Name <u>Newman's Chevron</u> | Turn Around Time: <input checked="" type="checkbox"/> Normal <input type="checkbox"/> Rush specify _____ | Reporting Units: <input type="checkbox"/> ppmv <input type="checkbox"/> ppbv <input checked="" type="checkbox"/> µg/m3 <input type="checkbox"/> mg/m3 | Indoor Air | Outdoor Air | Soil Vapor | Other () |
|---|--|--|------------|-------------|------------|-----------|

| Lab I.D. | Field Sample I.D. (Location) | Engraved or Stamped Tube # | Date of Collection (mm/dd/yy) | Start Time (hr:min) | Date of Retrieval (mm/dd/yy) | End Time (hr:min) | Pre-Test Flow Rate | Post-Test Flow Rate | Volume | Indoor Air | Outdoor Air | Soil Vapor | Other () |
|------------------|------------------------------|----------------------------|-------------------------------|---------------------|------------------------------|---------------------------|--------------------|---------------------|--------|--------------------------|-------------------------------------|-------------------------------------|--------------------------|
| 11A | SSVP-1-100622 | C09478 | 10/06/22 | 20:08 | 10/06/22 | 20:10 | NA | NA | 800 mL | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 12A | SSVP-2-100622 | C08355 | 10/06/22 | 21:23 | 10/06/22 | 21:25 21:22 | NA | NA | 800 mL | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 13A | SSVP-3-100622 | G0145558 | 10/06/22 | 19:48 | 10/06/22 | 19:50 | NA | NA | 800 mL | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 14A | SVP-8-100622 | G0143714 | 10/06/22 | 14:22 | 10/06/22 | 14:25 | NA | NA | 800 mL | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| 15A | FB-2-100622 | G0137603 | 10/06/22 | 17:03 | 10/06/22 | 17:05 | NA | NA | NA | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| _____ | | | | | | | | | | | | | |
| _____ | | | | | | | | | | | | | |
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| | | |
|---|--|-------------------------------------|
| Relinquished by: (signature) <u>[Signature]</u> Date/Time <u>10/10/22 15:00</u> | Received by: (signature) <u>[Signature]</u> Date/Time <u>10/11/22 1006</u> | Notes: <u>Fed Ex 5662 0998 6294</u> |
| Relinquished by: (signature) _____ Date/Time _____ | Received by: (signature) _____ Date/Time _____ | |
| Relinquished by: (signature) _____ Date/Time _____ | Received by: (signature) _____ Date/Time _____ | |

| | | | | | | |
|--------------|--------------|------------|-------------|-------------|-----------------------|----------------|
| Lab Use Only | Shipper Name | Air Bill # | Temp (°C) | Condition | Custody Seals Intact? | Work Order # |
| | <u>FRAX</u> | | <u>2802</u> | <u>Good</u> | Yes No <u>None</u> | <u>2210220</u> |

Appendix E:
RI Data Validation Reports



**DATA VALIDATION REPORT
NEWMAN'S CHEVRON REMEDIAL INVESTIGATION**

Prepared for:

Leidos
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Prepared by:

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EcoChem Project: C4159-1

November 29, 2018

Approved for Release:

A handwritten signature in black ink, appearing to read "Christine Ransom", written over a horizontal line.

Christine Ransom
Senior Project Chemist
EcoChem, Inc.

PROJECT NARRATIVE

Basis for the Data Validation

This report summarizes the results of summary validation (EPA Stage 2B) performed on soil, air, and associated quality control sample data for the Newman’s Chevron Remedial Investigation project. A complete list of samples is provided in the Sample Index.

All soil analyses were performed by Eurofins Laboratories Environmental, Lancaster, PA. Soil Vapor analyses were performed by ALS, Simi Valley, CA. The analytical methods and EcoChem project chemists are listed in the following table:

| ANALYSIS | METHOD | PRIMARY REVIEW | SECONDARY REVIEW |
|------------------------------------|------------|----------------|------------------|
| Volatiles | 8260B | E. Clayton | C. Ransom |
| PAH | 8270D SIM | | |
| Naphthalene | 8270D | | |
| PCB Aroclors | 8082 | | |
| Gas Range Hydrocarbons | NWTPH-Gx | | |
| Diesel Range Hydrocarbons | NWTPH-Dx | | |
| Extractable Petroleum Hydrocarbons | NW EPH | | |
| Volatile Petroleum Hydrocarbons | NW VPH | | |
| Lead | 6010D | | |
| BTEX, MTBE Naphthalene | TO15 | | |
| Fixed Gases | EPA 3C | | |
| Helium | ASTM D1946 | | |

The data were reviewed using guidance and quality control criteria documented in the analytical methods; *Final Remedial Investigation Work Plan Newman’s Chevron* (Leidos, July 2018); *National Functional Guidelines for Organic Data Review* (USEPA 2016); and *National Functional Guidelines for Inorganic Data Review* (USEPA 2016).

EcoChem’s goal in assigning data assessment qualifiers is to assist in proper data interpretation. If values are estimated (J or UJ), data may be used for site evaluation and risk assessment purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. If values have no data qualifier assigned, then the data meet the data quality objectives as stated in the documents and methods referenced above.

Validation criteria are included as Appendix A. The qualified data summary table (QDST) is included as Appendix B. Data Validation Worksheets and project associated communications will be kept on file at EcoChem, Inc. A qualified laboratory electronic data deliverable (EDD) is also submitted.

Sample Index
Newman's Chevron

| SDG | Sample ID | Lab Sample ID | 8260C | PAH 8270D-SIM | 8270D | TPH-Gx | TPH-DX | EPH | VPH | 8082A | Lead | TO15 | Fixed Gases | Helium |
|-------|--------------------|---------------|-------|------------------|-------|--------|--------|-----|-----|-------|------|------|----------------|--------|
| LDC01 | SB-4-S-6.0-180823 | 9780531 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-1-S-6.0-180823 | 9780532 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-7-S-6.0-180823 | 9780533 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-2-S-6.0-180824 | 9780534 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-6-S-2.0-180824 | 9780535 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-6-S-6.0-180824 | 9780536 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-1-S-12.0-180827 | 9780537 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-1-S-51.0-180827 | 9780538 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-7-S-10.0-180827 | 9780539 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | | |
| LDC01 | SB-7-S-14.0-180827 | 9780540 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-7-S-22.0-180827 | 9780541 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-7-S-28.0-180827 | 9780542 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-3-S-10.0-180828 | 9780543 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-3-S-12.0-180828 | 9780544 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-3-S-16.0-180828 | 9780545 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-3-S-24.0-180828 | 9780546 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | UST-1-S-8.0-180828 | 9780547 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-2-S-11.0-180828 | 9780548 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-2-S-15.0-180828 | 9780549 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-2-S-20.0-180828 | 9780550 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-2-S-8.0-180828 | 9780551 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | QA-1-O-180828 | 9780552 | ✓ | | | ✓ | | | | | | | | |
| LDC01 | UST-2-S-8.0-180828 | 9780553 | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| LDC01 | SB-5-S-12.0-180828 | 9780554 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-5-S-17.5-180828 | 9780555 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | | |
| LDC01 | SB-1-S-14.0-180827 | 9780556 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-1-S-16.0-180827 | 9780557 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | DUP-1-SD-180828 | 9780558 | ✓ | | ✓ | ✓ | ✓ | | | ✓ | ✓ | | | |

Sample Index
Newman's Chevron

| SDG | Sample ID | Lab Sample ID | 8260C | PAH 8270D-SIM | 8270D | TPH-Gx | TPH-DX | EPH | VPH | 8082A | Lead | TO15 | Fixed Gases | Helium |
|-------|---------------------|---------------|-------|------------------|-------|--------|--------|-----|-----|-------|------|------|----------------|--------|
| LDC01 | SB-5-S-24.0-180828 | 9780559 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-5-S-6.0-180823 | 9780560 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-5-S-14.0-180828 | 9780561 | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | ✓ | | | |
| LDC01 | QA-1-T-180829 | 9780562 | ✓ | | | ✓ | | | | | | | | |
| LDC01 | QA-2-T-180829 | 9780563 | ✓ | | | ✓ | | | | | | | | |
| LDC01 | QA-3-T-180829 | 9780564 | ✓ | | | ✓ | | | | | | | | |
| LDC01 | QA-4-T-180829 | 9780565 | ✓ | | | ✓ | | | | | | | | |
| LDC01 | QA-5-T-180829 | 9780566 | ✓ | | | ✓ | | | | | | | | |
| LDC01 | SB-8-S-2.0-180829 | 9780568 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-5-S-30.0-180829 | 9780569 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | UST-3-S-8.0-180829 | 9780570 | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| LDC01 | SB-4-S-12.0-180829 | 9780571 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | DUP-2-SD-180829 | 9780572 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-4-S-14.0-180829 | 9780573 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | UST-4-S-8.0-180829 | 9780574 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-4-S-25.0-180829 | 9780575 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | UST-5-S-8.0-180829 | 9780576 | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| LDC01 | UST-6-S-8.0-180829 | 9780577 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-8-S-12.0-180829 | 9780578 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-8-S-14.0-180829 | 9780579 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC01 | SB-8-S-25.0-180829 | 9780580 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC03 | SVP-1-S-10.0-180830 | 9789519 | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| LDC03 | SVP-1-S-8.0-180830 | 9789520 | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| LDC03 | UST-8-S-8.0-180829 | 9789521 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC03 | UST-7-S-8.0-180829 | 9789522 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC03 | SVP-2-S-8.0-180830 | 9789523 | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| LDC03 | SVP-2-S-10.0-180830 | 9789524 | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ | | | |
| LDC03 | SVP-3-S-8.0-180830 | 9789525 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |

Sample Index
Newman's Chevron

| SDG | Sample ID | Lab Sample ID | 8260C | PAH 8270D-SIM | 8270D | TPH-Gx | TPH-DX | EPH | VPH | 8082A | Lead | TO15 | Fixed Gases | Helium |
|----------|---------------------|---------------|-------|------------------|-------|--------|--------|-----|-----|-------|------|------|----------------|--------|
| LDC03 | SVP-3-S-10.0-180830 | 9789526 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC03 | SB-9-S-7.0-180831 | 9789527 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC03 | SB-9-S-11.5-180831 | 9789528 | ✓ | | ✓ | ✓ | ✓ | | | | ✓ | | | |
| LDC03 | QA-2-O-180831 | 9789529 | ✓ | | | ✓ | | | | | | | | |
| LDC03 | QA-6-T-180831 | 9789530 | ✓ | | | ✓ | | | | | | | | |
| P1805236 | SVP-1-092718 | P1805236-001 | | | | | | | | | | ✓ | ✓ | ✓ |
| P1805236 | SVP-2-092718 | P1805236-002 | | | | | | | | | | ✓ | ✓ | ✓ |
| P1805236 | SVP-3-092718 | P1805236-003 | | | | | | | | | | ✓ | ✓ | ✓ |
| P1805236 | DUP-1-092718 | P1805236-004 | | | | | | | | | | ✓ | ✓ | ✓ |
| P1805236 | EB-1-092618 | P1805236-005 | | | | | | | | | | ✓ | ✓ | ✓ |
| P1805236 | EB-1-092818 | P1805236-006 | | | | | | | | | | ✓ | ✓ | ✓ |

DATA VALIDATION REPORT
Newman's Chevron
Volatile Organic Compounds by SW8260B

This report documents the review of analytical data from the analysis of soil samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Eurofins Lancaster, Lancaster, Pennsylvania. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|-------|----------------------------------|------------------|
| LDC01 | 44 Soil, 1 Rinsate, 5 Trip Blank | Stage 2B |
| LDC03 | 10 Soil, 1 Rinsate, 1 Trip Blank | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

The laboratory logged in the field blanks with different IDs than were noted on the chains-of-custody. No action was taken other than to note the discrepancies:

| SDG | Chain of Custody ID | Lab Log-in ID | Lab ID |
|-------|---------------------|---------------|---------|
| LDC01 | ER-1-082818 | QA-1-O-180828 | 9780552 |
| LDC01 | TB-1-082918 | QA-1-T-180829 | 9780562 |
| LDC01 | TB-2-082918 | QA-2-T-180829 | 9780563 |
| LDC01 | TB-3-082918 | QA-3-T-180829 | 9780564 |
| LDC01 | TB-4-082918 | QA-4-T-180829 | 9780565 |
| LDC01 | TB-5-082918 | QA-5-T-180829 | 9780566 |
| LDC03 | ER-2-083118 | QA-2-O-180831 | 9789529 |
| LDC03 | TB-6-083118 | QA-6-T-180831 | 9789530 |

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|--|
| 1 | Sample Receipt, Preservation, and Holding Times | ✓ | Laboratory Control Samples (LCS/LCSD) |
| ✓ | GC/MS Instrument Performance (Tune) | 2 | Matrix Spikes/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Initial Calibration (ICAL) | 2 | Field Duplicates |
| 2 | Continuing Calibration (CCAL) | ✓ | Internal Standards |
| ✓ | Laboratory Blanks | ✓ | Target Analyte List |
| 2 | Field Blanks | ✓ | Reporting Limits |
| ✓ | Surrogate Compounds | ✓ | Reported Results |

✓ *Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.*

1 *Quality control outliers are discussed below, but no data were qualified.*

2 *Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2-6°C. With the following exceptions noted below, the laboratory received the sample coolers within the advisory temperature range.

SDG LDC01: Several sample cooler temperatures were less than the lower control limit, the lowest at 1.4°C. These outliers did not impact data quality; no data were qualified.

Sample UST-7-8.0-S-082918 listed on the chain-of-custody (COC) was missing from the sample cooler. This sample was included in SDG LDC03.

SDG LDC03: The sample cooler temperature was greater than the upper control limit, at 6.3°C. This outlier did not impact data quality; no data were qualified.

Continuing Calibration (CCAL)

With the exception noted below, the RRF values were greater than the 0.05 minimum control limit and the percent difference (%D) values were within the +/- 25% control limits for the continuing calibrations (CCAL).

SDG LDC01: For the CCAL analyzed on 9/7/18, the %D value for bromomethane was less than the lower control limit; associated sample results were estimated (UJ-5BL) to indicate a potential low bias.

Field Blanks

SDG LDC01: One rinsate blank, ER-1-082818, and five trip blanks, TB-1-082918, TB-2-082918, TB-3-082918, TB-4-082918, and TB-5-082918, were submitted. No target analytes were detected in these blanks. Toluene was detected in ER-1-082818. Toluene results in samples collected the same day as the field blank and that were less than 5x the concentration in the blank were qualified as not-detected (U-6).

SDG LDC03: One rinsate blank, ER-2-083118, and one trip blank, TB-6-083118, were submitted. Toluene was detected in Sample ER-2-083118. All associated sample results were greater than the 5x action level or were not detected; no data were qualified.

Matrix Spike/Matrix Spike Duplicates

SDG LDC01: For the matrix spike/matrix spike duplicate (MS/MSD) analyses performed using Sample SB-7-S-10.0-180827, the %R values for n-hexane were outside of the control limits; one was greater than the upper control limit and one was less than the lower control limit. The result for this compound in the parent sample was estimated (J-8) with no bias assigned. The RPD values for n-hexane, toluene, and xylene were greater than the control limit; the results in the parent sample were estimated (J-9).

Field Duplicates

SDG LDC01: Two sets of field duplicates were submitted: UST-2-S-8.0-180828 & DUP-1-SD-180828 and SB-4-S-12.0-180829 & DUP-2-SD-180829.

For samples SB-4-S-12.0-180829 & DUP-2-SD-180829, the results for ethylbenzene were less than 5x the reporting limit (RL) and the difference between the two results was greater than 2x the RL. The ethylbenzene results for these two samples were estimated (J-9).

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate, LCS/LCSD, and MS/MSD recovery values and precision were acceptable as demonstrated by the LCS/LCSD, MS/MSD, and field duplicate RPD values.

Detection limits were elevated based on rinsate blank contamination. Results were estimated based on a CCAL %D value, MS/MSD recovery and precision outliers, and a field duplicate precision outlier.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Newman's Chevron
Naphthalene by SW8270D and
Polycyclic Aromatic Hydrocarbons by 8270D-SIM

This report documents the review of analytical data from the analysis of soil samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Eurofins Lancaster, Lancaster, Pennsylvania. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|-------|-------------------|------------------|
| LDC01 | 44 Soil | Stage 2B |
| LDC03 | 10 Soil | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|---|
| 1 | Sample Receipt, Preservation, and Holding Times | ✓ | Laboratory Control Samples (LCS) |
| ✓ | GC/MS Instrument Performance (Tune) | ✓ | Matrix Spike/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Initial Calibration (ICAL) | ✓ | Internal Standards |
| ✓ | Continuing Calibration (CCAL) | 1 | Field Duplicates |
| ✓ | Laboratory Blanks | ✓ | Target Analyte List |
| 1 | Field Blanks | ✓ | Reporting Limits |
| 2 | Surrogate Compounds | ✓ | Reported Results |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2-6°C. With the following exceptions noted below, the laboratory received the sample coolers within the advisory temperature range.

SDG LDC01: Several sample cooler temperatures were less than the lower control limit, the lowest at 1.4°C. These outliers did not impact data quality; no data were qualified.

Sample UST-7-8.0-S-082918 listed on the chain-of-custody (COC) was missing from the sample cooler. This sample was included in SDG LDC03.

SDG LDC03: The sample cooler temperature was greater than the upper control limit, at 6.3°C. This outlier did not impact data quality; no data were qualified.

Field Blanks

No field blanks were submitted.

Surrogate Compounds

SDG LDC01: For Sample UST-3-S-8.0-180829, 2 of the 3 surrogate recoveries were greater than the upper control limits; all detected results in the sample were estimated (J-13H) to indicate a potential high bias.

Field Duplicates

SDG LDC01: Two sets of field duplicates were submitted: UST-2-S-8.0-180828 & DUP-1-SD-180828 and SB-4-S-12.0-180829 & DUP-2-SD-180829 were submitted as field duplicates. All acceptance criteria were met.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate, laboratory control sample, and matrix spike/matrix spike duplicate (MS/MSD) percent recovery values. Precision was also acceptable as demonstrated by the MS/MSD and field duplicate relative percent difference values.

Data were qualified due to surrogate recovery outliers.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT

Newman's Chevron

PCB Aroclors by SW846 Method 8082

This report documents the review of analytical data from the analysis of soil samples and the associated laboratory quality control (QC) samples. Eurofins Lancaster, Lancaster, Pennsylvania, analyzed the samples. Refer to the **SAMPLE INDEX** for a list of the individual samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|-------|-------------------|------------------|
| LDC01 | 4 Soil | EPA Stage 2B |
| LDC03 | 4 Soil | EPA Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

VERIFICATION OF EDD TO LABORATORY REPORT

Sample results and related quality control data were received as an electronic data deliverable (EDD) and laboratory report. The EDD was verified against the laboratory report; no errors were found.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|--|
| 1 | Sample Receipt, Preservation, and Holding Times | ✓ | Matrix Spikes/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Initial Calibration (ICAL) | 1 | Field Duplicates |
| ✓ | Continuing Calibration (CCAL) | ✓ | Target Analyte List |
| ✓ | Laboratory Blanks | ✓ | Reporting Limits |
| 1 | Field Blanks | ✓ | Compound Identification |
| ✓ | Surrogate Compounds | ✓ | Reported Results |
| ✓ | Laboratory Control Samples (LCS) | | |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2-6°C. With the following exceptions noted below, the laboratory received the sample coolers within the advisory temperature range.

SDG LDC01: Several sample cooler temperatures were less than the lower control limit, the lowest at 1.4°C. These outliers did not impact data quality; no data were qualified.

Sample UST-7-8.0-S-082918 listed on the chain-of-custody (COC) was missing from the sample cooler. This sample was included in SDG LDC03.

SDG LDC03: The sample cooler temperature was greater than the upper control limit, at 6.3°C. This outlier did not impact data quality; no data were qualified.

Field Blanks

No field blanks were submitted.

Field Duplicates

SDG LDC01: Samples UST-2-S-8.0-180828 and DUP-1-SD-180828 were submitted as field duplicates. NO target analytes were detected in these samples; field precision was acceptable.

OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory performed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate, laboratory control sample, and matrix spike/matrix spike duplicated (MS/MSD) recoveries. Precision was also acceptable as demonstrated by the MS/MSD and field duplicate relative percent difference values.

No data were qualified for any reason. All data, as reported, are acceptable for use.

DATA VALIDATION REPORT

Newman's Chevron

Gasoline Range Organics by NWTPH-Gx

This report documents the review of analytical data from the analysis of soil samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Eurofins Lancaster, Lancaster, Pennsylvania. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|-------|----------------------------------|------------------|
| LDC01 | 44 Soil, 1 Rinsate, 5 Trip Blank | Stage 2B |
| LDC03 | 10 Soil, 1 Rinsate, 1 Trip Blank | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

The laboratory logged in the field blanks with different IDs than were noted on the chains-of-custody. No action was taken other than to note the discrepancies:

| SDG | Chain of Custody ID | Lab Log-in ID | Lab ID |
|-------|---------------------|---------------|---------|
| LDC01 | ER-1-082818 | QA-1-O-180828 | 9780552 |
| LDC01 | TB-1-082918 | QA-1-T-180829 | 9780562 |
| LDC01 | TB-2-082918 | QA-2-T-180829 | 9780563 |
| LDC01 | TB-3-082918 | QA-3-T-180829 | 9780564 |
| LDC01 | TB-4-082918 | QA-4-T-180829 | 9780565 |
| LDC01 | TB-5-082918 | QA-5-T-180829 | 9780566 |
| LDC03 | ER-2-083118 | QA-2-O-180831 | 9789529 |
| LDC03 | TB-6-083118 | QA-6-T-180831 | 9789530 |

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---------------------------------------|---|---|
| 1 | Sample Preservation and Holding Times | ✓ | Laboratory Control Samples (LCS/LCSD) |
| ✓ | Initial Calibration (ICAL) | 1 | Matrix Spike/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Continuing Calibration (CCAL) | 1 | Field Duplicates |
| ✓ | Laboratory Blanks | ✓ | Reporting Limits |
| 1 | Field Blanks | ✓ | Reported Results |
| ✓ | Surrogate Compounds | | |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2-6°C. With the following exceptions noted below, the laboratory received the sample coolers within the advisory temperature range.

SDG LDC01: Several sample cooler temperatures were less than the lower control limit, the lowest at 1.4°C. These outliers did not impact data quality; no data were qualified.

Sample UST-7-8.0-S-082918 listed on the chain-of-custody (COC) was missing from the sample cooler. This sample was included in SDG LDC03.

SDG LDC03: The sample cooler temperature was greater than the upper control limit, at 6.3°C. This outlier did not impact data quality; no data were qualified.

Field Blanks

SDG LDC01: One rinsate blank, ER-1-082818, and five trip blanks, TB-1-082918, TB-2-082918, TB-3-082918, TB-4-082918, and TB-5-082918, were submitted. Gasoline range organics were not detected in these blanks.

SDG LDC03: One rinsate blank, ER-2-083118, and one trip blank, TB-6-083118, were submitted. No results were detected. Gasoline range organics were not detected in these blanks.

Matrix Spike/Matrix Spike Duplicates

Matrix spikes were not analyzed. Precision and accuracy were evaluated using the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) results.

Field Duplicates

SDG LDC01: Two sets of field duplicates were submitted: UST-2-S-8.0-180828 & DUP-1-SD-180828 and SB-4-S-12.0-180829 & DUP-2-SD-180829. All acceptance criteria were met.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate and LCS/LCSD percent recovery values. Precision was also acceptable as demonstrated by the LCS/LCSD and field duplicate RPD values.

No data were qualified for any reason.

All data, as reported, are acceptable for use.

DATA VALIDATION REPORT

Newman's Chevron

Diesel Range Organics (extended) by NWTPH-Dx

This report documents the review of analytical data from the analysis of soil samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Eurofins Lancaster, Lancaster, Pennsylvania. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|-------|-------------------|------------------|
| LDC01 | 44 Soil | Stage 2B |
| LDC03 | 10 Soil | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|--|
| 1 | Sample Receipt, Preservation, and Holding Times | ✓ | Laboratory Control Samples |
| ✓ | Initial Calibration (ICAL) | 2 | Matrix Spikes/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Continuing Calibration (CCAL) | 1 | Field Duplicates |
| ✓ | Laboratory Blanks | ✓ | Reporting Limits |
| 1 | Field Blanks | ✓ | Reported Results |
| ✓ | Surrogate Compounds | | |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2-6°C. With the following exceptions noted below, the laboratory received the sample coolers within the advisory temperature range.

SDG LDC01: Several sample cooler temperatures were less than the lower control limit, the lowest at 1.4°C. These outliers did not impact data quality; no data were qualified.

Sample UST-7-8.0-S-082918 listed on the chain-of-custody (COC) was missing from the sample cooler. This sample was included in SDG LDC03.

SDG LDC03: The sample cooler temperature was greater than the upper control limit, at 6.3°C. This outlier did not impact data quality; no data were qualified.

Field Blanks

No field blanks were submitted.

Matrix Spike/Matrix Spike Duplicate Samples

SDG LDC01: For batch 182500053A, the MS/MSD analyses were performed using Sample UST-6-S-8.0-180829. The MS/MSD RPD values for DRO and HRO were greater than the control limit; the results in the parent sample were estimated (J-9).

Field Duplicates

SDG LDC01: Two sets of field duplicates were submitted: UST-2-S-8.0-180828 & DUP-1-SD-180828 and SB-4-S-12.0-180829 & DUP-2-SD-180829. All acceptance criteria were met.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate, laboratory control sample, and matrix spike/matrix spike duplicate (MS/MSD) percent recovery values and precision was acceptable as demonstrated by the MS/MSD and field duplicate RPD values.

Results were estimated due to MS/MSD precision outliers.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT

Newman's Chevron

Volatile Petroleum Hydrocarbons by NW VPH

This report documents the review of analytical data from the analysis of soil samples and the associated laboratory quality control (QC) samples. Samples were analyzed by Eurofins Lancaster, Lancaster, Pennsylvania. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|-------|-------------------|------------------|
| LDC01 | 6 Soil | Stage 2B |
| LDC03 | 4 Soil | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|--|
| 1 | Sample Receipt, Preservation, and Holding Times | ✓ | Laboratory Control Samples (LCS/LCSD) |
| ✓ | Initial Calibration (ICAL) | 1 | Matrix Spikes/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Continuing Calibration (CCAL) | 1 | Field Duplicates |
| ✓ | Laboratory Blanks | ✓ | Target Analyte List |
| 1 | Field Blanks | ✓ | Reporting Limits |
| ✓ | Surrogate Compounds | ✓ | Reported Results |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2-6°C. With the following exceptions noted below, the laboratory received the sample coolers within the advisory temperature range.

SDG LDC01: Several sample cooler temperatures were less than the lower control limit, the lowest at 1.4°C. These outliers did not impact data quality; no data were qualified.

Sample UST-7-8.0-S-082918 listed on the chain-of-custody (COC) was missing from the sample cooler. This sample was included in SDG LDC03.

SDG LDC03: The sample cooler temperature was greater than the upper control limit, at 6.3°C. This outlier did not impact data quality; no data were qualified.

Field Blanks

No field blanks were submitted.

Matrix Spike/Matrix Spike Duplicates

Matrix spikes were not analyzed. Precision and accuracy were evaluated using the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) results.

Field Duplicates

No field duplicates were submitted.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate and LCS/LCSD recovery values. Precision was acceptable as demonstrated by the LCS/LCSD RPD values.

No data were qualified for any reason.

All data, as reported, are acceptable for use.

DATA VALIDATION REPORT

Newman's Chevron

Extractable Petroleum Hydrocarbons by NW EPH

This report documents the review of analytical data from the analysis of soil samples and the associated laboratory quality control (QC) samples. Samples were analyzed by Eurofins Lancaster, Lancaster, Pennsylvania. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|-------|-------------------|------------------|
| LDC01 | 6 Soil | Stage 2B |
| LDC03 | 4 Soil | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package. The laboratory did not include matrix spike or sample duplicate data in the EDD.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|--|
| 1 | Sample Receipt, Preservation, and Holding Times | 2 | Laboratory Control Samples (LCS/LCSD) |
| ✓ | Initial Calibration (ICAL) | 2 | Matrix Spikes/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Continuing Calibration (CCAL) | 1 | Field Duplicates |
| ✓ | Laboratory Blanks | ✓ | Target Analyte List |
| 1 | Field Blanks | ✓ | Reporting Limits |
| ✓ | Surrogate Compounds | 2 | Reported Results |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2-6°C. With the following exceptions noted below, the laboratory received the sample coolers within the advisory temperature range.

SDG LDC01: Several sample cooler temperatures were less than the lower control limit, the lowest at 1.4°C. These outliers did not impact data quality; no data were qualified.

Sample UST-7-8.0-S-082918 listed on the chain-of-custody (COC) was missing from the sample cooler. This sample was included in SDG LDC03.

SDG LDC03: The sample cooler temperature was greater than the upper control limit, at 6.3°C. This outlier did not impact data quality; no data were qualified.

Field Blanks

No field blanks were submitted.

Laboratory Control Samples

SDG LDC01, LDC03: The laboratory control sample/laboratory control sample duplicate (LCS/LCSD) percent recovery (%R) values for the C10-C12 aliphatic and aromatic ranges and the C12-C16 aliphatic range hydrocarbons were less than the lower control limit of 61% specified in the QAPP. The associated sample results were estimated (J/UJ-10L) to indicate a potential low bias. The RPD value for the C10-C12 aliphatic range was greater than the control limit of 20%; associated detected results were estimated (J-9).

Matrix Spike/Matrix Spike Duplicates

SDG LDC01, LDC03: The matrix spike/matrix spike duplicate analyses were performed using Sample UST-5-S-8.0-180829. The recoveries for the C10-C12 aromatic and aliphatic ranges were less than the lower control limit specified in the QAPP. The results for these fractions in the parent sample were estimated (J-8L). In addition, the RPD value for the C12-C16 aliphatic range was greater than 20%. The result for this range was estimated (J-9) in the parent sample.

Field Duplicates

No field duplicates were submitted.

Reported Results

SDG LDC01, LDC03: All samples were re-extracted based on LCS/LCSD recovery outliers in the original analysis. Both sets of data were reported. Because the re-extraction was done after the holding time had elapsed, the results from the original analysis should be used. Results from the re-extraction were flagged as do-not-report (DNR-11).

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate, LCS/LCSD, and MS/MSD recovery values and precision was acceptable as demonstrated by the LCS/LCSD and MS/MSD RPD values.

Results were estimated based on LCS/LCSD and MS/MSD recovery and precision outliers. Data were flagged as do-not-report (DNR) to indicate which results should not be used from multiple reported analyses. A usable result remains for all analytes and all samples; completeness is not affected.

Data flagged DNR should not be used. All other data, as qualified, are acceptable for use.

DATA VALIDATION REPORT

Newman's Chevron

Lead by Method SW6010D

This report documents the review of analytical data from the analyses of soil samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Eurofins Lancaster, Lancaster, Pennsylvania. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES AND MATRIX | VALIDATION LEVEL |
|-------|------------------------------|------------------|
| LDC01 | 44 Soil | Stage 2B |
| LDC03 | 10 Soil | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|---|
| 1 | Sample Receipt, Preservation, and Holding Times | ✓ | Matrix Spike/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Initial Calibration | 2 | Laboratory Duplicates |
| ✓ | Calibration Verification | ✓ | Interference Check Samples |
| ✓ | Reporting Limit Standards | ✓ | Serial Dilutions |
| 2 | Laboratory Blanks | 1 | Field Duplicates |
| 1 | Field Blanks | 1 | Reporting Limits |
| ✓ | Laboratory Control Samples (LCS) | ✓ | Reported Results |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2-6°C. With the following exceptions noted below, the laboratory received the sample coolers within the advisory temperature range.

SDG LDC01: Several sample cooler temperatures were less than the lower control limit, the lowest at 1.4°C. These outliers did not impact data quality; no data were qualified.

Sample UST-7-8.0-S-082918 listed on the chain-of-custody (COC) was missing from the sample cooler. This sample was included in SDG LDC03.

SDG LDC03: The sample cooler temperature was greater than the upper control limit, at 6.3°C. This outlier did not impact data quality; no data were qualified.

Laboratory Blanks

SDG LDC01: The instrument blanks analyzed on 9/05/18 were less than the negative detection limit (DL), indicating a potential low bias. The lead result for the associated sample, SB-8-S-25.0-180829, was estimated (UJ-7L).

The results for the instrument blanks analyzed on 9/06/18 were less than the negative DL. The lead result for the associated sample, SB-8-S-12.0-180829, was estimated (UJ-7L).

The results for the instrument blanks analyzed on 9/09/18 were less than the negative DL. The associated Sample SB-8-S-14.0-180829, was not detected and was qualified (UJ-7L).

Field Blanks

No field blanks were submitted.

Laboratory Duplicates

SDG LDC01: Sample SB-4-S-6.0-180823 was used for the laboratory duplicate analysis. The relative percent difference (RPD) value for lead was greater than the control limit of 20%. Results for this analyte were estimated (J-9) for all samples in the batch.

Field Duplicates

The field duplicate RPD control limit is 20% for results greater than 5x the reporting limit (RL)

SDG LDC01: Two sets of field duplicates were submitted: UST-2-S-8.0-180828 & DUP-1-SD-180828 and SB-4-S-12.0-180829 & DUP-2-SD-180829. All acceptance criteria were met.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the laboratory control sample and matrix spike/matrix spike duplicate (MS/MSD) recoveries. With the exceptions noted above, precision was acceptable as demonstrated by the MS/MSD, laboratory duplicate, and field duplicate RPD values.

Data were estimated based on instrument blank results and a laboratory duplicate precision outlier.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Newman's Chevron
Volatile Organic Compounds by EPA TO-15 GC-MS SIM
Helium by EPA 3C
Fixed Gases by ASTM D1946

This report documents the review of analytical data from the analysis of air samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by ALS, Simi Valley, California. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|----------|-----------------------|------------------|
| P1805236 | 4 Air & 2 Field Blank | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|---------------------------------------|
| ✓ | Sample Receipt, Preservation, and Holding Times | ✓ | Laboratory Control Samples (LCS/LCSD) |
| ✓ | GC/MS Instrument Performance (Tune) | 1 | Field Duplicates |
| ✓ | Initial Calibration (ICAL) | ✓ | Internal Standards |
| ✓ | Continuing Calibration (CCAL) | ✓ | Target Analyte List |
| ✓ | Laboratory Blanks | ✓ | Reporting Limits |
| 1 | Field Blanks | 1 | Reported Results |
| ✓ | Surrogate Compounds | | |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Field Blanks

Two field blanks were submitted: EB-1-092618 and EB-1-092818. Field blanks were connected to the manifold and nitrogen was run through the system. For both field blanks, levels of oxygen, helium, benzene, toluene, ethylbenzene, m,p-xylenes, and o-xylene were detected at approximately the same concentrations as for the field samples. The exceptions were: carbon dioxide, which was not

detected in the field blanks, but was approximately 5% v/v in the field samples; toluene, which was approximately 10 times higher in the field blanks than in the field samples; and helium in EB-1, which was about 10 times higher than the field samples. These results indicate possible leaks in the system and/or canisters that were not completely clean. No data were qualified; however, field blank results should be considered when interpreting sample data. All field sample results were less than the MTCA B Sub-Slab Soil Gas Screening Levels, so the potential high bias from possible canister contamination does not impact data usability.

Field Duplicates

One set of field duplicates was submitted: SVP-2-092718 and DUP-1-092718. All acceptance criteria were met.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate and laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recovery values and precision was acceptable as demonstrated by the LCS/LCSD and field duplicate RPD values.

No data were qualified for any reason. All data, as reported, are acceptable for use.



APPENDIX A

DATA QUALIFIER DEFINITIONS REASON CODES AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES **Based on National Functional Guidelines**

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

| | |
|----|---|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. |
| NJ | The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents the approximate concentration. |
| UJ | The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified. |

The following is an EcoChem qualifier that may also be assigned during the data review process:

| | |
|-----|---|
| DNR | Do not report; a more appropriate result is reported from another analysis or dilution. |
|-----|---|

DATA QUALIFIER REASON CODES

| Group | Code | Reason for Qualification |
|---------------------------------|------|---|
| Sample Handling | 1 | Improper Sample Handling or Sample Preservation (i.e., headspace, cooler temperature, pH, summa canister pressure); Exceeded Holding Times |
| Instrument Performance | 24 | Instrument Performance (i.e., tune, resolution, retention time window, endrin breakdown, lock-mass) |
| | 5A | Initial Calibration (RF, %RSD, r^2) |
| | 5B | Calibration Verification (CCV, CCAL; RF, %D, %R) Use bias flags (H,L) ¹ where appropriate |
| Blank Contamination | 5C | Initial Calibration Verification (ICV %D, %R) Use bias flags (H,L) ¹ where appropriate |
| | 6 | Field Blank Contamination (Equipment Rinsate, Trip Blank, etc.) |
| Precision and Accuracy | 7 | Lab Blank Contamination (i.e., method blank, instrument blank, etc.) Use low bias flag (L) ¹ for negative instrument blanks |
| | 8 | Matrix Spike (MS and/or MSD) Recoveries Use bias flags (H,L) ¹ where appropriate |
| | 9 | Precision (all replicates: LCS/LCSD, MS/MSD, Lab Replicate, Field Replicate) |
| | 10 | Laboratory Control Sample Recoveries (a.k.a. Blank Spikes) Use bias flags (H,L) ¹ where appropriate |
| | 12 | Reference Material Use bias flags (H,L) ¹ where appropriate |
| Interferences | 13 | Surrogate Spike Recoveries (a.k.a. labeled compounds, recovery standards) Use bias flags (H,L) ¹ where appropriate |
| | 16 | ICP/ICP-MS Serial Dilution Percent Difference |
| | 17 | ICP/ICP-MS Interference Check Standard Recovery Use bias flags (H,L) ¹ where appropriate |
| | 19 | Internal Standard Performance (i.e., area, retention time, recovery) |
| | 22 | Elevated Detection Limit due to Interference (i.e., chemical and/or matrix) |
| Identification and Quantitation | 23 | Bias from Matrix Interference (i.e. diphenyl ether, PCB/pesticides) |
| | 2 | Chromatographic pattern in sample does not match pattern of calibration standard |
| | 3 | 2 nd column confirmation (RPD or %D) |
| | 4 | Tentatively Identified Compound (TIC) (associated with NJ only) |
| | 20 | Calibration Range or Linear Range Exceeded |
| Miscellaneous | 25 | Compound Identification (i.e., ion ratio, retention time, relative abundance, etc.) |
| | 11 | A more appropriate result is reported (multiple reported analyses i.e., dilutions, re-extractions, etc. Associated with "R" and "DNR" only) |
| | 14 | Other (See DV report for details) |
| | 26 | Method QC information not provided |

¹H = high bias indicated

L = low bias indicated

Volatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8260C)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|--|-----------------------|--|
| Sample Handling | | | | | |
| Cooler/Storage Temperature Preservation | 4°C±2°C Aqueous: HCl to pH < 2 Current SW846 criterion is ≤ 6° C ⁽³⁾ | NFG ⁽¹⁾ Method ⁽³⁾ | If required by project: J (pos)/UJ (ND) if greater than 6° C | 1 | Use PJ for temp outliers; see TM20 if pH ≤ 2, reject 2-chloroethyl vinyl ether (R-1) some projects may require methanol preserved soils/seds |
| Holding Time | Aqueous: 14 days preserved 7 Days: unpreserved Solid: 14 Days | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos)/UJ (ND) if HT exceeded J (pos)/R (ND) if gross exceedance (> 2x HT) | 1 | Gross exceedance = > 2x HT, as per 1999 NFG |
| Instrument Performance | | | | | |
| Tuning | BFB Beginning of each 12 hour period Use method or project acceptance criteria | NFG ⁽¹⁾ Method ⁽³⁾ | R (pos/ND) all analytes in all samples associated with the tune | 24 | |
| Initial Calibration Sensitivity | Minimum 5 standards RRF ≥ 0.05 except: RRF ≥ 0.01 poor responders * RRF ≥ 0.005 1,4-dioxane | NFG ⁽¹⁾ Method ⁽³⁾ | Use PJ to qualify J (pos)/UJ (ND) | 5A | TM-06 EcoChem Policy for the Evaluation and Qualification of GCMS Instrument Performance PJ - no action if response is stable (ICAL RSD and CCAL %D acceptable) |
| Initial Calibration Stability | %RSD ≤ 20% except: %RSD ≤ 40% poor responders * %RSD ≤ 50% 1,4-dioxane | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if %RSD > limit | 5A | |
| Initial Calibration Verification | Second source analyzed immediately after ICAL %R 70% - 130% | Method ⁽³⁾ | J (pos) %R > UCL J (pos)/UJ (ND) %R < LCL | 5A (H,L) ⁴ | QAPP may have overriding accuracy limits. |
| Continuing Calibration Sensitivity | RRF ≥ 0.05 except: RRF ≥ 0.01 poor responders * RRF ≥ 0.005 1,4-dioxane | NFG ⁽¹⁾ Method ⁽³⁾ | Use PJ to qualify J (pos)/UJ (ND) | 5B | see ICAL RRF guidance |
| Continuing Calibration Stability | %D ≤ 25% except: %D ≤ 40% poor responders * %D ≤ 50% 1,4-dioxane | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) - %D > control limit (high bias) J (pos)/UJ (ND) - %D < -control limit (low bias) | 5B (H,L) ⁴ | |

Volatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8260C)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--------------------------------------|--|---|---|-----------------------|--|
| Blank Contamination | | | | | |
| Method Blank (MB) | <u>MB: One per matrix per batch (of ≤ 20 samples)</u> No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U (pos) if result is < 5X or 10X action level | 7 | 10X action level for methylene chloride, acetone, & 2-butanone. 5X for all other target analytes Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review TB, qualify as needed #3 - Review FB, qualify as needed Note: Actions as per NFG 1999 |
| | No TICs present | | R (pos) TICs using 10X rule | | |
| Trip Blank (TB) | No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U (pos) if result is < 5X or 10X action level | 6 | |
| Field Blank (FB) | No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U (pos) if result is < 5X or 10X action level | 6 | |
| Precision and Accuracy | | | | | |
| LCS/LCSD (recovery) | One per matrix per batch (of ≤ 20 samples) LCSD not required by NFG or method Use method acceptance criteria/laboratory limits | Method ⁽³⁾ | J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND)%R < 10% | 10 (H,L) ⁴ | No action if only one spike %R is outside criteria when LCSD is analyzed, unless one recovery is <10%. QAPP may have overriding accuracy limits. |
| LCS/LCSD RPD | If LCSD analyzed RPD < lab limits | Method ⁽³⁾ | J (pos) | 9 | Qualify all associated samples. QAPP may have overriding precision limits. |
| Reference Material (RM, SRM, or CRM) | Result ±20% of the 95% confidence interval of the true value for analytes | EcoChem standard policy | J (pos)/UJ (ND) if < LCL J (pos) if > UCL | 12 (H,L) ⁴ | QAPP may have overriding accuracy limits. Some manufacturers may have different RM control limits |
| Surrogates | Added to all samples Within method/laboratory control limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if %R >UCL J (pos)/UJ (ND) if %R <LCL J (pos)/R (ND) if <10% | 13 (H,L) ⁴ | No action if there are 4+ surrogates and only 1 outlier Qualify all compounds if qualification is required. |
| Internal Standards | Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if > 200% J (pos)/UJ (ND) if < 50% J (pos)/R (ND) if < 25% if RT >30 seconds use PJ | 19 | Qualify compounds quantified using particular internal standard |

**Volatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8260C)**

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|---|---|----------------------|---|
| Precision and Accuracy (continued) | | | | | |
| MS/MSD (recovery) | One per matrix per batch (of ≤ 20 samples) Use method acceptance criteria/laboratory limits | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) %R > UCL J (pos)/UJ (ND) if both %R < LCL J (pos)/R (ND) if both %R < 10% J (pos)/UJ (ND) if one > UCL & one < LCL, with no bias | 8 (H,L) ⁴ | No action if only one spike %R is outside criteria. No action if parent concentration is >4x the amount spiked. Qualify parent sample only. |
| MS/MSD (RPD) | One per matrix per batch (of ≤ 20 samples) Use method acceptance criteria/laboratory limits | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) If RPD > control limit | 9 | Qualify parent sample only |
| Field Duplicates | Solids: RPD < 50% OR difference < 2X RL (for results < 5X RL) Aqueous: RPD < 35% OR difference < 1X RL (for results < 5X RL) | EcoChem standard policy | J (pos)/UJ (ND) Qualify only parent and field duplicate samples | 9 | Use project limits if specified |
| Compound Identification and Quantitation | | | | | |
| Retention Time Relative Ion Intensities | RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample | NFG ⁽¹⁾ Method ⁽²⁾ | U (pos) if identification criteria not met | 25 | |
| TICs | Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification | NFG ⁽¹⁾ Method ⁽²⁾ | NJ TIC R (pos) if common laboratory contaminants | 4 | Common laboratory contaminants: aldol condensation products, solvent preservatives, and reagent contaminants |
| Calibration Range | Results greater than highest calibration standard | EcoChem standard policy | Qualify J (pos) | 20 | If result from dilution analysis is not reported. |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 EcoChem Policy for Rejection/Selection Process for Multiple Results |

¹ National Functional Guidelines for Organic Data Review, June, 2008² National Functional Guidelines for Organic Data Review, Oct, 1999³ Method SW846 8260C Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)⁴ NFG 2013 suggests using "+ / -" to indicate bias; EcoChem has chosen "H" = high bias indicated; "L" = low bias indicated.

* "Poor responder" compounds: Acetone, 2-butanone, carbon disulfide, chloroethane, chloromethane, cyclohexane, 1,2-dibromoethane, dichlorodifluoromethane, cis-1,2-dichloroethene, 1,2-dichloropropane, 1,2-dibromo-3-chloropropane, 2-hexanone, isopropylbenzene, methyl acetate, methylene chloride, methylcyclohexane, 4-methyl-2-pentanone, methyl tert-butyl ether, trans-1,2-dichloroethene, trichlorofluoromethane, 1,1,2-trichloro-1,2,2-trifluoroethane **criterion is 0.010 RRF**; 1,4-dioxane RRF **criterion is 0.005**.

(pos): Positive Result

(ND): Non-detect

DATA VALIDATION CRITERIA

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
 (Based on NFG 1999 & 2008 and SW-846 Method 8270D)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|---|--|-----------------------|--|
| Sample Handling | | | | | |
| Cooler/Storage Temperature Preservation | 4°C±2°C sediment/tissues may require storage at -20°C | NFG ⁽¹⁾ Method ⁽³⁾ | If required by project: J (pos)/UJ (ND) if greater than 6° C | 1 | Use PJ for temp outliers; see TM20 Current SW846 criterion is ≤ 6° C ⁽³⁾ |
| Holding Time | Extraction Aqueous: 7 days from collection Extraction Solid: 14 days from collection Analysis (all matrices): 40 days from extraction Holding time may be extended to 1 year for frozen sediments/tissues | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos)/UJ (ND) if HT exceeded J (pos)/R (ND) if gross exceedance (> 2x HT) | 1 | Gross exceedance = > 2x HT, as per 1999 NFG |
| Instrument Performance | | | | | |
| Tuning | DFTPP Beginning of each 12 hour period Use method or project acceptance criteria | NFG ⁽¹⁾ Method ⁽³⁾ | R (pos/ND) all analytes in all samples associated with the tune | 24 | |
| Initial Calibration Sensitivity | RRF ≥ 0.05 except: RRF ≥ 0.01 poor responders * | NFG ⁽¹⁾ Method ⁽³⁾ | Use PJ to qualify J (pos)/UJ (ND) | 5A | TM-06 EcoChem Policy for the Evaluation and Qualification of GCMS Instrument Performance PJ - no action if response is stable (ICAL RSD and CCAL %D acceptable) |
| Initial Calibration Stability | Minimum 5 standards %RSD ≤ 20.0% except: %RSD ≤ 40.0% poor responders * or co-efficient of determination (r ²) > 0.99 | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if %RSD > limit or r ² value < 0.99 | 5A | |
| Initial Calibration Verification Check | Prepared from second source; analyze after each ICAL Percent recovery limits = 70-130% | Method ⁽³⁾ | J (pos) %R > UCL J (pos)/UJ (ND) %R < LCL | 5A (H,L) ⁴ | QAPP may have overriding accuracy limits. |

DATA VALIDATION CRITERIA

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
 (Based on NFG 1999 & 2008 and SW-846 Method 8270D)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|---|--|-----------------------|--|
| Instrument Performance (continued) | | | | | |
| Continuing Calibration Sensitivity | RRF \geq 0.05 except: RRF \geq 0.01 poor responders * | NFG ⁽¹⁾ Method ⁽³⁾ | Use PJ to qualify J (pos)/UJ (ND) | 5B | see ICAL RRF guidance |
| Continuing Calibration Stability | Prior to sample analysis and every 12 hours %D \leq 25% except: %D \leq 40.0% poor responders * | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) - %D > control limit (high bias) J (pos)/UJ (ND) - %D < -control limit (low bias) | 5B (H,L) ⁴ | |
| Blank Contamination | | | | | |
| Method Blank (MB) | MB: One per matrix per batch of (of \leq 20 samples) No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U(pos) if result is < 5X or 10X action level | 7 | 10X action level applies to phthalates only. 5X for all other target analytes Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review FB , qualify as needed Note: Actions as per 1999 NFG |
| | No TICs present | | R (pos) TICs using 10X rule | 7 | |
| Field Blank (FB) | No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U (pos) if result is < 5X or 10X action level | 6 | |
| Precision and Accuracy | | | | | |
| LCS/LCSD (recovery) | One per matrix per batch (of \leq 20 samples) LCSD not required by NFG or method Use method acceptance criteria/laboratory limits | Method ⁽³⁾ | J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND)%R < 10% | 10 (H,L) ⁴ | No action if only one spike %R is outside criteria when LCSD is analyzed, unless one recovery is <10%. QAPP may have overriding accuracy limits. Qualify all associated samples. |
| LCS/LCSD (RPD) | If LCSD analyzed RPD < lab limits | Method ⁽³⁾ | J (pos) | 9 | Qualify all associated samples. QAPP may have overriding precision limits. |

DATA VALIDATION CRITERIA

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
 (Based on NFG 1999 & 2008 and SW-846 Method 8270D)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|---|---|-----------------------|--|
| Precision and Accuracy (continued) | | | | | |
| Reference Material (RM, SRM, or CRM) | Result \pm 20% of the 95% confidence interval of the true value for analytes | EcoChem standard policy | J (pos)/UJ (ND) if < LCL J (pos) if > UCL | 12 (H,L) ⁴ | QAPP may have overriding accuracy limits. Some manufacturers have different RM control limits |
| MS/MSD (recovery) | One per matrix per batch (of \leq 20 samples) Use method acceptance criteria/laboratory limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) %R > UCL J (pos)/UJ (ND) if both %R < LCL J (pos)/R (ND) if both %R < 10% J (pos)/UJ (ND) if one > UCL & one < LCL, with no bias | 8 (H,L) ⁴ | No action if only one spike %R is outside criteria. No action if parent concentration is >4x the amount spiked. Qualify parent sample only. |
| MS/MSD (RPD) | One per matrix per batch (of \leq 20 samples) Use method acceptance criteria/laboratory limits | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) in parent sample if RPD > CL | 9 | Qualify parent sample only |
| Surrogates | Minimum of 3 acid & 3 base/neutral (B/N) compounds added to all samples Within method control limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND) if %R < 10% | 13 (H,L) ⁴ | Qualify all compounds in associated fraction. Do not qualify if only 1 acid and/or 1 B/N surrogate is out, unless <10%. If 1 surrogate outlier < 10% then J (pos)/R (ND) |
| Internal Standards | Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if > 200% J (pos)/UJ (ND) if < 50% J (pos)/R (ND) if < 25% if RT >30 seconds use PJ | 19 | Qualify compounds quantified using particular internal standard |
| Field Duplicates | Solids: RPD < 50% OR difference < 2X RL (for results < 5X RL) Aqueous: RPD < 35% OR difference < 1X RL (for results < 5X RL) | EcoChem standard policy | J (pos)/UJ (ND) Qualify only parent and field duplicate samples | 9 | Use project limits if specified |

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8270D)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|---|--|-------------|--|
| Compound Identification and Quantitation and Calculation | | | | | |
| Retention times and relative ion intensities | RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample | NFG ⁽¹⁾ Method ⁽³⁾ | U (pos) if identification criteria not met | 25 | |
| TICs | Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification | NFG ⁽¹⁾ Method ⁽³⁾ | NJ the TIC unless: R (pos) common laboratory contaminants | 4 | |
| Calibration Range | Results greater than highest calibration standard | EcoChem standard policy | Qualify J (pos) | 20 | If result from dilution analysis is not reported. |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 EcoChem Policy for Rejection/Selection Process for Multiple Results |

¹ National Functional Guidelines for Organic Data Review, June, 2008

(pos): Positive Result(s)

² National Functional Guidelines for Organic Data Review, October, 1999

(ND): Non-detects

³ Method SW846 8270D Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS), Revision 4, February 2007.

⁴ NFG 2013 suggests using "+ / -" to indicate bias; EcoChem has chosen "H" = high bias indicated; "L" = low bias indicated.

* "Poor responder" compounds: acetophenone, atrazine, benzaldehyde, 1,1'-biphenyl, bis(2-ethylhexyl)phthalate, butylbenzylphthalate, caprolactam, carbazole, 4-chloroaniline, diethylphthalate, di-n-butylphthalate, 3-3'-dichlorobenzidine, dimethylphthalate, 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, di-n-octylphthalate, hexachlorobutadiene, hexachlorocyclopentadiene, 2-nitroaniline, 3-nitroaniline, 4-nitroaniline, 4-nitrophenol, N-nitrosodiphenylamine, 2,2'-oxybis-(1-chloropropane), 1,2,4,5-tetrachlorobenzene use a 0.010 RRF criterion.

PCB Aroclors by GC
(Based on Organic NFG 2008 and SW-846 Method 8082A)

| QC Element | Acceptance Criteria (NFG) | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|--|-------------|---|
| Sample | | | | | |
| Cooler/Storage Temperature Preservation | 4°C ± 2°C Tissue/sediments (may be frozen -20°C) | NFG ⁽¹⁾ Method ⁽²⁾ | If required by project: J (pos)/UJ (ND) if greater than 6° C | 1 | Use Professional Judgment (PJ) to qualify for temperature outlier. Current SW846 criterion is ≤ 6° C ⁽³⁾ |
| Holding Time | Extraction Aqueous: 7 days from collection Extraction Solid: 14 days from collection Extraction Tissue/Sediment (frozen): 1 year Analysis (all matrices): 40 days from extraction | NFG ⁽¹⁾ Method ⁽²⁾ | If required by project: J (pos)/UJ (ND) if ext/analyzed > HT J (pos)/R (ND) if gross exceedance (> 2x HT) | 1 | Use PJ to qualify for holding time outlier. Current SW846 does not have an extraction holding time limit. ⁽³⁾ Gross exceedance > 2x HT, as per NFG 1999 |
| Instrument Performance | | | | | |
| Retention Times | Surrogates: TCMX (± 0.05); DCB (± 0.10) Aroclors (± 0.07) | NFG ⁽¹⁾ | NJ (pos)/R (ND) results for analytes with RT shifts | 24 | |
| Initial Calibration | Minimum 5 point with RSD ≤ 20% OR correlation coefficient (r-value) ≥ 0.995 OR Minimum 6-point with co-efficient of determination (r ² -value) ≥ 0.99 | NFG ⁽¹⁾ Method ⁽⁴⁾ | J (pos) if %RSD greater than 20% OR r-value < 0.995 OR r ² -value < 0.99 | 5A | Refer to TM-01 for additional information. Use bias flags (H,L) ⁽⁵⁾ where appropriate |
| Initial Calibration Verification (ICV) | No NFG criteria. Project specific. | Project | J (pos) if > UCL J (pos)/UJ (ND) if < LCL | 5B | Use bias flags (H,L) where appropriate |
| Continuing Calibration (Prior to each 12 hr. shift) | %D ± 20% | Method ⁽²⁾ | If > 20% (high bias): J (pos) If < 20% (low bias): J (pos)/UJ (ND) | 5B | Refer to TM-01 for additional information. Use bias flags (H,L) where appropriate |
| Blank Contamination | | | | | |
| Method Blank (MB) | MB: One per matrix per batch of (of ≤ 20 samples) No detected compounds > RL | NFG ⁽¹⁾ Method ⁽²⁾ | U (pos) if result is less than appropriate 5X action level. | 7 | Hierarchy of blank review: #1 - Review MB and IB, qualify as needed #2 - Review FB , qualify as needed Note: Actions as per NFG 1999 Note: IB not required by method |
| Field Blank (FB) | FB: frequency as per QAPP No detected compounds > RL | NFG ⁽¹⁾ Method ⁽²⁾ | U (pos) if result is less than appropriate 5X action level. | 6 | |
| Instrument Blanks (IB) | Analyzed at the beginning and end of every 12 hour sequence No analyte > CRQL | NFG ⁽¹⁾ | U (pos) if result is less than appropriate 5X action level. | 7 | |

PCB Aroclors by GC
(Based on Organic NFG 2008 and SW-846 Method 8082A)

| QC Element | Acceptance Criteria (NFG) | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|-------------------------------|---|---|---|-------------|--|
| Precision and Accuracy | | | | | |
| MS/MSD (recovery) | One set per matrix per batch (of ≤ 20 samples) AR1016 and AR1260: %R = 29% - 135%, or project limits | NFG ⁽¹⁾ Method ⁽²⁾ | Qualify parent only unless other QC indicates systematic problems. J (pos) if both %R > upper control limit (UCL) J (pos)/UJ (ND) if both %R < lower control limit (LCL) J (pos)/R (ND) if both %R < 10% | 8 | No action if only one spike %R is outside criteria. No action if native analyte conc. > 5x the amount spiked. Use bias flags (H,L) where appropriate. Actions apply to all Aroclors in parent sample. |
| MS/MSD (RPD) | One set per matrix per batch (of ≤ 20 samples) AR1016: RPD < 15%, AR1260: RPD < 20% or project limits | NFG ⁽¹⁾ Method ⁽²⁾ | Qualify parent only unless other QC indicates systematic problems. J (pos) if RPD > control limit | 9 | No action if parent is ND. |
| LCS | One per lab batch (of ≤ 20 samples) AR1016 and AR1260: %R = 50% - 150%, or project limits | NFG ⁽¹⁾ | J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND) if %R < 10% | 10 | Use bias flags (H,L) where appropriate. Actions apply to all Aroclors in associated samples. |
| LCS/LCSD (RPD) | if analyzed use MS/MSD RPD criteria | NFG ⁽¹⁾ | J (pos) assoc. compound in all samples | 9 | LCSD not required by method or NFG |
| Precision and Accuracy | | | | | |
| Surrogates | TCMX and DCBP added to every sample %R = 30% - 150% or project limits | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) if either %R > UCL J (pos)/UJ (ND) if either %R < LCL J (pos)/R (ND) if either %R < 10% | 13 | If %R < 10% (sample dilution is a factor), use PJ Use bias flags (H,L) where appropriate |
| Internal Standards (if used) | Acceptable Range: IS area = 50% to 200% of CCAL area RT within 30 seconds of CC RT | Method ⁽²⁾ | J (pos) if area > 200% J (pos)/UJ (ND) if area < 50% J (pos)/R (ND) if area < 25% RT > 30 seconds, narrate | 19 | |
| Field Duplicates | Solids: RPD < 50% OR difference < 2X RL (for results < 5X RL) Aqueous: RPD < 35% OR difference < 1X RL (for results < 5X RL) | EcoChem | J (pos)/UJ (ND) Qualify only parent and field duplicate samples | 9 | use project limits if specified |

PCB Aroclors by GC
(Based on Organic NFG 2008 and SW-846 Method 8082A)

| QC Element | Acceptance Criteria (NFG) | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|--|-------------|--|
| Compound Identification/Quantification | | | | | |
| Quantitation/ Identification | Between two columns: RPD < 40% or %D < 25% Within Retention Time Windows on both columns. | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) if RPD = 40% - 60% (25% - 60% for %D) NJ (pos) if > 60% R (pos) if RTW criterion not met | 3 | See TM-08 for additional info. |
| Calibration Range | on column concentration < high calibration standard | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) if conc > high standard and sample was not diluted | 20 | |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | Standard reporting policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 Rev. 1 for additional info. |
| Sample Clean-up | | | | | |
| GPC/Sulfur/ Florisil/Acid | No criteria - cleanups are optional | NFG ⁽¹⁾ Method ⁽²⁾ | Use Professional Judgment | 14 | special cleanups may be required for project cleanup standards may be associated with GPC/florisil cleanups |

¹ National Functional Guidelines for Organic Data Review, June, 2008

² Polychlorinated Biphenyls (PCBs) by Gas Chromatography USEPA Method SW846 8082A, Feb 2007, Rev. 1

³ SW846, Chapter 4, Organic Analytes

⁴ Determinative Chromatographic Separations, Method 8000C, March 2003, Rev.3

⁵ "H" = high bias indicated; "L" = low bias indicated

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Gasoline Range
(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Gx,
June 1997, Wa DOE & Oregon DEQ)

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|--|-------------|-------------------------|
| Sample Handling | | | | |
| Cooler Temperature & Preservation | 4°C±2°C Water: HCl to pH < 2 | J(+)/UJ(-) if greater than 6°C | 1 | |
| Holding Time | Waters: 14 days preserved 7 days unpreserved Solids: 14 Days | J(+)/UJ(-) if hold times exceeded J(+)/R(-) if exceeded > 3X | 1 | Professional Judgement |
| Instrument Performance | | | | |
| Initial Calibration | 5 calibration points (All within 15% of true value) Linear Regression: $r^2 \geq 0.990$ If used, RSD of response factors $\leq 20\%$ | Narrate if fewer than 5 calibration levels or if %R > 15% J(+)/UJ(-) if $r^2 < 0.990$ J(+)/UJ(-) if %RSD > 20% | 5A | |
| Mid-range Calibration Check Std. | Analyzed before and after each analysis shift & every 20 samples. Recovery range 80% to 120% | Narrate if frequency not met. J(+)/UJ(-) if %R < 80% J(+) if %R > 120% | 5B | |
| Blank Contamination | | | | |
| Method Blank | At least one per batch (≤ 10 samples) No results > RL | U (at the RL) if sample result is < RL & < 5X blank result. | 7 | |
| | | U (at reported sample value) if sample result is \geq RL and < 5X blank result | 7 | |
| Trip Blank (if required by project) | No results > RL | Action is same as method blank for positive results remaining in trip blank after method blank qualifiers are assigned. | 18 | |
| Field Blanks (if required by project) | No results > RL | Action is same as method blank for positive results remaining in field blank after method and trip blank qualifiers are assigned. | 6 | |

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Gasoline Range
(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Gx,
June 1997, Wa DOE & Oregon DEQ)

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|-------------|---|
| Precision and Accuracy | | | | |
| MS samples (accuracy) (if required by project) | %R within lab control limits | Qualify parent only, unless other QC indicates systematic problems. J(+) if both %R > upper control limit (UCL) J(+)/UJ(-) if both %R < lower control limit (LCL) No action if parent conc. >5X the amount spiked. | 8 | Use Professional Judgement if only one %R outlier |
| Precision: MS/MSD or LCS/LCSD or sample/dup | At least one set per batch (≤10 samples) RPD ≤ lab control limit | J(+) if RPD > lab control limits | 9 | |
| LCS (not required by method) | %R within lab control limits | J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R < 10% | 10 | Professional Judgement |
| Surrogates | Bromofluorobenzene and/or 1,4-difluorobenzene added to all samples (inc. QC samples). %R = 50-150% | J(+)/UJ(-) if %R < LCL J(+) if %R >UCL J(+)/R(-) if any %R < 10% No action if 2 or more surrogates are used, and only one is outside control limits. | 13 | Professional Judgement |
| Pattern Identification | Compare sample chromatogram to standard chromatogram to ensure range and pattern are reasonable match. Laboratory may flag results which have poor match. | J(+) | 2 | |
| Field Duplicates | Use project control limits, if stated in QAPP EcoChem default: water: RPD < 35% solids: RPD < 50% | Narrate outliers If required by project , qualify with J(+)/UJ(-) | 9 | |
| Compound ID and Calculation | | | | |
| Two analyses for one sample (e.g., dilution) | Report only one result per analyte | "DNR" (or client requested qualifier) all results that should not be reported. | 11 | See EcoChem TM-04 |

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range
 (Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx,
 June 1997, Wa DOE & Oregon DEQ)

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|--|-------------|-------------------------|
| Sample Handling | | | | |
| Cooler Temperature & Preservation | 4°C±2°C Water: HCl to pH < 2 | J(+)/UJ(-) if greater than 6 deg. C | 1 | |
| Holding Time | Ext. Waters: 14 days preserved 7 days unpreserved Ext. Solids: 14 Days Analysis: 40 days from extraction | J(+)/UJ(-) if hold times exceeded J(+)/R(-) if exceeded > 3X | 1 | Professional Judgement |
| Instrument Performance | | | | |
| Initial Calibration | 5 calibration points (All within 15% of true value) Linear Regression: $r^2 \geq 0.990$ If used, RSD of response factors $\leq 20\%$ | Narrate if fewer than 5 calibration levels or if %R > 15% J(+)/UJ(-) if $r^2 < 0.990$ J(+)/UJ(-) if %RSD > 20% | 5A | |
| Mid-range Calibration Check Std. | Analyzed before and after each analysis shift & every 20 samples. Recovery range 85% to 115% | Narrate if frequency not met. J(+)/UJ(-) if %R < 85% J(+) if %R > 115% | 5B | |
| Blank Contamination | | | | |
| Method Blank | At least one per batch (≤ 20 samples) No results > RL | U (at the RL) if sample result is < RL & < 5X blank result. | 7 | |
| | | U (at reported sample value) if sample result is \geq RL and < 5X blank result | 7 | |
| Field Blanks (if required by project) | No results > RL | Action is same as method blank for positive results remaining in the field blank after method blank qualifiers are assigned. | 6 | |

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range
(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx,
June 1997, Wa DOE & Oregon DEQ)

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|-------------|---|
| Precision and Accuracy | | | | |
| MS samples (accuracy) (if required by project) | %R within lab control limits | Qualify parent only, unless other QC indicates systematic problems. J(+) if both %R > upper control limit (UCL) J(+)/UJ(-) if both %R < lower control limit (LCL) No action if parent conc. >5X the amount spiked. | 8 | Use Professional Judgement if only one %R outlier |
| Precision: MS/MSD or LCS/LCSD or sample/dup | At least one set per batch (≤10 samples) RPD ≤ lab control limit | J(+) if RPD > lab control limits | 9 | |
| LCS (not required by method) | %R within lab control limits | J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R < 10% | 10 | Professional Judgement |
| Surrogates | 2-fluorobiphenyl, p-terphenyl, o-terphenyl, and/or pentacosane added to all samples (inc. QC samples). %R = 50-150% | J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R < 10% No action if 2 or more surrogates are used, and only one is outside control limits. | 13 | Professional Judgement |
| Pattern Identification | Compare sample chromatogram to standard chromatogram to ensure range and pattern are reasonable match. Laboratory may flag results which have poor match. | J(+) | 2 | |
| Field Duplicates | Use project control limits, if stated in QAPP EcoChem default: water: RPD < 35% solids: RPD < 50% | Narrate (Use Professional Judgement to qualify) | 9 | |

**EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range
 (Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx,
 June 1997, Wa DOE & Oregon DEQ)**

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|------------------------------------|--|-------------|-------------------------|
| Compound ID and Calculation | | | | |
| Two analyses for one sample (dilution) | Report only one result per analyte | "DNR" (or client requested qualifier) all results that should not be reported. | 11 | See EcoChem TM-04 |

Metals by ICP-AES
 (Based on Inorganic NFG 2010 and SW-846 6010C)

| QC Element | EcoChem Acceptance Criteria | Source of Criteria | EcoChem Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|--|---|-----------------------|--|
| Sample Handling | | | | | |
| Cooler / Storage Temperature Preservation | Solid: Cooler temperature 4°C±2°C Aqueous: Nitric Acid to pH < 2 Dissolved Metals: 0.45 µm filter, preserve to pH < 2 after filtration | NFG ⁽¹⁾ Method ⁽²⁾ | Cooler Temps: If required by project J (pos)/UJ (ND) if greater than 6° C Aqueous: J (pos)/UJ (ND) if pH > 2 | 1 | Use PJ to qualify for temperature outlier. Current SW846 criterion is ≤ 6° C (4) No quals for pH if samples preserved by lab upon receipt and within 1 day of collection. |
| Holding Time | All matrices: 180 days from date sampled Frozen soils, sediments, tissues (-20°C) - HT extended to 1 year | NFG ⁽¹⁾ Method ⁽²⁾ EcoChem standard policy | J (pos)/UJ (ND) if holding time exceeded | 1 | |
| Instrument Performance | | | | | |
| Initial Calibration (ICAL) | Based on instrument requirements, blank + 1 standard minimum requirement for calibration If more than 1 standard used, r ≥ 0.995 | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if r < 0.995 | 5A | |
| Initial Calibration Verification (ICV) | Independent source analyzed immediately after calibration %R within ± 10% of true value | NFG ⁽¹⁾ Method ⁽²⁾ | R (pos/ND) if %R < 75% J (pos)/UJ (ND) if %R 75% - 89% J (pos) if %R > 111% | 5A (H,L) ³ | Qualify all samples in run |
| Reporting Limit (RL) Standard Low Level ICV/CCV | concentration at RL %R = 70%-130% | Method ⁽²⁾ | J (pos) < 2x RL / R (ND) if %R < 50% J (pos) < 2x RL / UJ (ND) if %R 50 - 69% J (pos) < 2x RL if %R > 130% | 5A (H,L) ³ | Qualify all samples in run |
| Continuing Calibration Verification (CCV) | Immediately following ICV/ICB, then every two hours or ten samples, and at end of run. %R within ± 10% of true value | NFG ⁽¹⁾ Method ⁽²⁾ | R (pos/ND) if %R < 75% J (pos)/UJ (ND) if %R 75% - 89% J (pos) if %R > 111% | 5B (H,L) ³ | Qualify samples bracketed by CCV outliers |
| Interference Check Samples (ICSA / ICSAB) | ICSAB %R 80% - 120% for all spiked elements ICSA < MDL for all unspiked elements | NFG ⁽¹⁾ Method ⁽²⁾ | For samples with Al, Ca, Fe, Mg > ICS levels: ICSAB: J(pos)/R (ND) if %R < 50% J (pos)/UJ (ND) if %R = 50% - 79% J (pos) if %R > 120% ICSA: J (pos) < 2x ICSA/UJ (ND) for ICSA < Neg MDL J (pos) < 2x ICSA for ICSA > MDL | 17 (H,L) ³ | Use PJ and inter-element correction factors to evaluate ICSA to determine if bias is present. Refer to TM-09 for additional information. |

Metals by ICP-AES
 (Based on Inorganic NFG 2010 and SW-846 6010C)

| QC Element | EcoChem Acceptance Criteria | Source of Criteria | EcoChem Action for Non-Conformance | Reason Code | Discussion and Comments |
|-------------------------------|---|---|--|--|---|
| Blank Contamination | | | | | |
| Method Blank (MB) | One per matrix per batch of (of ≤ 20 samples) Blank conc < MDL | NFG ⁽¹⁾ Method ⁽²⁾ | U (pos) if result is < 5X method blank concentration | 7 | Refer to TM-02 for additional information. Blank Evaluation based on NFG 1994 |
| Instrument Blanks (ICB/CCB) | After each ICV & CCV blank concentration < MDL | NFG ⁽¹⁾ Method ⁽²⁾ | Action level is 5x absolute value of blank conc. For positive blanks: U (pos) results < action level For negative blanks: J (pos)/UJ (ND) results < action level | Pos Blanks: 7 Neg Blanks: 7L ³ | Use blanks bracketing samples for Qualification Refer to TM-02 for additional information. Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review IB, qualify as needed #3 - Review FB, qualify as needed |
| Field Blank (FB) | Blank conc < MDL | EcoChem standard policy | U (pos) if result is < 5x action level, as per analyte. | 6 | Qualify in associated field samples only. Refer to TM-02 for additional information. |
| Precision and Accuracy | | | | | |
| LCS (recovery) | One per matrix per batch (of ≤ 20 samples); LCSD not required %R between 80-120% | Method ⁽²⁾ | J (pos)/R (ND) if %R < 50% J (pos)/UJ (ND) if %R 50% - 79% J (pos) if %R > 120% | 10 (H,L) ³ | Qualify all samples in batch QAPP may have overriding accuracy limits. NFG Limits 70% -130% (50% - 150% Ab, Ag) |
| LCS/LCSD (RPD) | LCSD not required, if analyzed: RPD ≤ 20% | Method ⁽²⁾ | J (pos)/UJ (ND) if RPD > 20% | 9 | Qualify all samples in batch QAPP may have overriding precision limits. |
| MS/MSD (recovery) | One per matrix per batch (of ≤ 20 samples); MSD not required %R between 75-125% | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) if %R > 125% J (pos)/UJ (ND) if %R < 75% J (pos)/R (ND) if %R < 30%, unless post digestion spike analyzed, J (pos)/UJ (ND) if post digestion spike %R OK | 8 (H,L) ³ | No action if only one spike %R is outside criteria. NA if parent concentration >4x the amount spiked. Qualify all samples in batch. QAPP may have overriding accuracy limits. |

DATA VALIDATION CRITERIA

Metals by ICP-AES
 (Based on Inorganic NFG 2010 and SW-846 6010C)

| QC Element | EcoChem Acceptance Criteria | Source of Criteria | EcoChem Action for Non-Conformance | Reason Code | Discussion and Comments |
|--------------------------------------|--|---|---|-----------------------|---|
| Precision and Accuracy con't | | | | | |
| Post Digestion Spikes | If MS is outside 75-125%, post-spike should be analyzed %R 80%-120% (method); 75%-125% (NFG) | NFG ⁽¹⁾ Method ⁽²⁾ | Only used to support MS qualification decisions | NA | No qualifiers assigned based solely on this element. |
| MS/MSD (RPD) | MSD not required, if analyzed: RPD ≤ 20% | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if RPD > 20% | 9 | QAPP may have overriding precision limits. |
| Laboratory Duplicate | One per matrix per batch (of ≤ 20 samples) RPD ≤ 20% for results ≥ 5x RL Solids: difference < 2X RL for results < 5X RL Aqueous: difference < 1X RL for results < 5X RL | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if RPD > 20% or if difference > control limit | 9 | Qualify all samples in batch. QAPP may have overriding precision limits. |
| Reference Material (RM, SRM, or CRM) | Result ±20% of the 95% confidence interval of the true value for analytes | EcoChem standard policy | J (pos)/UJ (ND) if < LCL J (pos) if > UCL | 12 (H,L) ³ | QAPP may have overriding accuracy limits. Some manufacturers may have different RM control limits |
| Serial Dilution | Analyze one sample per matrix at a 5x dilution %D <10% for original sample conc. > 50x MDL | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if %D > 10% and native sample concentration > 50x MDL | 16 | Qualify all samples in batch. |
| Field Duplicate | Solids: RPD <50% (for results ≥ 5x RL) OR difference < 2X RL (for results < 5X RL) Aqueous: RPD <35% (for results ≥ 5x RL) OR difference < 1X RL (for results < 5X RL) | EcoChem standard policy | Qualify only parent and field duplicate samples J (pos)/UJ (ND) | 9 | QAPP may have overriding precision limits. Client/QAPP may not require qualification based on field precision. |

Metals by ICP-AES
 (Based on Inorganic NFG 2010 and SW-846 6010C)

| QC Element | EcoChem Acceptance Criteria | Source of Criteria | EcoChem Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|------------------------------------|---|--|-------------|--|
| Compound Quantitation | | | | | |
| Total and Dissolved Comparison | Total > Dissolved | EcoChem standard policy | J (pos)/UJ (ND) if Dissolved > Total and results fall outside of standard duplicate precision criteria | 14 | |
| Calibration Range | Results < instrument linear range | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) if result exceeds linear range and sample was not diluted | 20 | |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 EcoChem Policy for Rejection/Selection Process for Multiple Results |

¹ National Functional Guidelines for Inorganic Superfund Data Review, January 2010.

² Method SW846 6010C Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP-AES), Revision 3, February 2007.

³ "H" = high bias indicated; "L" = low bias indicated

⁴ SW846, Chapter 3, Inorganic Analytes

(pos): Positive Result

(ND): Not Detected

Volatile Organics in Air by GCMS and GCMS-SIM, Method TO-15

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|--|-----------------------|--|
| Sample Handling | | | | | |
| Cooler/Storage Temperature Preservation | SUMMA Canister - no preservation requirements | | | | |
| SUMMA Canister Pressure | Pressure of Canister upon receipt at lab should be between 5-10 inches of Hg or greater of vacuum | Method ^{1,2} | If vacuum is > 8 inch Hg or < 1 inch Hg, note in report. | 1 | Professional judgment |
| Holding Time | 30 days from collection to analysis | Method ¹ | J(pos)/UJ(ND) if HT exceeded J(pos)/R(ND) if gross exceedance (> 2X HT) | 1 | Gross exceedance = > 2X HT, as per 1999 NFG |
| Instrument Performance | | | | | |
| Tuning | BFB Beginning of each 24 hour period Use method acceptance criteria (Table 3) | Method ¹ | R(pos/ND) all analytes in all samples associated with the tune | 5A | every 24 hours or every 20 samples (Section 10.4.2 of method) TM-06 EcoChem Policy for the Evaluation and Qualification of GCMS Instrument Performance |
| Initial Calibration (Minimum 5 stds.) Sensitivity | RRF ≥ 0.05 Note: not discussed in method. Default to NFG criteria. | NFG ³ | J(pos)/R(ND) if RRF/RF is less than criterion | | |
| Initial Calibration (Minimum 5 stds.) Stability | %RSD ≤ 30% with up to 2 compounds max 40%; OR Linear r ≥ 0.995 or r ² ≥ 0.990 (6 points must be used) (NFG optional criteria) | Method ¹ NFG ³ | J(pos) if %RSD > 30% OR r/r2-value < 0.995 (or 0.990) | | |
| Initial Calibration Verification (ICV) Stability | Not required by method. Standard from independent source Analyzed immediately after ICAL If analyzed, use lab or QAPP limits | | J(pos) if high bias J(pos)/UJ(ND) if low bias J(pos)/R(ND) if significant low bias | | |
| Continuing Calibration (Prior to each 24 hr. shift) Sensitivity | RRF ≥ 0.05 Note: not discussed in method. Default to NFG criteria. | NFG ³ | J(pos)/R(ND) if RRF/RF is less than criterion | 5B | |
| Continuing Calibration (Prior to each 24 hr. shift) Stability | %Drift ≤ 30% | Method ¹ | If > +/- 70%: J(pos)/R(ND) If -69% to -31%: J(pos) (high bias) If 31% to 69%: J(pos)/UJ(ND) (low bias) | 5B (H,L) ⁴ | |

Volatile Organics in Air by GCMS and GCMS-SIM, Method TO-15

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|------------------------------------|---|--|--|-----------------------|--|
| Blank Contamination | | | | | |
| Method Blank (MB) | MB: One per batch of (of ≤ 20 samples) No detected compounds > MDL | Method ¹ NFG ³ | U(pos) if result is < 5X or 10X action level, as per analyte. | 7 | 10X action level for methylene chloride, acetone, & 2-butanone. 5X for all other target analytes Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review FB, qualify as needed |
| | No TICs present | | R(pos) TICs using 10X rule | | |
| Field Blank (FB) | FB: frequency as per QAPP No detected compounds > MDL | Method ¹ NFG ³ | U(pos) if result is < 5X or 10X action level, as per analyte. | 6 | |
| Precision and Accuracy | | | | | |
| LCS | One per lab batch (of ≤ 20 samples) Note: not discussed in method. Default to lab or QAPP limits. | NFG ³ | Qualify all associated samples J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if both %R < LCL - low bias J(pos)/R(ND) if both %R < 10% - very low bias J(pos)/UJ(ND) if one > UCL & one < LCL, with no bias | 10 (H,L) ⁴ | No action if only one spike %R is outside criteria, when LCSD is analyzed. Qualify all associated samples. |
| LCS/LCSD (RPD) | if analyzed RPD $\leq 30\%$ | NFG ³ | J(pos) assoc. cmpd. in all samples | 9 | Qualify all associated samples. |
| Surrogates | Note: not discussed in method. Default to lab or QAPP limits. | NFG ³ | J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if %R < LCL - low bias J(pos)/R(ND) if < 10% - very low bias | 13 (H,L) ⁴ | Note: No action if there are 4+ surrogates and only 1 outlier. |
| Internal Standards | Added to all samples Acceptable Range: IS area $\pm 40\%$ of CCAL area RT within 20 seconds of mean RT over ICAL range RT within 0.33 minutes of CC RT | Method ¹ NFG ³ | J(pos) if > 140% J(pos)/UJ(ND) if < 60% J(pos)/R(ND) if < 25% RT > 0.33 mins, narrate and notify PM | 19 | |
| Field Duplicates | RPD $\leq 25\%$ OR difference < 1X RL (for results < 5X RL) | Method ¹ EcoChem standard policy | Narrate and qualify if required by project (EcoChem PJ) Qualify only field duplicate samples J(pos)/UJ(ND) | 9 | |
| Compound ID and Calculation | | | | | |
| Quantitation/ Identification | RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample | Method ¹ NFG ³ | See Technical Director if outliers are found | 14 25 (false pos) | |
| TICs | Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification | Method ¹ NFG ³ | NJ the TIC unless: R(pos) common laboratory contaminants See Technical Director for ID issues | 4 | Common laboratory contaminants: aldol condensation products, solvent preservatives, and reagent contaminants |
| Calibration Range | Results exceed the upper calibration range | EcoChem standard policy | Qualify J(pos) | 20 | If result from dilution analysis is not reported. |
| Calculation Check | Check 10% of field & QC sample results | EcoChem standard policy | Contact laboratory for resolution and/or corrective action | na | Full data validation only. |

Volatile Organics in Air by GCMS and GCMS-SIM, Method TO-15

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|-------------------------|---|-------------|--|
| Electronic Data Deliverable (EDD) | | | | | |
| Verification of EDD to hardcopy data | EcoChem verify @ 10% unless problems noted; then increase level up to 100% for next several packages. | EcoChem standard policy | Depending on scope of problem, correct at EcoChem (minor issues) to resubmittal by laboratory (major issues). | na | EcoChem Project Manager and/or Database Administrator will work with lab to provide long-term corrective action. |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 Rev. 1 EcoChem Policy for Rejection/Selection Process for Multiple Results |

(pos): Positive Result(s)
(ND): Non-detects

¹ Compendium Method TO-15, Determination of Volatile Organic Compounds (VOCs) in Air Collected In Specially-Prepared Canisters And Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), Second Edition, January 1999. EPA/625/R-96/010b

¹ Supplement to EPA Compendium Method TO-15. Reduction of Method Detection Limits to Meet Vapor Intrusion Monitoring Needs. E.H. Daughtrey Jr., K.D. Oliver, H.H. Jacumin Jr., and W.A. McClenny, 2/18/2009.

¹ ASTM D1945 - 03 Standard Test Method for Analysis of Natural Gas by Gas Chromatography. January 1, 2010.

² Air Toxics Ltd: Guide to Air Sampling and Analysis

³ National Functional Guidelines for Organic Data Review, June, 2008

⁴ "H" = high bias indicated; "L" = low bias indicated



APPENDIX B

QUALIFIED DATA SUMMARY TABLE

**Qualified Data Summary Table
Newman's Chevron**

| SDG | SAMPLE ID | LAB ID | METHOD | ANALYTE | RESULT | UNITS | LAB FLAG | DV QUALIFIER | DV REASON |
|-------|--------------------|-----------|--------|--------------------|--------|-------|----------|--------------|-----------|
| LDC01 | SB-7-S-10.0-180827 | 9780539 | NWEPH | >C10-C12 Aliphatic | 1.3 | mg/kg | U | UJ | 10L |
| LDC01 | SB-7-S-10.0-180827 | 9780539RE | NWEPH | >C10-C12 Aliphatic | 1.3 | mg/kg | U | DNR | 11 |
| LDC01 | SB-7-S-10.0-180827 | 9780539 | NWEPH | >C12-C16 Aliphatic | 1.3 | mg/kg | U | UJ | 10L |
| LDC01 | SB-7-S-10.0-180827 | 9780539RE | NWEPH | >C12-C16 Aliphatic | 1.3 | mg/kg | U | DNR | 11 |
| LDC01 | SB-7-S-10.0-180827 | 9780539RE | NWEPH | >C16-C21 Aliphatic | 3.8 | mg/kg | U | DNR | 11 |
| LDC01 | SB-7-S-10.0-180827 | 9780539RE | NWEPH | >C21-C34 Aliphatic | 7.6 | mg/kg | U | DNR | 11 |
| LDC01 | SB-7-S-10.0-180827 | 9780539 | NWEPH | >C10-C12 Aromatic | 1.3 | mg/kg | U | UJ | 10L |
| LDC01 | SB-7-S-10.0-180827 | 9780539RE | NWEPH | >C10-C12 Aromatic | 1.3 | mg/kg | U | DNR | 11 |
| LDC01 | SB-7-S-10.0-180827 | 9780539RE | NWEPH | >C12-C16 Aromatic | 1.3 | mg/kg | U | DNR | 11 |
| LDC01 | SB-7-S-10.0-180827 | 9780539RE | NWEPH | >C16-C21 Aromatic | 2.5 | mg/kg | U | DNR | 11 |
| LDC01 | SB-7-S-10.0-180827 | 9780539RE | NWEPH | >C21-C34 Aromatic | 2.5 | mg/kg | U | DNR | 11 |
| LDC01 | UST-2-S-8.0-180828 | 9780553 | NWEPH | >C10-C12 Aliphatic | 69 | mg/kg | | J | 9,10L |
| LDC01 | UST-2-S-8.0-180828 | 9780553RE | NWEPH | >C10-C12 Aliphatic | 100 | mg/kg | | DNR | 11 |
| LDC01 | UST-2-S-8.0-180828 | 9780553 | NWEPH | >C12-C16 Aliphatic | 550 | mg/kg | | J | 10L |
| LDC01 | UST-2-S-8.0-180828 | 9780553RE | NWEPH | >C12-C16 Aliphatic | 750 | mg/kg | | DNR | 11 |
| LDC01 | UST-2-S-8.0-180828 | 9780553RE | NWEPH | >C16-C21 Aliphatic | 460 | mg/kg | | DNR | 11 |
| LDC01 | UST-2-S-8.0-180828 | 9780553RE | NWEPH | >C21-C34 Aliphatic | 35 | mg/kg | | DNR | 11 |
| LDC01 | UST-2-S-8.0-180828 | 9780553 | NWEPH | >C10-C12 Aromatic | 3.5 | mg/kg | | J | 10L |
| LDC01 | UST-2-S-8.0-180828 | 9780553RE | NWEPH | >C10-C12 Aromatic | 7.5 | mg/kg | | DNR | 11 |
| LDC01 | UST-2-S-8.0-180828 | 9780553RE | NWEPH | >C12-C16 Aromatic | 120 | mg/kg | | DNR | 11 |
| LDC01 | SB-7-S-10.0-180827 | 9780539 | 8260C | n-Hexane | 0.074 | mg/kg | | J | 8,9 |
| LDC01 | SB-7-S-10.0-180827 | 9780539 | 8260C | Toluene | 0.16 | mg/kg | | J | 9 |
| LDC01 | SB-7-S-10.0-180827 | 9780539 | 8260C | Xylene (Total) | 0.38 | mg/kg | | J | 9 |
| LDC01 | SB-2-S-11.0-180828 | 9780548 | 8260C | Toluene | 0.001 | mg/kg | | U | 6 |
| LDC01 | SB-2-S-15.0-180828 | 9780549 | 8260C | Toluene | 0.0006 | mg/kg | | U | 6 |
| LDC01 | SB-2-S-8.0-180828 | 9780551 | 8260C | Toluene | 0.0009 | mg/kg | | U | 6 |
| LDC01 | UST-2-S-8.0-180828 | 9780553RE | NWEPH | >C16-C21 Aromatic | 290 | mg/kg | | DNR | 11 |
| LDC01 | UST-2-S-8.0-180828 | 9780553RE | NWEPH | >C21-C34 Aromatic | 29 | mg/kg | | DNR | 11 |
| LDC01 | SB-5-S-17.5-180828 | 9780555 | NWEPH | >C10-C12 Aliphatic | 8.3 | mg/kg | | J | 9,10L |
| LDC01 | SB-5-S-17.5-180828 | 9780555RE | NWEPH | >C10-C12 Aliphatic | 10 | mg/kg | | DNR | 11 |

**Qualified Data Summary Table
Newman's Chevron**

| SDG | SAMPLE ID | LAB ID | METHOD | ANALYTE | RESULT | UNITS | LAB FLAG | DV QUALIFIER | DV REASON |
|-------|--------------------|-----------|----------|-------------------------------|--------|-------|----------|--------------|-----------|
| LDC01 | SB-5-S-17.5-180828 | 9780555 | NWEPH | >C12-C16 Aliphatic | 2.1 | mg/kg | | J | 10L |
| LDC01 | SB-5-S-17.5-180828 | 9780555RE | NWEPH | >C12-C16 Aliphatic | 6 | mg/kg | | DNR | 11 |
| LDC01 | SB-5-S-17.5-180828 | 9780555RE | NWEPH | >C16-C21 Aliphatic | 3.1 | mg/kg | U | DNR | 11 |
| LDC01 | SB-5-S-17.5-180828 | 9780555RE | NWEPH | >C21-C34 Aliphatic | 6.3 | mg/kg | U | DNR | 11 |
| LDC01 | SB-5-S-17.5-180828 | 9780555 | NWEPH | >C10-C12 Aromatic | 3 | mg/kg | | J | 10L |
| LDC01 | SB-5-S-17.5-180828 | 9780555RE | NWEPH | >C10-C12 Aromatic | 5.1 | mg/kg | | DNR | 11 |
| LDC01 | SB-5-S-17.5-180828 | 9780555RE | NWEPH | >C12-C16 Aromatic | 6.6 | mg/kg | | DNR | 11 |
| LDC01 | SB-5-S-17.5-180828 | 9780555RE | NWEPH | >C16-C21 Aromatic | 2.8 | mg/kg | | DNR | 11 |
| LDC01 | SB-5-S-17.5-180828 | 9780555RE | NWEPH | >C21-C34 Aromatic | 2.1 | mg/kg | U | DNR | 11 |
| LDC01 | SB-5-S-14.0-180828 | 9780561 | NWEPH | >C10-C12 Aliphatic | 6.4 | mg/kg | | J | 9,10L |
| LDC01 | SB-5-S-14.0-180828 | 9780561RE | NWEPH | >C10-C12 Aliphatic | 5.3 | mg/kg | | DNR | 11 |
| LDC01 | SB-5-S-14.0-180828 | 9780561 | NWEPH | >C12-C16 Aliphatic | 1.2 | mg/kg | U | UJ | 10L |
| LDC01 | SB-5-S-14.0-180828 | 9780561RE | NWEPH | >C12-C16 Aliphatic | 1.4 | mg/kg | | DNR | 11 |
| LDC01 | SB-5-S-14.0-180828 | 9780561RE | NWEPH | >C16-C21 Aliphatic | 3.6 | mg/kg | U | DNR | 11 |
| LDC01 | SB-5-S-14.0-180828 | 9780561RE | NWEPH | >C21-C34 Aliphatic | 7.2 | mg/kg | U | DNR | 11 |
| LDC01 | UST-6-S-8.0-180829 | 9780577 | NWTPH-Dx | Diesel Range Organics C12-C24 | 160 | mg/kg | | J | 9 |
| LDC01 | SB-5-S-14.0-180828 | 9780561 | NWEPH | >C10-C12 Aromatic | 1.2 | mg/kg | U | UJ | 10L |
| LDC01 | SB-5-S-14.0-180828 | 9780561RE | NWEPH | >C10-C12 Aromatic | 1.6 | mg/kg | | DNR | 11 |
| LDC01 | SB-5-S-14.0-180828 | 9780561RE | NWEPH | >C12-C16 Aromatic | 1.2 | mg/kg | U | DNR | 11 |
| LDC01 | SB-5-S-14.0-180828 | 9780561RE | NWEPH | >C16-C21 Aromatic | 2.4 | mg/kg | U | DNR | 11 |
| LDC01 | SB-5-S-14.0-180828 | 9780561RE | NWEPH | >C21-C34 Aromatic | 2.4 | mg/kg | U | DNR | 11 |
| LDC01 | UST-3-S-8.0-180829 | 9780570 | NWEPH | >C10-C12 Aliphatic | 1.1 | mg/kg | U | UJ | 10L |
| LDC01 | UST-3-S-8.0-180829 | 9780570RE | NWEPH | >C10-C12 Aliphatic | 1.1 | mg/kg | U | DNR | 11 |
| LDC01 | UST-3-S-8.0-180829 | 9780570 | NWEPH | >C12-C16 Aliphatic | 29 | mg/kg | | J | 10L |
| LDC01 | UST-3-S-8.0-180829 | 9780570RE | NWEPH | >C12-C16 Aliphatic | 77 | mg/kg | | DNR | 11 |
| LDC01 | UST-3-S-8.0-180829 | 9780570RE | NWEPH | >C16-C21 Aliphatic | 170 | mg/kg | | DNR | 11 |
| LDC01 | UST-3-S-8.0-180829 | 9780570RE | NWEPH | >C21-C34 Aliphatic | 22 | mg/kg | | DNR | 11 |
| LDC01 | UST-3-S-8.0-180829 | 9780570 | NWEPH | >C10-C12 Aromatic | 1.1 | mg/kg | U | UJ | 10L |
| LDC01 | UST-3-S-8.0-180829 | 9780570RE | NWEPH | >C10-C12 Aromatic | 1.1 | mg/kg | U | DNR | 11 |
| LDC01 | UST-3-S-8.0-180829 | 9780570RE | NWEPH | >C12-C16 Aromatic | 1.7 | mg/kg | | DNR | 11 |

**Qualified Data Summary Table
Newman's Chevron**

| SDG | SAMPLE ID | LAB ID | METHOD | ANALYTE | RESULT | UNITS | LAB FLAG | DV QUALIFIER | DV REASON |
|-------|--------------------|-----------|--------------|------------------------------|--------|-------|----------|--------------|-----------|
| LDC01 | UST-3-S-8.0-180829 | 9780570RE | NWEPH | >C16-C21 Aromatic | 58 | mg/kg | | DNR | 11 |
| LDC01 | UST-3-S-8.0-180829 | 9780570RE | NWEPH | >C21-C34 Aromatic | 9 | mg/kg | | DNR | 11 |
| LDC01 | UST-5-S-8.0-180829 | 9780576 | NWEPH | >C10-C12 Aliphatic | 1.1 | mg/kg | U | UJ | 8L,10L |
| LDC01 | UST-5-S-8.0-180829 | 9780576RE | NWEPH | >C10-C12 Aliphatic | 1.1 | mg/kg | U | DNR | 11 |
| LDC01 | UST-5-S-8.0-180829 | 9780576 | NWEPH | >C12-C16 Aliphatic | 5 | mg/kg | | J | 9,10L |
| LDC01 | UST-5-S-8.0-180829 | 9780576RE | NWEPH | >C12-C16 Aliphatic | 16 | mg/kg | | DNR | 11 |
| LDC01 | UST-6-S-8.0-180829 | 9780577 | NWTPH-Dx | Heavy Range Organics C24-C40 | 47 | mg/kg | | J | 9 |
| LDC01 | SB-5-S-24.0-180828 | 9780559 | 8260C | Toluene | 0.001 | mg/kg | | U | 6 |
| LDC01 | UST-5-S-8.0-180829 | 9780576RE | NWEPH | >C16-C21 Aliphatic | 79 | mg/kg | | DNR | 11 |
| LDC01 | UST-5-S-8.0-180829 | 9780576RE | NWEPH | >C21-C34 Aliphatic | 260 | mg/kg | | DNR | 11 |
| LDC01 | UST-5-S-8.0-180829 | 9780576 | NWEPH | >C10-C12 Aromatic | 1.1 | mg/kg | U | UJ | 8L,10L |
| LDC01 | UST-5-S-8.0-180829 | 9780576RE | NWEPH | >C10-C12 Aromatic | 1.1 | mg/kg | U | DNR | 11 |
| LDC01 | UST-5-S-8.0-180829 | 9780576RE | NWEPH | >C12-C16 Aromatic | 1.1 | mg/kg | U | DNR | 11 |
| LDC01 | UST-5-S-8.0-180829 | 9780576RE | NWEPH | >C16-C21 Aromatic | 27 | mg/kg | | DNR | 11 |
| LDC01 | UST-5-S-8.0-180829 | 9780576RE | NWEPH | >C21-C34 Aromatic | 210 | mg/kg | | DNR | 11 |
| LDC01 | | P70701AB | NWEPH | >C10-C12 Aliphatic | 1 | mg/kg | U | DNR | 11 |
| LDC01 | | P70701AB | NWEPH | >C12-C16 Aliphatic | 1 | mg/kg | U | DNR | 11 |
| LDC01 | | P70701AB | NWEPH | >C16-C21 Aliphatic | 3 | mg/kg | U | DNR | 11 |
| LDC01 | | P70701AB | NWEPH | >C21-C34 Aliphatic | 6 | mg/kg | U | DNR | 11 |
| LDC01 | | P70701AB | NWEPH | >C10-C12 Aromatic | 1 | mg/kg | U | DNR | 11 |
| LDC01 | | P70701AB | NWEPH | >C12-C16 Aromatic | 1 | mg/kg | U | DNR | 11 |
| LDC01 | | P70701AB | NWEPH | >C16-C21 Aromatic | 2 | mg/kg | U | DNR | 11 |
| LDC01 | | P70701AB | NWEPH | >C21-C34 Aromatic | 2 | mg/kg | U | DNR | 11 |
| LDC01 | UST-3-S-8.0-180829 | 9780570 | 8260C | Bromomethane | 0.0006 | mg/kg | U | UJ | 5BL |
| LDC01 | SB-4-S-12.0-180829 | 9780571 | 8260C | Ethylbenzene | 0.002 | mg/kg | | J | 9 |
| LDC01 | DUP-2-SD-180829 | 9780572 | 8260C | Ethylbenzene | 0.0005 | mg/kg | | J | 9 |
| LDC01 | UST-5-S-8.0-180829 | 9780576 | 8260C | Bromomethane | 0.0007 | mg/kg | U | UJ | 5BL |
| LDC01 | SB-8-S-12.0-180829 | 9780578 | SW-846 6010D | Lead | 2.34 | mg/kg | U | UJ | 7L |
| LDC01 | SB-8-S-14.0-180829 | 9780579 | SW-846 6010D | Lead | 12.5 | mg/kg | U | UJ | 7L |
| LDC01 | SB-8-S-25.0-180829 | 9780580 | SW-846 6010D | Lead | 0.542 | mg/kg | U | UJ | 7L |

**Qualified Data Summary Table
Newman's Chevron**

| SDG | SAMPLE ID | LAB ID | METHOD | ANALYTE | RESULT | UNITS | LAB FLAG | DV QUALIFIER | DV REASON |
|-------|---------------------|-----------|--------|--------------------|--------|-------|----------|--------------|-----------|
| LDC03 | SVP-1-S-10.0-180830 | 9789519 | NWEPH | >C10-C12 Aliphatic | 1.2 | mg/kg | U | UJ | 10L |
| LDC03 | SVP-1-S-10.0-180830 | 9789519RE | NWEPH | >C10-C12 Aliphatic | 1.2 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-1-S-10.0-180830 | 9789519 | NWEPH | >C12-C16 Aliphatic | 1.2 | mg/kg | U | UJ | 10L |
| LDC03 | SVP-1-S-10.0-180830 | 9789519RE | NWEPH | >C12-C16 Aliphatic | 1.2 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-1-S-10.0-180830 | 9789519RE | NWEPH | >C16-C21 Aliphatic | 3.7 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-1-S-10.0-180830 | 9789519RE | NWEPH | >C21-C34 Aliphatic | 7.3 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-1-S-10.0-180830 | 9789519 | NWEPH | >C10-C12 Aromatic | 1.2 | mg/kg | U | UJ | 10L |
| LDC03 | SVP-1-S-10.0-180830 | 9789519RE | NWEPH | >C10-C12 Aromatic | 1.2 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-1-S-10.0-180830 | 9789519RE | NWEPH | >C12-C16 Aromatic | 1.2 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-1-S-10.0-180830 | 9789519RE | NWEPH | >C16-C21 Aromatic | 2.4 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-1-S-10.0-180830 | 9789519RE | NWEPH | >C21-C34 Aromatic | 2.4 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-1-S-8.0-180830 | 9789520 | NWEPH | >C10-C12 Aliphatic | 1.1 | mg/kg | U | UJ | 10L |
| LDC03 | SVP-1-S-8.0-180830 | 9789520RE | NWEPH | >C10-C12 Aliphatic | 1.1 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-1-S-8.0-180830 | 9789520 | NWEPH | >C12-C16 Aliphatic | 1.1 | mg/kg | U | UJ | 10L |
| LDC03 | SVP-1-S-8.0-180830 | 9789520RE | NWEPH | >C12-C16 Aliphatic | 1.1 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-1-S-8.0-180830 | 9789520RE | NWEPH | >C16-C21 Aliphatic | 3.2 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-1-S-8.0-180830 | 9789520RE | NWEPH | >C21-C34 Aliphatic | 9.7 | mg/kg | | DNR | 11 |
| LDC03 | SVP-1-S-8.0-180830 | 9789520 | NWEPH | >C10-C12 Aromatic | 1.1 | mg/kg | U | UJ | 10L |
| LDC03 | SVP-1-S-8.0-180830 | 9789520RE | NWEPH | >C10-C12 Aromatic | 1.1 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-1-S-8.0-180830 | 9789520RE | NWEPH | >C12-C16 Aromatic | 1.1 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-1-S-8.0-180830 | 9789520RE | NWEPH | >C16-C21 Aromatic | 2.2 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-1-S-8.0-180830 | 9789520RE | NWEPH | >C21-C34 Aromatic | 11 | mg/kg | | DNR | 11 |
| LDC03 | SVP-2-S-8.0-180830 | 9789523 | NWEPH | >C10-C12 Aliphatic | 1.2 | mg/kg | U | UJ | 10L |
| LDC03 | SVP-2-S-8.0-180830 | 9789523RE | NWEPH | >C10-C12 Aliphatic | 1.2 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-2-S-8.0-180830 | 9789523 | NWEPH | >C12-C16 Aliphatic | 1.2 | mg/kg | U | UJ | 10L |
| LDC03 | SVP-2-S-8.0-180830 | 9789523RE | NWEPH | >C12-C16 Aliphatic | 1.2 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-2-S-8.0-180830 | 9789523RE | NWEPH | >C16-C21 Aliphatic | 3.7 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-2-S-8.0-180830 | 9789523RE | NWEPH | >C21-C34 Aliphatic | 7.4 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-2-S-8.0-180830 | 9789523 | NWEPH | >C10-C12 Aromatic | 1.2 | mg/kg | U | UJ | 10L |
| LDC03 | SVP-2-S-8.0-180830 | 9789523RE | NWEPH | >C10-C12 Aromatic | 1.2 | mg/kg | U | DNR | 11 |

**Qualified Data Summary Table
Newman's Chevron**

| SDG | SAMPLE ID | LAB ID | METHOD | ANALYTE | RESULT | UNITS | LAB FLAG | DV QUALIFIER | DV REASON |
|-------|---------------------|-----------|--------|--------------------|--------|-------|----------|--------------|-----------|
| LDC03 | SVP-2-S-8.0-180830 | 9789523RE | NWEPH | >C12-C16 Aromatic | 1.2 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-2-S-8.0-180830 | 9789523RE | NWEPH | >C16-C21 Aromatic | 2.5 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-2-S-8.0-180830 | 9789523RE | NWEPH | >C21-C34 Aromatic | 2.5 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-2-S-10.0-180830 | 9789524 | NWEPH | >C10-C12 Aliphatic | 1.2 | mg/kg | U | UJ | 10L |
| LDC03 | SVP-2-S-10.0-180830 | 9789524RE | NWEPH | >C10-C12 Aliphatic | 1.2 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-2-S-10.0-180830 | 9789524 | NWEPH | >C12-C16 Aliphatic | 1.2 | mg/kg | U | UJ | 10L |
| LDC03 | SVP-2-S-10.0-180830 | 9789524RE | NWEPH | >C12-C16 Aliphatic | 1.2 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-2-S-10.0-180830 | 9789524RE | NWEPH | >C16-C21 Aliphatic | 3.7 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-2-S-10.0-180830 | 9789524RE | NWEPH | >C21-C34 Aliphatic | 7.3 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-2-S-10.0-180830 | 9789524 | NWEPH | >C10-C12 Aromatic | 1.2 | mg/kg | U | UJ | 10L |
| LDC03 | SVP-2-S-10.0-180830 | 9789524RE | NWEPH | >C10-C12 Aromatic | 1.2 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-2-S-10.0-180830 | 9789524RE | NWEPH | >C12-C16 Aromatic | 1.2 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-2-S-10.0-180830 | 9789524RE | NWEPH | >C16-C21 Aromatic | 2.4 | mg/kg | U | DNR | 11 |
| LDC03 | SVP-2-S-10.0-180830 | 9789524RE | NWEPH | >C21-C34 Aromatic | 2.4 | mg/kg | U | DNR | 11 |



DATA VALIDATION REPORT NEWMAN'S CHEVRON

Prepared for:

Leidos
18912 North Creek Parkway, Suite 101
Bothell, Washington 98101

Prepared by:

EcoChem, Inc.
500 Union Street, Suite 1010
Seattle, WA 98101

EcoChem Project: C4159-2

September 27, 2019

Approved for Release:

A handwritten signature in black ink, appearing to read "Christine Ransom", with a long horizontal flourish extending to the right.

Christine Ransom
Senior Project Chemist
EcoChem, Inc.

PROJECT NARRATIVE

Basis for the Data Validation

This report summarizes the results of summary validation (EPA Stage 2B) performed on soil, grab water, and associated quality control sample data for the Newman's Chevron project. A complete list of samples is provided in the Sample Index. The laboratory revised the sample IDs originally provided on the chains-of-custody to match the project naming convention.

All analyses were performed by Eurofins Laboratories Environmental, Lancaster, PA. The analytical methods and EcoChem project chemists are listed in the following table:

| ANALYSIS | METHOD | PRIMARY REVIEW | SECONDARY REVIEW |
|------------------------|-----------|----------------|------------------|
| Volatiles | 8260C | E. Clayton | C. Ransom |
| TCLP Volatiles | 8260C | | |
| Semivolatiles | 8270D | | |
| TCLP Semivolatiles | 8270D | | |
| PAH | 8270D-SIM | | |
| PCB Aroclors | 8082A | | |
| EDB | 8011 | | |
| Gas Range Hydrocarbons | NWTPH-Gx | | |
| Petroleum Hydrocarbons | NWTPH-Dx | | |
| Lead | 6010D | | |
| Percent Moisture | SM 2540 | | |

The data were reviewed using guidance and quality control criteria documented in the analytical methods; *Final Remedial Investigation Work Plan Newman's Chevron* (Leidos, July 2018); *National Functional Guidelines for Organic Data Review* (USEPA 2008); and *National Functional Guidelines for Inorganic Data Review* (USEPA 2010).

EcoChem's goal in assigning data assessment qualifiers is to assist in proper data interpretation. If values are estimated (J or UJ), data may be used for site evaluation and risk assessment purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. Data that have been rejected are flagged with (R). Rejected data should not be used for any purpose. If values have no data qualifier assigned, then the data meet the data quality objectives as stated in the documents and methods referenced above.

Validation criteria are included as Appendix A. The qualified data summary table (QDST) is included as Appendix B. Data Validation Worksheets and project associated communications will be kept on file at EcoChem, Inc. A qualified laboratory electronic data deliverable (EDD) is also submitted.

Sample Index
Newman's Chevron

| SDG | Sample ID | Lab ID | VOC BTEX 8260C | TCLP VOC | EDB 8011 | SVOC 8270D | PAH 8270SIM | TCLP SVOC | PCB 8082A | TPH-Gx | TPH-Dx | Metals 6010D | Mercury 7470A |
|-------|---------------------|---------|----------------------|-------------|-------------|---------------|----------------|--------------|--------------|--------|--------|-----------------|------------------|
| LDC06 | SB-13-S-12.0-190724 | 1114243 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC06 | SB-13-S-16.0-190724 | 1114244 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC06 | SB-13-S-27.5-190724 | 1114245 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC06 | QA-T-190724 | 1114246 | ✓ | | | | | | | ✓ | | | |
| LDC06 | SB-14-S-12.0-190724 | 1114247 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC07 | SB-15-S-8.0-190723 | 1114252 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC07 | SB-15-S-13.0-190723 | 1114253 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC07 | SB-15-S-22.5-190723 | 1114254 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC07 | SB-16-S-9.0-190723 | 1114255 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC07 | SB-16-S-13.0-190723 | 1114256 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC07 | SB-16-S-22.5-190723 | 1114257 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC07 | QA-T-190724 | 1114258 | ✓ | | | | | | | ✓ | | | |
| LDC08 | SB-18-S-8.0-190723 | 1114303 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC08 | SB-18-S-18.0-190723 | 1114304 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC08 | SB-18-S-22.5-190723 | 1114305 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC08 | DUP-1-SD-190723 | 1114306 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC08 | SB-19-S-8.0-190725 | 1114307 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC08 | SB-19-S-14.0-190725 | 1114308 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC08 | QA-T-190725 | 1114309 | ✓ | | | | | | | ✓ | | | |
| LDC09 | SB-19-S-22.5-190725 | 1114310 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC09 | SB-19-S-27.5-190725 | 1114311 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC09 | DUP-2-SD-190725 | 1114312 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC09 | SB-20-S-8.0-190725 | 1114313 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC09 | SB-20-S-14.0-190725 | 1114314 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC09 | SB-20-S-22.5-190725 | 1114315 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC09 | QA-T-190725 | 1114316 | ✓ | | | | | | | ✓ | | | |
| LDC10 | SB-11-S-6.0-190723 | 1114317 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |

Sample Index
Newman's Chevron

| SDG | Sample ID | Lab ID | VOC BTEX 8260C | TCLP VOC | EDB 8011 | SVOC 8270D | PAH 8270SIM | TCLP SVOC | PCB 8082A | TPH-Gx | TPH-Dx | Metals 6010D | Mercury 7470A |
|-------|----------------------------|---------|----------------------|-------------|-------------|---------------|----------------|--------------|--------------|--------|--------|-----------------|------------------|
| LDC10 | SB-11-S-10.0-190724 | 1114318 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC10 | SB-11-S-14.0-190724 | 1114319 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC10 | SB-11-S-20.0-190724 | 1114320 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC10 | SB-11-S-27.5-190724 | 1114321 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC10 | QA-T-190724 | 1114322 | ✓ | | | | | | | ✓ | | | |
| LDC11 | SB-20-S-27.5-190725 | 1114323 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC11 | SB-14-S-20.0-190724 | 1114324 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC11 | SB-14-S-27.5-190724 | 1114325 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC11 | SB-12-S-6.0-190723 | 1114326 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC11 | SB-12-S-14.5-190724 | 1114327 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC11 | SB-12-S-20.0-190724 | 1114328 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC11 | QA-T-190725 | 1114329 | ✓ | | | | | | | ✓ | | | |
| LDC12 | SB-10-S-27.5-190724 | 1114330 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC12 | SB-10-S-20.0-190724 | 1114331 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC12 | SB-10-S-14.0-190724 | 1114332 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC12 | SB-10-S-8.0-190724 | 1114333 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC12 | QA-T-190724 | 1114334 | ✓ | | | | | | | ✓ | | | |
| LDC13 | SB-17-S-8.0-190723 | 1114335 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC13 | SB-17-S-14.5-190723 | 1114336 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ | ✓ | |
| LDC13 | SB-17-S-19.5-190723 | 1114337 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC13 | QA-T-190723 | 1114338 | ✓ | | | | | | | ✓ | | | |
| LDC13 | SB-17-S-24.0-190723 | 1114339 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC13 | SB-17-S-29.5-190723 | 1114340 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |
| LDC14 | USTSOUTH-CONTENTS-W-190725 | 1115414 | ✓ | | ✓ | ✓ | ✓ | | ✓ | ✓ | ✓ | ✓ | ✓ |
| LDC14 | USTSOUTH-CONTENTS-W-190725 | 1115415 | | | | | | ✓ | | | | | |
| LDC14 | USTSOUTH-CONTENTS-W-190725 | 1115416 | | ✓ | | | | | | | | | |
| LDC14 | SB-12-S-27.5-190724 | 1115417 | ✓ | | | ✓ | | | | ✓ | ✓ | ✓ | |

Sample Index
Newman's Chevron

| SDG | Sample ID | Lab ID | VOC BTEX 8260C | TCLP VOC | EDB 8011 | SVOC 8270D | PAH 8270SIM | TCLP SVOC | PCB 8082A | TPH-Gx | TPH-Dx | Metals 6010D | Mercury 7470A |
|-------|---------------|---------|----------------------|-------------|-------------|---------------|----------------|--------------|--------------|--------|--------|-----------------|------------------|
| LDC14 | QA-T-190725 | 1115418 | ✓ | | | | | | | ✓ | | | |
| LDC14 | QA-2-O-190724 | 1115419 | ✓ | | | | | | | ✓ | | | |
| LDC14 | QA-1-O-190723 | 1115420 | ✓ | | | | | | | ✓ | | | |

DATA VALIDATION REPORT
Newman's Chevron
Volatile Organic Compounds by SW8260C

This report documents the review of analytical data from the analysis of soil samples, one grab water, and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Eurofins Lancaster, Lancaster, Pennsylvania. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|-------|--|------------------|
| LDC06 | 4 Soil, 1 Trip Blank | Stage 2B |
| LDC07 | 6 Soil, 1 Trip Blank | Stage 2B |
| LDC08 | 6 Soil, 1 Trip Blank | Stage 2B |
| LDC09 | 6 Soil, 1 Trip Blank | Stage 2B |
| LDC10 | 5 Soil, 1 Trip Blank | Stage 2B |
| LDC11 | 6 Soil, 1 Trip Blank | Stage 2B |
| LDC12 | 4 Soil, 1 Trip Blank | Stage 2B |
| LDC13 | 5 Soil, 1 Trip Blank | Stage 2B |
| LDC14 | 1 Grab Water, 1 Soil, 1 Trip Blank, 2 Equipment Blank | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

The laboratory changed the sample IDs from those noted on the chains-of-custody, e.g. "-S-8.0-" was changed to "-8.0-S-". Also, the date segment was changed from a mmddyy format to a yymmdd format. This was done to make the sample naming convention consistent with the first round of sampling.

The field blank IDs were also changed to agree with first round naming conventions. See the field blank section for a comparison of IDs.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|---|
| 2 | Sample Receipt, Preservation, and Holding Times | 1 | Laboratory Control Samples (LCS/LCSD) |
| ✓ | GC/MS Instrument Performance (Tune) | ✓ | Matrix Spike/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Initial Calibration (ICAL) | 1 | Field Duplicates |
| ✓ | Continuing Calibration (CCAL) | 2 | Internal Standards |
| 2 | Laboratory Blanks | ✓ | Target Analyte List |
| 1 | Field Blanks | ✓ | Reporting Limits |
| ✓ | Surrogate Compounds | ✓ | Reported Results |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2-6°C. Several coolers were received at temperatures less than the lower control limit, ranging from 0.6C to 1.8C. These outliers did not impact data quality; no data were qualified.

SDG LDC08: For Sample SB-19-8.0-S-072519, the collection time on the COC of 12:05 was 12:15 on the label; the time noted on the COC was used for login.

SDG LDC10: Sample SB-11-20.0-S-072419 was analyzed after the 14 day holding time; associated sample results were estimated (J/UJ-1).

SDG LDC14: Samples USTSOUTH-CONTENTS-W-190725 and ER-2-072419 were noted to have headspace at the time of analysis. There were no target analytes detected in these samples; results were estimated (UJ-1).

Laboratory Blanks

SDGs LDC10, LDC11, LDC12, LDC14: Toluene was detected in the method blank for batch X192191AA. Toluene results less in the associated samples that were less than the action level of 5x the blank concentration were qualified as not detected (U-7).

Field Blanks

The following field blanks were submitted. No target analytes were detected in these blanks.

| SDG | CHAIN OF CUSTODY ID | LAB LOG-IN ID |
|-------|---------------------|---------------|
| LDC06 | TB-4-072419 | QA-T-190724 |
| LDC07 | TB-5-072419 | QA-T-190724 |
| LDC08 | TB-6-072519 | QA-T-190725 |
| LDC09 | TB-7-072519 | QA-T-190725 |
| LDC10 | TB-3-072419 | QA-T-190724 |
| LDC11 | TB-8-072519 | QA-T-190725 |
| LDC12 | TB-2-072419 | QA-T-190724 |
| LDC13 | TB-1-072319 | QA-T-190723 |
| LDC14 | TB-1-072519 | QA-T-190725 |
| LDC14 | ER-2-072419 | QA-2-O-190724 |
| LDC14 | ER-1-072319 | QA-1-O-190723 |

Laboratory Control Samples

SDGs LDC10, LDC11, LDC12, LDC14: The percent recovery (%R) value for the laboratory control sample (LCS) associated with batch X192191AA was greater than the upper control limit but was in control in the associated laboratory control sample duplicate sample (LCSD). No data were qualified based on the single outlier single outlier.

Field Duplicates

SDG LDC08: One set of field duplicates were submitted: SB-17-S-19.5-190723 (LDC13) & DUP-1-190723 (LDC08). All acceptance criteria were met.

SDG LDC09: One set of field duplicates were submitted: SB-19-S-8.0-190725 (LDC08) & DUP-2-190725 (LDC09). All acceptance criteria were met.

Internal Standards

Internal standards were added to all samples as required by the method. With the following exceptions, the internal standard responses were within the method specified control limits of 50%-200% of the response in the associated calibration verification standard.

SDG LDC07: For Sample SB-15-8.0-S-190723, all internal standard recoveries were less than the lower control limit; associated sample results were estimated (J/UJ-19).

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate, LCS/LCSD, and MS/MSD recovery values and precision were acceptable as demonstrated by the LCS/LCSD, MS/MSD, and field duplicate RPD values.

Detection limits were elevated based on method blank contamination. Results were estimated based on holding time outliers and internal standard recovery outliers.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Newman's Chevron
Naphthalene by SW8270D and
Polycyclic Aromatic Hydrocarbons by 8270 & 8270D-SIM

This report documents the review of analytical data from the analysis of soil samples, one grab water, sample, and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Eurofins Lancaster, Lancaster, Pennsylvania. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|-------|----------------------|------------------|
| LDC06 | 4 Soil | Stage 2B |
| LDC07 | 6 Soil | Stage 2B |
| LDC08 | 6 Soil | Stage 2B |
| LDC09 | 6 Soil | Stage 2B |
| LDC10 | 5 Soil | Stage 2B |
| LDC11 | 6 Soil | Stage 2B |
| LDC12 | 4 Soil | Stage 2B |
| LDC13 | 5 Soil | Stage 2B |
| LDC14 | 1 Grab Water, 1 Soil | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

The laboratory changed the sample IDs from those noted on the chains-of-custody, e.g. "-S-8.0-" was changed to "-8.0-S-". Also, the date segment was changed from a mmddy format to a yymmdd format. This was done to make the sample naming convention consistent with the first round of sampling.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|---|
| 2 | Sample Receipt, Preservation, and Holding Times | 2 | Laboratory Control Samples (LCS/LCSD) |
| ✓ | GC/MS Instrument Performance (Tune) | ✓ | Matrix Spike/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Initial Calibration (ICAL) | ✓ | Internal Standards |
| ✓ | Continuing Calibration (CCAL) | 1 | Field Duplicates |
| ✓ | Laboratory Blanks | ✓ | Target Analyte List |
| 1 | Field Blanks | ✓ | Reporting Limits |
| ✓ | Surrogate Compounds | ✓ | Reported Results |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2-6°C. Several coolers were received at temperatures less than the lower control limit, ranging from 0.6C to 1.8C. These outliers did not impact data quality; no data were qualified.

SDG LDC08: For Sample SB-19-8.0-S-072519, the collection time on the COC of 12:05 was 12:15 on the label; the time noted on the COC was used for login.

SDG LDC14: Sample USTSouth-contents-072519 was extracted past the 7 day hold time for water samples; associated sample results were estimated (UJ-1).

Field Blanks

No field blanks were submitted.

Laboratory Control Samples

Laboratory control samples and laboratory control duplicate samples (LCS/LCSD) were analyzed at the required frequency of one per batch of 20 or fewer samples. With the following exceptions, all spike recoveries (%R) and relative percent difference (RPD) values were within the laboratory control limits.

SDG LDC14: For the TCLP extraction sample, the RPD values for 1,4-dichlorobenzene, 2,4-dinitrotoluene, hexachlorobenzene, hexachloroethane, and nitrobenzene were greater than the control limit. These analytes were not detected in the field sample; no qualification of data was necessary. The LCS %R value for 2,4-dinitrotoluene was less than the lower control limit but was in control in the associated LCSD. No data were qualified based on the single outlier.

For the water extraction batch, the LCS/LCSD %R values for naphthalene were less than the lower control limit. the associated sample result was estimated (UJ-10L).

Field Duplicates

SDG LDC08: One set of field duplicates were submitted: SB-17-S-19.5-190723 (LDC13) & DUP-1-190723 (LDC08). All acceptance criteria were met.

SDG LDC09: One set of field duplicates were submitted: SB-19-S-8.0-190725 (LDC08) & DUP-2-190725 (LDC09). All acceptance criteria were met.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate, LCS/LCSD, and matrix spike/matrix spike duplicate (MS/MSD) percent recovery values. Precision was also acceptable as demonstrated by the LCS/LCSD, MS/MSD, and field duplicate relative percent difference values.

Data were estimated due to an exceeded holding time and LCS/LCSD recovery outliers.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT

Newman's Chevron

PCB Aroclors by SW846 Method 8082

This report documents the review of analytical data from the analysis of one soil sample, one grab water samples, and the associated laboratory quality control (QC) samples. Eurofins Lancaster, Lancaster, Pennsylvania, analyzed the samples. Refer to the **SAMPLE INDEX** for a list of the individual samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|-------|-------------------|------------------|
| LDC13 | 1 Soil | EPA Stage 2B |
| LDC14 | 1 Grab Water | EPA Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

The laboratory changed the sample IDs from those noted on the chains-of-custody, e.g. "-S-8.0-" was changed to "-8.0-S-". Also, the date segment was changed from a mmddyy format to a yymmdd format. This was done to make the sample naming convention consistent with the first round of sampling.

VERIFICATION OF EDD TO LABORATORY REPORT

Sample results and related quality control data were received as an electronic data deliverable (EDD) and laboratory report. The EDD was verified against the laboratory report; no errors were found.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|--|
| 1 | Sample Receipt, Preservation, and Holding Times | 1 | Matrix Spikes/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Initial Calibration (ICAL) | 1 | Field Duplicates |
| ✓ | Continuing Calibration (CCAL) | ✓ | Target Analyte List |
| ✓ | Laboratory Blanks | ✓ | Reporting Limits |
| 1 | Field Blanks | ✓ | Compound Identification |
| ✓ | Surrogate Compounds | ✓ | Reported Results |
| ✓ | Laboratory Control Samples (LCS/LCSD) | | |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2-6°C. The sample coolers were received at temperatures less than the lower control limit, at 0.8°C and 1.8°C. These outliers did not impact data quality; no data were qualified.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicates were not analyzed. Laboratory precision and accuracy were evaluated using the surrogate and laboratory control sample/laboratory control sample duplicate (LCS/LCSD) results.

Field Blanks

No field blanks were submitted.

Field Duplicates

No field duplicates were submitted.

OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory performed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate and LCS/LCSD recoveries. Precision was also acceptable as demonstrated by the LCS/LCSD relative percent difference values.

No data were qualified for any reason. All data, as reported, are acceptable for use.

DATA VALIDATION REPORT

Newman's Chevron

Ethylene Dibromide by SW8011

This report documents the review of analytical data from the analysis of a grab water sample and the associated laboratory quality control (QC) samples. The analysis was performed by Eurofins Lancaster, Lancaster, Pennsylvania. Refer to the **Sample Index** for a sample ID cross reference.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|-------|-------------------|------------------|
| LDC14 | 1 Grab Water | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|--|
| 1 | Sample Receipt, Preservation, and Holding Times | ✓ | Laboratory Control Samples (LCS/LCSD) |
| ✓ | Initial Calibration (ICAL) | 1 | Matrix Spikes/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Continuing Calibration (CCAL) | 1 | Field Duplicates |
| ✓ | Laboratory Blanks | ✓ | Reporting Limits |
| 1 | Field Blanks | ✓ | Reported Results |
| ✓ | Surrogate Compounds | | |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2-6°C. The sample cooler temperature was less than the lower control limit, at 0.8°C. This outlier did not impact data quality; no data were qualified.

Field Blanks

No field blanks were submitted.

Matrix Spike/Matrix Spike Duplicates

Matrix spikes were not analyzed. Laboratory accuracy and precision were evaluated using the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) results.

Field Duplicates

No field duplicates were submitted.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate and LCS/LCSD recovery values and precision was acceptable as demonstrated by the LCS/LCSD relative percent difference values.

No data were qualified for any reason. All data, as reported, are acceptable for use.

DATA VALIDATION REPORT

Newman's Chevron

Gasoline Range Organics by NWTPH-Gx

This report documents the review of analytical data from the analysis of soil samples, one grab water sample, and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Eurofins Lancaster, Lancaster, Pennsylvania. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|-------|--|------------------|
| LDC06 | 4 Soil, 1 Trip Blank | Stage 2B |
| LDC07 | 6 Soil, 1 Trip Blank | Stage 2B |
| LDC08 | 6 Soil, 1 Trip Blank | Stage 2B |
| LDC09 | 6 Soil, 1 Trip Blank | Stage 2B |
| LDC10 | 5 Soil, 1 Trip Blank | Stage 2B |
| LDC11 | 6 Soil, 1 Trip Blank | Stage 2B |
| LDC12 | 4 Soil, 1 Trip Blank | Stage 2B |
| LDC13 | 5 Soil, 1 Trip Blank | Stage 2B |
| LDC14 | 1 Grab Water, 1 Soil, 1 Trip Blank, 2 Equipment Blank | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

The laboratory changed the sample IDs from those noted on the chains-of-custody, e.g. "-S-8.0-" was changed to "-8.0-S-". Also, the date segment was changed from a mmddy format to a yymmdd format. This was done to make the sample naming convention consistent with the first round of sampling.

The field blank IDs were also changed to agree with first round naming conventions. See the field blank section for a comparison of IDs.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---------------------------------------|---|---|
| 1 | Sample Preservation and Holding Times | ✓ | Laboratory Control Samples (LCS/LCSD) |
| ✓ | Initial Calibration (ICAL) | 1 | Matrix Spike/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Continuing Calibration (CCAL) | 1 | Field Duplicates |
| ✓ | Laboratory Blanks | ✓ | Reporting Limits |
| 1 | Field Blanks | ✓ | Reported Results |
| ✓ | Surrogate Compounds | | |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2-6°C. Several coolers were received at temperatures less than the lower control limit, ranging from 0.6C to 1.8C. These outliers did not impact data quality; no data were qualified.

SDG LDC08: For Sample SB-19-8.0-S-072519, the collection time on the COC of 12:05 was 12:15 on the label; the time noted on the COC was used for login.

Field Blanks

The following field blanks were submitted. No target analytes were detected in these blanks.

| SDG | CHAIN OF CUSTODY ID | LAB LOG-IN ID |
|-------|---------------------|---------------|
| LDC06 | TB-4-072419 | QA-T-190724 |
| LDC07 | TB-5-072419 | QA-T-190724 |
| LDC08 | TB-6-072519 | QA-T-190725 |
| LDC09 | TB-7-072519 | QA-T-190725 |
| LDC10 | TB-3-072419 | QA-T-190724 |
| LDC11 | TB-8-072519 | QA-T-190725 |
| LDC12 | TB-2-072419 | QA-T-190725 |
| LDC13 | TB-1-072319 | QA-T-190723 |
| LDC14 | TB-1-072519 | QA-T-190725 |
| LDC14 | ER-2-072419 | QA-2-O-190724 |
| LDC14 | ER-1-072319 | QA-1-O-190723 |

Matrix Spike/Matrix Spike Duplicates

Matrix spikes were not analyzed. Precision and accuracy were evaluated using the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) results.

Field Duplicates

SDG LDC08: One set of field duplicates were submitted: SB-17-S-19.5-190723 (LDC13) & DUP-1-190723 (LDC08). All acceptance criteria were met.

SDG LDC09: One set of field duplicates were submitted: SB-19-S-8.0-190725 (LDC08) & DUP-2-190725 (LDC09). All acceptance criteria were met.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate and LCS/LCSD percent recovery values. Precision was also acceptable as demonstrated by the LCS/LCSD and field duplicate RPD values.

No data were qualified for any reason. All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Newman's Chevron
Diesel Range Organics (extended) by NWTPH-Dx

This report documents the review of analytical data from the analysis of soil samples, one grab water sample, and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Eurofins Lancaster, Lancaster, Pennsylvania. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|-------|----------------------|------------------|
| LDC06 | 4 Soil | Stage 2B |
| LDC07 | 6 Soil | Stage 2B |
| LDC08 | 6 Soil | Stage 2B |
| LDC09 | 6 Soil | Stage 2B |
| LDC10 | 5 Soil | Stage 2B |
| LDC11 | 6 Soil | Stage 2B |
| LDC12 | 4 Soil | Stage 2B |
| LDC13 | 5 Soil | Stage 2B |
| LDC14 | 1 Grab Water, 1 Soil | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

The laboratory changed the sample IDs from those noted on the chains-of-custody, e.g. "-S-8.0-" was changed to "-8.0-S-". Also, the date segment was changed from a mmddyy format to a yymmdd format. This was done to make the sample naming convention consistent with the first round of sampling.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|---------------------------------------|
| 1 | Sample Receipt, Preservation, and Holding Times | 2 | Laboratory Control Samples (LCS/LCSD) |
| ✓ | Initial Calibration (ICAL) | 2 | Matrix Spikes |
| ✓ | Continuing Calibration (CCAL) | 2 | Laboratory Duplicates |
| 1 | Laboratory Blanks | 2 | Field Duplicates |
| 1 | Field Blanks | ✓ | Reporting Limits |
| ✓ | Surrogate Compounds | ✓ | Reported Results |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2-6°C. Several coolers were received at temperatures less than the lower control limit, ranging from 0.6C to 1.8C. These outliers did not impact data quality; no data were qualified.

SDG LDC08: For Sample SB-19-8.0-S-072519, the collection time on the COC of 12:05 was 12:15 on the label; the time noted on the COC was used for login.

Laboratory Blanks

SDGs LDC06, LDC07: Heavy range organics C24-C40 (RRO) were detected in the method blank for batch 192140026A. RRO was not detected in the associated samples; no data were qualified.

Field Blanks

No field blanks were submitted.

Matrix Spikes

SDG LDC11: For batch 192190015A, the matrix spike analysis was performed using Sample SB-14-20.0-S-072419. The MS percent recovery (%R) value for DRO was less than the lower control limit; the result in the parent sample was estimated (J-8L).

Laboratory Control Samples

Laboratory control samples/laboratory control duplicate samples (LCS/LCSD) were analyzed at the required frequency of one per batch of 20 or fewer samples. With the following exception, all recoveries and relative percent difference (RPD) were within the control limits.

SDG LDC14: The RPD for DRO was greater than the control limit; the associated sample result was estimated (J-9).

Laboratory Duplicates

The duplicate relative percent difference control limit is 20% for results greater than 5x the reporting limit (RL). For results less than 5X the RL, the difference between the sample and duplicate must be less than 2x the RL.

SDG LDC08: For batch 192140030A, the laboratory duplicate analysis was performed using Sample DUP-1-SD-190723. The RPD value for DRO was greater than the control limit of 20%. The DRO result in the parent sample was estimated (J-9).

SDG LDC10: For batch 192180010A, the laboratory duplicate analysis was performed using Sample SB-11-20.0-S-072419. For DRO, the difference was greater than the control limit; the result in the parent sample was estimated (J-9).

Field Duplicates

SDG LDC08: One set of field duplicates were submitted: SB-17-S-19.5-190723 (LDC13) & DUP-1-190723 (LDC08). The RPD value for DRO was greater than the control limit; the associated parent and duplicate results were estimated (J-9).

SDG LDC09: One set of field duplicates were submitted: SB-19-S-8.0-190725 (LDC08) & DUP-2-190725 (LDC09). All acceptance criteria were met.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate, LCS/LCSD, and matrix spike percent recovery values and precision were acceptable as demonstrated by the LCS/LCSD, laboratory duplicate, and field duplicate RPD values.

Results were estimated due to matrix spike recovery, LCS/LCSD RPD, laboratory duplicate RPD, and field duplicate RPD outliers.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT

Newman's Chevron

Metals by SW6010D, Mercury by SW7470A and Moisture by SM2540G

This report documents the review of analytical data from the analyses of soil samples, one grab water sample, and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Eurofins Lancaster, Lancaster, Pennsylvania. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES AND MATRIX | VALIDATION LEVEL |
|-------|------------------------------|------------------|
| LDC06 | 4 Soil | Stage 2B |
| LDC07 | 6 Soil | Stage 2B |
| LDC08 | 6 Soil | Stage 2B |
| LDC09 | 6 Soil | Stage 2B |
| LDC10 | 5 Soil | Stage 2B |
| LDC11 | 6 Soil | Stage 2B |
| LDC12 | 4 Soil | Stage 2B |
| LDC13 | 5 Soil | Stage 2B |
| LDC14 | 1 Grab Water, 1 Soil | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

The laboratory changed the sample IDs from those noted on the chains-of-custody, e.g. "-S-8.0-" was changed to "-8.0-S-". Also, the date segment was changed from a mmddyy format to a yymmdd format. This was done to make the sample naming convention consistent with the first round of sampling.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|---|
| 1 | Sample Receipt, Preservation, and Holding Times | ✓ | Matrix Spike/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Initial Calibration | ✓ | Laboratory Duplicates |
| ✓ | Calibration Verification | ✓ | Interference Check Samples |
| ✓ | Reporting Limit Standards | ✓ | Serial Dilutions |
| 1 | Laboratory Blanks | 2 | Field Duplicates |
| 1 | Field Blanks | ✓ | Reporting Limits |
| ✓ | Laboratory Control Samples (LCS) | ✓ | Reported Results |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2-6°C. Several coolers were received at temperatures less than the lower control limit, ranging from 0.6C to 1.8C. These outliers did not impact data quality; no data were qualified.

SDG LDC08: For Sample SB-19-8.0-S-072519, the collection time on the COC of 12:05 was 12:15 on the label; the time noted on the COC was used for login.

Laboratory Blanks

SDGs LDC06, LDC09: The instrument blank analyzed on 8/7/19 had a detected value for lead, however, the associated sample results were not detected or were greater than the 5x action level; no qualification was required.

SDGs LDC08, LDC09, LDC10: The instrument blank analyzed on 8/8/19 had a detected value for lead, however, the associated sample results were greater than the 5x action level; no qualification was required.

SDG LDC14: Arsenic was detected in the instrument blank analyzed on 8/7/19. This analyte was not detected in the associated sample; no qualification was necessary.

Field Blanks

No field blanks were submitted.

Field Duplicates

The field duplicate RPD control limit is 20% for results greater than 5x the reporting limit (RL)

SDG LDC08: One set of field duplicates were submitted: SB-17-S-19.5-190723 (LDC13) & DUP-1-190723 (LDC08). All acceptance criteria were met.

SDG LDC09: One set of field duplicates were submitted: SB-19-S-8.0-190725 (LDC08) & DUP-2-190725 (LDC09). The RPD value for lead was greater than the control limit; the associated parent and duplicate sample results are estimated (J-9).

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical methods. Accuracy was acceptable, as demonstrated by the laboratory control sample and matrix spike/matrix spike duplicate (MS/MSD) recoveries. Precision was also acceptable as demonstrated by the MS/MSD, laboratory duplicate, and field duplicate RPD values.

No data was qualified for any reason. All data, as reported, are acceptable for use.



APPENDIX A

DATA QUALIFIER DEFINITIONS REASON CODES AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES **Based on National Functional Guidelines**

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

| | |
|----|---|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. |
| NJ | The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents the approximate concentration. |
| UJ | The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified. |

The following is an EcoChem qualifier that may also be assigned during the data review process:

| | |
|-----|---|
| DNR | Do not report; a more appropriate result is reported from another analysis or dilution. |
|-----|---|

DATA QUALIFIER REASON CODES

| Group | Code | Reason for Qualification |
|---------------------------------|------|---|
| Sample Handling | 1 | Improper Sample Handling or Sample Preservation (i.e., headspace, cooler temperature, pH, summa canister pressure); Exceeded Holding Times |
| Instrument Performance | 24 | Instrument Performance (i.e., tune, resolution, retention time window, endrin breakdown, lock-mass) |
| | 5A | Initial Calibration (RF, %RSD, r^2) |
| | 5B | Calibration Verification (CCV, CCAL; RF, %D, %R) Use bias flags (H,L) ¹ where appropriate |
| | 5C | Initial Calibration Verification (ICV %D, %R) Use bias flags (H,L) ¹ where appropriate |
| Blank Contamination | 6 | Field Blank Contamination (Equipment Rinsate, Trip Blank, etc.) |
| | 7 | Lab Blank Contamination (i.e., method blank, instrument blank, etc.) Use low bias flag (L) ¹ for negative instrument blanks |
| Precision and Accuracy | 8 | Matrix Spike (MS and/or MSD) Recoveries Use bias flags (H,L) ¹ where appropriate |
| | 9 | Precision (all replicates: LCS/LCSD, MS/MSD, Lab Replicate, Field Replicate) |
| | 10 | Laboratory Control Sample Recoveries (a.k.a. Blank Spikes) Use bias flags (H,L) ¹ where appropriate |
| | 12 | Reference Material Use bias flags (H,L) ¹ where appropriate |
| | 13 | Surrogate Spike Recoveries (a.k.a. labeled compounds, recovery standards) Use bias flags (H,L) ¹ where appropriate |
| Interferences | 16 | ICP/ICP-MS Serial Dilution Percent Difference |
| | 17 | ICP/ICP-MS Interference Check Standard Recovery Use bias flags (H,L) ¹ where appropriate |
| | 19 | Internal Standard Performance (i.e., area, retention time, recovery) |
| | 22 | Elevated Detection Limit due to Interference (i.e., chemical and/or matrix) |
| | 23 | Bias from Matrix Interference (i.e. diphenyl ether, PCB/pesticides) |
| Identification and Quantitation | 2 | Chromatographic pattern in sample does not match pattern of calibration standard |
| | 3 | 2 nd column confirmation (RPD or %D) |
| | 4 | Tentatively Identified Compound (TIC) (associated with NJ only) |
| | 20 | Calibration Range or Linear Range Exceeded |
| | 25 | Compound Identification (i.e., ion ratio, retention time, relative abundance, etc.) |
| Miscellaneous | 11 | A more appropriate result is reported (multiple reported analyses i.e., dilutions, re-extractions, etc. Associated with "R" and "DNR" only) |
| | 14 | Other (See DV report for details) |
| | 26 | Method QC information not provided |

¹H = high bias indicated

L = low bias indicated

**Volatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8260C)**

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|--|---|--|-----------------------|--|
| Sample Handling | | | | | |
| Cooler/Storage Temperature Preservation | 4°C±2°C Aqueous: HCl to pH < 2 Current SW846 criterion is ≤ 6° C ⁽³⁾ | NFG ⁽¹⁾ Method ⁽³⁾ | If required by project: J (pos)/UJ (ND) if greater than 6° C | 1 | Use PJ for temp outliers; see TM20 if pH ≤ 2, reject 2-chloroethyl vinyl ether (R-1) some projects may require methanol preserved soils/seds |
| Holding Time | Aqueous: 14 days preserved 7 Days: unpreserved Solid: 14 Days | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos)/UJ (ND) if HT exceeded J (pos)/R (ND) if gross exceedance (> 2x HT) | 1 | Gross exceedance = > 2x HT, as per 1999 NFG |
| Instrument Performance | | | | | |
| Tuning | BFB Beginning of each 12 hour period Use method or project acceptance criteria | NFG ⁽¹⁾ Method ⁽³⁾ | R (pos/ND) all analytes in all samples associated with the tune | 24 | |
| Initial Calibration Sensitivity | Minimum 5 standards RRF ≥ 0.05 except: RRF ≥ 0.01 poor responders * RRF ≥ 0.005 1,4-dioxane | NFG ⁽¹⁾ Method ⁽³⁾ | Use PJ to qualify J (pos)/UJ (ND) | 5A | TM-06 EcoChem Policy for the Evaluation and Qualification of GCMS Instrument Performance PJ - no action if response is stable (ICAL RSD and CCAL %D acceptable) |
| Initial Calibration Stability | %RSD ≤ 20% except: %RSD ≤ 40% poor responders * %RSD ≤ 50% 1,4-dioxane | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if %RSD > limit | 5A | |
| Initial Calibration Verification | Second source analyzed immediately after ICAL %R 70% - 130% | Method ⁽³⁾ | J (pos) %R > UCL J (pos)/UJ (ND) %R < LCL | 5A (H,L) ⁴ | QAPP may have overriding accuracy limits. |
| Continuing Calibration Sensitivity | RRF ≥ 0.05 except: RRF ≥ 0.01 poor responders * RRF ≥ 0.005 1,4-dioxane | NFG ⁽¹⁾ Method ⁽³⁾ | Use PJ to qualify J (pos)/UJ (ND) | 5B | see ICAL RRF guidance |
| Continuing Calibration Stability | %D ≤ 25% except: %D ≤ 40% poor responders * %D ≤ 50% 1,4-dioxane | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) - %D > control limit (high bias) J (pos)/UJ (ND) - %D < -control limit (low bias) | 5B (H,L) ⁴ | |

**Volatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8260C)**

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--------------------------------------|--|---|---|-----------------------|--|
| Blank Contamination | | | | | |
| Method Blank (MB) | <u>MB: One per matrix per batch (of ≤ 20 samples)</u> No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U (pos) if result is < 5X or 10X action level | 7 | 10X action level for methylene chloride, acetone, & 2-butanone. 5X for all other target analytes Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review TB, qualify as needed #3 - Review FB, qualify as needed Note: Actions as per NFG 1999 |
| | No TICs present | | R (pos) TICs using 10X rule | | |
| Trip Blank (TB) | No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U (pos) if result is < 5X or 10X action level | 6 | |
| Field Blank (FB) | No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U (pos) if result is < 5X or 10X action level | 6 | |
| Precision and Accuracy | | | | | |
| LCS/LCSD (recovery) | One per matrix per batch (of ≤ 20 samples) LCSD not required by NFG or method Use method acceptance criteria/laboratory limits | Method ⁽³⁾ | J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND)%R < 10% | 10 (H,L) ⁴ | No action if only one spike %R is outside criteria when LCSD is analyzed, unless one recovery is <10%. QAPP may have overriding accuracy limits. |
| LCS/LCSD RPD | If LCSD analyzed RPD < lab limits | Method ⁽³⁾ | J (pos) | 9 | Qualify all associated samples. QAPP may have overriding precision limits. |
| Reference Material (RM, SRM, or CRM) | Result ±20% of the 95% confidence interval of the true value for analytes | EcoChem standard policy | J (pos)/UJ (ND) if < LCL J (pos) if > UCL | 12 (H,L) ⁴ | QAPP may have overriding accuracy limits. Some manufacturers may have different RM control limits |
| Surrogates | Added to all samples Within method/laboratory control limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if %R >UCL J (pos)/UJ (ND) if %R <LCL J (pos)/R (ND) if <10% | 13 (H,L) ⁴ | No action if there are 4+ surrogates and only 1 outlier Qualify all compounds if qualification is required. |
| Internal Standards | Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if > 200% J (pos)/UJ (ND) if < 50% J (pos)/R (ND) if < 25% if RT >30 seconds use PJ | 19 | Qualify compounds quantified using particular internal standard |

**Volatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8260C)**

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|---|---|----------------------|---|
| Precision and Accuracy (continued) | | | | | |
| MS/MSD (recovery) | One per matrix per batch (of ≤ 20 samples) Use method acceptance criteria/laboratory limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) %R > UCL J (pos)/UJ (ND) if both %R < LCL J (pos)/R (ND) if both %R < 10% J (pos)/UJ (ND) if one > UCL & one < LCL, with no bias | 8 (H,L) ⁴ | No action if only one spike %R is outside criteria. No action if parent concentration is >4x the amount spiked. Qualify parent sample only. |
| MS/MSD (RPD) | One per matrix per batch (of ≤ 20 samples) Use method acceptance criteria/laboratory limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) If RPD > control limit | 9 | Qualify parent sample only |
| Field Duplicates | Solids: RPD < 50% OR difference < 2X RL (for results < 5X RL) Aqueous: RPD < 35% OR difference < 1X RL (for results < 5X RL) | EcoChem standard policy | J (pos)/UJ (ND) Qualify only parent and field duplicate samples | 9 | Use project limits if specified |
| Compound Identification and Quantitation | | | | | |
| Retention Time Relative Ion Intensities | RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample | NFG ⁽¹⁾ Method ⁽³⁾ | U (pos) if identification criteria not met | 25 | |
| TICs | Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification | NFG ⁽¹⁾ Method ⁽³⁾ | NJ TIC R (pos) if common laboratory contaminants | 4 | Common laboratory contaminants: aldol condensation products, solvent preservatives, and reagent contaminants |
| Calibration Range | Results greater than highest calibration standard | EcoChem standard policy | Qualify J (pos) | 20 | If result from dilution analysis is not reported. |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 EcoChem Policy for Rejection/Selection Process for Multiple Results |

¹ National Functional Guidelines for Organic Data Review, June, 2008² National Functional Guidelines for Organic Data Review, Oct, 1999³ Method SW846 8260C Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)⁴ NFG 2013 suggests using "+ / -" to indicate bias; EcoChem has chosen "H" = high bias indicated; "L" = low bias indicated.

* "Poor responder" compounds: Acetone, 2-butanone, carbon disulfide, chloroethane, chloromethane, cyclohexane, 1,2-dibromoethane, dichlorodifluoromethane, cis-1,2-dichloroethene, 1,2-dichloropropane, 1,2-dibromo-3-chloropropane, 2-hexanone, isopropylbenzene, methyl acetate, methylene chloride, methylcyclohexane, 4-methyl-2-pentanone, methyl tert-butyl ether, trans-1,2-dichloroethene, trichlorofluoromethane, 1,1,2-trichloro-1,2,2-trifluoroethane **criterion is 0.010 RRF**; 1,4-dioxane RRF **criterion is 0.005**.

(pos): Positive Result

(ND): Non-detect

DATA VALIDATION CRITERIA

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
 (Based on NFG 1999 & 2008 and SW-846 Method 8270D)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|---|--|-----------------------|--|
| Sample Handling | | | | | |
| Cooler/Storage Temperature Preservation | 4°C±2°C sediment/tissues may require storage at -20°C | NFG ⁽¹⁾ Method ⁽³⁾ | If required by project: J (pos)/UJ (ND) if greater than 6° C | 1 | Use PJ for temp outliers; see TM20 Current SW846 criterion is ≤ 6° C ⁽³⁾ |
| Holding Time | Extraction Aqueous: 7 days from collection Extraction Solid: 14 days from collection Analysis (all matrices): 40 days from extraction Holding time may be extended to 1 year for frozen sediments/tissues | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos)/UJ (ND) if HT exceeded J (pos)/R (ND) if gross exceedance (> 2x HT) | 1 | Gross exceedance = > 2x HT, as per 1999 NFG |
| Instrument Performance | | | | | |
| Tuning | DFTPP Beginning of each 12 hour period Use method or project acceptance criteria | NFG ⁽¹⁾ Method ⁽³⁾ | R (pos/ND) all analytes in all samples associated with the tune | 24 | |
| Initial Calibration Sensitivity | RRF ≥ 0.05 except: RRF ≥ 0.01 poor responders * | NFG ⁽¹⁾ Method ⁽³⁾ | Use PJ to qualify J (pos)/UJ (ND) | 5A | TM-06 EcoChem Policy for the Evaluation and Qualification of GCMS Instrument Performance PJ - no action if response is stable (ICAL RSD and CCAL %D acceptable) |
| Initial Calibration Stability | Minimum 5 standards %RSD ≤ 20.0% except: %RSD ≤ 40.0% poor responders * or co-efficient of determination (r ²) > 0.99 | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if %RSD > limit or r ² value <0.99 | 5A | |
| Initial Calibration Verification Check | Prepared from second source; analyze after each ICAL Percent recovery limits = 70-130% | Method ⁽³⁾ | J (pos) %R > UCL J (pos)/UJ (ND) %R < LCL | 5A (H,L) ⁴ | QAPP may have overriding accuracy limits. |

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
 (Based on NFG 1999 & 2008 and SW-846 Method 8270D)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|---|--|-----------------------|--|
| Instrument Performance (continued) | | | | | |
| Continuing Calibration Sensitivity | RRF \geq 0.05 except: RRF \geq 0.01 poor responders * | NFG ⁽¹⁾ Method ⁽³⁾ | Use PJ to qualify J (pos)/UJ (ND) | 5B | see ICAL RRF guidance |
| Continuing Calibration Stability | Prior to sample analysis and every 12 hours %D \leq 25% except: %D \leq 40.0% poor responders * | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) - %D > control limit (high bias) J (pos)/UJ (ND) - %D < -control limit (low bias) | 5B (H,L) ⁴ | |
| Blank Contamination | | | | | |
| Method Blank (MB) | MB: One per matrix per batch of (of \leq 20 samples) No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U(pos) if result is < 5X or 10X action level | 7 | 10X action level applies to phthalates only. 5X for all other target analytes Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review FB , qualify as needed Note: Actions as per 1999 NFG |
| | No TICs present | | R (pos) TICs using 10X rule | 7 | |
| Field Blank (FB) | No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U (pos) if result is < 5X or 10X action level | 6 | |
| Precision and Accuracy | | | | | |
| LCS/LCSD (recovery) | One per matrix per batch (of \leq 20 samples) LCSD not required by NFG or method Use method acceptance criteria/laboratory limits | Method ⁽³⁾ | J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND)%R < 10% | 10 (H,L) ⁴ | No action if only one spike %R is outside criteria when LCSD is analyzed, unless one recovery is <10%. QAPP may have overriding accuracy limits. Qualify all associated samples. |
| LCS/LCSD (RPD) | If LCSD analyzed RPD < lab limits | Method ⁽³⁾ | J (pos) | 9 | Qualify all associated samples. QAPP may have overriding precision limits. |

DATA VALIDATION CRITERIA

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
 (Based on NFG 1999 & 2008 and SW-846 Method 8270D)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|---|---|-----------------------|--|
| Precision and Accuracy (continued) | | | | | |
| Reference Material (RM, SRM, or CRM) | Result \pm 20% of the 95% confidence interval of the true value for analytes | EcoChem standard policy | J (pos)/UJ (ND) if < LCL J (pos) if > UCL | 12 (H,L) ⁴ | QAPP may have overriding accuracy limits. Some manufacturers have different RM control limits |
| MS/MSD (recovery) | One per matrix per batch (of \leq 20 samples) Use method acceptance criteria/laboratory limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) %R > UCL J (pos)/UJ (ND) if both %R < LCL J (pos)/R (ND) if both %R < 10% J (pos)/UJ (ND) if one > UCL & one < LCL, with no bias | 8 (H,L) ⁴ | No action if only one spike %R is outside criteria. No action if parent concentration is >4x the amount spiked. Qualify parent sample only. |
| MS/MSD (RPD) | One per matrix per batch (of \leq 20 samples) Use method acceptance criteria/laboratory limits | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) in parent sample if RPD > CL | 9 | Qualify parent sample only |
| Surrogates | Minimum of 3 acid & 3 base/neutral (B/N) compounds added to all samples Within method control limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND) if %R < 10% | 13 (H,L) ⁴ | Qualify all compounds in associated fraction. Do not qualify if only 1 acid and/or 1 B/N surrogate is out, unless <10%. If 1 surrogate outlier < 10% then J (pos)/R (ND) |
| Internal Standards | Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if > 200% J (pos)/UJ (ND) if < 50% J (pos)/R (ND) if < 25% if RT >30 seconds use PJ | 19 | Qualify compounds quantified using particular internal standard |
| Field Duplicates | Solids: RPD < 50% OR difference < 2X RL (for results < 5X RL) Aqueous: RPD < 35% OR difference < 1X RL (for results < 5X RL) | EcoChem standard policy | J (pos)/UJ (ND) Qualify only parent and field duplicate samples | 9 | Use project limits if specified |

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8270D)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|---|--|-------------|--|
| Compound Identification and Quantitation and Calculation | | | | | |
| Retention times and relative ion intensities | RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample | NFG ⁽¹⁾ Method ⁽³⁾ | U (pos) if identification criteria not met | 25 | |
| TICs | Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification | NFG ⁽¹⁾ Method ⁽³⁾ | NJ the TIC unless: R (pos) common laboratory contaminants | 4 | |
| Calibration Range | Results greater than highest calibration standard | EcoChem standard policy | Qualify J (pos) | 20 | If result from dilution analysis is not reported. |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 EcoChem Policy for Rejection/Selection Process for Multiple Results |

¹ National Functional Guidelines for Organic Data Review, June, 2008

(pos): Positive Result(s)

² National Functional Guidelines for Organic Data Review, October, 1999

(ND): Non-detects

³ Method SW846 8270D Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS), Revision 4, February 2007.

⁴ NFG 2013 suggests using "+ / -" to indicate bias; EcoChem has chosen "H" = high bias indicated; "L" = low bias indicated.

* "Poor responder" compounds: acetophenone, atrazine, benzaldehyde, 1,1'-biphenyl, bis(2-ethylhexyl)phthalate, butylbenzylphthalate, caprolactam, carbazole, 4-chloroaniline, diethylphthalate, di-n-butylphthalate, 3-3'-dichlorobenzidine, dimethylphthalate, 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, di-n-octylphthalate, hexachlorobutadiene, hexachlorocyclopentadiene, 2-nitroaniline, 3-nitroaniline, 4-nitroaniline, 4-nitrophenol, N-nitrosodiphenylamine, 2,2'-oxybis-(1-chloropropane), 1,2,4,5-tetrachlorobenzene use a 0.010 RRF criterion.

PCB Aroclors by GC
(Based on Organic NFG 2008 and SW-846 Method 8082A)

| QC Element | Acceptance Criteria (NFG) | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|--|-------------|---|
| Sample | | | | | |
| Cooler/Storage Temperature Preservation | 4°C ± 2°C Tissue/sediments (may be frozen -20°C) | NFG ⁽¹⁾ Method ⁽²⁾ | If required by project: J (pos)/UJ (ND) if greater than 6° C | 1 | Use Professional Judgment (PJ) to qualify for temperature outlier. Current SW846 criterion is ≤ 6° C ⁽³⁾ |
| Holding Time | Extraction Aqueous: 7 days from collection Extraction Solid: 14 days from collection Extraction Tissue/Sediment (frozen): 1 year Analysis (all matrices): 40 days from extraction | NFG ⁽¹⁾ Method ⁽²⁾ | If required by project: J (pos)/UJ (ND) if ext/analyzed > HT J (pos)/R (ND) if gross exceedance (> 2x HT) | 1 | Use PJ to qualify for holding time outlier. Current SW846 does not have an extraction holding time limit. ⁽³⁾ Gross exceedance > 2x HT, as per NFG 1999 |
| Instrument Performance | | | | | |
| Retention Times | Surrogates: TCMX (± 0.05); DCB (± 0.10) Aroclors (± 0.07) | NFG ⁽¹⁾ | NJ (pos)/R (ND) results for analytes with RT shifts | 24 | |
| Initial Calibration | Minimum 5 point with RSD ≤ 20% OR correlation coefficient (r-value) ≥ 0.995 OR Minimum 6-point with co-efficient of determination (r ² -value) ≥ 0.99 | NFG ⁽¹⁾ Method ⁽⁴⁾ | J (pos) if %RSD greater than 20% OR r-value < 0.995 OR r ² -value < 0.99 | 5A | Refer to TM-01 for additional information. Use bias flags (H,L) ⁽⁵⁾ where appropriate |
| Initial Calibration Verification (ICV) | No NFG criteria. Project specific. | Project | J (pos) if > UCL J (pos)/UJ (ND) if < LCL | 5B | Use bias flags (H,L) where appropriate |
| Continuing Calibration (Prior to each 12 hr. shift) | %D ± 20% | Method ⁽²⁾ | If > 20% (high bias): J (pos) If < 20% (low bias): J (pos)/UJ (ND) | 5B | Refer to TM-01 for additional information. Use bias flags (H,L) where appropriate |
| Blank Contamination | | | | | |
| Method Blank (MB) | MB: One per matrix per batch of (of ≤ 20 samples) No detected compounds > RL | NFG ⁽¹⁾ Method ⁽²⁾ | U (pos) if result is less than appropriate 5X action level. | 7 | Hierarchy of blank review: #1 - Review MB and IB, qualify as needed #2 - Review FB , qualify as needed Note: Actions as per NFG 1999 Note: IB not required by method |
| Field Blank (FB) | FB: frequency as per QAPP No detected compounds > RL | NFG ⁽¹⁾ Method ⁽²⁾ | U (pos) if result is less than appropriate 5X action level. | 6 | |
| Instrument Blanks (IB) | Analyzed at the beginning and end of every 12 hour sequence No analyte > CRQL | NFG ⁽¹⁾ | U (pos) if result is less than appropriate 5X action level. | 7 | |

PCB Aroclors by GC
(Based on Organic NFG 2008 and SW-846 Method 8082A)

| QC Element | Acceptance Criteria (NFG) | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|-------------------------------|---|---|---|-------------|--|
| Precision and Accuracy | | | | | |
| MS/MSD (recovery) | One set per matrix per batch (of ≤ 20 samples) AR1016 and AR1260: %R = 29% - 135%, or project limits | NFG ⁽¹⁾ Method ⁽²⁾ | Qualify parent only unless other QC indicates systematic problems. J (pos) if both %R > upper control limit (UCL) J (pos)/UJ (ND) if both %R < lower control limit (LCL) J (pos)/R (ND) if both %R < 10% | 8 | No action if only one spike %R is outside criteria. No action if native analyte conc. > 5x the amount spiked. Use bias flags (H,L) where appropriate. Actions apply to all Aroclors in parent sample. |
| MS/MSD (RPD) | One set per matrix per batch (of ≤ 20 samples) AR1016: RPD < 15%, AR1260: RPD < 20% or project limits | NFG ⁽¹⁾ Method ⁽²⁾ | Qualify parent only unless other QC indicates systematic problems. J (pos) if RPD > control limit | 9 | No action if parent is ND. |
| LCS | One per lab batch (of ≤ 20 samples) AR1016 and AR1260: %R = 50% - 150%, or project limits | NFG ⁽¹⁾ | J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND) if %R < 10% | 10 | Use bias flags (H,L) where appropriate. Actions apply to all Aroclors in associated samples. |
| LCS/LCSD (RPD) | if analyzed use MS/MSD RPD criteria | NFG ⁽¹⁾ | J (pos) assoc. compound in all samples | 9 | LCSD not required by method or NFG |
| Precision and Accuracy | | | | | |
| Surrogates | TCMX and DCBP added to every sample %R = 30% - 150% or project limits | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) if either %R > UCL J (pos)/UJ (ND) if either %R < LCL J (pos)/R (ND) if either %R < 10% | 13 | If %R < 10% (sample dilution is a factor), use PJ Use bias flags (H,L) where appropriate |
| Internal Standards (if used) | Acceptable Range: IS area = 50% to 200% of CCAL area RT within 30 seconds of CC RT | Method ⁽²⁾ | J (pos) if area > 200% J (pos)/UJ (ND) if area < 50% J (pos)/R (ND) if area < 25% RT > 30 seconds, narrate | 19 | |
| Field Duplicates | Solids: RPD < 50% OR difference < 2X RL (for results < 5X RL) Aqueous: RPD < 35% OR difference < 1X RL (for results < 5X RL) | EcoChem | J (pos)/UJ (ND) Qualify only parent and field duplicate samples | 9 | use project limits if specified |

PCB Aroclors by GC
(Based on Organic NFG 2008 and SW-846 Method 8082A)

| QC Element | Acceptance Criteria (NFG) | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|--|-------------|--|
| Compound Identification/Quantification | | | | | |
| Quantitation/ Identification | Between two columns: RPD < 40% or %D < 25% Within Retention Time Windows on both columns. | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) if RPD = 40% - 60% (25% - 60% for %D) NJ (pos) if > 60% R (pos) if RTW criterion not met | 3 | See TM-08 for additional info. |
| Calibration Range | on column concentration < high calibration standard | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) if conc > high standard and sample was not diluted | 20 | |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | Standard reporting policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 Rev. 1 for additional info. |
| Sample Clean-up | | | | | |
| GPC/Sulfur/ Florisil/Acid | No criteria - cleanups are optional | NFG ⁽¹⁾ Method ⁽²⁾ | Use Professional Judgment | 14 | special cleanups may be required for project cleanup standards may be associated with GPC/florisil cleanups |

¹ National Functional Guidelines for Organic Data Review, June, 2008

² Polychlorinated Biphenyls (PCBs) by Gas Chromatography USEPA Method SW846 8082A, Feb 2007, Rev. 1

³ SW846, Chapter 4, Organic Analytes

⁴ Determinative Chromatographic Separations, Method 8000C, March 2003, Rev.3

⁵ "H" = high bias indicated; "L" = low bias indicated

**EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Gasoline Range
 (Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Gx,
 June 1997, Wa DOE & Oregon DEQ)**

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|--|-------------|-------------------------|
| Sample Handling | | | | |
| Cooler Temperature & Preservation | 4°C±2°C Water: HCl to pH < 2 | J(+)/UJ(-) if greater than 6°C | 1 | |
| Holding Time | Waters: 14 days preserved 7 days unpreserved Solids: 14 Days | J(+)/UJ(-) if hold times exceeded J(+)/R(-) if exceeded > 3X | 1 | Professional Judgement |
| Instrument Performance | | | | |
| Initial Calibration | 5 calibration points (All within 15% of true value) Linear Regression: $r^2 \geq 0.990$ If used, RSD of response factors $\leq 20\%$ | Narrate if fewer than 5 calibration levels or if %R > 15% J(+)/UJ(-) if $r^2 < 0.990$ J(+)/UJ(-) if %RSD > 20% | 5A | |
| Mid-range Calibration Check Std. | Analyzed before and after each analysis shift & every 20 samples. Recovery range 80% to 120% | Narrate if frequency not met. J(+)/UJ(-) if %R < 80% J(+) if %R > 120% | 5B | |
| Blank Contamination | | | | |
| Method Blank | At least one per batch (≤ 10 samples) No results > RL | U (at the RL) if sample result is < RL & < 5X blank result. | 7 | |
| | | U (at reported sample value) if sample result is \geq RL and < 5X blank result | 7 | |
| Trip Blank (if required by project) | No results > RL | Action is same as method blank for positive results remaining in trip blank after method blank qualifiers are assigned. | 18 | |
| Field Blanks (if required by project) | No results > RL | Action is same as method blank for positive results remaining in field blank after method and trip blank qualifiers are assigned. | 6 | |

**EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Gasoline Range
 (Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Gx,
 June 1997, Wa DOE & Oregon DEQ)**

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|-------------|---|
| Precision and Accuracy | | | | |
| MS samples (accuracy) (if required by project) | %R within lab control limits | Qualify parent only, unless other QC indicates systematic problems. J(+) if both %R > upper control limit (UCL) J(+)/UJ(-) if both %R < lower control limit (LCL) No action if parent conc. >5X the amount spiked. | 8 | Use Professional Judgement if only one %R outlier |
| Precision: MS/MSD or LCS/LCSD or sample/dup | At least one set per batch (≤10 samples) RPD ≤ lab control limit | J(+) if RPD > lab control limits | 9 | |
| LCS (not required by method) | %R within lab control limits | J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R < 10% | 10 | Professional Judgement |
| Surrogates | Bromofluorobenzene and/or 1,4-difluorobenzene added to all samples (inc. QC samples). %R = 50-150% | J(+)/UJ(-) if %R < LCL J(+) if %R >UCL J(+)/R(-) if any %R < 10% No action if 2 or more surrogates are used, and only one is outside control limits. | 13 | Professional Judgement |
| Pattern Identification | Compare sample chromatogram to standard chromatogram to ensure range and pattern are reasonable match. Laboratory may flag results which have poor match. | J(+) | 2 | |
| Field Duplicates | Use project control limits, if stated in QAPP EcoChem default: water: RPD < 35% solids: RPD < 50% | Narrate outliers If required by project, qualify with J(+)/UJ(-) | 9 | |
| Compound ID and Calculation | | | | |
| Two analyses for one sample (e.g., dilution) | Report only one result per analyte | "DNR" (or client requested qualifier) all results that should not be reported. | 11 | See EcoChem TM-04 |

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range
(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx,
June 1997, Wa DOE & Oregon DEQ)

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|--|-------------|-------------------------|
| Sample Handling | | | | |
| Cooler Temperature & Preservation | 4°C±2°C Water: HCl to pH < 2 | J(+)/UJ(-) if greater than 6 deg. C | 1 | |
| Holding Time | Ext. Waters: 14 days preserved 7 days unpreserved Ext. Solids: 14 Days Analysis: 40 days from extraction | J(+)/UJ(-) if hold times exceeded J(+)/R(-) if exceeded > 3X | 1 | Professional Judgement |
| Instrument Performance | | | | |
| Initial Calibration | 5 calibration points (All within 15% of true value) Linear Regression: $r^2 \geq 0.990$ If used, RSD of response factors $\leq 20\%$ | Narrate if fewer than 5 calibration levels or if %R > 15% J(+)/UJ(-) if $r^2 < 0.990$ J(+)/UJ(-) if %RSD > 20% | 5A | |
| Mid-range Calibration Check Std. | Analyzed before and after each analysis shift & every 20 samples. Recovery range 85% to 115% | Narrate if frequency not met. J(+)/UJ(-) if %R < 85% J(+) if %R > 115% | 5B | |
| Blank Contamination | | | | |
| Method Blank | At least one per batch (≤ 20 samples) No results > RL | U (at the RL) if sample result is < RL & < 5X blank result. | 7 | |
| | | U (at reported sample value) if sample result is \geq RL and < 5X blank result | 7 | |
| Field Blanks (if required by project) | No results > RL | Action is same as method blank for positive results remaining in the field blank after method blank qualifiers are assigned. | 6 | |

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range
 (Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx,
 June 1997, Wa DOE & Oregon DEQ)

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|-------------|---|
| Precision and Accuracy | | | | |
| MS samples (accuracy) (if required by project) | %R within lab control limits | Qualify parent only, unless other QC indicates systematic problems. J(+) if both %R > upper control limit (UCL) J(+)/UJ(-) if both %R < lower control limit (LCL) No action if parent conc. >5X the amount spiked. | 8 | Use Professional Judgement if only one %R outlier |
| Precision: MS/MSD or LCS/LCSD or sample/dup | At least one set per batch (≤10 samples) RPD ≤ lab control limit | J(+) if RPD > lab control limits | 9 | |
| LCS (not required by method) | %R within lab control limits | J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R < 10% | 10 | Professional Judgement |
| Surrogates | 2-fluorobiphenyl, p-terphenyl, o-terphenyl, and/or pentacosane added to all samples (inc. QC samples). %R = 50-150% | J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R < 10% No action if 2 or more surrogates are used, and only one is outside control limits. | 13 | Professional Judgement |
| Pattern Identification | Compare sample chromatogram to standard chromatogram to ensure range and pattern are reasonable match. Laboratory may flag results which have poor match. | J(+) | 2 | |
| Field Duplicates | Use project control limits, if stated in QAPP EcoChem default: water: RPD < 35% solids: RPD < 50% | Narrate (Use Professional Judgement to qualify) | 9 | |

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range
 (Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx,
 June 1997, Wa DOE & Oregon DEQ)

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|------------------------------------|--|-------------|-------------------------|
| Compound ID and Calculation | | | | |
| Two analyses for one sample (dilution) | Report only one result per analyte | "DNR" (or client requested qualifier) all results that should not be reported. | 11 | See EcoChem TM-04 |

Metals by ICP-AES
 (Based on Inorganic NFG 2010 and SW-846 6010C)

| QC Element | EcoChem Acceptance Criteria | Source of Criteria | EcoChem Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|--|---|-----------------------|--|
| Sample Handling | | | | | |
| Cooler / Storage Temperature Preservation | Solid: Cooler temperature 4°C±2°C Aqueous: Nitric Acid to pH < 2 Dissolved Metals: 0.45 µm filter, preserve to pH < 2 after filtration | NFG ⁽¹⁾ Method ⁽²⁾ | Cooler Temps: If required by project J (pos)/UJ (ND) if greater than 6° C Aqueous: J (pos)/UJ (ND) if pH > 2 | 1 | Use PJ to qualify for temperature outlier. Current SW846 criterion is ≤ 6° C (4) No quals for pH if samples preserved by lab upon receipt and within 1 day of collection. |
| Holding Time | All matrices: 180 days from date sampled Frozen soils, sediments, tissues (-20°C) - HT extended to 1 year | NFG ⁽¹⁾ Method ⁽²⁾ EcoChem standard policy | J (pos)/UJ (ND) if holding time exceeded | 1 | |
| Instrument Performance | | | | | |
| Initial Calibration (ICAL) | Based on instrument requirements, blank + 1 standard minimum requirement for calibration If more than 1 standard used, r ≥ 0.995 | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if r < 0.995 | 5A | |
| Initial Calibration Verification (ICV) | Independent source analyzed immediately after calibration %R within ± 10% of true value | NFG ⁽¹⁾ Method ⁽²⁾ | R (pos/ND) if %R < 75% J (pos)/UJ (ND) if %R 75% - 89% J (pos) if %R > 111% | 5A (H,L) ³ | Qualify all samples in run |
| Reporting Limit (RL) Standard Low Level ICV/CCV | concentration at RL %R = 70%-130% | Method ⁽²⁾ | J (pos) < 2x RL / R (ND) if %R < 50% J (pos) < 2x RL / UJ (ND) if %R 50 - 69% J (pos) < 2x RL if %R > 130% | 5A (H,L) ³ | Qualify all samples in run |
| Continuing Calibration Verification (CCV) | Immediately following ICV/ICB, then every two hours or ten samples, and at end of run. %R within ± 10% of true value | NFG ⁽¹⁾ Method ⁽²⁾ | R (pos/ND) if %R < 75% J (pos)/UJ (ND) if %R 75% - 89% J (pos) if %R > 111% | 5B (H,L) ³ | Qualify samples bracketed by CCV outliers |
| Interference Check Samples (ICSA / ICSAB) | ICSAB %R 80% - 120% for all spiked elements ICSA < MDL for all unspiked elements | NFG ⁽¹⁾ Method ⁽²⁾ | For samples with Al, Ca, Fe, Mg > ICS levels: ICSAB: J(pos)/R (ND) if %R < 50% J (pos)/UJ (ND) if %R = 50% - 79% J (pos) if %R > 120% ICSA: J (pos) < 2x ICSA/UJ (ND) for ICSA < Neg MDL J (pos) < 2x ICSA for ICSA > MDL | 17 (H,L) ³ | Use PJ and inter-element correction factors to evaluate ICSA to determine if bias is present. Refer to TM-09 for additional information. |

Metals by ICP-AES
 (Based on Inorganic NFG 2010 and SW-846 6010C)

| QC Element | EcoChem Acceptance Criteria | Source of Criteria | EcoChem Action for Non-Conformance | Reason Code | Discussion and Comments |
|-------------------------------|---|---|--|--|---|
| Blank Contamination | | | | | |
| Method Blank (MB) | One per matrix per batch of (of ≤ 20 samples) Blank conc < MDL | NFG ⁽¹⁾ Method ⁽²⁾ | U (pos) if result is < 5X method blank concentration | 7 | Refer to TM-02 for additional information. Blank Evaluation based on NFG 1994 |
| Instrument Blanks (ICB/CCB) | After each ICV & CCV blank concentration < MDL | NFG ⁽¹⁾ Method ⁽²⁾ | Action level is 5x absolute value of blank conc. For positive blanks: U (pos) results < action level For negative blanks: J (pos)/UJ (ND) results < action level | Pos Blanks: 7 Neg Blanks: 7L ³ | Use blanks bracketing samples for Qualification Refer to TM-02 for additional information. Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review IB, qualify as needed #3 - Review FB, qualify as needed |
| Field Blank (FB) | Blank conc < MDL | EcoChem standard policy | U (pos) if result is < 5x action level, as per analyte. | 6 | Qualify in associated field samples only. Refer to TM-02 for additional information. |
| Precision and Accuracy | | | | | |
| LCS (recovery) | One per matrix per batch (of ≤ 20 samples); LCSD not required %R between 80-120% | Method ⁽²⁾ | J (pos)/R (ND) if %R < 50% J (pos)/UJ (ND) if %R 50% - 79% J (pos) if %R > 120% | 10 (H,L) ³ | Qualify all samples in batch QAPP may have overriding accuracy limits. NFG Limits 70% -130% (50% - 150% Ab, Ag) |
| LCS/LCSD (RPD) | LCSD not required, if analyzed: RPD ≤ 20% | Method ⁽²⁾ | J (pos)/UJ (ND) if RPD > 20% | 9 | Qualify all samples in batch QAPP may have overriding precision limits. |
| MS/MSD (recovery) | One per matrix per batch (of ≤ 20 samples); MSD not required %R between 75-125% | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) if %R > 125% J (pos)/UJ (ND) if %R < 75% J (pos)/R (ND) if %R < 30%, unless post digestion spike analyzed, J (pos)/UJ (ND) if post digestion spike %R OK | 8 (H,L) ³ | No action if only one spike %R is outside criteria. NA if parent concentration >4x the amount spiked. Qualify all samples in batch. QAPP may have overriding accuracy limits. |

DATA VALIDATION CRITERIA

Metals by ICP-AES
 (Based on Inorganic NFG 2010 and SW-846 6010C)

| QC Element | EcoChem Acceptance Criteria | Source of Criteria | EcoChem Action for Non-Conformance | Reason Code | Discussion and Comments |
|--------------------------------------|--|---|--|-----------------------|---|
| Precision and Accuracy con't | | | | | |
| Post Digestion Spikes | If MS is outside 75-125%, post-spike should be analyzed %R 80%-120% (method); 75%-125% (NFG) | NFG ⁽¹⁾ Method ⁽²⁾ | Only used to support MS qualification decisions | NA | No qualifiers assigned based solely on this element. |
| MS/MSD (RPD) | MSD not required, if analyzed: RPD ≤ 20% | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if RPD > 20% | 9 | QAPP may have overriding precision limits. |
| Laboratory Duplicate | One per matrix per batch (of ≤ 20 samples) RPD ≤ 20% for results ≥ 5x RL Solids: difference < 2X RL for results < 5X RL Aqueous: difference < 1X RL for results < 5X RL | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if RPD > 20% or if difference > control limit | 9 | Qualify all samples in batch. QAPP may have overriding precision limits. |
| Reference Material (RM, SRM, or CRM) | Result ±20% of the 95% confidence interval of the true value for analytes | EcoChem standard policy | J (pos)/UJ (ND) if < LCL J (pos) if > UCL | 12 (H,L) ³ | QAPP may have overriding accuracy limits. Some manufacturers may have different RM control limits |
| Serial Dilution | Analyze one sample per matrix at a 5x dilution %D <10% for original sample conc. > 50x MDL | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if %D > 10% and native sample concentration > 50x MDL | 16 | Qualify all samples in batch. |
| Field Duplicate | Solids: RPD <50% (for results ≥ 5x RL) OR difference < 2X RL (for results < 5X RL) Aqueous: RPD <35% (for results ≥ 5x RL) OR difference < 1X RL (for results < 5X RL) | EcoChem standard policy | Qualify only parent and field duplicate samples J (pos)/UJ (ND) | 9 | QAPP may have overriding precision limits. Client/QAPP may not require qualification based on field precision. |

Metals by ICP-AES
(Based on Inorganic NFG 2010 and SW-846 6010C)

| QC Element | EcoChem Acceptance Criteria | Source of Criteria | EcoChem Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|------------------------------------|---|--|-------------|--|
| Compound Quantitation | | | | | |
| Total and Dissolved Comparison | Total > Dissolved | EcoChem standard policy | J (pos)/UJ (ND) if Dissolved > Total and results fall outside of standard duplicate precision criteria | 14 | |
| Calibration Range | Results < instrument linear range | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) if result exceeds linear range and sample was not diluted | 20 | |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 EcoChem Policy for Rejection/Selection Process for Multiple Results |

¹ National Functional Guidelines for Inorganic Superfund Data Review, January 2010.

² Method SW846 6010C Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP-AES), Revision 3, February 2007.

³ "H" = high bias indicated; "L" = low bias indicated

⁴ SW846, Chapter 3, Inorganic Analytes

(pos): Positive Result

(ND): Not Detected

Mercury by CVAA
(Based on Inorganic NFG 2010 and SW846 7470A & 7471B)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|--|---|-----------------------|--|
| Sample Handling | | | | | |
| Cooler / Storage Temperature Preservation | Solid: Cooler temperature 4°C±2°C Aqueous: Nitric Acid to pH < 2 Dissolved Metals: 0.45 µm filter, preserve to pH < 2 after filtration | NFG ⁽¹⁾ Method ⁽²⁾ | Cooler Temps: If required by project J (pos)/UJ (ND) if greater than 6° C Aqueous: J (pos)/UJ (ND) if pH > 2 | 1 | Use PJ to qualify for temperature outlier. Current SW846 criterion is ≤ 6° C (4) No quals for pH if samples preserved by lab immediately upon receipt and within 1 day of collection. |
| Holding Time | 28 days from date sampled Frozen solids and tissues HT extended to 6 months | NFG ⁽¹⁾ Method ⁽²⁾ EcoChem standard policy | J (pos)/UJ (ND) if HT exceeded | 1 | |
| Instrument Performance | | | | | |
| Initial Calibration (ICAL) | Daily Calibration Blank + 5 standards, one ≤ RL Correlation coefficient (r) ≥ 0.995 | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if r < 0.995 | 5A (H,L) ³ | |
| Initial Calibration Verification (ICV) | Independent source analyzed immediately after ICAL %R within ± 15% of true value | NFG ⁽¹⁾ Method ⁽²⁾ | R(pos/ND) if %R < 70% J(pos)/UJ(ND) if %R = 70-84% J(pos) if %R = > 116% | 5A (H,L) ³ | Qualify all samples in run |
| Reporting Limit (RL) Standard | Conc = RL %R = 70-130% | Method ⁽²⁾ | J (pos) < 2x RL / R (ND) if %R < 50% J (pos) < 2x RL / UJ (ND) if %R 50 - 69% J (pos) < 2x RL if %R > 130% | 5A (H,L) ³ | Qualify all samples in run |
| Continuing Calibration Verification (CCV) | At beginning of run, every ten samples, and again after last sample. %R within ± 15% of true value | NFG ⁽¹⁾ Method ⁽²⁾ | R(pos/ND) if %R < 70% J(pos)/UJ(ND) if %R = 70-84% J(pos) if %R = > 116% | 5B (H,L) ³ | Qualify samples bracketed by CCV outliers |
| Blank Contamination | | | | | |
| Method Blank (MB) | One per matrix per batch of (of ≤ 20 samples) Blank conc < MDL | NFG ⁽¹⁾ Method ⁽²⁾ | U (pos) if result is < 5X method blank concentration | 7 | Refer to TM-02 for additional information. Blank Evaluation based on NFG 1994 |

Mercury by CVAA
 (Based on Inorganic NFG 2010 and SW846 7470A & 7471B)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|--|--|---|
| Instrument Blanks (ICB/CCB) | After each ICV & CCV blank concentration < MDL | NFG ⁽¹⁾ Method ⁽²⁾ | Action level is 5x absolute value of blank conc. For positive blanks: U (pos) results < action level For negative blanks: J (pos)/UJ (ND) results < action level | Pos Blanks: 7 Neg Blanks: 7L ³ | Use blanks bracketing samples for Qualification Refer to TM-02 for additional information. Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review IB, qualify as needed #3 - Review FB, qualify as needed |
| Field Blank (FB) | Blank conc < MDL | EcoChem standard policy | U (pos) if result is < 5x action level, as per analyte. | 6 | Qualify in associated field samples only. Refer to TM-02 for additional information. |
| Precision and Accuracy | | | | | |
| Laboratory Control Sample (recovery) | One per matrix per batch (of ≤ 20 samples); LCSD not required %R between 80-120% | Method ⁽²⁾ | J (pos)/R (ND) if %R < 50% J (pos)/UJ (ND) if %R 50% - 79% J (pos) if %R > 120% | 10 (H,L) ³ | Qualify all samples in batch QAPP may have overriding accuracy limits. NFG does not address LCS |
| LCS/LCSD (RPD) | LCSD not required, if analyzed: RPD ≤ 20% | Method ⁽²⁾ | J (pos)/UJ (ND) if RPD > 20% | 9 | Qualify all samples in batch QAPP may have overriding precision limits. |
| Matrix Spike/Matrix Spike Duplicate MS/MSD (recovery) | One per matrix per batch (of ≤ 20 samples); MSD not required %R between 75-125% | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) if %R > 125% J (pos)/UJ (ND) if %R < 75% J (pos)/R (ND) if %R < 30% | 8 (H,L) ³ | No action if only one spike %R is outside criteria. NA if parent concentration > 4x the amount spiked. Qualify all samples in batch. QAPP may have overriding accuracy limits. |
| MS/MSD (RPD) | MSD not required, if analyzed: RPD ≤ 20% | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if RPD > 20% | 9 | QAPP may have overriding precision limits. |
| Laboratory Duplicate | One per matrix per batch (of ≤ 20 samples) RPD ≤ 20% for results ≥ 5x RL Solids: difference < 2X RL for results < 5X RL Aqueous: difference < 1X RL for results < 5X RL | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if RPD > 20% or if difference > control limit | 9 | Qualify all samples in batch. QAPP may have overriding precision limits. |

Mercury by CVAA
(Based on Inorganic NFG 2010 and SW846 7470A & 7471B)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|---|--|-----------------------|---|
| Reference Material (RM, SRM, or CRM) | Result ±20% of the 95% confidence interval of the true value for analytes | EcoChem standard policy | J (pos)/UJ (ND) if < LCL J (pos) if > UCL | 12 (H,L) ³ | QAPP may have overriding accuracy limits. Some manufacturers may have different RM control limits |
| Field Duplicate | Solids: RPD <50% (for results ≥ 5x RL) OR difference < 2X RL (for results < 5X RL) Aqueous: RPD <35% (for results ≥ 5x RL) OR difference < 1X RL (for results < 5X RL) | EcoChem standard policy | Qualify only parent and field duplicate samples J (pos)/UJ (ND) | 9 | QAPP may have overriding precision limits. Client/QAPP may not require qualification based on field precision. |
| Compound Quantitation | | | | | |
| Total and Dissolved Comparison | Total > Dissolved | EcoChem standard policy | J (pos)/UJ (ND) if Dissolved > Total and results fall outside of standard duplicate precision criteria | 14 | |
| Calibration Range | Results < instrument linear range | NFG ⁽¹⁾ Method ⁽²⁾ | if result exceeds linear range and sample was not diluted J (pos) | 20 | |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 EcoChem Policy for Rejection/Selection Process for Multiple Results |

¹ National Functional Guidelines for Inorganic Superfund Data Review, January 2010.

² Method SW846 7470A Mercury in Liquid Waste (Manual Cold-Vapor Technique), Revision 1, September 1994.
 Method SW846 7471B Mercury in Solid or Semisolid Waste (Manual Cold-Vapor Technique), Revision 2, February 2007.

³ "H" = high bias indicated; "L" = low bias indicated

⁴ SW846, Chapter 3, Inorganic Analytes

(pos): Positive Result
 (ND): Not Detected



APPENDIX B

QUALIFIED DATA SUMMARY TABLE

**Qualified Data Summary Table
Norman's Chevron**

| SDG | SAMPLE ID | METHOD | ANALYTE | RESULT | UNITS | LAB FLAG | DV QUAL | DV REASON |
|-------|----------------------------|--------------|-------------------------------|--------|-------|----------|---------|-----------|
| LDC08 | DUP-1-SD-190723 | NWTPH-Dx | Diesel Range Organics C12-C24 | 730 | mg/kg | | J | 9 |
| LDC08 | SB-19-S-8.0-190725 | SW-846 6010D | Lead | 1.72 | mg/kg | | J | 9 |
| LDC13 | SB-17-S-19.5-190723 | NWTPH-Dx | Diesel Range Organics C12-C24 | 3500 | mg/kg | | J | 9 |
| LDC09 | DUP-2-SD-190725 | SW-846 6010D | Lead | 3.89 | mg/kg | | J | 9 |
| LDC10 | SB-11-S-20.0-190724 | NWTPH-Dx | Diesel Range Organics C12-C24 | 55 | mg/kg | | J | 9 |
| LDC10 | SB-11-S-20.0-190724 | SW-846 8260C | Benzene | 0.047 | mg/kg | U | UJ | 1 |
| LDC10 | SB-11-S-20.0-190724 | SW-846 8260C | Toluene | 0.58 | mg/kg | | J | 1 |
| LDC10 | SB-11-S-20.0-190724 | SW-846 8260C | Ethylbenzene | 12 | mg/kg | | J | 1 |
| LDC10 | SB-11-S-20.0-190724 | SW-846 8260C | Xylene (Total) | 100 | mg/kg | | J | 1 |
| LDC10 | SB-11-S-27.5-190724 | SW-846 8260C | Toluene | 0.004 | mg/kg | | U | 7 |
| LDC07 | SB-15-S-8.0-190723 | SW-846 8260C | Benzene | 0.0004 | mg/kg | U | UJ | 19 |
| LDC07 | SB-15-S-8.0-190723 | SW-846 8260C | Toluene | 0.001 | mg/kg | | J | 19 |
| LDC07 | SB-15-S-8.0-190723 | SW-846 8260C | Ethylbenzene | 0.0004 | mg/kg | U | UJ | 19 |
| LDC07 | SB-15-S-8.0-190723 | SW-846 8260C | Xylene (Total) | 0.0009 | mg/kg | U | UJ | 19 |
| LDC11 | SB-14-S-20.0-190724 | NWTPH-Dx | Diesel Range Organics C12-C24 | 130 | mg/kg | | J | 8L |
| LDC11 | SB-14-S-20.0-190724 | SW-846 8260C | Toluene | 0.001 | mg/kg | | U | 7 |
| LDC11 | SB-14-S-27.5-190724 | SW-846 8260C | Toluene | 0.002 | mg/kg | | U | 7 |
| LDC11 | SB-12-S-14.5-190724 | SW-846 8260C | Toluene | 0.002 | mg/kg | | U | 7 |
| LDC11 | SB-12-S-20.0-190724 | SW-846 8260C | Toluene | 0.001 | mg/kg | | U | 7 |
| LDC12 | SB-10-S-27.5-190724 | SW-846 8260C | Toluene | 0.002 | mg/kg | | U | 7 |
| LDC12 | SB-10-S-20.0-190724 | SW-846 8260C | Toluene | 0.001 | mg/kg | | U | 7 |
| LDC12 | SB-10-S-14.0-190724 | SW-846 8260C | Toluene | 0.001 | mg/kg | | U | 7 |
| LDC12 | SB-10-S-8.0-190724 | SW-846 8260C | Toluene | 0.001 | mg/kg | | U | 7 |
| LDC14 | USTSOUTH-CONTENTS-W-190725 | NWTPH-Dx | DX DRO C12-C24 | 1400 | ug/l | | J | 9 |
| LDC14 | USTSOUTH-CONTENTS-W-190725 | SW-846 8260C | Methyl Tertiary Butyl Ether | 2 | ug/l | U | UJ | 1 |
| LDC14 | USTSOUTH-CONTENTS-W-190725 | SW-846 8260C | Benzene | 2 | ug/l | U | UJ | 1 |
| LDC14 | USTSOUTH-CONTENTS-W-190725 | SW-846 8260C | 1,2-Dichloroethane | 3 | ug/l | U | UJ | 1 |
| LDC14 | USTSOUTH-CONTENTS-W-190725 | SW-846 8260C | Toluene | 2 | ug/l | U | UJ | 1 |
| LDC14 | USTSOUTH-CONTENTS-W-190725 | SW-846 8260C | Ethylbenzene | 4 | ug/l | U | UJ | 1 |
| LDC14 | USTSOUTH-CONTENTS-W-190725 | SW-846 8260C | Xylene (Total) | 10 | ug/l | U | UJ | 1 |

**Qualified Data Summary Table
Norman's Chevron**

| SDG | SAMPLE ID | METHOD | ANALYTE | RESULT | UNITS | LAB FLAG | DV QUAL | DV REASON |
|-------|----------------------------|------------------|------------------------|--------|-------|----------|---------|-----------|
| LDC14 | USTSOUTH-CONTENTS-W-190725 | SW-846 8270D | Naphthalene | 0.1 | ug/l | U | UJ | 1,10L |
| LDC14 | USTSOUTH-CONTENTS-W-190725 | SW-846 8270D SIM | Benzo(a)anthracene | 0.01 | ug/l | U | UJ | 1 |
| LDC14 | USTSOUTH-CONTENTS-W-190725 | SW-846 8270D SIM | Chrysene | 0.01 | ug/l | U | UJ | 1 |
| LDC14 | USTSOUTH-CONTENTS-W-190725 | SW-846 8270D SIM | Benzo(b)fluoranthene | 0.01 | ug/l | U | UJ | 1 |
| LDC14 | USTSOUTH-CONTENTS-W-190725 | SW-846 8270D SIM | Benzo(k)fluoranthene | 0.01 | ug/l | U | UJ | 1 |
| LDC14 | USTSOUTH-CONTENTS-W-190725 | SW-846 8270D SIM | Benzo(a)pyrene | 0.01 | ug/l | U | UJ | 1 |
| LDC14 | USTSOUTH-CONTENTS-W-190725 | SW-846 8270D SIM | Indeno(1,2,3-cd)pyrene | 0.01 | ug/l | U | UJ | 1 |
| LDC14 | USTSOUTH-CONTENTS-W-190725 | SW-846 8270D SIM | Dibenz(a,h)anthracene | 0.02 | ug/l | U | UJ | 1 |
| LDC14 | SB-12-S-27.5-190724 | SW-846 8260C | Toluene | 0.001 | mg/kg | | U | 7 |
| LDC14 | QA-2-O-190724 | SW-846 8260C | Benzene | 0.2 | ug/l | U | UJ | 1 |
| LDC14 | QA-2-O-190724 | SW-846 8260C | Toluene | 0.2 | ug/l | U | UJ | 1 |
| LDC14 | QA-2-O-190724 | SW-846 8260C | Ethylbenzene | 0.4 | ug/l | U | UJ | 1 |
| LDC14 | QA-2-O-190724 | SW-846 8260C | Xylene (Total) | 1 | ug/l | U | UJ | 1 |



DATA VALIDATION REPORT NEWMAN'S CHEVRON

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EcoChem Project: C4159-3

Revised May 13, 2020

Approved for Release:

A handwritten signature in black ink, appearing to read "Christine Ransom", with a long horizontal flourish extending to the right.

Christine Ransom
Senior Project Chemist
EcoChem, Inc.

PROJECT NARRATIVE

Basis for the Data Validation

This report summarizes the results of summary validation (EPA Stage 2B) performed on soil, soil vapor, and associated quality control sample data for the Newman's Chevron project. A complete list of samples is provided in the Sample Index. The laboratory revised the sample IDs originally provided on the chains-of-custody to match the project naming convention. Both sets of IDs are noted in the Sample Index.

All soil analyses were performed by Eurofins Laboratories Environmental, Lancaster, PA. The soil vapor analyses were performed by H&P Mobile Geochemistry, Inc., Carlsbad, California. The analytical methods and EcoChem project chemists are listed in the following table:

| ANALYSIS | METHOD | PRIMARY REVIEW | SECONDARY REVIEW |
|--------------------------------|------------|----------------|------------------|
| Volatile Organic Compounds | 8260B | E. Clayton | C. Ransom |
| Semivolatile Organic Compounds | 8270D | | |
| Semivolatile Organic Compounds | 8270DSIM | | |
| Gasoline Range Hydrocarbons | NWTPH-Gx | | |
| Diesel Range Hydrocarbons | NWTPH-Dx | | |
| Lead | 6010B | | |
| Percent Moisture | SM 2540 | | |
| BTEX, MTBE, Naphthalene | TO15 | | |
| Fixed Gases | EPA 3C | | |
| Helium | ASTM D1946 | | |

The data were reviewed using guidance and quality control criteria documented in the analytical methods; *Final Remedial Investigation Work Plan Newman's Chevron* (Leidos, July 2018); *National Functional Guidelines for Organic Data Review* (USEPA 2008); and *National Functional Guidelines for Inorganic Data Review* (USEPA 2010).

EcoChem's goal in assigning data assessment qualifiers is to assist in proper data interpretation. If values are estimated (J or UJ), data may be used for site evaluation and risk assessment purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. Data that have been rejected are flagged with (R). Rejected data should not be used for any purpose. If values have no data qualifier assigned, then the data meet the data quality objectives as stated in the documents and methods referenced above.

Validation criteria are included as Appendix A. The qualified data summary table (QDST) is included as Appendix B. Data Validation Worksheets and project associated communications will be kept on file at EcoChem, Inc. A qualified laboratory electronic data deliverable (EDD) is also submitted.

Sample Index
Newman's Chevron

| SDG | Sample ID | Lab ID | VOC/BTEX 8260C | T015 | Helium | Fixed Gases | SVOC 8270D | PAH 8270SIM | NWTPH-Gx | NWTPH-DX | Lead 6010D |
|-------|---------------------|---------|-------------------|------|--------|----------------|---------------|----------------|----------|----------|---------------|
| LDC15 | SB-21-S-8-200224 | 1271114 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC15 | SB-22-S-8-200224 | 1271115 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC15 | SB-21-S-16-200225 | 1271116 | ✓ | | | | | ✓ | ✓ | ✓ | ✓ |
| LDC15 | SB-21-S-18-200225 | 1271117 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC15 | SB-21-S-20.5-200225 | 1271118 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC15 | SB-23-S-8-200225 | 1271119 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC15 | SB-23-S-16-200225 | 1271120 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC15 | SB-23-S-23-200225 | 1271121 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC15 | SB-23-S-19.5-200225 | 1271122 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC15 | SB-24-S-8-200225 | 1271123 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC15 | SB-24-S-14-200225 | 1271124 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC15 | SB-24-S-17.5-200225 | 1271125 | ✓ | | | | | ✓ | ✓ | ✓ | ✓ |
| LDC15 | SB-24-S-22-200225 | 1271126 | ✓ | | | | | ✓ | ✓ | ✓ | ✓ |
| LDC15 | SB-24-S-29-200225 | 1271127 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC15 | SB-22-S-16-200226 | 1271128 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC15 | SB-26-S-8-200226 | 1271129 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC15 | SB-26-S-15.5-200226 | 1271130 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC15 | SB-26-S-20-200226 | 1271131 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC15 | SB-27-S-8-200226 | 1271132 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC15 | SB-25-S-8.5-200226 | 1271133 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC15 | SB-25-S-12-200226 | 1271134 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC15 | SB-25-S-19-200226 | 1271135 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC15 | SB-27-S-15.5-200226 | 1271136 | ✓ | | | | | ✓ | ✓ | ✓ | ✓ |
| LDC15 | SB-29-S-8-200226 | 1271137 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC15 | SB-27-S-22-200226 | 1271138 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC15 | SB-27-S-26-200226 | 1271139 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC16 | SB-27-S-29-200226 | 1271140 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC16 | SB-29-S-16-200227 | 1271141 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |

Sample Index
Newman's Chevron

| SDG | Sample ID | Lab ID | VOC/BTEX 8260C | T015 | Helium | Fixed Gases | SVOC 8270D | PAH 8270SIM | NWTPH-Gx | NWTPH-DX | Lead 6010D |
|----------|---------------------|------------|-------------------|------|--------|----------------|---------------|----------------|----------|----------|---------------|
| LDC16 | SB-29-S-18-200227 | 1271142 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC16 | SB-28-S-8-200227 | 1271143 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC16 | DUP-1-SD-200227 | 1271144 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC16 | DUP-2-SD-200227 | 1271145 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC16 | SB-29-S-22-200227 | 1271146 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC16 | SVP-4-S-5-200227 | 1271147 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC16 | SB-28-S-14-200227 | 1271148 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC16 | SVP-5-S-5-200227 | 1271149 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC16 | SB-28-S-19.5-200227 | 1271150 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC16 | SB-28-S-24.5-200227 | 1271151 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC16 | QA-1-O-200227 | 1271152 | ✓ | | | | | | ✓ | | |
| LDC16 | QA-2-O-200227 | 1271153 | ✓ | | | | | | ✓ | | |
| LDC16 | SB-30-S-8-200228 | 1271154 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC16 | SVP-6-S-5-200228 | 1271155 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC16 | SB-30-S-15.5-200228 | 1271156 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LDC16 | QA-1-T-200224 | 1271157 | ✓ | | | | | | ✓ | | |
| LDC16 | QA-2-T-200224 | 1271158 | ✓ | | | | | | ✓ | | |
| LDC16 | QA-3-T-200224 | 1271159 | ✓ | | | | | | ✓ | | |
| LDC16 | QA-4-T-200224 | 1271160 | ✓ | | | | | | ✓ | | |
| LDC16 | SB-30-S-11.5-200228 | 1271161 | ✓ | | | | ✓ | | ✓ | ✓ | ✓ |
| LD033020 | EB-1-032420 | E003092-01 | | ✓ | ✓ | ✓ | | | | | |
| LD033020 | SVP-4-032520 | E003092-02 | | ✓ | ✓ | ✓ | | | | | |
| LD033020 | SVP-5-032520 | E003092-03 | | ✓ | ✓ | ✓ | | | | | |
| LD033020 | SVP-6-032520 | E003092-04 | | ✓ | ✓ | ✓ | | | | | |
| LD033020 | DUP-1-032520 | E003092-05 | | ✓ | ✓ | ✓ | | | | | |

DATA VALIDATION REPORT
Newman's Chevron
Volatile Organic Compounds by EPA TO-15 GC-MS
Helium by ASTM 1945M
Fixed Gases by ASTM D1945

This report documents the review of analytical data from the analysis of soil vapor samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by H&P Mobile Geochemistry, Inc., Carlsbad, California. Refer to the Sample Index for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|----------|------------------------------|------------------|
| LD033020 | 4 Soil Vapor & 1 Field Blank | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|---------------------------------------|
| ✓ | Sample Receipt, Preservation, and Holding Times | ✓ | Surrogate Compounds |
| 1 | Canister Checks | ✓ | Laboratory Control Samples (LCS/LCSD) |
| ✓ | GC/MS Instrument Performance (Tune) | 1 | Field Duplicates |
| 2 | Initial Calibration (ICAL) | ✓ | Internal Standards |
| ✓ | Continuing Calibration (CCAL) | ✓ | Target Analyte List |
| ✓ | Laboratory Blanks | ✓ | Reporting Limits |
| 2 | Field Blanks | 1 | Reported Results |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Canister Checks

The laboratory checked canisters for contamination prior to sending to the field. All canisters passed laboratory criteria.

Initial Calibration

The TO-15 initial calibration was performed on 2/10/20. The second source calibration verification standard recoveries for m,p-xylene and naphthalene were less than the lower control limit. Associated sample results were estimated (J/UJ-5A).

Field Blanks

One equipment blank was submitted: EB-1-032420. The field blank was connected to the manifold and another canister provided by the laboratory that was pressurized with nitrogen. Helium was not detected in the EB, indicating that there were no leaks in the field. Levels of oxygen and nitrogen in the EB were at approximately the same levels of the field samples. No action was taken for the fixed gases.

Benzene, toluene, ethylbenzene, m,p-xylenes, o-xylene, and naphthalene were also detected in the equipment blank. In order to evaluate the effect on the field samples, action levels were established at 5X the blank concentrations. Results for these analytes in the field samples that were less than the action levels were qualified as not-detected (U-6).

Field Duplicates

One set of field duplicates was submitted: SVP-5-032520 and DUP-1-032520. The levels for benzene, ethylbenzene, toluene, m,p-xylenes, and o-xylene were much higher in the field duplicate than in the parent sample. Results for these compounds in these two samples were estimated (J-9).

Reported Results

After qualification based on equipment blank contamination, all detected results were less than the screening levels.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate and laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recovery values. With the exceptions noted above, precision was acceptable as demonstrated by the LCS/LCSD and field duplicate RPD values.

Detection limits were elevated based on equipment blank contamination. Results were estimated due to second source calibration verification standard recovery outliers and field precision outliers.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT

Newman's Chevron

Volatile Organic Compounds by SW8260C

This report documents the review of analytical data from the analysis of soil samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Eurofins Lancaster, Lancaster, Pennsylvania. Refer to the Sample Index for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|-------|--|------------------|
| LDC15 | 26 Soil | Stage 2B |
| LDC16 | 16 Soil, 4 Trip Blank, 2 Equipment Blank | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

The laboratory changed the sample IDs from those noted on the chains-of-custody, e.g. "SB-21-8" was changed to "SB-21-S-8-". Also, the collection date was added as a suffix in the yymmdd format. This was done to make the sample naming convention consistent with the first round of sampling.

The laboratory changed the sample IDs from those noted on the chains-of-custody, e.g. "DUP-1-" was changed to "DUP-1-SD-". The field blank IDs were also changed to agree with first round naming conventions. See the field blank section for a comparison of IDs.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|---------------------------------------|
| 1 | Sample Receipt, Preservation, and Holding Times | ✓ | Laboratory Control Samples (LCS/LCSD) |
| ✓ | GC/MS Instrument Performance (Tune) | ✓ | Matrix Spikes (MS) |
| ✓ | Initial Calibration (ICAL) | 1 | Field Duplicates |
| ✓ | Continuing Calibration (CCAL) | ✓ | Internal Standards |
| ✓ | Laboratory Blanks | ✓ | Target Analyte List |
| 1 | Field Blanks | ✓ | Reporting Limits |
| ✓ | Surrogate Compounds | ✓ | Reported Results |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2-6°C. Several coolers were received at temperatures less than the lower control limit, ranging from 0.9C to 1.1C. These outliers did not impact data quality; no data were qualified.

SDG LDC16: Sample SB30-11.5 was received by the laboratory but was not listed on the chain-of-custody.

Field Blanks

The following field blanks were submitted. No target analytes were detected in these blanks.

| SDG | CHAIN OF CUSTODY ID | LAB LOG-IN ID |
|-------|---------------------|---------------|
| LDC16 | ER-1-022720 | QA-1-O-200227 |
| | ER-2-022720 | QA-2-O-200227 |
| | TB-1-022420 | QA-1-T-200224 |
| | TB-2-022420 | QA-2-T-200224 |
| | TB-3-022420 | QA-3-T-200224 |
| | TB-4-022420 | QA-4-T-200224 |

Field Duplicates

For soil samples, the RPD control limit is 30% for results greater than 5x the reporting limit (RL). For results less than 5x the RL, the difference between the sample and duplicate must be less than 2x the RL.

SDG LDC16: Two sets of field duplicates were submitted: SB-29-S-18-200227 & DUP-1-SD-200227 and SB-28-S-8-200227 & DUP-2-SD-200227. All acceptance criteria were met.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate, laboratory control sample/laboratory control sample duplicate (LCS/LCSD), and matrix spike recovery values. Precision was also acceptable as demonstrated by the LCS/LCSD and field duplicate RPD values.

No data were qualified for any reason.

All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Newman's Chevron
Naphthalenes by SW8270D and
Polycyclic Aromatic Hydrocarbons by SW8270D-SIM

This report documents the review of analytical data from the analysis of soil samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Eurofins Lancaster, Lancaster, Pennsylvania. Refer to the Sample Index for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|-------|-------------------|------------------|
| LDC15 | 26 Soil | Stage 2B |
| LDC16 | 16 Soil | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

The laboratory changed the sample IDs from those noted on the chains-of-custody, e.g. "SB-21-8" was changed to "SB-21-S-8-". Also, the collection date was added as a suffix in the yymmdd format. This was done to make the sample naming convention consistent with the first round of sampling.

The laboratory changed the sample IDs from those noted on the chains-of-custody, e.g. "DUP-1-" was changed to "DUP-1-SD-".

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|---|
| 1 | Sample Receipt, Preservation, and Holding Times | ✓ | Laboratory Control Samples (LCS) |
| ✓ | GC/MS Instrument Performance (Tune) | ✓ | Matrix Spike/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Initial Calibration (ICAL) | ✓ | Internal Standards |
| ✓ | Continuing Calibration (CCAL) | 1 | Field Duplicates |
| 1 | Laboratory Blanks | ✓ | Target Analyte List |
| 1 | Field Blanks | ✓ | Reporting Limits |
| ✓ | Surrogate Compounds | ✓ | Reported Results |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2-6°C. Several coolers were received at temperatures less than the lower control limit, ranging from 0.9C to 1.1C. These outliers did not impact data quality; no data were qualified.

SDG LDC16: Sample SB30-11.5 was received by the laboratory but was not listed on the chain-of-custody.

Laboratory Blanks

A method blank was analyzed at the required frequency of one per batch of 20 or fewer samples. Action levels were established at five times (5x) the concentration reported in the field blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). No action is taken if the sample result is greater than the action level, or for non-detected results.

SDG LDC15: Naphthalene was detected in the method blank for Batch 20064SLB026. Associated sample results were either greater than the action limit or were not-detected; no qualification was required.

Field Blanks

No field blanks were submitted.

Field Duplicates

For soil samples, the RPD control limit is 30% for results greater than 5x the reporting limit (RL). For results less than 5x the RL, the difference between the sample and duplicate must be less than 2x the RL.

SDG LDC16: Two sets of field duplicates were submitted: SB-29-S-18-200227 & DUP-1-SD-200227 and SB-28-S-8-200227 & DUP-2-SD-200227. All acceptance criteria were met.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate, laboratory control sample, and matrix spike/matrix spike duplicate (MS/MSD) percent recovery values. Precision was also acceptable as demonstrated by the MS/MSD and field duplicate relative percent difference values.

No data were qualified for any reason.

All data, as reported, are acceptable for use.

DATA VALIDATION REPORT

Newman's Chevron

Gasoline Range Organics by NWTPH-Gx

This report documents the review of analytical data from the analysis of soil samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Eurofins Lancaster, Lancaster, Pennsylvania. Refer to the Sample Index for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|-------|--|------------------|
| LDC15 | 26 Soil | Stage 2B |
| LDC16 | 16 Soil, 4 Trip Blank, 2 Equipment Blank | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

The laboratory changed the sample IDs from those noted on the chains-of-custody, e.g. "SB-21-8" was changed to "SB-21-S-8-". Also, the collection date was added as a suffix in the yymmdd format. This was done to make the sample naming convention consistent with the first round of sampling.

The laboratory changed the sample IDs for the field duplicates, e.g. "DUP-1-" was changed to "DUP-1-SD-". The field blank IDs were also changed to agree with first round naming conventions. See the field blank section for a comparison of IDs.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---------------------------------------|---|---|
| 1 | Sample Preservation and Holding Times | ✓ | Laboratory Control Samples (LCS/LCSD) |
| ✓ | Initial Calibration (ICAL) | 1 | Matrix Spike/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Continuing Calibration (CCAL) | 1 | Field Duplicates |
| ✓ | Laboratory Blanks | ✓ | Reporting Limits |
| 1 | Field Blanks | ✓ | Reported Results |
| ✓ | Surrogate Compounds | | |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2-6°C. Several coolers were received at temperatures less than the lower control limit, ranging from 0.9C to 1.1C. These outliers did not impact data quality; no data were qualified.

SDG LDC16: Sample SB30-11.5 was received by the laboratory, but was not listed on the chain-of-custody.

Field Blanks

The following field blanks were submitted. No target analytes were detected in these blanks.

| SDG | CHAIN OF CUSTODY ID | LAB LOG-IN ID |
|-------|---------------------|---------------|
| LDC16 | ER-1-022720 | QA-1-O-200227 |
| | ER-2-022720 | QA-2-O-200227 |
| | TB-1-022420 | QA-1-T-200224 |
| | TB-2-022420 | QA-2-T-200224 |
| | TB-3-022420 | QA-3-T-200224 |
| | TB-4-022420 | QA-4-T-200224 |

Matrix Spike/Matrix Spike Duplicates

Matrix spikes were not analyzed. Precision and accuracy were evaluated using the surrogate and laboratory control sample/laboratory control sample duplicate (LCS/LCSD) results.

Field Duplicates

For soil samples, the RPD control limit is 30% for results greater than 5x the reporting limit (RL). For results less than 5x the RL, the difference between the sample and duplicate must be less than 2x the RL.

SDG LDC16: Two sets of field duplicates were submitted: SB-29-S-18-200227 & DUP-1-SD-200227 and SB-28-S-8-200227 & DUP-2-SD-200227. All acceptance criteria were met.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate and LCS/LCSD percent recovery values. Precision was also acceptable as demonstrated by the LCS/LCSD and field duplicate RPD values.

No data were qualified for any reason.

All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Newman's Chevron
Diesel Range Organics (extended) by NWTPH-Dx

This report documents the review of analytical data from the analysis of soil samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Eurofins Lancaster, Lancaster, Pennsylvania. Refer to the Sample Index for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|-------|-------------------|------------------|
| LDC15 | 26 Soil | Stage 2B |
| LDC16 | 16 Soil | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

The laboratory changed the sample IDs from those noted on the chains-of-custody, e.g. "SB-21-8" was changed to "SB-21-S-8-". Also, the collection date was added as a suffix in the yymmdd format. This was done to make the sample naming convention consistent with the first round of sampling.

The laboratory changed the sample IDs from those noted on the chains-of-custody, e.g. "DUP-1-" was changed to "DUP-1-SD-".

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|----------------------------------|
| 1 | Sample Receipt, Preservation, and Holding Times | ✓ | Laboratory Control Samples (LCS) |
| ✓ | Initial Calibration (ICAL) | ✓ | Matrix Spikes (MS) |
| ✓ | Continuing Calibration (CCAL) | ✓ | Laboratory Duplicates |
| ✓ | Laboratory Blanks | 1 | Field Duplicates |
| 1 | Field Blanks | ✓ | Reporting Limits |
| ✓ | Surrogate Compounds | ✓ | Reported Results |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2-6°C. Several coolers were received at temperatures less than the lower control limit, ranging from 0.9C to 1.1C. These outliers did not impact data quality; no data were qualified.

SDG LDC16: Sample SB30-11.5 was received by the laboratory but was not listed on the chain-of-custody.

Field Blanks

No field blanks were submitted.

Field Duplicates

For soil samples, the RPD control limit is 20% for results greater than 5x the reporting limit (RL). For results less than 5x the RL, the difference between the sample and duplicate must be less than 2x the RL.

SDG LDC16: Two sets of field duplicates were submitted: SB-29-S-18-200227 & DUP-1-SD-200227 and SB-28-S-8-200227 & DUP-2-SD-200227. All acceptance criteria were met.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate, laboratory control sample, and matrix spike percent recovery values. Precision was also acceptable as demonstrated by the laboratory duplicate and field duplicate relative percent difference (RPD) values.

No data were qualified for any reason.

All data, as reported, are acceptable for use.

DATA VALIDATION REPORT

Newman's Chevron

Lead by SW6010D and Moisture by SM2540G

This report documents the review of analytical data from the analysis of soil samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Eurofins Lancaster, Lancaster, Pennsylvania. Refer to the Sample Index for a complete list of samples.

| SDG | NUMBER OF SAMPLES AND MATRIX | VALIDATION LEVEL |
|-------|------------------------------|------------------|
| LDC15 | 26 Soil | Stage 2B |
| LDC16 | 16 Soil | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

The laboratory changed the sample IDs from those noted on the chains-of-custody, e.g. "SB-21-8" was changed to "SB-21-S-8-". Also, the collection date was added as a suffix in the yymmdd format. This was done to make the sample naming convention consistent with the first round of sampling.

The laboratory changed the sample IDs for the field duplicates, e.g. "DUP-1-" was changed to "DUP-1-SD-".

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|---|
| 1 | Sample Receipt, Preservation, and Holding Times | 2 | Matrix Spike/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Initial Calibration | ✓ | Laboratory Duplicates |
| ✓ | Calibration Verification | ✓ | Interference Check Samples |
| ✓ | Reporting Limit Standards | ✓ | Serial Dilutions |
| 1 | Laboratory Blanks | 1 | Field Duplicates |
| 1 | Field Blanks | ✓ | Reporting Limits |
| ✓ | Laboratory Control Samples (LCS) | ✓ | Reported Results |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2-6°C. Several coolers were received at temperatures less than the lower control limit, ranging from 0.9C to 1.1C. These outliers did not impact data quality; no data were qualified.

SDG LDC16: Sample SB30-11.5 was received by the laboratory but was not listed on the chain-of-custody.

Field Blanks

No field blanks were submitted.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate samples (MS/MSD) were analyzed at the proper frequency of one per 20 samples or one per batch for soil samples. If the percent recovery values indicate a potential low bias, associated results are estimated (J/UJ-8L). If the %R values indicate a potential high bias, only the associated positive results are estimated (J-8H). For relative percent difference (RPD) outliers, positive results are estimated (J-9).

The following analytes were qualified in one or more samples based on %R and/or RPD value outliers. Qualifiers were issued to all samples associated with a QC batch.

| Batch | Parent Sample | MS %R | MSD %R | RPD | Qualifier |
|--------------|---------------------|-------|--------|-----|-----------|
| 200641404901 | SB-25-S-12-200226 | | | 22% | J-9 |
| 200641404902 | SB-28-S-24.5-200227 | 233% | 195% | | J-8H |
| 200641404904 | SVP-4-S-5-200227 | 56% | 69% | | J-8L |

Field Duplicates

The field duplicate RPD control limit is 20% for results greater than 5x the reporting limit (RL). For results less than 5x the RL, the difference between the sample and duplicate must be less than 2x the RL.

SDG LDC16: Two sets of field duplicates were submitted: SB-29-S-18-200227 & DUP-1-SD-200227 and SB-28-S-8-200227 & DUP-2-SD-200227. All field precision criteria were met.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical methods. With the exceptions noted above, accuracy was acceptable as demonstrated by the laboratory control sample and MS/MSD recoveries and precision was acceptable as demonstrated by the MS/MSD, laboratory duplicate, and field duplicate RPD values.

Results were estimated based on MS/MSD precision and recovery outliers.

All data, as qualified, are acceptable for use.



APPENDIX A

DATA QUALIFIER DEFINITIONS REASON CODES AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES **Based on National Functional Guidelines**

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

| | |
|----|---|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. |
| NJ | The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents the approximate concentration. |
| UJ | The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified. |

The following is an EcoChem qualifier that may also be assigned during the data review process:

| | |
|-----|---|
| DNR | Do not report; a more appropriate result is reported from another analysis or dilution. |
|-----|---|

DATA QUALIFIER REASON CODES

| Group | Code | Reason for Qualification |
|---------------------------------|------|---|
| Sample Handling | 1 | Improper Sample Handling or Sample Preservation (i.e., headspace, cooler temperature, pH, summa canister pressure); Exceeded Holding Times |
| Instrument Performance | 24 | Instrument Performance (i.e., tune, resolution, retention time window, endrin breakdown, lock-mass) |
| | 5A | Initial Calibration (RF, %RSD, r^2) |
| | 5B | Calibration Verification (CCV, CCAL; RF, %D, %R) Use bias flags (H,L) ¹ where appropriate |
| | 5C | Initial Calibration Verification (ICV %D, %R) Use bias flags (H,L) ¹ where appropriate |
| Blank Contamination | 6 | Field Blank Contamination (Equipment Rinsate, Trip Blank, etc.) |
| | 7 | Lab Blank Contamination (i.e., method blank, instrument blank, etc.) Use low bias flag (L) ¹ for negative instrument blanks |
| Precision and Accuracy | 8 | Matrix Spike (MS and/or MSD) Recoveries Use bias flags (H,L) ¹ where appropriate |
| | 9 | Precision (all replicates: LCS/LCSD, MS/MSD, Lab Replicate, Field Replicate) |
| | 10 | Laboratory Control Sample Recoveries (a.k.a. Blank Spikes) Use bias flags (H,L) ¹ where appropriate |
| | 12 | Reference Material Use bias flags (H,L) ¹ where appropriate |
| | 13 | Surrogate Spike Recoveries (a.k.a. labeled compounds, recovery standards) Use bias flags (H,L) ¹ where appropriate |
| Interferences | 16 | ICP/ICP-MS Serial Dilution Percent Difference |
| | 17 | ICP/ICP-MS Interference Check Standard Recovery Use bias flags (H,L) ¹ where appropriate |
| | 19 | Internal Standard Performance (i.e., area, retention time, recovery) |
| | 22 | Elevated Detection Limit due to Interference (i.e., chemical and/or matrix) |
| | 23 | Bias from Matrix Interference (i.e. diphenyl ether, PCB/pesticides) |
| Identification and Quantitation | 2 | Chromatographic pattern in sample does not match pattern of calibration standard |
| | 3 | 2 nd column confirmation (RPD or %D) |
| | 4 | Tentatively Identified Compound (TIC) (associated with NJ only) |
| | 20 | Calibration Range or Linear Range Exceeded |
| | 25 | Compound Identification (i.e., ion ratio, retention time, relative abundance, etc.) |
| Miscellaneous | 11 | A more appropriate result is reported (multiple reported analyses i.e., dilutions, re-extractions, etc. Associated with "R" and "DNR" only) |
| | 14 | Other (See DV report for details) |
| | 26 | Method QC information not provided |

¹H = high bias indicated

L = low bias indicated

**Volatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8260C)**

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|--|---|--|-----------------------|--|
| Sample Handling | | | | | |
| Cooler/Storage Temperature Preservation | 4°C±2°C Aqueous: HCl to pH < 2 Current SW846 criterion is ≤ 6° C ⁽³⁾ | NFG ⁽¹⁾ Method ⁽³⁾ | If required by project: J (pos)/UJ (ND) if greater than 6° C | 1 | Use PJ for temp outliers; see TM20 if pH ≤ 2, reject 2-chloroethyl vinyl ether (R-1) some projects may require methanol preserved soils/seds |
| Holding Time | Aqueous: 14 days preserved 7 Days: unpreserved Solid: 14 Days | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos)/UJ (ND) if HT exceeded J (pos)/R (ND) if gross exceedance (> 2x HT) | 1 | Gross exceedance = > 2x HT, as per 1999 NFG |
| Instrument Performance | | | | | |
| Tuning | BFB Beginning of each 12 hour period Use method or project acceptance criteria | NFG ⁽¹⁾ Method ⁽³⁾ | R (pos/ND) all analytes in all samples associated with the tune | 24 | |
| Initial Calibration Sensitivity | Minimum 5 standards RRF ≥ 0.05 except: RRF ≥ 0.01 poor responders * RRF ≥ 0.005 1,4-dioxane | NFG ⁽¹⁾ Method ⁽³⁾ | Use PJ to qualify J (pos)/UJ (ND) | 5A | TM-06 EcoChem Policy for the Evaluation and Qualification of GCMS Instrument Performance PJ - no action if response is stable (ICAL RSD and CCAL %D acceptable) |
| Initial Calibration Stability | %RSD ≤ 20% except: %RSD ≤ 40% poor responders * %RSD ≤ 50% 1,4-dioxane | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if %RSD > limit | 5A | |
| Initial Calibration Verification | Second source analyzed immediately after ICAL %R 70% - 130% | Method ⁽³⁾ | J (pos) %R > UCL J (pos)/UJ (ND) %R < LCL | 5A (H,L) ⁴ | QAPP may have overriding accuracy limits. |
| Continuing Calibration Sensitivity | RRF ≥ 0.05 except: RRF ≥ 0.01 poor responders * RRF ≥ 0.005 1,4-dioxane | NFG ⁽¹⁾ Method ⁽³⁾ | Use PJ to qualify J (pos)/UJ (ND) | 5B | see ICAL RRF guidance |
| Continuing Calibration Stability | %D ≤ 25% except: %D ≤ 40% poor responders * %D ≤ 50% 1,4-dioxane | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) - %D > control limit (high bias) J (pos)/UJ (ND) - %D < -control limit (low bias) | 5B (H,L) ⁴ | |

**Volatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8260C)**

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--------------------------------------|--|---|---|-----------------------|--|
| Blank Contamination | | | | | |
| Method Blank (MB) | <u>MB: One per matrix per batch (of ≤ 20 samples)</u> No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U (pos) if result is < 5X or 10X action level | 7 | 10X action level for methylene chloride, acetone, & 2-butanone. 5X for all other target analytes Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review TB, qualify as needed #3 - Review FB, qualify as needed Note: Actions as per NFG 1999 |
| | No TICs present | | R (pos) TICs using 10X rule | | |
| Trip Blank (TB) | No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U (pos) if result is < 5X or 10X action level | 6 | |
| Field Blank (FB) | No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U (pos) if result is < 5X or 10X action level | 6 | |
| Precision and Accuracy | | | | | |
| LCS/LCSD (recovery) | One per matrix per batch (of ≤ 20 samples) LCSD not required by NFG or method Use method acceptance criteria/laboratory limits | Method ⁽³⁾ | J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND)%R < 10% | 10 (H,L) ⁴ | No action if only one spike %R is outside criteria when LCSD is analyzed, unless one recovery is <10%. QAPP may have overriding accuracy limits. |
| LCS/LCSD RPD | If LCSD analyzed RPD < lab limits | Method ⁽³⁾ | J (pos) | 9 | Qualify all associated samples. QAPP may have overriding precision limits. |
| Reference Material (RM, SRM, or CRM) | Result ±20% of the 95% confidence interval of the true value for analytes | EcoChem standard policy | J (pos)/UJ (ND) if < LCL J (pos) if > UCL | 12 (H,L) ⁴ | QAPP may have overriding accuracy limits. Some manufacturers may have different RM control limits |
| Surrogates | Added to all samples Within method/laboratory control limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if %R >UCL J (pos)/UJ (ND) if %R <LCL J (pos)/R (ND) if <10% | 13 (H,L) ⁴ | No action if there are 4+ surrogates and only 1 outlier Qualify all compounds if qualification is required. |
| Internal Standards | Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if > 200% J (pos)/UJ (ND) if < 50% J (pos)/R (ND) if < 25% if RT >30 seconds use PJ | 19 | Qualify compounds quantified using particular internal standard |

**Volatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8260C)**

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|---|---|----------------------|---|
| Precision and Accuracy (continued) | | | | | |
| MS/MSD (recovery) | One per matrix per batch (of ≤ 20 samples) Use method acceptance criteria/laboratory limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) %R > UCL J (pos)/UJ (ND) if both %R < LCL J (pos)/R (ND) if both %R < 10% J (pos)/UJ (ND) if one > UCL & one < LCL, with no bias | 8 (H,L) ⁴ | No action if only one spike %R is outside criteria. No action if parent concentration is >4x the amount spiked. Qualify parent sample only. |
| MS/MSD (RPD) | One per matrix per batch (of ≤ 20 samples) Use method acceptance criteria/laboratory limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) If RPD > control limit | 9 | Qualify parent sample only |
| Field Duplicates | Solids: RPD < 50% OR difference < 2X RL (for results < 5X RL) Aqueous: RPD < 35% OR difference < 1X RL (for results < 5X RL) | EcoChem standard policy | J (pos)/UJ (ND) Qualify only parent and field duplicate samples | 9 | Use project limits if specified |
| Compound Identification and Quantitation | | | | | |
| Retention Time Relative Ion Intensities | RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample | NFG ⁽¹⁾ Method ⁽³⁾ | U (pos) if identification criteria not met | 25 | |
| TICs | Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification | NFG ⁽¹⁾ Method ⁽³⁾ | NJ TIC R (pos) if common laboratory contaminants | 4 | Common laboratory contaminants: aldol condensation products, solvent preservatives, and reagent contaminants |
| Calibration Range | Results greater than highest calibration standard | EcoChem standard policy | Qualify J (pos) | 20 | If result from dilution analysis is not reported. |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 EcoChem Policy for Rejection/Selection Process for Multiple Results |

¹ National Functional Guidelines for Organic Data Review, June, 2008² National Functional Guidelines for Organic Data Review, Oct, 1999³ Method SW846 8260C Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)⁴ NFG 2013 suggests using "+ / -" to indicate bias; EcoChem has chosen "H" = high bias indicated; "L" = low bias indicated.

* "Poor responder" compounds: Acetone, 2-butanone, carbon disulfide, chloroethane, chloromethane, cyclohexane, 1,2-dibromoethane, dichlorodifluoromethane, cis-1,2-dichloroethene, 1,2-dichloropropane, 1,2-dibromo-3-chloropropane, 2-hexanone, isopropylbenzene, methyl acetate, methylene chloride, methylcyclohexane, 4-methyl-2-pentanone, methyl tert-butyl ether, trans-1,2-dichloroethene, trichlorofluoromethane, 1,1,2-trichloro-1,2,2-trifluoroethane **criterion is 0.010 RRF**; 1,4-dioxane RRF **criterion is 0.005**.

(pos): Positive Result

(ND): Non-detect

Volatile Organics in Air by GCMS and GCMS-SIM, Method TO-15

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|--|-----------------------|--|
| Sample Handling | | | | | |
| Cooler/Storage Temperature Preservation | SUMMA Canister - no preservation requirements | | | | |
| SUMMA Canister Pressure | Pressure of Canister upon receipt at lab should be between 5-10 inches of Hg or greater of vacuum | Method ^{1,2} | If vacuum is > 8 inch Hg or < 1 inch Hg, note in report. | 1 | Professional judgment |
| Holding Time | 30 days from collection to analysis | Method ¹ | J(pos)/UJ(ND) if HT exceeded J(pos)/R(ND) if gross exceedance (> 2X HT) | 1 | Gross exceedance = > 2X HT, as per 1999 NFG |
| Instrument Performance | | | | | |
| Tuning | BFB Beginning of each 24 hour period Use method acceptance criteria (Table 3) | Method ¹ | R(pos/ND) all analytes in all samples associated with the tune | 5A | every 24 hours or every 20 samples (Section 10.4.2 of method) TM-06 EcoChem Policy for the Evaluation and Qualification of GCMS Instrument Performance |
| Initial Calibration (Minimum 5 stds.) Sensitivity | RRF \geq 0.05 Note: not discussed in method. Default to NFG criteria. | NFG ³ | J(pos)/R(ND) if RRF/RF is less than criterion | | |
| Initial Calibration (Minimum 5 stds.) Stability | %RSD \leq 30% with up to 2 compounds max 40%; OR Linear $r \geq$ 0.995 or $r^2 \geq$ 0.990 (6 points must be used) (NFG optional criteria) | Method ¹ NFG ³ | J(pos) if %RSD > 30% OR r/r2-value < 0.995 (or 0.990) | | |
| Initial Calibration Verification (ICV) Stability | Not required by method. Standard from independent source Analyzed immediately after ICAL If analyzed, use lab or QAPP limits | | J(pos) if high bias J(pos)/UJ(ND) if low bias J(pos)/R(ND) if significant low bias | | |
| Continuing Calibration (Prior to each 24 hr. shift) Sensitivity | RRF \geq 0.05 Note: not discussed in method. Default to NFG criteria. | NFG ³ | J(pos)/R(ND) if RRF/RF is less than criterion | 5B | |
| Continuing Calibration (Prior to each 24 hr. shift) Stability | %Drift \leq 30% | Method ¹ | If > +/- 70%: J(pos)/R(ND) If -69% to -31%: J(pos) (high bias) If 31% to 69%: J(pos)/UJ(ND) (low bias) | 5B (H,L) ⁴ | |

Volatile Organics in Air by GCMS and GCMS-SIM, Method TO-15

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|------------------------------------|---|--|--|-----------------------|--|
| Blank Contamination | | | | | |
| Method Blank (MB) | MB: One per batch of (of ≤ 20 samples) No detected compounds > MDL | Method ¹ NFG ³ | U(pos) if result is < 5X or 10X action level, as per analyte. | 7 | 10X action level for methylene chloride, acetone, & 2-butanone. 5X for all other target analytes Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review FB, qualify as needed |
| | No TICs present | | R(pos) TICs using 10X rule | | |
| Field Blank (FB) | FB: frequency as per QAPP No detected compounds > MDL | Method ¹ NFG ³ | U(pos) if result is < 5X or 10X action level, as per analyte. | 6 | |
| Precision and Accuracy | | | | | |
| LCS | One per lab batch (of ≤ 20 samples) Note: not discussed in method. Default to lab or QAPP limits. | NFG ³ | Qualify all associated samples J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if both %R < LCL - low bias J(pos)/R(ND) if both %R < 10% - very low bias J(pos)/UJ(ND) if one > UCL & one < LCL, with no bias | 10 (H,L) ⁴ | No action if only one spike %R is outside criteria, when LCSD is analyzed. Qualify all associated samples. |
| LCS/LCSD (RPD) | if analyzed RPD $\leq 30\%$ | NFG ³ | J(pos) assoc. compd. in all samples | 9 | Qualify all associated samples. |
| Surrogates | Note: not discussed in method. Default to lab or QAPP limits. | NFG ³ | J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if %R < LCL - low bias J(pos)/R(ND) if < 10% - very low bias | 13 (H,L) ⁴ | Note: No action if there are 4+ surrogates and only 1 outlier. |
| Internal Standards | Added to all samples Acceptable Range: IS area $\pm 40\%$ of CCAL area RT within 20 seconds of mean RT over ICAL range RT within 0.33 minutes of CC RT | Method ¹ NFG ³ | J(pos) if > 140% J(pos)/UJ(ND) if < 60% J(pos)/R(ND) if < 25% RT > 0.33 mins, narrate and notify PM | 19 | |
| Field Duplicates | RPD $\leq 25\%$ OR difference < 1X RL (for results < 5X RL) | Method ¹ EcoChem standard policy | Narrate and qualify if required by project (EcoChem PJ) Qualify only field duplicate samples J(pos)/UJ(ND) | 9 | |
| Compound ID and Calculation | | | | | |
| Quantitation/ Identification | RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample | Method ¹ NFG ³ | See Technical Director if outliers are found | 14 25 (false pos) | |
| TICs | Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification | Method ¹ NFG ³ | NJ the TIC unless: R(pos) common laboratory contaminants See Technical Director for ID issues | 4 | Common laboratory contaminants: aldol condensation products, solvent preservatives, and reagent contaminants |
| Calibration Range | Results exceed the upper calibration range | EcoChem standard policy | Qualify J(pos) | 20 | If result from dilution analysis is not reported. |
| Calculation Check | Check 10% of field & QC sample results | EcoChem standard policy | Contact laboratory for resolution and/or corrective action | na | Full data validation only. |

Volatile Organics in Air by GCMS and GCMS-SIM, Method TO-15

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|-------------------------|---|-------------|--|
| Electronic Data Deliverable (EDD) | | | | | |
| Verification of EDD to hardcopy data | EcoChem verify @ 10% unless problems noted; then increase level up to 100% for next several packages. | EcoChem standard policy | Depending on scope of problem, correct at EcoChem (minor issues) to resubmittal by laboratory (major issues). | na | EcoChem Project Manager and/or Database Administrator will work with lab to provide long-term corrective action. |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 Rev. 1 EcoChem Policy for Rejection/Selection Process for Multiple Results |

(pos): Positive Result(s)
 (ND): Non-detects

- ¹ Compendium Method TO-15, Determination of Volatile Organic Compounds (VOCs) in Air Collected In Specially-Prepared Canisters And Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), Second Edition, January 1999. EPA/625/R-96/010b
- ¹ Supplement to EPA Compendium Method TO-15. Reduction of Method Detection Limits to Meet Vapor Intrusion Monitoring Needs. E.H. Daughtrey Jr., K.D. Oliver, H.H. Jacumin Jr., and W.A. McClenny, 2/18/2009.
- ¹ ASTM D1945 - 03 Standard Test Method for Analysis of Natural Gas by Gas Chromatography. January 1, 2010.
- ² Air Toxics Ltd: Guide to Air Sampling and Analysis
- ³ National Functional Guidelines for Organic Data Review, June, 2008
- ⁴ "H" = high bias indicated; "L" = low bias indicated

DATA VALIDATION CRITERIA

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
 (Based on NFG 1999 & 2008 and SW-846 Method 8270D)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|---|--|-----------------------|--|
| Sample Handling | | | | | |
| Cooler/Storage Temperature Preservation | 4°C±2°C sediment/tissues may require storage at -20°C | NFG ⁽¹⁾ Method ⁽³⁾ | If required by project: J (pos)/UJ (ND) if greater than 6° C | 1 | Use PJ for temp outliers; see TM20 Current SW846 criterion is ≤ 6° C ⁽³⁾ |
| Holding Time | Extraction Aqueous: 7 days from collection Extraction Solid: 14 days from collection Analysis (all matrices): 40 days from extraction Holding time may be extended to 1 year for frozen sediments/tissues | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos)/UJ (ND) if HT exceeded J (pos)/R (ND) if gross exceedance (> 2x HT) | 1 | Gross exceedance = > 2x HT, as per 1999 NFG |
| Instrument Performance | | | | | |
| Tuning | DFTPP Beginning of each 12 hour period Use method or project acceptance criteria | NFG ⁽¹⁾ Method ⁽³⁾ | R (pos/ND) all analytes in all samples associated with the tune | 24 | |
| Initial Calibration Sensitivity | RRF ≥ 0.05 except: RRF ≥ 0.01 poor responders * | NFG ⁽¹⁾ Method ⁽³⁾ | Use PJ to qualify J (pos)/UJ (ND) | 5A | TM-06 EcoChem Policy for the Evaluation and Qualification of GCMS Instrument Performance PJ - no action if response is stable (ICAL RSD and CCAL %D acceptable) |
| Initial Calibration Stability | Minimum 5 standards %RSD ≤ 20.0% except: %RSD ≤ 40.0% poor responders * or co-efficient of determination (r ²) > 0.99 | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if %RSD > limit or r ² value <0.99 | 5A | |
| Initial Calibration Verification Check | Prepared from second source; analyze after each ICAL Percent recovery limits = 70-130% | Method ⁽³⁾ | J (pos) %R > UCL J (pos)/UJ (ND) %R < LCL | 5A (H,L) ⁴ | QAPP may have overriding accuracy limits. |

DATA VALIDATION CRITERIA

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
 (Based on NFG 1999 & 2008 and SW-846 Method 8270D)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|---|--|-----------------------|--|
| Instrument Performance (continued) | | | | | |
| Continuing Calibration Sensitivity | RRF \geq 0.05 except: RRF \geq 0.01 poor responders * | NFG ⁽¹⁾ Method ⁽³⁾ | Use PJ to qualify J (pos)/UJ (ND) | 5B | see ICAL RRF guidance |
| Continuing Calibration Stability | Prior to sample analysis and every 12 hours %D \leq 25% except: %D \leq 40.0% poor responders * | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) - %D > control limit (high bias) J (pos)/UJ (ND) - %D < -control limit (low bias) | 5B (H,L) ⁴ | |
| Blank Contamination | | | | | |
| Method Blank (MB) | MB: One per matrix per batch of (of \leq 20 samples) No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U(pos) if result is < 5X or 10X action level | 7 | 10X action level applies to phthalates only. 5X for all other target analytes Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review FB , qualify as needed Note: Actions as per 1999 NFG |
| | No TICs present | | R (pos) TICs using 10X rule | 7 | |
| Field Blank (FB) | No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U (pos) if result is < 5X or 10X action level | 6 | |
| Precision and Accuracy | | | | | |
| LCS/LCSD (recovery) | One per matrix per batch (of \leq 20 samples) LCSD not required by NFG or method Use method acceptance criteria/laboratory limits | Method ⁽³⁾ | J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND)%R < 10% | 10 (H,L) ⁴ | No action if only one spike %R is outside criteria when LCSD is analyzed, unless one recovery is <10%. QAPP may have overriding accuracy limits. Qualify all associated samples. |
| LCS/LCSD (RPD) | If LCSD analyzed RPD < lab limits | Method ⁽³⁾ | J (pos) | 9 | Qualify all associated samples. QAPP may have overriding precision limits. |

DATA VALIDATION CRITERIA

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
 (Based on NFG 1999 & 2008 and SW-846 Method 8270D)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|---|---|-----------------------|--|
| Precision and Accuracy (continued) | | | | | |
| Reference Material (RM, SRM, or CRM) | Result \pm 20% of the 95% confidence interval of the true value for analytes | EcoChem standard policy | J (pos)/UJ (ND) if < LCL J (pos) if > UCL | 12 (H,L) ⁴ | QAPP may have overriding accuracy limits. Some manufacturers have different RM control limits |
| MS/MSD (recovery) | One per matrix per batch (of \leq 20 samples) Use method acceptance criteria/laboratory limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) %R > UCL J (pos)/UJ (ND) if both %R < LCL J (pos)/R (ND) if both %R < 10% J (pos)/UJ (ND) if one > UCL & one < LCL, with no bias | 8 (H,L) ⁴ | No action if only one spike %R is outside criteria. No action if parent concentration is >4x the amount spiked. Qualify parent sample only. |
| MS/MSD (RPD) | One per matrix per batch (of \leq 20 samples) Use method acceptance criteria/laboratory limits | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) in parent sample if RPD > CL | 9 | Qualify parent sample only |
| Surrogates | Minimum of 3 acid & 3 base/neutral (B/N) compounds added to all samples Within method control limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND) if %R < 10% | 13 (H,L) ⁴ | Qualify all compounds in associated fraction. Do not qualify if only 1 acid and/or 1 B/N surrogate is out, unless <10%. If 1 surrogate outlier < 10% then J (pos)/R (ND) |
| Internal Standards | Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if > 200% J (pos)/UJ (ND) if < 50% J (pos)/R (ND) if < 25% if RT >30 seconds use PJ | 19 | Qualify compounds quantified using particular internal standard |
| Field Duplicates | Solids: RPD < 50% OR difference < 2X RL (for results < 5X RL) Aqueous: RPD < 35% OR difference < 1X RL (for results < 5X RL) | EcoChem standard policy | J (pos)/UJ (ND) Qualify only parent and field duplicate samples | 9 | Use project limits if specified |

DATA VALIDATION CRITERIA

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
 (Based on NFG 1999 & 2008 and SW-846 Method 8270D)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|---|--|-------------|--|
| Compound Identification and Quantitation and Calculation | | | | | |
| Retention times and relative ion intensities | RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample | NFG ⁽¹⁾ Method ⁽³⁾ | U (pos) if identification criteria not met | 25 | |
| TICs | Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification | NFG ⁽¹⁾ Method ⁽³⁾ | NJ the TIC unless: R (pos) common laboratory contaminants | 4 | |
| Calibration Range | Results greater than highest calibration standard | EcoChem standard policy | Qualify J (pos) | 20 | If result from dilution analysis is not reported. |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 EcoChem Policy for Rejection/Selection Process for Multiple Results |

¹ National Functional Guidelines for Organic Data Review, June, 2008

(pos): Positive Result(s)

² National Functional Guidelines for Organic Data Review, October, 1999

(ND): Non-detects

³ Method SW846 8270D Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS), Revision 4, February 2007.

⁴ NFG 2013 suggests using "+ / -" to indicate bias; EcoChem has chosen "H" = high bias indicated; "L" = low bias indicated.

* "Poor responder" compounds: acetophenone, atrazine, benzaldehyde, 1,1'-biphenyl, bis(2-ethylhexyl)phthalate, butylbenzylphthalate, caprolactam, carbazole, 4-chloroaniline, diethylphthalate, di-n-butylphthalate, 3-3'-dichlorobenzidine, dimethylphthalate, 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, di-n-octylphthalate, hexachlorobutadiene, hexachlorocyclopentadiene, 2-nitroaniline, 3-nitroaniline, 4-nitroaniline, 4-nitrophenol, N-nitrosodiphenylamine, 2,2'-oxybis-(1-chloropropane), 1,2,4,5-tetrachlorobenzene use a 0.010 RRF criterion.

**EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Gasoline Range
 (Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Gx,
 June 1997, Wa DOE & Oregon DEQ)**

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|--|-------------|-------------------------|
| Sample Handling | | | | |
| Cooler Temperature & Preservation | 4°C±2°C Water: HCl to pH < 2 | J(+)/UJ(-) if greater than 6°C | 1 | |
| Holding Time | Waters: 14 days preserved 7 days unpreserved Solids: 14 Days | J(+)/UJ(-) if hold times exceeded J(+)/R(-) if exceeded > 3X | 1 | Professional Judgement |
| Instrument Performance | | | | |
| Initial Calibration | 5 calibration points (All within 15% of true value) Linear Regression: $r^2 \geq 0.990$ If used, RSD of response factors $\leq 20\%$ | Narrate if fewer than 5 calibration levels or if %R > 15% J(+)/UJ(-) if $r^2 < 0.990$ J(+)/UJ(-) if %RSD > 20% | 5A | |
| Mid-range Calibration Check Std. | Analyzed before and after each analysis shift & every 20 samples. Recovery range 80% to 120% | Narrate if frequency not met. J(+)/UJ(-) if %R < 80% J(+) if %R > 120% | 5B | |
| Blank Contamination | | | | |
| Method Blank | At least one per batch (≤ 10 samples) No results > RL | U (at the RL) if sample result is < RL & < 5X blank result. | 7 | |
| | | U (at reported sample value) if sample result is \geq RL and < 5X blank result | 7 | |
| Trip Blank (if required by project) | No results > RL | Action is same as method blank for positive results remaining in trip blank after method blank qualifiers are assigned. | 18 | |
| Field Blanks (if required by project) | No results > RL | Action is same as method blank for positive results remaining in field blank after method and trip blank qualifiers are assigned. | 6 | |

**EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Gasoline Range
 (Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Gx,
 June 1997, Wa DOE & Oregon DEQ)**

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|-------------|---|
| Precision and Accuracy | | | | |
| MS samples (accuracy) (if required by project) | %R within lab control limits | Qualify parent only, unless other QC indicates systematic problems. J(+) if both %R > upper control limit (UCL) J(+)/UJ(-) if both %R < lower control limit (LCL) No action if parent conc. >5X the amount spiked. | 8 | Use Professional Judgement if only one %R outlier |
| Precision: MS/MSD or LCS/LCSD or sample/dup | At least one set per batch (≤10 samples) RPD ≤ lab control limit | J(+) if RPD > lab control limits | 9 | |
| LCS (not required by method) | %R within lab control limits | J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R < 10% | 10 | Professional Judgement |
| Surrogates | Bromofluorobenzene and/or 1,4-difluorobenzene added to all samples (inc. QC samples). %R = 50-150% | J(+)/UJ(-) if %R < LCL J(+) if %R >UCL J(+)/R(-) if any %R < 10% No action if 2 or more surrogates are used, and only one is outside control limits. | 13 | Professional Judgement |
| Pattern Identification | Compare sample chromatogram to standard chromatogram to ensure range and pattern are reasonable match. Laboratory may flag results which have poor match. | J(+) | 2 | |
| Field Duplicates | Use project control limits, if stated in QAPP EcoChem default: water: RPD < 35% solids: RPD < 50% | Narrate outliers If required by project, qualify with J(+)/UJ(-) | 9 | |
| Compound ID and Calculation | | | | |
| Two analyses for one sample (e.g., dilution) | Report only one result per analyte | "DNR" (or client requested qualifier) all results that should not be reported. | 11 | See EcoChem TM-04 |

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range
(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx,
June 1997, Wa DOE & Oregon DEQ)

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|--|-------------|-------------------------|
| Sample Handling | | | | |
| Cooler Temperature & Preservation | 4°C±2°C Water: HCl to pH < 2 | J(+)/UJ(-) if greater than 6 deg. C | 1 | |
| Holding Time | Ext. Waters: 14 days preserved 7 days unpreserved Ext. Solids: 14 Days Analysis: 40 days from extraction | J(+)/UJ(-) if hold times exceeded J(+)/R(-) if exceeded > 3X | 1 | Professional Judgement |
| Instrument Performance | | | | |
| Initial Calibration | 5 calibration points (All within 15% of true value) Linear Regression: $r^2 \geq 0.990$ If used, RSD of response factors $\leq 20\%$ | Narrate if fewer than 5 calibration levels or if %R > 15% J(+)/UJ(-) if $r^2 < 0.990$ J(+)/UJ(-) if %RSD > 20% | 5A | |
| Mid-range Calibration Check Std. | Analyzed before and after each analysis shift & every 20 samples. Recovery range 85% to 115% | Narrate if frequency not met. J(+)/UJ(-) if %R < 85% J(+) if %R > 115% | 5B | |
| Blank Contamination | | | | |
| Method Blank | At least one per batch (≤ 20 samples) No results > RL | U (at the RL) if sample result is < RL & < 5X blank result. | 7 | |
| | | U (at reported sample value) if sample result is \geq RL and < 5X blank result | 7 | |
| Field Blanks (if required by project) | No results > RL | Action is same as method blank for positive results remaining in the field blank after method blank qualifiers are assigned. | 6 | |

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range
 (Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx,
 June 1997, Wa DOE & Oregon DEQ)

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|-------------|---|
| Precision and Accuracy | | | | |
| MS samples (accuracy) (if required by project) | %R within lab control limits | Qualify parent only, unless other QC indicates systematic problems. J(+) if both %R > upper control limit (UCL) J(+)/UJ(-) if both %R < lower control limit (LCL) No action if parent conc. >5X the amount spiked. | 8 | Use Professional Judgement if only one %R outlier |
| Precision: MS/MSD or LCS/LCSD or sample/dup | At least one set per batch (≤10 samples) RPD ≤ lab control limit | J(+) if RPD > lab control limits | 9 | |
| LCS (not required by method) | %R within lab control limits | J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R < 10% | 10 | Professional Judgement |
| Surrogates | 2-fluorobiphenyl, p-terphenyl, o-terphenyl, and/or pentacosane added to all samples (inc. QC samples). %R = 50-150% | J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R < 10% No action if 2 or more surrogates are used, and only one is outside control limits. | 13 | Professional Judgement |
| Pattern Identification | Compare sample chromatogram to standard chromatogram to ensure range and pattern are reasonable match. Laboratory may flag results which have poor match. | J(+) | 2 | |
| Field Duplicates | Use project control limits, if stated in QAPP EcoChem default: water: RPD < 35% solids: RPD < 50% | Narrate (Use Professional Judgement to qualify) | 9 | |

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range
 (Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx,
 June 1997, Wa DOE & Oregon DEQ)

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|------------------------------------|--|-------------|-------------------------|
| Compound ID and Calculation | | | | |
| Two analyses for one sample (dilution) | Report only one result per analyte | "DNR" (or client requested qualifier) all results that should not be reported. | 11 | See EcoChem TM-04 |

Metals by ICP-AES
 (Based on Inorganic NFG 2010 and SW-846 6010C)

| QC Element | EcoChem Acceptance Criteria | Source of Criteria | EcoChem Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|--|---|-----------------------|--|
| Sample Handling | | | | | |
| Cooler / Storage Temperature Preservation | Solid: Cooler temperature 4°C±2°C Aqueous: Nitric Acid to pH < 2 Dissolved Metals: 0.45 µm filter, preserve to pH < 2 after filtration | NFG ⁽¹⁾ Method ⁽²⁾ | Cooler Temps: If required by project J (pos)/UJ (ND) if greater than 6° C Aqueous: J (pos)/UJ (ND) if pH > 2 | 1 | Use PJ to qualify for temperature outlier. Current SW846 criterion is ≤ 6° C (4) No quals for pH if samples preserved by lab upon receipt and within 1 day of collection. |
| Holding Time | All matrices: 180 days from date sampled Frozen soils, sediments, tissues (-20°C) - HT extended to 1 year | NFG ⁽¹⁾ Method ⁽²⁾ EcoChem standard policy | J (pos)/UJ (ND) if holding time exceeded | 1 | |
| Instrument Performance | | | | | |
| Initial Calibration (ICAL) | Based on instrument requirements, blank + 1 standard minimum requirement for calibration If more than 1 standard used, r ≥ 0.995 | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if r < 0.995 | 5A | |
| Initial Calibration Verification (ICV) | Independent source analyzed immediately after calibration %R within ± 10% of true value | NFG ⁽¹⁾ Method ⁽²⁾ | R (pos/ND) if %R < 75% J (pos)/UJ (ND) if %R 75% - 89% J (pos) if %R > 111% | 5A (H,L) ³ | Qualify all samples in run |
| Reporting Limit (RL) Standard Low Level ICV/CCV | concentration at RL %R = 70%-130% | Method ⁽²⁾ | J (pos) < 2x RL / R (ND) if %R < 50% J (pos) < 2x RL / UJ (ND) if %R 50 - 69% J (pos) < 2x RL if %R > 130% | 5A (H,L) ³ | Qualify all samples in run |
| Continuing Calibration Verification (CCV) | Immediately following ICV/ICB, then every two hours or ten samples, and at end of run. %R within ± 10% of true value | NFG ⁽¹⁾ Method ⁽²⁾ | R (pos/ND) if %R < 75% J (pos)/UJ (ND) if %R 75% - 89% J (pos) if %R > 111% | 5B (H,L) ³ | Qualify samples bracketed by CCV outliers |
| Interference Check Samples (ICSA / ICSAB) | ICSAB %R 80% - 120% for all spiked elements ICSA < MDL for all unspiked elements | NFG ⁽¹⁾ Method ⁽²⁾ | For samples with Al, Ca, Fe, Mg > ICS levels: ICSAB: J(pos)/R (ND) if %R < 50% J (pos)/UJ (ND) if %R = 50% - 79% J (pos) if %R > 120% ICSA: J (pos) < 2x ICSA/UJ (ND) for ICSA < Neg MDL J (pos) < 2x ICSA for ICSA > MDL | 17 (H,L) ³ | Use PJ and inter-element correction factors to evaluate ICSA to determine if bias is present. Refer to TM-09 for additional information. |

Metals by ICP-AES
 (Based on Inorganic NFG 2010 and SW-846 6010C)

| QC Element | EcoChem Acceptance Criteria | Source of Criteria | EcoChem Action for Non-Conformance | Reason Code | Discussion and Comments |
|-------------------------------|---|---|--|--|---|
| Blank Contamination | | | | | |
| Method Blank (MB) | One per matrix per batch of (of ≤ 20 samples) Blank conc < MDL | NFG ⁽¹⁾ Method ⁽²⁾ | U (pos) if result is < 5X method blank concentration | 7 | Refer to TM-02 for additional information. Blank Evaluation based on NFG 1994 |
| Instrument Blanks (ICB/CCB) | After each ICV & CCV blank concentration < MDL | NFG ⁽¹⁾ Method ⁽²⁾ | Action level is 5x absolute value of blank conc. For positive blanks: U (pos) results < action level For negative blanks: J (pos)/UJ (ND) results < action level | Pos Blanks: 7 Neg Blanks: 7L ³ | Use blanks bracketing samples for Qualification Refer to TM-02 for additional information. Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review IB, qualify as needed #3 - Review FB, qualify as needed |
| Field Blank (FB) | Blank conc < MDL | EcoChem standard policy | U (pos) if result is < 5x action level, as per analyte. | 6 | Qualify in associated field samples only. Refer to TM-02 for additional information. |
| Precision and Accuracy | | | | | |
| LCS (recovery) | One per matrix per batch (of ≤ 20 samples); LCSD not required %R between 80-120% | Method ⁽²⁾ | J (pos)/R (ND) if %R < 50% J (pos)/UJ (ND) if %R 50% - 79% J (pos) if %R > 120% | 10 (H,L) ³ | Qualify all samples in batch QAPP may have overriding accuracy limits. NFG Limits 70% -130% (50% - 150% Ab, Ag) |
| LCS/LCSD (RPD) | LCSD not required, if analyzed: RPD ≤ 20% | Method ⁽²⁾ | J (pos)/UJ (ND) if RPD > 20% | 9 | Qualify all samples in batch QAPP may have overriding precision limits. |
| MS/MSD (recovery) | One per matrix per batch (of ≤ 20 samples); MSD not required %R between 75-125% | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) if %R > 125% J (pos)/UJ (ND) if %R < 75% J (pos)/R (ND) if %R < 30%, unless post digestion spike analyzed, J (pos)/UJ (ND) if post digestion spike %R OK | 8 (H,L) ³ | No action if only one spike %R is outside criteria. NA if parent concentration >4x the amount spiked. Qualify all samples in batch. QAPP may have overriding accuracy limits. |

DATA VALIDATION CRITERIA

Metals by ICP-AES
 (Based on Inorganic NFG 2010 and SW-846 6010C)

| QC Element | EcoChem Acceptance Criteria | Source of Criteria | EcoChem Action for Non-Conformance | Reason Code | Discussion and Comments |
|--------------------------------------|--|---|--|-----------------------|---|
| Precision and Accuracy con't | | | | | |
| Post Digestion Spikes | If MS is outside 75-125%, post-spike should be analyzed %R 80%-120% (method); 75%-125% (NFG) | NFG ⁽¹⁾ Method ⁽²⁾ | Only used to support MS qualification decisions | NA | No qualifiers assigned based solely on this element. |
| MS/MSD (RPD) | MSD not required, if analyzed: RPD ≤ 20% | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if RPD > 20% | 9 | QAPP may have overriding precision limits. |
| Laboratory Duplicate | One per matrix per batch (of ≤ 20 samples) RPD ≤ 20% for results ≥ 5x RL Solids: difference < 2X RL for results < 5X RL Aqueous: difference < 1X RL for results < 5X RL | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if RPD > 20% or if difference > control limit | 9 | Qualify all samples in batch. QAPP may have overriding precision limits. |
| Reference Material (RM, SRM, or CRM) | Result ±20% of the 95% confidence interval of the true value for analytes | EcoChem standard policy | J (pos)/UJ (ND) if < LCL J (pos) if > UCL | 12 (H,L) ³ | QAPP may have overriding accuracy limits. Some manufacturers may have different RM control limits |
| Serial Dilution | Analyze one sample per matrix at a 5x dilution %D <10% for original sample conc. > 50x MDL | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if %D > 10% and native sample concentration > 50x MDL | 16 | Qualify all samples in batch. |
| Field Duplicate | Solids: RPD <50% (for results ≥ 5x RL) OR difference < 2X RL (for results < 5X RL) Aqueous: RPD <35% (for results ≥ 5x RL) OR difference < 1X RL (for results < 5X RL) | EcoChem standard policy | Qualify only parent and field duplicate samples J (pos)/UJ (ND) | 9 | QAPP may have overriding precision limits. Client/QAPP may not require qualification based on field precision. |

Metals by ICP-AES
 (Based on Inorganic NFG 2010 and SW-846 6010C)

| QC Element | EcoChem Acceptance Criteria | Source of Criteria | EcoChem Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|------------------------------------|---|--|-------------|--|
| Compound Quantitation | | | | | |
| Total and Dissolved Comparison | Total > Dissolved | EcoChem standard policy | J (pos)/UJ (ND) if Dissolved > Total and results fall outside of standard duplicate precision criteria | 14 | |
| Calibration Range | Results < instrument linear range | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) if result exceeds linear range and sample was not diluted | 20 | |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 EcoChem Policy for Rejection/Selection Process for Multiple Results |

¹ National Functional Guidelines for Inorganic Superfund Data Review, January 2010.

² Method SW846 6010C Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP-AES), Revision 3, February 2007.

³ "H" = high bias indicated; "L" = low bias indicated

⁴ SW846, Chapter 3, Inorganic Analytes

(pos): Positive Result

(ND): Not Detected



APPENDIX B

QUALIFIED DATA SUMMARY TABLE

**Qualified Data Summary Table
Norman's Chevron**

| SDG | SAMPLE ID | LAB ID | METHOD | ANALYTE | RESULT | UNITS | LAB FLAG | DV QUAL | DV REASON |
|-------|---------------------|---------|--------------|---------|--------|-------|----------|---------|-----------|
| LDC15 | SB-21-S-8-200224 | 1271114 | SW-846 6010D | Lead | 2.03 | mg/kg | | J | 8L |
| LDC15 | SB-22-S-8-200224 | 1271115 | SW-846 6010D | Lead | 6.02 | mg/kg | | J | 8L |
| LDC15 | SB-21-S-16-200225 | 1271116 | SW-846 6010D | Lead | 2 | mg/kg | | J | 8H |
| LDC15 | SB-21-S-20.5-200225 | 1271118 | SW-846 6010D | Lead | 6.53 | mg/kg | | J | 8H |
| LDC15 | SB-23-S-8-200225 | 1271119 | SW-846 6010D | Lead | 2.59 | mg/kg | | J | 8H |
| LDC15 | SB-23-S-16-200225 | 1271120 | SW-846 6010D | Lead | 2.35 | mg/kg | | J | 8H |
| LDC15 | SB-23-S-23-200225 | 1271121 | SW-846 6010D | Lead | 1.98 | mg/kg | | J | 8H |
| LDC15 | SB-23-S-19.5-200225 | 1271122 | SW-846 6010D | Lead | 1.96 | mg/kg | | J | 8H |
| LDC15 | SB-24-S-8-200225 | 1271123 | SW-846 6010D | Lead | 2.81 | mg/kg | | J | 8H |
| LDC15 | SB-24-S-14-200225 | 1271124 | SW-846 6010D | Lead | 1.93 | mg/kg | | J | 8H |
| LDC15 | SB-24-S-17.5-200225 | 1271125 | SW-846 6010D | Lead | 1.81 | mg/kg | | J | 8H |
| LDC15 | SB-24-S-22-200225 | 1271126 | SW-846 6010D | Lead | 3 | mg/kg | | J | 8H |
| LDC15 | SB-24-S-29-200225 | 1271127 | SW-846 6010D | Lead | 1.79 | mg/kg | | J | 8H |
| LDC15 | SB-22-S-16-200226 | 1271128 | SW-846 6010D | Lead | 4.11 | mg/kg | | J | 8H |
| LDC15 | SB-26-S-8-200226 | 1271129 | SW-846 6010D | Lead | 1.23 | mg/kg | | J | 9 |
| LDC15 | SB-26-S-15.5-200226 | 1271130 | SW-846 6010D | Lead | 1.74 | mg/kg | | J | 9 |
| LDC15 | SB-26-S-20-200226 | 1271131 | SW-846 6010D | Lead | 14.2 | mg/kg | | J | 9 |
| LDC15 | SB-27-S-8-200226 | 1271132 | SW-846 6010D | Lead | 6.36 | mg/kg | | J | 8H |
| LDC15 | SB-25-S-8.5-200226 | 1271133 | SW-846 6010D | Lead | 18.5 | mg/kg | | J | 8H |
| LDC15 | SB-25-S-12-200226 | 1271134 | SW-846 6010D | Lead | 0.836 | mg/kg | | J | 9 |
| LDC15 | SB-25-S-19-200226 | 1271135 | SW-846 6010D | Lead | 2.34 | mg/kg | | J | 9 |
| LDC15 | SB-27-S-15.5-200226 | 1271136 | SW-846 6010D | Lead | 19.7 | mg/kg | | J | 9 |
| LDC15 | SB-29-S-8-200226 | 1271137 | SW-846 6010D | Lead | 3.83 | mg/kg | | J | 9 |
| LDC15 | SB-27-S-22-200226 | 1271138 | SW-846 6010D | Lead | 16.1 | mg/kg | | J | 8L |
| LDC15 | SB-27-S-26-200226 | 1271139 | SW-846 6010D | Lead | 27.1 | mg/kg | | J | 8L |
| LDC16 | SB-27-S-29-200226 | 1271140 | SW-846 6010D | Lead | 1.64 | mg/kg | | J | 8L |
| LDC16 | SB-29-S-16-200227 | 1271141 | SW-846 6010D | Lead | 2.59 | mg/kg | | J | 8L |

**Qualified Data Summary Table
Norman's Chevron**

| SDG | SAMPLE ID | LAB ID | METHOD | ANALYTE | RESULT | UNITS | LAB FLAG | DV QUAL | DV REASON |
|----------|---------------------|------------|--------------|--------------|--------|-------|----------|---------|-----------|
| LDC16 | SB-29-S-18-200227 | 1271142 | SW-846 6010D | Lead | 1.68 | mg/kg | | J | 8L |
| LDC16 | SB-28-S-8-200227 | 1271143 | SW-846 6010D | Lead | 5.63 | mg/kg | | J | 8L |
| LDC16 | DUP-1-SD-200227 | 1271144 | SW-846 6010D | Lead | 1.92 | mg/kg | | J | 8L |
| LDC16 | DUP-2-SD-200227 | 1271145 | SW-846 6010D | Lead | 5.73 | mg/kg | | J | 8L |
| LDC16 | SB-29-S-22-200227 | 1271146 | SW-846 6010D | Lead | 2.03 | mg/kg | | J | 8L |
| LDC16 | SVP-4-S-5-200227 | 1271147 | SW-846 6010D | Lead | 7.22 | mg/kg | | J | 8L |
| LDC16 | SB-28-S-14-200227 | 1271148 | SW-846 6010D | Lead | 2.37 | mg/kg | | J | 8L |
| LDC16 | SVP-5-S-5-200227 | 1271149 | SW-846 6010D | Lead | 5.18 | mg/kg | | J | 8L |
| LDC16 | SB-28-S-19.5-200227 | 1271150 | SW-846 6010D | Lead | 1.55 | mg/kg | | J | 9 |
| LDC16 | SB-30-S-8-200228 | 1271154 | SW-846 6010D | Lead | 2.35 | mg/kg | | J | 9 |
| LDC16 | SVP-6-S-5-200228 | 1271155 | SW-846 6010D | Lead | 3.56 | mg/kg | | J | 9 |
| LDC16 | SB-30-S-15.5-200228 | 1271156 | SW-846 6010D | Lead | 3.88 | mg/kg | | J | 8H |
| LDC16 | SB-30-S-11.5-200228 | 1271161 | SW-846 6010D | Lead | 2.01 | mg/kg | | J | 8H |
| LD033020 | EB-1-032420 | E003092-01 | EPA TO-15 | m,p-Xylene | 7.1 | ug/m3 | | J | 5A |
| LD033020 | EB-1-032420 | E003092-01 | EPA TO-15 | Naphthalene | 0.9 | ug/m3 | J | J | 5A |
| LD033020 | SVP-4-032520 | E003092-02 | EPA TO-15 | m,p-Xylene | 67 | ug/m3 | | J | 5A |
| LD033020 | SVP-4-032520 | E003092-02 | EPA TO-15 | Naphthalene | 1.4 | ug/m3 | J | UJ | 5A,6 |
| LD033020 | SVP-5-032520 | E003092-03 | EPA TO-15 | Benzene | 0.3 | ug/m3 | J | UJ | 6,9 |
| LD033020 | SVP-5-032520 | E003092-03 | EPA TO-15 | Toluene | 1.6 | ug/m3 | J | UJ | 6,9 |
| LD033020 | SVP-5-032520 | E003092-03 | EPA TO-15 | Ethylbenzene | 0.3 | ug/m3 | J | UJ | 6,9 |
| LD033020 | SVP-5-032520 | E003092-03 | EPA TO-15 | m,p-Xylene | 0.9 | ug/m3 | J | UJ | 5A,6,9 |
| LD033020 | SVP-5-032520 | E003092-03 | EPA TO-15 | o-Xylene | 0.3 | ug/m3 | J | UJ | 6,9 |
| LD033020 | SVP-5-032520 | E003092-03 | EPA TO-15 | Naphthalene | ND | ug/m3 | | UJ | 5A |
| LD033020 | SVP-6-032520 | E003092-04 | EPA TO-15 | Benzene | 0.9 | ug/m3 | | UJ | 6 |
| LD033020 | SVP-6-032520 | E003092-04 | EPA TO-15 | Ethylbenzene | 1.0 | ug/m3 | J | U | 6 |
| LD033020 | SVP-6-032520 | E003092-04 | EPA TO-15 | m,p-Xylene | 2.0 | ug/m3 | | UJ | 5A,6 |
| LD033020 | SVP-6-032520 | E003092-04 | EPA TO-15 | Naphthalene | 0.3 | ug/m3 | J | UJ | 5A,6 |

Qualified Data Summary Table
Norman's Chevron

| SDG | SAMPLE ID | LAB ID | METHOD | ANALYTE | RESULT | UNITS | LAB FLAG | DV QUAL | DV REASON |
|----------|--------------|------------|-----------|--------------|--------|-------|----------|---------|-----------|
| LD033020 | SVP-6-032520 | E003092-04 | EPA TO-15 | o-Xylene | 0.9 | ug/m3 | J | U | 6 |
| LD033020 | SVP-6-032520 | E003092-04 | EPA TO-15 | Toluene | 4.6 | ug/m3 | | U | 6 |
| LD033020 | DUP-1-032520 | E003092-05 | EPA TO-15 | Benzene | 4.6 | ug/m3 | | J | 9 |
| LD033020 | DUP-1-032520 | E003092-05 | EPA TO-15 | Ethylbenzene | 16 | ug/m3 | | J | 9 |
| LD033020 | DUP-1-032520 | E003092-05 | EPA TO-15 | m,p-Xylene | 79 | ug/m3 | | J | 5A,9 |
| LD033020 | DUP-1-032520 | E003092-05 | EPA TO-15 | Naphthalene | 3.1 | ug/m3 | | UJ | 5A,6 |
| LD033020 | DUP-1-032520 | E003092-05 | EPA TO-15 | o-Xylene | 33 | ug/m3 | | J | 9 |
| LD033020 | DUP-1-032520 | E003092-05 | EPA TO-15 | Toluene | 50 | ug/m3 | | J | 9 |



**DATA VALIDATION REPORT
NEWMAN'S CHEVRON – SOIL VAPOR**

Prepared for:

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October 13, 2020

Approved for Release:

A handwritten signature in black ink, appearing to read "Christine Ransom", written over a horizontal line.

Christine Ransom
Senior Project Chemist
EcoChem, Inc.

PROJECT NARRATIVE

Basis for the Data Validation

This report summarizes the results of summary validation (EPA Stage 2B) performed on soil vapor and associated quality control sample data for the Newman's Chevron project. A complete list of samples is provided in the Sample Index.

The MADEP APH analysis was performed by Eurofins Air Toxics, South Burlington, Vermont. The TO-15 and ASTM D1946 analyses were performed by Eurofins Air Toxics, Folsom, California. The analytical methods and EcoChem project chemists are listed in the following table:

| ANALYSIS | METHOD | PRIMARY REVIEW | SECONDARY REVIEW |
|----------------------------------|------------|----------------|------------------|
| Volatile Organic Compounds | TO-15 | E. Clayton | C. Ransom |
| Air Phase Petroleum Hydrocarbons | MADEP ADH | | |
| Fixed Gases | ASTM D1946 | | |

The data were reviewed using guidance and quality control criteria documented in the analytical methods; *Final Remedial Investigation Work Plan Newman's Chevron* (Leidos, July 2018); and *National Functional Guidelines for Organic Data Review* (USEPA 2008).

EcoChem's goal in assigning data assessment qualifiers is to assist in proper data interpretation. If values are estimated (J or UJ), data may be used for site evaluation and risk assessment purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. Data that have been rejected are flagged with (R). Rejected data should not be used for any purpose. If values have no data qualifier assigned, then the data meet the data quality objectives as stated in the documents and methods referenced above.

Validation criteria are included as Appendix A. The qualified data summary table (QDST) is included as Appendix B. Data Validation Worksheets and project associated communications will be kept on file at EcoChem, Inc. A qualified laboratory electronic data deliverable (EDD) is also submitted.

Sample Index
Newman's Chevron- Soil Vapor

| SDG | Sample ID | Lab ID | T015 | Fixed Gases | APH |
|-------------|--------------|--------------|------|-------------|-----|
| 2008555 | SVP-4-081920 | 2008555B-01A | ✓ | ✓ | |
| 2008555 | SVP-5-081920 | 2008555B-02A | ✓ | ✓ | |
| 2008555 | SVP-6-081920 | 2008555B-03A | ✓ | ✓ | |
| 2008555 | DUP-1-081920 | 2008555B-04A | ✓ | ✓ | |
| 2008555 | AMB-1-081920 | 2008555B-05A | ✓ | ✓ | |
| 2008555 | EB-1-081920 | 2008555B-06A | ✓ | ✓ | |
| 200-54945-1 | SVP-4-081920 | 200-54945-1 | | | ✓ |
| 200-54945-1 | SVP-5-081920 | 200-54945-2 | | | ✓ |
| 200-54945-1 | SVP-6-081920 | 200-54945-3 | | | ✓ |
| 200-54945-1 | DUP-1-081920 | 200-54945-4 | | | ✓ |
| 200-54945-1 | AMB-1-081920 | 200-54945-5 | | | ✓ |
| 200-54945-1 | EB-1-081920 | 200-54945-6 | | | ✓ |

DATA VALIDATION REPORT
Newman's Chevron
Volatile Organic Compounds by EPA TO-15 GCMS-SIM
Fixed Gases by ASTM D-1946
Air Phase Petroleum Hydrocarbons by MADEP APH

This report documents the review of analytical data from the analysis of soil vapor samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Eurofins, Folsom, California and South Burlington, Vermont. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|---------|------------------------------|------------------|
| 2008555 | 4 Soil Vapor & 2 Field Blank | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

A question regarding the MADEP APH results lead to the discovery that incorrect dilution factors had been used. The laboratory PM contacted the Burlington lab, which submitted a revised data package and EDD.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|---------------------------------------|
| ✓ | Sample Receipt, Preservation, and Holding Times | ✓ | Laboratory Control Samples (LCS/LCSD) |
| ✓ | GC/MS Instrument Performance (Tune) | 1 | Field Duplicates |
| 2 | Initial Calibration (ICAL) | ✓ | Internal Standards |
| ✓ | Continuing Calibration (CCAL) | ✓ | Target Analyte List |
| ✓ | Laboratory Blanks | ✓ | Reporting Limits |
| 2 | Field Blanks | ✓ | Reported Results |
| ✓ | Surrogate Compounds | | |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Initial Calibration

For the TO-15 initial calibration performed on 6/2/20, the percent relative standard deviation (%RSD) value for naphthalene greater than the method specified control limit. Detected naphthalene results in the associated samples were estimated (J-5A). No action was taken for non-detects.

Field Blanks

One ambient blank, AMB-1-081920, and one equipment blank, EB-1-081920, were submitted. The equipment blank was collected by drawing ambient air through a probe screen/control valve/Teflon tubing assembly which is similar to the soil vapor sampling probes. The ambient blank was collected without the screen/valve/tubing assembly attached.

Toluene, ethylbenzene, m,p-xylenes, o-xylene, methane, and C5-C8 aliphatics were detected in both blanks at approximately the same levels. The highest concentration between the two blanks was used to evaluate the effects on the field samples. Detected results less than the 5x action levels were qualified as not detected (U-6).

Field Duplicates

For results greater than 5X the reporting limit (RL), The field duplicate relative percent difference (RPD) control limit is 25%. For results less than 5X the RL, the difference between the results should be less than the RL.

One set of field duplicates was submitted: SVP-5-081920 and DUP-1-081920. All acceptance criteria were met.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical methods. Accuracy was acceptable as demonstrated by the surrogate and laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recovery values. Precision was acceptable as demonstrated by the LCS/LCSD and field duplicate RPD values.

Detection limits were elevated based on field blank results. Data were estimated due to a calibration RSD outlier.

All data, as qualified, are acceptable for use.



APPENDIX A

DATA QUALIFIER DEFINITIONS REASON CODES AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES **Based on National Functional Guidelines**

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

| | |
|----|---|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. |
| NJ | The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents the approximate concentration. |
| UJ | The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified. |

The following is an EcoChem qualifier that may also be assigned during the data review process:

| | |
|-----|---|
| DNR | Do not report; a more appropriate result is reported from another analysis or dilution. |
|-----|---|

DATA QUALIFIER REASON CODES

| Group | Code | Reason for Qualification |
|---------------------------------|------|---|
| Sample Handling | 1 | Improper Sample Handling or Sample Preservation (i.e., headspace, cooler temperature, pH, summa canister pressure); Exceeded Holding Times |
| Instrument Performance | 24 | Instrument Performance (i.e., tune, resolution, retention time window, endrin breakdown, lock-mass) |
| | 5A | Initial Calibration (RF, %RSD, r^2) |
| | 5B | Calibration Verification (CCV, CCAL; RF, %D, %R) Use bias flags (H,L) ¹ where appropriate |
| | 5C | Initial Calibration Verification (ICV %D, %R) Use bias flags (H,L) ¹ where appropriate |
| Blank Contamination | 6 | Field Blank Contamination (Equipment Rinsate, Trip Blank, etc.) |
| | 7 | Lab Blank Contamination (i.e., method blank, instrument blank, etc.) Use low bias flag (L) ¹ for negative instrument blanks |
| Precision and Accuracy | 8 | Matrix Spike (MS and/or MSD) Recoveries Use bias flags (H,L) ¹ where appropriate |
| | 9 | Precision (all replicates: LCS/LCSD, MS/MSD, Lab Replicate, Field Replicate) |
| | 10 | Laboratory Control Sample Recoveries (a.k.a. Blank Spikes) Use bias flags (H,L) ¹ where appropriate |
| | 12 | Reference Material Use bias flags (H,L) ¹ where appropriate |
| | 13 | Surrogate Spike Recoveries (a.k.a. labeled compounds, recovery standards) Use bias flags (H,L) ¹ where appropriate |
| Interferences | 16 | ICP/ICP-MS Serial Dilution Percent Difference |
| | 17 | ICP/ICP-MS Interference Check Standard Recovery Use bias flags (H,L) ¹ where appropriate |
| | 19 | Internal Standard Performance (i.e., area, retention time, recovery) |
| | 22 | Elevated Detection Limit due to Interference (i.e., chemical and/or matrix) |
| | 23 | Bias from Matrix Interference (i.e. diphenyl ether, PCB/pesticides) |
| Identification and Quantitation | 2 | Chromatographic pattern in sample does not match pattern of calibration standard |
| | 3 | 2 nd column confirmation (RPD or %D) |
| | 4 | Tentatively Identified Compound (TIC) (associated with NJ only) |
| | 20 | Calibration Range or Linear Range Exceeded |
| | 25 | Compound Identification (i.e., ion ratio, retention time, relative abundance, etc.) |
| Miscellaneous | 11 | A more appropriate result is reported (multiple reported analyses i.e., dilutions, re-extractions, etc. Associated with "R" and "DNR" only) |
| | 14 | Other (See DV report for details) |
| | 26 | Method QC information not provided |

¹H = high bias indicated

L = low bias indicated

Volatile Organics in Air by GCMS and GCMS-SIM, Method TO-15

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|--|-----------------------|--|
| Sample Handling | | | | | |
| Cooler/Storage Temperature Preservation | SUMMA Canister - no preservation requirements | | | | |
| SUMMA Canister Pressure | Pressure of Canister upon receipt at lab should be between 5-10 inches of Hg or greater of vacuum | Method ^{1,2} | If vacuum is > 8 inch Hg or < 1 inch Hg, note in report. | 1 | Professional judgment |
| Holding Time | 30 days from collection to analysis | Method ¹ | J(pos)/UJ(ND) if HT exceeded J(pos)/R(ND) if gross exceedance (> 2X HT) | 1 | Gross exceedance = > 2X HT, as per 1999 NFG |
| Instrument Performance | | | | | |
| Tuning | BFB Beginning of each 24 hour period Use method acceptance criteria (Table 3) | Method ¹ | R(pos/ND) all analytes in all samples associated with the tune | 5A | every 24 hours or every 20 samples (Section 10.4.2 of method) TM-06 EcoChem Policy for the Evaluation and Qualification of GCMS Instrument Performance |
| Initial Calibration (Minimum 5 stds.) Sensitivity | RRF \geq 0.05 Note: not discussed in method. Default to NFG criteria. | NFG ³ | J(pos)/R(ND) if RRF/RF is less than criterion | | |
| Initial Calibration (Minimum 5 stds.) Stability | %RSD \leq 30% with up to 2 compounds max 40%; OR Linear $r \geq 0.995$ or $r^2 \geq 0.990$ (6 points must be used) (NFG optional criteria) | Method ¹ NFG ³ | J(pos) if %RSD > 30% OR r/r2-value < 0.995 (or 0.990) | | |
| Initial Calibration Verification (ICV) Stability | Not required by method. Standard from independent source Analyzed immediately after ICAL If analyzed, use lab or QAPP limits | | J(pos) if high bias J(pos)/UJ(ND) if low bias J(pos)/R(ND) if significant low bias | | |
| Continuing Calibration (Prior to each 24 hr. shift) Sensitivity | RRF \geq 0.05 Note: not discussed in method. Default to NFG criteria. | NFG ³ | J(pos)/R(ND) if RRF/RF is less than criterion | 5B | |
| Continuing Calibration (Prior to each 24 hr. shift) Stability | %Drift \leq 30% | Method ¹ | If > +/- 70%: J(pos)/R(ND) If -69% to -31%: J(pos) (high bias) If 31% to 69%: J(pos)/UJ(ND) (low bias) | 5B (H,L) ⁴ | |

Volatile Organics in Air by GCMS and GCMS-SIM, Method TO-15

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|------------------------------------|---|--|--|-----------------------|--|
| Blank Contamination | | | | | |
| Method Blank (MB) | MB: One per batch of (of ≤ 20 samples) No detected compounds > MDL | Method ¹ NFG ³ | U(pos) if result is < 5X or 10X action level, as per analyte. | 7 | 10X action level for methylene chloride, acetone, & 2-butanone. 5X for all other target analytes Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review FB, qualify as needed |
| | No TICs present | | R(pos) TICs using 10X rule | | |
| Field Blank (FB) | FB: frequency as per QAPP No detected compounds > MDL | Method ¹ NFG ³ | U(pos) if result is < 5X or 10X action level, as per analyte. | 6 | |
| Precision and Accuracy | | | | | |
| LCS | One per lab batch (of ≤ 20 samples) Note: not discussed in method. Default to lab or QAPP limits. | NFG ³ | Qualify all associated samples J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if both %R < LCL - low bias J(pos)/R(ND) if both %R < 10% - very low bias J(pos)/UJ(ND) if one > UCL & one < LCL, with no bias | 10 (H,L) ⁴ | No action if only one spike %R is outside criteria, when LCSD is analyzed. Qualify all associated samples. |
| LCS/LCSD (RPD) | if analyzed RPD $\leq 30\%$ | NFG ³ | J(pos) assoc. cmpd. in all samples | 9 | Qualify all associated samples. |
| Surrogates | Note: not discussed in method. Default to lab or QAPP limits. | NFG ³ | J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if %R < LCL - low bias J(pos)/R(ND) if < 10% - very low bias | 13 (H,L) ⁴ | Note: No action if there are 4+ surrogates and only 1 outlier. |
| Internal Standards | Added to all samples Acceptable Range: IS area $\pm 40\%$ of CCAL area RT within 20 seconds of mean RT over ICAL range RT within 0.33 minutes of CC RT | Method ¹ NFG ³ | J(pos) if > 140% J(pos)/UJ(ND) if < 60% J(pos)/R(ND) if < 25% RT > 0.33 mins, narrate and notify PM | 19 | |
| Field Duplicates | RPD $\leq 25\%$ OR difference < 1X RL (for results < 5X RL) | Method ¹ EcoChem standard policy | Narrate and qualify if required by project (EcoChem PJ) Qualify only field duplicate samples J(pos)/UJ(ND) | 9 | |
| Compound ID and Calculation | | | | | |
| Quantitation/ Identification | RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample | Method ¹ NFG ³ | See Technical Director if outliers are found | 14 25 (false pos) | |
| TICs | Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification | Method ¹ NFG ³ | NJ the TIC unless: R(pos) common laboratory contaminants See Technical Director for ID issues | 4 | Common laboratory contaminants: aldol condensation products, solvent preservatives, and reagent contaminants |
| Calibration Range | Results exceed the upper calibration range | EcoChem standard policy | Qualify J(pos) | 20 | If result from dilution analysis is not reported. |
| Calculation Check | Check 10% of field & QC sample results | EcoChem standard policy | Contact laboratory for resolution and/or corrective action | na | Full data validation only. |

Volatile Organics in Air by GCMS and GCMS-SIM, Method TO-15

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|-------------------------|---|-------------|--|
| Electronic Data Deliverable (EDD) | | | | | |
| Verification of EDD to hardcopy data | EcoChem verify @ 10% unless problems noted; then increase level up to 100% for next several packages. | EcoChem standard policy | Depending on scope of problem, correct at EcoChem (minor issues) to resubmittal by laboratory (major issues). | na | EcoChem Project Manager and/or Database Administrator will work with lab to provide long-term corrective action. |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 Rev. 1 EcoChem Policy for Rejection/Selection Process for Multiple Results |

(pos): Positive Result(s)
 (ND): Non-detects

- ¹ Compendium Method TO-15, Determination of Volatile Organic Compounds (VOCs) in Air Collected In Specially-Prepared Canisters And Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), Second Edition, January 1999. EPA/625/R-96/010b
- ¹ Supplement to EPA Compendium Method TO-15. Reduction of Method Detection Limits to Meet Vapor Intrusion Monitoring Needs. E.H. Daughtrey Jr., K.D. Oliver, H.H. Jacumin Jr., and W.A. McClenny, 2/18/2009.
- ¹ ASTM D1945 - 03 Standard Test Method for Analysis of Natural Gas by Gas Chromatography. January 1, 2010.
- ² Air Toxics Ltd: Guide to Air Sampling and Analysis
- ³ National Functional Guidelines for Organic Data Review, June, 2008
- ⁴ "H" = high bias indicated; "L" = low bias indicated



APPENDIX B

QUALIFIED DATA SUMMARY TABLE

**Qualified Data Summary Table
Newman's Chevron - Soil Vapor**

| SDG | SAMPLE ID | LAB ID | METHOD | ANALYTE | RESULT | UNITS | LAB FLAG | DV QUAL | DV REASON |
|-------------|--------------|--------------|--------|-----------------------------|--------|-------|----------|---------|-----------|
| 2008555A | SVP-4-081920 | 2008555A-01A | TO-15 | Naphthalene | 1.9 | ug/m3 | | J | 5A |
| 2008555A | SVP-5-081920 | 2008555A-02A | TO-15 | Toluene | 0.34 | ug/m3 | | U | 6 |
| 2008555A | SVP-5-081920 | 2008555A-02A | TO-15 | Ethyl Benzene | 0.19 | ug/m3 | | U | 6 |
| 2008555A | SVP-5-081920 | 2008555A-02A | TO-15 | Naphthalene | 4.4 | ug/m3 | | J | 5A |
| 2008555A | SVP-6-081920 | 2008555A-03A | TO-15 | Toluene | 0.31 | ug/m3 | | U | 6 |
| 2008555A | SVP-6-081920 | 2008555A-03A | TO-15 | Ethyl Benzene | 0.91 | ug/m3 | | U | 6 |
| 2008555A | SVP-6-081920 | 2008555A-03A | TO-15 | Naphthalene | 4.7 | ug/m3 | | J | 5A |
| 2008555A | DUP-1-081920 | 2008555A-04A | TO-15 | Ethyl Benzene | 0.15 | ug/m3 | | U | 6 |
| 2008555A | DUP-1-081920 | 2008555A-04A | TO-15 | Naphthalene | 4.4 | ug/m3 | | J | 5A |
| 2008555A | AMB-1-081920 | 2008555A-05A | TO-15 | Toluene | 0.96 | ug/m3 | | U | 6 |
| 2008555A | AMB-1-081920 | 2008555A-05A | TO-15 | Ethyl Benzene | 0.2 | ug/m3 | | U | 6 |
| 2008555A | AMB-1-081920 | 2008555A-05A | TO-15 | m,p-Xylene | 0.68 | ug/m3 | | U | 6 |
| 2008555A | AMB-1-081920 | 2008555A-05A | TO-15 | o-Xylene | 0.23 | ug/m3 | | U | 6 |
| 200-54945-1 | SVP-4-081920 | 200-54945-1 | APH | C5-C8 Aliphatics (adjusted) | 18 | ug/m3 | | U | 6 |
| 200-54945-1 | SVP-5-081920 | 200-54945-2 | APH | C5-C8 Aliphatics (adjusted) | 99 | ug/m3 | | U | 6 |
| 200-54945-1 | DUP-1-081920 | 200-54945-4 | APH | C5-C8 Aliphatics (adjusted) | 95 | ug/m3 | | U | 6 |



**DATA VALIDATION REPORT
NEWMAN'S CHEVRON – SOIL VAPOR**

Prepared for:

Leidos
18939 120th Ave NE, Suite 112
Bothell, Washington 98011

Prepared by:

EcoChem, Inc.
500 Union Street, Suite 1010
Seattle, WA 98101

EcoChem Project: C4159-5

February 5, 2021

Approved for Release:

A handwritten signature in black ink, appearing to read "Christine Ransom", written over a horizontal line.

Christine Ransom
Senior Project Chemist
EcoChem, Inc.

PROJECT NARRATIVE

Basis for the Data Validation

This report summarizes the results of summary validation (EPA Stage 2B) performed on soil vapor and associated quality control sample data for the Newman's Chevron project. A complete list of samples is provided in the Sample Index.

The MADEP APH analysis was performed by Eurofins Air Toxics, South Burlington, Vermont. The TO-15 and ASTM D1946 analyses were performed by Eurofins Air Toxics, Folsom, California. The analytical methods and EcoChem project chemists are listed in the following table:

| ANALYSIS | METHOD | PRIMARY REVIEW | SECONDARY REVIEW |
|----------------------------------|------------|----------------|------------------|
| Volatile Organic Compounds | TO-15 | E. Clayton | C. Ransom |
| Air Phase Petroleum Hydrocarbons | MADEP ADH | | |
| Fixed Gases | ASTM D1946 | | |

The data were reviewed using guidance and quality control criteria documented in the analytical methods; *Final Remedial Investigation Work Plan Newman's Chevron* (Leidos, July 2018); and *National Functional Guidelines for Organic Data Review* (USEPA 2008).

EcoChem's goal in assigning data assessment qualifiers is to assist in proper data interpretation. If values are estimated (J or UJ), data may be used for site evaluation and risk assessment purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. Data that have been rejected are flagged with (R). Rejected data should not be used for any purpose. If values have no data qualifier assigned, then the data meet the data quality objectives as stated in the documents and methods referenced above.

Validation criteria are included as Appendix A. The qualified data summary table (QDST) is included as Appendix B. Data Validation Worksheets and project associated communications will be kept on file at EcoChem, Inc. A qualified laboratory electronic data deliverable (EDD) is also submitted.

Sample Index
Newman's Chevron- Soil Vapor

| SDG | Sample ID | Lab ID | T015 | Fixed Gases | APH |
|------------|--------------|--------------|------|-------------|-----|
| 200-5656-1 | SVP-1-120420 | 200-56561-1 | | | ✓ |
| 200-5656-1 | SVP-2-120420 | 200-56561-2 | | | ✓ |
| 200-5656-1 | SVP-3-120420 | 200-56561-3 | | | ✓ |
| 200-5656-1 | SVP-4-120420 | 200-56561-4 | | | ✓ |
| 200-5656-1 | SVP-5-120420 | 200-56561-5 | | | ✓ |
| 200-5656-1 | SVP-6-120420 | 200-56561-6 | | | ✓ |
| 200-5656-1 | OA-1-120420 | 200-56561-7 | | | ✓ |
| 200-5656-1 | OA-2-120420 | 200-56561-8 | | | ✓ |
| 200-5656-1 | OA-3-120420 | 200-56561-9 | | | ✓ |
| 200-5656-1 | DUP-1-120420 | 200-56561-10 | | | ✓ |
| 2012224A | SVP-1-120420 | 2012224A-01A | ✓ | | |
| 2012224A | SVP-2-120420 | 2012224A-02A | ✓ | | |
| 2012224A | SVP-3-120420 | 2012224A-03A | ✓ | | |
| 2012224A | SVP-4-120420 | 2012224A-04A | ✓ | | |
| 2012224A | SVP-5-120420 | 2012224A-05A | ✓ | | |
| 2012224A | SVP-6-120420 | 2012224A-06A | ✓ | | |
| 2012224A | OA-1-120420 | 2012224A-07A | ✓ | | |
| 2012224A | OA-2-120420 | 2012224A-08A | ✓ | | |
| 2012224A | OA-3-120420 | 2012224A-09A | ✓ | | |
| 2012224A | DUP-1-120420 | 2012224A-10A | ✓ | | |
| 2012224B | SVP-1-120420 | 2012224B-01A | | ✓ | |
| 2012224B | SVP-2-120420 | 2012224B-02A | | ✓ | |
| 2012224B | SVP-3-120420 | 2012224B-03A | | ✓ | |
| 2012224B | SVP-4-120420 | 2012224B-04A | | ✓ | |
| 2012224B | SVP-5-120420 | 2012224B-05A | | ✓ | |
| 2012224B | SVP-6-120420 | 2012224B-06A | | ✓ | |
| 2012224B | OA-1-120420 | 2012224B-07A | | ✓ | |
| 2012224B | OA-2-120420 | 2012224B-08A | | ✓ | |
| 2012224B | OA-3-120420 | 2012224B-09A | | ✓ | |
| 2012224B | DUP-1-120420 | 2012224B-10A | | ✓ | |

DATA VALIDATION REPORT
Newman's Chevron
Volatile Organic Compounds by EPA TO-15 GCMS-SIM
Fixed Gases by ASTM D-1946
Air Phase Petroleum Hydrocarbons by MADEP APH

This report documents the review of analytical data from the analysis of soil vapor and outdoor air samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Eurofins, Folsom, California and South Burlington, Vermont. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|---------|-----------------------------|------------------|
| 2012224 | 7 Soil Vapor, 3 Outdoor Air | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|---------------------------------------|
| ✓ | Sample Receipt, Preservation, and Holding Times | ✓ | Laboratory Control Samples (LCS/LCSD) |
| ✓ | GC/MS Instrument Performance (Tune) | 2 | Field Duplicates |
| ✓ | Initial Calibration (ICAL) | ✓ | Internal Standards |
| ✓ | Continuing Calibration (CCAL) | ✓ | Target Analyte List |
| 2 | Laboratory Blanks | ✓ | Reporting Limits |
| 1 | Field Blanks | ✓ | Reported Results |
| ✓ | Surrogate Compounds | | |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Laboratory Blanks

A method blank was analyzed at the required frequency of one per batch of 20 or fewer samples. Action levels were established at five times (5x) the concentration reported in the field blank. If a contaminant is reported in an associated field sample and the concentration is less than the action

level, the result is qualified as not detected (U-7). No action is taken if the sample result is greater than the action level, or for non-detected results.

Naphthalene was detected in the method blank for the MADEP APH analyses. All associated naphthalene results were less than the 5x action level and were qualified as not detected (U-7).

Field Blanks

No field blanks were collected. Three outdoor air samples, OA1-120420, OA2-120420, and OA3-120420, were collected to evaluate ambient conditions. They were not used to determine potential field contamination.

Field Duplicates

For results greater than 5X the reporting limit (RL), The field duplicate relative percent difference (RPD) control limit is 25%. For results less than 5X the RL, the difference between the results should be less than the RL.

One set of field duplicates was submitted: SVP-4-120420 and DUP-1-120420. The following outliers were noted:

| Fraction | Analyte | Outlier | Qualifier |
|-----------|------------------|-----------|-----------|
| TO-15 | Toluene | Diff > RL | J-9 |
| | Ethyl benzene | Diff > RL | J-9 |
| | m,p-xylene | RPD | J-9 |
| | o-xylene | RPD | J-9 |
| MADEP APH | C9-C10 aromatics | Diff > RL | J-9 |
| | toluene | Diff > RL | J-9 |
| | m,p-xylene | RPD | J-9 |
| | o-xylene | Diff > RL | J-9 |

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical methods. With the exceptions noted above, accuracy was acceptable as demonstrated by the surrogate and laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recovery values and precision was acceptable as demonstrated by the LCS/LCSD and field duplicate RPD values.

Detection limits were elevated based on method blank contamination. Data were estimated due to field duplicate precision outliers.

All data, as qualified, are acceptable for use.



APPENDIX A

DATA QUALIFIER DEFINITIONS REASON CODES AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES **Based on National Functional Guidelines**

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

| | |
|----|---|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. |
| NJ | The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents the approximate concentration. |
| UJ | The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified. |

The following is an EcoChem qualifier that may also be assigned during the data review process:

| | |
|-----|---|
| DNR | Do not report; a more appropriate result is reported from another analysis or dilution. |
|-----|---|

DATA QUALIFIER REASON CODES

| Group | Code | Reason for Qualification |
|---------------------------------|------|---|
| Sample Handling | 1 | Improper Sample Handling or Sample Preservation (i.e., headspace, cooler temperature, pH, summa canister pressure); Exceeded Holding Times |
| Instrument Performance | 24 | Instrument Performance (i.e., tune, resolution, retention time window, endrin breakdown, lock-mass) |
| | 5A | Initial Calibration (RF, %RSD, r^2) |
| | 5B | Calibration Verification (CCV, CCAL; RF, %D, %R) Use bias flags (H,L) ¹ where appropriate |
| | 5C | Initial Calibration Verification (ICV %D, %R) Use bias flags (H,L) ¹ where appropriate |
| Blank Contamination | 6 | Field Blank Contamination (Equipment Rinsate, Trip Blank, etc.) |
| | 7 | Lab Blank Contamination (i.e., method blank, instrument blank, etc.) Use low bias flag (L) ¹ for negative instrument blanks |
| Precision and Accuracy | 8 | Matrix Spike (MS and/or MSD) Recoveries Use bias flags (H,L) ¹ where appropriate |
| | 9 | Precision (all replicates: LCS/LCSD, MS/MSD, Lab Replicate, Field Replicate) |
| | 10 | Laboratory Control Sample Recoveries (a.k.a. Blank Spikes) Use bias flags (H,L) ¹ where appropriate |
| | 12 | Reference Material Use bias flags (H,L) ¹ where appropriate |
| | 13 | Surrogate Spike Recoveries (a.k.a. labeled compounds, recovery standards) Use bias flags (H,L) ¹ where appropriate |
| Interferences | 16 | ICP/ICP-MS Serial Dilution Percent Difference |
| | 17 | ICP/ICP-MS Interference Check Standard Recovery Use bias flags (H,L) ¹ where appropriate |
| | 19 | Internal Standard Performance (i.e., area, retention time, recovery) |
| | 22 | Elevated Detection Limit due to Interference (i.e., chemical and/or matrix) |
| | 23 | Bias from Matrix Interference (i.e. diphenyl ether, PCB/pesticides) |
| Identification and Quantitation | 2 | Chromatographic pattern in sample does not match pattern of calibration standard |
| | 3 | 2 nd column confirmation (RPD or %D) |
| | 4 | Tentatively Identified Compound (TIC) (associated with NJ only) |
| | 20 | Calibration Range or Linear Range Exceeded |
| | 25 | Compound Identification (i.e., ion ratio, retention time, relative abundance, etc.) |
| Miscellaneous | 11 | A more appropriate result is reported (multiple reported analyses i.e., dilutions, re-extractions, etc. Associated with "R" and "DNR" only) |
| | 14 | Other (See DV report for details) |
| | 26 | Method QC information not provided |

¹H = high bias indicated

L = low bias indicated

Volatile Organics in Air by GCMS and GCMS-SIM, Method TO-15

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|--|-----------------------|--|
| Sample Handling | | | | | |
| Cooler/Storage Temperature Preservation | SUMMA Canister - no preservation requirements | | | | |
| SUMMA Canister Pressure | Pressure of Canister upon receipt at lab should be between 5-10 inches of Hg or greater of vacuum | Method ^{1,2} | If vacuum is > 8 inch Hg or < 1 inch Hg, note in report. | 1 | Professional judgment |
| Holding Time | 30 days from collection to analysis | Method ¹ | J(pos)/UJ(ND) if HT exceeded J(pos)/R(ND) if gross exceedance (> 2X HT) | 1 | Gross exceedance = > 2X HT, as per 1999 NFG |
| Instrument Performance | | | | | |
| Tuning | BFB Beginning of each 24 hour period Use method acceptance criteria (Table 3) | Method ¹ | R(pos/ND) all analytes in all samples associated with the tune | 5A | every 24 hours or every 20 samples (Section 10.4.2 of method) TM-06 EcoChem Policy for the Evaluation and Qualification of GCMS Instrument Performance |
| Initial Calibration (Minimum 5 stds.) Sensitivity | RRF \geq 0.05 Note: not discussed in method. Default to NFG criteria. | NFG ³ | J(pos)/R(ND) if RRF/RF is less than criterion | | |
| Initial Calibration (Minimum 5 stds.) Stability | %RSD \leq 30% with up to 2 compounds max 40%; OR Linear $r \geq 0.995$ or $r^2 \geq 0.990$ (6 points must be used) (NFG optional criteria) | Method ¹ NFG ³ | J(pos) if %RSD > 30% OR r/r2-value < 0.995 (or 0.990) | | |
| Initial Calibration Verification (ICV) Stability | Not required by method. Standard from independent source Analyzed immediately after ICAL If analyzed, use lab or QAPP limits | | J(pos) if high bias J(pos)/UJ(ND) if low bias J(pos)/R(ND) if significant low bias | | |
| Continuing Calibration (Prior to each 24 hr. shift) Sensitivity | RRF \geq 0.05 Note: not discussed in method. Default to NFG criteria. | NFG ³ | J(pos)/R(ND) if RRF/RF is less than criterion | 5B | |
| Continuing Calibration (Prior to each 24 hr. shift) Stability | %Drift \leq 30% | Method ¹ | If > +/- 70%: J(pos)/R(ND) If -69% to -31%: J(pos) (high bias) If 31% to 69%: J(pos)/UJ(ND) (low bias) | 5B (H,L) ⁴ | |

Volatile Organics in Air by GCMS and GCMS-SIM, Method TO-15

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|------------------------------------|---|--|--|-----------------------|--|
| Blank Contamination | | | | | |
| Method Blank (MB) | MB: One per batch of (of ≤ 20 samples) No detected compounds > MDL | Method ¹ NFG ³ | U(pos) if result is < 5X or 10X action level, as per analyte. | 7 | 10X action level for methylene chloride, acetone, & 2-butanone. 5X for all other target analytes Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review FB, qualify as needed |
| | No TICs present | | R(pos) TICs using 10X rule | | |
| Field Blank (FB) | FB: frequency as per QAPP No detected compounds > MDL | Method ¹ NFG ³ | U(pos) if result is < 5X or 10X action level, as per analyte. | 6 | |
| Precision and Accuracy | | | | | |
| LCS | One per lab batch (of ≤ 20 samples) Note: not discussed in method. Default to lab or QAPP limits. | NFG ³ | Qualify all associated samples J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if both %R < LCL - low bias J(pos)/R(ND) if both %R < 10% - very low bias J(pos)/UJ(ND) if one > UCL & one < LCL, with no bias | 10 (H,L) ⁴ | No action if only one spike %R is outside criteria, when LCSD is analyzed. Qualify all associated samples. |
| LCS/LCSD (RPD) | if analyzed RPD $\leq 30\%$ | NFG ³ | J(pos) assoc. cmpd. in all samples | 9 | Qualify all associated samples. |
| Surrogates | Note: not discussed in method. Default to lab or QAPP limits. | NFG ³ | J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if %R < LCL - low bias J(pos)/R(ND) if < 10% - very low bias | 13 (H,L) ⁴ | Note: No action if there are 4+ surrogates and only 1 outlier. |
| Internal Standards | Added to all samples Acceptable Range: IS area $\pm 40\%$ of CCAL area RT within 20 seconds of mean RT over ICAL range RT within 0.33 minutes of CC RT | Method ¹ NFG ³ | J(pos) if > 140% J(pos)/UJ(ND) if < 60% J(pos)/R(ND) if < 25% RT > 0.33 mins, narrate and notify PM | 19 | |
| Field Duplicates | RPD $\leq 25\%$ OR difference < 1X RL (for results < 5X RL) | Method ¹ EcoChem standard policy | Narrate and qualify if required by project (EcoChem PJ) Qualify only field duplicate samples J(pos)/UJ(ND) | 9 | |
| Compound ID and Calculation | | | | | |
| Quantitation/ Identification | RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample | Method ¹ NFG ³ | See Technical Director if outliers are found | 14 25 (false pos) | |
| TICs | Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification | Method ¹ NFG ³ | NJ the TIC unless: R(pos) common laboratory contaminants See Technical Director for ID issues | 4 | Common laboratory contaminants: aldol condensation products, solvent preservatives, and reagent contaminants |
| Calibration Range | Results exceed the upper calibration range | EcoChem standard policy | Qualify J(pos) | 20 | If result from dilution analysis is not reported. |
| Calculation Check | Check 10% of field & QC sample results | EcoChem standard policy | Contact laboratory for resolution and/or corrective action | na | Full data validation only. |

Volatile Organics in Air by GCMS and GCMS-SIM, Method TO-15

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|-------------------------|---|-------------|--|
| Electronic Data Deliverable (EDD) | | | | | |
| Verification of EDD to hardcopy data | EcoChem verify @ 10% unless problems noted; then increase level up to 100% for next several packages. | EcoChem standard policy | Depending on scope of problem, correct at EcoChem (minor issues) to resubmittal by laboratory (major issues). | na | EcoChem Project Manager and/or Database Administrator will work with lab to provide long-term corrective action. |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 Rev. 1 EcoChem Policy for Rejection/Selection Process for Multiple Results |

(pos): Positive Result(s)
 (ND): Non-detects

- ¹ Compendium Method TO-15, Determination of Volatile Organic Compounds (VOCs) in Air Collected In Specially-Prepared Canisters And Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), Second Edition, January 1999. EPA/625/R-96/010b
- ¹ Supplement to EPA Compendium Method TO-15. Reduction of Method Detection Limits to Meet Vapor Intrusion Monitoring Needs. E.H. Daughtrey Jr., K.D. Oliver, H.H. Jacumin Jr., and W.A. McClenny, 2/18/2009.
- ¹ ASTM D1945 - 03 Standard Test Method for Analysis of Natural Gas by Gas Chromatography. January 1, 2010.
- ² Air Toxics Ltd: Guide to Air Sampling and Analysis
- ³ National Functional Guidelines for Organic Data Review, June, 2008
- ⁴ "H" = high bias indicated; "L" = low bias indicated



APPENDIX B

QUALIFIED DATA SUMMARY TABLE

**Qualified Data Summary Table
Newman's Chevron - Soil Vapor**

| SDG | SAMPLE ID | LAB ID | METHOD | ANALYTE | RESULT | UNITS | LAB FLAG | DV QUAL | DV REASON |
|-------------|--------------|--------------|--------|---------------------|--------|-------|----------|---------|-----------|
| 2012224A | SVP-4-120420 | 2012224A-04A | TO-15 | Toluene | 0.74 | UG/M3 | | J | 9 |
| 2012224A | SVP-4-120420 | 2012224A-04A | TO-15 | Ethyl Benzene | 0.34 | UG/M3 | | J | 9 |
| 2012224A | SVP-4-120420 | 2012224A-04A | TO-15 | m,p-Xylene | 6.2 | UG/M3 | | J | 9 |
| 2012224A | SVP-4-120420 | 2012224A-04A | TO-15 | o-Xylene | 2.0 | UG/M3 | | J | 9 |
| 2012224A | DUP-1-120420 | 2012224A-10A | TO-15 | Toluene | 1.6 | UG/M3 | | J | 9 |
| 2012224A | DUP-1-120420 | 2012224A-10A | TO-15 | Ethyl Benzene | 0.62 | UG/M3 | | J | 9 |
| 2012224A | DUP-1-120420 | 2012224A-10A | TO-15 | m,p-Xylene | 12 | UG/M3 | | J | 9 |
| 2012224A | DUP-1-120420 | 2012224A-10A | TO-15 | o-Xylene | 3.5 | UG/M3 | | J | 9 |
| 200-56561-1 | SVP-1-120420 | 200-56561-1 | APH | Naphthalene | 4.2 | UG/M3 | B | U | 7 |
| 200-56561-1 | DUP-1-120420 | 200-56561-10 | APH | C9-C10 Aromatics | 15 | UG/M3 | | J | 9 |
| 200-56561-1 | DUP-1-120420 | 200-56561-10 | APH | m-Xylene & p-Xylene | 11 | UG/M3 | | J | 9 |
| 200-56561-1 | DUP-1-120420 | 200-56561-10 | APH | Naphthalene | 5 | UG/M3 | B | U | 7 |
| 200-56561-1 | DUP-1-120420 | 200-56561-10 | APH | o-Xylene | 3.6 | UG/M3 | | J | 9 |
| 200-56561-1 | DUP-1-120420 | 200-56561-10 | APH | Toluene | 1.2 | UG/M3 | | J | 9 |
| 200-56561-1 | SVP-2-120420 | 200-56561-2 | APH | Naphthalene | 5.6 | UG/M3 | B | U | 7 |
| 200-56561-1 | SVP-3-120420 | 200-56561-3 | APH | Naphthalene | 2.5 | UG/M3 | B | U | 7 |
| 200-56561-1 | SVP-4-120420 | 200-56561-4 | APH | C9-C10 Aromatics | 9.6 | UG/M3 | | J | 9 |
| 200-56561-1 | SVP-4-120420 | 200-56561-4 | APH | m-Xylene & p-Xylene | 6 | UG/M3 | | J | 9 |
| 200-56561-1 | SVP-4-120420 | 200-56561-4 | APH | Naphthalene | 2 | UG/M3 | B | U | 7 |
| 200-56561-1 | SVP-4-120420 | 200-56561-4 | APH | o-Xylene | 2.1 | UG/M3 | | J | 9 |
| 200-56561-1 | SVP-4-120420 | 200-56561-4 | APH | Toluene | 0.59 | UG/M3 | | J | 9 |
| 200-56561-1 | SVP-5-120420 | 200-56561-5 | APH | Naphthalene | 1.4 | UG/M3 | B | U | 7 |
| 200-56561-1 | SVP-6-120420 | 200-56561-6 | APH | Naphthalene | 1.9 | UG/M3 | B | U | 7 |
| 200-56561-1 | OA-1-120420 | 200-56561-7 | APH | Naphthalene | 1.1 | UG/M3 | B | U | 7 |
| 200-56561-1 | OA-2-120420 | 200-56561-8 | APH | Naphthalene | 1 | UG/M3 | B | U | 7 |
| 200-56561-1 | OA-3-120420 | 200-56561-9 | APH | Naphthalene | 1.2 | UG/M3 | B | U | 7 |



**DATA VALIDATION REPORT
NEWMAN'S CHEVRON – SOIL VAPOR**

Prepared for:

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Prepared by:

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EcoChem Project: C4159-6

July 30, 2021

Approved for Release:

A handwritten signature in black ink, appearing to read "Christine Ransom", written over a horizontal line.

Christine Ransom
Senior Project Chemist
EcoChem, Inc.

PROJECT NARRATIVE

Basis for the Data Validation

This report summarizes the results of summary validation (EPA Stage 2B) performed on soil vapor and associated quality control sample data for the Newman's Chevron project. A complete list of samples is provided in the **Sample Index**.

The analysis was performed by Eurofins Air Toxics, Folsom, California. The analytical method and EcoChem project chemists are listed in the following table:

| ANALYSIS | METHOD | PRIMARY REVIEW | SECONDARY REVIEW |
|-------------|--------|----------------|------------------|
| Naphthalene | TO-17 | E. Clayton | C. Ransom |

The data were reviewed using guidance and quality control criteria documented in the analytical methods; *Final Remedial Investigation Work Plan-Addendum 3, Newman's Chevron* (Leidos, May 12 2021); and *National Functional Guidelines for Organic Data Review* (USEPA 2008).

EcoChem's goal in assigning data assessment qualifiers is to assist in proper data interpretation. If values are estimated (J or UJ), data may be used for site evaluation and risk assessment purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. Data that have been rejected are flagged with (R). Rejected data should not be used for any purpose. If values have no data qualifier assigned, then the data meet the data quality objectives as stated in the documents and methods referenced above.

Validation criteria are included as **Appendix A**. Data Validation Worksheets and project associated communications will be kept on file at EcoChem, Inc. A qualified laboratory electronic data deliverable (EDD) is also submitted.

Sample Index
Newman's Chevron- Soil Vapor

| SDG | Sample ID | Lab ID | TO17 |
|---------|--------------|-------------|------|
| 2106570 | SVP-1-062221 | 2106570-01A | ✓ |
| 2106570 | SVP-2-062221 | 2106570-02A | ✓ |
| 2106570 | SVP-3-062221 | 2106570-03A | ✓ |
| 2106570 | SVP-4-062221 | 2106570-04A | ✓ |
| 2106570 | SVP-5-062221 | 2106570-05A | ✓ |
| 2106570 | SVP-6-062221 | 2106570-06A | ✓ |
| 2106570 | FB-1-062221 | 2106570-07A | ✓ |

DATA VALIDATION REPORT
Newman's Chevron
Naphthalene by EPA TO-17 GCMS

This report documents the review of analytical data from the analysis of soil vapor and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Eurofins Air Toxics, Folsom, California. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|---------|-----------------------------|------------------|
| 2106570 | 6 Soil Vapor, 1 Field Blank | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|---------------------------------------|
| ✓ | Sample Receipt, Preservation, and Holding Times | ✓ | Laboratory Control Samples (LCS/LCSD) |
| ✓ | GC/MS Instrument Performance (Tune) | 1 | Field Duplicates |
| ✓ | Initial Calibration (ICAL) | ✓ | Internal Standards |
| ✓ | Continuing Calibration (CCAL) | ✓ | Target Analyte List |
| ✓ | Laboratory Blanks | ✓ | Reporting Limits |
| 1 | Field Blanks | ✓ | Reported Results |
| ✓ | Surrogate Compounds | | |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Field Blanks

On field blank, FB-1-062221, was submitted. Naphthalene was not detected in this blank.

Field Duplicates

No field duplicates were submitted.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate and laboratory control sample/laboratory control sample duplicate (LCS/LCSD) recovery values and precision was acceptable as demonstrated by the LCS/LCSD relative percent difference values.

No data were qualified for any reason.

All data, as reported, are acceptable for use.



APPENDIX A

DATA QUALIFIER DEFINITIONS REASON CODES AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES **Based on National Functional Guidelines**

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

| | |
|----|---|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. |
| NJ | The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents the approximate concentration. |
| UJ | The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified. |

The following is an EcoChem qualifier that may also be assigned during the data review process:

| | |
|-----|---|
| DNR | Do not report; a more appropriate result is reported from another analysis or dilution. |
|-----|---|

DATA QUALIFIER REASON CODES

| Group | Code | Reason for Qualification |
|---------------------------------|------|---|
| Sample Handling | 1 | Improper Sample Handling or Sample Preservation (i.e., headspace, cooler temperature, pH, summa canister pressure); Exceeded Holding Times |
| Instrument Performance | 24 | Instrument Performance (i.e., tune, resolution, retention time window, endrin breakdown, lock-mass) |
| | 5A | Initial Calibration (RF, %RSD, r^2) |
| | 5B | Calibration Verification (CCV, CCAL; RF, %D, %R) Use bias flags (H,L) ¹ where appropriate |
| | 5C | Initial Calibration Verification (ICV %D, %R) Use bias flags (H,L) ¹ where appropriate |
| Blank Contamination | 6 | Field Blank Contamination (Equipment Rinsate, Trip Blank, etc.) |
| | 7 | Lab Blank Contamination (i.e., method blank, instrument blank, etc.) Use low bias flag (L) ¹ for negative instrument blanks |
| Precision and Accuracy | 8 | Matrix Spike (MS and/or MSD) Recoveries Use bias flags (H,L) ¹ where appropriate |
| | 9 | Precision (all replicates: LCS/LCSD, MS/MSD, Lab Replicate, Field Replicate) |
| | 10 | Laboratory Control Sample Recoveries (a.k.a. Blank Spikes) Use bias flags (H,L) ¹ where appropriate |
| | 12 | Reference Material Use bias flags (H,L) ¹ where appropriate |
| | 13 | Surrogate Spike Recoveries (a.k.a. labeled compounds, recovery standards) Use bias flags (H,L) ¹ where appropriate |
| Interferences | 16 | ICP/ICP-MS Serial Dilution Percent Difference |
| | 17 | ICP/ICP-MS Interference Check Standard Recovery Use bias flags (H,L) ¹ where appropriate |
| | 19 | Internal Standard Performance (i.e., area, retention time, recovery) |
| | 22 | Elevated Detection Limit due to Interference (i.e., chemical and/or matrix) |
| | 23 | Bias from Matrix Interference (i.e. diphenyl ether, PCB/pesticides) |
| Identification and Quantitation | 2 | Chromatographic pattern in sample does not match pattern of calibration standard |
| | 3 | 2 nd column confirmation (RPD or %D) |
| | 4 | Tentatively Identified Compound (TIC) (associated with NJ only) |
| | 20 | Calibration Range or Linear Range Exceeded |
| | 25 | Compound Identification (i.e., ion ratio, retention time, relative abundance, etc.) |
| Miscellaneous | 11 | A more appropriate result is reported (multiple reported analyses i.e., dilutions, re-extractions, etc. Associated with "R" and "DNR" only) |
| | 14 | Other (See DV report for details) |
| | 26 | Method QC information not provided |

¹H = high bias indicated

L = low bias indicated

Polycyclic Aromatic Hydrocarbons (PAH) by GCMS, Method TO17

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|---|-----------------------|--|
| Sample Handling | | | | | |
| Cooler/Storage Temperature Preservation | Air cartridge - Cool to $\leq 6^{\circ}\text{C}$ | Method ^{1,2} | J(pos)/UJ(ND) if > 6 deg. C (EcoChem PJ) | 1 | |
| Holding Time | 30 days from collection to analysis | Method ^{1,2} | J(pos)/UJ(ND) if HT exceeded J(pos)/R(ND) if gross exceedance($> 2\text{X HT}$) | 1 | Gross exceedance = $> 2\text{X HT}$, as per 1999 NFG |
| Instrument Performance | | | | | |
| Tuning | DFTPP Beginning of each 12 hour period Use method acceptance criteria | Method ^{1,2} NFG ³ | R(pos/ND) all analytes in all samples associated with the tune | 24 | 12 hour clock begins with a new DFTPP tune or if the closing CCV within criteria. |
| Initial Calibration (Minimum 5 stds.) Sensitivity | TAL Compounds: RRF ≥ 0.050 | QSM ⁽¹⁾ QAPP ⁽³⁾ | J(pos)/R(ND) if RRF/RF is less than criterion | 5A | |
| Initial Calibration (Minimum 5 stds.) Stability | CCC Compounds: %RSD $\leq 30\%$ and one option as follows: RSD for each analyte $\leq 20\%$; OR Linear $r \geq 0.995$; OR Non-linear $r^2 \geq 0.99$ (6 points must be used) CCC Compounds: Acenaphthene, Fluoranthene, Benzo(a)pyrene | Method ^{1,2} NFG ³ | J(pos) if %RSD $> 30\%$ (for CCC Compounds) OR $> 20\%$ (all other compounds) OR r^2 -value < 0.990 OR $r < 0.995$ | 5A | |
| Initial Calibration Verification (ICV) | Standard from independent source Analyzed immediately after ICAL %R within $\pm 30\%$ of true value | Method ^{1,2} NFG ³ | If $> +/ - 80\%$: J(pos)/R(ND) If $- 79\%$ to $- 31\%$: J(pos) - high bias If 31% to 79% : J(pos)/UJ(ND) - low bias | 5A (H,L) ⁴ | |
| Continuing Calibration (Prior to each 12 hr. shift) Sensitivity | TAL Compounds: RRF ≥ 0.050 | QSM ⁽¹⁾ QAPP ⁽³⁾ | J(pos)/R(ND) if RRF/RF is less than criterion | 5B | |
| Continuing Calibration (Prior to each 12 hr. shift) Stability | %Drift $\leq 30\%$ | Method ^{1,2} NFG ³ | If $> +/ - 80\%$: J(pos)/R(ND) If $- 79\%$ to $- 31\%$: J(pos) - high bias If 31% to 79% : J(pos)/UJ(ND) - low bias | 5B (H,L) ⁴ | QSM states that analysis cannot proceed if any CCC fails acceptance criterion. |
| Blank Contamination | | | | | |
| Method Blank (MB) | MB: One per matrix per batch of (of ≤ 20 samples) No detected compounds $> \text{RL}$ | Method ^{1,2} NFG ³ | U(pos) if result is $< 5\text{X}$ or 10X action level, as per analyte. | 7 | 10X action level applies to bis(2-ethylhexyl) phthalate only. 5X for all other target analytes Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review FB, qualify as needed |
| | No TICs present | | R(pos) TICs using 10X rule | | |
| Field Blank (FB) | FB: frequency as per QAPP No detected compounds $> \text{RL}$ | Method ^{1,2} NFG ³ | U(pos) if result is $< 5\text{X}$ or 10X action level, as per analyte. | 6 | |

Polycyclic Aromatic Hydrocarbons (PAH) by GCMS, Method TO17

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|---|--|-----------------------|---|
| Precision and Accuracy | | | | | |
| LCS | One per lab batch (of ≤ 20 samples) 70% -130% | NFG ³ | Qualify all associated samples J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if both %R < LCL - low bias J(pos)/R(ND) if both %R < 10% - very low bias J(pos)/UJ(ND) if one > UCL & one < LCL, with no bias PJ if only one %R outlier | 10 (H,L) ⁴ | No action if only one spike %R is outside criteria, when LCSD is analyzed. Qualify all associated samples. |
| LCS/LCSD (RPD) | One set per matrix per batch (of ≤ 20 samples) RPD ≤ 30% | NFG ³ | J(pos) assoc. compd. in all samples | 9 | Qualify all associated samples. |
| Surrogates | Minimum of 3 acid & 3 base/neutral (B/N) compounds added to all samples Within method control limits | Method ^{1,2} NFG ³ | Note: Do not qualify if only 1 acid and/or 1 B/N surrogate is out, unless <10%. *** J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if %R < LCL - low bias J(pos)/R(ND) if %R < 10% - very low bias | 13 (H,L) ⁴ | *** If 1 surrogate outlier < 10% then J(pos)/R(ND) NFG specifies surrogates and CL, and to J(pos)/R(ND) results <20%, EcoChem PJ is J(pos)/R(ND) <10%. |
| Internal Standards | Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT | Method ^{1,2} NFG ³ | J(pos) if > 200% J(pos)/UJ(ND) if < 50% J(pos)/R(ND) if < 25% RT>30 seconds, narrate and notify PM | 19 | NFG specifies surrogates and CL, and to J(pos)/R(ND) results <20%, EcoChem PJ is J(pos)/R(ND) <10%. |
| Field Duplicates | RPD ≤30% OR difference < 1X RL (for results < 5X RL) | EcoChem standard policy | Narrate and qualify if required by project (EcoChem PJ) Qualify only field duplicate samples J(pos)/UJ(ND) | 9 | |
| Compound ID and Calculation | | | | | |
| Quantitation/ Identification | RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample | Method ^{1,2} NFG ³ | See Technical Director if outliers are found | 14 25 (false pos) | |
| TICs | Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification | Method ^{1,2} NFG ³ | NJ the TIC unless: R(pos) common laboratory contaminants See Technical Director for ID issues | 4 | Common laboratory contaminants: aldol condensation products, solvent preservatives, and reagent contaminants |
| Calibration Range | Results exceed the upper calibration range | EcoChem standard policy | Qualify J(pos) | 20 | If result from dilution analysis is not reported. |
| Calculation Check | Check 10% of field & QC sample results | EcoChem standard policy | Contact laboratory for resolution and/or corrective action | na | Full data validation only. |
| Electronic Data Deliverable (EDD) | | | | | |
| Verification of EDD to hardcopy data | EcoChem verify @ 10% unless problems noted; then increase level up to 100% for next several packages. | EcoChem standard policy | Depending on scope of problem, correct at EcoChem (minor issues) to resubmittal by laboratory (major issues). | na | EcoChem Project Manager and/or Database Administrator will work with lab to provide long-term corrective action. |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 Rev. 1 EcoChem Policy for Rejection/Selection Process for Multiple Results |

(pos): Positive Result(s)
(ND): Non-detects¹ Compendium Method TO-17, Determination of Volatile Organic Compounds (VOCs) in Ambient Air Using Active Sampling Onto Sorbent Tubes, Second Edition, January 1999. EPA/625/R-96/010b² Air Toxics/Eurofin SOP: Analysis of Volatile and Semivolatile Organic Compounds in Vapor by Thermal Desorption GC/MS Full Scan Using Modified EPA Method TO-17 (SOP 109)³ National Functional Guidelines for Organic Data Review, June, 2008⁴ "H" = high bias indicated; "L" = low bias indicated



DATA VALIDATION REPORT NEWMAN'S CHEVRON

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EcoChem Project: C4159-7

March 7, 2022

Approved for Release:

A handwritten signature in black ink, appearing to read "Christine Ransom", written over a horizontal line.

Christine Ransom
Senior Project Chemist
EcoChem, Inc.

PROJECT NARRATIVE

Basis for the Data Validation

This report summarizes the results of summary validation (EPA Stage 2B) performed on one soil sample and associated quality control sample data for the Newman's Chevron project. The **Sample Index** contains sample ID cross-reference information.

The analysis was performed by Eurofins, Lancaster, Pennsylvania. The analytical methods and EcoChem project chemists are listed in the following table:

| ANALYSIS | METHOD | PRIMARY REVIEW | SECONDARY REVIEW |
|------------------------------|----------|----------------|------------------|
| Naphthalenes | SW8270E | A. Bodkin | C. Ransom |
| BTEX | SW8260D | | |
| Total Petroleum Hydrocarbons | NWTPH-Dx | | |
| Gas Range Hydrocarbons | NWTPH-Gx | | |
| Lead | SW6010D | | |

The data were reviewed using guidance and quality control criteria documented in the analytical methods; *Remedial Investigation Work Plan, Newman's Chevron* (Leidos, July 13, 2018); *National Functional Guidelines for Organic Data Review* (USEPA 2017); and *National Functional Guidelines for Inorganic Data Review* (USEPA 2017).

EcoChem's goal in assigning data assessment qualifiers is to assist in proper data interpretation. If values are estimated (J or UJ), data may be used for site evaluation and risk assessment purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. Data that have been rejected are flagged with (R). Rejected data should not be used for any purpose. If values have no data qualifier assigned, then the data meet the data quality objectives as stated in the documents and methods referenced above.

Validation criteria are included as **Appendix A**. A Qualified Data Summary Table is included as **Appendix B**. Data Validation Worksheets and project associated communications will be kept on file at EcoChem, Inc. A qualified laboratory electronic data deliverable (EDD) is also submitted.

Sample Index
Newman's Chevron

| SDG | Sample ID | Lab ID | BTEX 8260D | Naphthalenes 8270E | NWTPH-Gx | NWTPH-Dx | Lead 6010D |
|---------|--------------------|-------------|---------------|-----------------------|----------|----------|---------------|
| J6178-1 | SVP-7-S-6.5-211101 | 410-61781-1 | ✓ | ✓ | ✓ | ✓ | ✓ |

DATA VALIDATION REPORT
Newman's Chevron
Volatile Organic Compounds by SW8260D

This report documents the review of analytical data from the analysis of one soil sample and the associated laboratory quality control (QC) samples. The sample was analyzed by Eurofins, Lancaster, Pennsylvania. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|----------|-------------------|------------------|
| J61781-1 | 1 Soil | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|---|
| ✓ | Sample Receipt, Preservation, and Holding Times | ✓ | Laboratory Control Samples (LCS/LCSD) |
| ✓ | GC/MS Instrument Performance (Tune) | 1 | Matrix Spike/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Initial Calibration (ICAL) | 1 | Field Duplicates |
| ✓ | Continuing Calibration (CCAL) | ✓ | Internal Standards |
| ✓ | Laboratory Blanks | ✓ | Target Analyte List |
| 1 | Field Blanks | ✓ | Reporting Limits |
| ✓ | Surrogate Compounds | ✓ | Reported Results |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Field Blanks

No field blanks were submitted.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate analyses were not performed. Accuracy and precision were evaluated using the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) results.

Field Duplicates

No Field duplicates were submitted.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate and LCS/LCSD recovery values and precision was acceptable as demonstrated by the LCS/LCSD relative percent difference values.

No data were qualified for any reason. All data, as reported, are acceptable for use.

DATA VALIDATION REPORT

Newman's Chevron

Naphthalenes by SW8270E

This report documents the review of analytical data from the analysis of one soil sample and the associated laboratory quality control (QC) samples. Samples were analyzed by Eurofins, Lancaster, Pennsylvania. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|----------|-------------------|------------------|
| J61781-1 | 1 Soil | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|---|
| ✓ | Sample Receipt, Preservation, and Holding Times | ✓ | Laboratory Control Samples (LCS) |
| ✓ | GC/MS Instrument Performance (Tune) | 1 | Matrix Spike/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Initial Calibration (ICAL) | ✓ | Internal Standards |
| 1 | Continuing Calibration (CCAL) | 1 | Field Duplicates |
| ✓ | Laboratory Blanks | ✓ | Target Analyte List |
| 1 | Field Blanks | ✓ | Reporting Limits |
| ✓ | Surrogate Compounds | ✓ | Reported Results |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Continuing Calibration

For the CCAL analyzed on 11/11/21 @ 23:43, the retention time for the internal standard Naphthalene-d8 was outside the ± 30 second window established from the ICAL retention time. Since the internal standard retention time for the sample and QC samples were within the ± 30 second window established from the associated CCAL, data was judged as not impacted. No qualifiers were assigned.

Field Blanks

No field blanks were submitted.

Matrix Spike/Matrix Spike Duplicates

Matrix spike/matrix spike duplicate analyses were not performed. Accuracy was evaluated using the laboratory control sample. Laboratory precision could not be evaluated.

Field Duplicates

No Field duplicates were submitted.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate and laboratory control sample percent recovery values. Precision could not be evaluated.

No data were qualified for any reason. All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Newman's Chevron
Lead by SW6010D and Moisture by SM2540G

This report documents the review of analytical data from the analysis of one soil sample and the associated laboratory quality control (QC) samples. Samples were analyzed by Eurofins, Lancaster, Pennsylvania. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES AND MATRIX | VALIDATION LEVEL |
|----------|------------------------------|------------------|
| J61781-1 | 1 Soil | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|----------------------------|
| ✓ | Sample Receipt, Preservation, and Holding Times | 1 | Matrix Spikes |
| ✓ | Initial Calibration | 1 | Laboratory Duplicates |
| ✓ | Calibration Verification | ✓ | Interference Check Samples |
| ✓ | Reporting Limit Standards | 1 | Field Duplicates |
| ✓ | Laboratory Blanks | ✓ | Reporting Limits |
| 1 | Field Blanks | ✓ | Reported Results |
| ✓ | Laboratory Control Samples (LCS) | | |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Field Blanks

No field blanks were submitted.

Matrix Spikes

Matrix spikes were not analyzed. Accuracy was evaluated using the laboratory control sample (LCS) result.

Laboratory Duplicates

Laboratory duplicates were not analyzed. Laboratory precision could not be evaluated.

Field Duplicates

No field blanks were submitted.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the laboratory control sample recovery. Precision could not be evaluated.

No data were qualified for any reason. All data, as reported, are acceptable for use.

DATA VALIDATION REPORT

Newman's Chevron

Gasoline Range Organics by NWTPH-Gx

This report documents the review of analytical data from the analysis of one soil sample and the associated laboratory quality control (QC) samples. Samples were analyzed by Eurofins, Lancaster, Pennsylvania. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|----------|-------------------|------------------|
| J61781-1 | 1 Soil | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

The Result_Parameter_Name field was incorrectly populated as "Diesel Range Organics". It was corrected to say, "Gasoline Range Organics".

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---------------------------------------|---|---|
| ✓ | Sample Preservation and Holding Times | ✓ | Laboratory Control Samples (LCS/LCSD) |
| ✓ | Initial Calibration (ICAL) | 1 | Matrix Spike/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Continuing Calibration (CCAL) | 1 | Field Duplicates |
| ✓ | Laboratory Blanks | ✓ | Reporting Limits |
| 1 | Field Blanks | ✓ | Reported Results |
| ✓ | Surrogate Compounds | | |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Field Blanks

No field blanks were submitted.

Matrix Spike/Matrix Spike Duplicates

Matrix spikes were not analyzed. Precision and accuracy were evaluated using the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) results.

Field Duplicates

No field blanks were submitted.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate and LCS/LCSD percent recovery values. Precision was also acceptable as demonstrated by the LCS/LCSD relative percent difference values.

No data were qualified for any reason. All data, as reported, are acceptable for use.

DATA VALIDATION REPORT

Newman's Chevron

Diesel Range Organics by NWTPH-Dx

This report documents the review of analytical data from the analysis of one soil sample and the associated laboratory quality control (QC) samples. Samples were analyzed by Eurofins, Lancaster, Pennsylvania. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|----------|-------------------|------------------|
| J61781-1 | 1 Soil | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|----------------------------------|
| 2 | Sample Receipt, Preservation, and Holding Times | ✓ | Laboratory Control Samples (LCS) |
| ✓ | Initial Calibration (ICAL) | ✓ | Matrix Spikes (MS) |
| ✓ | Continuing Calibration (CCAL) | ✓ | Laboratory Duplicates |
| ✓ | Laboratory Blanks | 1 | Field Duplicates |
| 1 | Field Blanks | ✓ | Reporting Limits |
| ✓ | Surrogate Compounds | 2 | Reported Results |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Sample Receipt, Preservation, and Holding Times

Sample SVP-7-S-6.5-211101 was initially extracted within the 14-day holding time. The laboratory re-extracted the sample based on laboratory control sample (LCS) and matrix spike (MS) recovery outliers, but the re-extraction was done 3 days past the holding time. It was determined that the original results should be used; no action was taken based on holding times.

Field Blanks

No field blanks were submitted.

Field Duplicates

No field duplicates were submitted.

Reported Results

Sample SVP-7-S-6.5-211101 was re-extracted based on LCS and MS recovery outliers based on the current laboratory control limits. The re-extraction was done 3 days past the holding time, with acceptable recoveries. The sample results from the initial extraction and the re-extraction were the same. In addition, the LCS and MS recovery values were within the QAPP control limits for the initial extraction. It was determined that the results from the original extraction should be used. The results from the re-extraction were qualified as do-not-report (DNR-11).

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate, LCS, and MS recovery values. Precision was also acceptable as demonstrated by the laboratory duplicate relative percent difference (RPD) values.

Data were flagged as do-not-report (DNR) to indicate which result should not be used from multiple reported analyses. Completion is not affected.

Data that are flagged DNR should not be used. All other data, as reported, are acceptable for use.



APPENDIX A

DATA QUALIFIER DEFINITIONS REASON CODES AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES **Based on National Functional Guidelines**

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

| | |
|----|---|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. |
| NJ | The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents the approximate concentration. |
| UJ | The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified. |

The following is an EcoChem qualifier that may also be assigned during the data review process:

| | |
|-----|---|
| DNR | Do not report; a more appropriate result is reported from another analysis or dilution. |
|-----|---|

DATA QUALIFIER REASON CODES

| Group | Code | Reason for Qualification |
|---------------------------------|------|---|
| Sample Handling | 1 | Improper Sample Handling or Sample Preservation (i.e., headspace, cooler temperature, pH, summa canister pressure); Exceeded Holding Times |
| Instrument Performance | 24 | Instrument Performance (i.e., tune, resolution, retention time window, endrin breakdown, lock-mass) |
| | 5A | Initial Calibration (RF, %RSD, r^2) |
| | 5B | Calibration Verification (CCV, CCAL; RF, %D, %R) Use bias flags (H,L) ¹ where appropriate |
| | 5C | Initial Calibration Verification (ICV %D, %R) Use bias flags (H,L) ¹ where appropriate |
| Blank Contamination | 6 | Field Blank Contamination (Equipment Rinsate, Trip Blank, etc.) |
| | 7 | Lab Blank Contamination (i.e., method blank, instrument blank, etc.) Use low bias flag (L) ¹ for negative instrument blanks |
| Precision and Accuracy | 8 | Matrix Spike (MS and/or MSD) Recoveries Use bias flags (H,L) ¹ where appropriate |
| | 9 | Precision (all replicates: LCS/LCSD, MS/MSD, Lab Replicate, Field Replicate) |
| | 10 | Laboratory Control Sample Recoveries (a.k.a. Blank Spikes) Use bias flags (H,L) ¹ where appropriate |
| | 12 | Reference Material Use bias flags (H,L) ¹ where appropriate |
| | 13 | Surrogate Spike Recoveries (a.k.a. labeled compounds, recovery standards) Use bias flags (H,L) ¹ where appropriate |
| Interferences | 16 | ICP/ICP-MS Serial Dilution Percent Difference |
| | 17 | ICP/ICP-MS Interference Check Standard Recovery Use bias flags (H,L) ¹ where appropriate |
| | 19 | Internal Standard Performance (i.e., area, retention time, recovery) |
| | 22 | Elevated Detection Limit due to Interference (i.e., chemical and/or matrix) |
| | 23 | Bias from Matrix Interference (i.e. diphenyl ether, PCB/pesticides) |
| Identification and Quantitation | 2 | Chromatographic pattern in sample does not match pattern of calibration standard |
| | 3 | 2 nd column confirmation (RPD or %D) |
| | 4 | Tentatively Identified Compound (TIC) (associated with NJ only) |
| | 20 | Calibration Range or Linear Range Exceeded |
| | 25 | Compound Identification (i.e., ion ratio, retention time, relative abundance, etc.) |
| Miscellaneous | 11 | A more appropriate result is reported (multiple reported analyses i.e., dilutions, re-extractions, etc. Associated with "R" and "DNR" only) |
| | 14 | Other (See DV report for details) |
| | 26 | Method QC information not provided |

¹H = high bias indicated

L = low bias indicated

**Volatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8260C)**

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|--|---|--|-----------------------|--|
| Sample Handling | | | | | |
| Cooler/Storage Temperature Preservation | 4°C±2°C Aqueous: HCl to pH < 2 Current SW846 criterion is ≤ 6° C ⁽³⁾ | NFG ⁽¹⁾ Method ⁽³⁾ | If required by project: J (pos)/UJ (ND) if greater than 6° C | 1 | Use PJ for temp outliers; see TM20 if pH ≤ 2, reject 2-chloroethyl vinyl ether (R-1) some projects may require methanol preserved soils/seds |
| Holding Time | Aqueous: 14 days preserved 7 Days: unpreserved Solid: 14 Days | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos)/UJ (ND) if HT exceeded J (pos)/R (ND) if gross exceedance (> 2x HT) | 1 | Gross exceedance = > 2x HT, as per 1999 NFG |
| Instrument Performance | | | | | |
| Tuning | BFB Beginning of each 12 hour period Use method or project acceptance criteria | NFG ⁽¹⁾ Method ⁽³⁾ | R (pos/ND) all analytes in all samples associated with the tune | 24 | |
| Initial Calibration Sensitivity | Minimum 5 standards RRF ≥ 0.05 except: RRF ≥ 0.01 poor responders * RRF ≥ 0.005 1,4-dioxane | NFG ⁽¹⁾ Method ⁽³⁾ | Use PJ to qualify J (pos)/UJ (ND) | 5A | TM-06 EcoChem Policy for the Evaluation and Qualification of GCMS Instrument Performance PJ - no action if response is stable (ICAL RSD and CCAL %D acceptable) |
| Initial Calibration Stability | %RSD ≤ 20% except: %RSD ≤ 40% poor responders * %RSD ≤ 50% 1,4-dioxane | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if %RSD > limit | 5A | |
| Initial Calibration Verification | Second source analyzed immediately after ICAL %R 70% - 130% | Method ⁽³⁾ | J (pos) %R > UCL J (pos)/UJ (ND) %R < LCL | 5A (H,L) ⁴ | QAPP may have overriding accuracy limits. |
| Continuing Calibration Sensitivity | RRF ≥ 0.05 except: RRF ≥ 0.01 poor responders * RRF ≥ 0.005 1,4-dioxane | NFG ⁽¹⁾ Method ⁽³⁾ | Use PJ to qualify J (pos)/UJ (ND) | 5B | see ICAL RRF guidance |
| Continuing Calibration Stability | %D ≤ 25% except: %D ≤ 40% poor responders * %D ≤ 50% 1,4-dioxane | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) - %D > control limit (high bias) J (pos)/UJ (ND) - %D < -control limit (low bias) | 5B (H,L) ⁴ | |

Volatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8260C)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--------------------------------------|--|---|---|-----------------------|--|
| Blank Contamination | | | | | |
| Method Blank (MB) | <u>MB: One per matrix per batch (of ≤ 20 samples)</u> No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U (pos) if result is < 5X or 10X action level | 7 | 10X action level for methylene chloride, acetone, & 2-butanone. 5X for all other target analytes Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review TB, qualify as needed #3 - Review FB, qualify as needed Note: Actions as per NFG 1999 |
| | No TICs present | | R (pos) TICs using 10X rule | | |
| Trip Blank (TB) | No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U (pos) if result is < 5X or 10X action level | 6 | |
| Field Blank (FB) | No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U (pos) if result is < 5X or 10X action level | 6 | |
| Precision and Accuracy | | | | | |
| LCS/LCSD (recovery) | One per matrix per batch (of ≤ 20 samples) LCSD not required by NFG or method Use method acceptance criteria/laboratory limits | Method ⁽³⁾ | J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND)%R < 10% | 10 (H,L) ⁴ | No action if only one spike %R is outside criteria when LCSD is analyzed, unless one recovery is <10%. QAPP may have overriding accuracy limits. |
| LCS/LCSD RPD | If LCSD analyzed RPD < lab limits | Method ⁽³⁾ | J (pos) | 9 | Qualify all associated samples. QAPP may have overriding precision limits. |
| Reference Material (RM, SRM, or CRM) | Result ±20% of the 95% confidence interval of the true value for analytes | EcoChem standard policy | J (pos)/UJ (ND) if < LCL J (pos) if > UCL | 12 (H,L) ⁴ | QAPP may have overriding accuracy limits. Some manufacturers may have different RM control limits |
| Surrogates | Added to all samples Within method/laboratory control limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if %R >UCL J (pos)/UJ (ND) if %R <LCL J (pos)/R (ND) if <10% | 13 (H,L) ⁴ | No action if there are 4+ surrogates and only 1 outlier Qualify all compounds if qualification is required. |
| Internal Standards | Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if > 200% J (pos)/UJ (ND) if < 50% J (pos)/R (ND) if < 25% if RT >30 seconds use PJ | 19 | Qualify compounds quantified using particular internal standard |

**Volatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8260C)**

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|---|---|----------------------|---|
| Precision and Accuracy (continued) | | | | | |
| MS/MSD (recovery) | One per matrix per batch (of ≤ 20 samples) Use method acceptance criteria/laboratory limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) %R > UCL J (pos)/UJ (ND) if both %R < LCL J (pos)/R (ND) if both %R < 10% J (pos)/UJ (ND) if one > UCL & one < LCL, with no bias | 8 (H,L) ⁴ | No action if only one spike %R is outside criteria. No action if parent concentration is >4x the amount spiked. Qualify parent sample only. |
| MS/MSD (RPD) | One per matrix per batch (of ≤ 20 samples) Use method acceptance criteria/laboratory limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) If RPD > control limit | 9 | Qualify parent sample only |
| Field Duplicates | Solids: RPD < 50% OR difference < 2X RL (for results < 5X RL) Aqueous: RPD < 35% OR difference < 1X RL (for results < 5X RL) | EcoChem standard policy | J (pos)/UJ (ND) Qualify only parent and field duplicate samples | 9 | Use project limits if specified |
| Compound Identification and Quantitation | | | | | |
| Retention Time Relative Ion Intensities | RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample | NFG ⁽¹⁾ Method ⁽³⁾ | U (pos) if identification criteria not met | 25 | |
| TICs | Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification | NFG ⁽¹⁾ Method ⁽³⁾ | NJ TIC R (pos) if common laboratory contaminants | 4 | Common laboratory contaminants: aldol condensation products, solvent preservatives, and reagent contaminants |
| Calibration Range | Results greater than highest calibration standard | EcoChem standard policy | Qualify J (pos) | 20 | If result from dilution analysis is not reported. |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 EcoChem Policy for Rejection/Selection Process for Multiple Results |

¹ National Functional Guidelines for Organic Data Review, June, 2008² National Functional Guidelines for Organic Data Review, Oct, 1999³ Method SW846 8260C Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)⁴ NFG 2013 suggests using "+ / -" to indicate bias; EcoChem has chosen "H" = high bias indicated; "L" = low bias indicated.

* "Poor responder" compounds: Acetone, 2-butanone, carbon disulfide, chloroethane, chloromethane, cyclohexane, 1,2-dibromoethane, dichlorodifluoromethane, cis-1,2-dichloroethene, 1,2-dichloropropane, 1,2-dibromo-3-chloropropane, 2-hexanone, isopropylbenzene, methyl acetate, methylene chloride, methylcyclohexane, 4-methyl-2-pentanone, methyl tert-butyl ether, trans-1,2-dichloroethene, trichlorofluoromethane, 1,1,2-trichloro-1,2,2-trifluoroethane **criterion is 0.010 RRF**; 1,4-dioxane RRF **criterion is 0.005**.

(pos): Positive Result

(ND): Non-detect

DATA VALIDATION CRITERIA

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
 (Based on NFG 1999 & 2008 and SW-846 Method 8270D)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|---|--|-----------------------|--|
| Sample Handling | | | | | |
| Cooler/Storage Temperature Preservation | 4°C±2°C sediment/tissues may require storage at -20°C | NFG ⁽¹⁾ Method ⁽³⁾ | If required by project: J (pos)/UJ (ND) if greater than 6° C | 1 | Use PJ for temp outliers; see TM20 Current SW846 criterion is ≤ 6° C ⁽³⁾ |
| Holding Time | Extraction Aqueous: 7 days from collection Extraction Solid: 14 days from collection Analysis (all matrices): 40 days from extraction Holding time may be extended to 1 year for frozen sediments/tissues | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos)/UJ (ND) if HT exceeded J (pos)/R (ND) if gross exceedance (> 2x HT) | 1 | Gross exceedance = > 2x HT, as per 1999 NFG |
| Instrument Performance | | | | | |
| Tuning | DFTPP Beginning of each 12 hour period Use method or project acceptance criteria | NFG ⁽¹⁾ Method ⁽³⁾ | R (pos/ND) all analytes in all samples associated with the tune | 24 | |
| Initial Calibration Sensitivity | RRF ≥ 0.05 except: RRF ≥ 0.01 poor responders * | NFG ⁽¹⁾ Method ⁽³⁾ | Use PJ to qualify J (pos)/UJ (ND) | 5A | TM-06 EcoChem Policy for the Evaluation and Qualification of GCMS Instrument Performance PJ - no action if response is stable (ICAL RSD and CCAL %D acceptable) |
| Initial Calibration Stability | Minimum 5 standards %RSD ≤ 20.0% except: %RSD ≤ 40.0% poor responders * or co-efficient of determination (r ²) > 0.99 | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if %RSD > limit or r ² value < 0.99 | 5A | |
| Initial Calibration Verification Check | Prepared from second source; analyze after each ICAL Percent recovery limits = 70-130% | Method ⁽³⁾ | J (pos) %R > UCL J (pos)/UJ (ND) %R < LCL | 5A (H,L) ⁴ | QAPP may have overriding accuracy limits. |

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
 (Based on NFG 1999 & 2008 and SW-846 Method 8270D)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|---|--|-----------------------|--|
| Instrument Performance (continued) | | | | | |
| Continuing Calibration Sensitivity | RRF \geq 0.05 except: RRF \geq 0.01 poor responders * | NFG ⁽¹⁾ Method ⁽³⁾ | Use PJ to qualify J (pos)/UJ (ND) | 5B | see ICAL RRF guidance |
| Continuing Calibration Stability | Prior to sample analysis and every 12 hours %D \leq 25% except: %D \leq 40.0% poor responders * | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) - %D > control limit (high bias) J (pos)/UJ (ND) - %D < -control limit (low bias) | 5B (H,L) ⁴ | |
| Blank Contamination | | | | | |
| Method Blank (MB) | MB: One per matrix per batch of (of \leq 20 samples) No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U(pos) if result is < 5X or 10X action level | 7 | 10X action level applies to phthalates only. 5X for all other target analytes Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review FB , qualify as needed Note: Actions as per 1999 NFG |
| | No TICs present | | R (pos) TICs using 10X rule | 7 | |
| Field Blank (FB) | No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U (pos) if result is < 5X or 10X action level | 6 | |
| Precision and Accuracy | | | | | |
| LCS/LCSD (recovery) | One per matrix per batch (of \leq 20 samples) LCSD not required by NFG or method Use method acceptance criteria/laboratory limits | Method ⁽³⁾ | J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND)%R < 10% | 10 (H,L) ⁴ | No action if only one spike %R is outside criteria when LCSD is analyzed, unless one recovery is <10%. QAPP may have overriding accuracy limits. Qualify all associated samples. |
| LCS/LCSD (RPD) | If LCSD analyzed RPD < lab limits | Method ⁽³⁾ | J (pos) | 9 | Qualify all associated samples. QAPP may have overriding precision limits. |

DATA VALIDATION CRITERIA

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
 (Based on NFG 1999 & 2008 and SW-846 Method 8270D)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|---|---|-----------------------|--|
| Precision and Accuracy (continued) | | | | | |
| Reference Material (RM, SRM, or CRM) | Result $\pm 20\%$ of the 95% confidence interval of the true value for analytes | EcoChem standard policy | J (pos)/UJ (ND) if < LCL J (pos) if > UCL | 12 (H,L) ⁴ | QAPP may have overriding accuracy limits. Some manufacturers have different RM control limits |
| MS/MSD (recovery) | One per matrix per batch (of ≤ 20 samples) Use method acceptance criteria/laboratory limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) %R > UCL J (pos)/UJ (ND) if both %R < LCL J (pos)/R (ND) if both %R < 10% J (pos)/UJ (ND) if one > UCL & one < LCL, with no bias | 8 (H,L) ⁴ | No action if only one spike %R is outside criteria. No action if parent concentration is >4x the amount spiked. Qualify parent sample only. |
| MS/MSD (RPD) | One per matrix per batch (of ≤ 20 samples) Use method acceptance criteria/laboratory limits | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) in parent sample if RPD > CL | 9 | Qualify parent sample only |
| Surrogates | Minimum of 3 acid & 3 base/neutral (B/N) compounds added to all samples Within method control limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND) if %R < 10% | 13 (H,L) ⁴ | Qualify all compounds in associated fraction. Do not qualify if only 1 acid and/or 1 B/N surrogate is out, unless <10%. If 1 surrogate outlier < 10% then J (pos)/R (ND) |
| Internal Standards | Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if > 200% J (pos)/UJ (ND) if < 50% J (pos)/R (ND) if < 25% if RT >30 seconds use PJ | 19 | Qualify compounds quantified using particular internal standard |
| Field Duplicates | Solids: RPD < 50% OR difference < 2X RL (for results < 5X RL) Aqueous: RPD < 35% OR difference < 1X RL (for results < 5X RL) | EcoChem standard policy | J (pos)/UJ (ND) Qualify only parent and field duplicate samples | 9 | Use project limits if specified |

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8270D)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|---|--|-------------|--|
| Compound Identification and Quantitation and Calculation | | | | | |
| Retention times and relative ion intensities | RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample | NFG ⁽¹⁾ Method ⁽³⁾ | U (pos) if identification criteria not met | 25 | |
| TICs | Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification | NFG ⁽¹⁾ Method ⁽³⁾ | NJ the TIC unless: R (pos) common laboratory contaminants | 4 | |
| Calibration Range | Results greater than highest calibration standard | EcoChem standard policy | Qualify J (pos) | 20 | If result from dilution analysis is not reported. |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 EcoChem Policy for Rejection/Selection Process for Multiple Results |

¹ National Functional Guidelines for Organic Data Review, June, 2008

(pos): Positive Result(s)

² National Functional Guidelines for Organic Data Review, October, 1999

(ND): Non-detects

³ Method SW846 8270D Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS), Revision 4, February 2007.

⁴ NFG 2013 suggests using "+ / -" to indicate bias; EcoChem has chosen "H" = high bias indicated; "L" = low bias indicated.

* "Poor responder" compounds: acetophenone, atrazine, benzaldehyde, 1,1'-biphenyl, bis(2-ethylhexyl)phthalate, butylbenzylphthalate, caprolactam, carbazole, 4-chloroaniline, diethylphthalate, di-n-butylphthalate, 3-3'-dichlorobenzidine, dimethylphthalate, 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, di-n-octylphthalate, hexachlorobutadiene, hexachlorocyclopentadiene, 2-nitroaniline, 3-nitroaniline, 4-nitroaniline, 4-nitrophenol, N-nitrosodiphenylamine, 2,2'-oxybis-(1-chloropropane), 1,2,4,5-tetrachlorobenzene use a 0.010 RRF criterion.

**EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Gasoline Range
 (Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Gx,
 June 1997, Wa DOE & Oregon DEQ)**

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|--|-------------|-------------------------|
| Sample Handling | | | | |
| Cooler Temperature & Preservation | 4°C±2°C Water: HCl to pH < 2 | J(+)/UJ(-) if greater than 6°C | 1 | |
| Holding Time | Waters: 14 days preserved 7 days unpreserved Solids: 14 Days | J(+)/UJ(-) if hold times exceeded J(+)/R(-) if exceeded > 3X | 1 | Professional Judgement |
| Instrument Performance | | | | |
| Initial Calibration | 5 calibration points (All within 15% of true value) Linear Regression: $r^2 \geq 0.990$ If used, RSD of response factors $\leq 20\%$ | Narrate if fewer than 5 calibration levels or if %R > 15% J(+)/UJ(-) if $r^2 < 0.990$ J(+)/UJ(-) if %RSD > 20% | 5A | |
| Mid-range Calibration Check Std. | Analyzed before and after each analysis shift & every 20 samples. Recovery range 80% to 120% | Narrate if frequency not met. J(+)/UJ(-) if %R < 80% J(+) if %R > 120% | 5B | |
| Blank Contamination | | | | |
| Method Blank | At least one per batch (≤ 10 samples) No results > RL | U (at the RL) if sample result is < RL & < 5X blank result. | 7 | |
| | | U (at reported sample value) if sample result is \geq RL and < 5X blank result | 7 | |
| Trip Blank (if required by project) | No results > RL | Action is same as method blank for positive results remaining in trip blank after method blank qualifiers are assigned. | 18 | |
| Field Blanks (if required by project) | No results > RL | Action is same as method blank for positive results remaining in field blank after method and trip blank qualifiers are assigned. | 6 | |

**EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Gasoline Range
 (Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Gx,
 June 1997, Wa DOE & Oregon DEQ)**

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|-------------|---|
| Precision and Accuracy | | | | |
| MS samples (accuracy) (if required by project) | %R within lab control limits | Qualify parent only, unless other QC indicates systematic problems. J(+) if both %R > upper control limit (UCL) J(+)/UJ(-) if both %R < lower control limit (LCL) No action if parent conc. >5X the amount spiked. | 8 | Use Professional Judgement if only one %R outlier |
| Precision: MS/MSD or LCS/LCSD or sample/dup | At least one set per batch (≤10 samples) RPD ≤ lab control limit | J(+) if RPD > lab control limits | 9 | |
| LCS (not required by method) | %R within lab control limits | J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R < 10% | 10 | Professional Judgement |
| Surrogates | Bromofluorobenzene and/or 1,4-difluorobenzene added to all samples (inc. QC samples). %R = 50-150% | J(+)/UJ(-) if %R < LCL J(+) if %R >UCL J(+)/R(-) if any %R < 10% No action if 2 or more surrogates are used, and only one is outside control limits. | 13 | Professional Judgement |
| Pattern Identification | Compare sample chromatogram to standard chromatogram to ensure range and pattern are reasonable match. Laboratory may flag results which have poor match. | J(+) | 2 | |
| Field Duplicates | Use project control limits, if stated in QAPP EcoChem default: water: RPD < 35% solids: RPD < 50% | Narrate outliers If required by project, qualify with J(+)/UJ(-) | 9 | |
| Compound ID and Calculation | | | | |
| Two analyses for one sample (e.g., dilution) | Report only one result per analyte | "DNR" (or client requested qualifier) all results that should not be reported. | 11 | See EcoChem TM-04 |

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range
(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx,
June 1997, Wa DOE & Oregon DEQ)

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|--|-------------|-------------------------|
| Sample Handling | | | | |
| Cooler Temperature & Preservation | 4°C±2°C Water: HCl to pH < 2 | J(+)/UJ(-) if greater than 6 deg. C | 1 | |
| Holding Time | Ext. Waters: 14 days preserved 7 days unpreserved Ext. Solids: 14 Days Analysis: 40 days from extraction | J(+)/UJ(-) if hold times exceeded J(+)/R(-) if exceeded > 3X | 1 | Professional Judgement |
| Instrument Performance | | | | |
| Initial Calibration | 5 calibration points (All within 15% of true value) Linear Regression: $r^2 \geq 0.990$ If used, RSD of response factors $\leq 20\%$ | Narrate if fewer than 5 calibration levels or if %R > 15% J(+)/UJ(-) if $r^2 < 0.990$ J(+)/UJ(-) if %RSD > 20% | 5A | |
| Mid-range Calibration Check Std. | Analyzed before and after each analysis shift & every 20 samples. Recovery range 85% to 115% | Narrate if frequency not met. J(+)/UJ(-) if %R < 85% J(+) if %R > 115% | 5B | |
| Blank Contamination | | | | |
| Method Blank | At least one per batch (≤ 20 samples) No results > RL | U (at the RL) if sample result is < RL & < 5X blank result. | 7 | |
| | | U (at reported sample value) if sample result is \geq RL and < 5X blank result | 7 | |
| Field Blanks (if required by project) | No results > RL | Action is same as method blank for positive results remaining in the field blank after method blank qualifiers are assigned. | 6 | |

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range
 (Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx,
 June 1997, Wa DOE & Oregon DEQ)

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|-------------|---|
| Precision and Accuracy | | | | |
| MS samples (accuracy) (if required by project) | %R within lab control limits | Qualify parent only, unless other QC indicates systematic problems. J(+) if both %R > upper control limit (UCL) J(+)/UJ(-) if both %R < lower control limit (LCL) No action if parent conc. >5X the amount spiked. | 8 | Use Professional Judgement if only one %R outlier |
| Precision: MS/MSD or LCS/LCSD or sample/dup | At least one set per batch (≤10 samples) RPD ≤ lab control limit | J(+) if RPD > lab control limits | 9 | |
| LCS (not required by method) | %R within lab control limits | J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R < 10% | 10 | Professional Judgement |
| Surrogates | 2-fluorobiphenyl, p-terphenyl, o-terphenyl, and/or pentacosane added to all samples (inc. QC samples). %R = 50-150% | J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R < 10% No action if 2 or more surrogates are used, and only one is outside control limits. | 13 | Professional Judgement |
| Pattern Identification | Compare sample chromatogram to standard chromatogram to ensure range and pattern are reasonable match. Laboratory may flag results which have poor match. | J(+) | 2 | |
| Field Duplicates | Use project control limits, if stated in QAPP EcoChem default: water: RPD < 35% solids: RPD < 50% | Narrate (Use Professional Judgement to qualify) | 9 | |

**EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range
 (Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx,
 June 1997, Wa DOE & Oregon DEQ)**

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|------------------------------------|--|-------------|-------------------------|
| Compound ID and Calculation | | | | |
| Two analyses for one sample (dilution) | Report only one result per analyte | "DNR" (or client requested qualifier) all results that should not be reported. | 11 | See EcoChem TM-04 |

Metals by ICP-AES
 (Based on Inorganic NFG 2010 and SW-846 6010C)

| QC Element | EcoChem Acceptance Criteria | Source of Criteria | EcoChem Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|--|---|-----------------------|--|
| Sample Handling | | | | | |
| Cooler / Storage Temperature Preservation | Solid: Cooler temperature 4°C±2°C Aqueous: Nitric Acid to pH < 2 Dissolved Metals: 0.45 µm filter, preserve to pH < 2 after filtration | NFG ⁽¹⁾ Method ⁽²⁾ | Cooler Temps: If required by project J (pos)/UJ (ND) if greater than 6° C Aqueous: J (pos)/UJ (ND) if pH > 2 | 1 | Use PJ to qualify for temperature outlier. Current SW846 criterion is ≤ 6° C (4) No quals for pH if samples preserved by lab upon receipt and within 1 day of collection. |
| Holding Time | All matrices: 180 days from date sampled Frozen soils, sediments, tissues (-20°C) - HT extended to 1 year | NFG ⁽¹⁾ Method ⁽²⁾ EcoChem standard policy | J (pos)/UJ (ND) if holding time exceeded | 1 | |
| Instrument Performance | | | | | |
| Initial Calibration (ICAL) | Based on instrument requirements, blank + 1 standard minimum requirement for calibration If more than 1 standard used, r ≥ 0.995 | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if r < 0.995 | 5A | |
| Initial Calibration Verification (ICV) | Independent source analyzed immediately after calibration %R within ± 10% of true value | NFG ⁽¹⁾ Method ⁽²⁾ | R (pos/ND) if %R < 75% J (pos)/UJ (ND) if %R 75% - 89% J (pos) if %R > 111% | 5A (H,L) ³ | Qualify all samples in run |
| Reporting Limit (RL) Standard Low Level ICV/CCV | concentration at RL %R = 70%-130% | Method ⁽²⁾ | J (pos) < 2x RL / R (ND) if %R < 50% J (pos) < 2x RL / UJ (ND) if %R 50 - 69% J (pos) < 2x RL if %R > 130% | 5A (H,L) ³ | Qualify all samples in run |
| Continuing Calibration Verification (CCV) | Immediately following ICV/ICB, then every two hours or ten samples, and at end of run. %R within ± 10% of true value | NFG ⁽¹⁾ Method ⁽²⁾ | R (pos/ND) if %R < 75% J (pos)/UJ (ND) if %R 75% - 89% J (pos) if %R > 111% | 5B (H,L) ³ | Qualify samples bracketed by CCV outliers |
| Interference Check Samples (ICSA / ICSAB) | ICSAB %R 80% - 120% for all spiked elements ICSA < MDL for all unspiked elements | NFG ⁽¹⁾ Method ⁽²⁾ | For samples with Al, Ca, Fe, Mg > ICS levels: ICSAB: J(pos)/R (ND) if %R < 50% J (pos)/UJ (ND) if %R = 50% - 79% J (pos) if %R > 120% ICSA: J (pos) < 2x ICSA/UJ (ND) for ICSA < Neg MDL J (pos) < 2x ICSA for ICSA > MDL | 17 (H,L) ³ | Use PJ and inter-element correction factors to evaluate ICSA to determine if bias is present. Refer to TM-09 for additional information. |

Metals by ICP-AES
 (Based on Inorganic NFG 2010 and SW-846 6010C)

| QC Element | EcoChem Acceptance Criteria | Source of Criteria | EcoChem Action for Non-Conformance | Reason Code | Discussion and Comments |
|-------------------------------|---|---|--|--|---|
| Blank Contamination | | | | | |
| Method Blank (MB) | One per matrix per batch of (of ≤ 20 samples) Blank conc < MDL | NFG ⁽¹⁾ Method ⁽²⁾ | U (pos) if result is < 5X method blank concentration | 7 | Refer to TM-02 for additional information. Blank Evaluation based on NFG 1994 |
| Instrument Blanks (ICB/CCB) | After each ICV & CCV blank concentration < MDL | NFG ⁽¹⁾ Method ⁽²⁾ | Action level is 5x absolute value of blank conc. For positive blanks: U (pos) results < action level For negative blanks: J (pos)/UJ (ND) results < action level | Pos Blanks: 7 Neg Blanks: 7L ³ | Use blanks bracketing samples for Qualification Refer to TM-02 for additional information. Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review IB, qualify as needed #3 - Review FB, qualify as needed |
| Field Blank (FB) | Blank conc < MDL | EcoChem standard policy | U (pos) if result is < 5x action level, as per analyte. | 6 | Qualify in associated field samples only. Refer to TM-02 for additional information. |
| Precision and Accuracy | | | | | |
| LCS (recovery) | One per matrix per batch (of ≤ 20 samples); LCSD not required %R between 80-120% | Method ⁽²⁾ | J (pos)/R (ND) if %R < 50% J (pos)/UJ (ND) if %R 50% - 79% J (pos) if %R > 120% | 10 (H,L) ³ | Qualify all samples in batch QAPP may have overriding accuracy limits. NFG Limits 70% -130% (50% - 150% Ab, Ag) |
| LCS/LCSD (RPD) | LCSD not required, if analyzed: RPD ≤ 20% | Method ⁽²⁾ | J (pos)/UJ (ND) if RPD > 20% | 9 | Qualify all samples in batch QAPP may have overriding precision limits. |
| MS/MSD (recovery) | One per matrix per batch (of ≤ 20 samples); MSD not required %R between 75-125% | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) if %R > 125% J (pos)/UJ (ND) if %R < 75% J (pos)/R (ND) if %R < 30%, unless post digestion spike analyzed, J (pos)/UJ (ND) if post digestion spike %R OK | 8 (H,L) ³ | No action if only one spike %R is outside criteria. NA if parent concentration >4x the amount spiked. Qualify all samples in batch. QAPP may have overriding accuracy limits. |

DATA VALIDATION CRITERIA

Metals by ICP-AES
 (Based on Inorganic NFG 2010 and SW-846 6010C)

| QC Element | EcoChem Acceptance Criteria | Source of Criteria | EcoChem Action for Non-Conformance | Reason Code | Discussion and Comments |
|--------------------------------------|--|---|---|-----------------------|---|
| Precision and Accuracy con't | | | | | |
| Post Digestion Spikes | If MS is outside 75-125%, post-spike should be analyzed %R 80%-120% (method); 75%-125% (NFG) | NFG ⁽¹⁾ Method ⁽²⁾ | Only used to support MS qualification decisions | NA | No qualifiers assigned based solely on this element. |
| MS/MSD (RPD) | MSD not required, if analyzed: RPD ≤ 20% | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if RPD > 20% | 9 | QAPP may have overriding precision limits. |
| Laboratory Duplicate | One per matrix per batch (of ≤ 20 samples) RPD ≤ 20% for results ≥ 5x RL Solids: difference < 2X RL for results < 5X RL Aqueous: difference < 1X RL for results < 5X RL | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if RPD > 20% or if difference > control limit | 9 | Qualify all samples in batch. QAPP may have overriding precision limits. |
| Reference Material (RM, SRM, or CRM) | Result ±20% of the 95% confidence interval of the true value for analytes | EcoChem standard policy | J (pos)/UJ (ND) if < LCL J (pos) if > UCL | 12 (H,L) ³ | QAPP may have overriding accuracy limits. Some manufacturers may have different RM control limits |
| Serial Dilution | Analyze one sample per matrix at a 5x dilution %D <10% for original sample conc. > 50x MDL | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if %D > 10% and native sample concentration > 50x MDL | 16 | Qualify all samples in batch. |
| Field Duplicate | Solids: RPD <50% (for results ≥ 5x RL) OR difference < 2X RL (for results < 5X RL) Aqueous: RPD <35% (for results ≥ 5x RL) OR difference < 1X RL (for results < 5X RL) | EcoChem standard policy | Qualify only parent and field duplicate samples J (pos)/UJ (ND) | 9 | QAPP may have overriding precision limits. Client/QAPP may not require qualification based on field precision. |

Metals by ICP-AES
(Based on Inorganic NFG 2010 and SW-846 6010C)

| QC Element | EcoChem Acceptance Criteria | Source of Criteria | EcoChem Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|------------------------------------|---|--|-------------|--|
| Compound Quantitation | | | | | |
| Total and Dissolved Comparison | Total > Dissolved | EcoChem standard policy | J (pos)/UJ (ND) if Dissolved > Total and results fall outside of standard duplicate precision criteria | 14 | |
| Calibration Range | Results < instrument linear range | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) if result exceeds linear range and sample was not diluted | 20 | |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 EcoChem Policy for Rejection/Selection Process for Multiple Results |

¹ National Functional Guidelines for Inorganic Superfund Data Review, January 2010.

² Method SW846 6010C Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP-AES), Revision 3, February 2007.

³ "H" = high bias indicated; "L" = low bias indicated

⁴ SW846, Chapter 3, Inorganic Analytes

(pos): Positive Result

(ND): Not Detected



APPENDIX B

QUALIFIED DATA SUMMARY TABLE

**Qualified Data Summary Table
Newman's Chevron**

| SAMPLE ID | LAB ID | METHOD | ANALYTE | RESULT | UNITS | LAB FLAG | DV QUAL | DV REASON |
|--------------------|-------------|----------|-----------------------|--------|-------|----------|---------|-----------|
| SVP-7-S-6.5-211101 | 410-61781-1 | NWTPH-Dx | Diesel Range Organics | 5.2 | mg/kg | UH | DNR | 11 |
| SVP-7-S-6.5-211101 | 410-61781-1 | NWTPH-Dx | Motor Oil | 13 | mg/kg | UH | DNR | 11 |



**DATA VALIDATION REPORT
NEWMAN'S CHEVRON – SOIL VAPOR**

Prepared for:

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Prepared by:

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EcoChem Project: C4159-8

March 25, 2022

Approved for Release:

A handwritten signature in black ink, appearing to read "Christine Ransom". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Christine Ransom
Senior Project Chemist
EcoChem, Inc.

PROJECT NARRATIVE

Basis for the Data Validation

This report summarizes the results of summary validation (EPA Stage 2B) performed on soil vapor and associated quality control sample data for the Newman's Chevron project. A cross-reference of field and laboratory IDs is provided in the **Sample Index**.

The analyses were performed by Eurofins Air Toxics, Folsom, California. The analytical method and EcoChem project chemists are noted below:

| ANALYSIS | METHOD | PRIMARY REVIEW | SECONDARY REVIEW |
|-------------|--------|----------------|------------------|
| Naphthalene | TO-17 | E. Clayton | C. Ransom |

The data were reviewed using guidance and quality control criteria documented in the analytical methods; *Final Remedial Investigation Work Plan Newman's Chevron* (Leidos, July 2018); and *National Functional Guidelines for Organic Data Review* (USEPA 2008).

EcoChem's goal in assigning data assessment qualifiers is to assist in proper data interpretation. If values are estimated (J or UJ), data may be used for site evaluation and risk assessment purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. Data that have been rejected are flagged with (R). Rejected data should not be used for any purpose. If values have no data qualifier assigned, then the data meet the data quality objectives as stated in the documents and methods referenced above. No data were qualified.

Validation criteria are included as **Appendix A**. Data Validation Worksheets and project associated communications will be kept on file at EcoChem, Inc. A verified laboratory electronic data deliverable (EDD) is also submitted.

Sample Index
Newman's Chevron- Soil Vapor

| SDG | Sample ID | Lab ID | TO17 |
|---------|--------------|-------------|------|
| 2202501 | SVP-7-021822 | 2202501-01A | ✓ |
| 2202501 | FB-1-021822 | 2202501-02A | ✓ |

DATA VALIDATION REPORT
Newman's Chevron
Naphthalene by EPA TO-17 GCMS

This report documents the review of analytical data from the analysis of one soil vapor sample and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Eurofins Air Toxics, Folsom, California. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|---------|-----------------------------|------------------|
| 2202501 | 1 Soil Vapor, 1 Field Blank | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|---|
| ✓ | Sample Receipt, Preservation, and Holding Times | ✓ | Laboratory Control Samples (LCS/LCSD) |
| ✓ | GC/MS Instrument Performance (Tune) | 1 | Matrix Spike/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Initial Calibration (ICAL) | ✓ | Internal Standards |
| ✓ | Continuing Calibration (CCAL) | 1 | Field Duplicates |
| ✓ | Laboratory Blanks | ✓ | Target Analyte List |
| 1 | Field Blanks | ✓ | Reporting Limits |
| ✓ | Surrogate Compounds | ✓ | Reported Results |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.
1 Quality control outliers are discussed below, but no data were qualified.
2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Field Blanks

On field blank, FB-1-021822, was submitted. Naphthalene was not detected in this blank.

Matrix Spike/Matrix Spike Duplicates (MS/MSD)

Matrix Spike/matrix spike duplicate analyses were not performed. Laboratory precision and accuracy were evaluated using the laboratory control sample/laboratory control sample duplicate (LCs/LCSD) results.

Field Duplicates

No field duplicates were submitted.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate and LCS/LCSD recovery values and precision was acceptable as demonstrated by the LCS/LCSD relative percent difference value.

No data were qualified for any reason. All data, as reported, are acceptable for use.



APPENDIX A

DATA QUALIFIER DEFINITIONS REASON CODES AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES **Based on National Functional Guidelines**

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

| | |
|----|---|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. |
| NJ | The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents the approximate concentration. |
| UJ | The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified. |

The following is an EcoChem qualifier that may also be assigned during the data review process:

| | |
|-----|---|
| DNR | Do not report; a more appropriate result is reported from another analysis or dilution. |
|-----|---|

DATA QUALIFIER REASON CODES

| Group | Code | Reason for Qualification |
|---------------------------------|------|---|
| Sample Handling | 1 | Improper Sample Handling or Sample Preservation (i.e., headspace, cooler temperature, pH, summa canister pressure); Exceeded Holding Times |
| Instrument Performance | 24 | Instrument Performance (i.e., tune, resolution, retention time window, endrin breakdown, lock-mass) |
| | 5A | Initial Calibration (RF, %RSD, r^2) |
| | 5B | Calibration Verification (CCV, CCAL; RF, %D, %R) Use bias flags (H,L) ¹ where appropriate |
| | 5C | Initial Calibration Verification (ICV %D, %R) Use bias flags (H,L) ¹ where appropriate |
| Blank Contamination | 6 | Field Blank Contamination (Equipment Rinsate, Trip Blank, etc.) |
| | 7 | Lab Blank Contamination (i.e., method blank, instrument blank, etc.) Use low bias flag (L) ¹ for negative instrument blanks |
| Precision and Accuracy | 8 | Matrix Spike (MS and/or MSD) Recoveries Use bias flags (H,L) ¹ where appropriate |
| | 9 | Precision (all replicates: LCS/LCSD, MS/MSD, Lab Replicate, Field Replicate) |
| | 10 | Laboratory Control Sample Recoveries (a.k.a. Blank Spikes) Use bias flags (H,L) ¹ where appropriate |
| | 12 | Reference Material Use bias flags (H,L) ¹ where appropriate |
| | 13 | Surrogate Spike Recoveries (a.k.a. labeled compounds, recovery standards) Use bias flags (H,L) ¹ where appropriate |
| Interferences | 16 | ICP/ICP-MS Serial Dilution Percent Difference |
| | 17 | ICP/ICP-MS Interference Check Standard Recovery Use bias flags (H,L) ¹ where appropriate |
| | 19 | Internal Standard Performance (i.e., area, retention time, recovery) |
| | 22 | Elevated Detection Limit due to Interference (i.e., chemical and/or matrix) |
| | 23 | Bias from Matrix Interference (i.e. diphenyl ether, PCB/pesticides) |
| Identification and Quantitation | 2 | Chromatographic pattern in sample does not match pattern of calibration standard |
| | 3 | 2 nd column confirmation (RPD or %D) |
| | 4 | Tentatively Identified Compound (TIC) (associated with NJ only) |
| | 20 | Calibration Range or Linear Range Exceeded |
| | 25 | Compound Identification (i.e., ion ratio, retention time, relative abundance, etc.) |
| Miscellaneous | 11 | A more appropriate result is reported (multiple reported analyses i.e., dilutions, re-extractions, etc. Associated with "R" and "DNR" only) |
| | 14 | Other (See DV report for details) |
| | 26 | Method QC information not provided |

¹H = high bias indicated

L = low bias indicated

Polycyclic Aromatic Hydrocarbons (PAH) by GCMS, Method TO17

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|---|-----------------------|--|
| Sample Handling | | | | | |
| Cooler/Storage Temperature Preservation | Air cartridge - Cool to $\leq 6^{\circ}\text{C}$ | Method ^{1,2} | J(pos)/UJ(ND) if > 6 deg. C (EcoChem PJ) | 1 | |
| Holding Time | 30 days from collection to analysis | Method ^{1,2} | J(pos)/UJ(ND) if HT exceeded J(pos)/R(ND) if gross exceedance($> 2\text{X HT}$) | 1 | Gross exceedance = $> 2\text{X HT}$, as per 1999 NFG |
| Instrument Performance | | | | | |
| Tuning | DFTPP Beginning of each 12 hour period Use method acceptance criteria | Method ^{1,2} NFG ³ | R(pos/ND) all analytes in all samples associated with the tune | 24 | 12 hour clock begins with a new DFTPP tune or if the closing CCV within criteria. |
| Initial Calibration (Minimum 5 stds.) Sensitivity | TAL Compounds: RRF ≥ 0.050 | QSM ⁽¹⁾ QAPP ⁽³⁾ | J(pos)/R(ND) if RRF/RF is less than criterion | 5A | |
| Initial Calibration (Minimum 5 stds.) Stability | CCC Compounds: %RSD $\leq 30\%$ and one option as follows: RSD for each analyte $\leq 20\%$; OR Linear $r \geq 0.995$; OR Non-linear $r^2 \geq 0.99$ (6 points must be used) CCC Compounds: Acenaphthene, Fluoranthene, Benzo(a)pyrene | Method ^{1,2} NFG ³ | J(pos) if %RSD $> 30\%$ (for CCC Compounds) OR $> 20\%$ (all other compounds) OR r^2 -value < 0.990 OR $r < 0.995$ | 5A | |
| Initial Calibration Verification (ICV) | Standard from independent source Analyzed immediately after ICAL %R within $\pm 30\%$ of true value | Method ^{1,2} NFG ³ | If $> +/ - 80\%$: J(pos)/R(ND) If -79% to -31% : J(pos) - high bias If 31% to 79% : J(pos)/UJ(ND) - low bias | 5A (H,L) ⁴ | |
| Continuing Calibration (Prior to each 12 hr. shift) Sensitivity | TAL Compounds: RRF ≥ 0.050 | QSM ⁽¹⁾ QAPP ⁽³⁾ | J(pos)/R(ND) if RRF/RF is less than criterion | 5B | |
| Continuing Calibration (Prior to each 12 hr. shift) Stability | %Drift $\leq 30\%$ | Method ^{1,2} NFG ³ | If $> +/ - 80\%$: J(pos)/R(ND) If -79% to -31% : J(pos) - high bias If 31% to 79% : J(pos)/UJ(ND) - low bias | 5B (H,L) ⁴ | QSM states that analysis cannot proceed if any CCC fails acceptance criterion. |
| Blank Contamination | | | | | |
| Method Blank (MB) | MB: One per matrix per batch of (of ≤ 20 samples) No detected compounds $> \text{RL}$ | Method ^{1,2} NFG ³ | U(pos) if result is $< 5\text{X}$ or 10X action level, as per analyte. | 7 | 10X action level applies to bis(2-ethylhexyl) phthalate only. 5X for all other target analytes Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review FB, qualify as needed |
| | No TICs present | | R(pos) TICs using 10X rule | | |
| Field Blank (FB) | FB: frequency as per QAPP No detected compounds $> \text{RL}$ | Method ^{1,2} NFG ³ | U(pos) if result is $< 5\text{X}$ or 10X action level, as per analyte. | 6 | |

Polycyclic Aromatic Hydrocarbons (PAH) by GCMS, Method TO17

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|---|--|-----------------------|---|
| Precision and Accuracy | | | | | |
| LCS | One per lab batch (of ≤ 20 samples) 70% -130% | NFG ³ | Qualify all associated samples J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if both %R < LCL - low bias J(pos)/R(ND) if both %R < 10% - very low bias J(pos)/UJ(ND) if one > UCL & one < LCL, with no bias PJ if only one %R outlier | 10 (H,L) ⁴ | No action if only one spike %R is outside criteria, when LCSD is analyzed. Qualify all associated samples. |
| LCS/LCSD (RPD) | One set per matrix per batch (of ≤ 20 samples) RPD ≤ 30% | NFG ³ | J(pos) assoc. compd. in all samples | 9 | Qualify all associated samples. |
| Surrogates | Minimum of 3 acid & 3 base/neutral (B/N) compounds added to all samples Within method control limits | Method ^{1,2} NFG ³ | Note: Do not qualify if only 1 acid and/or 1 B/N surrogate is out, unless <10%. *** J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if %R < LCL - low bias J(pos)/R(ND) if %R < 10% - very low bias | 13 (H,L) ⁴ | *** If 1 surrogate outlier < 10% then J(pos)/R(ND) NFG specifies surrogates and CL, and to J(pos)/R(ND) results <20%, EcoChem PJ is J(pos)/R(ND) <10%. |
| Internal Standards | Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT | Method ^{1,2} NFG ³ | J(pos) if > 200% J(pos)/UJ(ND) if < 50% J(pos)/R(ND) if < 25% RT>30 seconds, narrate and notify PM | 19 | NFG specifies surrogates and CL, and to J(pos)/R(ND) results <20%, EcoChem PJ is J(pos)/R(ND) <10%. |
| Field Duplicates | RPD ≤30% OR difference < 1X RL (for results < 5X RL) | EcoChem standard policy | Narrate and qualify if required by project (EcoChem PJ) Qualify only field duplicate samples J(pos)/UJ(ND) | 9 | |
| Compound ID and Calculation | | | | | |
| Quantitation/ Identification | RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample | Method ^{1,2} NFG ³ | See Technical Director if outliers are found | 14 25 (false pos) | |
| TICs | Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification | Method ^{1,2} NFG ³ | NJ the TIC unless: R(pos) common laboratory contaminants See Technical Director for ID issues | 4 | Common laboratory contaminants: aldol condensation products, solvent preservatives, and reagent contaminants |
| Calibration Range | Results exceed the upper calibration range | EcoChem standard policy | Qualify J(pos) | 20 | If result from dilution analysis is not reported. |
| Calculation Check | Check 10% of field & QC sample results | EcoChem standard policy | Contact laboratory for resolution and/or corrective action | na | Full data validation only. |
| Electronic Data Deliverable (EDD) | | | | | |
| Verification of EDD to hardcopy data | EcoChem verify @ 10% unless problems noted; then increase level up to 100% for next several packages. | EcoChem standard policy | Depending on scope of problem, correct at EcoChem (minor issues) to resubmittal by laboratory (major issues). | na | EcoChem Project Manager and/or Database Administrator will work with lab to provide long-term corrective action. |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 Rev. 1 EcoChem Policy for Rejection/Selection Process for Multiple Results |

(pos): Positive Result(s)
(ND): Non-detects¹ Compendium Method TO-17, Determination of Volatile Organic Compounds (VOCs) in Ambient Air Using Active Sampling Onto Sorbent Tubes, Second Edition, January 1999. EPA/625/R-96/010b² Air Toxics/Eurofin SOP: Analysis of Volatile and Semivolatile Organic Compounds in Vapor by Thermal Desorption GC/MS Full Scan Using Modified EPA Method TO-17 (SOP 109)³ National Functional Guidelines for Organic Data Review, June, 2008⁴ "H" = high bias indicated; "L" = low bias indicated



DATA VALIDATION REPORT NEWMAN'S CHEVRON

Prepared for:

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EcoChem Project: C4159-9

December 22, 2022

Approved for Release:

A handwritten signature in black ink, appearing to read "Christine Ransom". The signature is fluid and cursive, with a long horizontal stroke extending to the right.

Christine Ransom
Senior Project Chemist
EcoChem, Inc.

PROJECT NARRATIVE

Basis for the Data Validation

This report summarizes the results of summary validation (EPA Stage 2B) performed on soil vapor, indoor air, outdoor air, crawl space air, soil, and associated quality control sample data for the Newman's Chevron project. A cross-reference of field and laboratory IDs is provided in the **Sample Index**.

The TO-17 analysis was performed by Eurofins Air Toxics, Folsom, California. All other analyses were performed by Eurofins, Lancaster, Pennsylvania. The analytical methods and EcoChem project chemists are listed in the following table:

| ANALYSIS | METHOD | PRIMARY REVIEW | SECONDARY REVIEW |
|-----------------------------|----------|----------------|------------------|
| Naphthalene | TO-17 | E. Clayton | C. Ransom |
| BTEX | 8260D | | |
| SVOC | 8270E | | |
| Gasoline Range Hydrocarbons | NWTPH-Gx | | |
| Diesel Range Hydrocarbons | NWTPH-Dx | | |
| Lead | 6010D | | |

The data were reviewed using guidance and quality control criteria documented in the analytical methods; *Final Remedial Investigation Work Plan Newman's Chevron* (Leidos, July 2018); *Final Remedial Investigation Work Plan Newman's Chevron, Addendum 4* (Leidos, August 2022); *National Functional Guidelines for Organic Data Review* (USEPA 2017, 2020); and *National Functional Guidelines for Inorganic Data Review* (USEPA 2017, 2020).

EcoChem's goal in assigning data assessment qualifiers is to assist in proper data interpretation. If values are estimated (J or UJ), data may be used for site evaluation and risk assessment purposes but reasons for data qualification should be taken into consideration when interpreting sample concentrations. Data that have been rejected are flagged with (R). Rejected data should not be used for any purpose. If values have no data qualifier assigned, then the data meet the data quality objectives as stated in the documents and methods referenced above. No data were qualified.

Validation criteria are included as **Appendix A**. Data Validation Worksheets and project associated communications will be kept on file at EcoChem, Inc. A verified laboratory electronic data deliverable (EDD) is also submitted.

Sample Index
Newman's Chevron

| SDG | Sample ID | Lab ID | TO17 | BETX | SVOC | NWTPH-Gx | NWTPH-Dx | LEAD | TOTAL SOLIDS |
|----------|------------------|-------------|------|------|------|----------|----------|------|--------------|
| 2210220 | OA-1-100622 | 2210220-01A | ✓ | | | | | | |
| 2210220 | OA-2-100622 | 2210220-02A | ✓ | | | | | | |
| 2210220 | OA-3-100622 | 2210220-03A | ✓ | | | | | | |
| 2210220 | IA-1-100622 | 2210220-04A | ✓ | | | | | | |
| 2210220 | IA-2-100622 | 2210220-05A | ✓ | | | | | | |
| 2210220 | IA-3-100622 | 2210220-06A | ✓ | | | | | | |
| 2210220 | CSA-1-100622 | 2210220-07A | ✓ | | | | | | |
| 2210220 | CSA-2-100622 | 2210220-08A | ✓ | | | | | | |
| 2210220 | CSA-B-100622 | 2210220-09A | ✓ | | | | | | |
| 2210220 | FB-1-100622 | 2210220-10A | ✓ | | | | | | |
| 2210220 | SSVP-1-100622 | 2210220-11A | ✓ | | | | | | |
| 2210220 | SSVP-2-100622 | 2210220-12A | ✓ | | | | | | |
| 2210220 | SSVP-3-100622 | 2210220-13A | ✓ | | | | | | |
| 2210220 | SVP-8-100622 | 2210220-14A | ✓ | | | | | | |
| 2210220 | FB-2-100622 | 2210220-15A | ✓ | | | | | | |
| J96601-1 | SVP-8-S-5-220826 | 410-96601-1 | | ✓ | ✓ | ✓ | ✓ | ✓ | ✓ |

DATA VALIDATION REPORT

Newman's Chevron

Naphthalene by EPA TO-17 GCMS

This report documents the review of analytical data from the analysis of soil vapor, indoor air, outdoor air, and crawl space air samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Eurofins Air Toxics, Folsom, California. Refer to the **Sample Index** for a complete list of samples.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|---------|------------------------------|------------------|
| 2210220 | 13 Soil Vapor, 2 Field Blank | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

The Internal Standard (IS) summary form has the control limits for bromochloromethane, but the IS values reported for the samples are for bromofluorobenzene, which is the IS associated with naphthalene. All IS area responses were within the control limits.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|---|
| ✓ | Sample Receipt, Preservation, and Holding Times | ✓ | Laboratory Control Samples (LCS/LCSD) |
| ✓ | GC/MS Instrument Performance (Tune) | 1 | Matrix Spike/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Initial Calibration (ICAL) | ✓ | Internal Standards |
| ✓ | Continuing Calibration (CCAL) | 1 | Field Duplicates |
| ✓ | Laboratory Blanks | ✓ | Target Analyte List |
| 1 | Field Blanks | ✓ | Reporting Limits |
| ✓ | Surrogate Compounds | ✓ | Reported Results |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Field Blanks

Two field blanks, FB-1-100622 and FB-2-100622, were submitted. Naphthalene was not detected in these blanks.

Sample CSA-B-100622 was collected as a field blank and was associated with the crawl space samples. Naphthalene was detected in this sample. A review of the sampling method indicated that this was not a true equipment blank; therefore, no data were qualified based on the result for this blank.

Matrix Spike/Matrix Spike Duplicates

Matrix spikes were not analyzed. Laboratory precision and accuracy were evaluated using the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) and surrogate results.

Field Duplicates

No field duplicates were submitted.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate and LCS/LCSD recovery values and precision was acceptable as demonstrated by the LCS/LCSD relative percent difference value.

No data were qualified for any reason.

All data, as reported, are acceptable for use.

DATA VALIDATION REPORT

Newman's Chevron

Naphthalenes by SW8270E

This report documents the review of analytical data from the analysis of one soil sample and the associated laboratory quality control (QC) samples. The analysis was performed by Eurofins, Lancaster, Pennsylvania. Refer to the **Sample Index** for a cross-reference of sample IDs.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|----------|-------------------|------------------|
| J96601-1 | 1 Soil | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|---|
| ✓ | Sample Receipt, Preservation, and Holding Times | ✓ | Laboratory Control Samples (LCS) |
| ✓ | GC/MS Instrument Performance (Tune) | 1 | Matrix Spike/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Initial Calibration (ICAL) | ✓ | Internal Standards |
| 1 | Continuing Calibration (CCAL) | 1 | Field Duplicates |
| ✓ | Laboratory Blanks | ✓ | Target Analyte List |
| 1 | Field Blanks | ✓ | Reporting Limits |
| ✓ | Surrogate Compounds | ✓ | Reported Results |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Continuing Calibration

For the calibration verification (CCAL) analyzed on 9/12/22 @ 11:03, the retention time for the internal standard Naphthalene-d8 was outside the ± 30 second window established from the initial calibration. Since the internal standard retention time for the sample and QC samples were within the ± 30 second window established from the associated CCAL, data was judged as not impacted. No qualifiers were assigned.

Field Blanks

No field blanks were submitted.

Matrix Spike/Matrix Spike Duplicates

Matrix spikes were not analyzed. Accuracy was evaluated using the laboratory control sample and surrogate recoveries. Laboratory precision could not be evaluated.

Field Duplicates

No field duplicates were submitted.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate and laboratory control sample percent recovery values. Precision could not be evaluated.

No data were qualified for any reason.

All data, as reported, are acceptable for use.

DATA VALIDATION REPORT

Newman's Chevron

Volatile Organic Compounds by SW8260D

This report documents the review of analytical data from the analysis of one soil sample and the associated laboratory quality control (QC) samples. The analysis was performed by Eurofins, Lancaster, Pennsylvania. Refer to the **Sample Index** for a cross-reference of sample IDs.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|----------|-------------------|------------------|
| J96601-1 | 1 Soil | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|---|
| ✓ | Sample Receipt, Preservation, and Holding Times | ✓ | Laboratory Control Samples (LCS/LCSD) |
| ✓ | GC/MS Instrument Performance (Tune) | 1 | Matrix Spike/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Initial Calibration (ICAL) | 1 | Field Duplicates |
| ✓ | Continuing Calibration (CCAL) | ✓ | Internal Standards |
| ✓ | Laboratory Blanks | ✓ | Target Analyte List |
| 1 | Field Blanks | ✓ | Reporting Limits |
| ✓ | Surrogate Compounds | ✓ | Reported Results |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Field Blanks

No field blanks were submitted.

Matrix Spike/Matrix Spike Duplicates

Matrix spikes were not analyzed. Accuracy and precision were evaluated using the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) and surrogate results.

Field Duplicates

No field duplicates were submitted.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate and LCS/LCSD recovery values and precision was acceptable as demonstrated by the LCS/LCSD relative percent difference values.

No data were qualified for any reason.

All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Newman's Chevron
Diesel Range Organics by NWTPH-Dx

This report documents the review of analytical data from the analysis of one soil sample and the associated laboratory quality control (QC) samples. The analysis was performed by Eurofins, Lancaster, Pennsylvania. Refer to the **Sample Index** for a cross reference of sample IDs.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|----------|-------------------|------------------|
| J96601-1 | 1 Soil | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

The original lab report did not contain the initial and continuing calibration information. The lab was contacted and submitted a revised report.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|----------------------------------|
| ✓ | Sample Receipt, Preservation, and Holding Times | ✓ | Laboratory Control Samples (LCS) |
| ✓ | Initial Calibration (ICAL) | 1 | Matrix Spikes (MS) |
| ✓ | Continuing Calibration (CCAL) | ✓ | Laboratory Duplicates |
| ✓ | Laboratory Blanks | 1 | Field Duplicates |
| 1 | Field Blanks | ✓ | Reporting Limits |
| ✓ | Surrogate Compounds | ✓ | Reported Results |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Field Blanks

No field blanks were submitted.

Matrix Spikes

Matrix Spike/matrix spike duplicates were not analyzed. Accuracy was evaluated using the laboratory control sample and surrogate recoveries. Precision could not be assessed.

Field Duplicates

No field duplicates were submitted.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable as demonstrated by the surrogate and laboratory control sample recovery values. Precision could not be assessed.

No data were qualified for any reason.

All data, as reported, are acceptable for use.

DATA VALIDATION REPORT

Newman's Chevron

Gasoline Range Organics by NWTPH-Gx

This report documents the review of analytical data from the analysis of one soil sample and the associated laboratory quality control (QC) samples. The analysis was performed by Eurofins, Lancaster, Pennsylvania. Refer to the **Sample Index** for a cross-reference of sample IDs.

| SDG | NUMBER OF SAMPLES | VALIDATION LEVEL |
|----------|-------------------|------------------|
| J96601-1 | 1 Soil | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

The Result_Parameter_Name field was incorrectly populated as "Diesel Range Organics". It was corrected to "Gasoline Range Organics".

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---------------------------------------|---|---|
| ✓ | Sample Preservation and Holding Times | ✓ | Laboratory Control Samples (LCS/LCSD) |
| ✓ | Initial Calibration (ICAL) | 1 | Matrix Spike/Matrix Spike Duplicates (MS/MSD) |
| ✓ | Continuing Calibration (CCAL) | 1 | Field Duplicates |
| ✓ | Laboratory Blanks | ✓ | Reporting Limits |
| 1 | Field Blanks | ✓ | Reported Results |
| 2 | Surrogate Compounds | | |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Field Blanks

No field blanks were submitted.

Matrix Spike/Matrix Spike Duplicates

Matrix spikes were not analyzed. Precision and accuracy were evaluated using the laboratory control sample/laboratory control sample duplicate (LCS/LCSD) and surrogate results.

Field Duplicates

No field blanks were submitted.

Surrogate Compounds

The recovery value for the surrogate compound a,a,a-Trifluorotoluene in the field sample was greater than the upper control limit of 150%; the sample result was estimated (J-13H).

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. With the exception noted above, accuracy was acceptable, as demonstrated by the surrogate and LCS/LCSD percent recovery values. Precision was also acceptable as demonstrated by the LCS/LCSD relative percent difference value.

The sample result was estimated due to a surrogate recovery outlier.

All data, as reported, are acceptable for use.

DATA VALIDATION REPORT
Newman's Chevron
Lead by SW6010D and Percent Solids

This report documents the review of analytical data from the analysis of one soil sample and the associated laboratory quality control (QC) samples. The analyses were performed by Eurofins, Lancaster, Pennsylvania. Refer to the **Sample Index** for a cross reference of sample IDs.

| SDG | NUMBER OF SAMPLES AND MATRIX | VALIDATION LEVEL |
|----------|------------------------------|------------------|
| J96601-1 | 1 Soil | Stage 2B |

DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

EDD TO HARDCOPY VERIFICATION

All sample IDs and results reported in the electronic data deliverable (EDD) were verified (10% verification) by comparing the EDD to the laboratory data package.

The percent moisture data was not included in the EDD. The data was added during validation.

TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

| | | | |
|---|---|---|----------------------------|
| ✓ | Sample Receipt, Preservation, and Holding Times | 1 | Matrix Spikes |
| ✓ | Initial Calibration | 1 | Laboratory Duplicates |
| ✓ | Calibration Verification | ✓ | Interference Check Samples |
| ✓ | Reporting Limit Standards | 1 | Field Duplicates |
| ✓ | Laboratory Blanks | ✓ | Reporting Limits |
| 1 | Field Blanks | ✓ | Reported Results |
| ✓ | Laboratory Control Samples (LCS) | | |

✓ Stated method quality objectives (MQO) and QC criteria have been met. No outliers are noted or discussed.

1 Quality control outliers are discussed below, but no data were qualified.

2 Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.

Field Blanks

No field blanks were submitted.

Matrix Spikes

Matrix spikes were not analyzed. Accuracy was evaluated using the laboratory control sample (LCS) result.

Laboratory Duplicates

Laboratory duplicates were not analyzed. Laboratory precision could not be evaluated.

Field Duplicates

No field blanks were submitted.

OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical methods. Accuracy was acceptable as demonstrated by the laboratory control sample recovery. Precision could not be evaluated.

No data were qualified for any reason.

All data, as reported, are acceptable for use.



APPENDIX A

DATA QUALIFIER DEFINITIONS REASON CODES AND CRITERIA TABLES

DATA VALIDATION QUALIFIER CODES **Based on National Functional Guidelines**

The following definitions provide brief explanations of the qualifiers assigned to results in the data review process.

| | |
|----|---|
| U | The analyte was analyzed for, but was not detected above the reported sample quantitation limit. |
| J | The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample. |
| NJ | The analysis indicates the presence of an analyte that has been “tentatively identified” and the associated numerical value represents the approximate concentration. |
| UJ | The analyte was not detected above the reported sample quantitation limit. However, the reported quantitation limit is approximate and may or may not represent the actual limit of quantitation necessary to accurately and precisely measure the analyte in the sample. |
| R | The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified. |

The following is an EcoChem qualifier that may also be assigned during the data review process:

| | |
|-----|---|
| DNR | Do not report; a more appropriate result is reported from another analysis or dilution. |
|-----|---|

DATA QUALIFIER REASON CODES

| Group | Code | Reason for Qualification |
|---------------------------------|------|---|
| Sample Handling | 1 | Improper Sample Handling or Sample Preservation (i.e., headspace, cooler temperature, pH, summa canister pressure); Exceeded Holding Times |
| Instrument Performance | 24 | Instrument Performance (i.e., tune, resolution, retention time window, endrin breakdown, lock-mass) |
| | 5A | Initial Calibration (RF, %RSD, r^2) |
| | 5B | Calibration Verification (CCV, CCAL; RF, %D, %R) Use bias flags (H,L) ¹ where appropriate |
| | 5C | Initial Calibration Verification (ICV %D, %R) Use bias flags (H,L) ¹ where appropriate |
| Blank Contamination | 6 | Field Blank Contamination (Equipment Rinsate, Trip Blank, etc.) |
| | 7 | Lab Blank Contamination (i.e., method blank, instrument blank, etc.) Use low bias flag (L) ¹ for negative instrument blanks |
| Precision and Accuracy | 8 | Matrix Spike (MS and/or MSD) Recoveries Use bias flags (H,L) ¹ where appropriate |
| | 9 | Precision (all replicates: LCS/LCSD, MS/MSD, Lab Replicate, Field Replicate) |
| | 10 | Laboratory Control Sample Recoveries (a.k.a. Blank Spikes) Use bias flags (H,L) ¹ where appropriate |
| | 12 | Reference Material Use bias flags (H,L) ¹ where appropriate |
| | 13 | Surrogate Spike Recoveries (a.k.a. labeled compounds, recovery standards) Use bias flags (H,L) ¹ where appropriate |
| Interferences | 16 | ICP/ICP-MS Serial Dilution Percent Difference |
| | 17 | ICP/ICP-MS Interference Check Standard Recovery Use bias flags (H,L) ¹ where appropriate |
| | 19 | Internal Standard Performance (i.e., area, retention time, recovery) |
| | 22 | Elevated Detection Limit due to Interference (i.e., chemical and/or matrix) |
| | 23 | Bias from Matrix Interference (i.e. diphenyl ether, PCB/pesticides) |
| Identification and Quantitation | 2 | Chromatographic pattern in sample does not match pattern of calibration standard |
| | 3 | 2 nd column confirmation (RPD or %D) |
| | 4 | Tentatively Identified Compound (TIC) (associated with NJ only) |
| | 20 | Calibration Range or Linear Range Exceeded |
| | 25 | Compound Identification (i.e., ion ratio, retention time, relative abundance, etc.) |
| Miscellaneous | 11 | A more appropriate result is reported (multiple reported analyses i.e., dilutions, re-extractions, etc. Associated with "R" and "DNR" only) |
| | 14 | Other (See DV report for details) |
| | 26 | Method QC information not provided |

¹H = high bias indicated

L = low bias indicated

**Volatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8260C)**

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|--|---|--|-----------------------|--|
| Sample Handling | | | | | |
| Cooler/Storage Temperature Preservation | 4°C±2°C Aqueous: HCl to pH < 2 Current SW846 criterion is ≤ 6° C ⁽³⁾ | NFG ⁽¹⁾ Method ⁽³⁾ | If required by project: J (pos)/UJ (ND) if greater than 6° C | 1 | Use PJ for temp outliers; see TM20 if pH ≤ 2, reject 2-chloroethyl vinyl ether (R-1) some projects may require methanol preserved soils/seds |
| Holding Time | Aqueous: 14 days preserved 7 Days: unpreserved Solid: 14 Days | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos)/UJ (ND) if HT exceeded J (pos)/R (ND) if gross exceedance (> 2x HT) | 1 | Gross exceedance = > 2x HT, as per 1999 NFG |
| Instrument Performance | | | | | |
| Tuning | BFB Beginning of each 12 hour period Use method or project acceptance criteria | NFG ⁽¹⁾ Method ⁽³⁾ | R (pos/ND) all analytes in all samples associated with the tune | 24 | |
| Initial Calibration Sensitivity | Minimum 5 standards RRF ≥ 0.05 except: RRF ≥ 0.01 poor responders * RRF ≥ 0.005 1,4-dioxane | NFG ⁽¹⁾ Method ⁽³⁾ | Use PJ to qualify J (pos)/UJ (ND) | 5A | TM-06 EcoChem Policy for the Evaluation and Qualification of GCMS Instrument Performance PJ - no action if response is stable (ICAL RSD and CCAL %D acceptable) |
| Initial Calibration Stability | %RSD ≤ 20% except: %RSD ≤ 40% poor responders * %RSD ≤ 50% 1,4-dioxane | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if %RSD > limit | 5A | |
| Initial Calibration Verification | Second source analyzed immediately after ICAL %R 70% - 130% | Method ⁽³⁾ | J (pos) %R > UCL J (pos)/UJ (ND) %R < LCL | 5A (H,L) ⁴ | QAPP may have overriding accuracy limits. |
| Continuing Calibration Sensitivity | RRF ≥ 0.05 except: RRF ≥ 0.01 poor responders * RRF ≥ 0.005 1,4-dioxane | NFG ⁽¹⁾ Method ⁽³⁾ | Use PJ to qualify J (pos)/UJ (ND) | 5B | see ICAL RRF guidance |
| Continuing Calibration Stability | %D ≤ 25% except: %D ≤ 40% poor responders * %D ≤ 50% 1,4-dioxane | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) - %D > control limit (high bias) J (pos)/UJ (ND) - %D < -control limit (low bias) | 5B (H,L) ⁴ | |

Volatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8260C)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--------------------------------------|--|---|---|-----------------------|--|
| Blank Contamination | | | | | |
| Method Blank (MB) | <u>MB: One per matrix per batch (of ≤ 20 samples)</u> No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U (pos) if result is < 5X or 10X action level | 7 | 10X action level for methylene chloride, acetone, & 2-butanone. 5X for all other target analytes Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review TB, qualify as needed #3 - Review FB, qualify as needed Note: Actions as per NFG 1999 |
| | No TICs present | | R (pos) TICs using 10X rule | | |
| Trip Blank (TB) | No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U (pos) if result is < 5X or 10X action level | 6 | |
| Field Blank (FB) | No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U (pos) if result is < 5X or 10X action level | 6 | |
| Precision and Accuracy | | | | | |
| LCS/LCSD (recovery) | One per matrix per batch (of ≤ 20 samples) LCSD not required by NFG or method Use method acceptance criteria/laboratory limits | Method ⁽³⁾ | J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND)%R < 10% | 10 (H,L) ⁴ | No action if only one spike %R is outside criteria when LCSD is analyzed, unless one recovery is <10%. QAPP may have overriding accuracy limits. |
| LCS/LCSD RPD | If LCSD analyzed RPD < lab limits | Method ⁽³⁾ | J (pos) | 9 | Qualify all associated samples. QAPP may have overriding precision limits. |
| Reference Material (RM, SRM, or CRM) | Result ±20% of the 95% confidence interval of the true value for analytes | EcoChem standard policy | J (pos)/UJ (ND) if < LCL J (pos) if > UCL | 12 (H,L) ⁴ | QAPP may have overriding accuracy limits. Some manufacturers may have different RM control limits |
| Surrogates | Added to all samples Within method/laboratory control limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if %R >UCL J (pos)/UJ (ND) if %R <LCL J (pos)/R (ND) if <10% | 13 (H,L) ⁴ | No action if there are 4+ surrogates and only 1 outlier Qualify all compounds if qualification is required. |
| Internal Standards | Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if > 200% J (pos)/UJ (ND) if < 50% J (pos)/R (ND) if < 25% if RT >30 seconds use PJ | 19 | Qualify compounds quantified using particular internal standard |

**Volatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8260C)**

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|---|---|----------------------|---|
| Precision and Accuracy (continued) | | | | | |
| MS/MSD (recovery) | One per matrix per batch (of ≤ 20 samples) Use method acceptance criteria/laboratory limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) %R > UCL J (pos)/UJ (ND) if both %R < LCL J (pos)/R (ND) if both %R < 10% J (pos)/UJ (ND) if one > UCL & one < LCL, with no bias | 8 (H,L) ⁴ | No action if only one spike %R is outside criteria. No action if parent concentration is >4x the amount spiked. Qualify parent sample only. |
| MS/MSD (RPD) | One per matrix per batch (of ≤ 20 samples) Use method acceptance criteria/laboratory limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) If RPD > control limit | 9 | Qualify parent sample only |
| Field Duplicates | Solids: RPD < 50% OR difference < 2X RL (for results < 5X RL) Aqueous: RPD < 35% OR difference < 1X RL (for results < 5X RL) | EcoChem standard policy | J (pos)/UJ (ND) Qualify only parent and field duplicate samples | 9 | Use project limits if specified |
| Compound Identification and Quantitation | | | | | |
| Retention Time Relative Ion Intensities | RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample | NFG ⁽¹⁾ Method ⁽³⁾ | U (pos) if identification criteria not met | 25 | |
| TICs | Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification | NFG ⁽¹⁾ Method ⁽³⁾ | NJ TIC R (pos) if common laboratory contaminants | 4 | Common laboratory contaminants: aldol condensation products, solvent preservatives, and reagent contaminants |
| Calibration Range | Results greater than highest calibration standard | EcoChem standard policy | Qualify J (pos) | 20 | If result from dilution analysis is not reported. |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 EcoChem Policy for Rejection/Selection Process for Multiple Results |

¹ National Functional Guidelines for Organic Data Review, June, 2008² National Functional Guidelines for Organic Data Review, Oct, 1999³ Method SW846 8260C Volatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS)⁴ NFG 2013 suggests using "+ / -" to indicate bias; EcoChem has chosen "H" = high bias indicated; "L" = low bias indicated.

* "Poor responder" compounds: Acetone, 2-butanone, carbon disulfide, chloroethane, chloromethane, cyclohexane, 1,2-dibromoethane, dichlorodifluoromethane, cis-1,2-dichloroethene, 1,2-dichloropropane, 1,2-dibromo-3-chloropropane, 2-hexanone, isopropylbenzene, methyl acetate, methylene chloride, methylcyclohexane, 4-methyl-2-pentanone, methyl tert-butyl ether, trans-1,2-dichloroethene, trichlorofluoromethane, 1,1,2-trichloro-1,2,2-trifluoroethane **criterion is 0.010 RRF**; 1,4-dioxane RRF **criterion is 0.005**.

(pos): Positive Result

(ND): Non-detect

Volatile Organics in Air by GCMS and GCMS-SIM, Method TO-15

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|--|-----------------------|--|
| Sample Handling | | | | | |
| Cooler/Storage Temperature Preservation | SUMMA Canister - no preservation requirements | | | | |
| SUMMA Canister Pressure | Pressure of Canister upon receipt at lab should be between 5-10 inches of Hg or greater of vacuum | Method ^{1,2} | If vacuum is > 8 inch Hg or < 1 inch Hg, note in report. | 1 | Professional judgment |
| Holding Time | 30 days from collection to analysis | Method ¹ | J(pos)/UJ(ND) if HT exceeded J(pos)/R(ND) if gross exceedance (> 2X HT) | 1 | Gross exceedance = > 2X HT, as per 1999 NFG |
| Instrument Performance | | | | | |
| Tuning | BFB Beginning of each 24 hour period Use method acceptance criteria (Table 3) | Method ¹ | R(pos/ND) all analytes in all samples associated with the tune | 5A | every 24 hours or every 20 samples (Section 10.4.2 of method) TM-06 EcoChem Policy for the Evaluation and Qualification of GCMS Instrument Performance |
| Initial Calibration (Minimum 5 stds.) Sensitivity | RRF ≥ 0.05 Note: not discussed in method. Default to NFG criteria. | NFG ³ | J(pos)/R(ND) if RRF/RF is less than criterion | | |
| Initial Calibration (Minimum 5 stds.) Stability | %RSD ≤ 30% with up to 2 compounds max 40%; OR Linear r ≥ 0.995 or r ² ≥ 0.990 (6 points must be used) (NFG optional criteria) | Method ¹ NFG ³ | J(pos) if %RSD > 30% OR r/r2-value < 0.995 (or 0.990) | | |
| Initial Calibration Verification (ICV) Stability | Not required by method. Standard from independent source Analyzed immediately after ICAL If analyzed, use lab or QAPP limits | | J(pos) if high bias J(pos)/UJ(ND) if low bias J(pos)/R(ND) if significant low bias | | |
| Continuing Calibration (Prior to each 24 hr. shift) Sensitivity | RRF ≥ 0.05 Note: not discussed in method. Default to NFG criteria. | NFG ³ | J(pos)/R(ND) if RRF/RF is less than criterion | 5B | |
| Continuing Calibration (Prior to each 24 hr. shift) Stability | %Drift ≤ 30% | Method ¹ | If > +/- 70%: J(pos)/R(ND) If -69% to -31%: J(pos) (high bias) If 31% to 69%: J(pos)/UJ(ND) (low bias) | 5B (H,L) ⁴ | |

Volatile Organics in Air by GCMS and GCMS-SIM, Method TO-15

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|------------------------------------|---|--|--|-----------------------|--|
| Blank Contamination | | | | | |
| Method Blank (MB) | MB: One per batch of (of ≤ 20 samples) No detected compounds > MDL | Method ¹ NFG ³ | U(pos) if result is < 5X or 10X action level, as per analyte. | 7 | 10X action level for methylene chloride, acetone, & 2-butanone. 5X for all other target analytes Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review FB, qualify as needed |
| | No TICs present | | R(pos) TICs using 10X rule | | |
| Field Blank (FB) | FB: frequency as per QAPP No detected compounds > MDL | Method ¹ NFG ³ | U(pos) if result is < 5X or 10X action level, as per analyte. | 6 | |
| Precision and Accuracy | | | | | |
| LCS | One per lab batch (of ≤ 20 samples) Note: not discussed in method. Default to lab or QAPP limits. | NFG ³ | Qualify all associated samples J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if both %R < LCL - low bias J(pos)/R(ND) if both %R < 10% - very low bias J(pos)/UJ(ND) if one > UCL & one < LCL, with no bias | 10 (H,L) ⁴ | No action if only one spike %R is outside criteria, when LCSD is analyzed. Qualify all associated samples. |
| LCS/LCSD (RPD) | if analyzed RPD $\leq 30\%$ | NFG ³ | J(pos) assoc. cmpd. in all samples | 9 | Qualify all associated samples. |
| Surrogates | Note: not discussed in method. Default to lab or QAPP limits. | NFG ³ | J(pos) if %R > UCL - high bias J(pos)/UJ(ND) if %R < LCL - low bias J(pos)/R(ND) if < 10% - very low bias | 13 (H,L) ⁴ | Note: No action if there are 4+ surrogates and only 1 outlier. |
| Internal Standards | Added to all samples Acceptable Range: IS area $\pm 40\%$ of CCAL area RT within 20 seconds of mean RT over ICAL range RT within 0.33 minutes of CC RT | Method ¹ NFG ³ | J(pos) if > 140% J(pos)/UJ(ND) if < 60% J(pos)/R(ND) if < 25% RT > 0.33 mins, narrate and notify PM | 19 | |
| Field Duplicates | RPD $\leq 25\%$ OR difference < 1X RL (for results < 5X RL) | Method ¹ EcoChem standard policy | Narrate and qualify if required by project (EcoChem PJ) Qualify only field duplicate samples J(pos)/UJ(ND) | 9 | |
| Compound ID and Calculation | | | | | |
| Quantitation/ Identification | RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample | Method ¹ NFG ³ | See Technical Director if outliers are found | 14 25 (false pos) | |
| TICs | Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification | Method ¹ NFG ³ | NJ the TIC unless: R(pos) common laboratory contaminants See Technical Director for ID issues | 4 | Common laboratory contaminants: aldol condensation products, solvent preservatives, and reagent contaminants |
| Calibration Range | Results exceed the upper calibration range | EcoChem standard policy | Qualify J(pos) | 20 | If result from dilution analysis is not reported. |
| Calculation Check | Check 10% of field & QC sample results | EcoChem standard policy | Contact laboratory for resolution and/or corrective action | na | Full data validation only. |

Volatile Organics in Air by GCMS and GCMS-SIM, Method TO-15

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|-------------------------|---|-------------|--|
| Electronic Data Deliverable (EDD) | | | | | |
| Verification of EDD to hardcopy data | EcoChem verify @ 10% unless problems noted; then increase level up to 100% for next several packages. | EcoChem standard policy | Depending on scope of problem, correct at EcoChem (minor issues) to resubmittal by laboratory (major issues). | na | EcoChem Project Manager and/or Database Administrator will work with lab to provide long-term corrective action. |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 Rev. 1 EcoChem Policy for Rejection/Selection Process for Multiple Results |

(pos): Positive Result(s)
 (ND): Non-detects

- ¹ Compendium Method TO-15, Determination of Volatile Organic Compounds (VOCs) in Air Collected In Specially-Prepared Canisters And Analyzed by Gas Chromatography/Mass Spectrometry (GC/MS), Second Edition, January 1999. EPA/625/R-96/010b
- ¹ Supplement to EPA Compendium Method TO-15. Reduction of Method Detection Limits to Meet Vapor Intrusion Monitoring Needs. E.H. Daughtrey Jr., K.D. Oliver, H.H. Jacumin Jr., and W.A. McClenny, 2/18/2009.
- ¹ ASTM D1945 - 03 Standard Test Method for Analysis of Natural Gas by Gas Chromatography. January 1, 2010.
- ² Air Toxics Ltd: Guide to Air Sampling and Analysis
- ³ National Functional Guidelines for Organic Data Review, June, 2008
- ⁴ "H" = high bias indicated; "L" = low bias indicated

DATA VALIDATION CRITERIA

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
 (Based on NFG 1999 & 2008 and SW-846 Method 8270D)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|---|--|-----------------------|--|
| Sample Handling | | | | | |
| Cooler/Storage Temperature Preservation | 4°C±2°C sediment/tissues may require storage at -20°C | NFG ⁽¹⁾ Method ⁽³⁾ | If required by project: J (pos)/UJ (ND) if greater than 6° C | 1 | Use PJ for temp outliers; see TM20 Current SW846 criterion is ≤ 6° C ⁽³⁾ |
| Holding Time | Extraction Aqueous: 7 days from collection Extraction Solid: 14 days from collection Analysis (all matrices): 40 days from extraction Holding time may be extended to 1 year for frozen sediments/tissues | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos)/UJ (ND) if HT exceeded J (pos)/R (ND) if gross exceedance (> 2x HT) | 1 | Gross exceedance = > 2x HT, as per 1999 NFG |
| Instrument Performance | | | | | |
| Tuning | DFTPP Beginning of each 12 hour period Use method or project acceptance criteria | NFG ⁽¹⁾ Method ⁽³⁾ | R (pos/ND) all analytes in all samples associated with the tune | 24 | |
| Initial Calibration Sensitivity | RRF ≥ 0.05 except: RRF ≥ 0.01 poor responders * | NFG ⁽¹⁾ Method ⁽³⁾ | Use PJ to qualify J (pos)/UJ (ND) | 5A | TM-06 EcoChem Policy for the Evaluation and Qualification of GCMS Instrument Performance PJ - no action if response is stable (ICAL RSD and CCAL %D acceptable) |
| Initial Calibration Stability | Minimum 5 standards %RSD ≤ 20.0% except: %RSD ≤ 40.0% poor responders * or co-efficient of determination (r ²) > 0.99 | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if %RSD > limit or r ² value <0.99 | 5A | |
| Initial Calibration Verification Check | Prepared from second source; analyze after each ICAL Percent recovery limits = 70-130% | Method ⁽³⁾ | J (pos) %R > UCL J (pos)/UJ (ND) %R < LCL | 5A (H,L) ⁴ | QAPP may have overriding accuracy limits. |

DATA VALIDATION CRITERIA

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
 (Based on NFG 1999 & 2008 and SW-846 Method 8270D)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|---|--|-----------------------|--|
| Instrument Performance (continued) | | | | | |
| Continuing Calibration Sensitivity | RRF \geq 0.05 except: RRF \geq 0.01 poor responders * | NFG ⁽¹⁾ Method ⁽³⁾ | Use PJ to qualify J (pos)/UJ (ND) | 5B | see ICAL RRF guidance |
| Continuing Calibration Stability | Prior to sample analysis and every 12 hours %D \leq 25% except: %D \leq 40.0% poor responders * | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) - %D > control limit (high bias) J (pos)/UJ (ND) - %D < -control limit (low bias) | 5B (H,L) ⁴ | |
| Blank Contamination | | | | | |
| Method Blank (MB) | MB: One per matrix per batch of (of \leq 20 samples) No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U(pos) if result is < 5X or 10X action level | 7 | 10X action level applies to phthalates only. 5X for all other target analytes Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review FB , qualify as needed Note: Actions as per 1999 NFG |
| | No TICs present | | R (pos) TICs using 10X rule | 7 | |
| Field Blank (FB) | No detected compounds > MDL | NFG ⁽²⁾ Method ⁽³⁾ | U (pos) if result is < 5X or 10X action level | 6 | |
| Precision and Accuracy | | | | | |
| LCS/LCSD (recovery) | One per matrix per batch (of \leq 20 samples) LCSD not required by NFG or method Use method acceptance criteria/laboratory limits | Method ⁽³⁾ | J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND)%R < 10% | 10 (H,L) ⁴ | No action if only one spike %R is outside criteria when LCSD is analyzed, unless one recovery is <10%. QAPP may have overriding accuracy limits. Qualify all associated samples. |
| LCS/LCSD (RPD) | If LCSD analyzed RPD < lab limits | Method ⁽³⁾ | J (pos) | 9 | Qualify all associated samples. QAPP may have overriding precision limits. |

DATA VALIDATION CRITERIA

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
 (Based on NFG 1999 & 2008 and SW-846 Method 8270D)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|---|---|-----------------------|--|
| Precision and Accuracy (continued) | | | | | |
| Reference Material (RM, SRM, or CRM) | Result \pm 20% of the 95% confidence interval of the true value for analytes | EcoChem standard policy | J (pos)/UJ (ND) if < LCL J (pos) if > UCL | 12 (H,L) ⁴ | QAPP may have overriding accuracy limits. Some manufacturers have different RM control limits |
| MS/MSD (recovery) | One per matrix per batch (of \leq 20 samples) Use method acceptance criteria/laboratory limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) %R > UCL J (pos)/UJ (ND) if both %R < LCL J (pos)/R (ND) if both %R < 10% J (pos)/UJ (ND) if one > UCL & one < LCL, with no bias | 8 (H,L) ⁴ | No action if only one spike %R is outside criteria. No action if parent concentration is >4x the amount spiked. Qualify parent sample only. |
| MS/MSD (RPD) | One per matrix per batch (of \leq 20 samples) Use method acceptance criteria/laboratory limits | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) in parent sample if RPD > CL | 9 | Qualify parent sample only |
| Surrogates | Minimum of 3 acid & 3 base/neutral (B/N) compounds added to all samples Within method control limits | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if %R > UCL J (pos)/UJ (ND) if %R < LCL J (pos)/R (ND) if %R < 10% | 13 (H,L) ⁴ | Qualify all compounds in associated fraction. Do not qualify if only 1 acid and/or 1 B/N surrogate is out, unless <10%. If 1 surrogate outlier < 10% then J (pos)/R (ND) |
| Internal Standards | Added to all samples Acceptable Range: IS area 50% to 200% of CCAL area RT within 30 seconds of CC RT | NFG ⁽¹⁾ Method ⁽³⁾ | J (pos) if > 200% J (pos)/UJ (ND) if < 50% J (pos)/R (ND) if < 25% if RT >30 seconds use PJ | 19 | Qualify compounds quantified using particular internal standard |
| Field Duplicates | Solids: RPD < 50% OR difference < 2X RL (for results < 5X RL) Aqueous: RPD < 35% OR difference < 1X RL (for results < 5X RL) | EcoChem standard policy | J (pos)/UJ (ND) Qualify only parent and field duplicate samples | 9 | Use project limits if specified |

Semivolatile Organic Compounds by Gas Chromatography-Mass Spectroscopy (GC-MS)
(Based on NFG 1999 & 2008 and SW-846 Method 8270D)

| QC Element | Acceptance Criteria | Source of Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|---|---|--|-------------|--|
| Compound Identification and Quantitation and Calculation | | | | | |
| Retention times and relative ion intensities | RRT within 0.06 of standard RRT Ion relative intensity within 20% of standard All ions in std. at > 10% intensity must be present in sample | NFG ⁽¹⁾ Method ⁽³⁾ | U (pos) if identification criteria not met | 25 | |
| TICs | Major ions (>10%) in reference must be present in sample; intensities agree within 20%; check identification | NFG ⁽¹⁾ Method ⁽³⁾ | NJ the TIC unless: R (pos) common laboratory contaminants | 4 | |
| Calibration Range | Results greater than highest calibration standard | EcoChem standard policy | Qualify J (pos) | 20 | If result from dilution analysis is not reported. |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 EcoChem Policy for Rejection/Selection Process for Multiple Results |

¹ National Functional Guidelines for Organic Data Review, June, 2008

(pos): Positive Result(s)

² National Functional Guidelines for Organic Data Review, October, 1999

(ND): Non-detects

³ Method SW846 8270D Semivolatile Organic Compounds by Gas Chromatography/Mass Spectrometry (GC/MS), Revision 4, February 2007.

⁴ NFG 2013 suggests using "+ / -" to indicate bias; EcoChem has chosen "H" = high bias indicated; "L" = low bias indicated.

* "Poor responder" compounds: acetophenone, atrazine, benzaldehyde, 1,1'-biphenyl, bis(2-ethylhexyl)phthalate, butylbenzylphthalate, caprolactam, carbazole, 4-chloroaniline, diethylphthalate, di-n-butylphthalate, 3-3'-dichlorobenzidine, dimethylphthalate, 2,4-dinitrophenol, 4,6-dinitro-2-methylphenol, di-n-octylphthalate, hexachlorobutadiene, hexachlorocyclopentadiene, 2-nitroaniline, 3-nitroaniline, 4-nitroaniline, 4-nitrophenol, N-nitrosodiphenylamine, 2,2'-oxybis-(1-chloropropane), 1,2,4,5-tetrachlorobenzene use a 0.010 RRF criterion.

**EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Gasoline Range
 (Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Gx,
 June 1997, Wa DOE & Oregon DEQ)**

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|--|-------------|-------------------------|
| Sample Handling | | | | |
| Cooler Temperature & Preservation | 4°C±2°C Water: HCl to pH < 2 | J(+)/UJ(-) if greater than 6°C | 1 | |
| Holding Time | Waters: 14 days preserved 7 days unpreserved Solids: 14 Days | J(+)/UJ(-) if hold times exceeded J(+)/R(-) if exceeded > 3X | 1 | Professional Judgement |
| Instrument Performance | | | | |
| Initial Calibration | 5 calibration points (All within 15% of true value) Linear Regression: $r^2 \geq 0.990$ If used, RSD of response factors $\leq 20\%$ | Narrate if fewer than 5 calibration levels or if %R > 15% J(+)/UJ(-) if $r^2 < 0.990$ J(+)/UJ(-) if %RSD > 20% | 5A | |
| Mid-range Calibration Check Std. | Analyzed before and after each analysis shift & every 20 samples. Recovery range 80% to 120% | Narrate if frequency not met. J(+)/UJ(-) if %R < 80% J(+) if %R > 120% | 5B | |
| Blank Contamination | | | | |
| Method Blank | At least one per batch (≤ 10 samples) No results > RL | U (at the RL) if sample result is < RL & < 5X blank result. | 7 | |
| | | U (at reported sample value) if sample result is \geq RL and < 5X blank result | 7 | |
| Trip Blank (if required by project) | No results > RL | Action is same as method blank for positive results remaining in trip blank after method blank qualifiers are assigned. | 18 | |
| Field Blanks (if required by project) | No results > RL | Action is same as method blank for positive results remaining in field blank after method and trip blank qualifiers are assigned. | 6 | |

**EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Gasoline Range
 (Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Gx,
 June 1997, Wa DOE & Oregon DEQ)**

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|-------------|---|
| Precision and Accuracy | | | | |
| MS samples (accuracy) (if required by project) | %R within lab control limits | Qualify parent only, unless other QC indicates systematic problems. J(+) if both %R > upper control limit (UCL) J(+)/UJ(-) if both %R < lower control limit (LCL) No action if parent conc. >5X the amount spiked. | 8 | Use Professional Judgement if only one %R outlier |
| Precision: MS/MSD or LCS/LCSD or sample/dup | At least one set per batch (≤10 samples) RPD ≤ lab control limit | J(+) if RPD > lab control limits | 9 | |
| LCS (not required by method) | %R within lab control limits | J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R < 10% | 10 | Professional Judgement |
| Surrogates | Bromofluorobenzene and/or 1,4-difluorobenzene added to all samples (inc. QC samples). %R = 50-150% | J(+)/UJ(-) if %R < LCL J(+) if %R >UCL J(+)/R(-) if any %R < 10% No action if 2 or more surrogates are used, and only one is outside control limits. | 13 | Professional Judgement |
| Pattern Identification | Compare sample chromatogram to standard chromatogram to ensure range and pattern are reasonable match. Laboratory may flag results which have poor match. | J(+) | 2 | |
| Field Duplicates | Use project control limits, if stated in QAPP EcoChem default: water: RPD < 35% solids: RPD < 50% | Narrate outliers If required by project, qualify with J(+)/UJ(-) | 9 | |
| Compound ID and Calculation | | | | |
| Two analyses for one sample (e.g., dilution) | Report only one result per analyte | "DNR" (or client requested qualifier) all results that should not be reported. | 11 | See EcoChem TM-04 |

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range
(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx,
June 1997, Wa DOE & Oregon DEQ)

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|--|-------------|-------------------------|
| Sample Handling | | | | |
| Cooler Temperature & Preservation | 4°C±2°C Water: HCl to pH < 2 | J(+)/UJ(-) if greater than 6 deg. C | 1 | |
| Holding Time | Ext. Waters: 14 days preserved 7 days unpreserved Ext. Solids: 14 Days Analysis: 40 days from extraction | J(+)/UJ(-) if hold times exceeded J(+)/R(-) if exceeded > 3X | 1 | Professional Judgement |
| Instrument Performance | | | | |
| Initial Calibration | 5 calibration points (All within 15% of true value) Linear Regression: $r^2 \geq 0.990$ If used, RSD of response factors $\leq 20\%$ | Narrate if fewer than 5 calibration levels or if %R > 15% J(+)/UJ(-) if $r^2 < 0.990$ J(+)/UJ(-) if %RSD > 20% | 5A | |
| Mid-range Calibration Check Std. | Analyzed before and after each analysis shift & every 20 samples. Recovery range 85% to 115% | Narrate if frequency not met. J(+)/UJ(-) if %R < 85% J(+) if %R > 115% | 5B | |
| Blank Contamination | | | | |
| Method Blank | At least one per batch (≤ 20 samples) No results > RL | U (at the RL) if sample result is < RL & < 5X blank result. | 7 | |
| | | U (at reported sample value) if sample result is \geq RL and < 5X blank result | 7 | |
| Field Blanks (if required by project) | No results > RL | Action is same as method blank for positive results remaining in the field blank after method blank qualifiers are assigned. | 6 | |

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range
(Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx,
June 1997, Wa DOE & Oregon DEQ)

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|--|---|-------------|---|
| Precision and Accuracy | | | | |
| MS samples (accuracy) (if required by project) | %R within lab control limits | Qualify parent only, unless other QC indicates systematic problems. J(+) if both %R > upper control limit (UCL) J(+)/UJ(-) if both %R < lower control limit (LCL) No action if parent conc. >5X the amount spiked. | 8 | Use Professional Judgement if only one %R outlier |
| Precision: MS/MSD or LCS/LCSD or sample/dup | At least one set per batch (≤10 samples) RPD ≤ lab control limit | J(+) if RPD > lab control limits | 9 | |
| LCS (not required by method) | %R within lab control limits | J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R < 10% | 10 | Professional Judgement |
| Surrogates | 2-fluorobiphenyl, p-terphenyl, o-terphenyl, and/or pentacosane added to all samples (inc. QC samples). %R = 50-150% | J(+)/UJ(-) if %R < LCL J(+) if %R > UCL J(+)/R(-) if any %R < 10% No action if 2 or more surrogates are used, and only one is outside control limits. | 13 | Professional Judgement |
| Pattern Identification | Compare sample chromatogram to standard chromatogram to ensure range and pattern are reasonable match. Laboratory may flag results which have poor match. | J(+) | 2 | |
| Field Duplicates | Use project control limits, if stated in QAPP EcoChem default: water: RPD < 35% solids: RPD < 50% | Narrate (Use Professional Judgement to qualify) | 9 | |

EcoChem Validation Guidelines for Total Petroleum Hydrocarbons-Diesel & Residual Range
 (Based on EPA National Functional Guidelines as applied to criteria in NWTPH-Dx,
 June 1997, Wa DOE & Oregon DEQ)

| QC Element | Acceptance Criteria | Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|------------------------------------|--|-------------|-------------------------|
| Compound ID and Calculation | | | | |
| Two analyses for one sample (dilution) | Report only one result per analyte | "DNR" (or client requested qualifier) all results that should not be reported. | 11 | See EcoChem TM-04 |

Metals by ICP-AES
 (Based on Inorganic NFG 2010 and SW-846 6010C)

| QC Element | EcoChem Acceptance Criteria | Source of Criteria | EcoChem Action for Non-Conformance | Reason Code | Discussion and Comments |
|--|---|--|---|-----------------------|--|
| Sample Handling | | | | | |
| Cooler / Storage Temperature Preservation | Solid: Cooler temperature 4°C±2°C Aqueous: Nitric Acid to pH < 2 Dissolved Metals: 0.45 µm filter, preserve to pH < 2 after filtration | NFG ⁽¹⁾ Method ⁽²⁾ | Cooler Temps: If required by project J (pos)/UJ (ND) if greater than 6° C Aqueous: J (pos)/UJ (ND) if pH > 2 | 1 | Use PJ to qualify for temperature outlier. Current SW846 criterion is ≤ 6° C (4) No quals for pH if samples preserved by lab upon receipt and within 1 day of collection. |
| Holding Time | All matrices: 180 days from date sampled Frozen soils, sediments, tissues (-20°C) - HT extended to 1 year | NFG ⁽¹⁾ Method ⁽²⁾ EcoChem standard policy | J (pos)/UJ (ND) if holding time exceeded | 1 | |
| Instrument Performance | | | | | |
| Initial Calibration (ICAL) | Based on instrument requirements, blank + 1 standard minimum requirement for calibration If more than 1 standard used, r ≥ 0.995 | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if r < 0.995 | 5A | |
| Initial Calibration Verification (ICV) | Independent source analyzed immediately after calibration %R within ± 10% of true value | NFG ⁽¹⁾ Method ⁽²⁾ | R (pos/ND) if %R < 75% J (pos)/UJ (ND) if %R 75% - 89% J (pos) if %R > 111% | 5A (H,L) ³ | Qualify all samples in run |
| Reporting Limit (RL) Standard Low Level ICV/CCV | concentration at RL %R = 70%-130% | Method ⁽²⁾ | J (pos) < 2x RL / R (ND) if %R < 50% J (pos) < 2x RL / UJ (ND) if %R 50 - 69% J (pos) < 2x RL if %R > 130% | 5A (H,L) ³ | Qualify all samples in run |
| Continuing Calibration Verification (CCV) | Immediately following ICV/ICB, then every two hours or ten samples, and at end of run. %R within ± 10% of true value | NFG ⁽¹⁾ Method ⁽²⁾ | R (pos/ND) if %R < 75% J (pos)/UJ (ND) if %R 75% - 89% J (pos) if %R > 111% | 5B (H,L) ³ | Qualify samples bracketed by CCV outliers |
| Interference Check Samples (ICSA / ICSAB) | ICSAB %R 80% - 120% for all spiked elements ICSA < MDL for all unspiked elements | NFG ⁽¹⁾ Method ⁽²⁾ | For samples with Al, Ca, Fe, Mg > ICS levels: ICSAB: J(pos)/R (ND) if %R < 50% J (pos)/UJ (ND) if %R = 50% - 79% J (pos) if %R > 120% ICSA: J (pos) < 2x ICSA/UJ (ND) for ICSA < Neg MDL J (pos) < 2x ICSA for ICSA > MDL | 17 (H,L) ³ | Use PJ and inter-element correction factors to evaluate ICSA to determine if bias is present. Refer to TM-09 for additional information. |

Metals by ICP-AES
 (Based on Inorganic NFG 2010 and SW-846 6010C)

| QC Element | EcoChem Acceptance Criteria | Source of Criteria | EcoChem Action for Non-Conformance | Reason Code | Discussion and Comments |
|-------------------------------|---|---|--|--|---|
| Blank Contamination | | | | | |
| Method Blank (MB) | One per matrix per batch of (of ≤ 20 samples) Blank conc < MDL | NFG ⁽¹⁾ Method ⁽²⁾ | U (pos) if result is < 5X method blank concentration | 7 | Refer to TM-02 for additional information. Blank Evaluation based on NFG 1994 |
| Instrument Blanks (ICB/CCB) | After each ICV & CCV blank concentration < MDL | NFG ⁽¹⁾ Method ⁽²⁾ | Action level is 5x absolute value of blank conc. For positive blanks: U (pos) results < action level For negative blanks: J (pos)/UJ (ND) results < action level | Pos Blanks: 7 Neg Blanks: 7L ³ | Use blanks bracketing samples for Qualification Refer to TM-02 for additional information. Hierarchy of blank review: #1 - Review MB, qualify as needed #2 - Review IB, qualify as needed #3 - Review FB, qualify as needed |
| Field Blank (FB) | Blank conc < MDL | EcoChem standard policy | U (pos) if result is < 5x action level, as per analyte. | 6 | Qualify in associated field samples only. Refer to TM-02 for additional information. |
| Precision and Accuracy | | | | | |
| LCS (recovery) | One per matrix per batch (of ≤ 20 samples); LCSD not required %R between 80-120% | Method ⁽²⁾ | J (pos)/R (ND) if %R < 50% J (pos)/UJ (ND) if %R 50% - 79% J (pos) if %R > 120% | 10 (H,L) ³ | Qualify all samples in batch QAPP may have overriding accuracy limits. NFG Limits 70% -130% (50% - 150% Ab, Ag) |
| LCS/LCSD (RPD) | LCSD not required, if analyzed: RPD ≤ 20% | Method ⁽²⁾ | J (pos)/UJ (ND) if RPD > 20% | 9 | Qualify all samples in batch QAPP may have overriding precision limits. |
| MS/MSD (recovery) | One per matrix per batch (of ≤ 20 samples); MSD not required %R between 75-125% | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) if %R > 125% J (pos)/UJ (ND) if %R < 75% J (pos)/R (ND) if %R < 30%, unless post digestion spike analyzed, J (pos)/UJ (ND) if post digestion spike %R OK | 8 (H,L) ³ | No action if only one spike %R is outside criteria. NA if parent concentration >4x the amount spiked. Qualify all samples in batch. QAPP may have overriding accuracy limits. |

DATA VALIDATION CRITERIA

Metals by ICP-AES
 (Based on Inorganic NFG 2010 and SW-846 6010C)

| QC Element | EcoChem Acceptance Criteria | Source of Criteria | EcoChem Action for Non-Conformance | Reason Code | Discussion and Comments |
|--------------------------------------|--|---|---|-----------------------|---|
| Precision and Accuracy con't | | | | | |
| Post Digestion Spikes | If MS is outside 75-125%, post-spike should be analyzed %R 80%-120% (method); 75%-125% (NFG) | NFG ⁽¹⁾ Method ⁽²⁾ | Only used to support MS qualification decisions | NA | No qualifiers assigned based solely on this element. |
| MS/MSD (RPD) | MSD not required, if analyzed: RPD ≤ 20% | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if RPD > 20% | 9 | QAPP may have overriding precision limits. |
| Laboratory Duplicate | One per matrix per batch (of ≤ 20 samples) RPD ≤ 20% for results ≥ 5x RL Solids: difference < 2X RL for results < 5X RL Aqueous: difference < 1X RL for results < 5X RL | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if RPD > 20% or if difference > control limit | 9 | Qualify all samples in batch. QAPP may have overriding precision limits. |
| Reference Material (RM, SRM, or CRM) | Result ±20% of the 95% confidence interval of the true value for analytes | EcoChem standard policy | J (pos)/UJ (ND) if < LCL J (pos) if > UCL | 12 (H,L) ³ | QAPP may have overriding accuracy limits. Some manufacturers may have different RM control limits |
| Serial Dilution | Analyze one sample per matrix at a 5x dilution %D <10% for original sample conc. > 50x MDL | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos)/UJ (ND) if %D > 10% and native sample concentration > 50x MDL | 16 | Qualify all samples in batch. |
| Field Duplicate | Solids: RPD <50% (for results ≥ 5x RL) OR difference < 2X RL (for results < 5X RL) Aqueous: RPD <35% (for results ≥ 5x RL) OR difference < 1X RL (for results < 5X RL) | EcoChem standard policy | Qualify only parent and field duplicate samples J (pos)/UJ (ND) | 9 | QAPP may have overriding precision limits. Client/QAPP may not require qualification based on field precision. |

Metals by ICP-AES
(Based on Inorganic NFG 2010 and SW-846 6010C)

| QC Element | EcoChem Acceptance Criteria | Source of Criteria | EcoChem Action for Non-Conformance | Reason Code | Discussion and Comments |
|---|------------------------------------|---|--|-------------|--|
| Compound Quantitation | | | | | |
| Total and Dissolved Comparison | Total > Dissolved | EcoChem standard policy | J (pos)/UJ (ND) if Dissolved > Total and results fall outside of standard duplicate precision criteria | 14 | |
| Calibration Range | Results < instrument linear range | NFG ⁽¹⁾ Method ⁽²⁾ | J (pos) if result exceeds linear range and sample was not diluted | 20 | |
| Dilutions, Re-extractions and/or Reanalyses | Report only one result per analyte | EcoChem standard policy | Use "DNR" to flag results that will not be reported. | 11 | TM-04 EcoChem Policy for Rejection/Selection Process for Multiple Results |

¹ National Functional Guidelines for Inorganic Superfund Data Review, January 2010.

² Method SW846 6010C Inductively Coupled Plasma-Atomic Emission Spectrometry (ICP-AES), Revision 3, February 2007.

³ "H" = high bias indicated; "L" = low bias indicated

⁴ SW846, Chapter 3, Inorganic Analytes

(pos): Positive Result

(ND): Not Detected



APPENDIX B

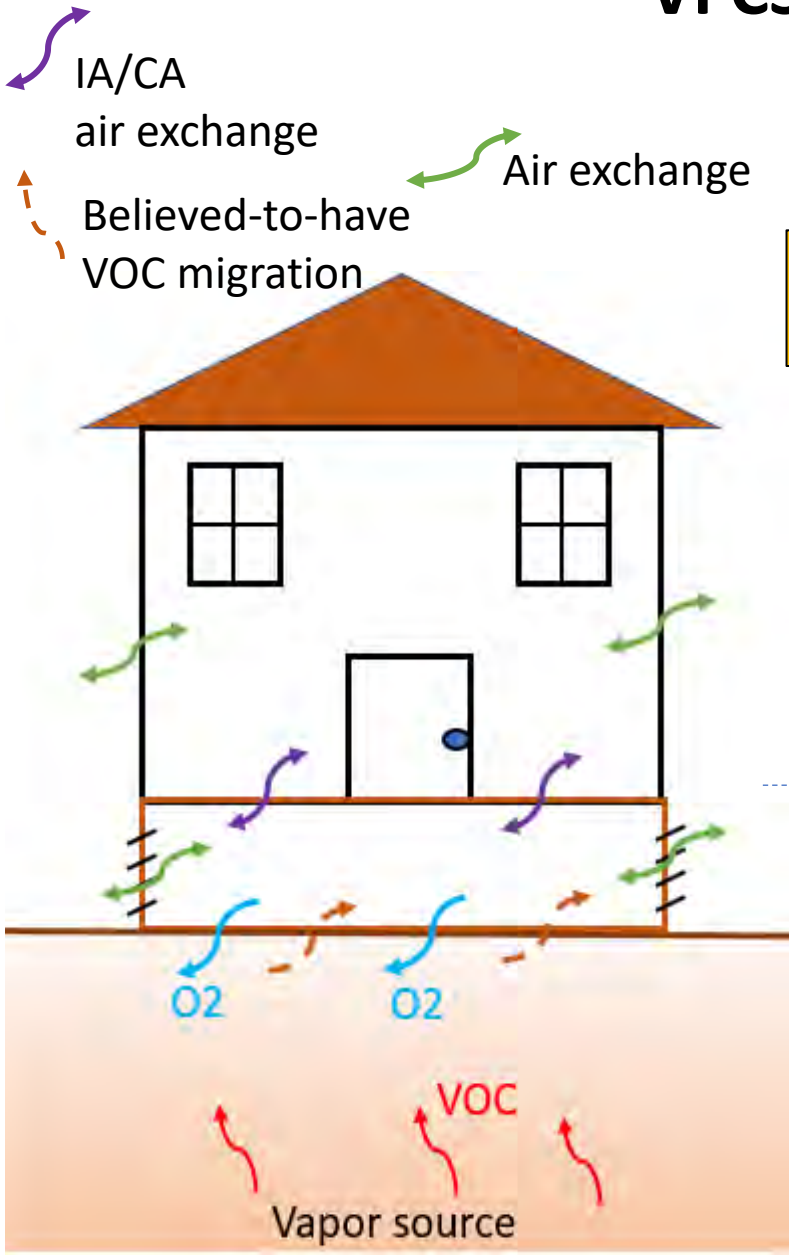
QUALIFIED DATA SUMMARY TABLE

**Qualified Data Summary Table
Newman's Chevron**

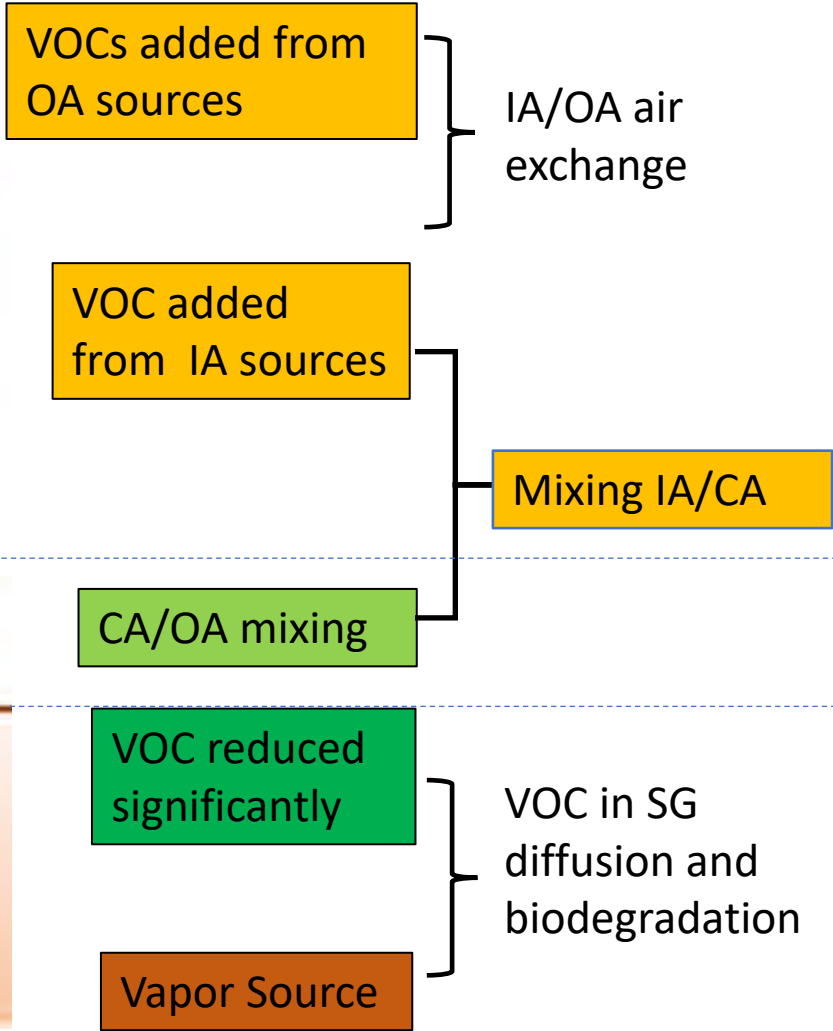
| SAMPLE ID | LAB ID | METHOD | ANALYTE | RESULT | UNITS | LAB FLAG | DV QUAL | DV REASON |
|------------------|-------------|----------|-------------------------|--------|-------|----------|---------|-----------|
| SVP-8-S-5-220826 | 410-96601-1 | NWTPH-Gx | Gasoline Range Organics | 1.0 | mg/kg | J cn | J | 13H |

Appendix F:
VI CSM for Buildings with Crawlspace

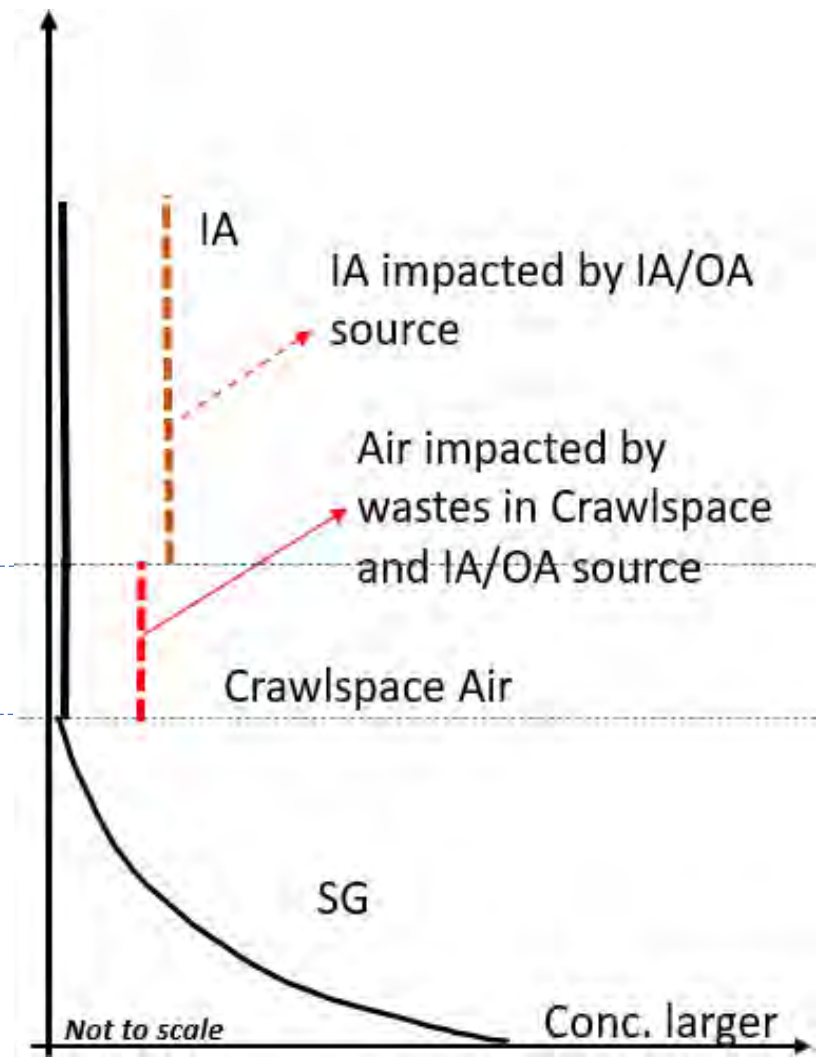
VI CSM for Buildings with Crawlspace



Fate of VOCs



Expected VOC conc.



CA— Crawlspace air

Appendix G:
MTCA TPH 11.1 Workbook Tool Calculations

A1 Soil Cleanup Levels: Worksheet for Soil Data Entry: Refer to WAC 173-340-720, 740,745, 747, 750

1. Enter Site Information

Date: 11/05/19
 Site Name: 204117 Newman's Chevron
 Sample Name: SB-5-17.5

2. Enter Soil Concentration Measured

| Chemical of Concern or Equivalent Carbon Group | Measured Soil Conc | Composition |
|---|--------------------|----------------|
| | dry basis | Ratio |
| | mg/kg | % |
| <u>Petroleum EC Fraction</u> | | |
| AL_EC >5-6 | 1.2335 | 0.52% |
| AL_EC >6-8 | 9.67 | 4.09% |
| AL_EC >8-10 | 108 | 45.64% |
| AL_EC >10-12 | 8.3 | 3.51% |
| AL_EC >12-16 | 2.1 | 0.89% |
| AL_EC >16-21 | 1.6 | 0.68% |
| AL_EC >21-34 | 3.15 | 1.33% |
| AR_EC >8-10 | 82.449 | 34.84% |
| AR_EC >10-12 | 2.66 | 1.12% |
| AR_EC >12-16 | 4.4 | 1.86% |
| AR_EC >16-21 | 1.05 | 0.44% |
| AR_EC >21-34 | 1.04545 | 0.44% |
| Benzene | 0.0115 | 0.00% |
| Toluene | 0.042 | 0.02% |
| Ethylbenzene | 0.751 | 0.32% |
| Total Xylenes | 9.8 | 4.14% |
| Naphthalene | 0.34 | 0.14% |
| 1-Methyl Naphthalene | | 0.00% |
| 2-Methyl Naphthalene | | 0.00% |
| n-Hexane | 0.0115 | 0.00% |
| MTBE | 0 | 0.00% |
| Ethylene Dibromide (EDB) | 0 | 0.00% |
| 1,2 Dichloroethane (EDC) | 0 | 0.00% |
| Benzo(a)anthracene | 0.0008 | 0.00% |
| Benzo(b)fluoranthene | 0.00035 | 0.00% |
| Benzo(k)fluoranthene | 0.00035 | 0.00% |
| Benzo(a)pyrene | 0.00035 | 0.00% |
| Chrysene | 0.002 | 0.00% |
| Dibenz(a,h)anthracene | 0.00035 | 0.00% |
| Indeno(1,2,3-cd)pyrene | 0.00035 | 0.00% |
| Sum | 236.6185 | 100.00% |

Notes for Data Entry

Set Default Hydrogeology

Clear All Soil Concentration Data Entry Cells

Restore All Soil Concentration Data cleared previously

REMARK:

half detection limits for: AL_EC>16-21, AR_EC>16-21, AL_EC>21-34, AR_EC>21-34, AL_EC>5-6, benzene, Benzo(a) pyrene , Benzo(b) fluoranthene, Benzo(k) fluoranthene, Dibenz[a,h] anthracene, Indeno (1,2,3-cd) pyrene, and n-hexane

zero was entered for EDB, EDC, and MTBE because they have never been detected at the site.

double counting avoided for EC fractions

default values used for FOC, dilution factor (20 for unsaturated zone soil)

3. Enter Site-Specific Hydrogeological Data

| | | |
|-----------------------------|-------|----------|
| Total soil porosity: | 0.42 | Unitless |
| Volumetric water content: | 0.3 | Unitless |
| Volumetric air content: | 0.12 | Unitless |
| Soil bulk density measured: | 1.5 | kg/L |
| Fraction Organic Carbon: | 0.001 | Unitless |
| Dilution Factor: | 20 | Unitless |

4. Target TPH Ground Water Concentration (if adjusted)

If you adjusted the target TPH ground water concentration, enter adjusted value 355 ug/L here:

A2 Soil Cleanup Levels: Calculation and Summary of Results. Refer to WAC 173-340-720, 740, 745, 747, 750

Site Information

Date: 11/5/2019

Site Name: 204117 Newman's Chevron

Sample Name:

Measured Soil TPH Concentration, mg/kg: **236.619**

1. Summary of Calculation Results

| Exposure Pathway | Method/Goal | Protective Soil TPH Conc, mg/kg | With Measured Soil Conc | | Does Measured Soil Conc Pass or Fail? |
|--|-------------------------------------|---------------------------------|-------------------------|----------|---------------------------------------|
| | | | RISK @ | HI @ | |
| Protection of Soil Direct Contact: Human Health | Method B | 3,353 | 6.32E-09 | 7.06E-02 | Pass |
| | Method C | 63,596 | 1.50E-09 | 3.72E-03 | Pass |
| Protection of Method B Ground Water Quality (Leaching) | Potable GW: Human Health Protection | 70 | 2.10E-06 | 1.62E+00 | Fail |
| | Target TPH GW Conc. @ 355 ug/L | 23 | NA | NA | Fail |

Warning! Check to determine if a simplified or site-specific Terrestrial Ecological Evaluation may be required (Refer to WAC 173-340-7490 through ~7494).

2. Results for Protection of Soil Direct Contact Pathway: Human Health

| | Method B: Unrestricted Land Use | Method C: Industrial Land Use |
|--|---------------------------------|-------------------------------|
| Protective Soil Concentration, TPH mg/kg | 3,352.94 | 63,596.20 |
| Most Stringent Criterion | HI =1 | HI =1 |

| Soil Criteria | Protective Soil Concentration @Method B | | | | Protective Soil Concentration @Method C | | | |
|-----------------------------|---|-----------------|----------|----------|---|-----------------|----------|----------|
| | Most Stringent? | TPH Conc, mg/kg | RISK @ | HI @ | Most Stringent? | TPH Conc, mg/kg | RISK @ | HI @ |
| HI=1 | YES | 3.35E+03 | 8.96E-08 | 1.00E+00 | YES | 6.36E+04 | 4.03E-07 | 1.00E+00 |
| Total Risk=1E-5 | NO | 3.74E+05 | 1.00E-05 | 1.12E+02 | NO | 1.58E+06 | 1.00E-05 | 2.48E+01 |
| Risk of Benzene= 1E-6 | NO | 3.74E+05 | 9.99E-06 | 1.11E+02 | NA | | | |
| Risk of cPAHs mixture= 1E-6 | NO | | 1.11E-06 | 1.24E+01 | | | | |
| EDB | NA | | NA | NA | | | | |
| EDC | NA | | NA | NA | | | | |

3. Results for Protection of Ground Water Quality (Leaching Pathway)

3.1. Protection of Potable Ground Water Quality (Method B): Human Health Protection

| | |
|---|---------------|
| Most Stringent Criterion | HI=1 |
| Protective Ground Water Concentration, ug/L | 838.66 |
| Protective Soil Concentration, mg/kg | 70.49 |

| Ground Water Criteria | Protective Potable Ground Water Concentration @Method B | | | | Protective Soil Conc, mg/kg |
|-----------------------------|---|----------------|----------|----------|-----------------------------|
| | Most Stringent? | TPH Conc, ug/L | RISK @ | HI @ | |
| HI=1 | YES | 8.39E+02 | 7.38E-07 | 1.00E+00 | 7.05E+01 |
| Total Risk = 1E-5 | NO | 1.72E+03 | 8.58E-06 | 2.17E+00 | 100% NAPL |
| Total Risk = 1E-6 | NO | 1.00E+03 | 1.00E-06 | 1.19E+00 | 9.82E+01 |
| Risk of cPAHs mixture= 1E-5 | NO | 1.72E+03 | 8.58E-06 | 2.17E+00 | 100% NAPL |
| Benzene MCL = 5 ug/L | NO | 1.67E+03 | 6.29E-06 | 2.06E+00 | 1.92E+03 |
| MTBE = 20 ug/L | NA | NA | NA | NA | NA |

Note: 100% NAPL is 63000 mg/kg TPH.

3.2 Protection of Ground Water Quality for TPH Ground Water Concentration previously adjusted and entered

| Ground Water Criteria | Protective Ground Water Concentration | | | Protective Soil Conc, mg/kg |
|-------------------------------|---------------------------------------|----------|----------|-----------------------------|
| | TPH Conc, ug/L | Risk @ | HI @ | |
| Target TPH GW Conc = 355 ug/L | 3.55E+02 | 2.46E-07 | 4.45E-01 | 2.25E+01 |

A1 Soil Cleanup Levels: Worksheet for Soil Data Entry: Refer to WAC 173-340-720, 740,745, 747, 750

1. Enter Site Information

Date: 11/04/19

Site Name: 204117 Newman's Chevron

Sample Name: UST-2-8

2. Enter Soil Concentration Measured

| Chemical of Concern or Equivalent Carbon Group | Measured Soil Conc | Composition |
|---|--------------------|----------------|
| | dry basis | Ratio |
| | mg/kg | % |
| <u>Petroleum EC Fraction</u> | | |
| AL_EC >5-6 | 1.368 | 0.10% |
| AL_EC >6-8 | 1.38 | 0.10% |
| AL_EC >8-10 | 12.7 | 0.95% |
| AL_EC >10-12 | 69 | 5.14% |
| AL_EC >12-16 | 550 | 40.99% |
| AL_EC >16-21 | 340 | 25.34% |
| AL_EC >21-34 | 32 | 2.38% |
| AR_EC >8-10 | 9.704 | 0.72% |
| AR_EC >10-12 | 3.497 | 0.26% |
| AR_EC >12-16 | 96 | 7.15% |
| AR_EC >16-21 | 210 | 15.65% |
| AR_EC >21-34 | 15.9977 | 1.19% |
| Benzene | 0.013 | 0.00% |
| Toluene | 0.0155 | 0.00% |
| Ethylbenzene | 0.0105 | 0.00% |
| Total Xylenes | 0.0255 | 0.00% |
| Naphthalene | 0.003 | 0.00% |
| 1-Methyl Naphthalene | | 0.00% |
| 2-Methyl Naphthalene | | 0.00% |
| n-Hexane | 0.012 | 0.00% |
| MTBE | 0 | 0.00% |
| Ethylene Dibromide (EDB) | 0 | 0.00% |
| 1,2 Dichloroethane (EDC) | 0 | 0.00% |
| Benzo(a)anthracene | 0.00035 | 0.00% |
| Benzo(b)fluoranthene | 0.00035 | 0.00% |
| Benzo(k)fluoranthene | 0.00035 | 0.00% |
| Benzo(a)pyrene | 0.00035 | 0.00% |
| Chrysene | 0.0002 | 0.00% |
| Dibenz(a,h)anthracene | 0.00035 | 0.00% |
| Indeno(1,2,3-cd)pyrene | 0.00035 | 0.00% |
| Sum | 1341.7285 | 100.00% |

Notes for Data Entry

Set Default Hydrogeology

Clear All Soil Concentration Data Entry Cells

Restore All Soil Concentration Data cleared previously

REMARK:

half detection limits for: AL_EC>5-6, AL_EC>6-8, benzene, toluene, ethylbenzene, total xylenes, Benzo(a) anthracene, **Benzo(a) pyrene**, Benzo(b) fluoranthene, Benzo(k) fluoranthene, Chrysene, Dibenz[a,h] anthracene, Indeno (1,2,3-cd) pyrene, and n-hexane

zero was entered for EDB, EDC, and MTBE because they have never been detected at the site

PAH and n-hexane results are from sample SB-17-14.5 which was collected from the same source area

double counting avoided for EC fractions

default values used for FOC, dilution factor (20 for unsaturated zone soil),

3. Enter Site-Specific Hydrogeological Data

| | | |
|-----------------------------|-------|----------|
| Total soil porosity: | 0.42 | Unitless |
| Volumetric water content: | 0.3 | Unitless |
| Volumetric air content: | 0.12 | Unitless |
| Soil bulk density measured: | 1.5 | kg/L |
| Fraction Organic Carbon: | 0.001 | Unitless |
| Dilution Factor: | 20 | Unitless |

4. Target TPH Ground Water Concentration (if adjusted)

If you adjusted the target TPH ground water concentration, enter adjusted value ug/L here:

A2 Soil Cleanup Levels: Calculation and Summary of Results. Refer to WAC 173-340-720, 740, 745, 747, 750

Site Information

Date: 11/4/2019

Site Name: 204117 Newman's Chevron

Sample Name:

Measured Soil TPH Concentration, mg/kg: **1,341.729**

1. Summary of Calculation Results

| Exposure Pathway | Method/Goal | Protective Soil TPH Conc, mg/kg | With Measured Soil Conc | | Does Measured Soil Conc Pass or Fail? |
|--|-------------------------------------|---------------------------------|-------------------------|----------|---------------------------------------|
| | | | RISK @ | HI @ | |
| Protection of Soil Direct Contact: Human Health | Method B | 2,477 | 5.80E-09 | 5.42E-01 | Pass |
| | Method C | 30,616 | 1.36E-09 | 4.38E-02 | Pass |
| Protection of Method B Ground Water Quality (Leaching) | Potable GW: Human Health Protection | 100% NAPL | 1.43E-06 | 1.56E-01 | Pass |
| | Target TPH GW Conc. @ 355 ug/L | 100% NAPL | NA | NA | Pass |

Warning! Check to determine if a simplified or site-specific Terrestrial Ecological Evaluation may be required (Refer to WAC 173-340-7490 through ~7494).

Warning! Check Residual Saturation (WAC340-747(10)).

2. Results for Protection of Soil Direct Contact Pathway: Human Health

| | Method B: Unrestricted Land Use | Method C: Industrial Land Use |
|--|---------------------------------|-------------------------------|
| Protective Soil Concentration, TPH mg/kg | 2,476.79 | 30,616.31 |
| Most Stringent Criterion | HI =1 | HI =1 |

| Soil Criteria | Protective Soil Concentration @Method B | | | | Protective Soil Concentration @Method C | | | |
|-----------------------------|---|-----------------|----------|----------|---|-----------------|----------|----------|
| | Most Stringent? | TPH Conc, mg/kg | RISK @ | HI @ | Most Stringent? | TPH Conc, mg/kg | RISK @ | HI @ |
| HI=1 | YES | 2.48E+03 | 1.07E-08 | 1.00E+00 | YES | 3.06E+04 | 3.10E-08 | 1.00E+00 |
| Total Risk=1E-5 | NO | 2.31E+06 | 1.00E-05 | 9.34E+02 | NO | 9.88E+06 | 1.00E-05 | 3.23E+02 |
| Risk of Benzene= 1E-6 | NO | 1.87E+06 | 8.10E-06 | 7.57E+02 | NA | | | |
| Risk of cPAHs mixture= 1E-6 | NO | | 1.14E-06 | 1.07E+02 | | | | |
| EDB | NA | | NA | NA | | | | |
| EDC | NA | | NA | NA | | | | |

3. Results for Protection of Ground Water Quality (Leaching Pathway)

3.1. Protection of Potable Ground Water Quality (Method B): Human Health Protection

| | |
|---|--|
| Most Stringent Criterion | NA |
| Protective Ground Water Concentration, ug/L | NA |
| Protective Soil Concentration, mg/kg | Soil-to-Ground Water is not a critical pathway! |

| Ground Water Criteria | Protective Potable Ground Water Concentration @Method B | | | | Protective Soil Conc, mg/kg |
|-----------------------------|---|----------------|----------|----------|-----------------------------|
| | Most Stringent? | TPH Conc, ug/L | RISK @ | HI @ | |
| HI=1 | YES | 8.65E+01 | 2.74E-06 | 1.98E-01 | 100% NAPL |
| Total Risk = 1E-5 | YES | 8.65E+01 | 2.74E-06 | 1.98E-01 | 100% NAPL |
| Total Risk = 1E-6 | YES | 7.34E+01 | 1.00E-06 | 1.39E-01 | 7.09E+02 |
| Risk of cPAHs mixture= 1E-5 | YES | 8.65E+01 | 2.74E-06 | 1.98E-01 | 100% NAPL |
| Benzene MCL = 5 ug/L | YES | 8.65E+01 | 2.74E-06 | 1.98E-01 | 100% NAPL |
| MTBE = 20 ug/L | NA | NA | NA | NA | NA |

Note: 100% NAPL is 66000 mg/kg TPH.

3.2 Protection of Ground Water Quality for TPH Ground Water Concentration previously adjusted and entered

| Ground Water Criteria | Protective Ground Water Concentration | | | Protective Soil Conc, mg/kg |
|-------------------------------|---------------------------------------|----------|----------|-----------------------------|
| | TPH Conc, ug/L | Risk @ | HI @ | |
| Target TPH GW Conc = 355 ug/L | 8.65E+01 | 2.74E-06 | 1.98E-01 | 100% NAPL |