



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
HEADQUARTERS, JOINT BASE LEWIS-MCCHORD
1010 LIGGETT AVENUE, BOX 339500, MAIL STOP 14A
JOINT BASE LEWIS-MCCHORD, WA 98433-9500

January 23, 2018

Public Works

Mr. Thomas Mackie
Washington Department of Ecology
1250 West Alder Street
Union Gap, Washington 98903-0009

Dear Mr. Mackie:

Enclosed for your review is one hard copy and one CD of the 2017 Annual Groundwater Monitoring Report, Fire Training Pit and Tracked Vehicle Repair/Old Mobilization and Training Equipment Site, Yakima Training Center, Washington.

The document summarizes depth to water level measurements and groundwater monitoring data collected during the two sampling events conducted in 2017. These groundwater events were conducted in accordance with the Groundwater Monitoring Plan dated June 2017.

Total petroleum hydrocarbon concentrations in FTP resource protection wells reported during 2017 are comparable to prior years' sampling results. TPH concentrations in groundwater are localized near well FTP-1 and have not migrated in any significant way.

Concentrations of trichloroethene in TVR/Old MATES resource protection wells reported during 2017 are also comparable to prior years' results. Trend analysis does not indicate any statistically significant upward trends of TCE in site wells and indicates a statistically significant downward trend of TCE in seven site wells.

If you have any questions or need clarification, please contact me at (253) 477-3742.

Sincerely,

GHEBRESLLASSIE.ME
SERET.C.1015675159

Digitally signed by
GHEBRESLLASSIE.MESERET.C.1015675159
DN: c=US, o=U.S. Government, ou=DoD, ou=PKI,
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Meseret C. Ghebreslassie
Installation Restoration Program Manager
Public Works Department



TETRA TECH EC, INC.

January 23, 2018
TTEC-BTL-1031-001-18-006
Deliverables / Summary Reports

Mr. Thomas Mackie
Washington Department of Ecology
1250 West Alder Street
Union Gap, Washington 98903-0009

Dear Mr. Mackie,

On behalf of Meseret C. Ghebreslassie, JBLM Installation Restoration Program Manager, we are forwarding one hardcopy with a CD containing the following documents for your review:

- 2017 Annual Groundwater Monitoring Report, Fire Training Pit and Tracked Vehicle Repair/Old Mobilization and Training Equipment Site, Yakima Training Center, Washington.

If you have any questions or need clarification, please contact Ms. Ghebreslassie at (253) 477-3742.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Brent Jones', is written over a light blue horizontal line.

D. Brent Jones, LEG
Task Order Manager



TETRA TECH EC, INC.

January 23, 2018
TTEC-BTL-1031-001-18-006
Deliverables / Summary Reports

Ms. Ember Korver
Project Manager
USACE, Seattle District
4735 East Marginal Way South
Seattle, WA 98134

SUBJECT: DRAFT FINAL REV1 2017 ANNUAL GROUNDWATER MONITORING REPORT, YTC FIRE TRAINING PIT AND TRACKED VEHICLE REPAIR/OLD MOBILIZATION AND TRAINING EQUIPMENT SITE

Reference: Contract W912DW-11-D-1031, T0001, Environmental Remediation Program Services, JBLM and Yakima Training Center, Washington

Dear Ms. Korver:

Attached to this letter is one hard copy and one CD of the Draft Final Rev1 2017 Annual Groundwater Monitoring Report for the Yakima Training Center Fire Training Pit and Tracked Vehicle Repair/Old Mobilization and Training Equipment Site. An electronic copy of the report (in Adobe and MS Word formats) has been transferred to the AMRDEC website.

The document summarizes the groundwater monitoring conducted during 2017 by Tetra Tech at the YTC FTP and TVR/Old MATES sites. The document contains revisions in response to comments on the Draft Final version and is generally consistent in content and format with previous annual reports prepared for these sites, per Section 5.3.2.2.3 of the Performance Work Statement.

If you have any questions or require additional information, please call me at (425) 482-7863 or Mark Ingersoll at (406) 270-6339.

Sincerely,

D. Brent Jones, LEG
Task Order Manager

Cc w/ Enclosure:
Meseret Ghebreslassie, JBLM PW-ERD (Hard copy + CD + AMRDEC)
Martin Roberts, USAEC (AMRDEC only)
Thomas Mackie, Ecology (Hard copy + CD)



January 2018

2017 Annual

Groundwater Monitoring Report

Fire Training Pit (FTP) and Tracked Vehicle Repair/Old Mobilization and Training Equipment Site (TVR/Old MATES)

**Joint Base Lewis-McChord and Yakima Training Center
Yakima, Washington**

Joint Base Lewis-McChord Public Works – Environmental Division

IMLM-PWE

MS 17 Box 339500

Joint Base Lewis-McChord, Washington 98433



CONTRACT NO. W912DW-11-D-1031
TASK ORDER NO. 0001

2017 ANNUAL
GROUNDWATER MONITORING REPORT

JANUARY 2018

FIRE TRAINING PIT (FTP) AND TRACKED VEHICLE REPAIR/OLD MOBILIZATION
AND TRAINING EQUIPMENT SITE (TVR/OLD MATES)
JOINT BASE LEWIS-McCHORD AND YAKIMA TRAINING CENTER
YAKIMA, WASHINGTON

DCN: TTEC-BTL-1031-001-018-006

Prepared for:
U.S. ARMY CORPS OF ENGINEERS, SEATTLE DISTRICT
AND
PUBLIC WORKS – ENVIRONMENTAL DIVISION
JOINT BASE LEWIS-McCHORD, WASHINGTON

Prepared By:



TETRA TECH EC, INC.

A SUBCONTRACTOR TO
SEALASKA ENVIRONMENTAL SERVICES, LLC
POULSBO, WASHINGTON

CONTENTS

Section	Page
1. INTRODUCTION	1-1
1.1 YTC BACKGROUND	1-1
1.2 SITE DESCRIPTIONS	1-1
1.2.1 Former Fire Training Pit.....	1-1
1.2.2 TVR/Old MATES	1-1
1.3 SITE GEOLOGY AND HYDROGEOLOGY	1-2
1.4 INVESTIGATION CHRONOLOGY	1-3
1.4.1 Facility-wide Investigations	1-3
1.4.2 Fire Training Pit	1-4
1.4.3 TVR/Old MATES	1-5
1.5 POTENTIAL GROUNDWATER RECEPTORS.....	1-7
1.6 ANALYSIS OF DATA.....	1-8
1.6.1 Shapiro-Wilk Test for Normality	1-9
1.6.2 Linear Regression and Mann-Kendall Correlation Analyses	1-9
1.6.3 Total Toxic Equivalent Concentrations of cPAHs	1-10
2. FIELD ACTIVITIES	2-1
2.1 GROUNDWATER MEASUREMENT, SAMPLING, AND ANALYSIS	2-1
2.2 INVESTIGATION-DERIVED WASTE	2-2
2.3 LAND USE CONTROL FIELD INSPECTION AND INTERVIEWS	2-2
3. RESULTS AND CONCLUSIONS.....	3-1
3.1 FORMER FTP SITE.....	3-1
3.2 TVR/OLD MATES SITE	3-2
3.3 DATA QUALITY REVIEW AND VERIFICATION.....	3-3
4. REFERENCES	4-1

APPENDICES

APPENDIX A	LAND USE CONTROL MONITORING CHECKLIST
APPENDIX B	COMPLETED FIELD FORMS AND LABORATORY ANALYTICAL REPORTS (on CD)
APPENDIX C	HISTOGRAMS, SCATTER PLOTS WITH FIT, AND MANN-KENDALL CORRELATION SCATTER PLOTS

CONTENTS (CONTINUED)

TABLES

- Table 1. Monitoring Well Construction Details
- Table 2. Depth-to-Water Measurements and Chemical of Concern Concentrations
- Table 3. Selected VOC, PAH, and PCB Concentrations
- Table 4. Carcinogenic PAH and Total PAH Concentrations
- Table 5. Depth-to-Water Measurements, and TCE and cis-1,2-DCE Concentrations
- Table 6. FTP-1 and TVR/OLD MATES Statistics Graphs, Fire Training Pit, Yakima Training Center, Washington

FIGURES

- Figure 1. JBLM Yakima Training Center Location Map
- Figure 2. Project Location Map
- Figure 3. Former Fire Training Pit Spring/Fall Water Table Contours – 2017
- Figure 4. Change in Total Petroleum Hydrocarbon Concentrations Over Time in Well FTP 1
- Figure 5. TVR/Old MATES Area Spring/Fall Water Table Contours – 2017
- Figure 6. TVR/Old MATES Area Spring TCE Concentration Contours – 2017
- Figure 7. TVR/Old MATES Area Fall TCE Concentration Contours – 2017

ABBREVIATIONS AND ACRONYMS

bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
cis-1,2-DCE	cis-1,2-dichloroethylene
cPAH	carcinogenic polycyclic aromatic hydrocarbon
DNAPL	dense non-aqueous phase liquid
E&E	Ecology & Environment
EPA	U.S. Environmental Protection Agency
ERP	Environmental Restoration Program
FTP	fire training pit
GIS	geographic information system
HRS	hazard ranking system
IRP	Installation Restoration Program
ITRC	Interstate Technology and Regulatory Council
JBLM	Joint Base Lewis-McChord
LNAPL	light non-aqueous phase liquid
LOQ	level of quantitation
LUC	land use control
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MMP	main motor pool
µg/L	micrograms per liter
MOGAS	motor gasoline
MTCA	Model Toxics Control Act
NPL	National Priorities List
Old MATES	Old Mobilization and Training Equipment Site
PAH	polycyclic aromatic hydrocarbon

ABBREVIATIONS AND ACRONYMS (CONTINUED)

PAIC	Pomona Artesian Irrigation Company
PCB	polychlorinated biphenyls
PDB	passive diffusion bag
PQL	practical quantitation limit
RCRA	Resource Conservation and Recovery Act
RFA	RCRA facility assessment
SAIC	Science Applications International Corporation
SI	site investigation
SVOC	semivolatile organic compound
SWMU	Solid Waste Management Unit
TCE	trichloroethylene
TCLP	Toxicity Characteristic Leaching Procedure
TEC	toxicity equivalency concentration
TEF	toxicity equivalency factor
TPH-D	total petroleum hydrocarbons – diesel range
TPH-G	total petroleum hydrocarbons – gasoline range
TPH-O	total petroleum hydrocarbons – heavy oil range
TtEC	Tetra Tech EC, Inc.
TVR	Tracked Vehicle Repair
U.S.	United States
USACE	U.S. Army Corps of Engineers
UST	underground storage tank
VOC	volatile organic compound
WAC	<i>Washington Administrative Code</i>
YTC	Yakima Training Center

1. INTRODUCTION

This Annual Groundwater Monitoring Report documents the March (spring) and September (fall) 2017 groundwater monitoring events conducted at the Yakima Training Center (YTC) former Fire Training Pit (FTP) and the Tracked Vehicle Repair/Old Mobilization and Training Equipment Site (TVR/Old MATES). This report was prepared for Joint Base Lewis-McChord (JBLM) Public Works by Tetra Tech EC, Inc. (TtEC). Work completed was in accordance with the 2017 Draft Final Groundwater Monitoring Plan, Revision 1 (TtEC 2017), and the *Washington Administrative Code* (WAC) chapters 173-340-810 and 173-340-820. This report presents water level measurements, sampling procedures, and analytical results for groundwater monitoring activities conducted at the FTP and TVR/Old MATES sites in 2017.

1.1 YTC BACKGROUND

YTC is an active United States (U.S.) Army sub-installation of JBLM located approximately 5 miles northeast of the City of Yakima (Figure 1). YTC has been used for training military artillery, infantry, and engineering units since 1941. Expansion of YTC occurred in the early 1950s with the acquisition of additional land and permanent construction of the Cantonment area in the southwest portion of YTC. An expansion of YTC to the north occurred in the early 1990s. Currently YTC is 327,231 acres.

1.2 SITE DESCRIPTIONS

1.2.1 Former Fire Training Pit

The former FTP is located in the northeast portion of the Cantonment area (Figure 2). The former FTP was used to practice extinguishing fires two or three times a year from an unknown start date until 1987 with a single training event in 1990 (Shapiro & Associates 1991). Practice events consisted of saturating an open, unlined earthen pit with water, adding and igniting 500 to 1,000 gallons of waste JP-4 aviation fuel, diesel fuel, or motor gasoline (MOGAS) and then extinguishing the fire (Shapiro & Associates 1991). Although reports of the releases differ slightly (Ecology & Environment [E&E] 1993, Science Applications International Corporation [SAIC] 1995), petroleum products were released to site soils as a result of past fire training practices. During the 1990s, the site was used for storing stockpiles of waste sand filter material and sediments from the adjacent vehicle wash rack treatment system (E&E 1993) as well as storing fuel bladders (Shannon & Wilson 2001). Currently the site is vacant and not being used by YTC. Monitoring wells FTP-1, FTP-14, FTP-15, and FTP-16 are located downgradient of the contaminant source (see Section 3.1).

1.2.2 TVR/Old MATES

Trichloroethylene (TCE) was detected during a 1993 Site Investigation (SI) conducted by E&E in two monitoring wells installed near the TVR facility (Building 845), two monitoring wells

installed near the Old MATES (Building 951), and the Marie well, a domestic drinking water well located southwest of both buildings 845 and 951. TCE had been detected in the Marie well before it was decommissioned in the late 1990s; however, TCE and other volatile organic compounds (VOCs) have not been detected in the Main Motor Pool (MMP) monitoring wells (MMP-1 and MMP-2) located in the vicinity of the former Marie well. Monitoring wells MTS-1, MTS-2, MTS-4, TVR-1 through TVR-7, MMP-1, MMP-2, and the Pomona production well and the Pomona Artesian Irrigation Company (PAIC) production well are located downgradient of the contaminant source (see Section 3.2). TCE and other VOCs have not been detected in either of the currently active water supply wells—the Pomona and PAIC wells located in the vicinity of monitoring wells TVR-6 and TVR-7.

Vehicle maintenance has been conducted and de-greasing solvents have been used at both facilities—since about 1968 at Building 845, and since 1975 at Building 951 (Shapiro & Associates 1991). Four 250-gallon underground storage tanks (USTs) used for waste oil were in use at Building 845 from 1975 until 1991 (Shapiro & Associates 1991, Pegasus 1993, SAIC 1995). A fifth waste oil UST (650 gallons) was used at Building 845 from 1980 until 1991 (Shapiro & Associates 1991, Pegasus 1993, SAIC 1995). One 2,000-gallon waste oil UST removed from Building 951 in 1995 was apparently in operation since 1968 (Shapiro & Associates 1991, SAIC 1995). All six of these former waste oil USTs have been removed. Three of the five waste oil tanks at Building 845 and the 2,000-gallon waste oil UST at Building 951 were “clean closed” with soil concentrations below cleanup levels promulgated under the Model Toxics Control Act (MTCA) (CEcon Corporation 1994, SAIC 1995). However, as discussed in the investigation chronology section below, soil contamination from waste oil USTs 845-3 and 845-4 remained under adjacent structures following tank removal activities. It should be noted that a downgradient monitoring well (TVR-2) is located as close to the UST 845-3/4 excavation as possible. In addition, it should also be noted that a former floor drain from Building 845 discharged immediately adjacent to the current location of monitoring well TVR-1 (Cory 2004).

1.3 SITE GEOLOGY AND HYDROGEOLOGY

YTC is located within the Yakima Fold Belt, which is characterized by southeast-trending anticlines and synclines. Most of the YTC Cantonment area is located within the synclinal valley between the anticlinal Yakima Ridge and Umtanum Ridge.

In general, YTC is underlain by a thick sequence of basalt flows known as the Columbia River Basalt Group. From youngest to oldest, the four formations that comprise the Columbia River Basalt Group are the Saddle Mountain Basalt, Wanapum Basalt, Grande Ronde Basalt, and Imnaha Basalt (Schuster et al. 1997). Portions of the YTC Cantonment area have sedimentary rocks/deposits of the Ellensburg Formation and/or quaternary deposits on top of the basalt flows (Schuster et al. 1997).

1.4 INVESTIGATION CHRONOLOGY

1.4.1 Facility-wide Investigations

A facility-wide preliminary assessment of YTC was completed in the early 1990s by Shapiro & Associates, Inc. The preliminary assessment documented the aforementioned site uses, identified potential receptors, and concluded that sites such as the two sites covered by this report could potentially be releasing hazardous substances to groundwater as a result of historical activities.

A Site Screening Inspection and Hazard Ranking System (HRS) Score for YTC were completed in January 1993 by Resource Applications, Inc. (1993a, 1993b). An HRS score was calculated; however, it was not high enough for YTC to be considered for inclusion on the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) National Priorities List (NPL).

Yakima Health District collected groundwater samples from 12 private domestic wells located downgradient of YTC and analyzed those samples for VOCs in 1995 (Yakima Health District 1995). The PAIC Well (located on YTC across the street from YTC's Pomona Well) was one of the twelve wells sampled. No contaminants were detected in any of the wells, with the exception of styrene in a single well at a concentration equal to the detection limit of 0.1 micrograms per liter ($\mu\text{g/L}$).

The final Resource Conservation and Recovery Act (RCRA) Facility Assessment (RFA) Report was completed in September 1995 by SAIC. The RFA for the entire installation was a result of a RCRA Part B Permit Application for the Range 14 open burning/open detonation area. The 1995 RFA indicated a high potential for releases to soil and possibly groundwater at the former FTP. As a result, there was a recommendation to remediate contaminated soil and the petroleum product in well FTP-1. Although the 1995 RFA did not explicitly address TCE in groundwater in the TVR/Old MATES area, the RFA recommended a corrective action for soil contamination that remained under a building adjacent to waste oil USTs 845-3 (Solid Waste Management Unit [SWMU] 43) and 845-4 (SWMU 44). RCRA corrective actions that were recommended or implied by the RFA need to satisfy MTCA regulations in accordance with WAC 173-303-646(3).

In October 2012, YTC had its first 5-year periodic review regarding six sites currently managed by the JBLM Installation Restoration Program (IRP). The review focused on sites where environmental remedies are currently in place; however, the constituents of concern are still above their respective cleanup levels (U.S. Army Corps of Engineers [USACE] 2012). Both the former FTP and the TVR/Old MATES sites were part of this periodic review. No significant concerns regarding the monitoring network were noted for the former FTP site and no recommendations were made to change it. One concern was noted regarding the TVR/Old

MATES monitoring network. TCE concentrations have been increasing over time in samples collected from monitoring well TVR-6, located on the western end of the monitoring network. It was suggested that if TCE concentrations continue to increase in TVR-6, it may warrant installing additional downgradient monitoring wells.

In 2017, the Groundwater Monitoring Plan for the former FTP and TVR/Old MATES sites was updated (TtEC 2017).

1.4.2 Fire Training Pit

The uppermost materials underlying the site consist of localized fill materials and up to 12 feet of alluvium comprised primarily of unconsolidated silty sand (Shannon & Wilson 2001). The uppermost bedrock geologic unit at the former FTP site is the Pomona Flow of the Saddle Mountain Basalt Formation (E&E 1993, Schuster et al. 1997, Shannon & Wilson 2001). In general, this unit is present at a depth of approximately 5 to 10 feet below ground surface (bgs) at the site (E&E 1993, Shannon & Wilson 2001). Basalt apparently extends to an approximate depth of 150 feet bgs without significant interbeds (E&E 1993, Shannon & Wilson 2001).

The former FTP site has impacted perched groundwater located in vesiculated fractured basalt near the top of the Pomona Basalt flow (E&E 1993, Shannon & Wilson 2001). Depth-to-water at the site is approximately 10 to 25 feet bgs (Shannon & Wilson 2001). The direction of perched groundwater flow is towards the southwest and generally mirrors the surface topography. Seasonal fluctuation in groundwater elevation appears to be slight based on limited data (Shannon & Wilson 2001). The next deepest groundwater-bearing unit is at approximately 150 feet below the site (Shannon & Wilson 2001).

The former FTP was one of the YTC facilities/sites investigated and summarized in the E&E SI Report (September 1993). Monitoring well FTP-1 was installed and four grab surface or near-surface soil samples and two composite surface soil samples were collected during the E&E SI. Significant groundwater was not encountered during the drilling of the FTP-1 borehole to a depth of approximately 140 feet. However, when it came time to decommission the FTP-1 borehole, several gallons of petroleum product were discovered on top of a column of water. As a result, FTP-1 was completed to a depth of approximately 20 feet in the perched groundwater, located at the fractured top of the uppermost basalt flow.

A RCRA Facility Investigation to further delineate the nature and extent of contamination at the former FTP site was completed in November 2001 by Shannon & Wilson. Monitoring wells FTP-13 through -16 were installed in 1999 in the perched groundwater located at the fractured top of the uppermost basalt flow. Groundwater monitoring events were conducted in July 1999, November 2000, and May 2001. The Shannon & Wilson report claimed that light non-aqueous phase liquid (LNAPL) and dense non-aqueous phase liquid (DNAPL) was present in well FTP-1 during each groundwater monitoring event. However, the thicknesses of LNAPL and DNAPL

were not accurately quantified. Review of the field notes and observations from the January 2004 groundwater monitoring event indicted the DNAPL claim was in error (the LNAPL claim might have been in error as well). Nine other soil borings were also advanced during the investigation.

An interim remedial action was completed in 2003 to remove soil contamination caused by the former FTP site that exceeded MTCA Method A/Standard Method B cleanup levels. Soil was excavated during three separate mobilizations: July 2003, September 2003, and October 2003. The total excavation area was approximately 5,000 square feet and extended downward until the underlying basalt was encountered. Soil (1,351 tons) was disposed off-site in November 2003. All contaminant concentrations in confirmation soil samples were below MTCA Method A/Standard Method B cleanup levels except for gasoline and diesel range total petroleum hydrocarbons (TPH-G and TPH-D respectively) in samples 13 and 14 collected from the soil/basalt interface. The excavation was backfilled with clean soil. The cleanup action was documented in a January 2004 Bay West report (Bay West 2004).

The terrestrial ecological pathway was closed as described in the April 2006 terrestrial ecological evaluation by Pacific Northwest National Laboratory (2006).

The Fort Lewis Environmental Restoration Program (ERP) conducted groundwater monitoring events in January 2004, March and August 2005, March and August 2006, March and September 2007, and March and September 2008. Between March 2005 and March 2007, four-inch diameter socks containing Oxygen Release Compound from Regensis were hung in the water column by Fort Lewis ERP in well FTP-1 between 11 to 18 feet bgs. While the socks were hung in FTP-1, depth-to-water ranged from 11.54 feet bgs in August 2006 to 15.59 feet bgs in March 2007.

Groundwater monitoring has been conducted semi-annually beginning in 2005. One sampling event, considered the “wet season,” or spring event, is typically conducted in February or March of each year. The other sampling event, considered the “dry season,” or fall event, is typically conducted in August or September of each year. Groundwater samples are collected for analysis of hydrocarbons and depth-to-water is measured during each event.

1.4.3 TVR/Old MATES

The uppermost materials underlying the site consist of localized fill materials, alluvium comprised primarily of unconsolidated silty sand, and unconsolidated soils of the Ellensburg Formation (Shannon & Wilson 2001). Together, the alluvium and Ellensburg sediments are up to 50 feet thick at the MATES facility. The uppermost bedrock unit underneath the overburden in the TVR/Old MATES area is the Pomona Flow of the Saddle Mountain Basalt Formation (E&E 1993, Shannon & Wilson 2001). In general, this unit was encountered at depths between 10 and 45 feet bgs in the six monitoring wells at TVR, MTS (Old MATES wells), and MMP

(E&E 1993). Saddle Mountain Basalt extends beneath the site without significant interbeds to a depth of greater than 100 feet bgs (E&E 1993).

The six E&E monitoring wells “were completed within a fractured basalt zone confined aquifer, identified as the Selah Interbed [of the Ellensburg Formation] beneath the Pomona basalt flow” (E&E 1993). This was the first encountered groundwater during drilling. In general, depth to groundwater in these six monitoring wells ranged from 60 to 100 feet bgs (E&E 1993). The direction of groundwater flow is to the west towards the Yakima River (E&E 1993).

In October 1991, Pegasus Environmental Management Services (Pegasus) evacuated, excavated, removed, cleaned, and disposed of five waste oil USTs at Building 845 (TVR). Pegasus noted visible surface contamination associated with three of the UST excavations. Soil samples from all excavations were analyzed for TPH, benzene, toluene, ethylbenzene, and xylenes (BTEX), Toxicity Characteristic Leaching Procedure (TCLP) VOCs, and TCLP metals. TPH concentrations exceeding 10,000 milligrams per kilogram (mg/kg) were detected in samples collected from all five UST excavations. TCLP TCE and TCLP tetrachloroethylene were detected at 20 milligrams per liter (mg/L) (sample from UST 845-5) and 17 mg/L (sample from UST 845-6), respectively. No TCLP VOCs were detected in samples collected from USTs 845-3 (SWMU 43) and 845-4 (SWMU 44) excavations. No additional corrective action was taken by Pegasus due to contract limitations. CEcon Corporation was contracted to excavate and remove contaminated soil left in place following the tank removal activities by Pegasus. CEcon Corporation removed on the order of 1,000 cubic yards of soil while excavating contaminated soil from the five Building 845 waste oil tank sites in October 1993. Confirmation samples collected by CEcon Corporation verified that no further action was required for USTs 845-2 (SWMU 42), 845-5 (SWMU 45), and 845-6 (SWMU 46); however, some TPH contaminated soil was left in place on the north and east sidewalls of the UST 845-3/4 (SWMUs 43/44) excavation, since existing structures (Building 845 lube rack and oil-water separator) prevented further excavation in those directions (over 400 cubic yards of soil had already been removed). Although all confirmation samples collected by CEcon Corporation were analyzed for all potential contaminants suspected at the time, no confirmation samples were analyzed for VOCs.

TVR, Old MATES, and MMP were among the facilities investigated in the September 1993 SI by E&E. Groundwater samples were collected from the two TVR, two MATES, and two MMP monitoring wells as well as the Pomona, PAIC, and Marie drinking water wells. In addition, soil samples were collected from each monitoring well borehole during drilling and analyzed for VOCs, semivolatile organic compounds (SVOCs), pesticides/polychlorinated biphenyls (PCBs), metals, and TPH. Based on the presence of TCE in groundwater at TVR and Old MATES and the absence of any contamination in corresponding soil samples, the SI Report concluded that TCE contamination in groundwater “may indicate migration from an unidentified source at the YTC facility.”

Fort Lewis ERP conducted a groundwater monitoring event in January 2004. Fort Lewis ERP installed monitoring wells MTS-3, MTS-4, TVR-3, and TVR-4 between October and November 2004. The ERP conducted groundwater monitoring events in March 2005 and August 2005. The ERP installed additional monitoring wells TVR-5, TVR-6, TVR-7, and 815-2 in October 2005.

Groundwater monitoring has been conducted semi-annually since 2005. Sampling events typically coincide with FTP sampling events. Beginning in August 2005, groundwater samples have been collected using disposable passive diffusion bags (PDBs). PDBs are sealed, low density polyethylene bags filled with de-ionized water. PDBs are hung so that the top of the PDBs are approximately 3 feet off of the bottom of monitoring wells using a dedicated stainless steel cable and clip. PDBs are hung approximately 3 months before the sampling event. It is suggested to allow PDBs a minimum of 2 weeks to be deployed in monitoring wells in order for VOC concentrations in groundwater and the water inside of the PDB to reach equilibrium (Interstate Technology and Regulatory Council [ITRC] 2004). During each sampling event, samples are analyzed for VOCs and depth-to-water is measured.

1.5 POTENTIAL GROUNDWATER RECEPTORS

The nearest potential groundwater receptors to the FTP and TVR/Old MATES sites are the Pomona and PAIC drinking water wells. A third well, the Marie drinking water well, was decommissioned in the late 1990s and is no longer a potential receptor. Before being decommissioned, the Marie well served as an emergency supply backup well to the Pomona well for the YTC Cantonment Area Water System. The Pomona and PAIC wells are domestic water supply wells located approximately 1 mile southwest of the FTP site and approximately 250 feet southwest of well TVR-1. Also, over the past decade additional residential drinking water wells have been installed west of the YTC boundary, approximately 1,500 to 3,000 feet northwest of the TVR/Old MATES TCE plume (Figure 2).

The Pomona well is an artesian well used by YTC as a primary production source for the Pomona water distribution system. The Pomona well is completed in the Wanapum and/or Grande Ronde Formation (HongWest 1996) with open borehole completion between depths of approximately 353 and 407 feet bgs (Fain 2000, Cory 2004). Sources of information provided incorrect information about the well construction details of the Pomona Well (including a typo in Table 2-1 of the current Water System Plan) (Cory 2004). A downhole video survey conducted by YTC in 1995 is considered to be the most accurate source of construction detail information for the Pomona Well to date. In addition to indicating the open interval referenced above, the video survey also indicated that water was entering the Pomona Well at approximately 401 feet bgs (Fain 2000).

The PAIC well is an artesian well used by PAIC as the sole production well for the PAIC water system serving approximately 60 homes and businesses located west of YTC (Wilson 2004). It appears that the PAIC well was constructed in an identical fashion as the Pomona well. Both wells were installed by the PAIC in 1913 by the same driller within 100 feet of each other (Fain 2000). Well logs from pump tests conducted in 1940 indicate identical (although very generic) well construction details for the Pomona well and PAIC well (Fain 2000). The construction details on the 1940 well logs were 10-inch diameter casings to a depth of 60 feet bgs and 6 and 5/8-inch diameter casings from 60 to 430 feet bgs for both wells. Since the video survey of the Pomona well showed the 1940 well log and other sources of post-drilling anecdotal information to be incorrect with respect to the actual well construction details of the well, it is reasonable to assume that the video survey is also a more accurate representation of well construction details for the PAIC well than the 1940 well log.

The bases for assuming nearly identical well construction details for the two wells are 1) both wells are artesian, 2) both wells have similar production capacities, 3) both wells were installed at the same time and location by the same well driller for the same water system, and 4) both wells have identical 1940 well logs.

Given the distance of both wells from the FTP site and the hydraulic separation between the perched groundwater and the aquifer(s) the water supply wells are completed in, it is unlikely that these potential receptors are being impacted by the FTP site. It is also unlikely that either water supply well would be impacted by TCE contamination in the TVR/Old MATES area given the relatively low TCE concentrations detected in samples collected from monitoring wells and the hydraulic separation between the Selah Interbed and the aquifer(s) the water supply wells are completed in. Existing water quality data from both the Pomona and PAIC wells support this conclusion.

1.6 ANALYSIS OF DATA

Gasoline-range, diesel-range, and heavy oil-range total petroleum hydrocarbon (TPH-G, TPH-D and TPH-O, respectively) analyses were conducted on the samples collected from the FTP site, and BTEX, polycyclic aromatic hydrocarbons (PAHs), and VOCs were also analyzed in the sample from well FTP-1 (Tables 2, 3, and 4). The samples collected from the TVR/Old MATES site were analyzed for VOCs. Summary statistics (mean and standard deviation) were calculated using the Microsoft Excel[®] Descriptive Statistics tool. A Shapiro-Wilk test for normality, and a linear regression analysis were performed on the data using a Microsoft Excel add-in software package called Analyse-It[®]. A Mann-Kendall correlation test was also performed on the data using the Analyse-It software. The statistical methods used generally followed the guidelines presented in the U.S. Environmental Protection Agency's (EPA's) Methods for Evaluating the Attainment of Cleanup Standards, Volume 2: Ground Water (EPA 1992).

All concentration measurements not known to be in error were considered valid; suspect “outliers” were not removed from the data set and were included in the analyses. Non-detect data, which represent concentration measurements below the practical quantitation limits (PQL) but above the minimum detection limit for each constituent, were evaluated at the reporting limit value; i.e., if the reporting limit was 0.5 µg/L, then the concentration value was set at 0.5 µg/L. PQLs for all of the contaminants of concern for the TVR/Old MATES and FTP sites are listed in Table 4 of the 2016 Sampling and Analyses Plan (TtEC 2016). All of the PQLs are below or equal to MTCA A and B cleanup levels for the constituent.

1.6.1 Shapiro-Wilk Test for Normality

Prior to analyzing data for trends, the data were tested for normal distribution. The null and alternate hypotheses are a summary of the objectives of a test, which in this case is to test for the distribution of the data. The null hypothesis, or what is assumed to be true before given evidence that it may be false, for all tests for normality is that a dataset is normally distributed. The alternate hypothesis, then, is that a dataset is not normally distributed (Helsel and Hirsch 2002). A significance level, or alpha level, of 0.05 was used when determining whether historical data from monitoring wells were normally distributed or not. P values, generated using the Shapiro-Wilk test for normality, were then compared to the alpha level (Table 6). The alpha level is the “cutoff” point for the test statistic in making a decision whether the data are normally distributed or not. P values show the strength of the test in determining whether the data were normally distributed or not. P values range from 0 to 1. The closer a P value is to 1, the higher the probability that the dataset is normally distributed. P values equal to or below 0.05 (alpha level) are not considered to be normally distributed.

Datasets that were not considered normally distributed were then transformed by taking the natural log of the original values. This is generally the most common transformation of water resources data. The Shapiro-Wilk test for normality was run on the transformed data with the same criteria as the datasets above (Table 6).

1.6.2 Linear Regression and Mann-Kendall Correlation Analyses

Linear regression trend analyses were conducted on all concentration data that were found to be normally or log normally distributed using the Shapiro-Wilk test (Table 6). In this instance, the null hypothesis for the test is that there is no trend in the data (Helsel and Hirsch 2002). The alpha level for the linear regression analysis was set at 0.05. P values generated by the analysis were then compared to the alpha level. P values less than the alpha value suggested a trend in the data.

The Mann-Kendall test for correlation was performed on data that were not normally or log-normally distributed (Table 6). No assumptions need to be made about the distribution of the data in order to perform the Mann-Kendall test (Helsel and Hirsch 2002). The null hypothesis is

the same as the linear regression test above in that there is no trend in the data. The alpha level was kept the same at 0.05 although the Mann-Kendall test computes a P value for a two-tailed prediction interval. As such, the alpha levels are actually 0.025 or 0.975. A P value that is smaller than 0.025 or larger than 0.975 suggests a correlation between the change in constituent concentration and time.

1.6.3 Total Toxic Equivalent Concentrations of cPAHs

During YTC's 5-year review conducted by the USACE in 2011, it was noted that the updated 2007 groundwater monitoring plan stated that total carcinogenic polycyclic aromatic hydrocarbons (cPAHs) for the FTP site would be evaluated using the total toxic equivalent concentration (TEC) of the benz(a)pyrene method outlined in WAC 173-340-708(8)(e) (USACE 2012). The cPAHs required for this analyses include benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluroanthene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene. The concentration of each of these cPAHs is multiplied by its corresponding toxicity equivalency factor (TEF) listed in Table 708-2 (WAC 173-340-900) to obtain the TEF for that cPAH. The TEFs from each cPAH are then added together to obtain the total TEF for that sample. If the total TEC is equal to or greater than 0.1, then the cPAHs are above the MTCA Method A cleanup level of 0.1 µg/L for cPAHs. During both the spring and fall 2017 sampling events, none of the specified cPAHs were detected in the sample from well FTP-1 and a TEF was not calculated (Table 4).

2. FIELD ACTIVITIES

Two groundwater sampling events were completed at the FTP and TVR/Old MATES sites in 2017 by TtEC on 29 and 30 March (spring), and 12 and 13 September (fall).

2.1 GROUNDWATER MEASUREMENT, SAMPLING, AND ANALYSIS

During each sampling event, an electronic water level indicator was used to measure depth-to-water at both the FTP and TVR/Old MATES sites (except well FTP-1), and an electronic interface probe was used to measure depth-to-water and any LNAPL or DNAPL thicknesses. There were no measurable amounts of LNAPL or DNAPL in well FTP-1 during either sampling event.

A disposable, Teflon bailer was used to purge water from the FTP monitoring wells prior to sampling. Three well volumes of water were bailed from each former FTP monitoring well scheduled for sampling. No monitoring wells were bailed dry in 2017. Groundwater samples were collected using the disposable bailer once the wells had recharged to at least 80 percent of the initial depth of water. Groundwater samples from the TVR/Old MATES wells scheduled for sampling were collected using disposable PDBs. A dedicated cable and harness was used to position the top of each PDB approximately 3 feet above the bottom of the monitoring well. The PDBs were sampled in March 2017, and were hung in June 2017 for the groundwater sampling event in September 2017. Samples from the Pomona and PAIC water production wells were collected from taps on each well while the pumps were running during each event. A field duplicate was collected at the PAIC Well during the fall sampling event.

Groundwater samples were transported overnight, under chain-of-custody documentation to ALS Environmental in Kelso, Washington for the March and September events. Groundwater samples collected from the former FTP site wells were analyzed for the following:

- TPH-G using Method NWTPH-Gx (FTP-1, FTP-14, FTP-15, and FTP-16)
- TPH-D and TPH-O using Method NWTPH-Dx (FTP-1, FTP-14, FTP-15, and FTP-16)
- VOCs using EPA Method 8260C (FTP-1)
- SVOCs (including PAHs) using EPA Method 8270C (FTP-1)

All groundwater samples collected from the TVR/Old MATES wells were analyzed for VOCs using EPA Method 8260C.

2.2 INVESTIGATION-DERIVED WASTE

Investigation-derived waste was disposed of in accordance with the approved Groundwater Monitoring Plan (TtEC 2017) as follows:

- Purge water and decontamination water from FTP-14 through FTP-16 were discarded to the ground on-site.
- Purge water and decontamination water from FTP-1 were dumped at a Main Vehicle Wash rack catch basin into an oil/water separator.
- Personal protective equipment (e.g., nitrile gloves), disposable bailers, used PDBs, and other garbage were disposed of in a YTC dumpster as part of the normal YTC solid waste stream.

2.3 LAND USE CONTROL FIELD INSPECTION AND INTERVIEWS

The 2017 land use control (LUC) field inspection and interviews were conducted in November 2017. A copy of the LUC monitoring checklist with the results of both the inspection and the interviews is included in Appendix A. Interviewees included Mr. David Theirl (YTC Public Works GIS), Mr. Pete Nissen (YTC Natural Resources Program Manager), Mr. Wade Warner (YTC Staff Engineer), Ms. Margaret Taaffe (YTC Environmental Manager) and Mr. Gary Stedman (JBLM Master Planner). Results of the inspection and interviews indicated no changes in site conditions and no changes to the land use control process in 2017.

3. RESULTS AND CONCLUSIONS

Monitoring well construction details for wells from both sites are shown in Table 1. Copies of field notes, water sampling logs, and laboratory analytical reports for both 2017 sampling events are included in Appendix B.

Distribution histograms and linear regression scatter plots for data from monitoring well FTP-1 and the TCE results from TVR/Old MATES are presented in Appendix C. In addition, graphs of historical TCE results for wells with less than half non-detects for the TVR/Old MATES site are also included in Appendix C.

3.1 FORMER FTP SITE

Figure 3 presents groundwater elevation contours for the former FTP site based on depth-to-water elevations measured during the March (spring) and September (fall) 2017 monitoring events. No measurable amounts of LNAPL or DNAPL were observed in well FTP-1 during either event; however, a petroleum odor was noted during the September event. Tables 2 and 3 present depth-to-water measurements and summaries of relevant contaminant concentrations relative to MTCA Method A and Standard Method B cleanup levels. FTP-1 is the most impacted well at the site; it is the only well with TPH-G, TPH-D, and TPH-O concentrations above cleanup levels. Historical TPH-G, TPH-D, and TPH-O concentrations in well FTP-1 are presented on Figure 4.

In 2017, TPH-G was detected at 930 µg/L (spring) and at 1,000 µg/L (fall) in samples collected from well FTP-1 (Table 2). The concentrations detected during the spring and fall sampling events exceed the 800 µg/L MTCA Method A cleanup level for TPH-G. Since 2011, the concentration of TPH-G reported in spring has consistently been higher than the concentration reported in the fall of the same year, with the exception of spring 2016 (Table 2). During the 2017 spring event, TPH-G was reported in wells FTP-14 at 50J µg/L, and was reported at 37J µg/L during the fall event. During the 2017 spring event, TPH-G was reported in well FTP-15 at 14J µg/L, and 15J µg/L during the fall event. TPH-G was not detected in well FTP-16.

TPH-D was detected at 17,000 µg/L (spring) and 35,000 µg/L (fall) in samples collected from FTP-1. These concentrations exceed the 500 µg/L MTCA Method A cleanup level for TPH-D. TPH-D was also detected in samples collected from FTP-14 (170J µg/L in spring and 220 µg/L in fall), FTP-15 (130J µg/L in spring and 210 µg/L in fall), and FTP-16 (130J µg/L in spring and 190 µg/L in fall).

TPH-O was detected at 2,400 µg/L (spring) and 4,000 µg/L (fall) in samples collected from FTP-1. These concentrations exceed the 500 µg/L MTCA Method A cleanup level for TPH-O.

TPH-O was also detected in samples collected from FTP-14 (90J $\mu\text{g/L}$ in spring and 110 $\mu\text{g/L}$ in fall), FTP-15 (120 J $\mu\text{g/L}$ in spring and 130 $\mu\text{g/L}$ in fall), and FTP-16 (120 J $\mu\text{g/L}$ in spring and 160 $\mu\text{g/L}$ in fall). Analytical data are presented on Table 2.

Other chemicals of concern detected in well FTP-1 include benzene at 1.3 $\mu\text{g/L}$ (spring) and 4.1 $\mu\text{g/L}$ (fall), and total PAHs at 126.1 $\mu\text{g/L}$ (fall). The benzene concentrations did not exceed the MTCA Method A cleanup level for benzene (5 $\mu\text{g/L}$). No cPAHs were detected in either the spring or fall samples from FTP-1 (Table 4). Since cPAHs were not detected, the TEFs could not be calculated. Other VOCs and PAHs detected in well FTP-1 are presented in Tables 3 and 4, respectively.

TPH data from FTP-1 were statistically analyzed using the tests described above in Section 1.6. Descriptive statistics, data distribution, and trend analysis results are presented in Table 6. Histograms (data distribution), scatter plots with fit (linear regression) and a Mann–Kendall Correlation scatter plots are included in Appendix C. Trend analysis suggests that TPH-G concentrations have been decreasing over time in FTP-1; however, not statistically. The overall trend in TPH-D concentrations in FTP-1 is increasing, however, also not statistically, and since 2012 the TPH-D concentrations have been on a generally decreasing trend.

Although concentrations of TPH-G above MTCA cleanup levels continue to be detected in samples from well FTP-1, TPH-G continues to either not be detected or detected at relatively low levels in samples from downgradient wells. Concentrations of TPH-D and TPH-O in well FTP-1 also continue to be detected above MTCA cleanup levels and, similar to TPH-G, the TPH-D and TPH-O concentrations in downgradient wells continue to be relatively low and below cleanup levels. This has been consistent during the 15 years of monitoring at the FTP, suggesting that the petroleum hydrocarbons in groundwater are localized near well FTP-1, and are not migrating in any significant way.

3.2 TVR/OLD MATES SITE

Figure 5 presents estimated contours for the groundwater surface based on measured elevations from the spring and fall 2017 monitoring events for the TVR/Old MATES site. Figures 6 and 7 present TCE concentration contours based on samples collected during the 2017 spring and fall sampling events, respectively. Table 5 presents both depth-to-water measurements and a summary of the concentrations of TCE and cis-1,2-dichloroethene (cis-1,2-DCE) for the site.

Groundwater samples from five of the wells (MTS-2, MTS-4, TVR-1, TVR-3, and TVR-7) had TCE concentrations above the 5 $\mu\text{g/L}$ MTCA Method A Cleanup level during one or both the 2017 spring and fall events. TCE was not detected above its cleanup level in any other TVR/Old MATES well. Overall, the TCE concentrations reported in groundwater are not significantly elevated. The highest TCE concentration was reported in well TVR-1 at 8.3 $\mu\text{g/L}$ (fall). TCE

was detected below its cleanup level during both spring and fall events in wells 815-2, MTS-1, and TVR-5. Cis-1,2-DCE was not detected above its cleanup level in any well sampled during 2017 (see Table 5).

TCE and cis-1,2-DCE were not detected in either of the 2017 spring or fall events in the samples collected from the Pomona and PAIC domestic production wells.

Results from the statistical analyses of the data are compiled on Table 6 and summarized below:

- Overall statistically significant downward trends for TCE concentrations are observed in seven TVR/Old MATES wells (815-2, MTS-1, MTS-2, MTS-4, TVR-1, TVR-3, and TVR-7).
- An overall downward trend for TCE was observed in TVR/Old MATES wells TVR-2 and TVR-5; however, the trends are not considered statistically significant.
- An overall upward trend for TCE was seen in one TVR/Old MATES well (TVR-6); however, the trend is not considered statistically significant.

The TCE concentration in well TVR-6 (located near the PAIC production well with an overall, not statistically significant, upward trend in TCE concentration) has been above 5 µg/L in 16 of 23 samples collected since sampling began in March 2006. The highest concentration of TCE from well TVR-6 was 13 µg/L in 2010. The 2017 spring sample from TVR-6 was below 5 µg/L (4.7).

The TCE concentration in well TVR-7 (located near the Pomona production well with an overall statistically significant downward trend in TCE concentration) has been above 5 µg/L in 22 of 23 samples collected since sampling began in 2006. The highest concentration of TCE from well TVR-7 was 43 µg/L in August 2006. Both the 2017 spring and fall samples from TVR-7 were above 5 µg/L (7.9 µg/L and 6.4 µg/L during spring and fall, respectively).

Since TCE concentrations are trending downward in most of the monitoring wells at the site, and the overall upward trend at TVR-6 is not considered statistically significant, it is believed that installing one or more additional monitoring wells downgradient of TVR-6 is not warranted at this time.

3.3 DATA QUALITY REVIEW AND VERIFICATION

A data quality review was completed on the laboratory data from the spring and fall 2017 sampling events. The data quality review documentation is included in Appendix B. The data was reviewed by a party independent from the laboratory for adherence to the project quality control requirements and for usability. The review found that the data quality objectives for both the FTP and TVR/Old MATES sites during the spring and fall events were met. The data are considered acceptable for use and for comparison with other site data.

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TABLES

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Table 1
Monitoring Well Construction Details
 Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

Well ID	Elevation at TOC (ft AMSL)	Ground Surface Elevation (ft AMSL)	Easting UTM (m)	Northing UTM (m)	Total Depth (ft)	Screen Interval (ft bgs)
Fire Training Pit Monitoring Wells						
FTP-1	1,467.72	1,464.59	695828.3	5173198.0	21.00	8 – 18
FTP-13	1,473.07	1,470.96	695878.5	5173153.0	25.00	10 – 20
FTP-14	1,457.48	1,455.35	695771.4	5173185.2	22.00	12 – 22
FTP-15	1,460.88	1,458.72	695783.1	5173228.9	20.00	10 – 20
FTP-16	1,444.81	1,442.68	695722.0	5173050.7	30.00	20 – 30
TVR/Old Mates Monitoring Wells						
815-2	1,304.28	1,301.86	694687.7	5172445.5	132.00	115 – 130
MMP-1	1,301.37	1,298.39	694553.4	5172215.3	100.50	88 – 98
MMP-2	1,301.31	1,298.55	694529.6	5172207.9	75.50	64 – 74
MRC-2	1,312.11	1,309.64	694558.9	5172939.9	113.50	101 – 111
MTS-1	1,361.02	1,359.05	695196.9	5172404.6	127.00	115 – 125
MTS-2	1,351.88	1,348.79	695135.9	5172405.4	113.00	101 – 111
MTS-3	1,362.36	1,362.62	695366.1	5172439.6	72.00	62 – 72
MTS-4	1,331.88	1,332.14	695078.6	5172347.7	97.00	82 – 97
TVR-1	1,320.17	1,317.32	694936.0	5172286.6	105.00	93 – 103
TVR-2	1,317.56	1,314.18	694910.0	5172337.7	95.00	83 – 93
TVR-3	1,310.60	1,310.86	694872.9	5172282.5	158.00	143 – 158
TVR-5	1,302.04	1,299.42	694704.2	5172275.0	142.00	132 – 142
TVR-6	1,310.06	1,310.30	694866.4	5172214.0	139.00	139 – 149
TVR-7	1,310.95	1,311.63	694882.5	5172255.6	140.00	140 – 150

Abbreviations and Acronyms:

ft AMSL – feet above mean sea level
 ft bgs – feet below ground surface
 ID – identification
 m – meter
 TOC – top-of-casing
 UTM – Universal Transverse Mercator

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Table 2
Depth-to-Water Measurements and Chemicals of Concern Concentrations
 Fire Training Pit, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/bgs)	Groundwater Elevation (ft/amsl)	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
FTP-1 1467.72	1-Mar-93	–	–	–	2,600,000J	3,500	50U	50U	60.0	1,100.0
	1-Jul-99	13.00	1,454.72	2,300	34,000J	1598J	7.5	0.074J	4.4	16.66J
	1-Nov-00	11.40	1,456.32	8,300	140,000J	450	7.7	4.7J	3.0J	41.2J
	1-May-01	14.21	1,453.51	6,800	750,000J	3540J	3.7U	0.77U	1.6U	52.0
	30-Jan-04	12.93	1,454.79	3,900	4,400	193	10.6	0.5U	3.8	9.4
	22-Mar-05	13.61	1,454.11	4,110	10,500	116	13.0	2.5U	4.6	2.8
	22-Aug-05	13.43	1,454.29	25,100	40,000	218	22.5	5U	7.2	10U
	21-Mar-06	15.53	1,452.19	1,000U	45,000	238	5U	5U	5U	10U
	8-Aug-06	11.54	1,456.18	2,600	25,000	93	6.3	1U	3.6	1.3
	21-Mar-07	15.59	1,452.13	2,300	35,500	150	4.0	0.5U	2.0	0.7
	19-Sep-07	12.49	1,455.23	1,300	19,000	190	7.1	0.5U	3.4	2.5
	18-Mar-08	13.21	1,454.51	5,120	11,400	500U	11.3	1.2	5.5	5.5
	Duplicate	18-Mar-08	13.21	1,454.51	4,830	8,230	500U	–	–	–
Duplicate	19-Sep-08	12.24	1,455.48	4,270	4,350	500U	10.9	0.5U	4.6	3.0
Duplicate	19-Sep-08	12.24	1,455.48	4,480	5,000	500U	-	–	–	–
Duplicate	23-Mar-09	13.72	1,454.00	2,200	32,900	500U	5.7	0.5U	3.3	2.6
Duplicate	23-Mar-09	13.72	1,454.00	1,950	28,800	500U	–	–	–	–
Duplicate	23-Sep-09	12.90	1,454.82	2,940	8,690	500U	10.7	0.5U	6.1	4.0
Duplicate	23-Sep-09	12.90	1,454.82	2,940	–	–	–	–	–	–
Duplicate	16-Mar-10	13.82	1,453.90	1,800	20,000	5,500	6.6	1U	3.8	3.5
Duplicate	16-Mar-10	13.82	1,453.90	1,800	19,000	5,400	–	–	–	–
Duplicate	28-Sep-10	11.33	1,456.39	2,800	35,000	11,000	9.4	0.5U	4.4	0.6
Duplicate	28-Sep-10	11.33	1,456.39	2,600	28,000	11,000	–	–	–	–
	22-Mar-11	13.00	1,454.72	1,900	23,000	4,600	4.7	0.5U	3.7	0.7
	21-Sep-11	11.34	1,456.38	1,500	17,000	5,600	7.4	0.5U	4.7	1.4
	27-Mar-12	13.27	1,454.45	5,400	38,000	5,700	3.8	0.5U	3.8	0.9
	20-Aug-12	11.21	1,456.51	1,100	30,000	13,000	6.5	0.5U	5.0	1.6
	20-Mar-13	13.54	1,454.18	7,600	110,000	7,900	3.7	0.2	4.5	0.8
	25-Sep-13	13.52	1,454.20	2,200	28,000	1,700	5.4	0.2	5.9	1.5

Table 2 (continued)
Depth-to-Water Measurements and Chemicals of Concern Concentrations
 Fire Training Pit, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/bgs)	Groundwater Elevation (ft/amsl)	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
FTP-1 Duplicate	11-Mar-14	14.25	1,453.47	2,000	14,000	1,700	3.4	0.2	4.5	0.95
	22-Sep-14	13.60	1,454.12	1,100	22,000	3,400	6.4	0.22J	6.6	1.49
	19-Mar-15	14.0	1,453.72	2,000	17,000	2,000	4.3	0.26J	4.9	1.38
	22-Sep-15	13.16	1,454.56	1,300	13,000	2,600	6.0	0.41J	6.0	1.51
	16-Mar-16	14.03	1,448.69	710Y	17,000	2,800	3.1	0.52	3.5	0.18J
	16-Mar-16	14.03	1,448.69	680Y	14,000	2,700	2.9	0.25J	3.4	0.18J
	21-Sept-16	11.59	1,456.13	1,500	30,000	5,500	5.1	0.16J	5.9	0.23J
	29-Mar-17	13.6	1,454.12	930	17,000	2,400	1.3	0.14J	2.5	0.36J
12-Sep-17	10.96	1,456.76	1,000	35,000	4,000	4.1	0.54	6.4	0.78J	
FTP-13 1473.07	1-Jul-99	16.25	1,456.82	100U	240U	1	0.4U	0.4U	0.4U	1.2U
	1-Nov-00	16.79	1,456.28	ND	240U	0.19U	0.4U	0.4U	0.4U	1.2U
	1-May-01	16.65	1,456.42	100U	240U	0.192U	0.4U	0.4U	0.4U	1.2U
	30-Jan-04	15.50	1,457.57	100U	100U	0.7U	0.5U	0.5U	0.5U	1U
	22-Mar-05	16.71	1,456.36	100U	100U	1U	0.5U	0.5U	0.5U	1U
	22-Aug-05	16.80	1,456.27	–	–	–	–	–	–	–
	21-Mar-06	12.66	1,460.41	100U	100U	1U	0.5U	0.5U	0.5U	1U
	8-Aug-06	12.57	1,460.50	–	–	–	–	–	–	–
	21-Mar-07	14.22	1,458.85	250U	100U	1.5U	0.5U	0.5U	0.5U	1U
	19-Sep-07	15.14	1,457.93	–	–	–	–	–	–	–
	18-Mar-08	15.05	1,458.02	–	–	–	–	–	–	–
	19-Sep-08	15.54	1,457.53	–	–	–	–	–	–	–
	23-Mar-09	16.06	1,457.01	–	–	–	–	–	–	–
	23-Sep-09	15.15	1,457.92	–	–	–	–	–	–	–
16-Mar-10	14.72	1,458.35	–	–	–	–	–	–	–	
FTP-13	28-Sep-10	11.85	1,461.22	–	–	–	–	–	–	–
	22-Mar-11	13.02	1,460.05	–	–	–	–	–	–	–
	21-Sep-11	12.22	1,460.85	–	–	–	–	–	–	–
	27-Mar-12	13.85	1,459.22	–	–	–	–	–	–	–

Table 2 (continued)
Depth-to-Water Measurements and Chemicals of Concern Concentrations
 Fire Training Pit, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/bgs)	Groundwater Elevation (ft/amsl)	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
FTP-13 (Cont.)	20-Aug-12	11.27	1,461.80	–	–	–	–	–	–	–
	20-Mar-13	13.90	1,459.17	–	–	–	–	–	–	–
	25-Sep-13	13.47	1,459.60	–	–	–	–	–	–	–
	11-Mar-14	16.50	1,456.57	–	–	–	–	–	–	–
	22-Sep-14	–	–	–	–	–	–	–	–	–
	19-Mar-15	14.32	1,458.75	–	–	–	–	–	–	–
	22-Sep-15	–	–	–	–	–	–	–	–	–
	16-Mar-16	11.72	1,461.35	–	–	–	–	–	–	–
	21-Sep-16	11.59	1,461.48	–	–	–	–	–	–	–
	29-Mar-17	12.45	1,460.60	–	–	–	–	–	–	–
12-Sep-17	11.45	1,461.62	–	–	–	–	–	–	–	
FTP-14 1457.48	1-Jul-99	17.63	1,439.85	100U	480J	0.192U	0.4U	0.4U	0.4U	1.2U
	1-Nov-00	18.28	1,439.20	100U	240U	0.19U	0.4U	0.028J	0.4U	1.2U
	1-May-01	18.69	1,438.79	2,100U	170J	0.19U	0.4U	0.4U	0.4U	1.2U
	30-Jan-04	17.46	1,440.02	100U	100U	0.7U	0.5U	0.5U	0.5U	1U
	22-Mar-05	17.83	1,439.65	310	400	1U	0.5U	0.5U	0.5U	1U
	22-Aug-05	18.02	1,439.46	260	330	1U	0.5U	0.5U	0.5U	1U
	21-Mar-06	17.92	1,439.56	1,000U	400	1U	0.5U	0.5U	0.5U	1U
	8-Aug-06	17.49	1,439.99	200	–	–	0.5U	0.5U	0.5U	1U
	21-Mar-07	17.59	1,439.89	250U	100U	1.5U	0.5U	0.5U	0.5U	1U
	19-Sep-07	17.47	1,440.01	500U	250	1.5U	0.5U	0.5U	0.5U	1U
	18-Mar-08	17.70	1,439.78	210	261	500U	–	–	–	–
	19-Sep-08	17.58	1,439.90	500U	100U	500U	–	–	–	–
	23-Mar-09	17.81	1,439.67	500U	–	–	–	–	–	–
23-Sep-09	17.84	1,439.64	500U	209	500U	–	–	–	–	
FTP-14	16-Mar-10	18.00	1,439.48	53	290	440	–	–	–	–
	28-Sep-10	17.68	1,439.80	55	350	330	–	–	–	–
	22-Mar-11	17.65	1,439.83	57	350	240U	–	–	–	–
	21-Sep-11	17.64	1,439.84	50U	–	–	–	–	–	–

Table 2 (continued)
Depth-to-Water Measurements and Chemicals of Concern Concentrations
 Fire Training Pit, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/bgs)	Groundwater Elevation (ft/amsl)	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
FTP-14 (Cont.) Duplicate	27-Mar-12	17.68	1,439.80	50	420	420	–	–	–	–
	20-Aug-12	16.93	1,440.55	59	170	240	–	–	–	–
	20-Mar-13	17.86	1,439.62	250U	150	200U	–	–	–	–
	25-Sep-13	18.94	1,438.54	250U	240	200U	–	–	–	–
	11-Mar-14	18.20	1,439.28	250U	250	200U	–	–	–	–
	11-Mar-14	18.20	1,439.28	250U	240	200U	–	–	–	–
	22-Sep-14	18.60	1,438.88	22	290	360	–	–	–	–
	19-Mar-15	18.76	1,438.72	83J	190	120J	–	–	–	–
	22-Sep-15	18.81	1,438.67	46J	210	110	–	–	–	–
	16-Mar-16	18.62	1,438.86	31	230	130	–	–	–	–
	21-Sep-16	17.89	1,439.59	21J	170	160	–	–	–	–
	29-Mar-17	18.15	1,439.33	50J	170J	90J	–	–	–	–
12-Sep-17	17.64	1,439.84	37J	220	110	–	–	–	–	
FTP-15 1460.88	1-Jul-99	16.68	1,444.20	100U	240U	0	0.4U	0.4U	0.4U	1.2U
	1-Nov-00	18.00	1,442.88	100U	240U	0.19U	0.4U	0.052J	0.4U	0.042J
	1-May-01	17.98	1,442.90	100U	240U	0.192U	0.4U	0.4U	0.4U	1.2U
	30-Jan-04	16.58	1,444.30	100U	100U	0.7U	0.5U	0.5U	0.5U	1U
	22-Mar-05	17.89	1,442.99	100U	100U	1U	0.5U	0.5U	0.5U	1U
	22-Aug-05	17.91	1,442.97	100U	100U	1U	0.5U	0.5U	0.5U	1U
	21-Mar-06	17.93	1,442.95	100U	100U	–	0.5U	0.5U	0.5U	1U
	8-Aug-06	16.79	1,444.09	100U	100U	–	0.5U	0.5U	0.5U	1U
	21-Mar-07	17.91	1,442.97	250U	100U	1.5U	0.5U	0.5U	0.5U	1U
	19-Sep-07	16.93	1,443.95	500U	100U	–	0.5U	0.5U	0.5U	1U
	18-Mar-08	17.95	1,442.93	100U	100U	500U	–	–	–	–
19-Sep-08	17.31	1,443.57	500U	100U	500U	–	–	–	–	
FTP-15	23-Mar-09	17.97	1,442.91	500U	100U	500U	–	–	–	–
	23-Sep-09	17.87	1,443.01	500U	100U	500U	–	–	–	–
	16-Mar-10	17.96	1,442.92	50U	100U	240U	–	–	–	–
	28-Sep-10	16.62	1,444.26	50U	180	440	–	–	–	–

Table 2 (continued)
Depth-to-Water Measurements and Chemicals of Concern Concentrations
 Fire Training Pit, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/bgs)	Groundwater Elevation (ft/amsl)	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
FTP-15 (Cont.) Duplicate Duplicate Duplicate	22-Mar-11	17.85	1,443.03	50U	120U	240U	–	–	–	–
	22-Mar-11	17.85	1,443.03	50U	120U	240U	–	–	–	–
	21-Sep-11	16.81	1,444.07	50U	–	–	–	–	–	–
	27-Mar-12	17.45	1,443.43	50U	150	370	–	–	–	–
	20-Aug-12	16.03	1,444.85	150	120	240U	–	–	–	–
	20-Aug-12	16.03	1,444.85	50U	120	240U	–	–	–	–
	20-Mar-13	16.77	1,444.11	250U	130	200U	–	–	–	–
	25-Sep-13	16.62	1,444.26	250U	100U	200U	–	–	–	–
	25-Sep-13	16.62	1,444.26	250U	110	200U	–	–	–	–
	11-Mar-14	17.80	1,443.08	250U	100U	200U	–	–	–	–
	22-Sep-14	18.30	1,442.58	14J	46J	110J	–	–	–	–
	19-Mar-15	17.91	1,442.97	250U	55J	180J	–	–	–	–
	22-Sep-15	16.22	1,444.66	250U	46J	80J	–	–	–	–
	16-Mar-16	17.92	1,442.96	250U	55J	130	–	–	–	–
	21-Sep-16	14.6	1,446.28	250U	150	210	–	–	–	–
	29-Mar-17	16.66	1,444.22	14J	130J	120J	–	–	–	–
12-Sep-17	12.27	1,448.60	15J	210	130	–	–	–	–	
FTP-16 1444.81	1-Jul-99	26.32	1,418.49	100U	360J	2	0.4U	0.4U	0.4U	1.2U
	1-Nov-00	26.51	1,418.30	100U	210J	0.19U	0.4U	0.064J	0.4U	0.043J
	1-May-01	26.41	1,418.40	100U	240U	0.188U	0.4U	0.4U	0.4U	1.2U
	30-Jan-04	26.34	1,418.47	100U	100U	0.7U	0.5U	0.5U	0.5U	1U
	22-Mar-05	26.77	1,418.04	100U	100U	1U	0.5U	0.5U	0.5U	1U
	22-Aug-05	26.49	1,418.32	100U	100U	1U	0.5U	0.5U	0.5U	1U
	21-Mar-06	26.05	1,418.76	100U	100U	1U	0.5U	0.5U	0.5U	1U
	8-Aug-06	26.11	1,418.70	100U	200	1U	0.5U	0.5U	0.5U	1U
	21-Mar-07	26.15	1,418.66	250U	100U	1.5U	0.5U	0.5U	0.5U	1U
19-Sep-07	26.12	1,418.69	500U	100U	–	0.5U	0.5U	0.5U	1U	

Table 2 (continued)
Depth-to-Water Measurements and Chemicals of Concern Concentrations
 Fire Training Pit, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/bgs)	Groundwater Elevation (ft/amsl)	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
FTP-16 1444.81 (Cont.)	18-Mar-08	26.09	1,418.72	100U	100U	500U	–	–	–	–
FTP-16	19-Sep-08	26.18	1,418.63	500U	100U	500U	–	–	–	–
	23-Mar-09	26.20	1,418.61	500U	100U	500U	–	–	–	–
	23-Sep-09	26.28	1,418.53	500U	140	500U	–	–	–	–
	16-Mar-10	26.25	1,418.56	50U	180	470	–	–	–	–
	28-Sep-10	26.05	1,418.76	50U	320	450	–	–	–	–
	22-Mar-11	26.15	1,418.66	50U	310	240U	–	–	–	–
	21-Sep-11	26.16	1,418.65	50U	–	–	–	–	–	–
	27-Mar-12	26.15	1,418.66	50U	280	470	–	–	–	–
	20-Aug-12	25.93	1,418.88	50U	200	350	–	–	–	–
	20-Mar-13	26.29	1,418.52	250U	130	200U	–	–	–	–
	25-Sep-13	26.50	1,418.31	250U	160	200U	–	–	–	–
	11-Mar-14	26.30	1,418.51	250U	150	200U	–	–	–	–
	22-Sep-14	26.35	1,418.46	250U	290	180	–	–	–	–
	19-Mar-15	26.19	1,418.62	250U	110J	76J	–	–	–	–
	22-Sep-15	26.09	1,418.72	250U	300	540	–	–	–	–
	Duplicate	16-Mar-16	26.12	1,422.69	250U	200	–	–	–	–
21-Sep-16		26.0	1,422.81	250U	160	–	–	–	–	–
29-Mar-17		26.33	1,418.48	250U	130J	120J	–	–	–	–
29-Mar-17		26.33	1,418.48	250U	120J	100J	–	–	–	–
12-Sep-17		25.97	1,418.84	250U	190	160	–	–	–	–

Table 2 (continued)
Depth-to-Water Measurements and Chemicals of Concern Concentrations
 Fire Training Pit, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/bgs)	Groundwater Elevation (ft/amsl)	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
MTCA Method A Cleanup Level				800	500	500	5	1,000	700	1,000
MTCA Method B Cleanup Level				–	–	–	–	–	–	–

Notes:

BOLD – Analyte detected above laboratory reporting limit.

SHADE – Analyte detected above Model Toxics Control Act (MTCA) cleanup level.

– = Not applicable, not sampled

Abbreviations and Acronyms:

µg/L – micrograms per liter

DTW – depth-to-water

ft/amsl – feet above mean sea level

ft/bgs – feet below ground surface

ID – identification

J – estimated concentration

ND – non-detect

TOC – top-of-casing elevation above mean sea level in feet

TPH-D – total petroleum hydrocarbons – diesel range

TPH-G – total petroleum hydrocarbons – gasoline range

TPH-O – total petroleum hydrocarbons – heavy oil range

U – Analyte not detected above laboratory practical quantitation limit (PQL).

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Table 3
Selected VOC, PAH, and PCB Concentrations
 Fire Training Pit, Yakima Training Center, Washington

Well ID	Date	TCE (µg/L)	cis-DCE (µg/L)	Vinyl Chloride (µg/L)	Methylene Chloride (µg/L)	Bis-(2-ethylhexyl) phthalate (µg/L)	Fluorene (µg/L)	Total Naphthalenes ¹ (µg/L)	Total PCBs (µg/L)
FTP-1	1-Mar-93	50U	50U	100U	110B,J	270B,J	–	905U	70U
	1-Jul-99	0.066J	0.4U	0.4U	0.4U	29J	7,600J	0.243J	23.1U
	1-Nov-00	32J	70J	ND	3.7J	ND	11,000J	1.774U	ND
	1-May-01	4U	4U	4U	4U	54J	46,000	5.02J	0.81U
	30-Jan-04	0.5U	0.5U	0.5U	1.3	6.0	48,300	0.362U	–
	22-Mar-05	2.5U	2.5U	2.5U	12.5U	1.0	500U	0.905U	–
	22-Aug-05	5U	5U	5U	25U	0.5U	500U	0.905U	–
	21-Mar-06	5U	5U	5U	25U	5U	500U	9.05U	–
	8-Aug-06	1U	1U	1U	5U	2.4	500U	0.905U	–
	21-Mar-07	0.5U	0.5U	0.5U	2.5U	3.6	10,000U	0.1	–
	19-Sep-07	0.5U	0.5U	0.5U	2.5U	2.7	500U	0.905U	–
	18-Mar-08	0.5U	0.5U	0.5U	2.5U	10U	1,000U	118.2	–
	19-Sep-08	0.5U	0.5U	0.5U	2.5U	–	500U	52.6	–
Duplicate	23-Mar-09	0.5U	0.5U	0.5U	2.5U	–	9.1	93.2	–
	23-Mar-09	0.5U	0.5U	0.5U	2.5U	–	–	–	–
Duplicate	23-Sep-09	0.5U	0.5U	0.5U	2.5U	15U	5.4	121.1	–
	23-Sep-09	0.5U	0.5U	0.5U	2.5U	15U	-	-	–
	16-Mar-10	0.5U	0.5U	0.5U	2.5U	15U	3.3	13.9	–
	28-Sep-10	0.5U	0.5U	0.5U	2.5U	–	8.3	238	–
	22-Mar-11	0.5U	0.5U	0.5U	2.5U	ND	6.1	56.6	–
	21-Sep-11	0.5U	0.5U	0.5U	2.5U	0.96U	4.2	120	–
	27-Mar-12	0.5U	0.5U	0.5U	0.5U	5.6	10	66	–
	20-Aug-12	0.5U	0.5U	0.5U	0.5U	14U	5.5	242	–
	20-Mar-13	0.2U	0.2U	0.2U	1.0U	6.3	27	94	–
	25-Sep-13	0.2U	0.2U	0.2U	1U	3U	11	260	–
	11-Mar-14	0.2U	0.2U	0.2U	1U	9U	5.8	112	–
	22-Sep-14	0.11J	0.5U	0.5U	2U	10U	7.8	154	–
	19-Mar-15	0.12J	0.2U	0.1U	0.2U	4.9J	8.9J	105	–
22-Sep-15	0.17J	0.2U	0.1U	0.12J	2U	9.4J	218	–	
16-Mar-16	0.13J	0.2U	0.5U	2U	10U	6.9J	111	–	
21-Sep-16	0.18J	.02U	0.5U	2U	9.9U	7.9J	57	–	
29-Mar-17	0.11J	.02U	0.5U	2U	10U	10U	10U	–	

Table 3 (continued)

Selected VOC, PAH, and PCB Concentrations

Fire Training Pit, Yakima Training Center, Washington

Well ID	Date	TCE (µg/L)	cis- DCE (µg/L)	Vinyl Chloride (µg/L)	Methylene Chloride (µg/L)	Bis-(2-ethylhexyl) phthalate (µg/L)	Fluorene (µg/L)	Total Naphthalenes ¹ (µg/L)	Total PCBs (µg/L)
FTP-1	12-Sep-17	0.10J	.02U	0.5U	2U	8.2J	9.9J	84	–
FTP-13	1-Mar-93	-	-	-	-	6.3	–	–	-
	1-Jul-99	0.4U	0.4U	0.4U	0.4U	0.5U	240J	0.172U	0.665U
	1-Nov-00	0.4U	0.4U	0.4U	0.4U	–	ND	0.172U	ND
	1-May-01	0.4U	0.4U	0.4U	0.4U	0.5U	480U	0.174U	0.076U
	30-Jan-04	0.5U	0.5U	0.5U	0.5U	–	500U	0.362U	–
	22-Mar-05	0.5U	0.5U	0.5U	2.5U	0.5U	500U	0.905U	–
	22-Aug-05	–	–	–	–	–	–	–	–
	21-Mar-06	0.5U	0.5U	0.5U	2.5U	0.96U	500U	0.905U	–
	8-Aug-06	–	–	–	–	9.5U	–	–	–
21-Mar-07	0.5U	0.5U	0.5U	2.5U	0.95U	500U	0.1	–	
FTP-14	1-Mar-93	–	–	–	–	9.2	–	–	–
	1-Jul-99	0.4U	0.4U	0.4U	0.4U	5.2	480	0.174U	0.665U
	1-Nov-00	ND	ND	ND	ND	0.8	480U	0.172U	0.076U
	1-May-01	0.4U	0.4U	0.4U	0.4U	0.5U	480U	0.172U	0.0766U
	30-Jan-04	0.5U	0.5U	0.5U	0.5U	–	900	0.362U	–
	22-Mar-05	0.5U	0.5U	0.5U	2.5U	2.3	500U	0.905U	–
	22-Aug-05	0.5U	0.5U	0.5U	2.5U	30.0	500U	0.905U	–
	21-Mar-06	0.5U	0.5U	0.5U	2.5U	–	500U	0.905U	–
	8-Aug-06	0.5U	0.5U	0.5U	2.5U	2.1J	–	–	–
21-Mar-07	0.5U	0.5U	0.5U	2.5U	9.5U	500U	0.905U	–	
19-Sep-07	0.5U	0.5U	0.5U	2.5U	0.96U	500U	0.905U	–	
FTP-15	1-Mar-93	–	–	–	–	1.4	–	–	–
	1-Jul-99	0.4U	0.4U	0.4U	0.4U	1.2	250J	0.172U	0.665U
	1-Nov-00	ND	ND	ND	ND	1.0	480U	0.172U	0.076U
	1-May-01	0.4U	0.4U	0.4U	0.4U	–	470U	0.174U	0.076U
	30-Jan-04	0.5U	0.5U	0.5U	0.5U	–	500	0.362U	–
	22-Mar-05	0.5U	0.5U	0.5U	2.5U	2.3	500U	0.905U	–
	22-Aug-05	0.5U	0.5U	0.5U	2.5U	–	500U	0.905U	–
	21-Mar-06	0.5U	0.5U	0.5U	2.5U	–	600	–	–
	8-Aug-06	0.5U	0.5U	0.5U	2.5U	0.9J	500U	–	–
21-Mar-07	0.5U	0.5U	0.5U	2.5U	ND	500U	0.905U	–	

Table 3 (continued)

Selected VOC, PAH, and PCB Concentrations

Fire Training Pit, Yakima Training Center, Washington

Well ID	Date	TCE (µg/L)	cis-DCE (µg/L)	Vinyl Chloride (µg/L)	Methylene Chloride (µg/L)	Bis-(2-ethylhexyl) phthalate (µg/L)	Fluorene (µg/L)	Total Naphthalenes ¹ (µg/L)	Total PCBs (µg/L)
	19-Sep-07	0.5U	0.5U	0.5U	2.5U	0.63J	500U	–	–
FTP-16	1-Mar-93	–	–	–	–	1.8	–	–	–
	1-Jul-99	0.4U	0.4U	0.4U	0.4U	1.5	600J	0.172U	0.665U
	1-Nov-00	ND	0.4U	ND	ND	0.8	480U	0.172U	0.076U
	1-May-01	0.4U	0.4U	0.4U	0.4U	0.5U	470U	0.170U	0.0754U
	30-Jan-04	0.5U	0.5U	0.5U	0.5U	0.5U	500	0.362U	–
	22-Mar-05	0.5U	0.5U	0.5U	2.5U	1.8	500U	0.905U	–
	22-Aug-05	0.5U	0.5U	0.5U	2.5U	–	500U	0.905U	–
	21-Mar-06	0.5U	0.5U	0.5U	2.5U	–	500U	0.905U	–
	8-Aug-06	0.5U	0.5U	0.5U	2.5U	–	500U	0.905U	–
	21-Mar-07	0.5U	0.5U	0.5U	2.5U	–	500U	0.1	–
	19-Sep-07	0.5U	0.5U	0.5U	2.5U	–	500U	–	–
MTCA Method A Cleanup Level		5	–	0.2	5	–	–	160	0.1
MTCA Standard Method B Cleanup Level		–	70	–	–	6	640	–	–

Notes:

BOLD – Analyte detected above laboratory Practical Quantitation Limit (PQL).

SHADE – Analyte detected above Model Toxics Control Act (MTCA) cleanup level.

total naphthalenes – Total value for naphthalene and 2-methyl naphthalene.

¹ Total Naphthalenes is the total of naphthalene, 1-methyl naphthalene, and 2-methyl naphthalene.

Abbreviations and Acronyms:

– = Not applicable, not sampled

µg/L – micrograms per liter

cis-DCE – cis 1,2-dichloroethylene

ID – identification

J – estimated concentration

ND – non-detect

PCBs – polychlorinated biphenyls

TCE – trichloroethylene

U – Analyte not detected above laboratory practical quantitation limit (PQL).

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Table 4
Carcinogenic PAH and Total PAH Concentrations
 Fire Training Pit, Yakima Training Center, Washington

Well ID	Date	Benz(a) anthracene (µg/L)	Benzo(a) pyrene (µg/L)	Benzo(b) fluoranthene (µg/L)	Benzo(k) fluoranthene (µg/L)	Chrysene (µg/L)	Dibenz(a,h) anthracene (µg/L)	Indeno(1,2,3-cd) pyrene (µg/L)	TEQ Total ⁽¹⁾ (µg/L)	Total PAHs ⁽²⁾ (µg/L)
FTP-1	1-Mar-93	–	–	–	–	–	–	–	–	1,100.0
	1-Jul-99	–	–	–	–	–	–	–	–	140J
	1-Nov-00	–	–	–	–	–	–	–	–	33.0
	1-May-01	–	–	–	–	–	–	–	–	450J
	30-Jan-04	–	–	–	–	–	–	–	–	9.1
	22-Mar-05	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	ND	5.0
	22-Aug-05	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	ND	5.7
	21-Mar-06	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	ND	33.4
	8-Aug-06	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	ND	4.9
	21-Mar-07	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5	0.05	5.9
	19-Sep-07	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	ND	6.4
	18-Mar-08	10U	10U	10U	10U	10U	10U	10U	ND	89.6
	19-Sep-08	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	0.5U	ND	158.8
	23-Mar-09	0.1U	0.1U	0.1U	0.1U	0.54	0.1U	0.1U	0.005	135.8
	23-Sep-09	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	0.1U	ND	117.2
	16-Mar-10	0.29U	0.19U	0.39U	0.29U	0.19U	0.29U	0.29U	ND	107.2
	28-Sep-10	0.29U	0.19U	0.39U	0.29U	0.38	0.29U	0.29U	0.004	333.8
	22-Mar-11	0.29U	0.19U	0.39U	0.29U	0.19U	0.29U	0.29U	ND	269.5
	21-Sep-11	0.28U	0.19U	0.38U	0.28U	0.19U	0.28U	0.28U	ND	176.3
	27-Mar-12	0.1U	0.1U	0.1U	0.1U	0.64	0.1U	0.1U	0.01	246.14
20-Aug-12	0.29U	0.19U	0.38U	0.29U	0.19U	0.29U	0.29U	ND	265.25	
20-Mar-13	3.3U	3.3U	17U	17U	3.3U	3.3U	3.3U	ND	165.43	
25-Sep-13	1U	1U	5U	5U	1U	1U	1U	ND	326.30	
11-Mar-14	3U	3U	15U	15U	3U	3U	3U	ND	248.40	
22-Sep-14	10U	10U	10U	10U	10U	10U	10U	ND	177.80	
19-Mar-15	10U	10U	10U	10U	10U	10U	10U	ND	140.1	
22-Sep-15	10U	10U	10U	10U	10U	10U	10U	ND	251.0	

Table 4 (continued)

Carcinogenic PAH and Total PAH Concentrations

Fire Training Pit, Yakima Training Center, Washington

Well ID	Date	Benz(a) anthracene (µg/L)	Benzo(a) pyrene (µg/L)	Benzo(b) fluoranthene (µg/L)	Benzo(k) fluoranthene (µg/L)	Chrysene (µg/L)	Dibenz(a,h) anthracene (µg/L)	Indeno(1,2,3-cd) pyrene (µg/L)	TEQ Total ⁽¹⁾ (µg/L)	Total PAHs ⁽²⁾ (µg/L)
FTP-1 (Cont.)	16-Mar-16	10U	10U	10U	10U	10U	10U	10U	ND	124.5
	21-Sep-16	9.9U	9.9U	9.9U	9.9U	9.9U	9.9U	9.9U	ND	84.4
	29-Mar-17	10U	10U	10U	10U	10U	10U	10U	ND	ND
	12-Sep-17	10U	10U	10U	10U	10U	10U	10U	ND	126.1
FTP-13	1-Mar-93	–	–	–	–	–	–	–	–	–
	1-Jul-99	–	–	–	–	–	–	–	–	0.1
	1-Nov-00	–	–	–	–	–	–	–	–	ND
	1-May-01	–	–	–	–	–	–	–	–	0.096U
	30-Jan-04	–	–	–	–	–	–	–	–	0.2U
	22-Mar-05	–	–	–	–	–	–	–	–	0.5U
	22-Aug-05	–	–	–	–	–	–	–	–	–
	21-Mar-06	–	–	–	–	–	–	–	–	0.5U
	8-Aug-06	–	–	–	–	–	–	–	–	–
	21-Mar-07	–	–	–	–	–	–	–	–	0.5U
FTP-14	1-Mar-93	–	–	–	–	–	–	–	–	–
	1-Jul-99	–	–	–	–	–	–	–	–	0.096U
	1-Nov-00	–	–	–	–	–	–	–	–	0.095U
	1-May-01	–	–	–	–	–	–	–	–	0.095U
	30-Jan-04	–	–	–	–	–	–	–	–	0.2U
	22-Mar-05	–	–	–	–	–	–	–	–	0.5U
	22-Aug-05	–	–	–	–	–	–	–	–	0.5U
	21-Mar-06	–	–	–	–	–	–	–	–	0.5U
	8-Aug-06	–	–	–	–	–	–	–	–	–
	21-Mar-07	–	–	–	–	–	–	–	–	0.5U
	19-Sep-07	–	–	–	–	–	–	–	–	0.5U

Table 4 (continued)
Carcinogenic PAH and Total PAH Concentrations
 Fire Training Pit, Yakima Training Center, Washington

Well ID	Date	Benz(a) anthracene (µg/L)	Benzo(a) pyrene (µg/L)	Benzo(b) fluoranthene (µg/L)	Benzo(k) fluoranthene (µg/L)	Chrysene (µg/L)	Dibenz(a,h) anthracene (µg/L)	Indeno(1,2,3-cd) pyrene (µg/L)	TEQ Total ⁽¹⁾ (µg/L)	Total PAHs ⁽²⁾ (µg/L)
FTP-15	1-Mar-93	–	–	–	–	–	–	–	–	
	1-Jul-99	–	–	–	–	–	–	–	–	0.095U
	1-Nov-00	–	–	–	–	–	–	–	–	0.095U
	1-May-01	–	–	–	–	–	–	–	–	0.096U
	30-Jan-04	–	–	–	–	–	–	–	–	0.2U
	22-Mar-05	–	–	–	–	–	–	–	–	0.5U
	22-Aug-05	–	–	–	–	–	–	–	–	0.5U
	21-Mar-06	–	–	–	–	–	–	–	–	–
	8-Aug-06	–	–	–	–	–	–	–	–	–
21-Mar-07	–	–	–	–	–	–	–	–	0.5U	
FTP-16	1-Mar-93	–	–	–	–	–	–	–	–	
	1-Jul-99	–	–	–	–	–	–	–	–	0.095U
	1-Nov-00	–	–	–	–	–	–	–	–	0.095U
	1-May-01	–	–	–	–	–	–	–	–	0.094U
	30-Jan-04	–	–	–	–	–	–	–	–	0.2U
	22-Mar-05	–	–	–	–	–	–	–	–	0.5U
	22-Aug-05	–	–	–	–	–	–	–	–	0.5U
	21-Mar-06	–	–	–	–	–	–	–	–	0.5U
	8-Aug-06	–	–	–	–	–	–	–	–	0.5U
21-Mar-07	–	–	–	–	–	–	–	–	0.5U	
MTCA Method A Cleanup Level		–	0.1	–	–	–	–	–	0.1	–
TEF		0.1	1.0	0.1	0.1	0.01	0.1	0.1	–	–

Table 4 (continued)

Carcinogenic PAH and Total PAH Concentrations

Fire Training Pit, Yakima Training Center, Washington

Notes:

BOLD – analyte detected above laboratory practical quantitation limit (PQL).

SHADE – Analyte detected above Model Toxics Control Act (MTCA) cleanup level.

– = not applicable, not sampled

(1) $TEQ = \text{Benzo(a)pyrene} \times 1 + (\text{benzo(a)anthracene} + \text{benzo(b)fluoranthene} + \text{benzo(k)fluoranthene} + \text{dibenz(ah)anthracene} + \text{indeno(123-cd)pyrene}) \times 0.1 + \text{chrysene} \times 0.01$.

(2) – includes naphthalene, 2-methylnaphthalene, acenaphthene, acenaphthylene, phenanthrene, anthracene, fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(123-cd)pyrene, dibenz(ah)anthracene, benzo(ghi)perylene.

Abbreviations and Acronyms:

$\mu\text{g/L}$ – micrograms per liter

cPAH – carcinogenic polycyclic aromatic hydrocarbon

ID – identification

ND – non-detect

PAHs – polycyclic aromatic hydrocarbons

PCBs – polychlorinated biphenyls

TEF – toxicity equivalency factor (TEF total is sum of all concentrations of cPAHs listed in table multiplied by their TEF values).

TEQ – toxicity equivalency quotient. TEQ values calculated from the TEF in Table 708-2 in WAC 173-340-900.

U – Analyte not detected above laboratory PQL.

Table 5
Depth-to-Water Measurements; TCE and cis-1,2-DCE Concentrations
 TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/bgs)	Groundwater Elevation (ft/amsl)	TCE (µg/L)	cis-1,2- DCE (µg/L)	
815-2 1304.28	21-Mar-06	66.35	1,237.93	2.40	0.5U	
	1-Aug-06	54.17	1,250.11	3.30	0.5U	
	21-Mar-07	64.02	1,240.26	1.80	0.5U	
	19-Sep-07	55.56	1,248.72	3.20	0.5U	
	18-Mar-08	62.99	1,241.29	1.14	0.5U	
	19-Sep-08	54.95	1,249.33	1.94	0.5U	
	23-Mar-09	64.72	1,239.56	2.03	0.5U	
	23-Sep-09	58.03	1,246.25	1.06	0.5U	
	15-Mar-10	65.65	1,238.63	1U	1U	
	28-Sep-10	52.22	1,252.06	0.74	0.5U	
	21-Mar-11	60.85	1,243.43	1.00	0.5U	
	21-Sep-11	48.42	1,255.86	1.20	0.5U	
	28-Mar-12	60.20	1,244.08	0.89	0.5U	
	20-Aug-12	46.48	1,257.80	0.97	0.5U	
	Duplicate	20-Aug-12	46.48	1,257.80	0.99	0.5U
	Duplicate	19-Mar-13	58.62	1,245.66	0.67	0.2U
		19-Mar-13	58.62	1,245.66	0.66	0.2U
	Duplicate	26-Sep-13	54.37	1,249.91	0.65	0.2U
		26-Sep-13	54.37	1,249.91	0.72	0.2U
12-Mar-14		62.75	1,241.53	0.45	0.2U	
23-Sep-14		53.90	1,250.38	1.60	0.5U	
19-Mar-15		62.89	1,241.39	0.75	0.2U	
22-Sep-15		54.42	1,249.86	1.1	0.2U	
16-Mar-16		56.91	1,247.37	0.83	0.2U	
21-Sep-16		52.42	1,251.86	0.68	0.2U	
MMP-1 1301.37	30-Mar-17	56.2	1,248.08	0.61	0.2U	
	12-Sep-17	48.42	1,255.84	0.64	0.2U	
	1-Mar-93	–	1,239.41	5U	5U	
	28-Feb-95	–	–	–	–	
	1997 ¹	–	–	–	–	
	1-Aug-99	–	–	–	–	
	1-Jan-04	–	1,239.70	1U	1U	
	23-Mar-05	66.24	1,235.13	0.5U	0.5U	
	23-Aug-05	58.33	1,243.04	–	–	
	21-Mar-06	64.27	1,237.10	0.5U	0.5U	
	1-Aug-06	53.77	1,247.60	–	–	
21-Mar-07	62.02	1,239.35	0.5U	0.5U		
19-Sep-07	56.08	1,245.29	–	–		
18-Mar-08	61.12	1,240.25	0.5U	0.5U		
19-Sep-08	55.87	1,245.50	–	–		
23-Mar-09	62.83	1,238.54	0.5U	0.5U		

Table 5 (continued)

Depth-to-Water Measurements; TCE and cis-1,2-DCE Concentrations
 TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/bgs)	Groundwater Elevation (ft/amsl)	TCE (µg/L)	cis-1,2- DCE (µg/L)
MMP-1 1301.37 (Cont.)	23-Sep-09	58.47	1,242.90	–	–
MMP-1	15-Mar-10	63.37	1,238.00	1U	1U
	28-Sep-10	52.67	1,248.70	–	–
	21-Mar-11	59.02	1,242.35	0.5U	0.5U
	21-Sep-11	47.02	1,254.35	–	–
	28-Mar-12	57.83	1,243.54	0.5U	0.5U
	20-Aug-12	47.10	1,254.27	–	–
	19-Mar-13	55.90	1,245.47	0.2U	0.2U
	26-Sep-13	55.06	1,246.31	–	–
	12-Mar-14	59.80	1,241.57	0.2U	0.2U
	23-Sep-14	54.47	1,246.90	–	–
	19-Mar-15	60.04	1,241.33	–	–
	22-Sep-15	54.20	1,247.17	–	–
	16-Mar-16	55.50	1,245.87	–	–
	21-Sep-16	52.64	1,248.73	–	–
30-Mar-17	55.45	1,245.92	–	–	
12-Sep-17	49.30	1,252.07	–	–	
MMP-2 1301.31	1-Mar-93	–	1,239.35	5U	5U
	28-Feb-95	–	–	–	–
	1997 ¹	–	–	–	–
	1-Aug-99	–	–	–	–
	1-Jan-04	–	1,239.50	0.5U	0.5U
	23-Mar-05	66.25	1,235.06	0.5U	0.5U
	23-Aug-05	59.75	1,241.56	–	–
	21-Mar-06	64.54	1,236.77	0.5U	0.5U
	1-Aug-06	55.69	1,245.62	–	–
	21-Mar-07	62.13	1,239.18	0.5U	0.5U
	19-Sep-07	57.12	1,244.19	–	–
	18-Mar-08	61.27	1,240.04	–	–
	19-Sep-08	56.95	1,244.36	–	–
	23-Mar-09	62.92	1,238.39	–	–
	23-Sep-09	59.23	1,242.08	–	–
	15-Mar-10	63.48	1,237.83	–	–
	28-Sep-10	54.22	1,247.09	–	–
21-Mar-11	59.17	1,242.14	–	–	
21-Sep-11	50.44	1,250.87	–	–	
28-Mar-12	57.83	1,243.48	–	–	
20-Aug-12	48.51	1,252.80	–	–	
19-Mar-13	55.98	1,245.33	–	–	

Table 5 (continued)

Depth-to-Water Measurements; TCE and cis-1,2-DCE Concentrations
 TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/bgs)	Groundwater Elevation (ft/amsl)	TCE (µg/L)	cis-1,2- DCE (µg/L)
MMP-2 1301.31 (Cont.)	26-Sep-13	–	–	–	–
	12-Mar-14	–	–	–	–
MMP-2	23-Sep-14	55.70	1,245.61	–	–
	19-Mar-15	60.03	1,241.28	–	–
	22-Sep-15	55.90	1,245.41	–	–
	16-Mar-16	56.72	1,244.59	–	–
	21-Sep-16	55.05	1,246.26	–	–
	30-Mar-17	–	–	–	–
	12-Sep-17	–	–	–	–
MRC-2 1312.11	1-Mar-93	–	1,236.27	5U	5U
	28-Feb-95	–	–	–	–
	1997 ¹	–	–	–	–
	1-Aug-99	–	–	–	–
	1-Jan-04	–	–	–	–
	23-Mar-05	81.82	1,230.29	–	–
	23-Aug-05	76.09	1,236.02	–	–
MRC-2	21-Mar-06	–	–	–	–
	1-Aug-06	–	–	–	–
	21-Mar-07	–	–	0.5U [2]	0.5U [2]
	19-Sep-07	–	–	–	–
	18-Mar-08	74.59	1,237.52	0.5U	0.5U
	19-Sep-08	67.90	1,244.21	–	–
	23-Mar-09	75.90	1,236.21	0.5U	0.5U
	23-Sep-09	–	–	–	–
	16-Mar-10	77.38	1,234.73	1U	1U
	28-Sep-10	67.00	1,245.11	–	–
	21-Mar-11	73.20	1,238.91	0.5U	0.5U
	21-Sep-11	63.07	1,249.04	–	–
	28-Mar-12	72.42	1,239.69	0.5U	0.5U
	20-Aug-12	61.93	1,250.18	–	–
	19-Mar-13	71.36	1,240.75	–	–
	26-Sep-13	–	–	–	–
	12-Mar-14	–	–	–	–
23-Sep-14	68.05	1,244.06	–	–	
19-Mar-15	75.27	1,236.84	–	–	
22-Sep-15	69.02	1,243.09	–	–	
16-Mar-16	–	–	–	–	
21-Sep-16	68.9	1,243.21	–	–	

Table 5 (continued)

Depth-to-Water Measurements; TCE and cis-1,2-DCE Concentrations
 TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/bgs)	Groundwater Elevation (ft/amsl)	TCE (µg/L)	cis-1,2- DCE (µg/L)	
MTS-1 1361.02	1-Mar-93	–	1,257.88	7.90	5U	
	28-Feb-95	–	–	–	–	
	1997 ¹	–	–	–	–	
	1-Aug-99	–	–	–	–	
	1-Jan-04	–	1,261.96	5.60	0.5U	
MTS-1	23-Mar-05	104.71	1,256.31	7.60	0.5U	
	23-Aug-05	95.98	1,265.04	4.60	0.5U	
	21-Mar-06	100.98	1,260.04	6.30	0.5U	
	1-Aug-06	93.82	1,267.20	7.50	0.5U	
	21-Mar-07	99.62	1,261.40	6.80	0.5U	
	19-Sep-07	94.08	1,266.94	5.90	0.5U	
	18-Mar-08	99.36	1,261.66	5.56	0.5U	
	19-Sep-08	95.47	1,265.55	4.88	0.5U	
	23-Mar-09	100.72	1,260.30	6.36	0.5U	
	23-Sep-09	94.90	1,266.12	6.55	0.5U	
	16-Mar-10	99.92	1,261.10	4.90	1U	
	28-Sep-10	91.30	1,269.72	4.10	0.5U	
	21-Mar-11	96.35	1,264.67	4.90	0.5U	
	21-Sep-11	91.44	1,269.58	4.30	0.5U	
	28-Mar-12	95.98	1,265.04	4.10	0.5U	
	20-Aug-12	91.38	1,269.64	4.10	0.5U	
	19-Mar-13	95.43	1,265.59	3.40	0.2U	
	26-Sep-13	93.85	1,267.17	2.80	0.2U	
	12-Mar-14	97.35	1,263.67	2.70	0.2U	
	Duplicate	12-Mar-14	97.35	1,263.67	2.80	0.2U
		23-Sep-14	92.71	1,268.31	3.50	0.5U
	19-Mar-15	97.47	1,263.55	3.8	0.2U	
	22-Sep-15	92.74	1,268.28	4.0	0.2U	
	16-Mar-16	94.73	1,266.29	3.7	0.2U	
	21-Sep-16	92.90	1,268.12	3.2	0.2U	
	30-Mar-17	94.84	1,266.18	3.5	0.2U	
	12-Sep-17	92.97	1,268.05	3.5	0.2U	
MTS-2 1351.88	1-Mar-93	–	1,256.80	7.4	5U	
	28-Feb-95	–	–	–	–	
	1997 ¹	–	–	–	–	
	1-Aug-99	–	–	–	–	
	1-Jan-04	–	1,260.71	12.0	1U	
	23-Mar-05	96.15	1,255.73	25.0	0.5U	
	23-Aug-05	87.89	1,263.99	38.0	0.50	
	21-Mar-06	92.33	1,259.55	28.0	0.70	
	1-Aug-06	85.85	1,266.03	76.0	1.90	

Table 5 (continued)

Depth-to-Water Measurements; TCE and cis-1,2-DCE Concentrations
 TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/bgs)	Groundwater Elevation (ft/amsl)	TCE (µg/L)	cis-1,2- DCE (µg/L)
MTS-2 1351.88 (Cont.) Duplicate	21-Mar-07	90.96	1,260.92	32.0	0.60
	19-Sep-07	86.00	1,265.88	55.0	1.40
	18-Mar-08	90.68	1,261.20	18.6	0.50
	19-Sep-08	87.22	1,264.66	38.2	1.26
	19-Sep-08	87.22	1,264.66	37.3	1.21
	23-Mar-09	92.07	1,259.81	28.2	0.73
	23-Sep-09	86.65	1,265.23	43.2	1.01
	16-Mar-10	91.22	1,260.66	16.0	1U
28-Sep-10	83.75	1,268.13	6.3	0.5U	
MTS-2	21-Mar-11	87.70	1,264.18	7.4	0.5U
	21-Sep-11	83.79	1,268.09	4.6	0.5U
	28-Mar-12	87.26	1,264.62	4.4	0.5U
	20-Aug-12	83.67	1,268.21	6.5	0.5U
	19-Mar-13	86.76	1,265.12	6.8	0.2U
	26-Sep-13	85.65	1,266.23	5.6	0.2U
	12-Mar-14	88.60	1,263.28	8.4	0.2U
	23-Sep-14	84.68	1,267.20	24	0.47J
	19-Mar-15	88.66	1,263.22	8	0.2J
	22-Sep-15	89.81	1,262.07	11	0.22J
	16-Mar-16	86.13	1,265.75	6.9	0.18J
	21-Sep-16	84.79	1,267.09	5.0	0.15
	30-Mar-17	86.28	1,265.60	7.9	0.18J
12-Sep-17	84.88	1,267.00	5.3	0.12J	
MTS-3 1362.36	23-Mar-05	29.14	1,333.22	0.5U	0.5U
	23-Aug-05	27.73	1,334.63	–	–
	21-Mar-06	29.00	1,333.36	0.5U	0.5U
	1-Aug-06	26.86	1,335.50	–	–
	21-Mar-07	28.90	1,333.46	0.5U	0.5U
	19-Sep-07	26.43	1,335.93	–	–
	18-Mar-08	28.67	1,333.69	–	–
	19-Sep-08	26.62	1,335.74	–	–
	23-Mar-09	28.70	1,333.66	–	–
	23-Sep-09	26.65	1,335.71	–	–
	16-Mar-10	28.74	1,333.62	–	–
	28-Sep-10	25.53	1,336.83	–	–
	21-Mar-11	27.58	1,334.78	–	–
	21-Sep-11	25.41	1,336.95	–	–
	28-Mar-12	27.60	1,334.76	–	–
20-Aug-12	25.64	1,336.72	–	–	
19-Mar-13	27.87	1,334.49	–	–	
26-Sep-13	27.24	1,335.12	–	–	

Table 5 (continued)

Depth-to-Water Measurements; TCE and cis-1,2-DCE Concentrations
 TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/bgs)	Groundwater Elevation (ft/amsl)	TCE (µg/L)	cis-1,2- DCE (µg/L)
MTS-3 1362.36 (Cont.)	12-Mar-14	28.50	1,333.86	–	–
	23-Sep-14	26.45	1,335.91	–	–
	19-Mar-15	28.03	1,334.33	–	–
	22-Sep-15	27.76	1,334.60	–	–
	16-Mar-16	27.95	1,334.41	–	–
	21-Sep-16	25.55	1,336.81	–	–
	30-Mar-17	27.65	1,334.71	–	–
	12-Sep-17	25.65	1,336.71	–	–
MTS-4 1331.88	23-Mar-05	89.70	1,242.18	15.0	0.5U
	23-Aug-05	86.14	1,245.74	9.4	0.5U
	21-Mar-06	88.02	1,243.86	13.0	0.5U
	1-Aug-06	81.32	1,250.56	12.0	0.5U
	21-Mar-07	86.15	1,245.73	13.0	0.5U
	19-Sep-07	81.25	1,250.63	8.2	0.5U
	18-Mar-08	85.51	1,246.37	10.1	0.5U
	19-Sep-08	83.80	1,248.08	7.6	0.5U
	23-Mar-09	87.72	1,244.16	0.52	0.5U
	23-Sep-09	83.47	1,248.41	10.7	0.5U
	16-Mar-10	87.32	1,244.56	8.9	1U
	28-Sep-10	75.75	1,256.13	6.4	0.5U
	21-Mar-11	82.13	1,249.75	7.7	0.5U
	21-Sep-11	73.72	1,258.16	6.0	0.5U
MTS-4 Duplicate	28-Mar-12	81.19	1,250.69	7.3	0.5U
	20-Aug-12	72.60	1,259.28	5.3	0.5U
	19-Mar-13	79.52	1,252.36	6.2	0.2U
	26-Sep-13	78.85	1,253.03	4.9	0.23
	12-Mar-14	83.70	1,248.18	5.4	0.2U
	23-Sep-14	79.06	1,252.82	5.6	0.16J
	23-Sep-14	79.06	1,252.82	6.0	0.18J
	19-Mar-15	83.35	1,248.53	8.0	0.25J
	22-Sep-15	78.42	1,253.46	5.6	0.18J
	16-Mar-16	79.9	1,251.98	7.3	0.27J
	21-Sep-16	76.52	1,255.36	–	0.19J
	30-Mar-17	79.24	1,252.64	5.5	0.21J
	12-Sep-17	75.80	1,256.08	5.1	0.17J
TVR-1 1320.17	1-Mar-93	–	1,246.81	35.00	5U
	28-Feb-95	–	–	–	–
	1997 ¹	–	–	–	–
	1-Aug-99	–	–	–	–
	1-Jan-04	–	1,245.50	12.0	0.5U
	23-Mar-05	78.98	1,241.19	9.8	0.5U

Table 5 (continued)

Depth-to-Water Measurements; TCE and cis-1,2-DCE Concentrations
 TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/bgs)	Groundwater Elevation (ft/amsl)	TCE (µg/L)	cis-1,2- DCE (µg/L)
TVR-1 1320.17 (Cont.)	23-Aug-05	75.48	1,244.69	6.2	0.5U
	21-Mar-06	71.17	1,249.00	8.4	0.5U
	1-Aug-06	71.43	1,248.74	12.0	0.5U
	21-Mar-07	75.32	1,244.85	12.0	0.5U
	19-Sep-07	71.34	1,248.83	12.0	0.5U
	18-Mar-08	74.63	1,245.54	9.2	0.5U
	19-Sep-08	73.52	1,246.65	9.0	0.5U
TVR-1 Duplicate	23-Mar-09	76.76	1,243.41	8.8	0.5U
	23-Mar-09	76.76	1,243.41	9.0	0.5U
	23-Sep-09	73.40	1,246.77	8.6	0.5U
	16-Mar-10	76.50	1,243.67	5.8	1U
	29-Sep-10	67.05	1,253.12	3.2	0.5U
	21-Mar-11	71.58	1,248.59	6.9	0.5U
	21-Sep-11	64.61	1,255.56	8.7	0.5U
	28-Mar-12	70.63	1,249.54	7.3	0.5U
	20-Aug-12	63.45	1,256.72	7.9	0.5U
	19-Mar-13	69.00	1,251.17	6.8	0.2U
	26-Sep-13	69.35	1,250.82	5.9	0.2U
	12-Mar-14	73.10	1,247.07	5.4	0.2U
	22-Sep-14	70.45	1,249.72	4.7	0.5U
	19-Mar-15	72.60	1,247.57	4.5	0.2U
	22-Sep-15	69.70	1,250.47	3.8	0.2U
	16-Mar-16	69.9	1,250.27	5.7	0.2U
	21-Sep-16	67.12	1,253.05	6.1	0.08J
29-Mar-17	69.46	1,250.71	7.0	0.2U	
12-Sep-17	66.35	1,253.82	8.3	0.2U	
TVR-2 1317.56	1-Mar-93	–	1,247.03	14.0	5U
	28-Feb-95	–	–	–	–
	1997 ¹	–	–	–	–
	1-Aug-99	–	–	–	–
	1-Jan-04	–	1,245.30	3.60	1U
	23-Mar-05	76.96	1,240.60	4.40	0.5U
	23-Aug-05	72.13	1,245.43	3.40	0.5U
	21-Mar-06	74.22	1,243.34	3.30	0.5U
	1-Aug-06	67.69	1,249.87	2.90	0.5U
	21-Mar-07	72.55	1,245.01	2.60	0.5U
	19-Sep-07	68.19	1,249.37	1.70	0.5U
	18-Mar-08	71.91	1,245.65	3.37	0.5U
	19-Sep-08	70.15	1,247.41	–	–
	23-Mar-09	74.10	1,243.46	3.54	0.5U
23-Sep-09	70.50	1,247.06	–	–	

Table 5 (continued)

Depth-to-Water Measurements; TCE and cis-1,2-DCE Concentrations
 TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/bgs)	Groundwater Elevation (ft/amsl)	TCE (µg/L)	cis-1,2- DCE (µg/L)
TVR-2 1317.56 (Cont.)	16-Mar-10	73.75	1,243.81	3.20	1U
	29-Sep-10	63.72	1,253.84	–	–
	21-Mar-11	68.75	1,248.81	2.90	0.5U
	21-Sep-11	60.89	1,256.67	–	–
	28-Mar-12	68.06	1,249.50	2.8	0.5U
	20-Aug-12	59.84	1,257.72	–	–
TVR-2	19-Mar-13	66.52	1,251.04	2.6	0.2U
	26-Sep-13	66.35	1,251.21	–	–
	12-Mar-14	70.55	1,247.01	2.1	0.2U
	22-Sep-14	67.58	1,249.98	–	–
	19-Mar-15	70.34	1,247.22	2.6	0.2U
	22-Sep-15	66.53	1,251.03	–	–
	16-Mar-16	66.4	1,251.16	3.6	0.2U
	21-Sep-16	63.96	1,253.60	–	–
	29-Mar-17	65.94	1,251.62	–	–
12-Sep-17	66.46	1,251.10	–	–	
TVR-3 1310.60 Duplicate	23-Mar-05	69.63	1,240.97	43.0	1.30
	23-Aug-05	64.98	1,245.62	25.0	0.50
	21-Mar-06	67.32	1,243.28	26.0	0.5U
	1-Aug-06	60.93	1,249.67	17.0	0.5U
	21-Mar-07	65.64	1,244.96	33.0	0.5U
	19-Sep-07	61.53	1,249.07	15.0	0.5U
	18-Mar-08	64.98	1,245.62	21.0	0.5U
	19-Sep-08	63.50	1,247.10	10.0	0.5U
	23-Mar-09	67.11	1,243.49	14.8	0.5U
	23-Sep-09	63.87	1,246.73	14.3	0.5U
	23-Sep-09	63.87	1,246.73	14.0	0.5U
	16-Mar-10	66.83	1,243.77	17.0	1U
	29-Sep-10	57.00	1,253.60	11.0	0.5U
	21-Mar-11	61.80	1,248.80	14.0	0.5U
	21-Sep-11	54.07	1,256.53	10.0	0.5U
	28-Mar-12	61.20	1,249.40	12.0	0.5U
	20-Aug-12	53.12	1,257.48	8.0	0.5U
	19-Mar-13	59.52	1,251.08	9.2	0.2U
	26-Sep-13	59.65	1,250.95	6.6	0.2U
	12-Mar-14	63.50	1,247.10	8.2	0.2U
22-Sep-14	60.90	1,249.70	6.9	0.10J	
19-Mar-15	63.31	1,247.29	7.7	0.17J	
22-Sep-15	59.75	1,250.85	8.4	0.12J	
16-Mar-16	59.57	1,251.03	7.5	0.14J	
21-Sep-16	57.21	1,253.39	4.9	0.13J	

Table 5 (continued)

Depth-to-Water Measurements; TCE and cis-1,2-DCE Concentrations
 TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/bgs)	Groundwater Elevation (ft/amsl)	TCE (µg/L)	cis-1,2- DCE (µg/L)
TVR-3 1310.60 (Cont.)	30-Mar-17	59.35	1,251.25	6.1	0.11J
	12-Sep-17	56.16	1,254.44	2.9	0.2U
TVR-5 1302.04	21-Mar-06	60.48	1,241.56	1.6	0.5U
	1-Aug-06	51.50	1,250.54	1.0	0.5U
	21-Mar-07	58.53	1,243.51	1.2	0.5U
	19-Sep-07	53.35	1,248.69	1.1	0.5U
	18-Mar-08	57.81	1,244.23	1.0	0.5U
TVR-5	19-Sep-08	54.31	1,247.73	1.2	0.5U
	23-Mar-09	59.85	1,242.19	1.2	0.5U
Duplicate	23-Sep-09	55.81	1,246.23	16.0	0.5U
	16-Mar-10	59.91	1,242.13	3.5	0.5U
Duplicate	16-Mar-10	59.91	1,242.13	3.5	0.5U
	28-Sep-10	48.53	1,253.51	11.0	0.5U
Duplicate	28-Sep-10	48.53	1,253.51	11.0	0.5U
	21-Mar-11	54.90	1,247.14	2.4	0.5U
Duplicate	21-Mar-11	54.90	1,247.14	2.4	0.5U
	21-Sep-11	44.95	1,257.09	0.7	0.5U
Duplicate	21-Sep-11	44.95	1,257.09	0.5	0.5U
	28-Mar-12	54.25	1,247.79	0.7	0.5U
Duplicate	28-Mar-12	54.25	1,247.79	0.7	0.5U
	20-Aug-12	44.17	1,257.87	0.5U	0.5U
Duplicate	19-Mar-13	52.58	1,249.46	0.4	0.2U
	26-Sep-13	51.60	1,250.44	3.7	0.2U
Duplicate	12-Mar-14	56.40	1,245.64	0.4	0.2U
	22-Sep-14	52.52	1,249.52	6.6	0.5U
Duplicate	19-Mar-15	56.51	1,245.53	0.8	0.2U
	22-Sep-15	51.05	1,250.99	4.4	0.2U
Duplicate	16-Mar-16	51.58	1,250.46	0.49J	0.2U
	21-Sep-16	48.73	1,253.31	0.92	0.2U
Duplicate	31-Mar-17	51.05	1,250.99	0.26J	0.2U
	12-Sep-17	49.9	1,252.14	0.12J	0.2U
TVR-6 1310.06	21-Mar-06	67.03	1,243.03	6.8	0.5U
	1-Aug-06	60.88	1,249.18	7.7	0.5U
	21-Mar-07	65.19	1,244.87	5.0	0.5U
	19-Sep-07	61.50	1,248.56	2.8	0.5U
	18-Mar-08	64.98	1,245.08	2.9	0.5U
	19-Sep-08	63.39	1,246.67	1.7	0.5U
	23-Mar-09	66.68	1,243.38	2.2	0.5U
	23-Sep-09	63.62	1,246.44	10.6	0.5U
Duplicate	16-Mar-10	66.41	1,243.65	4.6	1U

Table 5 (continued)

Depth-to-Water Measurements; TCE and cis-1,2-DCE Concentrations
 TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/bgs)	Groundwater Elevation (ft/amsl)	TCE (µg/L)	cis-1,2- DCE (µg/L)
TVR-6 1310.06 (Cont.)	29-Sep-10	57.03	1,253.03	13.0	0.5U
	21-Mar-11	61.48	1,248.58	11.0	0.5U
	21-Sep-11	54.01	1,256.05	5.2	0.5U
	28-Mar-12	60.80	1,249.26	4.2	0.5U
	20-Aug-12	53.26	1,256.80	2.9	0.5U
	19-Mar-13	59.07	1,250.99	5.4	0.2U
	25-Sep-13	58.65	1,251.41	10	0.2U
TVR-6	12-Mar-14	62.80	1,247.26	8.8	0.2U
	23-Sep-14	59.94	1,250.12	11	0.090J
	19-Mar-15	62.61	1,247.45	8	0.2U
	22-Sep-15	59.50	1,250.56	9.9	0.2U
	16-Mar-16	59.49	1,250.57	8.0J	0.2U
	21-Mar-16	57.02	1,253.04	5.9	0.2U
	29-Mar-17	59.30	1,250.76	4.7	0.2U
TVR-7 1310.95 Duplicate Duplicate	12-Sep-17	56.10	1,253.96	1.7	0.2U
	21-Mar-06	67.89	1,243.06	38.0	1.30
	1-Aug-06	61.82	1,249.13	43.0	1.00
	21-Mar-07	66.10	1,244.85	42.0	0.80
	19-Sep-07	62.31	1,248.64	32.0	0.60
	18-Mar-08	65.45	1,245.50	28.3	0.77
	18-Mar-08	65.45	1,245.50	29.0	0.80
	19-Sep-08	64.30	1,246.65	20.7	0.5U
	23-Mar-09	67.51	1,243.44	21.6	0.56
	23-Sep-09	64.39	1,246.56	26.6	0.5U
	16-Mar-10	67.29	1,243.66	20.0	1U
	29-Sep-10	57.85	1,253.10	21.0	0.5U
	21-Mar-11	62.35	1,248.60	21.0	0.5U
	21-Sep-11	55.05	1,255.90	18.0	0.5U
	28-Mar-12	61.66	1,249.29	15.0	0.5U
	20-Aug-12	54.10	1,256.85	13.0	0.5U
	19-Mar-13	59.97	1,250.98	0.4	0.2U
	26-Sep-13	60.15	1,250.80	9.8	0.2U
	12-Mar-14	63.75	1,247.20	6.2	0.2U
	23-Sep-14	67.50	1,243.45	12.0	0.5U
19-Mar-15	63.60	1,247.35	10.0	0.2U	
19-Mar-15	63.60	1,247.35	10.0	0.2U	
22-Sep-15	60.45	1,250.50	10.0	0.2U	
16-Mar-16	60.43	1,250.52	10	0.2U	
21-Mar-16	57.92	1,253.03	8.2	0.2U	
30-Mar-17	60.27	1,250.68	7.9	0.2U	

Table 5 (continued)

Depth-to-Water Measurements; TCE and cis-1,2-DCE Concentrations
 TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/bgs)	Groundwater Elevation (ft/amsl)	TCE (µg/L)	cis-1,2- DCE (µg/L)
TVR-7 (Cont.)	12-Sep-17	57.04	1,253.91	6.4	0.2U
Marie Well	1-Mar-93	–	–	1.20	5U
PAIC Well	1-Mar-93	–	–	5U	5U
	28-Feb-95	–	–	0.1U	0.1U
	1997 ¹	–	–	0.5U	0.5U
	1-Aug-99	–	–	–	–
	1-Jan-04	–	–	–	–
	23-Mar-05	–	–	–	–
	23-Aug-05	–	–	–	–
	21-Mar-06	–	–	0.5U	0.5U
	1-Aug-06	–	–	–	–
	21-Mar-07	–	–	0.5U	0.5U
	19-Sep-07	–	–	0.5U	0.5U
	18-Mar-08	–	–	0.5U	0.5U
	19-Sep-08	–	–	0.5U	0.5U
	23-Mar-09	–	–	0.5U	0.5U
	23-Sep-09	–	–	0.5U	0.5U
	15-Mar-10	–	–	1U	1U
	29-Sep-10	–	–	0.5U	0.5U
	21-Mar-11	–	–	0.5U	0.5U
	22-Sep-11	–	–	0.5U	0.5U
	28-Mar-12	–	–	0.5U	0.5U
	20-Aug-12	–	–	0.5U	0.5U
	20-Mar-13	–	–	0.2U	0.2U
	25-Sep-13	–	–	0.2U	0.2U
12-Mar-14	–	–	0.2U	0.2U	
23-Sep-14	–	–	0.5U	0.5U	
19-Mar-15	–	–	0.1U	0.2U	
22-Sep-15	–	–	0.1U	0.2U	
16-Mar-16	–	–	0.1U	0.2U	
21-Sep-16	–	–	0.1U	0.2U	
30-Mar-17	–	–	0.1U	0.2U	
12-Sep-17	–	–	0.1U	0.2U	
Pomona Well	1-Mar-91	–	–	ND	ND
	1-Aug-92	–	–	0.5U	0.5U
	1-Mar-93	–	–	5U	5U
	28-Feb-95	–	–	–	–
	1997 ¹	–	–	ND	ND
	1-Aug-99	–	–	0.5U	0.5U

Table 5 (continued)

Depth-to-Water Measurements; TCE and cis-1,2-DCE Concentrations
 TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/bgs)	Groundwater Elevation (ft/amsl)	TCE (µg/L)	cis-1,2- DCE (µg/L)
Pomona Well (Cont.)	1-Jan-04	–	–	–	–
	23-Mar-05	–	–	–	–
	23-Aug-05	–	–	–	–
	21-Mar-06	–	–	0.5U	0.5U
	1-Aug-06	–	–	0.5U	0.5U
	21-Mar-07	–	–	0.5U	0.5U
	19-Sep-07	–	–	0.5U	0.5U
	18-Mar-08	–	–	–	–
	19-Sep-08	–	–	0.5U	0.5U
	23-Mar-09	–	–	0.5U	0.5U
	23-Sep-09	–	–	0.5U	0.5U
	16-Mar-10	–	–	1U	1U
	29-Sep-10	–	–	0.5U	0.5U
	21-Mar-11	–	–	0.5U	0.5U
	21-Sep-11	–	–	0.5U	0.5U
	28-Mar-12	–	–	0.5U	0.5U
	20-Aug-12	–	–	0.5U	0.5U
	19-Mar-13	–	–	0.2U	0.2U
	26-Sep-13	–	–	0.2U	0.2U
	12-Mar-14	–	–	0.2U	0.2U
23-Sep-14	–	–	0.5U	0.5U	
19-Mar-15	–	–	0.1U	0.2U	
22-Sep-15	–	–	0.1U	0.2U	
16-Mar-16	–	–	0.1U	0.2U	
21-Sep-16	–	–	0.1U	0.2U	
30-Mar-17	–	–	0.1U	0.2U	
12-Sep-17	–	–	0.1U	0.2U	
MTCA Method A Cleanup Level		–	–	5.0	–
MTCA Method B Cleanup Level		–	–	–	16

Notes:

¹ 1997 Sampling Event

BOLD – analyte detected above laboratory practical quantitation limit (PQL).

SHADE – Analyte detected above Model Toxics Control Act (MTCA) cleanup level.

– = not applicable, not sampled

Abbreviations and Acronyms:

µg/L – micrograms per liter

cis-1,2-DCE – cis-1,2-dichloroethene

DTW – depth-to-water

ft AMSL – feet above mean sea level

ft bgs – feet below ground surface

ID – identification

J – estimated concentration

ND – non-detect

TCE – trichloroethylene

TOC – top-of-casing elevation

U – Analyte not detected above laboratory PQL

Table 6

FTP-1 and TVR/OLD MATES Statistics Graphs
 Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

Site	Fire Training Pit			TVR / Old MATES							TVR / Old MATES							PAIC Well	Pomona Well
Well ID	FTP-1			815-2	MMP-1	MMP-2	MRC-2	MTS-1	MTS-2	MTS-3	MTS-4	TVR-1	TVR-2	TVR-3	TVR-5	TVR-6	TVR-7	PAIC Well	Pomona Well
Compound	TPH-G	TPH-D	TPH-O	TCE	TCE	TCE	TCE	TCE	TCE	TCE	TCE	TCE	TCE	TCE	TCE	TCE	TCE	TCE	TCE
	Descriptive Statistics			Descriptive Statistics							Descriptive Statistics								
First Sample Date	30-Jan-04			21-Mar-06	1-Mar-93	1-Mar-93	1-Mar-93	1-Jan-04	1-Jan-04	23-Mar-05	23-Mar-05	1-Jan-04	1-Jan-04	23-Mar-05	21-Mar-06	21-Mar-06	21-Mar-06	1-Mar-93	1-Mar-91
Last Sample Date	12-Sep-17			12-Sep-17	19-Mar-13	21-Mar-07	19-Mar-13	30-May-17	12-Sep-17	22-Sep-14	12-Sep-17	12-Sep-17	15-Mar-16	12-Sep-17	12-Sep-17	12-Sep-17	12-Sep-17	12-Sep-17	12-Sep-17
Number of Samples	27			24	11	5	8	26	27	3	26	27	15	26	24	24	24	26	28
Number of Non-Detects	1	0	7	1	11	5	8	0	0	3	0	0	0	0	0	0	0	24	24
Sample Mean	3,394	26,046	3,022	1.33	-	-	-	4.79	19.57	-	7.68	7.63	3.07	13.83	2.55	6.55	18.38	-	-
Standard Deviation	4,729	20,133	3,450	0.79	-	-	-	1.42	18.04	-	3.19	2.51	0.67	9.29	3.78	3.33	11.66	-	-
Minimum Concentration	710	4,350	93	0.45	-	-	-	2.7	4.4	-	0.52	3.2	1.7	2.9	0.12	1.7	0.38	-	-
Maximum Concentration	25,100	110,000	13,000	3.3	-	-	-	7.6	76	-	15	12	4.4	43	16	13	43	-	-
Date*	22-Aug-05	20-Mar-13	20-Aug-12	1-Aug-06	-	-	-	23-Mar-05	1-Aug-06	-	23-Mar-05	19-Sep-07	23-Mar-05	23-Mar-05	23-Sep-09	28-Sep-10	1-Aug-06	-	-
	Distribution of Data			Distribution of Data							Distribution of Data								
P Value	<0.0001	<0.0001	0.0002	0.0005	-	-	-	0.1732	0.0001	-	0.1915	0.2355	0.8347	0.0008	<0.0001	0.3157	0.0746	-	-
Normally Distributed?	No	No	No	No	-	-	-	Yes	No	-	Yes	Yes	Yes	No	No	Yes	Yes	-	-
Log P Value	0.3040	0.2975	0.0041	0.1784	-	-	-	-	0.0319	-	-	-	-	0.9635	0.6179	-	-	-	-
Log Normally Distributed?	Yes	Yes	No	Yes	-	-	-	-	No	-	-	-	-	Yes	Yes	-	-	-	-
	Trend Analysis			Trend Analysis							Trend Analysis								
Linear Regression P Value	0.0302	0.2950	-	<0.0001	-	-	-	<0.0001	-	-	0.0002	0.0002	0.2425	<0.0001	0.1236	0.3073	<0.0001	-	-
Slope	-0.00024	9.93 E-05	-	-3.197 E-04	-	-	-	-1.702 E-04	-	-	-0.0015	-0.0011	-0.0002	-0.0004	-0.00029	5.60 E-04	-0.0080	-	-
Trend**	Down	Up	-	Down	-	-	-	Down	-	-	Down	Down	Down	Down	Down	Up	Down	-	-
Statistically Significant?	No	No	-	Yes	-	-	-	Yes	-	-	Yes	Yes	No	Yes	No	No	Yes	-	-
Tau Statistic	-	-	0.493	-	-	-	-	-	-0.425	-	-	-	-	-	-	-	-	-	-
Two Tailed P Value	-	-	0.0004	-	-	-	-	-	0.0019	-	-	-	-	-	-	-	-	-	-
Trend	-	-	Up	-	-	-	-	-	Down	-	-	-	-	-	-	-	-	-	-
Statistically Significant?	-	-	Yes	-	-	-	-	-	Yes	-	-	-	-	-	-	-	-	-	-

Notes:
 - = Not applicable
 * = Date sample with highest concentration of TCE was collected from monitoring well
 ** = Trend for entire dataset not taking discontinuities into consideration
 TPH-G – gasoline range total petroleum hydrocarbons in micrograms per liter
 TPH-D – diesel range total petroleum hydrocarbons in micrograms per liter
 TPH-O – heavy oil range total petroleum hydrocarbons in micrograms per liter
 TCE – trichloroethylene in micrograms per liter

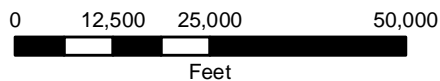
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FIGURES

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N

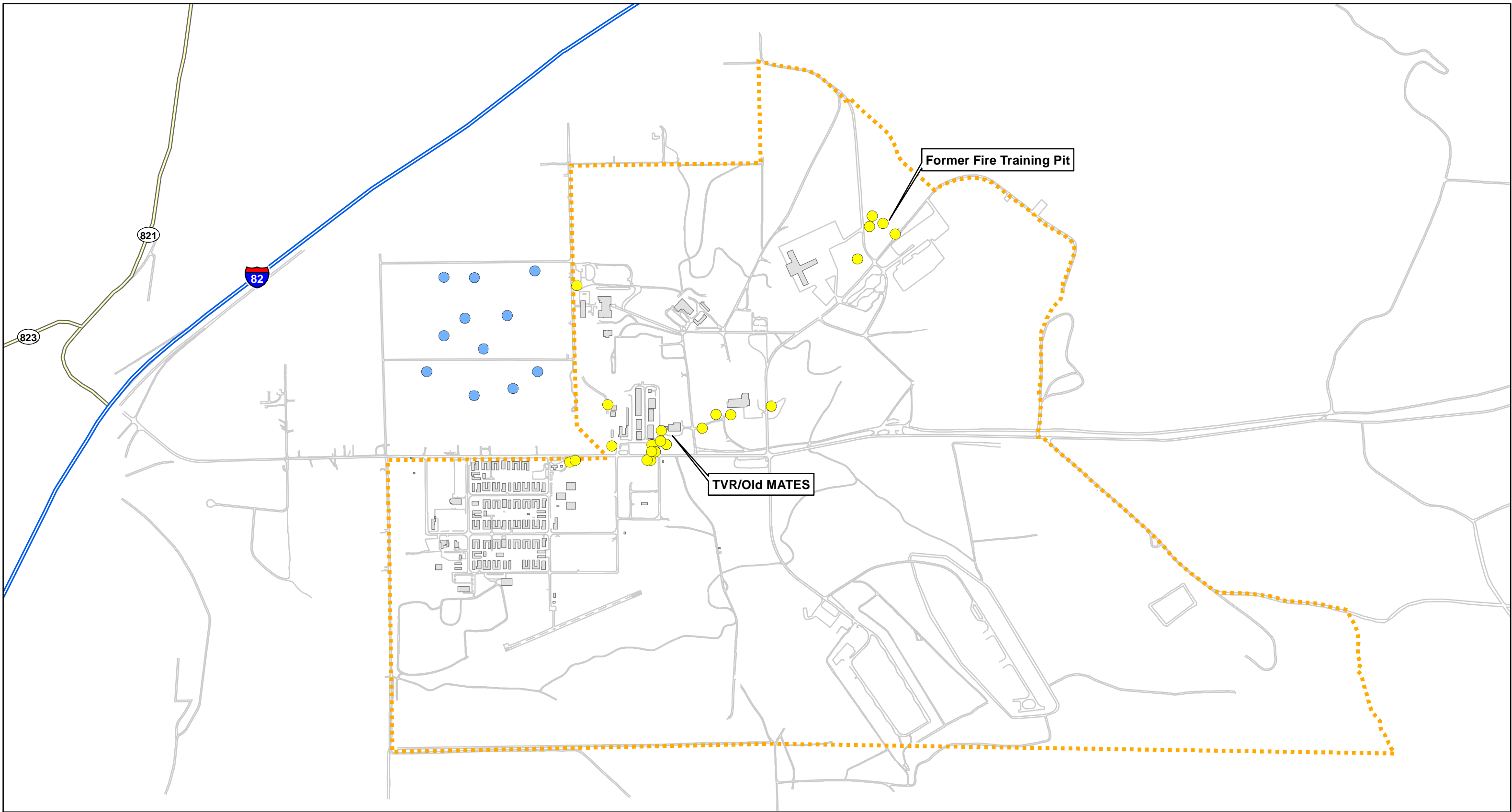


MAP DATA:
COORDINATE SYSTEM: UTM, Zone 10
HORIZONTAL DATUM: WGS 84

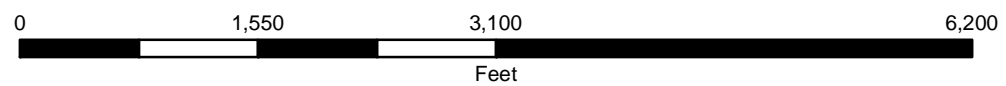
JBLM
Yakima Training Center
Location Map

Figure

1



- Monitoring Well
- Residential Drinking Water Wells
- Cantonment Boundary
- Building

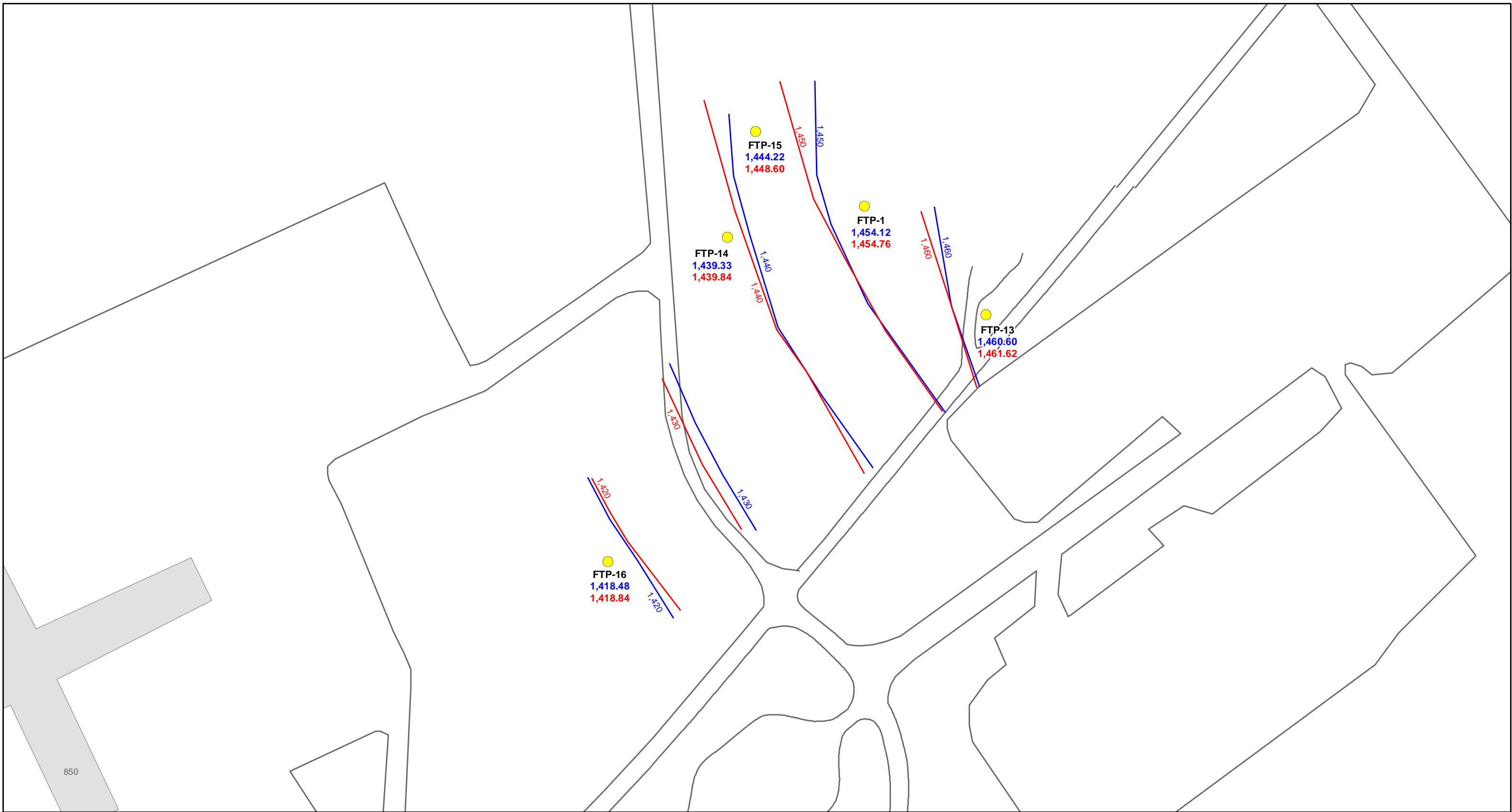


1 inch = 1,250 feet

MAP DATA:
 COORDINATE SYSTEM: UTM, Zone 10
 HORIZONTAL DATUM: WGS 84

PROJECT LOCATION MAP

Figure
2



<ul style="list-style-type: none"> ● Monitoring Well — Contours - Spring — Contours - Fall Building 	<p><u>Labels</u></p> <p>Well ID: FTP-1</p> <p>Spring WL (Ft/AMSL): 1,464.12</p> <p>Fall WL (Ft/AMSL): 1,454.26</p>
--	--

N

0 125 250 500
Feet

1 inch = 125 feet

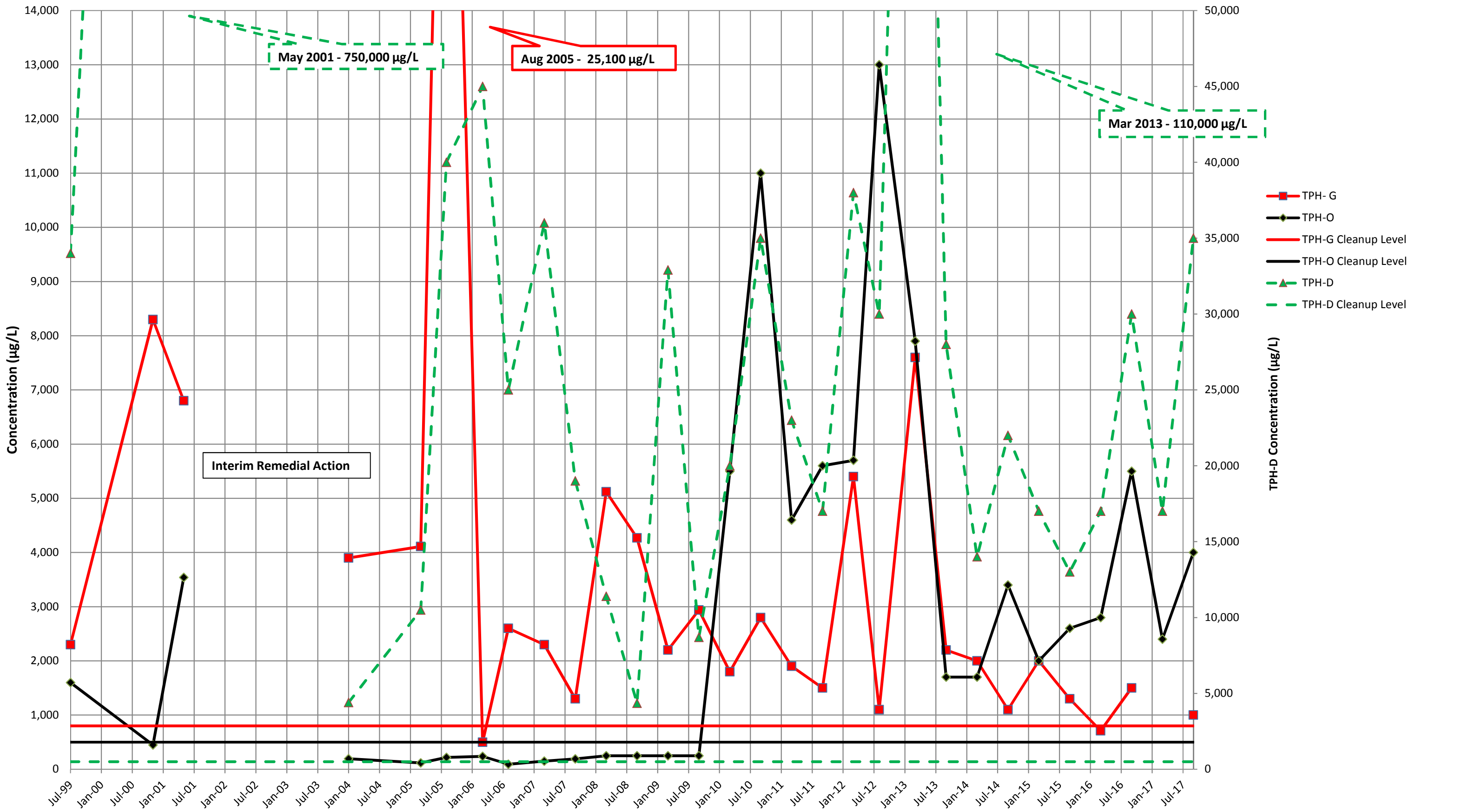
MAP DATA:
 COORDINATE SYSTEM: UTM, Zone 10
 HORIZONTAL DATUM: WGS 84

FORMER FIRE TRAINING PIT
 SPRING / FALL
 WATER TABLE CONTOURS

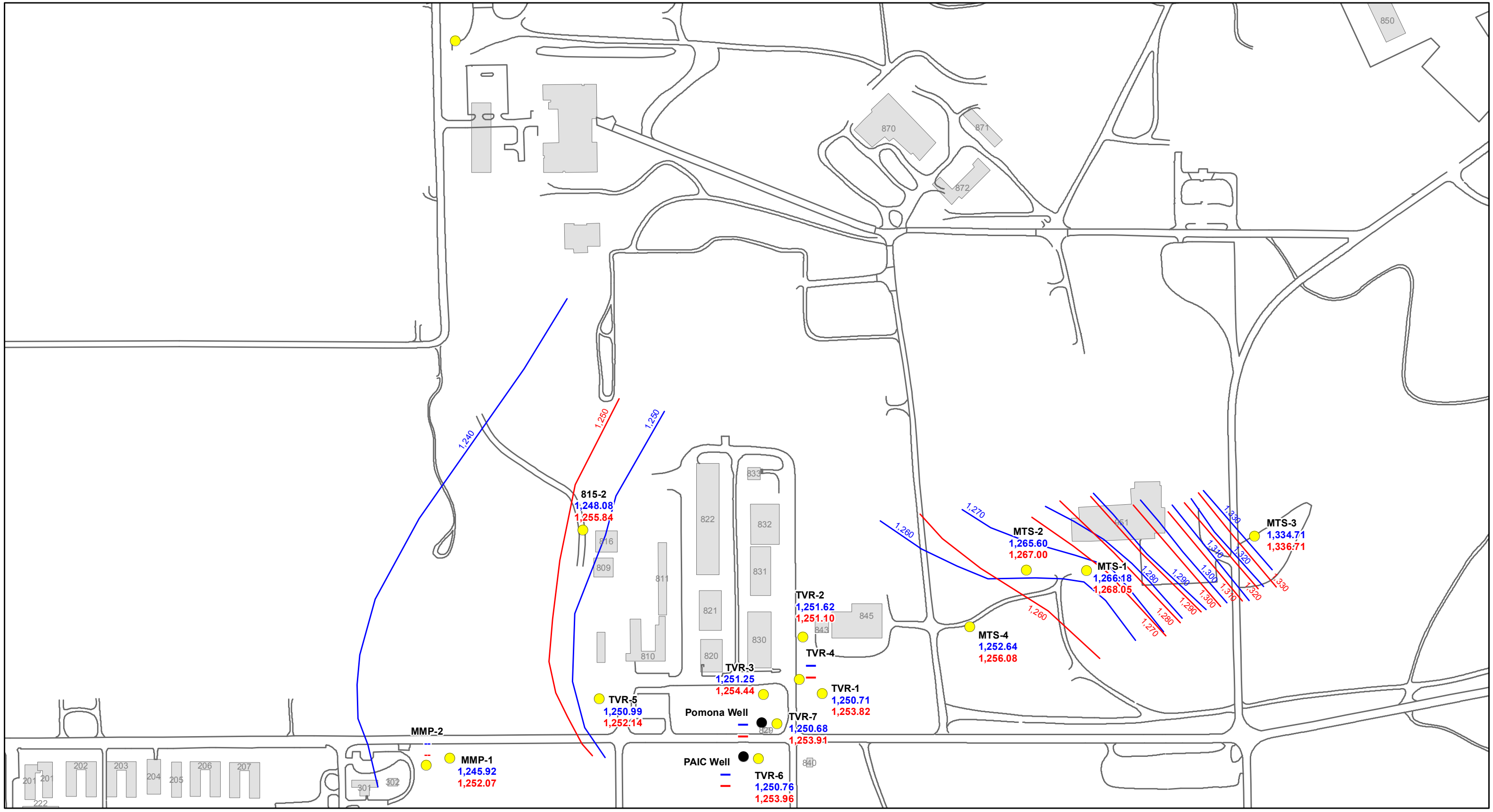
2017

Figure
3

Figure 4 - Change in Total Petroleum Hydrocarbon Concentrations Over Time in Well FTP 1
 Fire Training Pit, Yakima Training Center, Washington



Solid Line - Primary Axis
 Dashed Line - Secondary Axis



● Monitoring Well
● Production Well
— Contours - Spring
— Contours - Fall
 Building

Labels
 Well ID: 815-2
 Spring WL (Ft/AMSL): 1,248.08
 Fall WL (Ft/AMSL): 1,255.84
 Not Measured: — or —

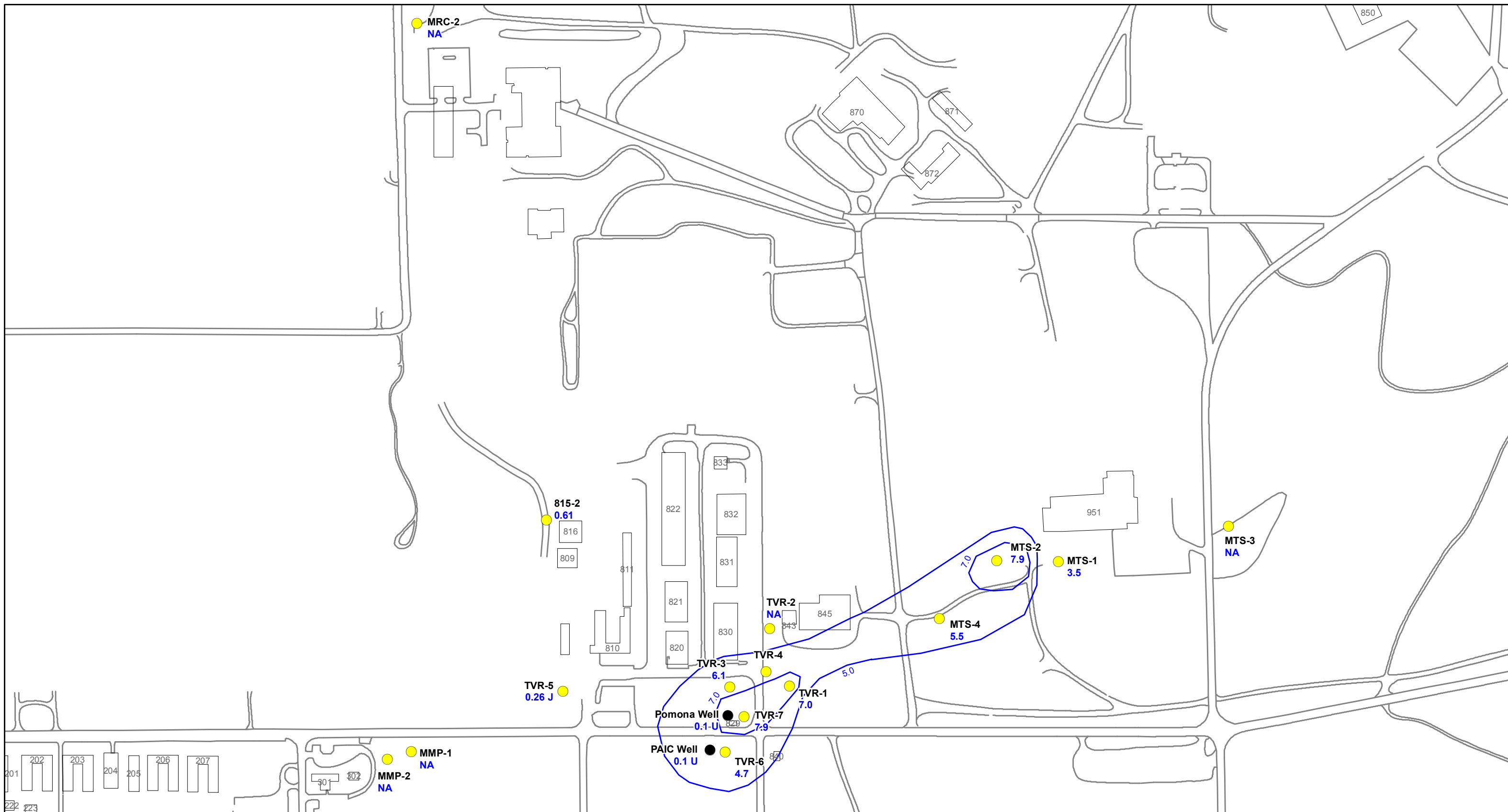
N

 0 375 750 1,500
 Feet
 1 inch = 300 feet
MAP DATA:
 COORDINATE SYSTEM: UTM, Zone 10
 HORIZONTAL DATUM: WGS 84

TVR/Old MATES AREA
 SPRING / FALL
 WATER TABLE CONTOURS

2017

Figure
5



<ul style="list-style-type: none"> ● Monitoring Well ● Production Well — Contours - Spring Building 	<p><u>Labels</u></p> <p>Well ID: 815-2</p> <p>Spring TCE (ug/L): 0.61</p> <p>Not Analyzed: NA</p>
---	---

N

0 375 750 1,500

Feet

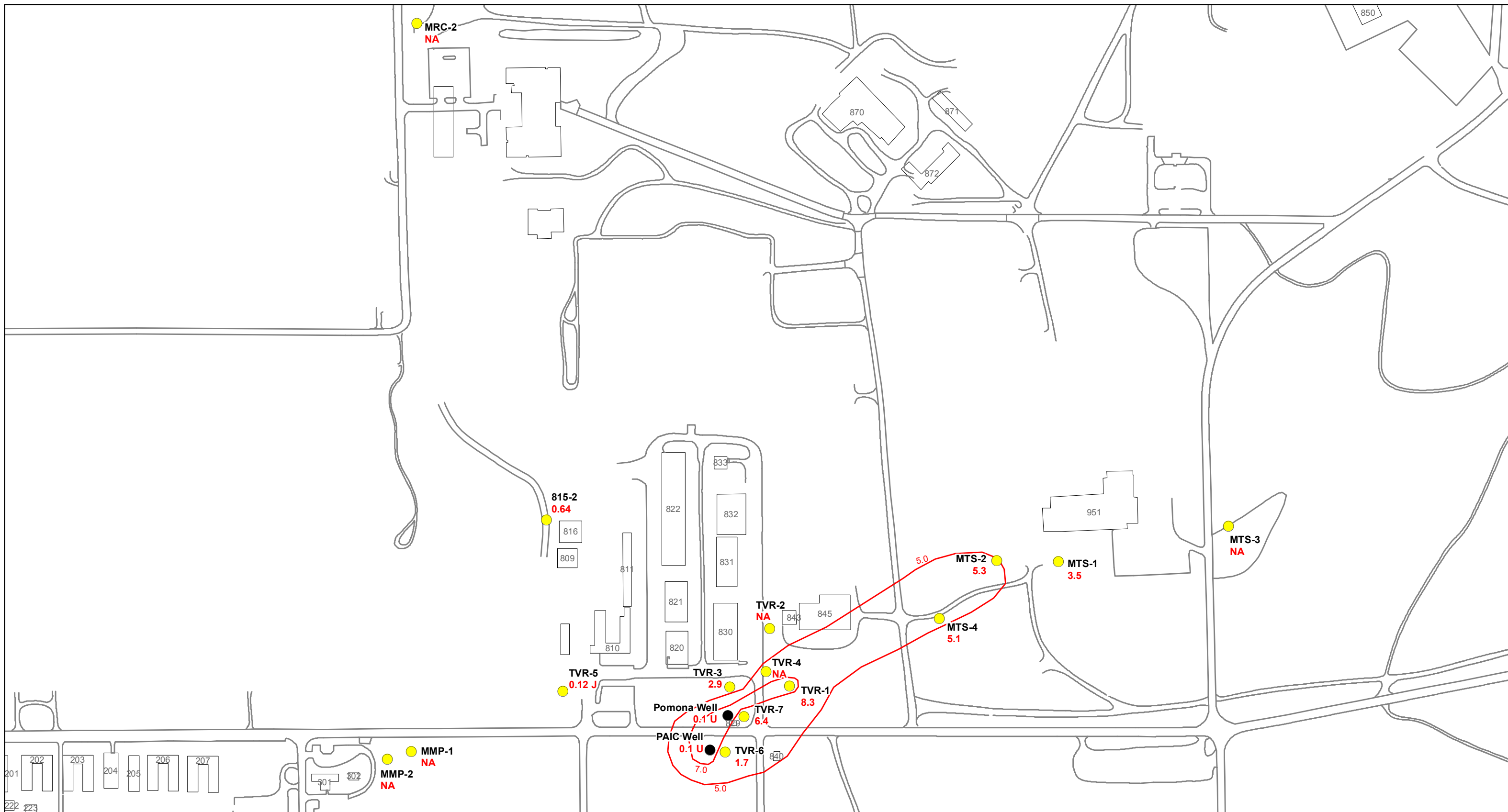
1 inch = 300 feet

MAP DATA:
 COORDINATE SYSTEM: UTM, Zone 10
 HORIZONTAL DATUM: WGS 84

TVR/Old MATES AREA
 SPRING TCE
 CONCENTRATION CONTOURS

2017

Figure
 6



<ul style="list-style-type: none"> ● Monitoring Well ● Production Well — Contours - Fall Building 	<p><u>Labels</u></p> <p>Well ID: 815-2</p> <p>FALL TCE (ug/L): 0.64</p> <p>Not Analyzed: NA</p>
--	---

N

0 375 750 1,500

Feet

1 inch = 300 feet

MAP DATA:
 COORDINATE SYSTEM: UTM, Zone 10
 HORIZONTAL DATUM: WGS 84

TVR/Old MATES AREA
 FALL TCE
 CONCENTRATION CONTOURS

2017

Figure
 7

APPENDIX A
LAND USE CONTROL MONITORING CHECKLIST

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YTC LUC MONITORING CHECKLIST

A. FIELD INSPECTION

Site	Question	Answer
F. Pesticide Handling Area	1. Any family housing within site boundary?	Yes / <u>No</u>
Former ASP Burn Pits	2. Any family housing within site boundary?	Yes / <u>No</u>
	3. Any obvious recent construction/excavation in site boundary?	Yes / <u>No</u>
1969 - 1994 Landfill	4. Any family housing within landfill boundary?	Yes / <u>No</u>
	5. Any obvious recent construction/excavation within landfill?	Yes / <u>No</u>
1954 - 1968 Landfill/Burn Pits	6. Any family housing within landfill boundary?	Yes / <u>No</u>
	7. Any obvious recent construction/excavation within landfill?	Yes / <u>No</u>
Former Fire Training Pit	8. Any apparent new drinking water wells within site boundary?	Yes / <u>No</u>
Building 218	9. Has Building 218 been torn down?	Yes / <u>No</u>
Bldg 301 Former UST Site	10. Building 301 been torn down?	Yes / <u>No</u>
TVR/Old MATES	11. Any apparent new drinking water wells within 1000 ft of site boundary?	Yes / <u>No</u>
	12. Building 843 been torn down?	Yes / <u>No</u>
Centralized Fueling Point	13. Has hard stand been penetrated?	Yes / <u>No</u>
	14. Any obvious excavation within boundaries of the hard stand?	Yes / <u>No</u>

15. Any comments (required for "Yes" answers from Field Inspection)? YES or NO If yes, describe on back.

16. Inspection Date:

B. INTERVIEWS

Position	Name	Question	Answer
JBLM PW GIS Lab	Terese Hansen	17. Are you still storing LUC data layer in GIS? <i>currently reviewing</i>	<u>Yes</u> / No
		18. Is LUC data layer still available to GIS users? <i>updated 2017 data</i>	<u>Yes</u> / No
YTC PW GIS	Dana Thurl	19. Do you still have LUC data layer in GIS?	<u>Yes</u> / No
JBLM Master Planner	Gary Skoman	20. Do you still have access to LUC data when you need it?	<u>Yes</u> / No
		21. Are you still using the LUC data for a Master Plan overlay?	<u>Yes</u> / No
		22. Any plans for future family housing at YTC?	<u>Yes</u> / No
		23. Any plans for property conveyance in YTC Cantonment Area?	<u>Yes</u> / No
YTC Natural Resources Program Mgr	Pete Nissen	24. Do you still have access to LUC data when you need it?	<u>Yes</u> / No
		25. Are you still using the LUC data as environmental review overlay?	<u>Yes</u> / No
		26. Any plans to take down Buildings 218, 301, or 843?	Yes / <u>No</u>
YTC Staff Engineer	Wade Warner	27. Do you still have access to LUC data when you need it?	<u>Yes</u> / No
		28. Are you still aware that relevant LUC data needs to (be added / remain) in future SWSMP updates?	<u>Yes</u> / No
		29. Any plans for new drinking water wells in Cantonment Water System?	Yes / <u>No</u>
		30. Any plans for property conveyance in YTC Cantonment Area?	Yes / <u>No</u>
YTC Cultural Resources PM	Randy Kroger	31. Do you still have access to LUC data when you need it?	<u>Yes</u> / No
		32. Are you still using the LUC data for a digging permit overlay?	<u>Yes</u> / No

33. Any comments (required for any "No" answer from Interview Questions 17-21, 24-27, 27-28, 31-32 OR for any "Yes" answer from Questions 22, 23, 26, 29, 30)? YES or NO If yes, describe on back.

34. Any changes noted about how LUC mechanisms are executed? YES or NO If yes, describe on separate page.

35. Interview Dates: 11-1-17

C. CERTIFICATION

Based on this monitoring, LUC mechanisms appear to be working and achieving LUCs.

Dana Ranquist Dana Ranquist

11-1-17

Signature

Print Name

Date

APPENDIX B
COMPLETED FIELD FORMS AND
LABORATORY ANALYTICAL REPORTS

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Field Forms

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WATER SAMPLING LOG

Project: JBLM - Yakima Training Center

Well No.: FTP-1 Date Well Purged: 9/21/7 Date Well Sampled: 9/21/7

TD-21-

Well Data

Measuring Point (MP): Top of Casing

Depth to Water Below MP: 10.90 Purge Method: bauler

TD-21-

Water Sample Data

Sample Number: FTP-1 Time Sample Collected: 1000

Sampling Method: bauler

Sampling Personnel: WHP

Remarks: _____

Checklist

- Well capped and locked (pre-sampling)
- Water level measured
- Appropriate sample containers filled and capped
- Samples placed in cooler with blue ice
- PDB deployed (if applicable)
- Well capped and locked (post-sampling)

New lock

Liters	Time	PH	Temp	DO	Spec. Cond.	ORP	Turb
<i>Outbal</i> 13	1000	7.4	15.3	3.9	1535	51	126

6.52 curme

.65

WATER SAMPLING LOG

Project: JBLM - Yakima Training Center
 Well No.: FTP-14 Date Well Purged: 9/2/7 Date Well Sampled: 9/2/7
 TP - 22-

Well Data

Measuring Point (MP): Top of Casing
 Depth to Water Below MP: 17.64 Purge Method: baller

Water Sample Data

Sample Number: FTP-14 Time Sample Collected: 1145
 Sampling Method: baller
 Sampling Personnel: M. H.P.
 Remarks: _____

Checklist

- Well capped and locked (pre-sampling)
- Water level measured
- Appropriate sample containers filled and capped
- Samples placed in cooler with blue ice
- PDB deployed (if applicable)
- Well capped and locked (post-sampling)

Liters Out	Time	PH	Temp	DO	Spec. Cond.	ORP	Turb
0 gal	1145	7.9	16.6	4.0	925	147	148

WATER SAMPLING LOG

Project: JBLM - Yakima Training Center

Well No.: FRP-15 Date Well Purged: 9/27 Date Well Sampled: 9/27

TP-20-

Well Data

Measuring Point (MP): Top of Casing

Depth to Water Below MP: 12.27 Purge Method: puller

Water Sample Data

Sample Number: FRP-15 Time Sample Collected: 10:30

Sampling Method: puller

Sampling Personnel: JP + BZ

Remarks: _____

Checklist

- Well capped and locked (pre-sampling)
- Water level measured
- Appropriate sample containers filled and capped
- Samples placed in cooler with blue ice
- PDB deployed (if applicable)
- Well capped and locked (post-sampling)

Liters Out	Time	PH	Temp	DO	Spec. Cond.	ORP	Turb
10 gal		8.1	12.9	8.0	284	121	180

7.730

WATER SAMPLING LOG

Project: JBLM - Yakima Training Center

Well No.: FTP-116 Date Well Purged: 9/2/13 Date Well Sampled: 9/13/17

TD-30

Well Data

Measuring Point (MP): Top of Casing

Depth to Water Below MP: 25.97 Purge Method: bauler
32.35 TD

Water Sample Data

Sample Number: FTP-116 Time Sample Collected: 830

Sampling Method: bauler

Sampling Personnel: DR + JP

Remarks: 3.9 CV

Checklist

- Well capped and locked (pre-sampling)
- Water level measured
- Appropriate sample containers filled and capped
- Samples placed in cooler with blue ice
- PDB deployed (if applicable)
- Well capped and locked (post-sampling)

Liters Out	Time	PH	Temp	DO	Spec. Cond.	ORP	Turb
5.5 gal	830	7.7	14.6	7.0	1964	213	189

2.16 CV

Laboratory Data
(on CD)

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ALS Environmental
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Kelso, WA 98626
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F : +1 360 636 1068
www.alsglobal.com

April 24, 2017

Analytical Report for Service Request No: K1703135

Keir Craigie
Tetra Tech, Inc.
19803 North Creek Parkway
Bothell, WA 98011

RE: YTC / 106-45760003

Dear Keir,

Enclosed are the results of the sample(s) submitted to our laboratory March 31, 2017
For your reference, these analyses have been assigned our service request number **K1703135**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3356. You may also contact me via email at Kurt.Clarkson@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Kurt Clarkson
Client Services
Manager



ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
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Table of Contents

Acronyms

Qualifiers

State Certifications, Accreditations, And Licenses

Case Narrative

Chain of Custody

Volatile Organic Compounds

Raw Data

 Volatile Organic Compounds

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client: Tetra Tech, Incorporate
Project: YTC/ 106-45760003
Sample Matrix: Water

Service Request No.: K1703135
Date Received: 03/31/17

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Thirteen water samples were received for analysis at ALS Environmental on 03/31/17. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Volatile Organic Compounds by EPA Method 8260

Calibration Verification Exceptions:

The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) J:\MS46\0331F003.D: 1,2,4-Trichlorobenzene, Napthalene, and 1,2,3-Trichlorobenzene. The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) J:\MS46\0403F004.D: Napthalene, and 1,2,3-Trichlorobenzene. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Sample Notes and Discussion:

Manual integration of one or more chromatographic peaks was required to correct the integration performed by the automated data processing program. The manual integration was performed in accordance with ALS policy, which is consistent with the National Environmental Laboratory Accreditation Program (NELAP), Department of Defense (DOD), and other certifying agencies. The analytes that required manual integrations are identified on each sample report contained in this data package.

No other anomalies associated with the analysis of these samples were observed.

Approved by





Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



CHAIN OF CUSTODY

78078

001

SR# K1703135

COC Set ___ of ___

COC# _____

1317 South 13th Ave, Kelso, WA 98626 Phone (360) 577-7222 / 800-695-7222 / FAX (360) 636-1068
www.alsglobal.com

Project Name: <u>ITC</u>		Project Number: <u>W0-45760003</u>		NUMBER OF CONTAINERS	7D			14D			Remarks					
Project Manager: <u>Mark Ingersoll</u>					3270D / PAH SIM	3270D / SVO	3330B / NitramAroEsters	3280C / VOC FP	NWTPH-DX / NW_TPH	NWTPH-GX / NW_GAS		1	2	3	4	5
Company: <u>T+EC</u>																
Address: <u>19803 N Cr Plwy Bethel WA 98011</u>																
Phone # <u>425 270 6339</u>		email <u>mark.ingersoll@tehrakelso.com</u>														
Sampler Signature: <u>[Signature]</u>		Sampler Printed Name: <u>Dana Panquist</u>														
CLIENT SAMPLE ID	LABID	SAMPLING Date Time	Matrix													
1. <u>B15-2</u>		<u>32917 1500</u>	<u>W</u>	<u>3</u>			<u>X</u>									
2. <u>MTS-1</u>		<u>33017 1000</u>	<u>W</u>	<u>3</u>			<u>X</u>									
3. <u>MTS-2</u>		<u>33017 1010</u>	<u>W</u>	<u>3</u>			<u>X</u>									
4. <u>MTS-4</u>		<u>33017 940</u>	<u>W</u>	<u>3</u>			<u>X</u>									
5. <u>DOMONA</u>		<u>33017 920</u>	<u>W</u>	<u>3</u>			<u>X</u>									
6. <u>PAUL</u>		<u>33017 930</u>	<u>W</u>	<u>3</u>			<u>X</u>									
7. <u>TVR-1</u>		<u>32917 1515</u>	<u>W</u>	<u>3</u>			<u>X</u>									
8. <u>TVR-3</u>		<u>33017 910</u>	<u>W</u>	<u>3</u>			<u>X</u>									
9. <u>TVR-5</u>		<u>32917 945</u>	<u>W</u>	<u>3</u>			<u>X</u>									
10. <u>TVR-6</u>		<u>32917 1530</u>	<u>W</u>	<u>3</u>			<u>X</u>									

Report Requirements <input type="checkbox"/> I. Routine Report: Method Blank, Surrogate, as required <input type="checkbox"/> II. Report Dup., MS, MSD as required <input type="checkbox"/> III. CLP Like Summary (no raw data) <input checked="" type="checkbox"/> IV. Data Validation Report <input type="checkbox"/> V. EDD	Invoice Information P.O.# _____ Bill To: _____ _____	Circle which metals are to be analyzed Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg	
	Turnaround Requirements <input type="checkbox"/> 24 hr. _____ 48 hr. <input checked="" type="checkbox"/> 5 Day Standard	Special Instructions/Comments: _____	*Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other _____ (Circle One)
	Requested Report Date: _____		

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: <u>[Signature]</u>	Signature: _____	Signature: _____	Signature: <u>[Signature]</u>	Signature: _____	Signature: _____
Printed Name: <u>Dana Panquist</u>	Printed Name: _____	Printed Name: _____	Printed Name: <u>hsmith</u>	Printed Name: _____	Printed Name: _____
Firm: <u>T+EC</u>	Firm: <u>TEDEX</u>	Firm: _____	Firm: <u>ALS</u>	Firm: _____	Firm: _____
Date/Time: <u>33017/1200</u>	Date/Time: _____	Date/Time: _____	Date/Time: <u>3/31/17 1000</u>	Date/Time: _____	Date/Time: _____



CHAIN OF CUSTODY

78078

001

SR# K1703135
 COC Set _____ of _____
 COC# _____

1317 South 13th Ave, Kelso, WA 98626 Phone (360) 577-7222 / 800-695-7222 / FAX (360) 636-1068
 www.alsglobal.com

Project Name <u>TC</u>		Project Number:		NUMBER OF CONTAINERS	7D		14D								Remarks	
Project Manager <u>Neva Ingersoll</u>					8270D / PAH SIM	8270D / SVO	8330B / NitramAroEsters	8260C / VOC FP	NWTPH-Dx / NW_TPH	NWTPH-Gx / NW_GAS	1	2	3	4		5
Company <u>see pg 1</u>																
Address																
Phone #		email														
Sampler Signature <u>[Signature]</u>		Sampler Printed Name <u>Dana Panquist</u>														
CLIENT SAMPLE ID	LABID	SAMPLING Date	Time	Matrix												
1. <u>TVR-7</u>		<u>33017</u>	<u>900</u>	<u>W</u>	<u>3</u>				<u>X</u>							
2. <u>POMONA-1</u>		<u>33017</u>	<u>940</u>	<u>W</u>	<u>3</u>				<u>X</u>							
3. <u>TRIP BLANK</u>		<u>32917</u>	<u>930</u>	<u>W</u>	<u>3</u>				<u>X</u>							
4.																
5.																
6.																
7.																
8.																
9.																
10.																

Report Requirements

I. Routine Report: Method Blank, Surrogate, as required

II. Report Dup., MS, MSD as required

III. CLP Like Summary (no raw data)

IV. Data Validation Report

V. EDD

Invoice Information

P.O.# _____

Bill To: _____

Turnaround Requirements

24 hr. 48 hr.

5 Day

Standard

Requested Report Date _____

Circle which metals are to be analyzed

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg

Special Instructions/Comments: _____

*Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other _____ (Circle One)

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature <u>[Signature]</u>	Signature <u>[Signature]</u>	Signature	Signature	Signature	Signature
Printed Name <u>[Name]</u>	Printed Name <u>[Name]</u>	Printed Name	Printed Name	Printed Name	Printed Name
Firm <u>ALS</u>	Firm <u>ALS</u>	Firm	Firm	Firm	Firm
Date/Time <u>3/31/17 1000</u>	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time



PC KC

Cooler Receipt and Preservation Form

Client TTEC Service Request K17 0335
 Received: 3/31/17 Opened: 3/31/17 By: KO Unloaded: 3/31/17 By: KO

1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
 2. Samples were received in: (circle) Cooler Box Envelope Other NA
 3. Were custody seals on coolers? NA Y N If yes, how many and where? 1 Front 1 Back
 If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID	Tracking Number	NA	Filed
<u>-2</u>	<u>-2</u>	<u>3.9</u>	<u>3.9</u>	<u>0</u>	<u>379</u>	<u>NA</u>	<u>810702441175</u>		

4. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
 5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N *
 6. Were samples received in good condition (temperature, unbroken)? Indicate in the table below. NA Y N
 If applicable, tissue samples were received: Frozen Partially Thawed Thawed
 7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
 8. Did all sample labels and tags agree with custody papers? Indicate major discrepancies in the table on page 2. NA Y N
 9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
 10. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
 11. Were VOA vials received without headspace? Indicate in the table below. NA Y N
 12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: 1 of 3 chains was not relinquished

~~SHORT HOLD TIME~~



Volatile Organic Compounds

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703135

**Cover Page - Organic Analysis Data Package
 Volatile Organic Compounds**

Sample Name	Lab Code	Date Collected	Date Received
815-2	K1703135-001	03/29/2017	03/31/2017
MTS-1	K1703135-002	03/30/2017	03/31/2017
MTS-2	K1703135-003	03/30/2017	03/31/2017
MTS-4	K1703135-004	03/30/2017	03/31/2017
POMONA	K1703135-005	03/30/2017	03/31/2017
PAIC	K1703135-006	03/30/2017	03/31/2017
TVR-1	K1703135-007	03/29/2017	03/31/2017
TVR-3	K1703135-008	03/30/2017	03/31/2017
TVR-5	K1703135-009	03/29/2017	03/31/2017
TVR-6	K1703135-010	03/29/2017	03/31/2017
TVR-7	K1703135-011	03/30/2017	03/31/2017
POMONA-1	K1703135-012	03/30/2017	03/31/2017
TRIP BLANK	K1703135-013	03/29/2017	03/31/2017

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/29/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: 815-2
Lab Code: K1703135-001
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/31/17	03/31/17	KWG1702587	
Chloromethane	ND	U	0.50	0.20	0.068	1	03/31/17	03/31/17	KWG1702587	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/31/17	03/31/17	KWG1702587	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/31/17	03/31/17	KWG1702587	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/31/17	03/31/17	KWG1702587	
Acetone	ND	U	20	10	3.3	1	03/31/17	03/31/17	KWG1702587	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	03/31/17	03/31/17	KWG1702587	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/31/17	03/31/17	KWG1702587	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/31/17	03/31/17	KWG1702587	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/31/17	03/31/17	KWG1702587	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	03/31/17	03/31/17	KWG1702587	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/31/17	03/31/17	KWG1702587	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Chloroform	ND	U	0.50	0.20	0.072	1	03/31/17	03/31/17	KWG1702587	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/31/17	03/31/17	KWG1702587	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
Benzene	ND	U	0.50	0.10	0.062	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/31/17	03/31/17	KWG1702587	
Trichloroethene (TCE)	0.61		0.50	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/31/17	03/31/17	KWG1702587	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/31/17	03/31/17	KWG1702587	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/31/17	03/31/17	KWG1702587	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/31/17	03/31/17	KWG1702587	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/31/17	03/31/17	KWG1702587	
Toluene	ND	U	0.50	0.10	0.054	1	03/31/17	03/31/17	KWG1702587	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/31/17	03/31/17	KWG1702587	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/31/17	03/31/17	KWG1702587	
Tetrachloroethene (PCE)	0.14	J	0.50	0.20	0.099	1	03/31/17	03/31/17	KWG1702587	
2-Hexanone	ND	U	20	10	2.7	1	03/31/17	03/31/17	KWG1702587	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/31/17	03/31/17	KWG1702587	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/31/17	03/31/17	KWG1702587	

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/29/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: 815-2
Lab Code: K1703135-001
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	03/31/17	03/31/17	KWG1702587	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
o-Xylene	ND	U	0.50	0.20	0.074	1	03/31/17	03/31/17	KWG1702587	
Styrene	ND	U	0.50	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
Bromoform	ND	U	0.50	0.50	0.16	1	03/31/17	03/31/17	KWG1702587	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	03/31/17	03/31/17	KWG1702587	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	03/31/17	03/31/17	KWG1702587	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/31/17	03/31/17	KWG1702587	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/31/17	03/31/17	KWG1702587	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	03/31/17	03/31/17	KWG1702587	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	03/31/17	03/31/17	KWG1702587	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	03/31/17	03/31/17	KWG1702587	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	03/31/17	03/31/17	KWG1702587	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/31/17	03/31/17	KWG1702587	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/31/17	03/31/17	KWG1702587	*
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	03/31/17	03/31/17	KWG1702587	
Naphthalene	ND	U	2.0	0.30	0.088	1	03/31/17	03/31/17	KWG1702587	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/31/17	03/31/17	KWG1702587	*

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/29/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: 815-2
Lab Code: K1703135-001

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	105	85-115	03/31/17	Acceptable
1,2-Dichloroethane-d4	103	70-120	03/31/17	Acceptable
Toluene-d8	100	85-120	03/31/17	Acceptable
4-Bromofluorobenzene	98	75-120	03/31/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: MTS-1
Lab Code: K1703135-002
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/31/17	03/31/17	KWG1702587	
Chloromethane	ND	U	0.50	0.20	0.068	1	03/31/17	03/31/17	KWG1702587	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/31/17	03/31/17	KWG1702587	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/31/17	03/31/17	KWG1702587	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/31/17	03/31/17	KWG1702587	
Acetone	ND	U	20	10	3.3	1	03/31/17	03/31/17	KWG1702587	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	03/31/17	03/31/17	KWG1702587	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/31/17	03/31/17	KWG1702587	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/31/17	03/31/17	KWG1702587	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/31/17	03/31/17	KWG1702587	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	03/31/17	03/31/17	KWG1702587	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/31/17	03/31/17	KWG1702587	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Chloroform	ND	U	0.50	0.20	0.072	1	03/31/17	03/31/17	KWG1702587	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/31/17	03/31/17	KWG1702587	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
Benzene	ND	U	0.50	0.10	0.062	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/31/17	03/31/17	KWG1702587	
Trichloroethene (TCE)	3.5		0.50	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/31/17	03/31/17	KWG1702587	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/31/17	03/31/17	KWG1702587	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/31/17	03/31/17	KWG1702587	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/31/17	03/31/17	KWG1702587	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/31/17	03/31/17	KWG1702587	
Toluene	ND	U	0.50	0.10	0.054	1	03/31/17	03/31/17	KWG1702587	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/31/17	03/31/17	KWG1702587	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/31/17	03/31/17	KWG1702587	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	03/31/17	03/31/17	KWG1702587	
2-Hexanone	ND	U	20	10	2.7	1	03/31/17	03/31/17	KWG1702587	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/31/17	03/31/17	KWG1702587	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/31/17	03/31/17	KWG1702587	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: MTS-1
Lab Code: K1703135-002
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	03/31/17	03/31/17	KWG1702587	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
o-Xylene	ND	U	0.50	0.20	0.074	1	03/31/17	03/31/17	KWG1702587	
Styrene	ND	U	0.50	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
Bromoform	ND	U	0.50	0.50	0.16	1	03/31/17	03/31/17	KWG1702587	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	03/31/17	03/31/17	KWG1702587	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	03/31/17	03/31/17	KWG1702587	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/31/17	03/31/17	KWG1702587	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/31/17	03/31/17	KWG1702587	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	03/31/17	03/31/17	KWG1702587	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	03/31/17	03/31/17	KWG1702587	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	03/31/17	03/31/17	KWG1702587	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	03/31/17	03/31/17	KWG1702587	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/31/17	03/31/17	KWG1702587	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/31/17	03/31/17	KWG1702587	*
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	03/31/17	03/31/17	KWG1702587	
Naphthalene	ND	U	2.0	0.30	0.088	1	03/31/17	03/31/17	KWG1702587	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/31/17	03/31/17	KWG1702587	*

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: MTS-1
Lab Code: K1703135-002

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	105	85-115	03/31/17	Acceptable
1,2-Dichloroethane-d4	101	70-120	03/31/17	Acceptable
Toluene-d8	99	85-120	03/31/17	Acceptable
4-Bromofluorobenzene	97	75-120	03/31/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: MTS-2
Lab Code: K1703135-003
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/31/17	03/31/17	KWG1702587	
Chloromethane	ND	U	0.50	0.20	0.068	1	03/31/17	03/31/17	KWG1702587	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/31/17	03/31/17	KWG1702587	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/31/17	03/31/17	KWG1702587	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/31/17	03/31/17	KWG1702587	
Acetone	ND	U	20	10	3.3	1	03/31/17	03/31/17	KWG1702587	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	03/31/17	03/31/17	KWG1702587	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/31/17	03/31/17	KWG1702587	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/31/17	03/31/17	KWG1702587	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/31/17	03/31/17	KWG1702587	
cis-1,2-Dichloroethene	0.18	J	0.50	0.20	0.067	1	03/31/17	03/31/17	KWG1702587	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/31/17	03/31/17	KWG1702587	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Chloroform	ND	U	0.50	0.20	0.072	1	03/31/17	03/31/17	KWG1702587	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/31/17	03/31/17	KWG1702587	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
Benzene	ND	U	0.50	0.10	0.062	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/31/17	03/31/17	KWG1702587	
Trichloroethene (TCE)	7.9		0.50	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/31/17	03/31/17	KWG1702587	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/31/17	03/31/17	KWG1702587	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/31/17	03/31/17	KWG1702587	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/31/17	03/31/17	KWG1702587	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/31/17	03/31/17	KWG1702587	
Toluene	ND	U	0.50	0.10	0.054	1	03/31/17	03/31/17	KWG1702587	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/31/17	03/31/17	KWG1702587	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/31/17	03/31/17	KWG1702587	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	03/31/17	03/31/17	KWG1702587	
2-Hexanone	ND	U	20	10	2.7	1	03/31/17	03/31/17	KWG1702587	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/31/17	03/31/17	KWG1702587	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/31/17	03/31/17	KWG1702587	

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: MTS-2
Lab Code: K1703135-003
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	03/31/17	03/31/17	KWG1702587	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
o-Xylene	ND	U	0.50	0.20	0.074	1	03/31/17	03/31/17	KWG1702587	
Styrene	ND	U	0.50	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
Bromoform	ND	U	0.50	0.50	0.16	1	03/31/17	03/31/17	KWG1702587	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	03/31/17	03/31/17	KWG1702587	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	03/31/17	03/31/17	KWG1702587	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/31/17	03/31/17	KWG1702587	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/31/17	03/31/17	KWG1702587	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	03/31/17	03/31/17	KWG1702587	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	03/31/17	03/31/17	KWG1702587	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	03/31/17	03/31/17	KWG1702587	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	03/31/17	03/31/17	KWG1702587	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/31/17	03/31/17	KWG1702587	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/31/17	03/31/17	KWG1702587	*
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	03/31/17	03/31/17	KWG1702587	
Naphthalene	ND	U	2.0	0.30	0.088	1	03/31/17	03/31/17	KWG1702587	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/31/17	03/31/17	KWG1702587	*

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: MTS-2
Lab Code: K1703135-003

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	105	85-115	03/31/17	Acceptable
1,2-Dichloroethane-d4	103	70-120	03/31/17	Acceptable
Toluene-d8	101	85-120	03/31/17	Acceptable
4-Bromofluorobenzene	96	75-120	03/31/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: MTS-4
Lab Code: K1703135-004
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/31/17	03/31/17	KWG1702587	
Chloromethane	ND	U	0.50	0.20	0.068	1	03/31/17	03/31/17	KWG1702587	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/31/17	03/31/17	KWG1702587	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/31/17	03/31/17	KWG1702587	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/31/17	03/31/17	KWG1702587	
Acetone	ND	U	20	10	3.3	1	03/31/17	03/31/17	KWG1702587	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	03/31/17	03/31/17	KWG1702587	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/31/17	03/31/17	KWG1702587	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/31/17	03/31/17	KWG1702587	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/31/17	03/31/17	KWG1702587	
cis-1,2-Dichloroethene	0.21	J	0.50	0.20	0.067	1	03/31/17	03/31/17	KWG1702587	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/31/17	03/31/17	KWG1702587	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Chloroform	ND	U	0.50	0.20	0.072	1	03/31/17	03/31/17	KWG1702587	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/31/17	03/31/17	KWG1702587	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
Benzene	ND	U	0.50	0.10	0.062	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/31/17	03/31/17	KWG1702587	
Trichloroethene (TCE)	5.5		0.50	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/31/17	03/31/17	KWG1702587	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/31/17	03/31/17	KWG1702587	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/31/17	03/31/17	KWG1702587	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/31/17	03/31/17	KWG1702587	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/31/17	03/31/17	KWG1702587	
Toluene	ND	U	0.50	0.10	0.054	1	03/31/17	03/31/17	KWG1702587	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/31/17	03/31/17	KWG1702587	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/31/17	03/31/17	KWG1702587	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	03/31/17	03/31/17	KWG1702587	
2-Hexanone	ND	U	20	10	2.7	1	03/31/17	03/31/17	KWG1702587	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/31/17	03/31/17	KWG1702587	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/31/17	03/31/17	KWG1702587	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: MTS-4
Lab Code: K1703135-004
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	03/31/17	03/31/17	KWG1702587	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
o-Xylene	ND	U	0.50	0.20	0.074	1	03/31/17	03/31/17	KWG1702587	
Styrene	ND	U	0.50	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
Bromoform	ND	U	0.50	0.50	0.16	1	03/31/17	03/31/17	KWG1702587	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	03/31/17	03/31/17	KWG1702587	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	03/31/17	03/31/17	KWG1702587	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/31/17	03/31/17	KWG1702587	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/31/17	03/31/17	KWG1702587	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	03/31/17	03/31/17	KWG1702587	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	03/31/17	03/31/17	KWG1702587	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	03/31/17	03/31/17	KWG1702587	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	03/31/17	03/31/17	KWG1702587	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/31/17	03/31/17	KWG1702587	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/31/17	03/31/17	KWG1702587	*
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	03/31/17	03/31/17	KWG1702587	
Naphthalene	ND	U	2.0	0.30	0.088	1	03/31/17	03/31/17	KWG1702587	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/31/17	03/31/17	KWG1702587	*

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: MTS-4
Lab Code: K1703135-004

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	102	85-115	03/31/17	Acceptable
1,2-Dichloroethane-d4	99	70-120	03/31/17	Acceptable
Toluene-d8	99	85-120	03/31/17	Acceptable
4-Bromofluorobenzene	95	75-120	03/31/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: POMONA
Lab Code: K1703135-005
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	04/01/17	04/01/17	KWG1702587	
Chloromethane	ND	U	0.50	0.20	0.068	1	04/01/17	04/01/17	KWG1702587	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	04/01/17	04/01/17	KWG1702587	
Bromomethane	ND	U	0.50	0.30	0.16	1	04/01/17	04/01/17	KWG1702587	
Chloroethane	ND	U	0.50	0.20	0.16	1	04/01/17	04/01/17	KWG1702587	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	04/01/17	04/01/17	KWG1702587	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	04/01/17	04/01/17	KWG1702587	
Acetone	ND	U	20	10	3.3	1	04/01/17	04/01/17	KWG1702587	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	04/01/17	04/01/17	KWG1702587	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	04/01/17	04/01/17	KWG1702587	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	04/01/17	04/01/17	KWG1702587	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	04/01/17	04/01/17	KWG1702587	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	04/01/17	04/01/17	KWG1702587	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	04/01/17	04/01/17	KWG1702587	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	04/01/17	04/01/17	KWG1702587	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	04/01/17	04/01/17	KWG1702587	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	04/01/17	04/01/17	KWG1702587	
Chloroform	ND	U	0.50	0.20	0.072	1	04/01/17	04/01/17	KWG1702587	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	04/01/17	04/01/17	KWG1702587	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	04/01/17	04/01/17	KWG1702587	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	04/01/17	04/01/17	KWG1702587	
Benzene	ND	U	0.50	0.10	0.062	1	04/01/17	04/01/17	KWG1702587	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	04/01/17	04/01/17	KWG1702587	
Trichloroethene (TCE)	ND	U	0.50	0.20	0.10	1	04/01/17	04/01/17	KWG1702587	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	04/01/17	04/01/17	KWG1702587	
Dibromomethane	ND	U	0.50	0.50	0.15	1	04/01/17	04/01/17	KWG1702587	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	04/01/17	04/01/17	KWG1702587	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	04/01/17	04/01/17	KWG1702587	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	04/01/17	04/01/17	KWG1702587	
Toluene	ND	U	0.50	0.10	0.054	1	04/01/17	04/01/17	KWG1702587	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	04/01/17	04/01/17	KWG1702587	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	04/01/17	04/01/17	KWG1702587	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	04/01/17	04/01/17	KWG1702587	
2-Hexanone	ND	U	20	10	2.7	1	04/01/17	04/01/17	KWG1702587	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	04/01/17	04/01/17	KWG1702587	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	04/01/17	04/01/17	KWG1702587	

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: POMONA
Lab Code: K1703135-005
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	04/01/17	04/01/17	KWG1702587	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	04/01/17	04/01/17	KWG1702587	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	04/01/17	04/01/17	KWG1702587	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	04/01/17	04/01/17	KWG1702587	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	04/01/17	04/01/17	KWG1702587	
o-Xylene	ND	U	0.50	0.20	0.074	1	04/01/17	04/01/17	KWG1702587	
Styrene	ND	U	0.50	0.20	0.089	1	04/01/17	04/01/17	KWG1702587	
Bromoform	ND	U	0.50	0.50	0.16	1	04/01/17	04/01/17	KWG1702587	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	04/01/17	04/01/17	KWG1702587	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	04/01/17	04/01/17	KWG1702587	
Bromobenzene	ND	U	2.0	0.20	0.12	1	04/01/17	04/01/17	KWG1702587	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	04/01/17	04/01/17	KWG1702587	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	04/01/17	04/01/17	KWG1702587	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	04/01/17	04/01/17	KWG1702587	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	04/01/17	04/01/17	KWG1702587	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	04/01/17	04/01/17	KWG1702587	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	04/01/17	04/01/17	KWG1702587	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	04/01/17	04/01/17	KWG1702587	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	04/01/17	04/01/17	KWG1702587	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	04/01/17	04/01/17	KWG1702587	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	04/01/17	04/01/17	KWG1702587	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	04/01/17	04/01/17	KWG1702587	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	04/01/17	04/01/17	KWG1702587	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	04/01/17	04/01/17	KWG1702587	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	04/01/17	04/01/17	KWG1702587	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	04/01/17	04/01/17	KWG1702587	*
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	04/01/17	04/01/17	KWG1702587	
Naphthalene	ND	U	2.0	0.30	0.088	1	04/01/17	04/01/17	KWG1702587	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	04/01/17	04/01/17	KWG1702587	*

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: POMONA
Lab Code: K1703135-005

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	104	85-115	04/01/17	Acceptable
1,2-Dichloroethane-d4	101	70-120	04/01/17	Acceptable
Toluene-d8	100	85-120	04/01/17	Acceptable
4-Bromofluorobenzene	99	75-120	04/01/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: PAIC
Lab Code: K1703135-006
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	04/01/17	04/01/17	KWG1702587	
Chloromethane	ND	U	0.50	0.20	0.068	1	04/01/17	04/01/17	KWG1702587	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	04/01/17	04/01/17	KWG1702587	
Bromomethane	ND	U	0.50	0.30	0.16	1	04/01/17	04/01/17	KWG1702587	
Chloroethane	ND	U	0.50	0.20	0.16	1	04/01/17	04/01/17	KWG1702587	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	04/01/17	04/01/17	KWG1702587	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	04/01/17	04/01/17	KWG1702587	
Acetone	ND	U	20	10	3.3	1	04/01/17	04/01/17	KWG1702587	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	04/01/17	04/01/17	KWG1702587	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	04/01/17	04/01/17	KWG1702587	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	04/01/17	04/01/17	KWG1702587	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	04/01/17	04/01/17	KWG1702587	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	04/01/17	04/01/17	KWG1702587	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	04/01/17	04/01/17	KWG1702587	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	04/01/17	04/01/17	KWG1702587	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	04/01/17	04/01/17	KWG1702587	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	04/01/17	04/01/17	KWG1702587	
Chloroform	ND	U	0.50	0.20	0.072	1	04/01/17	04/01/17	KWG1702587	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	04/01/17	04/01/17	KWG1702587	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	04/01/17	04/01/17	KWG1702587	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	04/01/17	04/01/17	KWG1702587	
Benzene	ND	U	0.50	0.10	0.062	1	04/01/17	04/01/17	KWG1702587	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	04/01/17	04/01/17	KWG1702587	
Trichloroethene (TCE)	ND	U	0.50	0.20	0.10	1	04/01/17	04/01/17	KWG1702587	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	04/01/17	04/01/17	KWG1702587	
Dibromomethane	ND	U	0.50	0.50	0.15	1	04/01/17	04/01/17	KWG1702587	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	04/01/17	04/01/17	KWG1702587	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	04/01/17	04/01/17	KWG1702587	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	04/01/17	04/01/17	KWG1702587	
Toluene	ND	U	0.50	0.10	0.054	1	04/01/17	04/01/17	KWG1702587	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	04/01/17	04/01/17	KWG1702587	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	04/01/17	04/01/17	KWG1702587	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	04/01/17	04/01/17	KWG1702587	
2-Hexanone	ND	U	20	10	2.7	1	04/01/17	04/01/17	KWG1702587	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	04/01/17	04/01/17	KWG1702587	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	04/01/17	04/01/17	KWG1702587	

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: PAIC
Lab Code: K1703135-006
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	04/01/17	04/01/17	KWG1702587	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	04/01/17	04/01/17	KWG1702587	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	04/01/17	04/01/17	KWG1702587	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	04/01/17	04/01/17	KWG1702587	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	04/01/17	04/01/17	KWG1702587	
o-Xylene	ND	U	0.50	0.20	0.074	1	04/01/17	04/01/17	KWG1702587	
Styrene	ND	U	0.50	0.20	0.089	1	04/01/17	04/01/17	KWG1702587	
Bromoform	ND	U	0.50	0.50	0.16	1	04/01/17	04/01/17	KWG1702587	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	04/01/17	04/01/17	KWG1702587	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	04/01/17	04/01/17	KWG1702587	
Bromobenzene	ND	U	2.0	0.20	0.12	1	04/01/17	04/01/17	KWG1702587	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	04/01/17	04/01/17	KWG1702587	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	04/01/17	04/01/17	KWG1702587	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	04/01/17	04/01/17	KWG1702587	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	04/01/17	04/01/17	KWG1702587	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	04/01/17	04/01/17	KWG1702587	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	04/01/17	04/01/17	KWG1702587	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	04/01/17	04/01/17	KWG1702587	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	04/01/17	04/01/17	KWG1702587	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	04/01/17	04/01/17	KWG1702587	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	04/01/17	04/01/17	KWG1702587	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	04/01/17	04/01/17	KWG1702587	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	04/01/17	04/01/17	KWG1702587	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	04/01/17	04/01/17	KWG1702587	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	04/01/17	04/01/17	KWG1702587	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	04/01/17	04/01/17	KWG1702587	*
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	04/01/17	04/01/17	KWG1702587	
Naphthalene	ND	U	2.0	0.30	0.088	1	04/01/17	04/01/17	KWG1702587	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	04/01/17	04/01/17	KWG1702587	*

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: PAIC
Lab Code: K1703135-006

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	106	85-115	04/01/17	Acceptable
1,2-Dichloroethane-d4	103	70-120	04/01/17	Acceptable
Toluene-d8	102	85-120	04/01/17	Acceptable
4-Bromofluorobenzene	96	75-120	04/01/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/29/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: TVR-1
Lab Code: K1703135-007
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	04/03/17	04/03/17	KWG1702628	
Chloromethane	ND	U	0.50	0.20	0.068	1	04/03/17	04/03/17	KWG1702628	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	04/03/17	04/03/17	KWG1702628	
Bromomethane	ND	U	0.50	0.30	0.16	1	04/03/17	04/03/17	KWG1702628	
Chloroethane	ND	U	0.50	0.20	0.16	1	04/03/17	04/03/17	KWG1702628	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	04/03/17	04/03/17	KWG1702628	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	04/03/17	04/03/17	KWG1702628	
Acetone	ND	U	20	10	3.3	1	04/03/17	04/03/17	KWG1702628	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	04/03/17	04/03/17	KWG1702628	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	04/03/17	04/03/17	KWG1702628	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	04/03/17	04/03/17	KWG1702628	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	04/03/17	04/03/17	KWG1702628	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	04/03/17	04/03/17	KWG1702628	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	04/03/17	04/03/17	KWG1702628	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	04/03/17	04/03/17	KWG1702628	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	04/03/17	04/03/17	KWG1702628	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	04/03/17	04/03/17	KWG1702628	
Chloroform	ND	U	0.50	0.20	0.072	1	04/03/17	04/03/17	KWG1702628	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	04/03/17	04/03/17	KWG1702628	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	04/03/17	04/03/17	KWG1702628	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	04/03/17	04/03/17	KWG1702628	
Benzene	ND	U	0.50	0.10	0.062	1	04/03/17	04/03/17	KWG1702628	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	04/03/17	04/03/17	KWG1702628	
Trichloroethene (TCE)	7.0		0.50	0.20	0.10	1	04/03/17	04/03/17	KWG1702628	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	04/03/17	04/03/17	KWG1702628	
Dibromomethane	ND	U	0.50	0.50	0.15	1	04/03/17	04/03/17	KWG1702628	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	04/03/17	04/03/17	KWG1702628	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	04/03/17	04/03/17	KWG1702628	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	04/03/17	04/03/17	KWG1702628	
Toluene	ND	U	0.50	0.10	0.054	1	04/03/17	04/03/17	KWG1702628	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	04/03/17	04/03/17	KWG1702628	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	04/03/17	04/03/17	KWG1702628	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	04/03/17	04/03/17	KWG1702628	
2-Hexanone	ND	U	20	10	2.7	1	04/03/17	04/03/17	KWG1702628	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	04/03/17	04/03/17	KWG1702628	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	04/03/17	04/03/17	KWG1702628	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/29/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: TVR-1
Lab Code: K1703135-007
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	04/03/17	04/03/17	KWG1702628	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	04/03/17	04/03/17	KWG1702628	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	04/03/17	04/03/17	KWG1702628	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	04/03/17	04/03/17	KWG1702628	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	04/03/17	04/03/17	KWG1702628	
o-Xylene	ND	U	0.50	0.20	0.074	1	04/03/17	04/03/17	KWG1702628	
Styrene	ND	U	0.50	0.20	0.089	1	04/03/17	04/03/17	KWG1702628	
Bromoform	ND	U	0.50	0.50	0.16	1	04/03/17	04/03/17	KWG1702628	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	04/03/17	04/03/17	KWG1702628	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	04/03/17	04/03/17	KWG1702628	
Bromobenzene	ND	U	2.0	0.20	0.12	1	04/03/17	04/03/17	KWG1702628	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	04/03/17	04/03/17	KWG1702628	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	04/03/17	04/03/17	KWG1702628	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	04/03/17	04/03/17	KWG1702628	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	04/03/17	04/03/17	KWG1702628	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	04/03/17	04/03/17	KWG1702628	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	04/03/17	04/03/17	KWG1702628	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	04/03/17	04/03/17	KWG1702628	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	04/03/17	04/03/17	KWG1702628	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	04/03/17	04/03/17	KWG1702628	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	04/03/17	04/03/17	KWG1702628	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	04/03/17	04/03/17	KWG1702628	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	04/03/17	04/03/17	KWG1702628	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	04/03/17	04/03/17	KWG1702628	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	04/03/17	04/03/17	KWG1702628	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	04/03/17	04/03/17	KWG1702628	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	04/03/17	04/03/17	KWG1702628	
Naphthalene	ND	U	2.0	0.30	0.088	1	04/03/17	04/03/17	KWG1702628	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	04/03/17	04/03/17	KWG1702628	*

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/29/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: TVR-1
Lab Code: K1703135-007

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	104	85-115	04/03/17	Acceptable
1,2-Dichloroethane-d4	101	70-120	04/03/17	Acceptable
Toluene-d8	101	85-120	04/03/17	Acceptable
4-Bromofluorobenzene	98	75-120	04/03/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: TVR-3
Lab Code: K1703135-008
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	04/03/17	04/03/17	KWG1702628	
Chloromethane	ND	U	0.50	0.20	0.068	1	04/03/17	04/03/17	KWG1702628	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	04/03/17	04/03/17	KWG1702628	
Bromomethane	ND	U	0.50	0.30	0.16	1	04/03/17	04/03/17	KWG1702628	
Chloroethane	ND	U	0.50	0.20	0.16	1	04/03/17	04/03/17	KWG1702628	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	04/03/17	04/03/17	KWG1702628	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	04/03/17	04/03/17	KWG1702628	
Acetone	ND	U	20	10	3.3	1	04/03/17	04/03/17	KWG1702628	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	04/03/17	04/03/17	KWG1702628	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	04/03/17	04/03/17	KWG1702628	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	04/03/17	04/03/17	KWG1702628	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	04/03/17	04/03/17	KWG1702628	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	04/03/17	04/03/17	KWG1702628	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	04/03/17	04/03/17	KWG1702628	
cis-1,2-Dichloroethene	0.11	J	0.50	0.20	0.067	1	04/03/17	04/03/17	KWG1702628	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	04/03/17	04/03/17	KWG1702628	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	04/03/17	04/03/17	KWG1702628	
Chloroform	ND	U	0.50	0.20	0.072	1	04/03/17	04/03/17	KWG1702628	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	04/03/17	04/03/17	KWG1702628	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	04/03/17	04/03/17	KWG1702628	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	04/03/17	04/03/17	KWG1702628	
Benzene	ND	U	0.50	0.10	0.062	1	04/03/17	04/03/17	KWG1702628	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	04/03/17	04/03/17	KWG1702628	
Trichloroethene (TCE)	6.1		0.50	0.20	0.10	1	04/03/17	04/03/17	KWG1702628	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	04/03/17	04/03/17	KWG1702628	
Dibromomethane	ND	U	0.50	0.50	0.15	1	04/03/17	04/03/17	KWG1702628	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	04/03/17	04/03/17	KWG1702628	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	04/03/17	04/03/17	KWG1702628	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	04/03/17	04/03/17	KWG1702628	
Toluene	ND	U	0.50	0.10	0.054	1	04/03/17	04/03/17	KWG1702628	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	04/03/17	04/03/17	KWG1702628	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	04/03/17	04/03/17	KWG1702628	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	04/03/17	04/03/17	KWG1702628	
2-Hexanone	ND	U	20	10	2.7	1	04/03/17	04/03/17	KWG1702628	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	04/03/17	04/03/17	KWG1702628	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	04/03/17	04/03/17	KWG1702628	

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: TVR-3
Lab Code: K1703135-008
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	04/03/17	04/03/17	KWG1702628	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	04/03/17	04/03/17	KWG1702628	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	04/03/17	04/03/17	KWG1702628	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	04/03/17	04/03/17	KWG1702628	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	04/03/17	04/03/17	KWG1702628	
o-Xylene	ND	U	0.50	0.20	0.074	1	04/03/17	04/03/17	KWG1702628	
Styrene	ND	U	0.50	0.20	0.089	1	04/03/17	04/03/17	KWG1702628	
Bromoform	ND	U	0.50	0.50	0.16	1	04/03/17	04/03/17	KWG1702628	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	04/03/17	04/03/17	KWG1702628	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	04/03/17	04/03/17	KWG1702628	
Bromobenzene	ND	U	2.0	0.20	0.12	1	04/03/17	04/03/17	KWG1702628	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	04/03/17	04/03/17	KWG1702628	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	04/03/17	04/03/17	KWG1702628	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	04/03/17	04/03/17	KWG1702628	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	04/03/17	04/03/17	KWG1702628	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	04/03/17	04/03/17	KWG1702628	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	04/03/17	04/03/17	KWG1702628	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	04/03/17	04/03/17	KWG1702628	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	04/03/17	04/03/17	KWG1702628	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	04/03/17	04/03/17	KWG1702628	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	04/03/17	04/03/17	KWG1702628	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	04/03/17	04/03/17	KWG1702628	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	04/03/17	04/03/17	KWG1702628	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	04/03/17	04/03/17	KWG1702628	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	04/03/17	04/03/17	KWG1702628	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	04/03/17	04/03/17	KWG1702628	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	04/03/17	04/03/17	KWG1702628	
Naphthalene	ND	U	2.0	0.30	0.088	1	04/03/17	04/03/17	KWG1702628	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	04/03/17	04/03/17	KWG1702628	*

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: TVR-3
Lab Code: K1703135-008

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	104	85-115	04/03/17	Acceptable
1,2-Dichloroethane-d4	103	70-120	04/03/17	Acceptable
Toluene-d8	100	85-120	04/03/17	Acceptable
4-Bromofluorobenzene	96	75-120	04/03/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/29/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: TVR-5
Lab Code: K1703135-009
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	04/03/17	04/03/17	KWG1702628	
Chloromethane	ND	U	0.50	0.20	0.068	1	04/03/17	04/03/17	KWG1702628	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	04/03/17	04/03/17	KWG1702628	
Bromomethane	ND	U	0.50	0.30	0.16	1	04/03/17	04/03/17	KWG1702628	
Chloroethane	ND	U	0.50	0.20	0.16	1	04/03/17	04/03/17	KWG1702628	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	04/03/17	04/03/17	KWG1702628	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	04/03/17	04/03/17	KWG1702628	
Acetone	ND	U	20	10	3.3	1	04/03/17	04/03/17	KWG1702628	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	04/03/17	04/03/17	KWG1702628	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	04/03/17	04/03/17	KWG1702628	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	04/03/17	04/03/17	KWG1702628	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	04/03/17	04/03/17	KWG1702628	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	04/03/17	04/03/17	KWG1702628	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	04/03/17	04/03/17	KWG1702628	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	04/03/17	04/03/17	KWG1702628	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	04/03/17	04/03/17	KWG1702628	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	04/03/17	04/03/17	KWG1702628	
Chloroform	ND	U	0.50	0.20	0.072	1	04/03/17	04/03/17	KWG1702628	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	04/03/17	04/03/17	KWG1702628	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	04/03/17	04/03/17	KWG1702628	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	04/03/17	04/03/17	KWG1702628	
Benzene	ND	U	0.50	0.10	0.062	1	04/03/17	04/03/17	KWG1702628	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	04/03/17	04/03/17	KWG1702628	
Trichloroethene (TCE)	0.26	J	0.50	0.20	0.10	1	04/03/17	04/03/17	KWG1702628	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	04/03/17	04/03/17	KWG1702628	
Dibromomethane	ND	U	0.50	0.50	0.15	1	04/03/17	04/03/17	KWG1702628	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	04/03/17	04/03/17	KWG1702628	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	04/03/17	04/03/17	KWG1702628	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	04/03/17	04/03/17	KWG1702628	
Toluene	ND	U	0.50	0.10	0.054	1	04/03/17	04/03/17	KWG1702628	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	04/03/17	04/03/17	KWG1702628	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	04/03/17	04/03/17	KWG1702628	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	04/03/17	04/03/17	KWG1702628	
2-Hexanone	ND	U	20	10	2.7	1	04/03/17	04/03/17	KWG1702628	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	04/03/17	04/03/17	KWG1702628	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	04/03/17	04/03/17	KWG1702628	

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/29/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: TVR-5
Lab Code: K1703135-009
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	04/03/17	04/03/17	KWG1702628	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	04/03/17	04/03/17	KWG1702628	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	04/03/17	04/03/17	KWG1702628	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	04/03/17	04/03/17	KWG1702628	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	04/03/17	04/03/17	KWG1702628	
o-Xylene	ND	U	0.50	0.20	0.074	1	04/03/17	04/03/17	KWG1702628	
Styrene	ND	U	0.50	0.20	0.089	1	04/03/17	04/03/17	KWG1702628	
Bromoform	ND	U	0.50	0.50	0.16	1	04/03/17	04/03/17	KWG1702628	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	04/03/17	04/03/17	KWG1702628	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	04/03/17	04/03/17	KWG1702628	
Bromobenzene	ND	U	2.0	0.20	0.12	1	04/03/17	04/03/17	KWG1702628	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	04/03/17	04/03/17	KWG1702628	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	04/03/17	04/03/17	KWG1702628	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	04/03/17	04/03/17	KWG1702628	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	04/03/17	04/03/17	KWG1702628	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	04/03/17	04/03/17	KWG1702628	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	04/03/17	04/03/17	KWG1702628	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	04/03/17	04/03/17	KWG1702628	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	04/03/17	04/03/17	KWG1702628	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	04/03/17	04/03/17	KWG1702628	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	04/03/17	04/03/17	KWG1702628	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	04/03/17	04/03/17	KWG1702628	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	04/03/17	04/03/17	KWG1702628	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	04/03/17	04/03/17	KWG1702628	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	04/03/17	04/03/17	KWG1702628	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	04/03/17	04/03/17	KWG1702628	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	04/03/17	04/03/17	KWG1702628	
Naphthalene	ND	U	2.0	0.30	0.088	1	04/03/17	04/03/17	KWG1702628	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	04/03/17	04/03/17	KWG1702628	*

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/29/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: TVR-5
Lab Code: K1703135-009

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	108	85-115	04/03/17	Acceptable
1,2-Dichloroethane-d4	103	70-120	04/03/17	Acceptable
Toluene-d8	102	85-120	04/03/17	Acceptable
4-Bromofluorobenzene	97	75-120	04/03/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/29/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: TVR-6
Lab Code: K1703135-010
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	04/04/17	04/04/17	KWG1702628	
Chloromethane	ND	U	0.50	0.20	0.068	1	04/04/17	04/04/17	KWG1702628	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	04/04/17	04/04/17	KWG1702628	
Bromomethane	ND	U	0.50	0.30	0.16	1	04/04/17	04/04/17	KWG1702628	
Chloroethane	ND	U	0.50	0.20	0.16	1	04/04/17	04/04/17	KWG1702628	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	04/04/17	04/04/17	KWG1702628	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	04/04/17	04/04/17	KWG1702628	
Acetone	ND	U	20	10	3.3	1	04/04/17	04/04/17	KWG1702628	
Carbon Disulfide	0.11	J	0.50	0.20	0.069	1	04/04/17	04/04/17	KWG1702628	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	04/04/17	04/04/17	KWG1702628	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	04/04/17	04/04/17	KWG1702628	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	04/04/17	04/04/17	KWG1702628	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	04/04/17	04/04/17	KWG1702628	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	04/04/17	04/04/17	KWG1702628	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	04/04/17	04/04/17	KWG1702628	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	04/04/17	04/04/17	KWG1702628	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	04/04/17	04/04/17	KWG1702628	
Chloroform	0.080	J	0.50	0.20	0.072	1	04/04/17	04/04/17	KWG1702628	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	04/04/17	04/04/17	KWG1702628	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	04/04/17	04/04/17	KWG1702628	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	04/04/17	04/04/17	KWG1702628	
Benzene	ND	U	0.50	0.10	0.062	1	04/04/17	04/04/17	KWG1702628	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	04/04/17	04/04/17	KWG1702628	
Trichloroethene (TCE)	4.7		0.50	0.20	0.10	1	04/04/17	04/04/17	KWG1702628	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	04/04/17	04/04/17	KWG1702628	
Dibromomethane	ND	U	0.50	0.50	0.15	1	04/04/17	04/04/17	KWG1702628	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	04/04/17	04/04/17	KWG1702628	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	04/04/17	04/04/17	KWG1702628	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	04/04/17	04/04/17	KWG1702628	
Toluene	ND	U	0.50	0.10	0.054	1	04/04/17	04/04/17	KWG1702628	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	04/04/17	04/04/17	KWG1702628	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	04/04/17	04/04/17	KWG1702628	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	04/04/17	04/04/17	KWG1702628	
2-Hexanone	ND	U	20	10	2.7	1	04/04/17	04/04/17	KWG1702628	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	04/04/17	04/04/17	KWG1702628	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	04/04/17	04/04/17	KWG1702628	

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/29/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: TVR-6
Lab Code: K1703135-010
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	04/04/17	04/04/17	KWG1702628	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	04/04/17	04/04/17	KWG1702628	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	04/04/17	04/04/17	KWG1702628	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	04/04/17	04/04/17	KWG1702628	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	04/04/17	04/04/17	KWG1702628	
o-Xylene	ND	U	0.50	0.20	0.074	1	04/04/17	04/04/17	KWG1702628	
Styrene	ND	U	0.50	0.20	0.089	1	04/04/17	04/04/17	KWG1702628	
Bromoform	ND	U	0.50	0.50	0.16	1	04/04/17	04/04/17	KWG1702628	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	04/04/17	04/04/17	KWG1702628	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	04/04/17	04/04/17	KWG1702628	
Bromobenzene	ND	U	2.0	0.20	0.12	1	04/04/17	04/04/17	KWG1702628	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	04/04/17	04/04/17	KWG1702628	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	04/04/17	04/04/17	KWG1702628	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	04/04/17	04/04/17	KWG1702628	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	04/04/17	04/04/17	KWG1702628	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	04/04/17	04/04/17	KWG1702628	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	04/04/17	04/04/17	KWG1702628	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	04/04/17	04/04/17	KWG1702628	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	04/04/17	04/04/17	KWG1702628	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	04/04/17	04/04/17	KWG1702628	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	04/04/17	04/04/17	KWG1702628	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	04/04/17	04/04/17	KWG1702628	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	04/04/17	04/04/17	KWG1702628	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	04/04/17	04/04/17	KWG1702628	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	04/04/17	04/04/17	KWG1702628	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	04/04/17	04/04/17	KWG1702628	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	04/04/17	04/04/17	KWG1702628	
Naphthalene	ND	U	2.0	0.30	0.088	1	04/04/17	04/04/17	KWG1702628	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	04/04/17	04/04/17	KWG1702628	*

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/29/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: TVR-6
Lab Code: K1703135-010

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	103	85-115	04/04/17	Acceptable
1,2-Dichloroethane-d4	101	70-120	04/04/17	Acceptable
Toluene-d8	102	85-120	04/04/17	Acceptable
4-Bromofluorobenzene	96	75-120	04/04/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: TVR-7
Lab Code: K1703135-011
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	04/04/17	04/04/17	KWG1702628	
Chloromethane	ND	U	0.50	0.20	0.068	1	04/04/17	04/04/17	KWG1702628	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	04/04/17	04/04/17	KWG1702628	
Bromomethane	ND	U	0.50	0.30	0.16	1	04/04/17	04/04/17	KWG1702628	
Chloroethane	ND	U	0.50	0.20	0.16	1	04/04/17	04/04/17	KWG1702628	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	04/04/17	04/04/17	KWG1702628	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	04/04/17	04/04/17	KWG1702628	
Acetone	ND	U	20	10	3.3	1	04/04/17	04/04/17	KWG1702628	
Carbon Disulfide	0.070	J	0.50	0.20	0.069	1	04/04/17	04/04/17	KWG1702628	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	04/04/17	04/04/17	KWG1702628	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	04/04/17	04/04/17	KWG1702628	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	04/04/17	04/04/17	KWG1702628	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	04/04/17	04/04/17	KWG1702628	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	04/04/17	04/04/17	KWG1702628	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	04/04/17	04/04/17	KWG1702628	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	04/04/17	04/04/17	KWG1702628	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	04/04/17	04/04/17	KWG1702628	
Chloroform	0.11	J	0.50	0.20	0.072	1	04/04/17	04/04/17	KWG1702628	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	04/04/17	04/04/17	KWG1702628	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	04/04/17	04/04/17	KWG1702628	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	04/04/17	04/04/17	KWG1702628	
Benzene	ND	U	0.50	0.10	0.062	1	04/04/17	04/04/17	KWG1702628	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	04/04/17	04/04/17	KWG1702628	
Trichloroethene (TCE)	7.9		0.50	0.20	0.10	1	04/04/17	04/04/17	KWG1702628	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	04/04/17	04/04/17	KWG1702628	
Dibromomethane	ND	U	0.50	0.50	0.15	1	04/04/17	04/04/17	KWG1702628	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	04/04/17	04/04/17	KWG1702628	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	04/04/17	04/04/17	KWG1702628	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	04/04/17	04/04/17	KWG1702628	
Toluene	ND	U	0.50	0.10	0.054	1	04/04/17	04/04/17	KWG1702628	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	04/04/17	04/04/17	KWG1702628	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	04/04/17	04/04/17	KWG1702628	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	04/04/17	04/04/17	KWG1702628	
2-Hexanone	ND	U	20	10	2.7	1	04/04/17	04/04/17	KWG1702628	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	04/04/17	04/04/17	KWG1702628	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	04/04/17	04/04/17	KWG1702628	

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: TVR-7
Lab Code: K1703135-011
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	04/04/17	04/04/17	KWG1702628	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	04/04/17	04/04/17	KWG1702628	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	04/04/17	04/04/17	KWG1702628	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	04/04/17	04/04/17	KWG1702628	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	04/04/17	04/04/17	KWG1702628	
o-Xylene	ND	U	0.50	0.20	0.074	1	04/04/17	04/04/17	KWG1702628	
Styrene	ND	U	0.50	0.20	0.089	1	04/04/17	04/04/17	KWG1702628	
Bromoform	ND	U	0.50	0.50	0.16	1	04/04/17	04/04/17	KWG1702628	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	04/04/17	04/04/17	KWG1702628	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	04/04/17	04/04/17	KWG1702628	
Bromobenzene	ND	U	2.0	0.20	0.12	1	04/04/17	04/04/17	KWG1702628	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	04/04/17	04/04/17	KWG1702628	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	04/04/17	04/04/17	KWG1702628	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	04/04/17	04/04/17	KWG1702628	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	04/04/17	04/04/17	KWG1702628	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	04/04/17	04/04/17	KWG1702628	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	04/04/17	04/04/17	KWG1702628	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	04/04/17	04/04/17	KWG1702628	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	04/04/17	04/04/17	KWG1702628	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	04/04/17	04/04/17	KWG1702628	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	04/04/17	04/04/17	KWG1702628	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	04/04/17	04/04/17	KWG1702628	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	04/04/17	04/04/17	KWG1702628	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	04/04/17	04/04/17	KWG1702628	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	04/04/17	04/04/17	KWG1702628	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	04/04/17	04/04/17	KWG1702628	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	04/04/17	04/04/17	KWG1702628	
Naphthalene	ND	U	2.0	0.30	0.088	1	04/04/17	04/04/17	KWG1702628	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	04/04/17	04/04/17	KWG1702628	*

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: TVR-7
Lab Code: K1703135-011

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	105	85-115	04/04/17	Acceptable
1,2-Dichloroethane-d4	102	70-120	04/04/17	Acceptable
Toluene-d8	101	85-120	04/04/17	Acceptable
4-Bromofluorobenzene	98	75-120	04/04/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: POMONA-1
Lab Code: K1703135-012
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	04/04/17	04/04/17	KWG1702628	
Chloromethane	ND	U	0.50	0.20	0.068	1	04/04/17	04/04/17	KWG1702628	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	04/04/17	04/04/17	KWG1702628	
Bromomethane	ND	U	0.50	0.30	0.16	1	04/04/17	04/04/17	KWG1702628	
Chloroethane	ND	U	0.50	0.20	0.16	1	04/04/17	04/04/17	KWG1702628	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	04/04/17	04/04/17	KWG1702628	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	04/04/17	04/04/17	KWG1702628	
Acetone	ND	U	20	10	3.3	1	04/04/17	04/04/17	KWG1702628	
Carbon Disulfide	0.070	J	0.50	0.20	0.069	1	04/04/17	04/04/17	KWG1702628	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	04/04/17	04/04/17	KWG1702628	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	04/04/17	04/04/17	KWG1702628	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	04/04/17	04/04/17	KWG1702628	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	04/04/17	04/04/17	KWG1702628	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	04/04/17	04/04/17	KWG1702628	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	04/04/17	04/04/17	KWG1702628	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	04/04/17	04/04/17	KWG1702628	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	04/04/17	04/04/17	KWG1702628	
Chloroform	ND	U	0.50	0.20	0.072	1	04/04/17	04/04/17	KWG1702628	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	04/04/17	04/04/17	KWG1702628	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	04/04/17	04/04/17	KWG1702628	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	04/04/17	04/04/17	KWG1702628	
Benzene	ND	U	0.50	0.10	0.062	1	04/04/17	04/04/17	KWG1702628	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	04/04/17	04/04/17	KWG1702628	
Trichloroethene (TCE)	ND	U	0.50	0.20	0.10	1	04/04/17	04/04/17	KWG1702628	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	04/04/17	04/04/17	KWG1702628	
Dibromomethane	ND	U	0.50	0.50	0.15	1	04/04/17	04/04/17	KWG1702628	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	04/04/17	04/04/17	KWG1702628	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	04/04/17	04/04/17	KWG1702628	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	04/04/17	04/04/17	KWG1702628	
Toluene	ND	U	0.50	0.10	0.054	1	04/04/17	04/04/17	KWG1702628	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	04/04/17	04/04/17	KWG1702628	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	04/04/17	04/04/17	KWG1702628	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	04/04/17	04/04/17	KWG1702628	
2-Hexanone	ND	U	20	10	2.7	1	04/04/17	04/04/17	KWG1702628	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	04/04/17	04/04/17	KWG1702628	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	04/04/17	04/04/17	KWG1702628	

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: POMONA-1
Lab Code: K1703135-012
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	04/04/17	04/04/17	KWG1702628	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	04/04/17	04/04/17	KWG1702628	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	04/04/17	04/04/17	KWG1702628	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	04/04/17	04/04/17	KWG1702628	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	04/04/17	04/04/17	KWG1702628	
o-Xylene	ND	U	0.50	0.20	0.074	1	04/04/17	04/04/17	KWG1702628	
Styrene	ND	U	0.50	0.20	0.089	1	04/04/17	04/04/17	KWG1702628	
Bromoform	ND	U	0.50	0.50	0.16	1	04/04/17	04/04/17	KWG1702628	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	04/04/17	04/04/17	KWG1702628	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	04/04/17	04/04/17	KWG1702628	
Bromobenzene	ND	U	2.0	0.20	0.12	1	04/04/17	04/04/17	KWG1702628	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	04/04/17	04/04/17	KWG1702628	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	04/04/17	04/04/17	KWG1702628	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	04/04/17	04/04/17	KWG1702628	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	04/04/17	04/04/17	KWG1702628	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	04/04/17	04/04/17	KWG1702628	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	04/04/17	04/04/17	KWG1702628	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	04/04/17	04/04/17	KWG1702628	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	04/04/17	04/04/17	KWG1702628	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	04/04/17	04/04/17	KWG1702628	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	04/04/17	04/04/17	KWG1702628	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	04/04/17	04/04/17	KWG1702628	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	04/04/17	04/04/17	KWG1702628	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	04/04/17	04/04/17	KWG1702628	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	04/04/17	04/04/17	KWG1702628	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	04/04/17	04/04/17	KWG1702628	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	04/04/17	04/04/17	KWG1702628	
Naphthalene	ND	U	2.0	0.30	0.088	1	04/04/17	04/04/17	KWG1702628	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	04/04/17	04/04/17	KWG1702628	*

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/30/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: POMONA-1
Lab Code: K1703135-012

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	105	85-115	04/04/17	Acceptable
1,2-Dichloroethane-d4	103	70-120	04/04/17	Acceptable
Toluene-d8	101	85-120	04/04/17	Acceptable
4-Bromofluorobenzene	97	75-120	04/04/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/29/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: TRIP BLANK
Lab Code: K1703135-013
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	04/04/17	04/04/17	KWG1702628	
Chloromethane	ND	U	0.50	0.20	0.068	1	04/04/17	04/04/17	KWG1702628	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	04/04/17	04/04/17	KWG1702628	
Bromomethane	ND	U	0.50	0.30	0.16	1	04/04/17	04/04/17	KWG1702628	
Chloroethane	ND	U	0.50	0.20	0.16	1	04/04/17	04/04/17	KWG1702628	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	04/04/17	04/04/17	KWG1702628	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	04/04/17	04/04/17	KWG1702628	
Acetone	9.1	J	20	10	3.3	1	04/04/17	04/04/17	KWG1702628	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	04/04/17	04/04/17	KWG1702628	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	04/04/17	04/04/17	KWG1702628	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	04/04/17	04/04/17	KWG1702628	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	04/04/17	04/04/17	KWG1702628	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	04/04/17	04/04/17	KWG1702628	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	04/04/17	04/04/17	KWG1702628	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	04/04/17	04/04/17	KWG1702628	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	04/04/17	04/04/17	KWG1702628	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	04/04/17	04/04/17	KWG1702628	
Chloroform	ND	U	0.50	0.20	0.072	1	04/04/17	04/04/17	KWG1702628	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	04/04/17	04/04/17	KWG1702628	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	04/04/17	04/04/17	KWG1702628	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	04/04/17	04/04/17	KWG1702628	
Benzene	ND	U	0.50	0.10	0.062	1	04/04/17	04/04/17	KWG1702628	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	04/04/17	04/04/17	KWG1702628	
Trichloroethene (TCE)	ND	U	0.50	0.20	0.10	1	04/04/17	04/04/17	KWG1702628	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	04/04/17	04/04/17	KWG1702628	
Dibromomethane	ND	U	0.50	0.50	0.15	1	04/04/17	04/04/17	KWG1702628	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	04/04/17	04/04/17	KWG1702628	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	04/04/17	04/04/17	KWG1702628	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	04/04/17	04/04/17	KWG1702628	
Toluene	ND	U	0.50	0.10	0.054	1	04/04/17	04/04/17	KWG1702628	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	04/04/17	04/04/17	KWG1702628	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	04/04/17	04/04/17	KWG1702628	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	04/04/17	04/04/17	KWG1702628	
2-Hexanone	ND	U	20	10	2.7	1	04/04/17	04/04/17	KWG1702628	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	04/04/17	04/04/17	KWG1702628	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	04/04/17	04/04/17	KWG1702628	

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/29/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: TRIP BLANK
Lab Code: K1703135-013
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	04/04/17	04/04/17	KWG1702628	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	04/04/17	04/04/17	KWG1702628	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	04/04/17	04/04/17	KWG1702628	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	04/04/17	04/04/17	KWG1702628	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	04/04/17	04/04/17	KWG1702628	
o-Xylene	ND	U	0.50	0.20	0.074	1	04/04/17	04/04/17	KWG1702628	
Styrene	ND	U	0.50	0.20	0.089	1	04/04/17	04/04/17	KWG1702628	
Bromoform	ND	U	0.50	0.50	0.16	1	04/04/17	04/04/17	KWG1702628	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	04/04/17	04/04/17	KWG1702628	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	04/04/17	04/04/17	KWG1702628	
Bromobenzene	ND	U	2.0	0.20	0.12	1	04/04/17	04/04/17	KWG1702628	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	04/04/17	04/04/17	KWG1702628	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	04/04/17	04/04/17	KWG1702628	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	04/04/17	04/04/17	KWG1702628	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	04/04/17	04/04/17	KWG1702628	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	04/04/17	04/04/17	KWG1702628	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	04/04/17	04/04/17	KWG1702628	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	04/04/17	04/04/17	KWG1702628	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	04/04/17	04/04/17	KWG1702628	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	04/04/17	04/04/17	KWG1702628	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	04/04/17	04/04/17	KWG1702628	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	04/04/17	04/04/17	KWG1702628	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	04/04/17	04/04/17	KWG1702628	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	04/04/17	04/04/17	KWG1702628	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	04/04/17	04/04/17	KWG1702628	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	04/04/17	04/04/17	KWG1702628	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	04/04/17	04/04/17	KWG1702628	
Naphthalene	ND	U	2.0	0.30	0.088	1	04/04/17	04/04/17	KWG1702628	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	04/04/17	04/04/17	KWG1702628	*

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: 03/29/2017
Date Received: 03/31/2017

Volatile Organic Compounds

Sample Name: TRIP BLANK
Lab Code: K1703135-013

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	104	85-115	04/04/17	Acceptable
1,2-Dichloroethane-d4	101	70-120	04/04/17	Acceptable
Toluene-d8	102	85-120	04/04/17	Acceptable
4-Bromofluorobenzene	95	75-120	04/04/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1702587-3
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/31/17	03/31/17	KWG1702587	
Chloromethane	ND	U	0.50	0.20	0.068	1	03/31/17	03/31/17	KWG1702587	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/31/17	03/31/17	KWG1702587	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/31/17	03/31/17	KWG1702587	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/31/17	03/31/17	KWG1702587	
Acetone	ND	U	20	10	3.3	1	03/31/17	03/31/17	KWG1702587	
Carbon Disulfide	0.12	J	0.50	0.20	0.069	1	03/31/17	03/31/17	KWG1702587	
Methylene Chloride	0.10	J	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/31/17	03/31/17	KWG1702587	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/31/17	03/31/17	KWG1702587	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/31/17	03/31/17	KWG1702587	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	03/31/17	03/31/17	KWG1702587	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/31/17	03/31/17	KWG1702587	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Chloroform	ND	U	0.50	0.20	0.072	1	03/31/17	03/31/17	KWG1702587	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/31/17	03/31/17	KWG1702587	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
Benzene	ND	U	0.50	0.10	0.062	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/31/17	03/31/17	KWG1702587	
Trichloroethene (TCE)	ND	U	0.50	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/31/17	03/31/17	KWG1702587	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/31/17	03/31/17	KWG1702587	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/31/17	03/31/17	KWG1702587	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/31/17	03/31/17	KWG1702587	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/31/17	03/31/17	KWG1702587	
Toluene	ND	U	0.50	0.10	0.054	1	03/31/17	03/31/17	KWG1702587	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/31/17	03/31/17	KWG1702587	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/31/17	03/31/17	KWG1702587	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	03/31/17	03/31/17	KWG1702587	
2-Hexanone	ND	U	20	10	2.7	1	03/31/17	03/31/17	KWG1702587	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/31/17	03/31/17	KWG1702587	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/31/17	03/31/17	KWG1702587	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1702587-3
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	03/31/17	03/31/17	KWG1702587	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
o-Xylene	ND	U	0.50	0.20	0.074	1	03/31/17	03/31/17	KWG1702587	
Styrene	ND	U	0.50	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
Bromoform	ND	U	0.50	0.50	0.16	1	03/31/17	03/31/17	KWG1702587	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	03/31/17	03/31/17	KWG1702587	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	03/31/17	03/31/17	KWG1702587	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/31/17	03/31/17	KWG1702587	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/31/17	03/31/17	KWG1702587	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	03/31/17	03/31/17	KWG1702587	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	03/31/17	03/31/17	KWG1702587	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	03/31/17	03/31/17	KWG1702587	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	03/31/17	03/31/17	KWG1702587	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/31/17	03/31/17	KWG1702587	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/31/17	03/31/17	KWG1702587	*
Hexachlorobutadiene	0.15	J	2.0	0.30	0.11	1	03/31/17	03/31/17	KWG1702587	
Naphthalene	ND	U	2.0	0.30	0.088	1	03/31/17	03/31/17	KWG1702587	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/31/17	03/31/17	KWG1702587	*

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1702587-3

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	104	85-115	03/31/17	Acceptable
1,2-Dichloroethane-d4	102	70-120	03/31/17	Acceptable
Toluene-d8	101	85-120	03/31/17	Acceptable
4-Bromofluorobenzene	97	75-120	03/31/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1702628-3
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	04/03/17	04/03/17	KWG1702628	
Chloromethane	ND	U	0.50	0.20	0.068	1	04/03/17	04/03/17	KWG1702628	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	04/03/17	04/03/17	KWG1702628	
Bromomethane	ND	U	0.50	0.30	0.16	1	04/03/17	04/03/17	KWG1702628	
Chloroethane	ND	U	0.50	0.20	0.16	1	04/03/17	04/03/17	KWG1702628	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	04/03/17	04/03/17	KWG1702628	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	04/03/17	04/03/17	KWG1702628	
Acetone	ND	U	20	10	3.3	1	04/03/17	04/03/17	KWG1702628	
Carbon Disulfide	0.090	J	0.50	0.20	0.069	1	04/03/17	04/03/17	KWG1702628	
Methylene Chloride	0.10	J	2.0	0.20	0.10	1	04/03/17	04/03/17	KWG1702628	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	04/03/17	04/03/17	KWG1702628	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	04/03/17	04/03/17	KWG1702628	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	04/03/17	04/03/17	KWG1702628	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	04/03/17	04/03/17	KWG1702628	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	04/03/17	04/03/17	KWG1702628	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	04/03/17	04/03/17	KWG1702628	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	04/03/17	04/03/17	KWG1702628	
Chloroform	ND	U	0.50	0.20	0.072	1	04/03/17	04/03/17	KWG1702628	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	04/03/17	04/03/17	KWG1702628	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	04/03/17	04/03/17	KWG1702628	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	04/03/17	04/03/17	KWG1702628	
Benzene	ND	U	0.50	0.10	0.062	1	04/03/17	04/03/17	KWG1702628	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	04/03/17	04/03/17	KWG1702628	
Trichloroethene (TCE)	ND	U	0.50	0.20	0.10	1	04/03/17	04/03/17	KWG1702628	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	04/03/17	04/03/17	KWG1702628	
Dibromomethane	ND	U	0.50	0.50	0.15	1	04/03/17	04/03/17	KWG1702628	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	04/03/17	04/03/17	KWG1702628	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	04/03/17	04/03/17	KWG1702628	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	04/03/17	04/03/17	KWG1702628	
Toluene	ND	U	0.50	0.10	0.054	1	04/03/17	04/03/17	KWG1702628	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	04/03/17	04/03/17	KWG1702628	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	04/03/17	04/03/17	KWG1702628	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	04/03/17	04/03/17	KWG1702628	
2-Hexanone	ND	U	20	10	2.7	1	04/03/17	04/03/17	KWG1702628	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	04/03/17	04/03/17	KWG1702628	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	04/03/17	04/03/17	KWG1702628	

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1702628-3
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	04/03/17	04/03/17	KWG1702628	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	04/03/17	04/03/17	KWG1702628	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	04/03/17	04/03/17	KWG1702628	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	04/03/17	04/03/17	KWG1702628	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	04/03/17	04/03/17	KWG1702628	
o-Xylene	ND	U	0.50	0.20	0.074	1	04/03/17	04/03/17	KWG1702628	
Styrene	ND	U	0.50	0.20	0.089	1	04/03/17	04/03/17	KWG1702628	
Bromoform	ND	U	0.50	0.50	0.16	1	04/03/17	04/03/17	KWG1702628	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	04/03/17	04/03/17	KWG1702628	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	04/03/17	04/03/17	KWG1702628	
Bromobenzene	ND	U	2.0	0.20	0.12	1	04/03/17	04/03/17	KWG1702628	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	04/03/17	04/03/17	KWG1702628	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	04/03/17	04/03/17	KWG1702628	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	04/03/17	04/03/17	KWG1702628	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	04/03/17	04/03/17	KWG1702628	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	04/03/17	04/03/17	KWG1702628	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	04/03/17	04/03/17	KWG1702628	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	04/03/17	04/03/17	KWG1702628	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	04/03/17	04/03/17	KWG1702628	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	04/03/17	04/03/17	KWG1702628	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	04/03/17	04/03/17	KWG1702628	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	04/03/17	04/03/17	KWG1702628	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	04/03/17	04/03/17	KWG1702628	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	04/03/17	04/03/17	KWG1702628	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	04/03/17	04/03/17	KWG1702628	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	04/03/17	04/03/17	KWG1702628	
Hexachlorobutadiene	0.14	J	2.0	0.30	0.11	1	04/03/17	04/03/17	KWG1702628	
Naphthalene	ND	U	2.0	0.30	0.088	1	04/03/17	04/03/17	KWG1702628	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	04/03/17	04/03/17	KWG1702628	*

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1702628-3

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	105	85-115	04/03/17	Acceptable
1,2-Dichloroethane-d4	103	70-120	04/03/17	Acceptable
Toluene-d8	100	85-120	04/03/17	Acceptable
4-Bromofluorobenzene	97	75-120	04/03/17	Acceptable

Comments: _____

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135

**Surrogate Recovery Summary
 Volatile Organic Compounds**

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: Percent
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>	<u>Sur3</u>	<u>Sur4</u>
815-2	K1703135-001	105	103	100	98
MTS-1	K1703135-002	105	101	99	97
MTS-2	K1703135-003	105	103	101	96
MTS-4	K1703135-004	102	99	99	95
POMONA	K1703135-005	104	101	100	99
PAIC	K1703135-006	106	103	102	96
TVR-1	K1703135-007	104	101	101	98
TVR-3	K1703135-008	104	103	100	96
TVR-5	K1703135-009	108	103	102	97
TVR-6	K1703135-010	103	101	102	96
TVR-7	K1703135-011	105	102	101	98
POMONA-1	K1703135-012	105	103	101	97
TRIP BLANK	K1703135-013	104	101	102	95
Method Blank	KWG1702587-3	104	102	101	97
Method Blank	KWG1702628-3	105	103	100	97
Lab Control Sample	KWG1702587-1	103	101	102	102
Duplicate Lab Control Sample	KWG1702587-2	100	95	101	102
Lab Control Sample	KWG1702628-1	102	96	103	100
Duplicate Lab Control Sample	KWG1702628-2	101	95	102	102

Surrogate Recovery Control Limits (%)

Sur1 = Dibromofluoromethane	85-115
Sur2 = 1,2-Dichloroethane-d4	70-120
Sur3 = Toluene-d8	85-120
Sur4 = 4-Bromofluorobenzene	75-120

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703135
Date Analyzed: 03/31/2017
Time Analyzed: 14:20

Internal Standard Area and RT Summary
Volatile Organic Compounds

File ID: I:\MS46\DATA\033117\0331F003.D
Instrument ID: MS46
Analysis Method: 8260C

Lab Code: KWG1702586-2
Analysis Lot: KWG1702586

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>
Results ==>	591,240	6.39	225,318	9.86	227,136	12.43
Upper Limit ==>	1,182,480	6.56	450,636	10.03	454,272	12.60
Lower Limit ==>	295,620	6.22	112,659	9.69	113,568	12.26
ICAL Result ==>	651,287	6.39	251,959	9.86	250,044	12.44

Associated Analyses

Lab Control Sample	KWG1702587-1	574,327	6.39	219,974	9.86	226,555	12.43
Duplicate Lab Control Sample	KWG1702587-2	591,761	6.39	224,831	9.86	226,852	12.43
Method Blank	KWG1702587-3	555,843	6.39	216,755	9.86	212,117	12.43
815-2	K1703135-001	529,869	6.39	201,843	9.86	203,673	12.43
MTS-1	K1703135-002	541,924	6.39	205,242	9.86	202,919	12.43
MTS-2	K1703135-003	527,810	6.39	206,232	9.86	201,062	12.43
MTS-4	K1703135-004	543,835	6.39	208,577	9.86	203,067	12.43
POMONA	K1703135-005	531,841	6.39	199,849	9.86	201,719	12.43
PAIC	K1703135-006	529,466	6.39	204,246	9.86	201,080	12.43

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703135
Date Analyzed: 04/03/2017
Time Analyzed: 15:47

Internal Standard Area and RT Summary
Volatile Organic Compounds

File ID: I:\MS46\DATA\040317\0403F004.D
Instrument ID: MS46
Analysis Method: 8260C

Lab Code: KWG1702627-2
Analysis Lot: KWG1702627

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>
Results ==>	561,536	6.39	217,103	9.86	221,650	12.43
Upper Limit ==>	1,123,072	6.56	434,206	10.03	443,300	12.60
Lower Limit ==>	280,768	6.22	108,552	9.69	110,825	12.26
ICAL Result ==>	651,287	6.39	251,959	9.86	250,044	12.44

Associated Analyses

Lab Control Sample	KWG1702628-1	579,048	6.39	223,043	9.86	227,741	12.43
Duplicate Lab Control Sample	KWG1702628-2	573,679	6.39	218,095	9.86	223,777	12.43
Method Blank	KWG1702628-3	539,953	6.39	208,721	9.86	207,559	12.43
TVR-1	K1703135-007	518,841	6.39	198,530	9.86	200,036	12.43
TVR-3	K1703135-008	519,868	6.39	199,713	9.86	195,152	12.43
TVR-5	K1703135-009	508,916	6.39	196,898	9.86	196,255	12.43
TVR-6	K1703135-010	527,962	6.39	204,294	9.86	200,074	12.43
TVR-7	K1703135-011	510,520	6.39	196,182	9.86	195,011	12.43
POMONA-1	K1703135-012	508,751	6.39	198,154	9.86	197,055	12.43
TRIP BLANK	K1703135-013	511,713	6.39	198,653	9.86	196,550	12.43

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Extracted: 03/31/2017
Date Analyzed: 03/31/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1702587

Analyte Name	Lab Control Sample KWG1702587-1 Lab Control Spike			Duplicate Lab Control Sample KWG1702587-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Dichlorodifluoromethane	10.8	10.0	108	10.2	10.0	102	30-155	5	30
Chloromethane	9.66	10.0	97	9.10	10.0	91	40-125	6	30
Vinyl Chloride	11.4	10.0	114	10.5	10.0	105	50-145	8	30
Bromomethane	10.7	10.0	107	10.4	10.0	104	30-145	4	30
Chloroethane	11.9	10.0	119	11.3	10.0	113	60-135	5	30
Trichlorofluoromethane	10.1	10.0	101	9.48	10.0	95	60-145	7	30
1,1-Dichloroethene	11.0	10.0	110	10.1	10.0	101	70-130	9	30
Acetone	50.1	50.0	100	43.5	50.0	87	40-140	14	30
Carbon Disulfide	20.4	20.0	102	19.1	20.0	95	35-160	7	30
Methylene Chloride	10.2	10.0	102	9.88	10.0	99	55-140	4	30
Methyl tert-Butyl Ether	9.91	10.0	99	9.11	10.0	91	65-125	8	30
trans-1,2-Dichloroethene	10.6	10.0	106	9.79	10.0	98	60-140	8	30
1,1-Dichloroethane	10.5	10.0	105	10.3	10.0	103	70-135	2	30
2,2-Dichloropropane	11.0	10.0	110	10.2	10.0	102	70-135	7	30
cis-1,2-Dichloroethene	9.86	10.0	99	9.22	10.0	92	70-125	7	30
2-Butanone (MEK)	52.5	50.0	105	45.2	50.0	90	30-150	15	30
Bromochloromethane	9.63	10.0	96	9.58	10.0	96	65-130	1	30
Chloroform	10.6	10.0	106	10.2	10.0	102	65-135	4	30
1,1,1-Trichloroethane (TCA)	10.6	10.0	106	9.73	10.0	97	65-130	9	30
Carbon Tetrachloride	11.1	10.0	111	10.4	10.0	104	65-140	7	30
1,1-Dichloropropene	10.1	10.0	101	9.45	10.0	95	75-130	7	30
Benzene	9.78	10.0	98	9.29	10.0	93	80-120	5	30
1,2-Dichloroethane (EDC)	9.83	10.0	98	9.20	10.0	92	70-130	7	30
Trichloroethene (TCE)	10.9	10.0	109	10.1	10.0	101	70-125	7	30
1,2-Dichloropropane	10.2	10.0	102	9.62	10.0	96	75-125	6	30
Dibromomethane	9.89	10.0	99	9.44	10.0	94	75-125	5	30
Bromodichloromethane	10.1	10.0	101	9.53	10.0	95	75-120	5	30
cis-1,3-Dichloropropene	9.78	10.0	98	9.28	10.0	93	70-130	5	30
4-Methyl-2-pentanone (MIBK)	49.3	50.0	99	44.4	50.0	89	60-135	10	30
Toluene	10.0	10.0	100	9.48	10.0	95	75-120	6	30
trans-1,3-Dichloropropene	9.95	10.0	100	9.22	10.0	92	55-140	8	30
1,1,2-Trichloroethane	10.5	10.0	105	9.59	10.0	96	75-125	9	30
Tetrachloroethene (PCE)	10.8	10.0	108	10.4	10.0	104	45-150	3	30
2-Hexanone	51.8	50.0	104	43.2	50.0	86	55-130	18	30
1,3-Dichloropropane	9.75	10.0	98	9.04	10.0	90	75-125	8	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Extracted: 03/31/2017
Date Analyzed: 03/31/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1702587

Analyte Name	Lab Control Sample KWG1702587-1 Lab Control Spike			Duplicate Lab Control Sample KWG1702587-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Dibromochloromethane	9.66	10.0	97	9.12	10.0	91	60-135	6	30
1,2-Dibromoethane (EDB)	10.2	10.0	102	9.29	10.0	93	80-120	9	30
Chlorobenzene	10.4	10.0	104	9.91	10.0	99	80-120	5	30
Ethylbenzene	10.2	10.0	102	9.79	10.0	98	75-125	4	30
1,1,1,2-Tetrachloroethane	10.1	10.0	101	9.68	10.0	97	80-130	4	30
m,p-Xylenes	20.9	20.0	104	19.7	20.0	99	75-130	6	30
o-Xylene	9.89	10.0	99	9.47	10.0	95	80-120	4	30
Styrene	9.60	10.0	96	9.34	10.0	93	65-135	3	30
Bromoform	10.4	10.0	104	9.54	10.0	95	70-130	8	30
Isopropylbenzene	10.3	10.0	103	9.73	10.0	97	75-125	6	30
1,1,2,2-Tetrachloroethane	9.82	10.0	98	9.09	10.0	91	65-130	8	30
Bromobenzene	9.72	10.0	97	9.35	10.0	94	75-125	4	30
n-Propylbenzene	9.93	10.0	99	9.51	10.0	95	70-130	4	30
1,2,3-Trichloropropane	9.23	10.0	92	8.57	10.0	86	75-125	7	30
2-Chlorotoluene	9.44	10.0	94	9.06	10.0	91	75-125	4	30
1,3,5-Trimethylbenzene	9.76	10.0	98	9.42	10.0	94	75-130	4	30
4-Chlorotoluene	9.83	10.0	98	9.30	10.0	93	75-130	6	30
tert-Butylbenzene	9.99	10.0	100	9.42	10.0	94	70-130	6	30
1,2,4-Trimethylbenzene	9.97	10.0	100	9.52	10.0	95	75-130	5	30
sec-Butylbenzene	9.95	10.0	100	9.33	10.0	93	70-125	6	30
4-Isopropyltoluene	10.2	10.0	102	9.67	10.0	97	75-130	5	30
1,3-Dichlorobenzene	9.81	10.0	98	9.61	10.0	96	75-125	2	30
1,4-Dichlorobenzene	9.97	10.0	100	9.59	10.0	96	75-125	4	30
n-Butylbenzene	9.45	10.0	95	9.00	10.0	90	70-135	5	30
1,2-Dichlorobenzene	9.82	10.0	98	9.36	10.0	94	70-120	5	30
1,2-Dibromo-3-chloropropane	8.93	10.0	89	8.36	10.0	84	50-130	7	30
1,2,4-Trichlorobenzene	8.95	10.0	90	7.88	10.0	79	65-135	13	30
Hexachlorobutadiene	9.32	10.0	93	8.59	10.0	86	50-140	8	30
Naphthalene	9.13	10.0	91	7.85	10.0	79	55-140	15	30
1,2,3-Trichlorobenzene	8.97	10.0	90	7.64	10.0	76	55-140	16	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Extracted: 04/03/2017
Date Analyzed: 04/03/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1702628

Analyte Name	Lab Control Sample KWG1702628-1 Lab Control Spike			Duplicate Lab Control Sample KWG1702628-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Dichlorodifluoromethane	8.10	10.0	81	7.59	10.0	76	30-155	7	30
Chloromethane	8.49	10.0	85	8.02	10.0	80	40-125	6	30
Vinyl Chloride	9.64	10.0	96	9.16	10.0	92	50-145	5	30
Bromomethane	9.96	10.0	100	9.73	10.0	97	30-145	2	30
Chloroethane	10.8	10.0	108	10.4	10.0	104	60-135	4	30
Trichlorofluoromethane	8.75	10.0	88	8.43	10.0	84	60-145	4	30
1,1-Dichloroethene	9.55	10.0	96	9.34	10.0	93	70-130	2	30
Acetone	46.0	50.0	92	48.5	50.0	97	40-140	5	30
Carbon Disulfide	18.5	20.0	92	17.2	20.0	86	35-160	7	30
Methylene Chloride	10.1	10.0	101	9.61	10.0	96	55-140	5	30
Methyl tert-Butyl Ether	9.17	10.0	92	9.14	10.0	91	65-125	0	30
trans-1,2-Dichloroethene	9.83	10.0	98	9.42	10.0	94	60-140	4	30
1,1-Dichloroethane	9.82	10.0	98	9.44	10.0	94	70-135	4	30
2,2-Dichloropropane	9.99	10.0	100	9.43	10.0	94	70-135	6	30
cis-1,2-Dichloroethene	9.30	10.0	93	8.90	10.0	89	70-125	4	30
2-Butanone (MEK)	45.2	50.0	90	48.3	50.0	97	30-150	7	30
Bromochloromethane	9.59	10.0	96	9.40	10.0	94	65-130	2	30
Chloroform	10.1	10.0	101	9.83	10.0	98	65-135	3	30
1,1,1-Trichloroethane (TCA)	9.62	10.0	96	9.23	10.0	92	65-130	4	30
Carbon Tetrachloride	10.2	10.0	102	9.47	10.0	95	65-140	7	30
1,1-Dichloropropene	9.14	10.0	91	8.63	10.0	86	75-130	6	30
Benzene	9.30	10.0	93	8.99	10.0	90	80-120	3	30
1,2-Dichloroethane (EDC)	9.06	10.0	91	9.08	10.0	91	70-130	0	30
Trichloroethene (TCE)	9.91	10.0	99	9.68	10.0	97	70-125	2	30
1,2-Dichloropropane	9.55	10.0	96	9.34	10.0	93	75-125	2	30
Dibromomethane	9.41	10.0	94	9.43	10.0	94	75-125	0	30
Bromodichloromethane	9.82	10.0	98	9.26	10.0	93	75-120	6	30
cis-1,3-Dichloropropene	9.42	10.0	94	9.15	10.0	92	70-130	3	30
4-Methyl-2-pentanone (MIBK)	45.0	50.0	90	46.1	50.0	92	60-135	2	30
Toluene	9.47	10.0	95	9.11	10.0	91	75-120	4	30
trans-1,3-Dichloropropene	9.16	10.0	92	9.11	10.0	91	55-140	1	30
1,1,2-Trichloroethane	9.55	10.0	96	9.51	10.0	95	75-125	0	30
Tetrachloroethene (PCE)	10.0	10.0	100	9.70	10.0	97	45-150	3	30
2-Hexanone	45.3	50.0	91	46.0	50.0	92	55-130	2	30
1,3-Dichloropropane	9.12	10.0	91	9.17	10.0	92	75-125	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Extracted: 04/03/2017
Date Analyzed: 04/03/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1702628

Analyte Name	Lab Control Sample KWG1702628-1 Lab Control Spike			Duplicate Lab Control Sample KWG1702628-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Dibromochloromethane	9.15	10.0	92	9.09	10.0	91	60-135	1	30
1,2-Dibromoethane (EDB)	9.26	10.0	93	9.32	10.0	93	80-120	1	30
Chlorobenzene	9.83	10.0	98	9.62	10.0	96	80-120	2	30
Ethylbenzene	9.53	10.0	95	9.22	10.0	92	75-125	3	30
1,1,1,2-Tetrachloroethane	9.63	10.0	96	9.39	10.0	94	80-130	3	30
m,p-Xylenes	19.7	20.0	98	18.9	20.0	94	75-130	4	30
o-Xylene	9.38	10.0	94	9.02	10.0	90	80-120	4	30
Styrene	9.32	10.0	93	9.02	10.0	90	65-135	3	30
Bromoform	9.46	10.0	95	9.50	10.0	95	70-130	0	30
Isopropylbenzene	9.50	10.0	95	9.13	10.0	91	75-125	4	30
1,1,2,2-Tetrachloroethane	8.75	10.0	88	9.21	10.0	92	65-130	5	30
Bromobenzene	9.23	10.0	92	9.15	10.0	92	75-125	1	30
n-Propylbenzene	9.24	10.0	92	8.77	10.0	88	70-130	5	30
1,2,3-Trichloropropane	8.53	10.0	85	8.83	10.0	88	75-125	3	30
2-Chlorotoluene	8.99	10.0	90	8.56	10.0	86	75-125	5	30
1,3,5-Trimethylbenzene	9.19	10.0	92	8.83	10.0	88	75-130	4	30
4-Chlorotoluene	9.34	10.0	93	8.78	10.0	88	75-130	6	30
tert-Butylbenzene	9.25	10.0	93	8.68	10.0	87	70-130	6	30
1,2,4-Trimethylbenzene	9.51	10.0	95	9.09	10.0	91	75-130	5	30
sec-Butylbenzene	9.26	10.0	93	8.56	10.0	86	70-125	8	30
4-Isopropyltoluene	9.43	10.0	94	8.81	10.0	88	75-130	7	30
1,3-Dichlorobenzene	9.64	10.0	96	9.29	10.0	93	75-125	4	30
1,4-Dichlorobenzene	9.54	10.0	95	9.02	10.0	90	75-125	6	30
n-Butylbenzene	8.86	10.0	89	8.22	10.0	82	70-135	7	30
1,2-Dichlorobenzene	9.31	10.0	93	9.11	10.0	91	70-120	2	30
1,2-Dibromo-3-chloropropane	8.08	10.0	81	8.58	10.0	86	50-130	6	30
1,2,4-Trichlorobenzene	7.94	10.0	79	7.72	10.0	77	65-135	3	30
Hexachlorobutadiene	8.68	10.0	87	8.22	10.0	82	50-140	5	30
Naphthalene	7.42	10.0	74	7.84	10.0	78	55-140	6	30
1,2,3-Trichlorobenzene	7.85	10.0	79	7.57	10.0	76	55-140	4	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Extracted: 03/31/2017
Date Analyzed: 03/31/2017
Time Analyzed: 16:59

Method Blank Summary
Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1702587-3
Extraction Method: EPA 5030B
Analysis Method: 8260C
Instrument ID: MS46
File ID: J:\MS46\DATA\033117\0331F009.D
Level: Low
Extraction Lot: KWG1702587

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1702587-1	J:\MS46\DATA\033117\0331F004.D	03/31/17	14:46
Duplicate Lab Control Sample	KWG1702587-2	J:\MS46\DATA\033117\0331F005.D	03/31/17	15:13
815-2	K1703135-001	J:\MS46\DATA\033117\0331F021.D	03/31/17	22:17
MTS-1	K1703135-002	J:\MS46\DATA\033117\0331F022.D	03/31/17	22:44
MTS-2	K1703135-003	J:\MS46\DATA\033117\0331F023.D	03/31/17	23:10
MTS-4	K1703135-004	J:\MS46\DATA\033117\0331F024.D	03/31/17	23:37
POMONA	K1703135-005	J:\MS46\DATA\033117\0331F025.D	04/01/17	00:03
PAIC	K1703135-006	J:\MS46\DATA\033117\0331F026.D	04/01/17	00:30

QA/QC Report

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Extracted: 04/03/2017
Date Analyzed: 04/03/2017
Time Analyzed: 17:33

Method Blank Summary
Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1702628-3
Extraction Method: EPA 5030B
Analysis Method: 8260C
Instrument ID: MS46
File ID: J:\MS46\DATA\040317\0403F008.D
Level: Low
Extraction Lot: KWG1702628

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1702628-1	J:\MS46\DATA\040317\0403F005.D	04/03/17	16:13
Duplicate Lab Control Sample	KWG1702628-2	J:\MS46\DATA\040317\0403F006.D	04/03/17	16:40
TVR-1	K1703135-007	J:\MS46\DATA\040317\0403F011.D	04/03/17	18:53
TVR-3	K1703135-008	J:\MS46\DATA\040317\0403F012.D	04/03/17	19:19
TVR-5	K1703135-009	J:\MS46\DATA\040317\0403F013.D	04/03/17	19:46
TVR-6	K1703135-010	J:\MS46\DATA\040317\0403F025.D	04/04/17	01:04
TVR-7	K1703135-011	J:\MS46\DATA\040317\0403F026.D	04/04/17	01:31
POMONA-1	K1703135-012	J:\MS46\DATA\040317\0403F027.D	04/04/17	01:58
TRIP BLANK	K1703135-013	J:\MS46\DATA\040317\0403F028.D	04/04/17	02:24

QA/QC Report

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Extracted: 03/31/2017
Date Analyzed: 03/31/2017
Time Analyzed: 14:46

Lab Control Sample Summary
Volatile Organic Compounds

Sample Name: Lab Control Sample **Instrument ID:** MS46
Lab Code: KWG1702587-1 **File ID:** J:\MS46\DATA\033117\0331F004.D
Extraction Method: EPA 5030B **Level:** Low
Analysis Method: 8260C **Extraction Lot:** KWG1702587

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1702587-3	J:\MS46\DATA\033117\0331F009.D	03/31/17	16:59
815-2	K1703135-001	J:\MS46\DATA\033117\0331F021.D	03/31/17	22:17
MTS-1	K1703135-002	J:\MS46\DATA\033117\0331F022.D	03/31/17	22:44
MTS-2	K1703135-003	J:\MS46\DATA\033117\0331F023.D	03/31/17	23:10
MTS-4	K1703135-004	J:\MS46\DATA\033117\0331F024.D	03/31/17	23:37
POMONA	K1703135-005	J:\MS46\DATA\033117\0331F025.D	04/01/17	00:03
PAIC	K1703135-006	J:\MS46\DATA\033117\0331F026.D	04/01/17	00:30

QA/QC Report

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Extracted: 04/03/2017
Date Analyzed: 04/03/2017
Time Analyzed: 16:13

Lab Control Sample Summary
Volatile Organic Compounds

Sample Name: Lab Control Sample
Lab Code: KWG1702628-1
Extraction Method: EPA 5030B
Analysis Method: 8260C

Instrument ID: MS46
File ID: J:\MS46\DATA\040317\0403F005.D
Level: Low
Extraction Lot: KWG1702628

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1702628-3	J:\MS46\DATA\040317\0403F008.D	04/03/17	17:33
TVR-1	K1703135-007	J:\MS46\DATA\040317\0403F011.D	04/03/17	18:53
TVR-3	K1703135-008	J:\MS46\DATA\040317\0403F012.D	04/03/17	19:19
TVR-5	K1703135-009	J:\MS46\DATA\040317\0403F013.D	04/03/17	19:46
TVR-6	K1703135-010	J:\MS46\DATA\040317\0403F025.D	04/04/17	01:04
TVR-7	K1703135-011	J:\MS46\DATA\040317\0403F026.D	04/04/17	01:31
POMONA-1	K1703135-012	J:\MS46\DATA\040317\0403F027.D	04/04/17	01:58
TRIP BLANK	K1703135-013	J:\MS46\DATA\040317\0403F028.D	04/04/17	02:24

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703135
Date Analyzed: 03/31/2017
Time Analyzed: 13:53

Tune Summary
Volatile Organic Compounds

File ID: J:\MS46\DATA\033117\0331F002.D
Instrument ID: GCMS46
Column:

Analysis Method: 8260C
Analysis Lot: KWG1702586

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	17.0	9897	PASS
75	95	30	60	48.5	28248	PASS
95	95	100	100	100.0	58296	PASS
96	95	5	9	7.1	4147	PASS
173	174	0	2	0.7	481	PASS
174	95	50	120	110.2	64240	PASS
175	174	5	9	6.8	4362	PASS
176	174	95	101	95.8	61560	PASS
177	176	5	9	6.9	4271	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1702586-2	J:\MS46\DATA\033117\0331F003.D	03/31/2017	14:20	
Lab Control Sample	KWG1702587-1	J:\MS46\DATA\033117\0331F004.D	03/31/2017	14:46	
Duplicate Lab Control Sample	KWG1702587-2	J:\MS46\DATA\033117\0331F005.D	03/31/2017	15:13	
Method Blank	KWG1702587-3	J:\MS46\DATA\033117\0331F009.D	03/31/2017	16:59	
815-2	K1703135-001	J:\MS46\DATA\033117\0331F021.D	03/31/2017	22:17	
MTS-1	K1703135-002	J:\MS46\DATA\033117\0331F022.D	03/31/2017	22:44	
MTS-2	K1703135-003	J:\MS46\DATA\033117\0331F023.D	03/31/2017	23:10	
MTS-4	K1703135-004	J:\MS46\DATA\033117\0331F024.D	03/31/2017	23:37	
POMONA	K1703135-005	J:\MS46\DATA\033117\0331F025.D	04/01/2017	00:03	
PAIC	K1703135-006	J:\MS46\DATA\033117\0331F026.D	04/01/2017	00:30	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703135
Date Analyzed: 04/03/2017
Time Analyzed: 15:15

Tune Summary
Volatile Organic Compounds

File ID: J:\MS46\DATA\040317\0403F003.D
Instrument ID: GCMS46
Column:

Analysis Method: 8260C
Analysis Lot: KWG1702627

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	15.9	8986	PASS
75	95	30	60	48.7	27466	PASS
95	95	100	100	100.0	56448	PASS
96	95	5	9	6.6	3725	PASS
173	174	0	2	0.8	510	PASS
174	95	50	120	107.2	60496	PASS
175	174	5	9	7.3	4441	PASS
176	174	95	101	98.7	59688	PASS
177	176	5	9	6.3	3765	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1702627-2	J:\MS46\DATA\040317\0403F004.D	04/03/2017	15:47	
Lab Control Sample	KWG1702628-1	J:\MS46\DATA\040317\0403F005.D	04/03/2017	16:13	
Duplicate Lab Control Sample	KWG1702628-2	J:\MS46\DATA\040317\0403F006.D	04/03/2017	16:40	
Method Blank	KWG1702628-3	J:\MS46\DATA\040317\0403F008.D	04/03/2017	17:33	
TVR-1	K1703135-007	J:\MS46\DATA\040317\0403F011.D	04/03/2017	18:53	
TVR-3	K1703135-008	J:\MS46\DATA\040317\0403F012.D	04/03/2017	19:19	
TVR-5	K1703135-009	J:\MS46\DATA\040317\0403F013.D	04/03/2017	19:46	
TVR-6	K1703135-010	J:\MS46\DATA\040317\0403F025.D	04/04/2017	01:04	
TVR-7	K1703135-011	J:\MS46\DATA\040317\0403F026.D	04/04/2017	01:31	
POMONA-1	K1703135-012	J:\MS46\DATA\040317\0403F027.D	04/04/2017	01:58	
TRIP BLANK	K1703135-013	J:\MS46\DATA\040317\0403F028.D	04/04/2017	02:24	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703135
Calibration Date: 01/24/2017

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15139
Instrument ID: MS46

Column: MS

Level ID	File ID	Level ID	File ID
A	J:\MS46\DATA\012417\0124F007.D	G	J:\MS46\DATA\012417\0124F013.D
B	J:\MS46\DATA\012417\0124F008.D	H	J:\MS46\DATA\012417\0124F014.D
C	J:\MS46\DATA\012417\0124F009.D	I	J:\MS46\DATA\012417\0124F015.D
D	J:\MS46\DATA\012417\0124F010.D	J	J:\MS46\DATA\012417\0124F016.D
E	J:\MS46\DATA\012417\0124F011.D	K	J:\MS46\DATA\012417\0124F017.D
F	J:\MS46\DATA\012417\0124F012.D		

Analyte Name	Level ID			Level ID			Level ID			Level ID			Level ID		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
Dichlorodifluoromethane	F	5.0	0.291	G	10	0.266	C	0.50	0.238	D	1.0	0.208	E	2.0	0.267
	K	80	0.287				H	20	0.298	I	40	0.260	J	60	0.259
Chloromethane	F	5.0	0.289	G	10	0.280	C	0.50	0.308	D	1.0	0.259	E	2.0	0.298
	K	80	0.286				H	20	0.285	I	40	0.264	J	60	0.269
Vinyl Chloride	A	0.10	0.334	B	0.20	0.261	C	0.50	0.289	D	1.0	0.259	E	2.0	0.262
	F	5.0	0.279	G	10	0.261	H	20	0.287	I	40	0.259	J	60	0.264
	K	80	0.293												
Bromomethane	F	5.0	0.169	G	10	0.162	C	0.50	0.211	D	1.0	0.194	E	2.0	0.183
	K	80	0.188				H	20	0.169	I	40	0.168	J	60	0.173
Chloroethane	F	5.0	0.157	G	10	0.151	C	0.50	0.204	D	1.0	0.145	E	2.0	0.152
	K	80	0.160				H	20	0.158	I	40	0.147	J	60	0.149
Trichlorofluoromethane	A	0.10	0.490	B	0.20	0.421	C	0.50	0.432	D	1.0	0.361	E	2.0	0.397
	F	5.0	0.418	G	10	0.385	H	20	0.421	I	40	0.369	J	60	0.369
	K	80	0.404												
1,1-Dichloroethene	F	5.0	0.244	G	10	0.224	C	0.50	0.242	D	1.0	0.207	E	2.0	0.241
	K	80	0.241				H	20	0.251	I	40	0.222	J	60	0.226
Acetone	A	4.0	0.0421	B	8.0	0.0333	C	20	0.0313	D	40	0.0304	E	80	0.0299
	F	100	0.0304	G	200	0.0323	H	400	0.0335	I	800	0.0300	J	1600	0.0291
	K	2000	0.0285												
Carbon Disulfide	F	5.0	0.725	G	10	0.701	C	0.50	0.723	D	1.0	0.647	E	2.0	0.695
	K	80	0.743				H	20	0.762	I	40	0.691	J	60	0.699
Methylene Chloride	F	5.0	0.267	G	10	0.263				D	1.0	0.296	E	2.0	0.277
	K	80	0.257				H	20	0.263	I	40	0.255	J	60	0.250

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703135
Calibration Date: 01/24/2017

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15139
Instrument ID: MS46

Column: MS

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
Methyl tert-Butyl Ether	A	0.20	0.576	B	0.40	0.580	C	1.0	0.575	D	2.0	0.573	E	4.0	0.589
	F	10	0.598	G	20	0.602	H	40	0.615	I	80	0.601	J	120	0.587
	K	160	0.613												
trans-1,2-Dichloroethene				B	0.20	0.297	C	0.50	0.305	D	1.0	0.271	E	2.0	0.262
	F	5.0	0.274	G	10	0.266	H	20	0.282	I	40	0.263	J	60	0.266
	K	80	0.281												
1,1-Dichloroethane							C	0.50	0.465	D	1.0	0.463	E	2.0	0.461
	F	5.0	0.449	G	10	0.451	H	20	0.457	I	40	0.437	J	60	0.437
	K	80	0.455												
2,2-Dichloropropane				B	0.20	0.409	C	0.50	0.396	D	1.0	0.368	E	2.0	0.377
	F	5.0	0.387	G	10	0.370	H	20	0.396	I	40	0.364	J	60	0.372
	K	80	0.395												
cis-1,2-Dichloroethene	A	0.10	0.390	B	0.20	0.349	C	0.50	0.323	D	1.0	0.322	E	2.0	0.298
	F	5.0	0.312	G	10	0.299	H	20	0.306	I	40	0.298	J	60	0.298
	K	80	0.309												
2-Butanone (MEK)				B	8.0	0.0155	C	20	0.0156	D	40	0.0147	E	80	0.0148
	F	100	0.0155	G	200	0.0163	H	400	0.0171	I	800	0.0160	J	1600	0.0158
	K	2000	0.0159												
Bromochloromethane							C	0.50	0.160	D	1.0	0.145	E	2.0	0.140
	F	5.0	0.137	G	10	0.138	H	20	0.139	I	40	0.130	J	60	0.123
	K	80	0.125												
Chloroform				B	0.20	0.496	C	0.50	0.493	D	1.0	0.478	E	2.0	0.473
	F	5.0	0.481	G	10	0.480	H	20	0.486	I	40	0.466	J	60	0.467
	K	80	0.478												
1,1,1-Trichloroethane (TCA)				B	0.20	0.485	C	0.50	0.446	D	1.0	0.399	E	2.0	0.417
	F	5.0	0.442	G	10	0.412	H	20	0.450	I	40	0.420	J	60	0.424
	K	80	0.458												
Carbon Tetrachloride	A	0.10	0.405	B	0.20	0.366	C	0.50	0.378	D	1.0	0.341	E	2.0	0.368
	F	5.0	0.395	G	10	0.371	H	20	0.414	I	40	0.382	J	60	0.392
	K	80	0.429												
1,1-Dichloropropene	A	0.10	0.434	B	0.20	0.409	C	0.50	0.382	D	1.0	0.363	E	2.0	0.362
	F	5.0	0.378	G	10	0.359	H	20	0.395	I	40	0.361	J	60	0.368
	K	80	0.396												
Benzene	A	0.10	1.26	B	0.20	1.08	C	0.50	1.13	D	1.0	1.07	E	2.0	1.10
	F	5.0	1.11	G	10	1.10	H	20	1.13	I	40	1.08	J	60	1.08
	K	80	1.12												

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† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703135
Calibration Date: 01/24/2017

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15139
Instrument ID: MS46

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
1,2-Dichloroethane (EDC)	F	5.0	0.317	G	10	0.315	C	0.50	0.331	D	1.0	0.319	E	2.0	0.313
	K	80	0.304				H	20	0.316	I	40	0.304	J	60	0.295
Trichloroethene (TCE)	F	5.0	0.290	B	0.20	0.304	C	0.50	0.301	D	1.0	0.267	E	2.0	0.286
	K	80	0.303	G	10	0.280	H	20	0.296	I	40	0.284	J	60	0.288
1,2-Dichloropropane	A	0.10	0.235	B	0.20	0.292	C	0.50	0.279	D	1.0	0.261	E	2.0	0.281
	F	5.0	0.271	G	10	0.270	H	20	0.275	I	40	0.269	J	60	0.270
	K	80	0.275												
Dibromomethane	F	5.0	0.147	G	10	0.152	C	0.50	0.146	D	1.0	0.155	E	2.0	0.154
	K	80	0.153				H	20	0.154	I	40	0.151	J	60	0.146
Bromodichloromethane	A	0.10	0.339	B	0.20	0.361	C	0.50	0.352	D	1.0	0.334	E	2.0	0.345
	F	5.0	0.349	G	10	0.360	H	20	0.368	I	40	0.365	J	60	0.360
	K	80	0.373												
cis-1,3-Dichloropropene	A	0.10	0.473	B	0.20	0.413	C	0.50	0.414	D	1.0	0.403	E	2.0	0.419
	F	5.0	0.422	G	10	0.439	H	20	0.451	I	40	0.445	J	60	0.441
	K	80	0.453												
4-Methyl-2-pentanone (MIBK)	F	100	0.0599	B	8.0	0.0534	C	20	0.0549	D	40	0.0576	E	80	0.0559
	K	2000	0.0624	G	200	0.0626	H	400	0.0656	I	800	0.0639	J	1600	0.0617
Toluene	F	5.0	0.722	B	0.20	0.713	C	0.50	0.709	D	1.0	0.680	E	2.0	0.706
	K	80	0.737	G	10	0.697	H	20	0.733	I	40	0.710	J	60	0.715
trans-1,3-Dichloropropene	F	5.0	0.915	B	0.20	0.808	C	0.50	0.871	D	1.0	0.882	E	2.0	0.912
	K	80	0.997	G	10	0.942	H	20	0.962	I	40	0.958	J	60	0.941
1,1,2-Trichloroethane	F	5.0	0.471	B	0.20	0.485	C	0.50	0.459	D	1.0	0.498	E	2.0	0.486
	K	80	0.486	G	10	0.482	H	20	0.485	I	40	0.470	J	60	0.463
Tetrachloroethene (PCE)	A	0.10	1.02	B	0.20	0.839	C	0.50	0.744	D	1.0	0.685	E	2.0	0.683
	F	5.0	0.724	G	10	0.690	H	20	0.746	I	40	0.702	J	60	0.727
	K	80	0.783												
2-Hexanone	F	100	0.0478	B	8.0	0.0386	C	20	0.0425	D	40	0.0451	E	80	0.0441
	K	2400	0.0418	G	200	0.0496	H	400	0.0514	I	800	0.0489	J	1600	0.0485

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† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703135
Calibration Date: 01/24/2017

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15139
Instrument ID: MS46

Column: MS

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
1,3-Dichloropropane	A	0.10	1.02	B	0.20	1.00	C	0.50	0.965	D	1.0	0.970	E	2.0	0.989
	F	5.0	1.00	G	10	0.986	H	20	0.992	I	40	0.960	J	60	0.953
	K	80	0.988												
Dibromochloromethane	A	0.10	0.767	B	0.20	0.618	C	0.50	0.694	D	1.0	0.709	E	2.0	0.703
	F	5.0	0.730	G	10	0.759	H	20	0.766	I	40	0.760	J	60	0.757
	K	80	0.797												
1,2-Dibromoethane (EDB)	A	0.10	0.524	B	0.20	0.583	C	0.50	0.540	D	1.0	0.536	E	2.0	0.524
	F	5.0	0.554	G	10	0.568	H	20	0.571	I	40	0.566	J	60	0.555
	K	80	0.577												
Chlorobenzene	A	0.10	2.18	B	0.20	2.03	C	0.50	2.14	D	1.0	2.11	E	2.0	2.12
	F	5.0	2.09	G	10	2.10	H	20	2.12	I	40	2.07	J	60	2.07
	K	80	2.16												
Ethylbenzene	A	0.10	1.14	B	0.20	1.09	C	0.50	1.14	D	1.0	1.05	E	2.0	1.06
	F	5.0	1.12	G	10	1.10	H	20	1.16	I	40	1.10	J	60	1.12
	K	80	1.17												
1,1,1,2-Tetrachloroethane	A	0.10	0.741	B	0.20	0.720	C	0.50	0.721	D	1.0	0.745	E	2.0	0.742
	F	5.0	0.716	G	10	0.760	H	20	0.779	I	40	0.773	J	60	0.770
	K	80	0.807												
m,p-Xylenes	A	0.20	1.31	B	0.40	1.22	C	1.0	1.33	D	2.0	1.29	E	4.0	1.34
	F	10	1.35	G	20	1.36	H	40	1.41	I	80	1.36	J	120	1.37
	K	160	1.42												
o-Xylene	A	0.10	1.32	B	0.20	1.27	C	0.50	1.27	D	1.0	1.24	E	2.0	1.28
	F	5.0	1.29	G	10	1.31	H	20	1.34	I	40	1.30	J	60	1.31
	K	80	1.37												
Styrene							C	0.50	0.943	D	1.0	1.02	E	2.0	0.980
	F	5.0	1.03	G	10	1.01	H	20	1.08	I	40	1.07	J	60	1.06
	K	80	1.11												
Bromoform				B	0.20	0.407	C	0.50	0.372	D	1.0	0.378	E	2.0	0.397
	F	5.0	0.421	G	10	0.430	H	20	0.454	I	40	0.464	J	60	0.459
Isopropylbenzene							C	0.50	3.36	D	1.0	3.22	E	2.0	3.26
	F	5.0	3.43	G	10	3.36	H	20	3.62	I	40	3.42	J	60	3.42
	K	80	3.59												
1,1,2,2-Tetrachloroethane				B	0.20	0.570	C	0.50	0.571	D	1.0	0.613	E	2.0	0.595
	F	5.0	0.608	G	10	0.583	H	20	0.589	I	40	0.594	J	60	0.566
	K	80	0.581												

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† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703135
Calibration Date: 01/24/2017

**Initial Calibration Summary
 Volatile Organic Compounds**

Calibration ID: CAL15139
Instrument ID: MS46

Column: MS

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
Bromobenzene	A	0.10	0.949	B	0.20	0.873	C	0.50	0.898	D	1.0	0.921	E	2.0	0.926
	F	5.0	0.945	G	10	0.919	H	20	0.929	I	40	0.921	J	60	0.918
	K	80	0.941												
n-Propylbenzene							C	0.50	3.86	D	1.0	3.66	E	2.0	3.81
	F	5.0	4.06	G	10	3.95	H	20	4.14	I	40	3.95	J	60	3.93
	K	80	4.07												
1,2,3-Trichloropropane							C	0.50	0.205	D	1.0	0.214	E	2.0	0.200
	F	5.0	0.211	G	10	0.195	H	20	0.197	I	40	0.194	J	60	0.184
	K	80	0.191												
2-Chlorotoluene	A	0.10	2.54	B	0.20	2.33	C	0.50	2.20	D	1.0	2.24	E	2.0	2.32
	F	5.0	2.35	G	10	2.27	H	20	2.33	I	40	2.26	J	60	2.26
	K	80	2.32												
1,3,5-Trimethylbenzene							C	0.50	2.51	D	1.0	2.45	E	2.0	2.60
	F	5.0	2.76	G	10	2.69	H	20	2.84	I	40	2.75	J	60	2.71
	K	80	2.82												
4-Chlorotoluene	A	0.10	2.36	B	0.20	2.21	C	0.50	2.38	D	1.0	2.34	E	2.0	2.34
	F	5.0	2.48	G	10	2.40	H	20	2.44	I	40	2.39	J	60	2.37
	K	80	2.44												
tert-Butylbenzene	A	0.10	2.44	B	0.20	2.23	C	0.50	2.30	D	1.0	2.23	E	2.0	2.35
	F	5.0	2.48	G	10	2.36	H	20	2.53	I	40	2.45	J	60	2.43
	K	80	2.55												
1,2,4-Trimethylbenzene							C	0.50	2.45	D	1.0	2.43	E	2.0	2.57
	F	5.0	2.72	G	10	2.66	H	20	2.79	I	40	2.71	J	60	2.67
	K	80	2.76												
sec-Butylbenzene							C	0.50	3.24	D	1.0	3.06	E	2.0	3.16
	F	5.0	3.51	G	10	3.35	H	20	3.61	I	40	3.47	J	60	3.40
	K	80	3.60												
4-Isopropyltoluene							C	0.50	2.58	D	1.0	2.46	E	2.0	2.63
	F	5.0	2.89	G	10	2.83	H	20	3.02	I	40	2.92	J	60	2.88
	K	80	3.05												
1,3-Dichlorobenzene	A	0.10	1.69	B	0.20	1.59	C	0.50	1.69	D	1.0	1.62	E	2.0	1.73
	F	5.0	1.73	G	10	1.72	H	20	1.71	I	40	1.69	J	60	1.66
	K	80	1.72												
1,4-Dichlorobenzene				B	0.20	1.64	C	0.50	1.63	D	1.0	1.69	E	2.0	1.75
	F	5.0	1.73	G	10	1.72	H	20	1.71	I	40	1.67	J	60	1.65
	K	80	1.70												

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† SPCC Compound

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Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703135
Calibration Date: 01/24/2017

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15139
Instrument ID: MS46

Column: MS

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
n-Butylbenzene							C	0.50	2.20	D	1.0	2.05	E	2.0	2.19
	F	5.0	2.42	G	10	2.34	H	20	2.56	I	40	2.48	J	60	2.45
	K	80	2.59												
1,2-Dichlorobenzene				B	0.20	1.55	C	0.50	1.44	D	1.0	1.42	E	2.0	1.48
	F	5.0	1.53	G	10	1.48	H	20	1.49	I	40	1.48	J	60	1.43
	K	80	1.49												
1,2-Dibromo-3-chloropropane							C	0.50	0.0765	D	1.0	0.0653	E	2.0	0.0757
	F	5.0	0.0706	G	10	0.0749	H	20	0.0751	I	40	0.0739	J	60	0.0741
	K	80	0.0800												
1,2,4-Trichlorobenzene				B	0.20	0.603	C	0.50	0.667	D	1.0	0.643	E	2.0	0.660
	F	5.0	0.692	G	10	0.706	H	20	0.728	I	40	0.728	J	60	0.732
	K	80	0.778												
Hexachlorobutadiene				B	0.20	0.373	C	0.50	0.353	D	1.0	0.279	E	2.0	0.329
	F	5.0	0.349	G	10	0.347	H	20	0.374	I	40	0.365	J	60	0.371
	K	80	0.413												
Naphthalene							C	0.50	0.963	D	1.0	0.942	E	2.0	0.977
	F	5.0	1.07	G	10	1.06	H	20	1.12	I	40	1.11	J	60	1.13
	K	80	1.20												
1,2,3-Trichlorobenzene				B	0.20	0.368	C	0.50	0.454	D	1.0	0.402	E	2.0	0.450
	F	5.0	0.464	G	10	0.459	H	20	0.485	I	40	0.471	J	60	0.479
	K	80	0.514												
Dibromofluoromethane										D	4.0	0.255	E	6.0	0.254
	F	8.0	0.245	G	10	0.253	H	12	0.264	I	14	0.260	J	16	0.256
	K	20	0.260												
1,2-Dichloroethane-d4										D	4.0	0.246	E	6.0	0.246
	F	8.0	0.241	G	10	0.242	H	12	0.250	I	14	0.247	J	16	0.242
	K	20	0.240												
Toluene-d8										D	4.0	0.932	E	6.0	0.928
	F	8.0	0.889	G	10	0.946	H	12	1.02	I	14	0.965	J	16	0.969
	K	20	0.949												
4-Bromofluorobenzene										D	4.0	0.839	E	6.0	0.835
	F	8.0	0.818	G	10	0.842	H	12	0.888	I	14	0.856	J	16	0.853
	K	20	0.857												

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† SPCC Compound

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QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703135
Calibration Date: 01/24/2017

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15139
Instrument ID: MS46

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Dichlorodifluoromethane	MS	AverageRF	% RSD	10.6		≤20	0.264		0.100
Chloromethane	MS	AverageRF	% RSD	5.7		≤20	0.282		0.100
Vinyl Chloride	MS	AverageRF	% RSD	8.3		≤20	0.277		0.100
Bromomethane	MS	AverageRF	% RSD	8.7		≤20	0.180		0.100
Chloroethane	MS	AverageRF	% RSD	11.3		≤20	0.158		0.100
Trichlorofluoromethane	MS	AverageRF	% RSD	9.1		≤20	0.406		0.100
1,1-Dichloroethene	MS	AverageRF	% RSD	6.0		≤20	0.233		.100
Acetone	MS	AverageRF	% RSD	11.8		≤20	0.0319		0.01
Carbon Disulfide	MS	AverageRF	% RSD	4.7		≤20	0.710		0.100
Methylene Chloride	MS	AverageRF	% RSD	5.5		≤20	0.266		0.100
Methyl tert-Butyl Ether	MS	AverageRF	% RSD	2.5		≤20	0.592		0.100
trans-1,2-Dichloroethene	MS	AverageRF	% RSD	5.4		≤20	0.277		0.100
1,1-Dichloroethane	MS	AverageRF	% RSD	2.3		≤20	0.453		.200
2,2-Dichloropropane	MS	AverageRF	% RSD	4.0		≤20	0.383		0.01
cis-1,2-Dichloroethene	MS	AverageRF	% RSD	8.9		≤20	0.318		0.100
2-Butanone (MEK)	MS	AverageRF	% RSD	4.5		≤20	0.0157		0.01
Bromochloromethane	MS	AverageRF	% RSD	8.1		≤20	0.137		0.01
Chloroform	MS	AverageRF	% RSD	2.1		≤20	0.480		0.200
1,1,1-Trichloroethane (TCA)	MS	AverageRF	% RSD	5.9		≤20	0.435		.100
Carbon Tetrachloride	MS	AverageRF	% RSD	6.4		≤20	0.386		0.100
1,1-Dichloropropene	MS	AverageRF	% RSD	6.3		≤20	0.382		0.01
Benzene	MS	AverageRF	% RSD	4.9		≤20	1.11		0.500
1,2-Dichloroethane (EDC)	MS	AverageRF	% RSD	3.3		≤20	0.313		0.100
Trichloroethene (TCE)	MS	AverageRF	% RSD	4.0		≤20	0.290		0.200
1,2-Dichloropropane	MS	AverageRF	% RSD	5.3		≤20	0.271		0.100
Dibromomethane	MS	AverageRF	% RSD	2.4		≤20	0.151		0.01
Bromodichloromethane	MS	AverageRF	% RSD	3.5		≤20	0.355		0.200
cis-1,3-Dichloropropene	MS	AverageRF	% RSD	4.9		≤20	0.434		0.200
4-Methyl-2-pentanone (MIBK)	MS	AverageRF	% RSD	6.9		≤20	0.0598		0.01
Toluene	MS	AverageRF	% RSD	2.3		≤20	0.712		0.400
trans-1,3-Dichloropropene	MS	AverageRF	% RSD	5.9		≤20	0.919		0.100
1,1,2-Trichloroethane	MS	AverageRF	% RSD	2.6		≤20	0.478		.100
Tetrachloroethene (PCE)	MS	AverageRF	% RSD	12.9		≤20	0.758		0.200
2-Hexanone	MS	AverageRF	% RSD	8.9		≤20	0.0458		0.015
1,3-Dichloropropane	MS	AverageRF	% RSD	2.2		≤20	0.985		0.01
Dibromochloromethane	MS	AverageRF	% RSD	6.7		≤20	0.733		0.100
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	3.7		≤20	0.554		0.100
Chlorobenzene	MS	AverageRF	% RSD	2.0		≤20	2.11		0.500
Ethylbenzene	MS	AverageRF	% RSD	3.4		≤20	1.11		0.100
1,1,1,2-Tetrachloroethane	MS	AverageRF	% RSD	3.8		≤20	0.752		.01
m,p-Xylenes	MS	AverageRF	% RSD	4.2		≤20	1.34		0.100
o-Xylene	MS	AverageRF	% RSD	2.7		≤20	1.30		0.300

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703135
Calibration Date: 01/24/2017

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15139
Instrument ID: MS46

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Styrene	MS	AverageRF	% RSD	4.9		≤ 20	1.03		0.300
Bromoforn	MS	AverageRF	% RSD	8.2		≤ 20	0.420		0.100
Isopropylbenzene	MS	AverageRF	% RSD	3.9		≤ 20	3.41		0.100
1,1,2,2-Tetrachloroethane	MS	AverageRF	% RSD	2.7		≤ 20	0.587		.300
Bromobenzene	MS	AverageRF	% RSD	2.3		≤ 20	0.922		0.01
n-Propylbenzene	MS	AverageRF	% RSD	3.7		≤ 20	3.94		0.01
1,2,3-Trichloropropane	MS	AverageRF	% RSD	4.9		≤ 20	0.199		0.01
2-Chlorotoluene	MS	AverageRF	% RSD	3.9		≤ 20	2.31		0.01
1,3,5-Trimethylbenzene	MS	AverageRF	% RSD	5.0		≤ 20	2.68		0.01
4-Chlorotoluene	MS	AverageRF	% RSD	2.9		≤ 20	2.38		0.01
tert-Butylbenzene	MS	AverageRF	% RSD	4.6		≤ 20	2.39		0.01
1,2,4-Trimethylbenzene	MS	AverageRF	% RSD	4.9		≤ 20	2.64		0.01
sec-Butylbenzene	MS	AverageRF	% RSD	5.8		≤ 20	3.38		0.01
4-Isopropyltoluene	MS	AverageRF	% RSD	7.2		≤ 20	2.81		0.01
1,3-Dichlorobenzene	MS	AverageRF	% RSD	2.7		≤ 20	1.69		0.600
1,4-Dichlorobenzene	MS	AverageRF	% RSD	2.4		≤ 20	1.69		0.500
n-Butylbenzene	MS	AverageRF	% RSD	7.8		≤ 20	2.37		0.01
1,2-Dichlorobenzene	MS	AverageRF	% RSD	2.8		≤ 20	1.48		0.400
1,2-Dibromo-3-chloropropane	MS	AverageRF	% RSD	5.5		≤ 20	0.0740		0.025
1,2,4-Trichlorobenzene	MS	AverageRF	% RSD	7.4		≤ 20	0.694		0.200
Hexachlorobutadiene	MS	AverageRF	% RSD	9.8		≤ 20	0.355		0.01
Naphthalene	MS	AverageRF	% RSD	8.3		≤ 20	1.06		0.01
1,2,3-Trichlorobenzene	MS	AverageRF	% RSD	9.2		≤ 20	0.455		0.01
Dibromofluoromethane	SURR	AverageRF	% RSD	2.2		≤ 20	0.256		0.01
1,2-Dichloroethane-d4	SURR	AverageRF	% RSD	1.4		≤ 20	0.244		0.01
Toluene-d8	SURR	AverageRF	% RSD	4.0		≤ 20	0.950		0.01
4-Bromofluorobenzene	SURR	AverageRF	% RSD	2.4		≤ 20	0.849		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703135
Calibration Date: 01/24/2017
Date Analyzed: 01/24/2017 -
01/25/2017

**Second Source Calibration Verification
Volatile Organic Compounds**

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration ID: CAL15139
Units: PPB

File ID: J:\MS46\DATA\012417\0124F020.D
J:\MS46\DATA\012417\0124F021.D
J:\MS46\DATA\012417\0124F022.D
J:\MS46\DATA\012517\0125F004.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Dichlorodifluoromethane	10	12	0.264	0.313	19	NA	± 30 %	AverageRF
Chloromethane	10	11	0.282	0.313	11	NA	± 30 %	AverageRF
Vinyl Chloride	10	11	0.277	0.296	7	NA	± 30 %	AverageRF
Bromomethane	10	10	0.180	0.180	0	NA	± 30 %	AverageRF
Chloroethane	10	11	0.158	0.168	6	NA	± 30 %	AverageRF
Trichlorofluoromethane	10	9.1	0.406	0.369	-9	NA	± 30 %	AverageRF
1,1-Dichloroethene	10	10	0.233	0.241	3	NA	± 30 %	AverageRF
Acetone	50	50	0.0319	0.0320	0	NA	± 30 %	AverageRF
Carbon Disulfide	20	23	0.710	0.812	14	NA	± 30 %	AverageRF
Methylene Chloride	10	10	0.266	0.279	5	NA	± 30 %	AverageRF
Methyl tert-Butyl Ether	10	10	0.592	0.589	0	NA	± 30 %	AverageRF
trans-1,2-Dichloroethene	10	10	0.277	0.288	4	NA	± 30 %	AverageRF
1,1-Dichloroethane	10	11	0.453	0.487	8	NA	± 30 %	AverageRF
2,2-Dichloropropane	10	10	0.383	0.386	1	NA	± 30 %	AverageRF
cis-1,2-Dichloroethene	10	9.9	0.318	0.314	-1	NA	± 30 %	AverageRF
2-Butanone (MEK)	50	50	0.0157	0.0157	0	NA	± 30 %	AverageRF
Bromochloromethane	10	10	0.137	0.137	0	NA	± 30 %	AverageRF
Chloroform	10	11	0.480	0.516	8	NA	± 30 %	AverageRF
1,1,1-Trichloroethane (TCA)	10	10	0.435	0.452	4	NA	± 30 %	AverageRF
Carbon Tetrachloride	10	11	0.386	0.405	5	NA	± 30 %	AverageRF
1,1-Dichloropropene	10	9.9	0.382	0.377	-1	NA	± 30 %	AverageRF
Benzene	10	10	1.11	1.13	1	NA	± 30 %	AverageRF
1,2-Dichloroethane (EDC)	10	10	0.313	0.322	3	NA	± 30 %	AverageRF
Trichloroethene (TCE)	10	11	0.290	0.308	6	NA	± 30 %	AverageRF
1,2-Dichloropropane	10	10	0.271	0.284	5	NA	± 30 %	AverageRF
Dibromomethane	10	10	0.151	0.155	3	NA	± 30 %	AverageRF
Bromodichloromethane	10	11	0.355	0.382	8	NA	± 30 %	AverageRF
cis-1,3-Dichloropropene	10	10	0.434	0.452	4	NA	± 30 %	AverageRF
4-Methyl-2-pentanone (MIBK)	50	53	0.0598	0.0631	5	NA	± 30 %	AverageRF
Toluene	10	10	0.712	0.724	2	NA	± 30 %	AverageRF
trans-1,3-Dichloropropene	10	11	0.919	0.968	5	NA	± 30 %	AverageRF
1,1,2-Trichloroethane	10	10	0.478	0.495	3	NA	± 30 %	AverageRF
Tetrachloroethene (PCE)	10	10	0.758	0.775	2	NA	± 30 %	AverageRF
2-Hexanone	50	54	0.0458	0.0495	8	NA	± 30 %	AverageRF
1,3-Dichloropropane	10	10	0.985	0.990	1	NA	± 30 %	AverageRF
Dibromochloromethane	10	10	0.733	0.753	3	NA	± 30 %	AverageRF
1,2-Dibromoethane (EDB)	10	10	0.554	0.566	2	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703135
Calibration Date: 01/24/2017
Date Analyzed: 01/24/2017 - 01/25/2017

Second Source Calibration Verification
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration ID: CAL15139
Units: PPB

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Chlorobenzene	10	11	2.11	2.23	6	NA	± 30 %	AverageRF
Ethylbenzene	10	10	1.11	1.16	4	NA	± 30 %	AverageRF
1,1,1,2-Tetrachloroethane	10	10	0.752	0.781	4	NA	± 30 %	AverageRF
m,p-Xylenes	20	21	1.34	1.43	6	NA	± 30 %	AverageRF
o-Xylene	10	10	1.30	1.34	3	NA	± 30 %	AverageRF
Styrene	10	10	1.03	1.08	5	NA	± 30 %	AverageRF
Bromoform	10	11	0.420	0.456	8	NA	± 30 %	AverageRF
Isopropylbenzene	10	11	3.41	3.60	6	NA	± 30 %	AverageRF
1,1,2,2-Tetrachloroethane	10	10	0.587	0.610	4	NA	± 30 %	AverageRF
Bromobenzene	10	10	0.922	0.948	3	NA	± 30 %	AverageRF
n-Propylbenzene	10	10	3.94	4.03	2	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	10	9.5	0.199	0.190	-5	NA	± 30 %	AverageRF
2-Chlorotoluene	10	10	2.31	2.35	2	NA	± 30 %	AverageRF
1,3,5-Trimethylbenzene	10	11	2.68	2.82	5	NA	± 30 %	AverageRF
4-Chlorotoluene	10	10	2.38	2.46	3	NA	± 30 %	AverageRF
tert-Butylbenzene	10	10	2.39	2.50	5	NA	± 30 %	AverageRF
1,2,4-Trimethylbenzene	10	11	2.64	2.83	7	NA	± 30 %	AverageRF
sec-Butylbenzene	10	10	3.38	3.54	5	NA	± 30 %	AverageRF
4-Isopropyltoluene	10	11	2.81	3.06	9	NA	± 30 %	AverageRF
1,3-Dichlorobenzene	10	11	1.69	1.78	6	NA	± 30 %	AverageRF
1,4-Dichlorobenzene	10	11	1.69	1.80	7	NA	± 30 %	AverageRF
n-Butylbenzene	10	10	2.37	2.46	4	NA	± 30 %	AverageRF
1,2-Dichlorobenzene	10	11	1.48	1.57	6	NA	± 30 %	AverageRF
1,2-Dibromo-3-chloropropane	10	9.9	0.0740	0.0734	-1	NA	± 30 %	AverageRF
1,2,4-Trichlorobenzene	10	10	0.694	0.718	3	NA	± 30 %	AverageRF
Hexachlorobutadiene	10	11	0.355	0.374	5	NA	± 30 %	AverageRF
Naphthalene	10	10	1.06	1.08	2	NA	± 30 %	AverageRF
1,2,3-Trichlorobenzene	10	11	0.455	0.484	6	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703135
Date Analyzed: 03/31/2017

**Continuing Calibration Verification Summary
 Volatile Organic Compounds**

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 01/24/2017
Calibration ID: CAL15139
Analysis Lot: KWG1702586
Units: PPB

File ID: I:\MS46\DATA\033117\0331F003.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Dichlorodifluoromethane	10	9.3	0.100	0.264	0.246	-7	NA	± 20	AverageRF
Chloromethane	10	9.6	0.100	0.282	0.272	-4	NA	± 20	AverageRF
Vinyl Chloride	10	12	0.100	0.277	0.321	16	NA	± 20	AverageRF
Bromomethane	10	11	0.100	0.180	0.204	14	NA	± 20	AverageRF
Chloroethane	10	12	0.100	0.158	0.189	20	NA	± 20	AverageRF
Trichlorofluoromethane	10	11	0.100	0.406	0.462	14	NA	± 20	AverageRF
1,1-Dichloroethene	10	10	.100	0.233	0.241	3	NA	± 20	AverageRF
Acetone	200	190	0.01	0.0319	0.0295	-7	NA	± 20	AverageRF
Carbon Disulfide	10	9.3	0.100	0.710	0.657	-7	NA	± 20	AverageRF
Methylene Chloride	10	9.9	0.100	0.266	0.262	-2	NA	± 20	AverageRF
Methyl tert-Butyl Ether	20	18	0.100	0.592	0.546	-8	NA	± 20	AverageRF
trans-1,2-Dichloroethene	10	10	0.100	0.277	0.289	4	NA	± 20	AverageRF
1,1-Dichloroethane	10	9.9	.200	0.453	0.446	-2	NA	± 20	AverageRF
2,2-Dichloropropane	10	11	0.01	0.383	0.410	7	NA	± 20	AverageRF
cis-1,2-Dichloroethene	10	9.5	0.100	0.318	0.303	-5	NA	± 20	AverageRF
2-Butanone (MEK)	200	190	0.01	0.0157	0.0149	-5	NA	± 20	AverageRF
Bromochloromethane	10	10	0.01	0.137	0.138	0	NA	± 20	AverageRF
Chloroform	10	9.8	0.200	0.480	0.472	-2	NA	± 20	AverageRF
1,1,1-Trichloroethane (TCA)	10	10	.100	0.435	0.440	1	NA	± 20	AverageRF
Carbon Tetrachloride	10	11	0.100	0.386	0.416	8	NA	± 20	AverageRF
1,1-Dichloropropene	10	10	0.01	0.382	0.395	3	NA	± 20	AverageRF
Benzene	10	9.9	0.500	1.11	1.10	-1	NA	± 20	AverageRF
1,2-Dichloroethane (EDC)	10	9.1	0.100	0.313	0.283	-9	NA	± 20	AverageRF
Trichloroethene (TCE)	10	10	0.200	0.290	0.298	3	NA	± 20	AverageRF
1,2-Dichloropropane	10	9.6	0.100	0.271	0.260	-4	NA	± 20	AverageRF
Dibromomethane	10	9.2	0.01	0.151	0.139	-8	NA	± 20	AverageRF
Bromodichloromethane	10	9.2	0.200	0.355	0.325	-8	NA	± 20	AverageRF
cis-1,3-Dichloropropene	10	9.3	0.200	0.434	0.402	-7	NA	± 20	AverageRF
4-Methyl-2-pentanone (MIBK)	200	180	0.01	0.0598	0.0541	-10	NA	± 20	AverageRF
Toluene	10	10	0.400	0.712	0.716	1	NA	± 20	AverageRF
trans-1,3-Dichloropropene	10	9.2	0.100	0.919	0.840	-9	NA	± 20	AverageRF
1,1,2-Trichloroethane	10	9.5	.100	0.478	0.455	-5	NA	± 20	AverageRF
Tetrachloroethene (PCE)	10	10	0.200	0.758	0.792	5	NA	± 20	AverageRF
2-Hexanone	200	180	0.015	0.0458	0.0423	-8	NA	± 20	AverageRF
1,3-Dichloropropane	10	9.1	0.01	0.985	0.900	-9	NA	± 20	AverageRF
Dibromochloromethane	10	9.6	0.100	0.733	0.700	-4	NA	± 20	AverageRF
1,2-Dibromoethane (EDB)	10	9.6	0.100	0.554	0.534	-4	NA	± 20	AverageRF
Chlorobenzene	10	9.9	0.500	2.11	2.10	-1	NA	± 20	AverageRF
Ethylbenzene	10	10	0.100	1.11	1.13	1	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703135
Date Analyzed: 03/31/2017

Continuing Calibration Verification Summary
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 01/24/2017
Calibration ID: CAL15139
Analysis Lot: KWG1702586
Units: PPB

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,1,1,2-Tetrachloroethane	10	10	.01	0.752	0.758	1	NA	± 20	AverageRF
m,p-Xylenes	20	21	0.100	1.34	1.39	4	NA	± 20	AverageRF
o-Xylene	10	9.9	0.300	1.30	1.29	-1	NA	± 20	AverageRF
Styrene	10	9.8	0.300	1.03	1.01	-2	NA	± 20	AverageRF
Bromoform	10	9.1	0.100	0.420	0.384	-9	NA	± 20	AverageRF
Isopropylbenzene	10	10	0.100	3.41	3.49	2	NA	± 20	AverageRF
1,1,2,2-Tetrachloroethane	10	8.9	.300	0.587	0.520	-11	NA	± 20	AverageRF
Bromobenzene	10	9.6	0.01	0.922	0.883	-4	NA	± 20	AverageRF
n-Propylbenzene	10	10	0.01	3.94	3.98	1	NA	± 20	AverageRF
1,2,3-Trichloropropane	10	8.6	0.01	0.199	0.172	-14	NA	± 20	AverageRF
2-Chlorotoluene	10	9.6	0.01	2.31	2.22	-4	NA	± 20	AverageRF
1,3,5-Trimethylbenzene	10	10	0.01	2.68	2.67	0	NA	± 20	AverageRF
4-Chlorotoluene	10	9.7	0.01	2.38	2.30	-3	NA	± 20	AverageRF
tert-Butylbenzene	10	10	0.01	2.39	2.41	1	NA	± 20	AverageRF
1,2,4-Trimethylbenzene	10	9.8	0.01	2.64	2.59	-2	NA	± 20	AverageRF
sec-Butylbenzene	10	10	0.01	3.38	3.37	0	NA	± 20	AverageRF
4-Isopropyltoluene	10	9.9	0.01	2.81	2.79	-1	NA	± 20	AverageRF
1,3-Dichlorobenzene	10	9.5	0.600	1.69	1.60	-5	NA	± 20	AverageRF
1,4-Dichlorobenzene	10	9.6	0.500	1.69	1.61	-4	NA	± 20	AverageRF
n-Butylbenzene	10	9.6	0.01	2.37	2.27	-4	NA	± 20	AverageRF
1,2-Dichlorobenzene	10	9.2	0.400	1.48	1.36	-8	NA	± 20	AverageRF
1,2-Dibromo-3-chloropropane	10	8.4	0.025	0.0740	0.0621	-16	NA	± 20	AverageRF
1,2,4-Trichlorobenzene	10	7.8	0.200	0.694	0.539	-22	*	± 20	AverageRF
Hexachlorobutadiene	10	9.2	0.01	0.355	0.326	-8	NA	± 20	AverageRF
Naphthalene	10	7.5	0.01	1.06	0.795	-25	*	± 20	AverageRF
1,2,3-Trichlorobenzene	10	7.2	0.01	0.455	0.326	-28	*	± 20	AverageRF
Dibromofluoromethane	10	10	0.01	0.256	0.262	2	NA	± 20	AverageRF
1,2-Dichloroethane-d4	10	9.4	0.01	0.244	0.230	-6	NA	± 20	AverageRF
Toluene-d8	10	10	0.01	0.950	0.972	2	NA	± 20	AverageRF
4-Bromofluorobenzene	10	10	0.01	0.849	0.860	1	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703135
Date Analyzed: 04/03/2017

**Continuing Calibration Verification Summary
 Volatile Organic Compounds**

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 01/24/2017
Calibration ID: CAL15139
Analysis Lot: KWG1702627
Units: PPB

File ID: I:\MS46\DATA\040317\0403F004.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit	
Dichlorodifluoromethane	10	13	0.100	0.264	0.343	30	*	NA	± 20	AverageRF
Chloromethane	10	11	0.100	0.282	0.317	13		NA	± 20	AverageRF
Vinyl Chloride	10	13	0.100	0.277	0.348	26	*	NA	± 20	AverageRF
Bromomethane	10	12	0.100	0.180	0.223	24	*	NA	± 20	AverageRF
Chloroethane	10	13	0.100	0.158	0.200	26	*	NA	± 20	AverageRF
Trichlorofluoromethane	10	11	0.100	0.406	0.454	12		NA	± 20	AverageRF
1,1-Dichloroethene	10	10	.100	0.233	0.236	1		NA	± 20	AverageRF
Acetone	200	190	0.01	0.0319	0.0302	-5		NA	± 20	AverageRF
Carbon Disulfide	10	8.7	0.100	0.710	0.620	-13		NA	± 20	AverageRF
Methylene Chloride	10	10	0.100	0.266	0.275	3		NA	± 20	AverageRF
Methyl tert-Butyl Ether	20	19	0.100	0.592	0.571	-3		NA	± 20	AverageRF
trans-1,2-Dichloroethene	10	11	0.100	0.277	0.291	5		NA	± 20	AverageRF
1,1-Dichloroethane	10	10	.200	0.453	0.460	2		NA	± 20	AverageRF
2,2-Dichloropropane	10	11	0.01	0.383	0.404	5		NA	± 20	AverageRF
cis-1,2-Dichloroethene	10	9.7	0.100	0.318	0.308	-3		NA	± 20	AverageRF
2-Butanone (MEK)	200	190	0.01	0.0157	0.0153	-3		NA	± 20	AverageRF
Bromochloromethane	10	10	0.01	0.137	0.138	1		NA	± 20	AverageRF
Chloroform	10	10	0.200	0.480	0.492	3		NA	± 20	AverageRF
1,1,1-Trichloroethane (TCA)	10	10	.100	0.435	0.446	2		NA	± 20	AverageRF
Carbon Tetrachloride	10	11	0.100	0.386	0.409	6		NA	± 20	AverageRF
1,1-Dichloropropene	10	9.9	0.01	0.382	0.380	-1		NA	± 20	AverageRF
Benzene	10	10	0.500	1.11	1.12	0		NA	± 20	AverageRF
1,2-Dichloroethane (EDC)	10	9.4	0.100	0.313	0.294	-6		NA	± 20	AverageRF
Trichloroethene (TCE)	10	10	0.200	0.290	0.296	2		NA	± 20	AverageRF
1,2-Dichloropropane	10	9.9	0.100	0.271	0.267	-1		NA	± 20	AverageRF
Dibromomethane	10	9.8	0.01	0.151	0.149	-2		NA	± 20	AverageRF
Bromodichloromethane	10	9.7	0.200	0.355	0.346	-3		NA	± 20	AverageRF
cis-1,3-Dichloropropene	10	9.6	0.200	0.434	0.418	-4		NA	± 20	AverageRF
4-Methyl-2-pentanone (MIBK)	200	190	0.01	0.0598	0.0566	-5		NA	± 20	AverageRF
Toluene	10	10	0.400	0.712	0.725	2		NA	± 20	AverageRF
trans-1,3-Dichloropropene	10	9.4	0.100	0.919	0.867	-6		NA	± 20	AverageRF
1,1,2-Trichloroethane	10	9.7	.100	0.478	0.464	-3		NA	± 20	AverageRF
Tetrachloroethene (PCE)	10	10	0.200	0.758	0.769	1		NA	± 20	AverageRF
2-Hexanone	200	190	0.015	0.0458	0.0442	-4		NA	± 20	AverageRF
1,3-Dichloropropane	10	9.5	0.01	0.985	0.935	-5		NA	± 20	AverageRF
Dibromochloromethane	10	9.9	0.100	0.733	0.723	-1		NA	± 20	AverageRF
1,2-Dibromoethane (EDB)	10	9.9	0.100	0.554	0.550	-1		NA	± 20	AverageRF
Chlorobenzene	10	10	0.500	2.11	2.12	1		NA	± 20	AverageRF
Ethylbenzene	10	10	0.100	1.11	1.13	1		NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703135
Date Analyzed: 04/03/2017

Continuing Calibration Verification Summary
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 01/24/2017
Calibration ID: CAL15139
Analysis Lot: KWG1702627
Units: PPB

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,1,1,2-Tetrachloroethane	10	11	.01	0.752	0.790	5	NA	± 20	AverageRF
m,p-Xylenes	20	21	0.100	1.34	1.40	5	NA	± 20	AverageRF
o-Xylene	10	10	0.300	1.30	1.31	1	NA	± 20	AverageRF
Styrene	10	10	0.300	1.03	1.04	1	NA	± 20	AverageRF
Bromoform	10	9.5	0.100	0.420	0.400	-5	NA	± 20	AverageRF
Isopropylbenzene	10	10	0.100	3.41	3.50	3	NA	± 20	AverageRF
1,1,2,2-Tetrachloroethane	10	9.1	.300	0.587	0.536	-9	NA	± 20	AverageRF
Bromobenzene	10	9.9	0.01	0.922	0.915	-1	NA	± 20	AverageRF
n-Propylbenzene	10	10	0.01	3.94	3.92	0	NA	± 20	AverageRF
1,2,3-Trichloropropane	10	9.2	0.01	0.199	0.183	-8	NA	± 20	AverageRF
2-Chlorotoluene	10	9.7	0.01	2.31	2.24	-3	NA	± 20	AverageRF
1,3,5-Trimethylbenzene	10	9.9	0.01	2.68	2.65	-1	NA	± 20	AverageRF
4-Chlorotoluene	10	9.9	0.01	2.38	2.36	-1	NA	± 20	AverageRF
tert-Butylbenzene	10	9.9	0.01	2.39	2.37	-1	NA	± 20	AverageRF
1,2,4-Trimethylbenzene	10	10	0.01	2.64	2.64	0	NA	± 20	AverageRF
sec-Butylbenzene	10	9.8	0.01	3.38	3.30	-2	NA	± 20	AverageRF
4-Isopropyltoluene	10	9.8	0.01	2.81	2.75	-2	NA	± 20	AverageRF
1,3-Dichlorobenzene	10	9.8	0.600	1.69	1.65	-2	NA	± 20	AverageRF
1,4-Dichlorobenzene	10	9.8	0.500	1.69	1.65	-2	NA	± 20	AverageRF
n-Butylbenzene	10	9.6	0.01	2.37	2.26	-4	NA	± 20	AverageRF
1,2-Dichlorobenzene	10	9.5	0.400	1.48	1.41	-5	NA	± 20	AverageRF
1,2-Dibromo-3-chloropropane	10	8.7	0.025	0.0740	0.0640	-14	NA	± 20	AverageRF
1,2,4-Trichlorobenzene	10	8.3	0.200	0.694	0.577	-17	NA	± 20	AverageRF
Hexachlorobutadiene	10	8.8	0.01	0.355	0.314	-12	NA	± 20	AverageRF
Naphthalene	10	7.5	0.01	1.06	0.800	-25	*	NA	AverageRF
1,2,3-Trichlorobenzene	10	7.5	0.01	0.455	0.339	-25	*	NA	AverageRF
Dibromofluoromethane	10	10	0.01	0.256	0.267	4	NA	± 20	AverageRF
1,2-Dichloroethane-d4	10	9.8	0.01	0.244	0.238	-2	NA	± 20	AverageRF
Toluene-d8	10	10	0.01	0.950	0.987	4	NA	± 20	AverageRF
4-Bromofluorobenzene	10	10	0.01	0.849	0.883	4	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703135

Analysis Run Log
Volatile Organic Compounds

Analysis Method: 8260C

Analysis Lot: KWG1702586
Instrument ID: MS46

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0331F002.D	GC/MS Tuning - Bromofluorobenzene	KWG1702586-1	3/31/2017	13:53		3/31/2017	14:10
0331F003.D	Continuing Calibration Verification	KWG1702586-2	3/31/2017	14:20		3/31/2017	14:37
0331F004.D	Lab Control Sample	KWG1702587-1	3/31/2017	14:46		3/31/2017	15:03
0331F005.D	Duplicate Lab Control Sample	KWG1702587-2	3/31/2017	15:13		3/31/2017	15:30
0331F006.D	ZZZZZZ	ZZZZZZ	3/31/2017	15:39		3/31/2017	15:56
0331F007.D	ZZZZZZ	ZZZZZZ	3/31/2017	16:06		3/31/2017	16:23
0331F009.D	Method Blank	KWG1702587-3	3/31/2017	16:59		3/31/2017	17:16
0331F010.D	ZZZZZZ	ZZZZZZ	3/31/2017	17:26		3/31/2017	17:43
0331F011.D	ZZZZZZ	ZZZZZZ	3/31/2017	17:52		3/31/2017	18:09
0331F012.D	ZZZZZZ	ZZZZZZ	3/31/2017	18:19		3/31/2017	18:36
0331F013.D	ZZZZZZ	ZZZZZZ	3/31/2017	18:45		3/31/2017	19:02
0331F014.D	ZZZZZZ	ZZZZZZ	3/31/2017	19:12		3/31/2017	19:29
0331F015.D	ZZZZZZ	ZZZZZZ	3/31/2017	19:38		3/31/2017	19:55
0331F016.D	ZZZZZZ	ZZZZZZ	3/31/2017	20:05		3/31/2017	20:22
0331F017.D	ZZZZZZ	ZZZZZZ	3/31/2017	20:31		3/31/2017	20:48
0331F018.D	ZZZZZZ	ZZZZZZ	3/31/2017	20:58		3/31/2017	21:15
0331F019.D	ZZZZZZ	ZZZZZZ	3/31/2017	21:24		3/31/2017	21:41
0331F020.D	ZZZZZZ	ZZZZZZ	3/31/2017	21:51		3/31/2017	22:08
0331F021.D	815-2	K1703135-001	3/31/2017	22:17		3/31/2017	22:34
0331F022.D	MTS-1	K1703135-002	3/31/2017	22:44		3/31/2017	23:01
0331F023.D	MTS-2	K1703135-003	3/31/2017	23:10		3/31/2017	23:27
0331F024.D	MTS-4	K1703135-004	3/31/2017	23:37		3/31/2017	23:54
0331F025.D	POMONA	K1703135-005	4/1/2017	00:03		4/1/2017	00:20
0331F026.D	PAIC	K1703135-006	4/1/2017	00:30		4/1/2017	00:47
0331F027.D	ZZZZZZ	ZZZZZZ	4/1/2017	00:56		4/1/2017	01:13
0331F028.D	ZZZZZZ	ZZZZZZ	4/1/2017	01:22		4/1/2017	01:39

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703135

**Analysis Run Log
 Volatile Organic Compounds**

Analysis Method: 8260C

Analysis Lot: KWG1702627
Instrument ID: MS46

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0403F003.D	GC/MS Tuning - Bromofluorobenzene	KWG1702627-1	4/3/2017	15:15		4/3/2017	15:32
0403F004.D	Continuing Calibration Verification	KWG1702627-2	4/3/2017	15:47		4/3/2017	16:04
0403F005.D	Lab Control Sample	KWG1702628-1	4/3/2017	16:13		4/3/2017	16:30
0403F006.D	Duplicate Lab Control Sample	KWG1702628-2	4/3/2017	16:40		4/3/2017	16:57
0403F008.D	Method Blank	KWG1702628-3	4/3/2017	17:33		4/3/2017	17:50
0403F009.D	ZZZZZZ	ZZZZZZ	4/3/2017	17:59		4/3/2017	18:16
0403F010.D	ZZZZZZ	ZZZZZZ	4/3/2017	18:26		4/3/2017	18:43
0403F011.D	TVR-1	K1703135-007	4/3/2017	18:53		4/3/2017	19:10
0403F012.D	TVR-3	K1703135-008	4/3/2017	19:19		4/3/2017	19:36
0403F013.D	TVR-5	K1703135-009	4/3/2017	19:46		4/3/2017	20:03
0403F025.D	TVR-6	K1703135-010	4/4/2017	01:04		4/4/2017	01:21
0403F026.D	TVR-7	K1703135-011	4/4/2017	01:31		4/4/2017	01:48
0403F027.D	POMONA-1	K1703135-012	4/4/2017	01:58		4/4/2017	02:15
0403F028.D	TRIP BLANK	K1703135-013	4/4/2017	02:24		4/4/2017	02:41
0403F029.D	Continuing Calibration Verification	KWG1702627-3	4/4/2017	02:51		4/4/2017	03:08

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Extracted: 03/31/2017

Extraction Prep Log
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Extraction Lot: KWG1702587
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
815-2	K1703135-001	03/29/17	03/31/17	10ml	10ml	NA	
MTS-1	K1703135-002	03/30/17	03/31/17	10ml	10ml	NA	
MTS-2	K1703135-003	03/30/17	03/31/17	10ml	10ml	NA	
MTS-4	K1703135-004	03/30/17	03/31/17	10ml	10ml	NA	
POMONA	K1703135-005	03/30/17	03/31/17	10ml	10ml	NA	
PAIC	K1703135-006	03/30/17	03/31/17	10ml	10ml	NA	
Method Blank	KWG1702587-3	NA	NA	10ml	10ml	NA	
Lab Control Sample	KWG1702587-1	NA	NA	10ml	10ml	NA	
Duplicate Lab Control Sample	KWG1702587-2	NA	NA	10ml	10ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703135
Date Extracted: 04/03/2017

Extraction Prep Log
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Extraction Lot: KWG1702628
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
TVR-1	K1703135-007	03/29/17	03/31/17	10ml	10ml	NA	
TVR-3	K1703135-008	03/30/17	03/31/17	10ml	10ml	NA	
TVR-5	K1703135-009	03/29/17	03/31/17	10ml	10ml	NA	
TVR-6	K1703135-010	03/29/17	03/31/17	10ml	10ml	NA	
TVR-7	K1703135-011	03/30/17	03/31/17	10ml	10ml	NA	
POMONA-1	K1703135-012	03/30/17	03/31/17	10ml	10ml	NA	
TRIP BLANK	K1703135-013	03/29/17	03/31/17	10ml	10ml	NA	
Method Blank	KWG1702628-3	NA	NA	10ml	10ml	NA	
Lab Control Sample	KWG1702628-1	NA	NA	10ml	10ml	NA	
Duplicate Lab Control Sample	KWG1702628-2	NA	NA	10ml	10ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis



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April 28, 2017

Analytical Report for Service Request No: K1703074

Keir Craigie
Tetra Tech, Inc.
19803 North Creek Parkway
Bothell, WA 98011

RE: YTC / 106-45760003

Dear Keir,

Enclosed are the results of the sample(s) submitted to our laboratory March 30, 2017
For your reference, these analyses have been assigned our service request number **K1703074**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

Please contact me if you have any questions. My extension is 3356. You may also contact me via email at Kurt.Clarkson@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Kurt Clarkson
Client Services
Manager



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Table of Contents

Acronyms

Qualifiers

State Certifications, Accreditations, And Licenses

Case Narrative

Chain of Custody

Diesel and Residual Range Organics

Gasoline Range Organics

Volatile Organic Compounds

Semi-Volatile Organic Compounds by GCMS

Raw Data

 Diesel and Residual Range Organics

 Gasoline Range Organics

 Volatile Organic Compounds

 Semi-Volatile Organic Compounds by GCMS

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEC UST	http://dec.alaska.gov/applications/eh/ehllabreports/USTLabs.aspx	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
DOD ELAP	http://www.denix.osd.mil/edqw/Accreditation/AccreditedLabs.cfm	L14-51
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	Not available	-
ISO 17025	http://www.pjllabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.

Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client: Tetra Tech, Incorporated
Project: YTC/ 106-45760003
Sample Matrix: Water

Service Request No.: K1703074
Date Received: 03/30/17

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Six water samples were received for analysis at ALS Environmental on 03/30/17. The samples were received in good condition and consistent with the accompanying chain of custody form, except where noted on the cooler receipt and preservation form included in this report. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Diesel Range Organics by Method NWTPH-Dx

Sample Notes and Discussion:

Insufficient sample volume was received to perform a Matrix Spike/Matrix Spike Duplicate (MS/MSD). A Laboratory Control Sample/Duplicate Laboratory Control Sample (LCS/DLCS) was analyzed and reported in lieu of the MS/MSD for these samples.

Manual integration of one or more chromatographic peaks was required to correct the integration performed by the automated data processing program. The manual integration was performed in accordance with ALS policy, which is consistent with the National Environmental Laboratory Accreditation Program (NELAP), Department of Defense (DOD), and other certifying agencies. The analytes that required manual integrations are identified on each sample report contained in this data package.

Surrogate Exceptions:

The control criteria were exceeded for n-Triacontane in QC sample KWG1702701-1DUP due to suspected matrix interference. Sample formed an emulsion during the extraction process. No further corrective action was appropriate.

No other anomalies associated with the analysis of these samples were observed.

Approved by



Gasoline Range Organics by Method NWTPH-Gx

Sample Notes and Discussion:

Manual integration of one or more chromatographic peaks was required to correct the integration performed by the automated data processing program. The manual integration was performed in accordance with ALS policy, which is consistent with the National Environmental Laboratory Accreditation Program (NELAP), Department of Defense (DOD), and other certifying agencies. The analytes that required manual integrations are identified on each sample report contained in this data package.

No other anomalies associated with the analysis of these samples were observed.

Volatile Organic Compounds by EPA Method 8260

Calibration Verification Exceptions:

The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) J:\MS46\0331F003.D: 1,2,4-Trichlorobenzene, Napthalene, and 1,2,3-Trichlorobenzene. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Sample Notes and Discussion:

Manual integration of one or more chromatographic peaks was required to correct the integration performed by the automated data processing program. The manual integration was performed in accordance with ALS policy, which is consistent with the National Environmental Laboratory Accreditation Program (NELAP), Department of Defense (DOD), and other certifying agencies. The analytes that required manual integrations are identified on each sample report contained in this data package.

No other anomalies associated with the analysis of these samples were observed.

Semivolatile Organic Compounds by EPA Method 8270

Initial Calibration Exceptions:

The minimum relative response factor criterion for 2-Methylphenol was not met in Initial Calibration (ICAL) ID 15331. The minimum response factor for this analyte is a value recommended by Method EPA 8270D. Based on historical data, the response factor observed was within the range expected for this procedure. No further corrective action was appropriate.

Sample Notes and Discussion:

Manual integration of one or more chromatographic peaks was required to correct the integration performed by the automated data processing program. The manual integration was performed in accordance with ALS policy, which is consistent with the National Environmental Laboratory Accreditation Program (NELAP), Department of Defense (DOD), and other certifying agencies. The analytes that required manual integrations are identified on each sample report contained in this data package.

No other anomalies associated with the analysis of these samples were observed.

Approved by





Chain of Custody

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com



CHAIN OF CUSTODY

78078

001

SR# K1103074
 COC Set ___ of ___
 COC# _____

1317 South 13th Ave, Kelso, WA 98626 Phone (360) 577-7222 / 800-695-7222 / FAX (360) 636-1068
 www.alsglobal.com

Page 1 of 1

FTP/TR

Project Name		Project Number		NUMBER OF CONTAINERS	7D			14D			Remarks
Project Manager		Company			8270D / PAH SIM	8270D / SVC	8330B / NitramAroEsters	8260C / VOC FP	NWTPH-Dx / NW_TPH	NWTPH-Cx / NW_GAS	
CLIENT SAMPLE ID	LABID	SAMPLING Date	Time	Matrix							
1. FTP-1		32917	1230	W	12	X	X	X	X		
2. FTP-14		32917	1330	W	5			X	X		
3. FTP-15		32917	1430	W	5			X	X		
4. FTP-16		32917	1100	W	5			X	X		
5. FTP-16A		32917	1130	W	5			X	X		
6. TRIP BLANK-2		32917 / 1045		W	2		X				
7.											
8.											
9.	BL	32917									
10.											

Report Requirements

I. Routine Report: Method Blank, Surrogate, as required

II. Report Dup., MS, MSD as required

III. CLP Like Summary (no raw data)

IV. Data Validation Report

V. EDD

Invoice Information

P.O.# _____

Bill To: _____

Turnaround Requirements

24 hr. 48 hr.

5 Day Standard

Requested Report Date _____

Circle which metals are to be analyzed

Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg

Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg

Special Instructions/Comments: _____ *Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other _____ (Circle One)

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature <i>Dana Rungquist</i>	Signature <i>Dana Rungquist</i>	Signature	Signature	Signature	Signature
Printed Name Dana Rungquist	Printed Name MS 3:3017945	Printed Name	Printed Name	Printed Name	Printed Name
Firm T+EC	Firm FedEx	Firm	Firm	Firm	Firm
Date/Time 32917/1600	Date/Time	Date/Time	Date/Time	Date/Time	Date/Time



PC KC

Cooler Receipt and Preservation Form

03074

Client TFEC Service Request K17
Received: 3-30-17 Opened: 3-30-17 By: BW Unloaded: 3-30-17 By: BW

- 1. Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
- 2. Samples were received in: (circle) Cooler Box Envelope Other NA
- 3. Were custody seals on coolers? NA Y N If yes, how many and where? 2 - 1 Front / 1 Back
- If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID	Tracking Number	NA	Filed
0.2	0.1	2.3	2.2	-0.1	371	78078	8107-0244-1196		

- 4. Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
- 5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- 6. Were samples received in good condition (temperature, unbroken)? Indicate in the table below. NA Y N
If applicable, tissue samples were received: Frozen Partially Thawed Thawed
- 7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
- 8. Did all sample labels and tags agree with custody papers? Indicate major discrepancies in the table on page 2. NA Y N
- 9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- 10. Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- 11. Were VOA vials received without headspace? Indicate in the table below. NA Y N
- 12. Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time
FTP-1	2 VOA'S			✓					BW	11:50

Notes, Discrepancies, & Resolutions: 2 VOA'S Frozen and broken upon receipt FTP



Diesel and Residual Range Organics

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074

**Cover Page - Organic Analysis Data Package
 Diesel and Residual Range Organics**

Sample Name	Lab Code	Date Collected	Date Received
FTP-1	K1703074-001	03/29/2017	03/30/2017
FTP-14	K1703074-002	03/29/2017	03/30/2017
FTP-15	K1703074-003	03/29/2017	03/30/2017
FTP-16	K1703074-004	03/29/2017	03/30/2017
FTP-16A	K1703074-005	03/29/2017	03/30/2017
FTP-1	KWG1702701-1	03/29/2017	03/30/2017

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: 03/29/2017
Date Received: 03/30/2017

Diesel and Residual Range Organics

Sample Name: FTP-1
Lab Code: K1703074-001
Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	17000	Y	270	22	12	1	04/07/17	04/12/17	KWG1702701	
Residual Range Organics (RRO)	2400	L	530	53	21	1	04/07/17	04/12/17	KWG1702701	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	61	50-150	04/12/17	Acceptable
n-Triacontane	59	50-150	04/12/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: 03/29/2017
Date Received: 03/30/2017

Diesel and Residual Range Organics

Sample Name: FTP-14
Lab Code: K1703074-002
Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	170	J	260	21	12	1	04/07/17	04/12/17	KWG1702701	
Residual Range Organics (RRO)	90	J	520	52	20	1	04/07/17	04/12/17	KWG1702701	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	76	50-150	04/12/17	Acceptable
n-Triacontane	70	50-150	04/12/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: 03/29/2017
Date Received: 03/30/2017

Diesel and Residual Range Organics

Sample Name: FTP-15
Lab Code: K1703074-003
Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	130	J	280	22	12	1	04/07/17	04/12/17	KWG1702701	
Residual Range Organics (RRO)	120	J	550	55	21	1	04/07/17	04/12/17	KWG1702701	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	72	50-150	04/12/17	Acceptable
n-Triacontane	68	50-150	04/12/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: 03/29/2017
Date Received: 03/30/2017

Diesel and Residual Range Organics

Sample Name: FTP-16
Lab Code: K1703074-004
Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	130	J	270	22	12	1	04/07/17	04/12/17	KWG1702701	
Residual Range Organics (RRO)	120	J	530	53	21	1	04/07/17	04/12/17	KWG1702701	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	78	50-150	04/12/17	Acceptable
n-Triacontane	82	50-150	04/12/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: 03/29/2017
Date Received: 03/30/2017

Diesel and Residual Range Organics

Sample Name: FTP-16A
Lab Code: K1703074-005
Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	120	J	280	22	12	1	04/07/17	04/12/17	KWG1702701	
Residual Range Organics (RRO)	100	J	550	55	21	1	04/07/17	04/12/17	KWG1702701	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	77	50-150	04/12/17	Acceptable
n-Triacontane	74	50-150	04/12/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: NA
Date Received: NA

Diesel and Residual Range Organics

Sample Name: Method Blank
Lab Code: KWG1702701-4
Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	14	J	250	20	11	1	04/07/17	04/12/17	KWG1702701	
Residual Range Organics (RRO)	39	J	500	50	19	1	04/07/17	04/12/17	KWG1702701	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	80	50-150	04/12/17	Acceptable
n-Triacontane	81	50-150	04/12/17	Acceptable

Comments: _____

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074

**Surrogate Recovery Summary
 Diesel and Residual Range Organics**

Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: Percent
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>
FTP-1	K1703074-001	61	59
FTP-14	K1703074-002	76	70
FTP-15	K1703074-003	72	68
FTP-16	K1703074-004	78	82
FTP-16A	K1703074-005	77	74
FTP-1DUP	KWG1702701-1	52	44 *
Method Blank	KWG1702701-4	80	81
Lab Control Sample	KWG1702701-2	75	71
Duplicate Lab Control Sample	KWG1702701-3	77	70

Surrogate Recovery Control Limits (%)

Sur1 = o-Terphenyl	50-150
Sur2 = n-Triacontane	50-150

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Extracted: 04/07/2017
Date Analyzed: 04/12/2017

Duplicate Sample Summary
Diesel and Residual Range Organics

Sample Name: FTP-1
Lab Code: K1703074-001
Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1702701

Analyte Name	LOQ	MDL	Sample Result	FTP-1DUP KWG1702701-1 Duplicate Sample		Relative Percent Difference	RPD Limit
				Result	Average		
Diesel Range Organics (DRO)	280	13	17000	20000	18000	19	30
Residual Range Organics (RRO)	560	22	2400	3200	2800	28	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Extracted: 04/07/2017
Date Analyzed: 04/12/2017

**Lab Control Spike/Duplicate Lab Control Spike Summary
 Diesel and Residual Range Organics**

Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1702701

Analyte Name	Lab Control Sample KWG1702701-2 Lab Control Spike			Duplicate Lab Control Sample KWG1702701-3 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Diesel Range Organics (DRO)	2380	3200	74	2660	3200	83	46-140	11	30
Residual Range Organics (RRO)	1210	1600	76	1280	1600	80	45-159	5	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Extracted: 04/07/2017
Date Analyzed: 04/12/2017
Time Analyzed: 13:17

Method Blank Summary
Diesel and Residual Range Organics

Sample Name: Method Blank
Lab Code: KWG1702701-4
Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Instrument ID: GC21
File ID: J:\GC21\DATA\041217F\0412F030.D
Level: Low
Extraction Lot: KWG1702701

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1702701-2	J:\GC21\DATA\041217F\0412F026.D	04/12/17	12:33
Duplicate Lab Control Sample	KWG1702701-3	J:\GC21\DATA\041217F\0412F028.D	04/12/17	12:55
FTP-14	K1703074-002	J:\GC21\DATA\041217F\0412F036.D	04/12/17	14:23
FTP-15	K1703074-003	J:\GC21\DATA\041217F\0412F038.D	04/12/17	14:45
FTP-16	K1703074-004	J:\GC21\DATA\041217F\0412F040.D	04/12/17	15:07
FTP-16A	K1703074-005	J:\GC21\DATA\041217F\0412F042.D	04/12/17	15:29
FTP-1	K1703074-001	J:\GC21\DATA\041217F\0412F044.D	04/12/17	15:51
FTP-1DUP	KWG1702701-1	J:\GC21\DATA\041217F\0412F046.D	04/12/17	16:13

QA/QC Report

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Extracted: 04/07/2017
Date Analyzed: 04/12/2017
Time Analyzed: 12:33

Lab Control Sample Summary
Diesel and Residual Range Organics

Sample Name: Lab Control Sample
Lab Code: KWG1702701-2
Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Instrument ID: GC21
File ID: J:\GC21\DATA\041217F\0412F026.D
Level: Low
Extraction Lot: KWG1702701

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1702701-4	J:\GC21\DATA\041217F\0412F030.D	04/12/17	13:17
FTP-14	K1703074-002	J:\GC21\DATA\041217F\0412F036.D	04/12/17	14:23
FTP-15	K1703074-003	J:\GC21\DATA\041217F\0412F038.D	04/12/17	14:45
FTP-16	K1703074-004	J:\GC21\DATA\041217F\0412F040.D	04/12/17	15:07
FTP-16A	K1703074-005	J:\GC21\DATA\041217F\0412F042.D	04/12/17	15:29
FTP-1	K1703074-001	J:\GC21\DATA\041217F\0412F044.D	04/12/17	15:51
FTP-1DUP	KWG1702701-1	J:\GC21\DATA\041217F\0412F046.D	04/12/17	16:13

Client: Tetra Tech, Incorporated
 Project: YTC/106-45760003

Service Request: K1703074
 Calibration Date: 01/30/2017

**Initial Calibration Summary
 Diesel and Residual Range Organics**

Calibration ID: CAL15147
 Instrument ID: GC21

Column: ZB-1

Level ID	File ID
A	J:\GC21\DATA\013017F\0130F040.D
B	J:\GC21\DATA\013017F\0130F042.D
C	J:\GC21\DATA\013017F\0130F044.D
D	J:\GC21\DATA\013017F\0130F046.D
E	J:\GC21\DATA\013017F\0130F048.D
F	J:\GC21\DATA\013017F\0130F050.D
G	J:\GC21\DATA\013017F\0130F052.D
H	J:\GC21\DATA\013017F\0130F054.D
I	J:\GC21\DATA\013017F\0130F062.D
J	J:\GC21\DATA\013017F\0130F064.D

Level ID	File ID
K	J:\GC21\DATA\013017F\0130F066.D
L	J:\GC21\DATA\013017F\0130F068.D
M	J:\GC21\DATA\013017F\0130F070.D
N	J:\GC21\DATA\013017F\0130F078.D
O	J:\GC21\DATA\013017F\0130F080.D
P	J:\GC21\DATA\013017F\0130F082.D
Q	J:\GC21\DATA\013017F\0130F084.D
R	J:\GC21\DATA\013017F\0130F086.D

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF
Diesel Range Organics (DRO)	A	20	1020	B	50	1050	C	200	901	D	500	1100	E	2000	917
	F	5000	1050	G	20000	966	H	50000	876						
Residual Range Organics (RRO)										I	50	552	J	200	565
				K	500	543	L	2000	509	M	5000	513			
o-Terphenyl	A	1.0	1560	B	2.5	1550	C	10	1360	D	25	1510	E	100	1400
	F	250	1430												
n-Triacontane	A	1.0	1200	B	2.5	1220	C	10	1110	D	25	1240	E	100	1170
	F	250	1210												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Calibration Date: 01/30/2017

Initial Calibration Summary
Diesel and Residual Range Organics

Calibration ID: CAL15147
Instrument ID: GC21

Column: ZB-1

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
Diesel Range Organics (DRO)	MS	AverageRF	% RSD	8.3		≤ 20
Residual Range Organics (RRO)	MS	AverageRF	% RSD	4.6		≤ 20
o-Terphenyl	SURR	AverageRF	% RSD	5.7		≤ 20
n-Triacontane	SURR	AverageRF	% RSD	3.9		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Calibration Date: 01/30/2017
Date Analyzed: 01/30/2017

Second Source Calibration Verification
Diesel and Residual Range Organics

Calibration Type: External Standard
Analysis Method: NWTPH-Dx

Calibration ID: CAL15147
Units: ppm

File ID: J:\GC21\DATA\013017F\0130F074.D
 J:\GC21\DATA\013017F\0130F090.D
 J:\GC21\DATA\013017F\0130F058.D

Column ID: ZB-1

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Diesel Range Organics (DRO)	1000	1000	985	984	0	NA	± 15 %	AverageRF
Residual Range Organics (RRO)	1000	880	536	472	-12	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Date Analyzed: 04/12/2017

**Continuing Calibration Verification Summary
 Diesel and Residual Range Organics**

Calibration Type: External Standard
Analysis Method: NWTPH-Dx

Calibration Date: 01/30/2017
Calibration ID: CAL15147
Analysis Lot: KWG1702907
Units: ppm
Column ID: ZB-1

File ID: J:\GC21\DATA\041217F\0412F010.D
 J:\GC21\DATA\041217F\0412F012.D

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Diesel Range Organics (DRO)	1000	950	985	940	-5	NA	± 15	AverageRF
Residual Range Organics (RRO)	1000	920	536	492	-8	NA	± 15	AverageRF
o-Terphenyl	50	45	1470	1310	-11	NA	± 15	AverageRF
n-Triacontane	50	45	1190	1080	-9	NA	± 15	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Date Analyzed: 04/12/2017

**Continuing Calibration Verification Summary
 Diesel and Residual Range Organics**

Calibration Type: External Standard
Analysis Method: NWTPH-Dx

Calibration Date: 01/30/2017
Calibration ID: CAL15147
Analysis Lot: KWG1702907
Units: ppm
Column ID: ZB-1

File ID: J:\GC21\DATA\041217F\0412F052.D
 J:\GC21\DATA\041217F\0412F054.D

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Diesel Range Organics (DRO)	1000	1000	985	1010	3	NA	± 15	AverageRF
Residual Range Organics (RRO)	1000	1100	536	570	6	NA	± 15	AverageRF
o-Terphenyl	50	48	1470	1400	-4	NA	± 15	AverageRF
n-Triacontane	50	45	1190	1070	-10	NA	± 15	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074

Analysis Run Log
Diesel and Residual Range Organics

Analysis Method: NWTPH-Dx

Analysis Lot: KWG1702907
Instrument ID: GC21
Column: ZB-1

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0412F010.D	Continuing Calibration Verification	KWG1702907-1	4/12/2017	09:35		4/12/2017	09:51
0412F012.D	Continuing Calibration Verification	KWG1702907-1	4/12/2017	09:58		4/12/2017	10:14
0412F014.D	Instrument Blank	KWG1702907-3	4/12/2017	10:20		4/12/2017	10:36
0412F020.D	ZZZZZZ	ZZZZZZ	4/12/2017	11:27		4/12/2017	11:43
0412F022.D	ZZZZZZ	ZZZZZZ	4/12/2017	11:49		4/12/2017	12:05
0412F024.D	ZZZZZZ	ZZZZZZ	4/12/2017	12:11		4/12/2017	12:27
0412F026.D	Lab Control Sample	KWG1702701-2	4/12/2017	12:33		4/12/2017	12:49
0412F028.D	Duplicate Lab Control Sample	KWG1702701-3	4/12/2017	12:55		4/12/2017	13:11
0412F030.D	Method Blank	KWG1702701-4	4/12/2017	13:17		4/12/2017	13:33
0412F032.D	ZZZZZZ	ZZZZZZ	4/12/2017	13:39		4/12/2017	13:55
0412F034.D	ZZZZZZ	ZZZZZZ	4/12/2017	14:01		4/12/2017	14:17
0412F036.D	FTP-14	K1703074-002	4/12/2017	14:23		4/12/2017	14:39
0412F038.D	FTP-15	K1703074-003	4/12/2017	14:45		4/12/2017	15:01
0412F040.D	FTP-16	K1703074-004	4/12/2017	15:07		4/12/2017	15:23
0412F042.D	FTP-16A	K1703074-005	4/12/2017	15:29		4/12/2017	15:45
0412F044.D	FTP-1	K1703074-001	4/12/2017	15:51		4/12/2017	16:07
0412F046.D	FTP-1DUP	KWG1702701-1	4/12/2017	16:13		4/12/2017	16:29
0412F048.D	ZZZZZZ	ZZZZZZ	4/12/2017	16:35		4/12/2017	16:51
0412F050.D	ZZZZZZ	ZZZZZZ	4/12/2017	16:57		4/12/2017	17:13
0412F052.D	Continuing Calibration Verification	KWG1702907-2	4/12/2017	17:19		4/12/2017	17:35
0412F054.D	Continuing Calibration Verification	KWG1702907-2	4/12/2017	17:41		4/12/2017	17:57
0412F056.D	Instrument Blank	KWG1702907-4	4/12/2017	18:03		4/12/2017	18:19

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Extracted: 04/07/2017

Extraction Prep Log
Diesel and Residual Range Organics

Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Extraction Lot: KWG1702701
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
FTP-1	K1703074-001	03/29/17	03/30/17	475ml	1ml	NA	
FTP-14	K1703074-002	03/29/17	03/30/17	485ml	1ml	NA	
FTP-15	K1703074-003	03/29/17	03/30/17	460ml	1ml	NA	
FTP-16	K1703074-004	03/29/17	03/30/17	475ml	1ml	NA	
FTP-16A	K1703074-005	03/29/17	03/30/17	460ml	1ml	NA	
FTP-1DUP	KWG1702701-1	03/29/17	03/30/17	450ml	1ml	NA	
Method Blank	KWG1702701-4	NA	NA	500ml	1ml	NA	
Lab Control Sample	KWG1702701-2	NA	NA	500ml	1ml	NA	
Duplicate Lab Control Sample	KWG1702701-3	NA	NA	500ml	1ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis



Gasoline Range Organics

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074

**Cover Page - Organic Analysis Data Package
Gasoline Range Organics**

Sample Name	Lab Code	Date Collected	Date Received
FTP-1	K1703074-001	03/29/2017	03/30/2017
FTP-14	K1703074-002	03/29/2017	03/30/2017
FTP-15	K1703074-003	03/29/2017	03/30/2017
FTP-16	K1703074-004	03/29/2017	03/30/2017
FTP-16A	K1703074-005	03/29/2017	03/30/2017

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: 03/29/2017
Date Received: 03/30/2017

Gasoline Range Organics

Sample Name: FTP-1
Lab Code: K1703074-001
Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	930	Y	250	25	12	1	04/01/17	04/01/17	KWG1702739	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	93	50-150	04/01/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: 03/29/2017
Date Received: 03/30/2017

Gasoline Range Organics

Sample Name: FTP-14
Lab Code: K1703074-002
Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	50	J	250	25	12	1	04/01/17	04/01/17	KWG1702739	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	94	50-150	04/01/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: 03/29/2017
Date Received: 03/30/2017

Gasoline Range Organics

Sample Name: FTP-15
Lab Code: K1703074-003
Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	14	J	250	25	12	1	04/01/17	04/01/17	KWG1702739	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	96	50-150	04/01/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: 03/29/2017
Date Received: 03/30/2017

Gasoline Range Organics

Sample Name: FTP-16
Lab Code: K1703074-004
Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	25	12	1	04/01/17	04/01/17	KWG1702739	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	95	50-150	04/01/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: 03/29/2017
Date Received: 03/30/2017

Gasoline Range Organics

Sample Name: FTP-16A
Lab Code: K1703074-005
Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	25	12	1	04/01/17	04/01/17	KWG1702739	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	95	50-150	04/01/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: NA
Date Received: NA

Gasoline Range Organics

Sample Name: Method Blank
Lab Code: KWG1702739-3
Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	12	J	250	25	12	1	04/01/17	04/01/17	KWG1702739	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	94	50-150	04/01/17	Acceptable

Comments: _____

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074

**Surrogate Recovery Summary
 Gasoline Range Organics**

Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: Percent
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
FTP-1	K1703074-001	93
FTP-14	K1703074-002	94
FTP-15	K1703074-003	96
FTP-16	K1703074-004	95
FTP-16A	K1703074-005	95
Method Blank	KWG1702739-3	94
Lab Control Sample	KWG1702739-1	99
Duplicate Lab Control Sample	KWG1702739-2	97

Surrogate Recovery Control Limits (%)

Sur1 = 1,4-Difluorobenzene 50-150

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Extracted: 04/01/2017
Date Analyzed: 04/01/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Gasoline Range Organics

Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1702739

Analyte Name	Lab Control Sample KWG1702739-1 Lab Control Spike			Duplicate Lab Control Sample KWG1702739-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Gasoline Range Organics-NWTPH	439	500	88	445	500	89	80-119	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Extracted: 04/01/2017
Date Analyzed: 04/01/2017
Time Analyzed: 12:56

Method Blank Summary
Gasoline Range Organics

Sample Name: Method Blank
Lab Code: KWG1702739-3
Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Instrument ID: GC60
File ID: J:\GC60\DATA\033117\0331F063.D
Level: Low
Extraction Lot: KWG1702739

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
FTP-1	K1703074-001	J:\GC60\DATA\033117\0331F056.D	04/01/17	09:56
FTP-14	K1703074-002	J:\GC60\DATA\033117\0331F057.D	04/01/17	10:21
FTP-15	K1703074-003	J:\GC60\DATA\033117\0331F058.D	04/01/17	10:47
FTP-16	K1703074-004	J:\GC60\DATA\033117\0331F059.D	04/01/17	11:13
FTP-16A	K1703074-005	J:\GC60\DATA\033117\0331F060.D	04/01/17	11:39
Lab Control Sample	KWG1702739-1	J:\GC60\DATA\033117\0331F061.D	04/01/17	12:04
Duplicate Lab Control Sample	KWG1702739-2	J:\GC60\DATA\033117\0331F062.D	04/01/17	12:30

QA/QC Report

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Extracted: 04/01/2017
Date Analyzed: 04/01/2017
Time Analyzed: 12:04

Lab Control Sample Summary
Gasoline Range Organics

Sample Name: Lab Control Sample
Lab Code: KWG1702739-1
Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Instrument ID: GC60
File ID: J:\GC60\DATA\033117\0331F061.D
Level: Low
Extraction Lot: KWG1702739

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
FTP-1	K1703074-001	J:\GC60\DATA\033117\0331F056.D	04/01/17	09:56
FTP-14	K1703074-002	J:\GC60\DATA\033117\0331F057.D	04/01/17	10:21
FTP-15	K1703074-003	J:\GC60\DATA\033117\0331F058.D	04/01/17	10:47
FTP-16	K1703074-004	J:\GC60\DATA\033117\0331F059.D	04/01/17	11:13
FTP-16A	K1703074-005	J:\GC60\DATA\033117\0331F060.D	04/01/17	11:39
Method Blank	KWG1702739-3	J:\GC60\DATA\033117\0331F063.D	04/01/17	12:56

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Calibration Date: 08/01/2016

Initial Calibration Summary
Gasoline Range Organics

Calibration ID: CAL14851
Instrument ID: GC60

Column: DB-624

Level ID	File ID	Level ID	File ID
A	J:\GC60\Data\080116\0801F005.D	E	J:\GC60\Data\080116\0801F009.D
B	J:\GC60\Data\080116\0801F006.D	F	J:\GC60\Data\080116\0801F010.D
C	J:\GC60\Data\080116\0801F007.D	G	J:\GC60\Data\080116\0801F011.D
D	J:\GC60\Data\080116\0801F008.D		

Analyte Name	Level ID			Level ID			Level ID			Level ID					
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF			
Gasoline Range Organics-NWTPH	A	50	86200	B	100	78800	C	200	74800	D	500	70700	E	1000	69300
	F	5000	72100	G	10000	71200									
1,4-Difluorobenzene	A	20	1.36E+5	B	25	1.31E+5	C	50	1.31E+5	D	100	1.37E+5	E	150	1.37E+5

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Calibration Date: 08/01/2016

Initial Calibration Summary
Gasoline Range Organics

Calibration ID: CAL14851
Instrument ID: GC60

Column: DB-624

Analyte Name	Compound Type	Calibration Evaluation				Control Criteria
		Fit Type	Eval.	Eval. Result	Q	
Gasoline Range Organics-NWTPH	MS	AverageRF	% RSD	8.0		≤ 20
1,4-Difluorobenzene	SURR	AverageRF	% RSD	2.6		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Calibration Date: 08/01/2016
Date Analyzed: 08/01/2016

**Second Source Calibration Verification
 Gasoline Range Organics**

Calibration Type: External Standard
Analysis Method: NWTPH-Gx

Calibration ID: CAL14851
Units: ug/L

File ID: J:\GC60\Data\080116\0801F014.D

Column ID: DB-624

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Gasoline Range Organics-NWTPH	500	550	74700	82800	11	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Date Analyzed: 04/01/2017

Continuing Calibration Verification Summary
Gasoline Range Organics

Calibration Type: External Standard
Analysis Method: NWTPH-Gx

Calibration Date: 08/01/2016
Calibration ID: CAL14851
Analysis Lot: KWG1702734
Units: ug/L
Column ID: DB-624

File ID: J:\GC60\DATA\033117\0331F049.D

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Gasoline Range Organics-NWTPH	500	450	74700	67000	-10	NA	± 20	AverageRF
1,4-Difluorobenzene	100	99	134000	133000	-1	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Date Analyzed: 04/01/2017

Continuing Calibration Verification Summary
Gasoline Range Organics

Calibration Type: External Standard
Analysis Method: NWTPH-Gx

Calibration Date: 08/01/2016
Calibration ID: CAL14851
Analysis Lot: KWG1702734
Units: ug/L
Column ID: DB-624

File ID: J:\GC60\DATA\033117\0331F064.D

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Gasoline Range Organics-NWTPH	500	450	74700	67700	-9	NA	± 20	AverageRF
1,4-Difluorobenzene	100	100	134000	134000	0	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074

Analysis Run Log
Gasoline Range Organics

Analysis Method: NWTPH-Gx

Analysis Lot: KWG1702734
Instrument ID: GC60
Column: DB-624

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0331F003.D	Continuing Calibration Verification	KWG1702734-1	3/31/2017	10:00		3/31/2017	10:15
0331F004.D	Instrument Blank	KWG1702734-6	3/31/2017	10:35		3/31/2017	10:50
0331F005.D	ZZZZZZ	ZZZZZZ	3/31/2017	11:00		3/31/2017	11:15
0331F007.D	ZZZZZZ	ZZZZZZ	3/31/2017	12:18		3/31/2017	12:33
0331F009.D	ZZZZZZ	ZZZZZZ	3/31/2017	13:28		3/31/2017	13:43
0331F014.D	ZZZZZZ	ZZZZZZ	3/31/2017	15:55		3/31/2017	16:10
0331F016.D	ZZZZZZ	ZZZZZZ	3/31/2017	16:47		3/31/2017	17:02
0331F017.D	ZZZZZZ	ZZZZZZ	3/31/2017	17:12		3/31/2017	17:27
0331F018.D	ZZZZZZ	ZZZZZZ	3/31/2017	17:38		3/31/2017	17:53
0331F019.D	ZZZZZZ	ZZZZZZ	3/31/2017	18:04		3/31/2017	18:19
0331F020.D	ZZZZZZ	ZZZZZZ	3/31/2017	18:30		3/31/2017	18:45
0331F021.D	Continuing Calibration Verification	KWG1702734-2	3/31/2017	18:56		3/31/2017	19:11
0331F022.D	Instrument Blank	KWG1702734-7	3/31/2017	19:22		3/31/2017	19:37
0331F023.D	ZZZZZZ	ZZZZZZ	3/31/2017	19:47		3/31/2017	20:02
0331F024.D	ZZZZZZ	ZZZZZZ	3/31/2017	20:13		3/31/2017	20:28
0331F025.D	ZZZZZZ	ZZZZZZ	3/31/2017	20:39		3/31/2017	20:54
0331F026.D	ZZZZZZ	ZZZZZZ	3/31/2017	21:05		3/31/2017	21:20
0331F027.D	ZZZZZZ	ZZZZZZ	3/31/2017	21:31		3/31/2017	21:46
0331F028.D	ZZZZZZ	ZZZZZZ	3/31/2017	21:56		3/31/2017	22:11
0331F029.D	ZZZZZZ	ZZZZZZ	3/31/2017	22:22		3/31/2017	22:37
0331F030.D	ZZZZZZ	ZZZZZZ	3/31/2017	22:48		3/31/2017	23:03
0331F031.D	ZZZZZZ	ZZZZZZ	3/31/2017	23:14		3/31/2017	23:29
0331F032.D	ZZZZZZ	ZZZZZZ	3/31/2017	23:39		3/31/2017	23:54
0331F033.D	ZZZZZZ	ZZZZZZ	4/1/2017	00:05		4/1/2017	00:20
0331F034.D	ZZZZZZ	ZZZZZZ	4/1/2017	00:31		4/1/2017	00:46
0331F035.D	Continuing Calibration Verification	KWG1702734-3	4/1/2017	00:56		4/1/2017	01:11
0331F036.D	Instrument Blank	KWG1702734-8	4/1/2017	01:22		4/1/2017	01:37
0331F037.D	ZZZZZZ	ZZZZZZ	4/1/2017	01:48		4/1/2017	02:03
0331F038.D	ZZZZZZ	ZZZZZZ	4/1/2017	02:13		4/1/2017	02:28
0331F039.D	ZZZZZZ	ZZZZZZ	4/1/2017	02:39		4/1/2017	02:54
0331F040.D	ZZZZZZ	ZZZZZZ	4/1/2017	03:05		4/1/2017	03:20
0331F041.D	ZZZZZZ	ZZZZZZ	4/1/2017	03:30		4/1/2017	03:45
0331F042.D	ZZZZZZ	ZZZZZZ	4/1/2017	03:56		4/1/2017	04:11
0331F043.D	ZZZZZZ	ZZZZZZ	4/1/2017	04:22		4/1/2017	04:37
0331F044.D	ZZZZZZ	ZZZZZZ	4/1/2017	04:47		4/1/2017	05:02

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074

**Analysis Run Log
Gasoline Range Organics**

Analysis Method: NWTPH-Gx

Analysis Lot: KWG1702734
Instrument ID: GC60
Column: DB-624

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0331F045.D	ZZZZZZ	ZZZZZZ	4/1/2017	05:13		4/1/2017	05:28
0331F046.D	ZZZZZZ	ZZZZZZ	4/1/2017	05:39		4/1/2017	05:54
0331F047.D	ZZZZZZ	ZZZZZZ	4/1/2017	06:04		4/1/2017	06:19
0331F048.D	ZZZZZZ	ZZZZZZ	4/1/2017	06:30		4/1/2017	06:45
0331F049.D	Continuing Calibration Verification	KWG1702734-4	4/1/2017	06:56		4/1/2017	07:11
0331F050.D	Instrument Blank	KWG1702734-9	4/1/2017	07:21		4/1/2017	07:36
0331F051.D	ZZZZZZ	ZZZZZZ	4/1/2017	07:47		4/1/2017	08:02
0331F052.D	ZZZZZZ	ZZZZZZ	4/1/2017	08:13		4/1/2017	08:28
0331F053.D	ZZZZZZ	ZZZZZZ	4/1/2017	08:38		4/1/2017	08:53
0331F054.D	ZZZZZZ	ZZZZZZ	4/1/2017	09:04		4/1/2017	09:19
0331F055.D	ZZZZZZ	ZZZZZZ	4/1/2017	09:30		4/1/2017	09:45
0331F056.D	FTP-1	K1703074-001	4/1/2017	09:56		4/1/2017	10:11
0331F057.D	FTP-14	K1703074-002	4/1/2017	10:21		4/1/2017	10:36
0331F058.D	FTP-15	K1703074-003	4/1/2017	10:47		4/1/2017	11:02
0331F059.D	FTP-16	K1703074-004	4/1/2017	11:13		4/1/2017	11:28
0331F060.D	FTP-16A	K1703074-005	4/1/2017	11:39		4/1/2017	11:54
0331F061.D	Lab Control Sample	KWG1702739-1	4/1/2017	12:04		4/1/2017	12:19
0331F062.D	Duplicate Lab Control Sample	KWG1702739-2	4/1/2017	12:30		4/1/2017	12:45
0331F063.D	Method Blank	KWG1702739-3	4/1/2017	12:56		4/1/2017	13:11
0331F064.D	Continuing Calibration Verification	KWG1702734-5	4/1/2017	13:21		4/1/2017	13:36
0331F066.D	Instrument Blank	KWG1702734-10	4/1/2017	14:13		4/1/2017	14:28

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Extracted: 04/01/2017

Extraction Prep Log
Gasoline Range Organics

Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Extraction Lot: KWG1702739
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
FTP-1	K1703074-001	03/29/17	03/30/17	10ml	10ml	NA	
FTP-14	K1703074-002	03/29/17	03/30/17	10ml	10ml	NA	
FTP-15	K1703074-003	03/29/17	03/30/17	10ml	10ml	NA	
FTP-16	K1703074-004	03/29/17	03/30/17	10ml	10ml	NA	
FTP-16A	K1703074-005	03/29/17	03/30/17	10ml	10ml	NA	
Method Blank	KWG1702739-3	NA	NA	10ml	10ml	NA	
Lab Control Sample	KWG1702739-1	NA	NA	10ml	10ml	NA	
Duplicate Lab Control Sample	KWG1702739-2	NA	NA	10ml	10ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis



Volatile Organic Compounds

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074

**Cover Page - Organic Analysis Data Package
Volatile Organic Compounds**

Sample Name	Lab Code	Date Collected	Date Received
FTP-1	K1703074-001	03/29/2017	03/30/2017
TRIP BLANK-2	K1703074-006	03/29/2017	03/30/2017

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: 03/29/2017
Date Received: 03/30/2017

Volatile Organic Compounds

Sample Name: FTP-1
Lab Code: K1703074-001
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/31/17	03/31/17	KWG1702587	
Chloromethane	ND	U	0.50	0.20	0.068	1	03/31/17	03/31/17	KWG1702587	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/31/17	03/31/17	KWG1702587	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/31/17	03/31/17	KWG1702587	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/31/17	03/31/17	KWG1702587	
Acetone	5.5	J	20	10	3.3	1	03/31/17	03/31/17	KWG1702587	
Carbon Disulfide	0.12	J	0.50	0.20	0.069	1	03/31/17	03/31/17	KWG1702587	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/31/17	03/31/17	KWG1702587	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/31/17	03/31/17	KWG1702587	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/31/17	03/31/17	KWG1702587	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	03/31/17	03/31/17	KWG1702587	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/31/17	03/31/17	KWG1702587	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Chloroform	ND	U	0.50	0.20	0.072	1	03/31/17	03/31/17	KWG1702587	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/31/17	03/31/17	KWG1702587	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
Benzene	1.3		0.50	0.10	0.062	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/31/17	03/31/17	KWG1702587	
Trichloroethene (TCE)	0.11	J	0.50	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/31/17	03/31/17	KWG1702587	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/31/17	03/31/17	KWG1702587	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/31/17	03/31/17	KWG1702587	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/31/17	03/31/17	KWG1702587	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/31/17	03/31/17	KWG1702587	
Toluene	0.14	J	0.50	0.10	0.054	1	03/31/17	03/31/17	KWG1702587	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/31/17	03/31/17	KWG1702587	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/31/17	03/31/17	KWG1702587	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	03/31/17	03/31/17	KWG1702587	
2-Hexanone	ND	U	20	10	2.7	1	03/31/17	03/31/17	KWG1702587	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/31/17	03/31/17	KWG1702587	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/31/17	03/31/17	KWG1702587	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: 03/29/2017
Date Received: 03/30/2017

Volatile Organic Compounds

Sample Name: FTP-1
Lab Code: K1703074-001
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
Ethylbenzene	2.5		0.50	0.10	0.050	1	03/31/17	03/31/17	KWG1702587	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
m,p-Xylenes	0.11	J	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
o-Xylene	0.36	J	0.50	0.20	0.074	1	03/31/17	03/31/17	KWG1702587	
Styrene	ND	U	0.50	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
Bromoform	ND	U	0.50	0.50	0.16	1	03/31/17	03/31/17	KWG1702587	
Isopropylbenzene	2.1		2.0	0.20	0.051	1	03/31/17	03/31/17	KWG1702587	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
n-Propylbenzene	2.8		2.0	0.20	0.054	1	03/31/17	03/31/17	KWG1702587	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/31/17	03/31/17	KWG1702587	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/31/17	03/31/17	KWG1702587	
tert-Butylbenzene	0.22	J	2.0	0.20	0.059	1	03/31/17	03/31/17	KWG1702587	
1,2,4-Trimethylbenzene	38		2.0	0.20	0.069	1	03/31/17	03/31/17	KWG1702587	
sec-Butylbenzene	1.5	J	2.0	0.10	0.062	1	03/31/17	03/31/17	KWG1702587	
4-Isopropyltoluene	2.8		2.0	0.20	0.060	1	03/31/17	03/31/17	KWG1702587	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
n-Butylbenzene	1.9	J	2.0	0.10	0.054	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichlorobenzene	0.51		0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/31/17	03/31/17	KWG1702587	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/31/17	03/31/17	KWG1702587	*
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	03/31/17	03/31/17	KWG1702587	
Naphthalene	45		2.0	0.30	0.088	1	03/31/17	03/31/17	KWG1702587	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/31/17	03/31/17	KWG1702587	*

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: 03/29/2017
Date Received: 03/30/2017

Volatile Organic Compounds

Sample Name: FTP-1
Lab Code: K1703074-001

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	103	85-115	03/31/17	Acceptable
1,2-Dichloroethane-d4	101	70-120	03/31/17	Acceptable
Toluene-d8	102	85-120	03/31/17	Acceptable
4-Bromofluorobenzene	97	75-120	03/31/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: 03/29/2017
Date Received: 03/30/2017

Volatile Organic Compounds

Sample Name: TRIP BLANK-2
Lab Code: K1703074-006
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/31/17	03/31/17	KWG1702587	
Chloromethane	0.16	J	0.50	0.20	0.068	1	03/31/17	03/31/17	KWG1702587	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/31/17	03/31/17	KWG1702587	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/31/17	03/31/17	KWG1702587	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/31/17	03/31/17	KWG1702587	
Acetone	ND	U	20	10	3.3	1	03/31/17	03/31/17	KWG1702587	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	03/31/17	03/31/17	KWG1702587	
Methylene Chloride	0.11	J	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/31/17	03/31/17	KWG1702587	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/31/17	03/31/17	KWG1702587	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/31/17	03/31/17	KWG1702587	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	03/31/17	03/31/17	KWG1702587	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/31/17	03/31/17	KWG1702587	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Chloroform	0.10	J	0.50	0.20	0.072	1	03/31/17	03/31/17	KWG1702587	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/31/17	03/31/17	KWG1702587	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
Benzene	ND	U	0.50	0.10	0.062	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/31/17	03/31/17	KWG1702587	
Trichloroethene (TCE)	ND	U	0.50	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/31/17	03/31/17	KWG1702587	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/31/17	03/31/17	KWG1702587	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/31/17	03/31/17	KWG1702587	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/31/17	03/31/17	KWG1702587	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/31/17	03/31/17	KWG1702587	
Toluene	ND	U	0.50	0.10	0.054	1	03/31/17	03/31/17	KWG1702587	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/31/17	03/31/17	KWG1702587	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/31/17	03/31/17	KWG1702587	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	03/31/17	03/31/17	KWG1702587	
2-Hexanone	ND	U	20	10	2.7	1	03/31/17	03/31/17	KWG1702587	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/31/17	03/31/17	KWG1702587	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/31/17	03/31/17	KWG1702587	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: 03/29/2017
Date Received: 03/30/2017

Volatile Organic Compounds

Sample Name: TRIP BLANK-2
Lab Code: K1703074-006
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	03/31/17	03/31/17	KWG1702587	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
o-Xylene	ND	U	0.50	0.20	0.074	1	03/31/17	03/31/17	KWG1702587	
Styrene	ND	U	0.50	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
Bromoform	ND	U	0.50	0.50	0.16	1	03/31/17	03/31/17	KWG1702587	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	03/31/17	03/31/17	KWG1702587	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	03/31/17	03/31/17	KWG1702587	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/31/17	03/31/17	KWG1702587	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/31/17	03/31/17	KWG1702587	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	03/31/17	03/31/17	KWG1702587	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	03/31/17	03/31/17	KWG1702587	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	03/31/17	03/31/17	KWG1702587	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	03/31/17	03/31/17	KWG1702587	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/31/17	03/31/17	KWG1702587	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/31/17	03/31/17	KWG1702587	*
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	03/31/17	03/31/17	KWG1702587	
Naphthalene	ND	U	2.0	0.30	0.088	1	03/31/17	03/31/17	KWG1702587	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/31/17	03/31/17	KWG1702587	*

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: 03/29/2017
Date Received: 03/30/2017

Volatile Organic Compounds

Sample Name: TRIP BLANK-2
Lab Code: K1703074-006

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	104	85-115	03/31/17	Acceptable
1,2-Dichloroethane-d4	101	70-120	03/31/17	Acceptable
Toluene-d8	100	85-120	03/31/17	Acceptable
4-Bromofluorobenzene	98	75-120	03/31/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1702587-3
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/31/17	03/31/17	KWG1702587	
Chloromethane	ND	U	0.50	0.20	0.068	1	03/31/17	03/31/17	KWG1702587	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/31/17	03/31/17	KWG1702587	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/31/17	03/31/17	KWG1702587	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/31/17	03/31/17	KWG1702587	
Acetone	ND	U	20	10	3.3	1	03/31/17	03/31/17	KWG1702587	
Carbon Disulfide	0.12	J	0.50	0.20	0.069	1	03/31/17	03/31/17	KWG1702587	
Methylene Chloride	0.10	J	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/31/17	03/31/17	KWG1702587	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/31/17	03/31/17	KWG1702587	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/31/17	03/31/17	KWG1702587	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	03/31/17	03/31/17	KWG1702587	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/31/17	03/31/17	KWG1702587	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Chloroform	ND	U	0.50	0.20	0.072	1	03/31/17	03/31/17	KWG1702587	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/31/17	03/31/17	KWG1702587	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/31/17	03/31/17	KWG1702587	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
Benzene	ND	U	0.50	0.10	0.062	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/31/17	03/31/17	KWG1702587	
Trichloroethene (TCE)	ND	U	0.50	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/31/17	03/31/17	KWG1702587	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/31/17	03/31/17	KWG1702587	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/31/17	03/31/17	KWG1702587	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/31/17	03/31/17	KWG1702587	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/31/17	03/31/17	KWG1702587	
Toluene	ND	U	0.50	0.10	0.054	1	03/31/17	03/31/17	KWG1702587	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/31/17	03/31/17	KWG1702587	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/31/17	03/31/17	KWG1702587	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	03/31/17	03/31/17	KWG1702587	
2-Hexanone	ND	U	20	10	2.7	1	03/31/17	03/31/17	KWG1702587	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/31/17	03/31/17	KWG1702587	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/31/17	03/31/17	KWG1702587	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1702587-3
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	03/31/17	03/31/17	KWG1702587	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	03/31/17	03/31/17	KWG1702587	
o-Xylene	ND	U	0.50	0.20	0.074	1	03/31/17	03/31/17	KWG1702587	
Styrene	ND	U	0.50	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
Bromoform	ND	U	0.50	0.50	0.16	1	03/31/17	03/31/17	KWG1702587	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	03/31/17	03/31/17	KWG1702587	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/31/17	03/31/17	KWG1702587	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	03/31/17	03/31/17	KWG1702587	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/31/17	03/31/17	KWG1702587	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	03/31/17	03/31/17	KWG1702587	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/31/17	03/31/17	KWG1702587	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	03/31/17	03/31/17	KWG1702587	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	03/31/17	03/31/17	KWG1702587	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	03/31/17	03/31/17	KWG1702587	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	03/31/17	03/31/17	KWG1702587	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/31/17	03/31/17	KWG1702587	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	03/31/17	03/31/17	KWG1702587	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/31/17	03/31/17	KWG1702587	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/31/17	03/31/17	KWG1702587	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/31/17	03/31/17	KWG1702587	*
Hexachlorobutadiene	0.15	J	2.0	0.30	0.11	1	03/31/17	03/31/17	KWG1702587	
Naphthalene	ND	U	2.0	0.30	0.088	1	03/31/17	03/31/17	KWG1702587	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/31/17	03/31/17	KWG1702587	*

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1702587-3

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	104	85-115	03/31/17	Acceptable
1,2-Dichloroethane-d4	102	70-120	03/31/17	Acceptable
Toluene-d8	101	85-120	03/31/17	Acceptable
4-Bromofluorobenzene	97	75-120	03/31/17	Acceptable

Comments: _____

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074

**Surrogate Recovery Summary
 Volatile Organic Compounds**

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: Percent
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>	<u>Sur3</u>	<u>Sur4</u>
FTP-1	K1703074-001	103	101	102	97
TRIP BLANK-2	K1703074-006	104	101	100	98
Method Blank	KWG1702587-3	104	102	101	97
Lab Control Sample	KWG1702587-1	103	101	102	102
Duplicate Lab Control Sample	KWG1702587-2	100	95	101	102

Surrogate Recovery Control Limits (%)

Sur1 = Dibromofluoromethane	85-115
Sur2 = 1,2-Dichloroethane-d4	70-120
Sur3 = Toluene-d8	85-120
Sur4 = 4-Bromofluorobenzene	75-120

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Date Analyzed: 03/31/2017
Time Analyzed: 14:20

Internal Standard Area and RT Summary
Volatile Organic Compounds

File ID: J:\MS46\DATA\033117\0331F003.D
Instrument ID: MS46
Analysis Method: 8260C

Lab Code: KWG1702586-2
Analysis Lot: KWG1702586

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>
Results ==>	591,240	6.39	225,318	9.86	227,136	12.43
Upper Limit ==>	1,182,480	6.56	450,636	10.03	454,272	12.60
Lower Limit ==>	295,620	6.22	112,659	9.69	113,568	12.26
ICAL Result ==>	651,287	6.39	251,959	9.86	250,044	12.44

Associated Analyses

Lab Control Sample	KWG1702587-1	574,327	6.39	219,974	9.86	226,555	12.43
Duplicate Lab Control Sample	KWG1702587-2	591,761	6.39	224,831	9.86	226,852	12.43
Method Blank	KWG1702587-3	555,843	6.39	216,755	9.86	212,117	12.43
TRIP BLANK-2	K1703074-006	550,421	6.39	209,928	9.86	208,123	12.43
FTP-1	K1703074-001	536,833	6.39	218,618	9.86	214,481	12.43

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Extracted: 03/31/2017
Date Analyzed: 03/31/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1702587

Analyte Name	Lab Control Sample KWG1702587-1 Lab Control Spike			Duplicate Lab Control Sample KWG1702587-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Dichlorodifluoromethane	10.8	10.0	108	10.2	10.0	102	30-155	5	30
Chloromethane	9.66	10.0	97	9.10	10.0	91	40-125	6	30
Vinyl Chloride	11.4	10.0	114	10.5	10.0	105	50-145	8	30
Bromomethane	10.7	10.0	107	10.4	10.0	104	30-145	4	30
Chloroethane	11.9	10.0	119	11.3	10.0	113	60-135	5	30
Trichlorofluoromethane	10.1	10.0	101	9.48	10.0	95	60-145	7	30
1,1-Dichloroethene	11.0	10.0	110	10.1	10.0	101	70-130	9	30
Acetone	50.1	50.0	100	43.5	50.0	87	40-140	14	30
Carbon Disulfide	20.4	20.0	102	19.1	20.0	95	35-160	7	30
Methylene Chloride	10.2	10.0	102	9.88	10.0	99	55-140	4	30
Methyl tert-Butyl Ether	9.91	10.0	99	9.11	10.0	91	65-125	8	30
trans-1,2-Dichloroethene	10.6	10.0	106	9.79	10.0	98	60-140	8	30
1,1-Dichloroethane	10.5	10.0	105	10.3	10.0	103	70-135	2	30
2,2-Dichloropropane	11.0	10.0	110	10.2	10.0	102	70-135	7	30
cis-1,2-Dichloroethene	9.86	10.0	99	9.22	10.0	92	70-125	7	30
2-Butanone (MEK)	52.5	50.0	105	45.2	50.0	90	30-150	15	30
Bromochloromethane	9.63	10.0	96	9.58	10.0	96	65-130	1	30
Chloroform	10.6	10.0	106	10.2	10.0	102	65-135	4	30
1,1,1-Trichloroethane (TCA)	10.6	10.0	106	9.73	10.0	97	65-130	9	30
Carbon Tetrachloride	11.1	10.0	111	10.4	10.0	104	65-140	7	30
1,1-Dichloropropene	10.1	10.0	101	9.45	10.0	95	75-130	7	30
Benzene	9.78	10.0	98	9.29	10.0	93	80-120	5	30
1,2-Dichloroethane (EDC)	9.83	10.0	98	9.20	10.0	92	70-130	7	30
Trichloroethene (TCE)	10.9	10.0	109	10.1	10.0	101	70-125	7	30
1,2-Dichloropropane	10.2	10.0	102	9.62	10.0	96	75-125	6	30
Dibromomethane	9.89	10.0	99	9.44	10.0	94	75-125	5	30
Bromodichloromethane	10.1	10.0	101	9.53	10.0	95	75-120	5	30
cis-1,3-Dichloropropene	9.78	10.0	98	9.28	10.0	93	70-130	5	30
4-Methyl-2-pentanone (MIBK)	49.3	50.0	99	44.4	50.0	89	60-135	10	30
Toluene	10.0	10.0	100	9.48	10.0	95	75-120	6	30
trans-1,3-Dichloropropene	9.95	10.0	100	9.22	10.0	92	55-140	8	30
1,1,2-Trichloroethane	10.5	10.0	105	9.59	10.0	96	75-125	9	30
Tetrachloroethene (PCE)	10.8	10.0	108	10.4	10.0	104	45-150	3	30
2-Hexanone	51.8	50.0	104	43.2	50.0	86	55-130	18	30
1,3-Dichloropropane	9.75	10.0	98	9.04	10.0	90	75-125	8	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Extracted: 03/31/2017
Date Analyzed: 03/31/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1702587

Analyte Name	Lab Control Sample KWG1702587-1 Lab Control Spike			Duplicate Lab Control Sample KWG1702587-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Dibromochloromethane	9.66	10.0	97	9.12	10.0	91	60-135	6	30
1,2-Dibromoethane (EDB)	10.2	10.0	102	9.29	10.0	93	80-120	9	30
Chlorobenzene	10.4	10.0	104	9.91	10.0	99	80-120	5	30
Ethylbenzene	10.2	10.0	102	9.79	10.0	98	75-125	4	30
1,1,1,2-Tetrachloroethane	10.1	10.0	101	9.68	10.0	97	80-130	4	30
m,p-Xylenes	20.9	20.0	104	19.7	20.0	99	75-130	6	30
o-Xylene	9.89	10.0	99	9.47	10.0	95	80-120	4	30
Styrene	9.60	10.0	96	9.34	10.0	93	65-135	3	30
Bromoform	10.4	10.0	104	9.54	10.0	95	70-130	8	30
Isopropylbenzene	10.3	10.0	103	9.73	10.0	97	75-125	6	30
1,1,2,2-Tetrachloroethane	9.82	10.0	98	9.09	10.0	91	65-130	8	30
Bromobenzene	9.72	10.0	97	9.35	10.0	94	75-125	4	30
n-Propylbenzene	9.93	10.0	99	9.51	10.0	95	70-130	4	30
1,2,3-Trichloropropane	9.23	10.0	92	8.57	10.0	86	75-125	7	30
2-Chlorotoluene	9.44	10.0	94	9.06	10.0	91	75-125	4	30
1,3,5-Trimethylbenzene	9.76	10.0	98	9.42	10.0	94	75-130	4	30
4-Chlorotoluene	9.83	10.0	98	9.30	10.0	93	75-130	6	30
tert-Butylbenzene	9.99	10.0	100	9.42	10.0	94	70-130	6	30
1,2,4-Trimethylbenzene	9.97	10.0	100	9.52	10.0	95	75-130	5	30
sec-Butylbenzene	9.95	10.0	100	9.33	10.0	93	70-125	6	30
4-Isopropyltoluene	10.2	10.0	102	9.67	10.0	97	75-130	5	30
1,3-Dichlorobenzene	9.81	10.0	98	9.61	10.0	96	75-125	2	30
1,4-Dichlorobenzene	9.97	10.0	100	9.59	10.0	96	75-125	4	30
n-Butylbenzene	9.45	10.0	95	9.00	10.0	90	70-135	5	30
1,2-Dichlorobenzene	9.82	10.0	98	9.36	10.0	94	70-120	5	30
1,2-Dibromo-3-chloropropane	8.93	10.0	89	8.36	10.0	84	50-130	7	30
1,2,4-Trichlorobenzene	8.95	10.0	90	7.88	10.0	79	65-135	13	30
Hexachlorobutadiene	9.32	10.0	93	8.59	10.0	86	50-140	8	30
Naphthalene	9.13	10.0	91	7.85	10.0	79	55-140	15	30
1,2,3-Trichlorobenzene	8.97	10.0	90	7.64	10.0	76	55-140	16	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Extracted: 03/31/2017
Date Analyzed: 03/31/2017
Time Analyzed: 16:59

Method Blank Summary
Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1702587-3
Extraction Method: EPA 5030B
Analysis Method: 8260C

Instrument ID: MS46
File ID: J:\MS46\DATA\033117\0331F009.D
Level: Low
Extraction Lot: KWG1702587

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1702587-1	J:\MS46\DATA\033117\0331F004.D	03/31/17	14:46
Duplicate Lab Control Sample	KWG1702587-2	J:\MS46\DATA\033117\0331F005.D	03/31/17	15:13
TRIP BLANK-2	K1703074-006	J:\MS46\DATA\033117\0331F015.D	03/31/17	19:38
FTP-1	K1703074-001	J:\MS46\DATA\033117\0331F016.D	03/31/17	20:05

QA/QC Report

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Extracted: 03/31/2017
Date Analyzed: 03/31/2017
Time Analyzed: 14:46

Lab Control Sample Summary
Volatile Organic Compounds

Sample Name: Lab Control Sample
Lab Code: KWG1702587-1
Extraction Method: EPA 5030B
Analysis Method: 8260C

Instrument ID: MS46
File ID: J:\MS46\DATA\033117\0331F004.D
Level: Low
Extraction Lot: KWG1702587

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1702587-3	J:\MS46\DATA\033117\0331F009.D	03/31/17	16:59
TRIP BLANK-2	K1703074-006	J:\MS46\DATA\033117\0331F015.D	03/31/17	19:38
FTP-1	K1703074-001	J:\MS46\DATA\033117\0331F016.D	03/31/17	20:05

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Date Analyzed: 03/31/2017
Time Analyzed: 13:53

Tune Summary
Volatile Organic Compounds

File ID: J:\MS46\DATA\033117\0331F002.D
Instrument ID: GCMS46
Column:

Analysis Method: 8260C
Analysis Lot: KWG1702586

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	17.0	9897	PASS
75	95	30	60	48.5	28248	PASS
95	95	100	100	100.0	58296	PASS
96	95	5	9	7.1	4147	PASS
173	174	0	2	0.7	481	PASS
174	95	50	120	110.2	64240	PASS
175	174	5	9	6.8	4362	PASS
176	174	95	101	95.8	61560	PASS
177	176	5	9	6.9	4271	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1702586-2	J:\MS46\DATA\033117\0331F003.D	03/31/2017	14:20	
Lab Control Sample	KWG1702587-1	J:\MS46\DATA\033117\0331F004.D	03/31/2017	14:46	
Duplicate Lab Control Sample	KWG1702587-2	J:\MS46\DATA\033117\0331F005.D	03/31/2017	15:13	
Method Blank	KWG1702587-3	J:\MS46\DATA\033117\0331F009.D	03/31/2017	16:59	
TRIP BLANK-2	K1703074-006	J:\MS46\DATA\033117\0331F015.D	03/31/2017	19:38	
FTP-1	K1703074-001	J:\MS46\DATA\033117\0331F016.D	03/31/2017	20:05	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Calibration Date: 01/24/2017

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15139
Instrument ID: MS46

Column: MS

Level ID	File ID	Level ID	File ID
A	J:\MS46\DATA\012417\0124F007.D	G	J:\MS46\DATA\012417\0124F013.D
B	J:\MS46\DATA\012417\0124F008.D	H	J:\MS46\DATA\012417\0124F014.D
C	J:\MS46\DATA\012417\0124F009.D	I	J:\MS46\DATA\012417\0124F015.D
D	J:\MS46\DATA\012417\0124F010.D	J	J:\MS46\DATA\012417\0124F016.D
E	J:\MS46\DATA\012417\0124F011.D	K	J:\MS46\DATA\012417\0124F017.D
F	J:\MS46\DATA\012417\0124F012.D		

Analyte Name	Level ID			Level ID			Level ID			Level ID			Level ID		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
Dichlorodifluoromethane	F	5.0	0.291	G	10	0.266	C	0.50	0.238	D	1.0	0.208	E	2.0	0.267
	K	80	0.287				H	20	0.298	I	40	0.260	J	60	0.259
Chloromethane	F	5.0	0.289	G	10	0.280	C	0.50	0.308	D	1.0	0.259	E	2.0	0.298
	K	80	0.286				H	20	0.285	I	40	0.264	J	60	0.269
Vinyl Chloride	A	0.10	0.334	B	0.20	0.261	C	0.50	0.289	D	1.0	0.259	E	2.0	0.262
	F	5.0	0.279	G	10	0.261	H	20	0.287	I	40	0.259	J	60	0.264
	K	80	0.293												
Bromomethane	F	5.0	0.169	G	10	0.162	C	0.50	0.211	D	1.0	0.194	E	2.0	0.183
	K	80	0.188				H	20	0.169	I	40	0.168	J	60	0.173
Chloroethane	F	5.0	0.157	G	10	0.151	C	0.50	0.204	D	1.0	0.145	E	2.0	0.152
	K	80	0.160				H	20	0.158	I	40	0.147	J	60	0.149
Trichlorofluoromethane	A	0.10	0.490	B	0.20	0.421	C	0.50	0.432	D	1.0	0.361	E	2.0	0.397
	F	5.0	0.418	G	10	0.385	H	20	0.421	I	40	0.369	J	60	0.369
	K	80	0.404												
1,1-Dichloroethene	F	5.0	0.244	G	10	0.224	C	0.50	0.242	D	1.0	0.207	E	2.0	0.241
	K	80	0.241				H	20	0.251	I	40	0.222	J	60	0.226
Acetone	A	4.0	0.0421	B	8.0	0.0333	C	20	0.0313	D	40	0.0304	E	80	0.0299
	F	100	0.0304	G	200	0.0323	H	400	0.0335	I	800	0.0300	J	1600	0.0291
	K	2000	0.0285												
Carbon Disulfide	F	5.0	0.725	G	10	0.701	C	0.50	0.723	D	1.0	0.647	E	2.0	0.695
	K	80	0.743				H	20	0.762	I	40	0.691	J	60	0.699
Methylene Chloride	F	5.0	0.267	G	10	0.263				D	1.0	0.296	E	2.0	0.277
	K	80	0.257				H	20	0.263	I	40	0.255	J	60	0.250

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Calibration Date: 01/24/2017

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15139
Instrument ID: MS46

Column: MS

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
Methyl tert-Butyl Ether	A	0.20	0.576	B	0.40	0.580	C	1.0	0.575	D	2.0	0.573	E	4.0	0.589
	F	10	0.598	G	20	0.602	H	40	0.615	I	80	0.601	J	120	0.587
	K	160	0.613												
trans-1,2-Dichloroethene				B	0.20	0.297	C	0.50	0.305	D	1.0	0.271	E	2.0	0.262
	F	5.0	0.274	G	10	0.266	H	20	0.282	I	40	0.263	J	60	0.266
	K	80	0.281												
1,1-Dichloroethane							C	0.50	0.465	D	1.0	0.463	E	2.0	0.461
	F	5.0	0.449	G	10	0.451	H	20	0.457	I	40	0.437	J	60	0.437
	K	80	0.455												
2,2-Dichloropropane				B	0.20	0.409	C	0.50	0.396	D	1.0	0.368	E	2.0	0.377
	F	5.0	0.387	G	10	0.370	H	20	0.396	I	40	0.364	J	60	0.372
	K	80	0.395												
cis-1,2-Dichloroethene	A	0.10	0.390	B	0.20	0.349	C	0.50	0.323	D	1.0	0.322	E	2.0	0.298
	F	5.0	0.312	G	10	0.299	H	20	0.306	I	40	0.298	J	60	0.298
	K	80	0.309												
2-Butanone (MEK)				B	8.0	0.0155	C	20	0.0156	D	40	0.0147	E	80	0.0148
	F	100	0.0155	G	200	0.0163	H	400	0.0171	I	800	0.0160	J	1600	0.0158
	K	2000	0.0159												
Bromochloromethane							C	0.50	0.160	D	1.0	0.145	E	2.0	0.140
	F	5.0	0.137	G	10	0.138	H	20	0.139	I	40	0.130	J	60	0.123
	K	80	0.125												
Chloroform				B	0.20	0.496	C	0.50	0.493	D	1.0	0.478	E	2.0	0.473
	F	5.0	0.481	G	10	0.480	H	20	0.486	I	40	0.466	J	60	0.467
	K	80	0.478												
1,1,1-Trichloroethane (TCA)				B	0.20	0.485	C	0.50	0.446	D	1.0	0.399	E	2.0	0.417
	F	5.0	0.442	G	10	0.412	H	20	0.450	I	40	0.420	J	60	0.424
	K	80	0.458												
Carbon Tetrachloride	A	0.10	0.405	B	0.20	0.366	C	0.50	0.378	D	1.0	0.341	E	2.0	0.368
	F	5.0	0.395	G	10	0.371	H	20	0.414	I	40	0.382	J	60	0.392
	K	80	0.429												
1,1-Dichloropropene	A	0.10	0.434	B	0.20	0.409	C	0.50	0.382	D	1.0	0.363	E	2.0	0.362
	F	5.0	0.378	G	10	0.359	H	20	0.395	I	40	0.361	J	60	0.368
	K	80	0.396												
Benzene	A	0.10	1.26	B	0.20	1.08	C	0.50	1.13	D	1.0	1.07	E	2.0	1.10
	F	5.0	1.11	G	10	1.10	H	20	1.13	I	40	1.08	J	60	1.08
	K	80	1.12												

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Calibration Date: 01/24/2017

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15139
Instrument ID: MS46

Column: MS

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
1,2-Dichloroethane (EDC)							C	0.50	0.331	D	1.0	0.319	E	2.0	0.313
	F	5.0	0.317	G	10	0.315	H	20	0.316	I	40	0.304	J	60	0.295
	K	80	0.304												
Trichloroethene (TCE)				B	0.20	0.304	C	0.50	0.301	D	1.0	0.267	E	2.0	0.286
	F	5.0	0.290	G	10	0.280	H	20	0.296	I	40	0.284	J	60	0.288
	K	80	0.303												
1,2-Dichloropropane	A	0.10	0.235	B	0.20	0.292	C	0.50	0.279	D	1.0	0.261	E	2.0	0.281
	F	5.0	0.271	G	10	0.270	H	20	0.275	I	40	0.269	J	60	0.270
	K	80	0.275												
Dibromomethane							C	0.50	0.146	D	1.0	0.155	E	2.0	0.154
	F	5.0	0.147	G	10	0.152	H	20	0.154	I	40	0.151	J	60	0.146
	K	80	0.153												
Bromodichloromethane	A	0.10	0.339	B	0.20	0.361	C	0.50	0.352	D	1.0	0.334	E	2.0	0.345
	F	5.0	0.349	G	10	0.360	H	20	0.368	I	40	0.365	J	60	0.360
	K	80	0.373												
cis-1,3-Dichloropropene	A	0.10	0.473	B	0.20	0.413	C	0.50	0.414	D	1.0	0.403	E	2.0	0.419
	F	5.0	0.422	G	10	0.439	H	20	0.451	I	40	0.445	J	60	0.441
	K	80	0.453												
4-Methyl-2-pentanone (MIBK)				B	8.0	0.0534	C	20	0.0549	D	40	0.0576	E	80	0.0559
	F	100	0.0599	G	200	0.0626	H	400	0.0656	I	800	0.0639	J	1600	0.0617
	K	2000	0.0624												
Toluene				B	0.20	0.713	C	0.50	0.709	D	1.0	0.680	E	2.0	0.706
	F	5.0	0.722	G	10	0.697	H	20	0.733	I	40	0.710	J	60	0.715
	K	80	0.737												
trans-1,3-Dichloropropene				B	0.20	0.808	C	0.50	0.871	D	1.0	0.882	E	2.0	0.912
	F	5.0	0.915	G	10	0.942	H	20	0.962	I	40	0.958	J	60	0.941
	K	80	0.997												
1,1,2-Trichloroethane				B	0.20	0.485	C	0.50	0.459	D	1.0	0.498	E	2.0	0.486
	F	5.0	0.471	G	10	0.482	H	20	0.485	I	40	0.470	J	60	0.463
	K	80	0.486												
Tetrachloroethene (PCE)	A	0.10	1.02	B	0.20	0.839	C	0.50	0.744	D	1.0	0.685	E	2.0	0.683
	F	5.0	0.724	G	10	0.690	H	20	0.746	I	40	0.702	J	60	0.727
	K	80	0.783												
2-Hexanone				B	8.0	0.0386	C	20	0.0425	D	40	0.0451	E	80	0.0441
	F	100	0.0478	G	200	0.0496	H	400	0.0514	I	800	0.0489	J	1600	0.0485
	K	2400	0.0418												

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Calibration Date: 01/24/2017

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15139
Instrument ID: MS46

Column: MS

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
1,3-Dichloropropane	A	0.10	1.02	B	0.20	1.00	C	0.50	0.965	D	1.0	0.970	E	2.0	0.989
	F	5.0	1.00	G	10	0.986	H	20	0.992	I	40	0.960	J	60	0.953
	K	80	0.988												
Dibromochloromethane	A	0.10	0.767	B	0.20	0.618	C	0.50	0.694	D	1.0	0.709	E	2.0	0.703
	F	5.0	0.730	G	10	0.759	H	20	0.766	I	40	0.760	J	60	0.757
	K	80	0.797												
1,2-Dibromoethane (EDB)	A	0.10	0.524	B	0.20	0.583	C	0.50	0.540	D	1.0	0.536	E	2.0	0.524
	F	5.0	0.554	G	10	0.568	H	20	0.571	I	40	0.566	J	60	0.555
	K	80	0.577												
Chlorobenzene	A	0.10	2.18	B	0.20	2.03	C	0.50	2.14	D	1.0	2.11	E	2.0	2.12
	F	5.0	2.09	G	10	2.10	H	20	2.12	I	40	2.07	J	60	2.07
	K	80	2.16												
Ethylbenzene	A	0.10	1.14	B	0.20	1.09	C	0.50	1.14	D	1.0	1.05	E	2.0	1.06
	F	5.0	1.12	G	10	1.10	H	20	1.16	I	40	1.10	J	60	1.12
	K	80	1.17												
1,1,1,2-Tetrachloroethane	A	0.10	0.741	B	0.20	0.720	C	0.50	0.721	D	1.0	0.745	E	2.0	0.742
	F	5.0	0.716	G	10	0.760	H	20	0.779	I	40	0.773	J	60	0.770
	K	80	0.807												
m,p-Xylenes	A	0.20	1.31	B	0.40	1.22	C	1.0	1.33	D	2.0	1.29	E	4.0	1.34
	F	10	1.35	G	20	1.36	H	40	1.41	I	80	1.36	J	120	1.37
	K	160	1.42												
o-Xylene	A	0.10	1.32	B	0.20	1.27	C	0.50	1.27	D	1.0	1.24	E	2.0	1.28
	F	5.0	1.29	G	10	1.31	H	20	1.34	I	40	1.30	J	60	1.31
	K	80	1.37												
Styrene							C	0.50	0.943	D	1.0	1.02	E	2.0	0.980
	F	5.0	1.03	G	10	1.01	H	20	1.08	I	40	1.07	J	60	1.06
	K	80	1.11												
Bromoform				B	0.20	0.407	C	0.50	0.372	D	1.0	0.378	E	2.0	0.397
	F	5.0	0.421	G	10	0.430	H	20	0.454	I	40	0.464	J	60	0.459
Isopropylbenzene							C	0.50	3.36	D	1.0	3.22	E	2.0	3.26
	F	5.0	3.43	G	10	3.36	H	20	3.62	I	40	3.42	J	60	3.42
	K	80	3.59												
1,1,2,2-Tetrachloroethane				B	0.20	0.570	C	0.50	0.571	D	1.0	0.613	E	2.0	0.595
	F	5.0	0.608	G	10	0.583	H	20	0.589	I	40	0.594	J	60	0.566
	K	80	0.581												

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Calibration Date: 01/24/2017

**Initial Calibration Summary
 Volatile Organic Compounds**

Calibration ID: CAL15139
Instrument ID: MS46

Column: MS

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
Bromobenzene	A	0.10	0.949	B	0.20	0.873	C	0.50	0.898	D	1.0	0.921	E	2.0	0.926
	F	5.0	0.945	G	10	0.919	H	20	0.929	I	40	0.921	J	60	0.918
	K	80	0.941												
n-Propylbenzene							C	0.50	3.86	D	1.0	3.66	E	2.0	3.81
	F	5.0	4.06	G	10	3.95	H	20	4.14	I	40	3.95	J	60	3.93
	K	80	4.07												
1,2,3-Trichloropropane							C	0.50	0.205	D	1.0	0.214	E	2.0	0.200
	F	5.0	0.211	G	10	0.195	H	20	0.197	I	40	0.194	J	60	0.184
	K	80	0.191												
2-Chlorotoluene	A	0.10	2.54	B	0.20	2.33	C	0.50	2.20	D	1.0	2.24	E	2.0	2.32
	F	5.0	2.35	G	10	2.27	H	20	2.33	I	40	2.26	J	60	2.26
	K	80	2.32												
1,3,5-Trimethylbenzene							C	0.50	2.51	D	1.0	2.45	E	2.0	2.60
	F	5.0	2.76	G	10	2.69	H	20	2.84	I	40	2.75	J	60	2.71
	K	80	2.82												
4-Chlorotoluene	A	0.10	2.36	B	0.20	2.21	C	0.50	2.38	D	1.0	2.34	E	2.0	2.34
	F	5.0	2.48	G	10	2.40	H	20	2.44	I	40	2.39	J	60	2.37
	K	80	2.44												
tert-Butylbenzene	A	0.10	2.44	B	0.20	2.23	C	0.50	2.30	D	1.0	2.23	E	2.0	2.35
	F	5.0	2.48	G	10	2.36	H	20	2.53	I	40	2.45	J	60	2.43
	K	80	2.55												
1,2,4-Trimethylbenzene							C	0.50	2.45	D	1.0	2.43	E	2.0	2.57
	F	5.0	2.72	G	10	2.66	H	20	2.79	I	40	2.71	J	60	2.67
	K	80	2.76												
sec-Butylbenzene							C	0.50	3.24	D	1.0	3.06	E	2.0	3.16
	F	5.0	3.51	G	10	3.35	H	20	3.61	I	40	3.47	J	60	3.40
	K	80	3.60												
4-Isopropyltoluene							C	0.50	2.58	D	1.0	2.46	E	2.0	2.63
	F	5.0	2.89	G	10	2.83	H	20	3.02	I	40	2.92	J	60	2.88
	K	80	3.05												
1,3-Dichlorobenzene	A	0.10	1.69	B	0.20	1.59	C	0.50	1.69	D	1.0	1.62	E	2.0	1.73
	F	5.0	1.73	G	10	1.72	H	20	1.71	I	40	1.69	J	60	1.66
	K	80	1.72												
1,4-Dichlorobenzene				B	0.20	1.64	C	0.50	1.63	D	1.0	1.69	E	2.0	1.75
	F	5.0	1.73	G	10	1.72	H	20	1.71	I	40	1.67	J	60	1.65
	K	80	1.70												

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Calibration Date: 01/24/2017

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15139
Instrument ID: MS46

Column: MS

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
n-Butylbenzene							C	0.50	2.20	D	1.0	2.05	E	2.0	2.19
	F	5.0	2.42	G	10	2.34	H	20	2.56	I	40	2.48	J	60	2.45
	K	80	2.59												
1,2-Dichlorobenzene				B	0.20	1.55	C	0.50	1.44	D	1.0	1.42	E	2.0	1.48
	F	5.0	1.53	G	10	1.48	H	20	1.49	I	40	1.48	J	60	1.43
	K	80	1.49												
1,2-Dibromo-3-chloropropane							C	0.50	0.0765	D	1.0	0.0653	E	2.0	0.0757
	F	5.0	0.0706	G	10	0.0749	H	20	0.0751	I	40	0.0739	J	60	0.0741
	K	80	0.0800												
1,2,4-Trichlorobenzene				B	0.20	0.603	C	0.50	0.667	D	1.0	0.643	E	2.0	0.660
	F	5.0	0.692	G	10	0.706	H	20	0.728	I	40	0.728	J	60	0.732
	K	80	0.778												
Hexachlorobutadiene				B	0.20	0.373	C	0.50	0.353	D	1.0	0.279	E	2.0	0.329
	F	5.0	0.349	G	10	0.347	H	20	0.374	I	40	0.365	J	60	0.371
	K	80	0.413												
Naphthalene							C	0.50	0.963	D	1.0	0.942	E	2.0	0.977
	F	5.0	1.07	G	10	1.06	H	20	1.12	I	40	1.11	J	60	1.13
	K	80	1.20												
1,2,3-Trichlorobenzene				B	0.20	0.368	C	0.50	0.454	D	1.0	0.402	E	2.0	0.450
	F	5.0	0.464	G	10	0.459	H	20	0.485	I	40	0.471	J	60	0.479
	K	80	0.514												
Dibromofluoromethane										D	4.0	0.255	E	6.0	0.254
	F	8.0	0.245	G	10	0.253	H	12	0.264	I	14	0.260	J	16	0.256
	K	20	0.260												
1,2-Dichloroethane-d4										D	4.0	0.246	E	6.0	0.246
	F	8.0	0.241	G	10	0.242	H	12	0.250	I	14	0.247	J	16	0.242
	K	20	0.240												
Toluene-d8										D	4.0	0.932	E	6.0	0.928
	F	8.0	0.889	G	10	0.946	H	12	1.02	I	14	0.965	J	16	0.969
	K	20	0.949												
4-Bromofluorobenzene										D	4.0	0.839	E	6.0	0.835
	F	8.0	0.818	G	10	0.842	H	12	0.888	I	14	0.856	J	16	0.853
	K	20	0.857												

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† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Incorporated
 Project: YTC/106-45760003

Service Request: K1703074
 Calibration Date: 01/24/2017

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15139
 Instrument ID: MS46

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Dichlorodifluoromethane	MS	AverageRF	% RSD	10.6		≤20	0.264		0.100
Chloromethane	MS	AverageRF	% RSD	5.7		≤20	0.282		0.100
Vinyl Chloride	MS	AverageRF	% RSD	8.3		≤20	0.277		0.100
Bromomethane	MS	AverageRF	% RSD	8.7		≤20	0.180		0.100
Chloroethane	MS	AverageRF	% RSD	11.3		≤20	0.158		0.100
Trichlorofluoromethane	MS	AverageRF	% RSD	9.1		≤20	0.406		0.100
1,1-Dichloroethene	MS	AverageRF	% RSD	6.0		≤20	0.233		.100
Acetone	MS	AverageRF	% RSD	11.8		≤20	0.0319		0.01
Carbon Disulfide	MS	AverageRF	% RSD	4.7		≤20	0.710		0.100
Methylene Chloride	MS	AverageRF	% RSD	5.5		≤20	0.266		0.100
Methyl tert-Butyl Ether	MS	AverageRF	% RSD	2.5		≤20	0.592		0.100
trans-1,2-Dichloroethene	MS	AverageRF	% RSD	5.4		≤20	0.277		0.100
1,1-Dichloroethane	MS	AverageRF	% RSD	2.3		≤20	0.453		.200
2,2-Dichloropropane	MS	AverageRF	% RSD	4.0		≤20	0.383		0.01
cis-1,2-Dichloroethene	MS	AverageRF	% RSD	8.9		≤20	0.318		0.100
2-Butanone (MEK)	MS	AverageRF	% RSD	4.5		≤20	0.0157		0.01
Bromochloromethane	MS	AverageRF	% RSD	8.1		≤20	0.137		0.01
Chloroform	MS	AverageRF	% RSD	2.1		≤20	0.480		0.200
1,1,1-Trichloroethane (TCA)	MS	AverageRF	% RSD	5.9		≤20	0.435		.100
Carbon Tetrachloride	MS	AverageRF	% RSD	6.4		≤20	0.386		0.100
1,1-Dichloropropene	MS	AverageRF	% RSD	6.3		≤20	0.382		0.01
Benzene	MS	AverageRF	% RSD	4.9		≤20	1.11		0.500
1,2-Dichloroethane (EDC)	MS	AverageRF	% RSD	3.3		≤20	0.313		0.100
Trichloroethene (TCE)	MS	AverageRF	% RSD	4.0		≤20	0.290		0.200
1,2-Dichloropropane	MS	AverageRF	% RSD	5.3		≤20	0.271		0.100
Dibromomethane	MS	AverageRF	% RSD	2.4		≤20	0.151		0.01
Bromodichloromethane	MS	AverageRF	% RSD	3.5		≤20	0.355		0.200
cis-1,3-Dichloropropene	MS	AverageRF	% RSD	4.9		≤20	0.434		0.200
4-Methyl-2-pentanone (MIBK)	MS	AverageRF	% RSD	6.9		≤20	0.0598		0.01
Toluene	MS	AverageRF	% RSD	2.3		≤20	0.712		0.400
trans-1,3-Dichloropropene	MS	AverageRF	% RSD	5.9		≤20	0.919		0.100
1,1,2-Trichloroethane	MS	AverageRF	% RSD	2.6		≤20	0.478		.100
Tetrachloroethene (PCE)	MS	AverageRF	% RSD	12.9		≤20	0.758		0.200
2-Hexanone	MS	AverageRF	% RSD	8.9		≤20	0.0458		0.015
1,3-Dichloropropane	MS	AverageRF	% RSD	2.2		≤20	0.985		0.01
Dibromochloromethane	MS	AverageRF	% RSD	6.7		≤20	0.733		0.100
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	3.7		≤20	0.554		0.100
Chlorobenzene	MS	AverageRF	% RSD	2.0		≤20	2.11		0.500
Ethylbenzene	MS	AverageRF	% RSD	3.4		≤20	1.11		0.100
1,1,1,2-Tetrachloroethane	MS	AverageRF	% RSD	3.8		≤20	0.752		.01
m,p-Xylenes	MS	AverageRF	% RSD	4.2		≤20	1.34		0.100
o-Xylene	MS	AverageRF	% RSD	2.7		≤20	1.30		0.300

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† SPCC Compound

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Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Calibration Date: 01/24/2017

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15139
Instrument ID: MS46

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Styrene	MS	AverageRF	% RSD	4.9		≤ 20	1.03		0.300
Bromoforn	MS	AverageRF	% RSD	8.2		≤ 20	0.420		0.100
Isopropylbenzene	MS	AverageRF	% RSD	3.9		≤ 20	3.41		0.100
1,1,2,2-Tetrachloroethane	MS	AverageRF	% RSD	2.7		≤ 20	0.587		.300
Bromobenzene	MS	AverageRF	% RSD	2.3		≤ 20	0.922		0.01
n-Propylbenzene	MS	AverageRF	% RSD	3.7		≤ 20	3.94		0.01
1,2,3-Trichloropropane	MS	AverageRF	% RSD	4.9		≤ 20	0.199		0.01
2-Chlorotoluene	MS	AverageRF	% RSD	3.9		≤ 20	2.31		0.01
1,3,5-Trimethylbenzene	MS	AverageRF	% RSD	5.0		≤ 20	2.68		0.01
4-Chlorotoluene	MS	AverageRF	% RSD	2.9		≤ 20	2.38		0.01
tert-Butylbenzene	MS	AverageRF	% RSD	4.6		≤ 20	2.39		0.01
1,2,4-Trimethylbenzene	MS	AverageRF	% RSD	4.9		≤ 20	2.64		0.01
sec-Butylbenzene	MS	AverageRF	% RSD	5.8		≤ 20	3.38		0.01
4-Isopropyltoluene	MS	AverageRF	% RSD	7.2		≤ 20	2.81		0.01
1,3-Dichlorobenzene	MS	AverageRF	% RSD	2.7		≤ 20	1.69		0.600
1,4-Dichlorobenzene	MS	AverageRF	% RSD	2.4		≤ 20	1.69		0.500
n-Butylbenzene	MS	AverageRF	% RSD	7.8		≤ 20	2.37		0.01
1,2-Dichlorobenzene	MS	AverageRF	% RSD	2.8		≤ 20	1.48		0.400
1,2-Dibromo-3-chloropropane	MS	AverageRF	% RSD	5.5		≤ 20	0.0740		0.025
1,2,4-Trichlorobenzene	MS	AverageRF	% RSD	7.4		≤ 20	0.694		0.200
Hexachlorobutadiene	MS	AverageRF	% RSD	9.8		≤ 20	0.355		0.01
Naphthalene	MS	AverageRF	% RSD	8.3		≤ 20	1.06		0.01
1,2,3-Trichlorobenzene	MS	AverageRF	% RSD	9.2		≤ 20	0.455		0.01
Dibromofluoromethane	SURR	AverageRF	% RSD	2.2		≤ 20	0.256		0.01
1,2-Dichloroethane-d4	SURR	AverageRF	% RSD	1.4		≤ 20	0.244		0.01
Toluene-d8	SURR	AverageRF	% RSD	4.0		≤ 20	0.950		0.01
4-Bromofluorobenzene	SURR	AverageRF	% RSD	2.4		≤ 20	0.849		0.01

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† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Calibration Date: 01/24/2017
Date Analyzed: 01/24/2017 - 01/25/2017

Second Source Calibration Verification
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration ID: CAL15139
Units: PPB

File ID: J:\MS46\DATA\012417\0124F020.D
 J:\MS46\DATA\012417\0124F021.D
 J:\MS46\DATA\012417\0124F022.D
 J:\MS46\DATA\012517\0125F004.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Dichlorodifluoromethane	10	12	0.264	0.313	19	NA	± 30 %	AverageRF
Chloromethane	10	11	0.282	0.313	11	NA	± 30 %	AverageRF
Vinyl Chloride	10	11	0.277	0.296	7	NA	± 30 %	AverageRF
Bromomethane	10	10	0.180	0.180	0	NA	± 30 %	AverageRF
Chloroethane	10	11	0.158	0.168	6	NA	± 30 %	AverageRF
Trichlorofluoromethane	10	9.1	0.406	0.369	-9	NA	± 30 %	AverageRF
1,1-Dichloroethene	10	10	0.233	0.241	3	NA	± 30 %	AverageRF
Acetone	50	50	0.0319	0.0320	0	NA	± 30 %	AverageRF
Carbon Disulfide	20	23	0.710	0.812	14	NA	± 30 %	AverageRF
Methylene Chloride	10	10	0.266	0.279	5	NA	± 30 %	AverageRF
Methyl tert-Butyl Ether	10	10	0.592	0.589	0	NA	± 30 %	AverageRF
trans-1,2-Dichloroethene	10	10	0.277	0.288	4	NA	± 30 %	AverageRF
1,1-Dichloroethane	10	11	0.453	0.487	8	NA	± 30 %	AverageRF
2,2-Dichloropropane	10	10	0.383	0.386	1	NA	± 30 %	AverageRF
cis-1,2-Dichloroethene	10	9.9	0.318	0.314	-1	NA	± 30 %	AverageRF
2-Butanone (MEK)	50	50	0.0157	0.0157	0	NA	± 30 %	AverageRF
Bromochloromethane	10	10	0.137	0.137	0	NA	± 30 %	AverageRF
Chloroform	10	11	0.480	0.516	8	NA	± 30 %	AverageRF
1,1,1-Trichloroethane (TCA)	10	10	0.435	0.452	4	NA	± 30 %	AverageRF
Carbon Tetrachloride	10	11	0.386	0.405	5	NA	± 30 %	AverageRF
1,1-Dichloropropene	10	9.9	0.382	0.377	-1	NA	± 30 %	AverageRF
Benzene	10	10	1.11	1.13	1	NA	± 30 %	AverageRF
1,2-Dichloroethane (EDC)	10	10	0.313	0.322	3	NA	± 30 %	AverageRF
Trichloroethene (TCE)	10	11	0.290	0.308	6	NA	± 30 %	AverageRF
1,2-Dichloropropane	10	10	0.271	0.284	5	NA	± 30 %	AverageRF
Dibromomethane	10	10	0.151	0.155	3	NA	± 30 %	AverageRF
Bromodichloromethane	10	11	0.355	0.382	8	NA	± 30 %	AverageRF
cis-1,3-Dichloropropene	10	10	0.434	0.452	4	NA	± 30 %	AverageRF
4-Methyl-2-pentanone (MIBK)	50	53	0.0598	0.0631	5	NA	± 30 %	AverageRF
Toluene	10	10	0.712	0.724	2	NA	± 30 %	AverageRF
trans-1,3-Dichloropropene	10	11	0.919	0.968	5	NA	± 30 %	AverageRF
1,1,2-Trichloroethane	10	10	0.478	0.495	3	NA	± 30 %	AverageRF
Tetrachloroethene (PCE)	10	10	0.758	0.775	2	NA	± 30 %	AverageRF
2-Hexanone	50	54	0.0458	0.0495	8	NA	± 30 %	AverageRF
1,3-Dichloropropane	10	10	0.985	0.990	1	NA	± 30 %	AverageRF
Dibromochloromethane	10	10	0.733	0.753	3	NA	± 30 %	AverageRF
1,2-Dibromoethane (EDB)	10	10	0.554	0.566	2	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Calibration Date: 01/24/2017
Date Analyzed: 01/24/2017 -
01/25/2017

**Second Source Calibration Verification
Volatile Organic Compounds**

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration ID: CAL15139
Units: PPB

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Chlorobenzene	10	11	2.11	2.23	6	NA	± 30 %	AverageRF
Ethylbenzene	10	10	1.11	1.16	4	NA	± 30 %	AverageRF
1,1,1,2-Tetrachloroethane	10	10	0.752	0.781	4	NA	± 30 %	AverageRF
m,p-Xylenes	20	21	1.34	1.43	6	NA	± 30 %	AverageRF
o-Xylene	10	10	1.30	1.34	3	NA	± 30 %	AverageRF
Styrene	10	10	1.03	1.08	5	NA	± 30 %	AverageRF
Bromoform	10	11	0.420	0.456	8	NA	± 30 %	AverageRF
Isopropylbenzene	10	11	3.41	3.60	6	NA	± 30 %	AverageRF
1,1,2,2-Tetrachloroethane	10	10	0.587	0.610	4	NA	± 30 %	AverageRF
Bromobenzene	10	10	0.922	0.948	3	NA	± 30 %	AverageRF
n-Propylbenzene	10	10	3.94	4.03	2	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	10	9.5	0.199	0.190	-5	NA	± 30 %	AverageRF
2-Chlorotoluene	10	10	2.31	2.35	2	NA	± 30 %	AverageRF
1,3,5-Trimethylbenzene	10	11	2.68	2.82	5	NA	± 30 %	AverageRF
4-Chlorotoluene	10	10	2.38	2.46	3	NA	± 30 %	AverageRF
tert-Butylbenzene	10	10	2.39	2.50	5	NA	± 30 %	AverageRF
1,2,4-Trimethylbenzene	10	11	2.64	2.83	7	NA	± 30 %	AverageRF
sec-Butylbenzene	10	10	3.38	3.54	5	NA	± 30 %	AverageRF
4-Isopropyltoluene	10	11	2.81	3.06	9	NA	± 30 %	AverageRF
1,3-Dichlorobenzene	10	11	1.69	1.78	6	NA	± 30 %	AverageRF
1,4-Dichlorobenzene	10	11	1.69	1.80	7	NA	± 30 %	AverageRF
n-Butylbenzene	10	10	2.37	2.46	4	NA	± 30 %	AverageRF
1,2-Dichlorobenzene	10	11	1.48	1.57	6	NA	± 30 %	AverageRF
1,2-Dibromo-3-chloropropane	10	9.9	0.0740	0.0734	-1	NA	± 30 %	AverageRF
1,2,4-Trichlorobenzene	10	10	0.694	0.718	3	NA	± 30 %	AverageRF
Hexachlorobutadiene	10	11	0.355	0.374	5	NA	± 30 %	AverageRF
Naphthalene	10	10	1.06	1.08	2	NA	± 30 %	AverageRF
1,2,3-Trichlorobenzene	10	11	0.455	0.484	6	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Date Analyzed: 03/31/2017

Continuing Calibration Verification Summary
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 01/24/2017
Calibration ID: CAL15139
Analysis Lot: KWG1702586
Units: PPB

File ID: J:\MS46\DATA\033117\0331F003.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Dichlorodifluoromethane	10	9.3	0.100	0.264	0.246	-7	NA	± 20	AverageRF
Chloromethane	10	9.6	0.100	0.282	0.272	-4	NA	± 20	AverageRF
Vinyl Chloride	10	12	0.100	0.277	0.321	16	NA	± 20	AverageRF
Bromomethane	10	11	0.100	0.180	0.204	14	NA	± 20	AverageRF
Chloroethane	10	12	0.100	0.158	0.189	20	NA	± 20	AverageRF
Trichlorofluoromethane	10	11	0.100	0.406	0.462	14	NA	± 20	AverageRF
1,1-Dichloroethene	10	10	.100	0.233	0.241	3	NA	± 20	AverageRF
Acetone	200	190	0.01	0.0319	0.0295	-7	NA	± 20	AverageRF
Carbon Disulfide	10	9.3	0.100	0.710	0.657	-7	NA	± 20	AverageRF
Methylene Chloride	10	9.9	0.100	0.266	0.262	-2	NA	± 20	AverageRF
Methyl tert-Butyl Ether	20	18	0.100	0.592	0.546	-8	NA	± 20	AverageRF
trans-1,2-Dichloroethene	10	10	0.100	0.277	0.289	4	NA	± 20	AverageRF
1,1-Dichloroethane	10	9.9	.200	0.453	0.446	-2	NA	± 20	AverageRF
2,2-Dichloropropane	10	11	0.01	0.383	0.410	7	NA	± 20	AverageRF
cis-1,2-Dichloroethene	10	9.5	0.100	0.318	0.303	-5	NA	± 20	AverageRF
2-Butanone (MEK)	200	190	0.01	0.0157	0.0149	-5	NA	± 20	AverageRF
Bromochloromethane	10	10	0.01	0.137	0.138	0	NA	± 20	AverageRF
Chloroform	10	9.8	0.200	0.480	0.472	-2	NA	± 20	AverageRF
1,1,1-Trichloroethane (TCA)	10	10	.100	0.435	0.440	1	NA	± 20	AverageRF
Carbon Tetrachloride	10	11	0.100	0.386	0.416	8	NA	± 20	AverageRF
1,1-Dichloropropene	10	10	0.01	0.382	0.395	3	NA	± 20	AverageRF
Benzene	10	9.9	0.500	1.11	1.10	-1	NA	± 20	AverageRF
1,2-Dichloroethane (EDC)	10	9.1	0.100	0.313	0.283	-9	NA	± 20	AverageRF
Trichloroethene (TCE)	10	10	0.200	0.290	0.298	3	NA	± 20	AverageRF
1,2-Dichloropropane	10	9.6	0.100	0.271	0.260	-4	NA	± 20	AverageRF
Dibromomethane	10	9.2	0.01	0.151	0.139	-8	NA	± 20	AverageRF
Bromodichloromethane	10	9.2	0.200	0.355	0.325	-8	NA	± 20	AverageRF
cis-1,3-Dichloropropene	10	9.3	0.200	0.434	0.402	-7	NA	± 20	AverageRF
4-Methyl-2-pentanone (MIBK)	200	180	0.01	0.0598	0.0541	-10	NA	± 20	AverageRF
Toluene	10	10	0.400	0.712	0.716	1	NA	± 20	AverageRF
trans-1,3-Dichloropropene	10	9.2	0.100	0.919	0.840	-9	NA	± 20	AverageRF
1,1,2-Trichloroethane	10	9.5	.100	0.478	0.455	-5	NA	± 20	AverageRF
Tetrachloroethene (PCE)	10	10	0.200	0.758	0.792	5	NA	± 20	AverageRF
2-Hexanone	200	180	0.015	0.0458	0.0423	-8	NA	± 20	AverageRF
1,3-Dichloropropane	10	9.1	0.01	0.985	0.900	-9	NA	± 20	AverageRF
Dibromochloromethane	10	9.6	0.100	0.733	0.700	-4	NA	± 20	AverageRF
1,2-Dibromoethane (EDB)	10	9.6	0.100	0.554	0.534	-4	NA	± 20	AverageRF
Chlorobenzene	10	9.9	0.500	2.11	2.10	-1	NA	± 20	AverageRF
Ethylbenzene	10	10	0.100	1.11	1.13	1	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Date Analyzed: 03/31/2017

**Continuing Calibration Verification Summary
 Volatile Organic Compounds**

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 01/24/2017
Calibration ID: CAL15139
Analysis Lot: KWG1702586
Units: PPB

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,1,1,2-Tetrachloroethane	10	10	.01	0.752	0.758	1	NA	± 20	AverageRF
m,p-Xylenes	20	21	0.100	1.34	1.39	4	NA	± 20	AverageRF
o-Xylene	10	9.9	0.300	1.30	1.29	-1	NA	± 20	AverageRF
Styrene	10	9.8	0.300	1.03	1.01	-2	NA	± 20	AverageRF
Bromoform	10	9.1	0.100	0.420	0.384	-9	NA	± 20	AverageRF
Isopropylbenzene	10	10	0.100	3.41	3.49	2	NA	± 20	AverageRF
1,1,2,2-Tetrachloroethane	10	8.9	.300	0.587	0.520	-11	NA	± 20	AverageRF
Bromobenzene	10	9.6	0.01	0.922	0.883	-4	NA	± 20	AverageRF
n-Propylbenzene	10	10	0.01	3.94	3.98	1	NA	± 20	AverageRF
1,2,3-Trichloropropane	10	8.6	0.01	0.199	0.172	-14	NA	± 20	AverageRF
2-Chlorotoluene	10	9.6	0.01	2.31	2.22	-4	NA	± 20	AverageRF
1,3,5-Trimethylbenzene	10	10	0.01	2.68	2.67	0	NA	± 20	AverageRF
4-Chlorotoluene	10	9.7	0.01	2.38	2.30	-3	NA	± 20	AverageRF
tert-Butylbenzene	10	10	0.01	2.39	2.41	1	NA	± 20	AverageRF
1,2,4-Trimethylbenzene	10	9.8	0.01	2.64	2.59	-2	NA	± 20	AverageRF
sec-Butylbenzene	10	10	0.01	3.38	3.37	0	NA	± 20	AverageRF
4-Isopropyltoluene	10	9.9	0.01	2.81	2.79	-1	NA	± 20	AverageRF
1,3-Dichlorobenzene	10	9.5	0.600	1.69	1.60	-5	NA	± 20	AverageRF
1,4-Dichlorobenzene	10	9.6	0.500	1.69	1.61	-4	NA	± 20	AverageRF
n-Butylbenzene	10	9.6	0.01	2.37	2.27	-4	NA	± 20	AverageRF
1,2-Dichlorobenzene	10	9.2	0.400	1.48	1.36	-8	NA	± 20	AverageRF
1,2-Dibromo-3-chloropropane	10	8.4	0.025	0.0740	0.0621	-16	NA	± 20	AverageRF
1,2,4-Trichlorobenzene	10	7.8	0.200	0.694	0.539	-22	*	± 20	AverageRF
Hexachlorobutadiene	10	9.2	0.01	0.355	0.326	-8	NA	± 20	AverageRF
Naphthalene	10	7.5	0.01	1.06	0.795	-25	*	± 20	AverageRF
1,2,3-Trichlorobenzene	10	7.2	0.01	0.455	0.326	-28	*	± 20	AverageRF
Dibromofluoromethane	10	10	0.01	0.256	0.262	2	NA	± 20	AverageRF
1,2-Dichloroethane-d4	10	9.4	0.01	0.244	0.230	-6	NA	± 20	AverageRF
Toluene-d8	10	10	0.01	0.950	0.972	2	NA	± 20	AverageRF
4-Bromofluorobenzene	10	10	0.01	0.849	0.860	1	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074

Analysis Run Log
Volatile Organic Compounds

Analysis Method: 8260C

Analysis Lot: KWG1702586
Instrument ID: MS46

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0331F002.D	GC/MS Tuning - Bromofluorobenzene	KWG1702586-1	3/31/2017	13:53		3/31/2017	14:10
0331F003.D	Continuing Calibration Verification	KWG1702586-2	3/31/2017	14:20		3/31/2017	14:37
0331F004.D	Lab Control Sample	KWG1702587-1	3/31/2017	14:46		3/31/2017	15:03
0331F005.D	Duplicate Lab Control Sample	KWG1702587-2	3/31/2017	15:13		3/31/2017	15:30
0331F006.D	ZZZZZZ	ZZZZZZ	3/31/2017	15:39		3/31/2017	15:56
0331F007.D	ZZZZZZ	ZZZZZZ	3/31/2017	16:06		3/31/2017	16:23
0331F009.D	Method Blank	KWG1702587-3	3/31/2017	16:59		3/31/2017	17:16
0331F010.D	ZZZZZZ	ZZZZZZ	3/31/2017	17:26		3/31/2017	17:43
0331F011.D	ZZZZZZ	ZZZZZZ	3/31/2017	17:52		3/31/2017	18:09
0331F012.D	ZZZZZZ	ZZZZZZ	3/31/2017	18:19		3/31/2017	18:36
0331F013.D	ZZZZZZ	ZZZZZZ	3/31/2017	18:45		3/31/2017	19:02
0331F014.D	ZZZZZZ	ZZZZZZ	3/31/2017	19:12		3/31/2017	19:29
0331F015.D	TRIP BLANK-2	K1703074-006	3/31/2017	19:38		3/31/2017	19:55
0331F016.D	FTP-1	K1703074-001	3/31/2017	20:05		3/31/2017	20:22
0331F017.D	ZZZZZZ	ZZZZZZ	3/31/2017	20:31		3/31/2017	20:48
0331F018.D	ZZZZZZ	ZZZZZZ	3/31/2017	20:58		3/31/2017	21:15
0331F019.D	ZZZZZZ	ZZZZZZ	3/31/2017	21:24		3/31/2017	21:41
0331F020.D	ZZZZZZ	ZZZZZZ	3/31/2017	21:51		3/31/2017	22:08
0331F021.D	ZZZZZZ	ZZZZZZ	3/31/2017	22:17		3/31/2017	22:34
0331F022.D	ZZZZZZ	ZZZZZZ	3/31/2017	22:44		3/31/2017	23:01
0331F023.D	ZZZZZZ	ZZZZZZ	3/31/2017	23:10		3/31/2017	23:27
0331F024.D	ZZZZZZ	ZZZZZZ	3/31/2017	23:37		3/31/2017	23:54
0331F025.D	ZZZZZZ	ZZZZZZ	4/1/2017	00:03		4/1/2017	00:20
0331F026.D	ZZZZZZ	ZZZZZZ	4/1/2017	00:30		4/1/2017	00:47
0331F027.D	ZZZZZZ	ZZZZZZ	4/1/2017	00:56		4/1/2017	01:13
0331F028.D	ZZZZZZ	ZZZZZZ	4/1/2017	01:22		4/1/2017	01:39

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Extracted: 03/31/2017

Extraction Prep Log
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Extraction Lot: KWG1702587
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
FTP-1	K1703074-001	03/29/17	03/30/17	10ml	10ml	NA	
TRIP BLANK-2	K1703074-006	03/29/17	03/30/17	10ml	10ml	NA	
Method Blank	KWG1702587-3	NA	NA	10ml	10ml	NA	
Lab Control Sample	KWG1702587-1	NA	NA	10ml	10ml	NA	
Duplicate Lab Control Sample	KWG1702587-2	NA	NA	10ml	10ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis



Semi-Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074

**Cover Page - Organic Analysis Data Package
Semi-Volatile Organic Compounds by GC/MS**

Sample Name	Lab Code	Date Collected	Date Received
FTP-1	K1703074-001	03/29/2017	03/30/2017

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: 03/29/2017
Date Received: 03/30/2017

Semi-Volatile Organic Compounds by GC/MS

Sample Name: FTP-1
Lab Code: K1703074-001
Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	25	5.0	0.48	1	04/05/17	04/19/17	KWG1702659	
Bis(2-chloroethyl) Ether	ND	U	10	0.50	0.33	1	04/05/17	04/19/17	KWG1702659	
Phenol	ND	U	10	0.50	0.32	1	04/05/17	04/19/17	KWG1702659	
2-Chlorophenol	ND	U	10	0.50	0.31	1	04/05/17	04/19/17	KWG1702659	
1,3-Dichlorobenzene	ND	U	10	0.50	0.35	1	04/05/17	04/19/17	KWG1702659	
1,4-Dichlorobenzene	ND	U	10	0.50	0.32	1	04/05/17	04/19/17	KWG1702659	
1,2-Dichlorobenzene	ND	U	10	0.50	0.43	1	04/05/17	04/19/17	KWG1702659	
Benzyl alcohol	ND	U	10	0.50	0.38	1	04/05/17	04/19/17	KWG1702659	
Bis(2-chloroisopropyl) Ether	ND	U	10	0.50	0.31	1	04/05/17	04/19/17	KWG1702659	
2-Methylphenol	ND	U	10	0.50	0.33	1	04/05/17	04/19/17	KWG1702659	*
Hexachloroethane	ND	U	10	2.0	0.29	1	04/05/17	04/19/17	KWG1702659	
N-Nitrosodi-n-propylamine	ND	U	10	2.0	0.50	1	04/05/17	04/19/17	KWG1702659	
4-Methylphenol†	ND	U	10	0.50	0.48	1	04/05/17	04/19/17	KWG1702659	
Nitrobenzene	ND	U	10	0.57	0.57	1	04/05/17	04/19/17	KWG1702659	
Isophorone	ND	U	10	1.0	0.25	1	04/05/17	04/19/17	KWG1702659	
2-Nitrophenol	ND	U	10	0.50	0.37	1	04/05/17	04/19/17	KWG1702659	
2,4-Dimethylphenol	ND	U	10	2.0	0.26	1	04/05/17	04/19/17	KWG1702659	
Bis(2-chloroethoxy)methane	ND	U	10	0.50	0.28	1	04/05/17	04/19/17	KWG1702659	
2,4-Dichlorophenol	ND	U	10	0.50	0.30	1	04/05/17	04/19/17	KWG1702659	
Benzoic acid	ND	U	25	25	5.8	1	04/05/17	04/19/17	KWG1702659	
1,2,4-Trichlorobenzene	ND	U	10	0.50	0.36	1	04/05/17	04/19/17	KWG1702659	
Naphthalene	ND	U	10	0.50	0.37	1	04/05/17	04/19/17	KWG1702659	
4-Chloroaniline	ND	U	10	2.0	0.38	1	04/05/17	04/19/17	KWG1702659	
Hexachlorobutadiene	ND	U	10	0.50	0.29	1	04/05/17	04/19/17	KWG1702659	
4-Chloro-3-methylphenol	ND	U	10	0.50	0.49	1	04/05/17	04/19/17	KWG1702659	
2-Methylnaphthalene	ND	U	10	0.50	0.24	1	04/05/17	04/19/17	KWG1702659	
2,4,6-Trichlorophenol	ND	U	10	1.0	0.20	1	04/05/17	04/19/17	KWG1702659	
2,4,5-Trichlorophenol	ND	U	10	0.50	0.38	1	04/05/17	04/19/17	KWG1702659	
2-Chloronaphthalene	ND	U	10	0.50	0.29	1	04/05/17	04/19/17	KWG1702659	
Acenaphthene	ND	U	10	0.50	0.28	1	04/05/17	04/19/17	KWG1702659	
2-Nitroaniline	ND	U	25	0.50	0.34	1	04/05/17	04/19/17	KWG1702659	
Acenaphthylene	ND	U	10	0.50	0.24	1	04/05/17	04/19/17	KWG1702659	
Dimethyl Phthalate	ND	U	10	2.0	0.25	1	04/05/17	04/19/17	KWG1702659	
2,6-Dinitrotoluene	ND	U	10	0.50	0.35	1	04/05/17	04/19/17	KWG1702659	
3-Nitroaniline	ND	U	25	1.0	3.3	1	04/05/17	04/19/17	KWG1702659	
2,4-Dinitrophenol	ND	U	25	25	2.2	1	04/05/17	04/19/17	KWG1702659	

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: 03/29/2017
Date Received: 03/30/2017

Semi-Volatile Organic Compounds by GC/MS

Sample Name: FTP-1
Lab Code: K1703074-001
Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibenzofuran	ND	U	10	0.50	0.33	1	04/05/17	04/19/17	KWG1702659	
4-Nitrophenol	ND	U	25	10	1.9	1	04/05/17	04/19/17	KWG1702659	
2,4-Dinitrotoluene	ND	U	10	1.0	0.27	1	04/05/17	04/19/17	KWG1702659	
Fluorene	ND	U	10	0.50	0.32	1	04/05/17	04/19/17	KWG1702659	
4-Chlorophenyl Phenyl Ether	ND	U	10	0.50	0.28	1	04/05/17	04/19/17	KWG1702659	
Diethyl Phthalate	ND	U	10	0.50	0.29	1	04/05/17	04/19/17	KWG1702659	
4-Nitroaniline	ND	U	25	4.0	4.0	1	04/05/17	04/19/17	KWG1702659	
2-Methyl-4,6-dinitrophenol	ND	U	25	10	2.1	1	04/05/17	04/19/17	KWG1702659	
N-Nitrosodiphenylamine	ND	U	10	0.50	0.48	1	04/05/17	04/19/17	KWG1702659	
1,2-Diphenylhydrazine†	ND	U	10	0.50	0.51	1	04/05/17	04/19/17	KWG1702659	
4-Bromophenyl Phenyl Ether	ND	U	10	0.50	0.27	1	04/05/17	04/19/17	KWG1702659	
Hexachlorobenzene	ND	U	10	0.63	0.63	1	04/05/17	04/19/17	KWG1702659	
Pentachlorophenol	ND	U	25	5.0	2.4	1	04/05/17	04/19/17	KWG1702659	
Phenanthrene	ND	U	10	0.50	0.48	1	04/05/17	04/19/17	KWG1702659	
Anthracene	ND	U	10	0.61	0.61	1	04/05/17	04/19/17	KWG1702659	
Carbazole	ND	U	10	0.50	0.36	1	04/05/17	04/19/17	KWG1702659	
Di-n-butyl Phthalate	ND	U	10	0.65	0.65	1	04/05/17	04/19/17	KWG1702659	
Fluoranthene	ND	U	10	0.65	0.65	1	04/05/17	04/19/17	KWG1702659	
Pyrene	ND	U	10	0.73	0.73	1	04/05/17	04/19/17	KWG1702659	
Butyl Benzyl Phthalate	ND	U	10	0.50	0.47	1	04/05/17	04/19/17	KWG1702659	
3,3'-Dichlorobenzidine	ND	U	25	2.0	0.27	1	04/05/17	04/19/17	KWG1702659	
Benz(a)anthracene	ND	U	10	0.59	0.59	1	04/05/17	04/19/17	KWG1702659	
Chrysene	ND	U	10	1.0	0.79	1	04/05/17	04/19/17	KWG1702659	
Bis(2-ethylhexyl) Phthalate	ND	U	10	2.0	1.9	1	04/05/17	04/19/17	KWG1702659	
Di-n-octyl Phthalate	ND	U	10	0.63	0.63	1	04/05/17	04/19/17	KWG1702659	
Benzo(b)fluoranthene	ND	U	10	0.58	0.58	1	04/05/17	04/19/17	KWG1702659	
Benzo(k)fluoranthene	ND	U	10	0.83	0.83	1	04/05/17	04/19/17	KWG1702659	
Benzo(a)pyrene	ND	U	10	1.0	0.65	1	04/05/17	04/19/17	KWG1702659	
Indeno(1,2,3-cd)pyrene	ND	U	10	0.68	0.68	1	04/05/17	04/19/17	KWG1702659	
Dibenz(a,h)anthracene	ND	U	10	1.0	0.75	1	04/05/17	04/19/17	KWG1702659	
Benzo(g,h,i)perylene	ND	U	10	0.81	0.81	1	04/05/17	04/19/17	KWG1702659	

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: 03/29/2017
Date Received: 03/30/2017

Semi-Volatile Organic Compounds by GC/MS

Sample Name: FTP-1
Lab Code: K1703074-001

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	87	20-110	04/19/17	Acceptable
Phenol-d6	94	10-115	04/19/17	Acceptable
Nitrobenzene-d5	93	40-110	04/19/17	Acceptable
2-Fluorobiphenyl	87	50-110	04/19/17	Acceptable
2,4,6-Tribromophenol	114	40-125	04/19/17	Acceptable
Terphenyl-d14	76	50-135	04/19/17	Acceptable

† Analyte Comments

4-Methylphenol This analyte cannot be separated from 3-Methylphenol.
 1,2-Diphenylhydrazine This compound is quantitated as Azobenzene.

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: NA
Date Received: NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: KWG1702659-5
Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	25	5.0	0.48	1	04/05/17	04/18/17	KWG1702659	
Bis(2-chloroethyl) Ether	ND	U	9.9	0.50	0.33	1	04/05/17	04/18/17	KWG1702659	
Phenol	ND	U	9.9	0.50	0.32	1	04/05/17	04/18/17	KWG1702659	
2-Chlorophenol	ND	U	9.9	0.50	0.31	1	04/05/17	04/18/17	KWG1702659	
1,3-Dichlorobenzene	ND	U	9.9	0.50	0.35	1	04/05/17	04/18/17	KWG1702659	
1,4-Dichlorobenzene	ND	U	9.9	0.50	0.32	1	04/05/17	04/18/17	KWG1702659	
1,2-Dichlorobenzene	ND	U	9.9	0.50	0.43	1	04/05/17	04/18/17	KWG1702659	
Benzyl alcohol	ND	U	9.9	0.50	0.38	1	04/05/17	04/18/17	KWG1702659	
Bis(2-chloroisopropyl) Ether	ND	U	9.9	0.50	0.31	1	04/05/17	04/18/17	KWG1702659	
2-Methylphenol	ND	U	9.9	0.50	0.33	1	04/05/17	04/18/17	KWG1702659	*
Hexachloroethane	ND	U	9.9	2.0	0.29	1	04/05/17	04/18/17	KWG1702659	
N-Nitrosodi-n-propylamine	ND	U	9.9	2.0	0.50	1	04/05/17	04/18/17	KWG1702659	
4-Methylphenol†	ND	U	9.9	0.50	0.48	1	04/05/17	04/18/17	KWG1702659	
Nitrobenzene	ND	U	9.9	0.57	0.57	1	04/05/17	04/18/17	KWG1702659	
Isophorone	ND	U	9.9	1.0	0.25	1	04/05/17	04/18/17	KWG1702659	
2-Nitrophenol	ND	U	9.9	0.50	0.37	1	04/05/17	04/18/17	KWG1702659	
2,4-Dimethylphenol	ND	U	9.9	2.0	0.26	1	04/05/17	04/18/17	KWG1702659	
Bis(2-chloroethoxy)methane	ND	U	9.9	0.50	0.28	1	04/05/17	04/18/17	KWG1702659	
2,4-Dichlorophenol	ND	U	9.9	0.50	0.30	1	04/05/17	04/18/17	KWG1702659	
Benzoic acid	ND	U	25	25	5.8	1	04/05/17	04/18/17	KWG1702659	
1,2,4-Trichlorobenzene	ND	U	9.9	0.50	0.36	1	04/05/17	04/18/17	KWG1702659	
Naphthalene	ND	U	9.9	0.50	0.37	1	04/05/17	04/18/17	KWG1702659	
4-Chloroaniline	ND	U	9.9	2.0	0.38	1	04/05/17	04/18/17	KWG1702659	
Hexachlorobutadiene	ND	U	9.9	0.50	0.29	1	04/05/17	04/18/17	KWG1702659	
4-Chloro-3-methylphenol	ND	U	9.9	0.50	0.49	1	04/05/17	04/18/17	KWG1702659	
2-Methylnaphthalene	ND	U	9.9	0.50	0.24	1	04/05/17	04/18/17	KWG1702659	
2,4,6-Trichlorophenol	ND	U	9.9	1.0	0.20	1	04/05/17	04/18/17	KWG1702659	
2,4,5-Trichlorophenol	ND	U	9.9	0.50	0.38	1	04/05/17	04/18/17	KWG1702659	
2-Chloronaphthalene	ND	U	9.9	0.50	0.29	1	04/05/17	04/18/17	KWG1702659	
Acenaphthene	ND	U	9.9	0.50	0.28	1	04/05/17	04/18/17	KWG1702659	
2-Nitroaniline	ND	U	25	0.50	0.34	1	04/05/17	04/18/17	KWG1702659	
Acenaphthylene	ND	U	9.9	0.50	0.24	1	04/05/17	04/18/17	KWG1702659	
Dimethyl Phthalate	ND	U	9.9	2.0	0.25	1	04/05/17	04/18/17	KWG1702659	
2,6-Dinitrotoluene	ND	U	9.9	0.50	0.35	1	04/05/17	04/18/17	KWG1702659	
3-Nitroaniline	ND	U	25	1.0	3.3	1	04/05/17	04/18/17	KWG1702659	
2,4-Dinitrophenol	ND	U	25	25	2.2	1	04/05/17	04/18/17	KWG1702659	

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: NA
Date Received: NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: KWG1702659-5
Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dibenzofuran	ND	U	9.9	0.50	0.33	1	04/05/17	04/18/17	KWG1702659	
4-Nitrophenol	ND	U	25	10	1.9	1	04/05/17	04/18/17	KWG1702659	
2,4-Dinitrotoluene	ND	U	9.9	1.0	0.27	1	04/05/17	04/18/17	KWG1702659	
Fluorene	ND	U	9.9	0.50	0.32	1	04/05/17	04/18/17	KWG1702659	
4-Chlorophenyl Phenyl Ether	ND	U	9.9	0.50	0.28	1	04/05/17	04/18/17	KWG1702659	
Diethyl Phthalate	ND	U	9.9	0.50	0.29	1	04/05/17	04/18/17	KWG1702659	
4-Nitroaniline	ND	U	25	4.0	4.0	1	04/05/17	04/18/17	KWG1702659	
2-Methyl-4,6-dinitrophenol	ND	U	25	10	2.1	1	04/05/17	04/18/17	KWG1702659	
N-Nitrosodiphenylamine	ND	U	9.9	0.50	0.48	1	04/05/17	04/18/17	KWG1702659	
1,2-Diphenylhydrazine†	ND	U	9.9	0.50	0.51	1	04/05/17	04/18/17	KWG1702659	
4-Bromophenyl Phenyl Ether	ND	U	9.9	0.50	0.27	1	04/05/17	04/18/17	KWG1702659	
Hexachlorobenzene	ND	U	9.9	0.63	0.63	1	04/05/17	04/18/17	KWG1702659	
Pentachlorophenol	ND	U	25	5.0	2.4	1	04/05/17	04/18/17	KWG1702659	
Phenanthrene	ND	U	9.9	0.50	0.48	1	04/05/17	04/18/17	KWG1702659	
Anthracene	ND	U	9.9	0.61	0.61	1	04/05/17	04/18/17	KWG1702659	
Carbazole	ND	U	9.9	0.50	0.36	1	04/05/17	04/18/17	KWG1702659	
Di-n-butyl Phthalate	ND	U	9.9	0.65	0.65	1	04/05/17	04/18/17	KWG1702659	
Fluoranthene	ND	U	9.9	0.65	0.65	1	04/05/17	04/18/17	KWG1702659	
Pyrene	ND	U	9.9	0.73	0.73	1	04/05/17	04/18/17	KWG1702659	
Butyl Benzyl Phthalate	ND	U	9.9	0.50	0.47	1	04/05/17	04/18/17	KWG1702659	
3,3'-Dichlorobenzidine	ND	U	25	2.0	0.27	1	04/05/17	04/18/17	KWG1702659	
Benz(a)anthracene	ND	U	9.9	0.59	0.59	1	04/05/17	04/18/17	KWG1702659	
Chrysene	ND	U	9.9	1.0	0.79	1	04/05/17	04/18/17	KWG1702659	
Bis(2-ethylhexyl) Phthalate	ND	U	9.9	2.0	1.9	1	04/05/17	04/18/17	KWG1702659	
Di-n-octyl Phthalate	ND	U	9.9	0.63	0.63	1	04/05/17	04/18/17	KWG1702659	
Benzo(b)fluoranthene	ND	U	9.9	0.58	0.58	1	04/05/17	04/18/17	KWG1702659	
Benzo(k)fluoranthene	ND	U	9.9	0.83	0.83	1	04/05/17	04/18/17	KWG1702659	
Benzo(a)pyrene	ND	U	9.9	1.0	0.65	1	04/05/17	04/18/17	KWG1702659	
Indeno(1,2,3-cd)pyrene	ND	U	9.9	0.68	0.68	1	04/05/17	04/18/17	KWG1702659	
Dibenz(a,h)anthracene	ND	U	9.9	1.0	0.75	1	04/05/17	04/18/17	KWG1702659	
Benzo(g,h,i)perylene	ND	U	9.9	0.81	0.81	1	04/05/17	04/18/17	KWG1702659	

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Collected: NA
Date Received: NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: KWG1702659-5

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	78	20-110	04/18/17	Acceptable
Phenol-d6	76	10-115	04/18/17	Acceptable
Nitrobenzene-d5	73	40-110	04/18/17	Acceptable
2-Fluorobiphenyl	81	50-110	04/18/17	Acceptable
2,4,6-Tribromophenol	92	40-125	04/18/17	Acceptable
Terphenyl-d14	108	50-135	04/18/17	Acceptable

† Analyte Comments

4-Methylphenol This analyte cannot be separated from 3-Methylphenol.
 1,2-Diphenylhydrazine This compound is quantitated as Azobenzene.

Comments: _____

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074

**Surrogate Recovery Summary
 Semi-Volatile Organic Compounds by GC/MS**

Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: Percent
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>	<u>Sur3</u>	<u>Sur4</u>	<u>Sur5</u>	<u>Sur6</u>
FTP-1	K1703074-001	87	94	93	87	114	76
Method Blank	KWG1702659-5	78	76	73	81	92	108
Lab Control Sample	KWG1702659-1	73	77	76	85	102	93
Duplicate Lab Control Sample	KWG1702659-2	87	86	82	91	101	92

Surrogate Recovery Control Limits (%)

Sur1 = 2-Fluorophenol	20-110	Sur5 = 2,4,6-Tribromophenol	40-125
Sur2 = Phenol-d6	10-115	Sur6 = Terphenyl-d14	50-135
Sur3 = Nitrobenzene-d5	40-110		
Sur4 = 2-Fluorobiphenyl	50-110		

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Date Analyzed: 04/18/2017
Time Analyzed: 20:22

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\041817\0418F020.D
Instrument ID: MS07
Analysis Method: 8270D

Lab Code: KWG1703110-2
Analysis Lot: KWG1703110

	1,4-Dichlorobenzene-d4		Naphthalene-d8		Acenaphthene-d10	
	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>
ICAL Result ==>	58,885	9.18	193,582	11.29	106,189	14.15
Upper Limit ==>	117,770	9.68	387,164	11.79	212,378	14.65
Lower Limit ==>	29,443	8.68	96,791	10.79	53,095	13.65

Associated Analyses

Continuing Calibration Verification	CCV	KWG1703110-2	53,031	9.17	178,233	11.29	94,432	14.14
Method Blank		KWG1702659-5	52,403	9.17	164,204	11.28	90,983	14.14
Lab Control Sample		KWG1702659-1	54,877	9.17	178,225	11.28	95,504	14.14
Duplicate Lab Control Sample		KWG1702659-2	53,780	9.17	176,660	11.28	95,933	14.14
FTP-1		K1703074-001	48,573	9.17	169,869	11.28	90,385	14.15

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Date Analyzed: 04/18/2017
Time Analyzed: 20:22

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\041817\0418F020.D
Instrument ID: MS07
Analysis Method: 8270D

Lab Code: KWG1703110-2
Analysis Lot: KWG1703110

	Phenanthrene-d10		Chrysene-d12		Perylene-d12	
	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>
ICAL Result ==>	188,035	16.56	185,115	20.94	199,935	24.05
Upper Limit ==>	376,070	17.06	370,230	21.44	399,870	24.55
Lower Limit ==>	94,018	16.06	92,558	20.44	99,968	23.55

Associated Analyses

Continuing Calibration Verification	CCV	KWG1703110-2	170,126	16.54	174,685	20.92	187,712	24.04
Method Blank		KWG1702659-5	163,842	16.54	157,378	20.91	163,305	24.02
Lab Control Sample		KWG1702659-1	167,463	16.54	169,885	20.92	192,378	24.04
Duplicate Lab Control Sample		KWG1702659-2	167,150	16.54	171,639	20.92	187,814	24.04
FTP-1		K1703074-001	139,786	16.55	174,150	20.94	146,642	24.06

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Extracted: 04/05/2017
Date Analyzed: 04/18/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1702659

Analyte Name	Lab Control Sample KWG1702659-1 Lab Control Spike			Duplicate Lab Control Sample KWG1702659-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
N-Nitrosodimethylamine	85.0	100	85	97.1	100	97	25-110	13	30
Bis(2-chloroethyl) Ether	79.2	100	79	87.8	100	88	35-110	10	30
Phenol	80.0	100	80	87.5	100	87	0-115	9	30
2-Chlorophenol	77.9	100	78	89.4	100	89	35-105	14	30
1,3-Dichlorobenzene	72.8	100	73	81.1	100	81	30-100	11	30
1,4-Dichlorobenzene	73.9	100	74	82.5	100	82	30-100	11	30
1,2-Dichlorobenzene	75.3	100	75	84.0	100	84	35-100	11	30
Benzyl alcohol	82.2	100	82	94.5	100	95	30-110	14	30
Bis(2-chloroisopropyl) Ether	77.2	100	77	89.3	100	89	25-130	15	30
2-Methylphenol	77.7	100	78	87.9	100	88	40-110	12	30
Hexachloroethane	66.3	100	66	75.8	100	76	30-100	13	30
N-Nitrosodi-n-propylamine	83.5	100	83	87.9	100	88	35-130	5	30
4-Methylphenol	81.6	100	82	91.6	100	92	30-110	12	30
Nitrobenzene	78.4	100	78	87.8	100	88	45-110	11	30
Isophorone	91.4	100	91	95.2	100	95	50-110	4	30
2-Nitrophenol	88.0	100	88	97.7	100	98	40-115	10	30
2,4-Dimethylphenol	84.6	100	85	93.4	100	93	30-110	10	30
Bis(2-chloroethoxy)methane	83.8	100	84	94.1	100	94	45-105	12	30
2,4-Dichlorophenol	88.6	100	89	97.1	100	97	50-105	9	30
Benzoic acid	83.3	100	83	89.7	100	90	0-125	7	30
1,2,4-Trichlorobenzene	76.0	100	76	85.6	100	86	35-105	12	30
Naphthalene	79.2	100	79	87.5	100	88	40-100	10	30
4-Chloroaniline	91.8	100	92	99.2	100	99	15-110	8	30
Hexachlorobutadiene	69.2	100	69	80.4	100	80	25-105	15	30
4-Chloro-3-methylphenol	95.5	100	95	101	100	101	45-110	5	30
2-Methylnaphthalene	83.6	100	84	86.7	100	87	45-105	4	30
2,4,6-Trichlorophenol	98.4	100	98	99.2	100	99	50-115	1	30
2,4,5-Trichlorophenol	102	100	102	102	100	102	50-110	0	30
2-Chloronaphthalene	89.4	100	89	91.4	100	91	50-105	2	30
Acenaphthene	92.8	100	93	94.5	100	94	45-110	2	30
2-Nitroaniline	99.8	100	100	97.8	100	98	50-115	2	30
Acenaphthylene	94.2	100	94	95.4	100	95	50-105	1	30
Dimethyl Phthalate	102	100	102	101	100	101	25-125	1	30
2,6-Dinitrotoluene	104	100	104	102	100	102	50-115	2	30
3-Nitroaniline	101	100	101	100	100	100	20-125	0	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Extracted: 04/05/2017
Date Analyzed: 04/18/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1702659

Analyte Name	Lab Control Sample KWG1702659-1 Lab Control Spike			Duplicate Lab Control Sample KWG1702659-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
2,4-Dinitrophenol	100	100	100	99.0	100	99	15-140	1	30
Dibenzofuran	91.6	100	92	89.7	100	90	55-105	2	30
4-Nitrophenol	101	100	101	101	100	101	0-125	0	30
2,4-Dinitrotoluene	101	100	101	101	100	101	50-120	0	30
Fluorene	91.5	100	92	88.4	100	88	50-110	3	30
4-Chlorophenyl Phenyl Ether	91.4	100	91	91.4	100	91	50-110	0	30
Diethyl Phthalate	96.4	100	96	90.7	100	91	40-120	6	30
4-Nitroaniline	96.3	100	96	101	100	101	30-120	5	30
2-Methyl-4,6-dinitrophenol	104	100	104	103	100	103	40-130	1	30
N-Nitrosodiphenylamine	95.6	100	96	94.0	100	94	50-110	2	30
1,2-Diphenylhydrazine	85.1	100	85	87.1	100	87	55-115	2	30
4-Bromophenyl Phenyl Ether	94.7	100	95	94.8	100	95	50-115	0	30
Hexachlorobenzene	93.9	100	94	94.3	100	94	50-110	0	30
Pentachlorophenol	99.7	100	100	101	100	101	40-115	1	30
Phenanthrene	88.0	100	88	89.4	100	89	50-115	2	30
Anthracene	88.0	100	88	89.6	100	90	55-110	2	30
Carbazole	93.1	100	93	94.1	100	94	50-115	1	30
Di-n-butyl Phthalate	87.8	100	88	84.8	100	85	55-115	4	30
Fluoranthene	87.8	100	88	87.3	100	87	55-115	1	30
Pyrene	85.3	100	85	82.8	100	83	50-130	3	30
Butyl Benzyl Phthalate	89.8	100	90	90.1	100	90	45-115	0	30
3,3'-Dichlorobenzidine	92.3	100	92	91.0	100	91	20-110	1	30
Benz(a)anthracene	92.0	100	92	90.1	100	90	55-110	2	30
Chrysene	90.7	100	91	91.0	100	91	55-110	0	30
Bis(2-ethylhexyl) Phthalate	90.4	100	90	86.3	100	86	40-125	5	30
Di-n-octyl Phthalate	82.0	100	82	84.1	100	84	35-135	3	30
Benzo(b)fluoranthene	90.6	100	91	93.4	100	93	45-120	3	30
Benzo(k)fluoranthene	90.9	100	91	97.4	100	97	45-125	7	30
Benzo(a)pyrene	91.6	100	92	91.6	100	92	55-110	0	30
Indeno(1,2,3-cd)pyrene	84.8	100	85	86.9	100	87	45-125	2	30
Dibenz(a,h)anthracene	90.3	100	90	89.0	100	89	40-125	1	30
Benzo(g,h,i)perylene	87.1	100	87	87.3	100	87	40-125	0	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Extracted: 04/05/2017
Date Analyzed: 04/18/2017
Time Analyzed: 21:49

Method Blank Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: KWG1702659-5
Extraction Method: EPA 3520C
Analysis Method: 8270D
Instrument ID: MS07
File ID: J:\MS07\DATA\041817\0418F022.D
Level: Low
Extraction Lot: KWG1702659

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1702659-1	J:\MS07\DATA\041817\0418F023.D	04/18/17	22:30
Duplicate Lab Control Sample	KWG1702659-2	J:\MS07\DATA\041817\0418F024.D	04/18/17	23:11
FTP-1	K1703074-001	J:\MS07\DATA\041817\0418F027.D	04/19/17	01:14

QA/QC Report

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Extracted: 04/05/2017
Date Analyzed: 04/18/2017
Time Analyzed: 22:30

Lab Control Sample Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name: Lab Control Sample **Instrument ID:** MS07
Lab Code: KWG1702659-1 **File ID:** J:\MS07\DATA\041817\0418F023.D
Extraction Method: EPA 3520C **Level:** Low
Analysis Method: 8270D **Extraction Lot:** KWG1702659

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1702659-5	J:\MS07\DATA\041817\0418F022.D	04/18/17	21:49
FTP-1	K1703074-001	J:\MS07\DATA\041817\0418F027.D	04/19/17	01:14

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Date Analyzed: 04/18/2017
Time Analyzed: 19:38

Tune Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\041817\0418F019.D
Instrument ID: MS07
Column:

Analysis Method: 8270D
Analysis Lot: KWG1703110

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	47.9	13133	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	58.4	16033	PASS
70	69	0	2	0.4	71	PASS
127	198	25	75	42.8	11739	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	27431	PASS
199	198	5	9	6.6	1805	PASS
275	198	10	30	26.5	7263	PASS
365	198	1	100	3.4	946	PASS
441	443	0	100	82.1	3614	PASS
442	198	40	110	83.3	22856	PASS
443	442	15	24	19.3	4402	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1703110-2	J:\MS07\DATA\041817\0418F020.D	04/18/2017	20:22	
Method Blank	KWG1702659-5	J:\MS07\DATA\041817\0418F022.D	04/18/2017	21:49	
Lab Control Sample	KWG1702659-1	J:\MS07\DATA\041817\0418F023.D	04/18/2017	22:30	
Duplicate Lab Control Sample	KWG1702659-2	J:\MS07\DATA\041817\0418F024.D	04/18/2017	23:11	
FTP-1	K1703074-001	J:\MS07\DATA\041817\0418F027.D	04/19/2017	01:14	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Calibration Date: 04/17/2017

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL15331
Instrument ID: MS07

Column: MS

Level ID **File ID**
A J:\MS07\DATA\041717\0417F003.D
B J:\MS07\DATA\041717\0417F004.D
C J:\MS07\DATA\041717\0417F005.D
D J:\MS07\DATA\041717\0417F006.D
E J:\MS07\DATA\041717\0417F007.D
F J:\MS07\DATA\041717\0417F008.D

Level ID **File ID**
G J:\MS07\DATA\041717\0417F009.D
H J:\MS07\DATA\041717\0417F010.D
I J:\MS07\DATA\041817\0418F002.D
J J:\MS07\DATA\041817\0418F003.D

Analyte Name	Level ID			Level ID			Level ID			Level ID			Level ID		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
N-Nitrosodimethylamine				B	5.0	0.930	C	10	0.847	D	20	1.01	E	50	1.15
	F	80	1.11	G	100	1.12	H	120	1.10	I	160	1.17	J	200	1.21
Bis(2-chloroethyl) Ether	A	1.0	0.866	B	5.0	0.762	C	10	0.779	D	20	0.807	E	50	0.837
	F	80	0.831	G	100	0.789	H	120	0.750	I	160	0.797	J	200	0.814
Phenol	A	1.0	0.961	B	5.0	0.929	C	10	0.944	D	20	0.989	E	50	0.973
	F	80	0.956	G	100	0.987	H	120	0.956	I	160	0.979	J	200	1.00
2-Chlorophenol	A	1.0	1.03	B	5.0	1.04	C	10	1.03	D	20	1.10	E	50	1.14
	F	80	1.12	G	100	1.11	H	120	1.07	I	160	1.10	J	200	1.13
1,3-Dichlorobenzene	A	1.0	1.37	B	5.0	1.35	C	10	1.36	D	20	1.39	E	50	1.47
	F	80	1.41	G	100	1.38	H	120	1.38	I	160	1.45	J	200	1.46
1,4-Dichlorobenzene	A	1.0	1.53	B	5.0	1.43	C	10	1.35	D	20	1.45	E	50	1.50
	F	80	1.46	G	100	1.44	H	120	1.40	I	160	1.46	J	200	1.47
1,2-Dichlorobenzene	A	1.0	1.28	B	5.0	1.32	C	10	1.29	D	20	1.31	E	50	1.38
	F	80	1.36	G	100	1.35	H	120	1.30	I	160	1.36	J	200	1.38
Benzyl alcohol	A	1.0	0.429	B	5.0	0.532	C	10	0.554	D	20	0.528	E	50	0.585
	F	80	0.577	G	100	0.600	H	120	0.579	I	160	0.600	J	200	0.613
Bis(2-chloroisopropyl) Ether	A	1.0	1.29	B	5.0	1.21	C	10	1.17	D	20	1.21	E	50	1.26
	F	80	1.19	G	100	1.14	H	120	1.13	I	160	1.16	J	200	1.18
2-Methylphenol				B	5.0	0.689	C	10	0.656	D	20	0.702	E	50	0.756
	F	80	0.706	G	100	0.697	H	120	0.695	I	160	0.695			
Hexachloroethane	A	1.0	0.711	B	5.0	0.570	C	10	0.602	D	20	0.622	E	50	0.646
	F	80	0.624	G	100	0.630	H	120	0.602	I	160	0.615	J	200	0.635
N-Nitrosodi-n-propylamine	A	1.0	0.842	B	5.0	0.657	C	10	0.730	D	20	0.713	E	50	0.756
	F	80	0.739	G	100	0.717	H	120	0.723	I	160	0.738	J	200	0.756
4-Methylphenol	A	1.0	1.03	B	5.0	1.02	C	10	1.08	D	20	1.07	E	50	1.12
	F	80	1.04	G	100	1.06	H	120	1.04	I	160	1.06	J	200	1.08
Nitrobenzene	A	1.0	1.06	B	5.0	1.14	C	10	1.14	D	20	1.14	E	50	1.21
	F	80	1.18	G	100	1.16	H	120	1.11	I	160	1.13	J	200	1.17

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Calibration Date: 04/17/2017

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL15331
Instrument ID: MS07

Column: MS

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
Isophorone	A	1.0	0.555	B	5.0	0.563	C	10	0.538	D	20	0.557	E	50	0.569
	F	80	0.578	G	100	0.540	H	120	0.538	I	160	0.566	J	200	0.558
2-Nitrophenol	A	1.0	0.135	B	5.0	0.183	C	10	0.169	D	20	0.202	E	50	0.205
	F	80	0.208	G	100	0.198	H	120	0.199	I	160	0.207	J	200	0.204
2,4-Dimethylphenol	A	1.0	0.194	B	5.0	0.252	C	10	0.260	D	20	0.255	E	50	0.257
	F	80	0.265	G	100	0.251	H	120	0.253	I	160	0.259	J	200	0.253
Bis(2-chloroethoxy)methane	A	1.0	0.304	B	5.0	0.306	C	10	0.300	D	20	0.304	E	50	0.300
	F	80	0.313	G	100	0.294	H	120	0.292	I	160	0.302	J	200	0.300
2,4-Dichlorophenol	A	1.0	0.243	B	5.0	0.288	C	10	0.291	D	20	0.317	E	50	0.322
	F	80	0.322	G	100	0.316	H	120	0.309	I	160	0.329	J	200	0.322
Benzoic acid										D	20	0.142	E	50	0.160
	F	80	0.179	G	100	0.171	H	120	0.174	I	160	0.194	J	200	0.192
1,2,4-Trichlorobenzene	A	1.0	0.346	B	5.0	0.352	C	10	0.347	D	20	0.362	E	50	0.356
	F	80	0.366	G	100	0.355	H	120	0.347	I	160	0.375	J	200	0.367
Naphthalene	A	1.0	0.912	B	5.0	0.865	C	10	0.863	D	20	0.863	E	50	0.888
	F	80	0.863	G	100	0.851	H	120	0.847	I	160	0.877	J	200	0.864
4-Chloroaniline	A	1.0	0.310	B	5.0	0.363	C	10	0.359	D	20	0.367	E	50	0.389
	F	80	0.383	G	100	0.359	H	120	0.362	I	160	0.385	J	200	0.357
Hexachlorobutadiene	A	1.0	0.222	B	5.0	0.267	C	10	0.261	D	20	0.270	E	50	0.279
	F	80	0.289	G	100	0.283	H	120	0.280	I	160	0.297	J	200	0.286
4-Chloro-3-methylphenol	A	1.0	0.210	B	5.0	0.245	C	10	0.270	D	20	0.269	E	50	0.271
	F	80	0.293	G	100	0.268	H	120	0.274	I	160	0.280	J	200	0.266
2-Methylnaphthalene	A	1.0	0.574	B	5.0	0.664	C	10	0.643	D	20	0.646	E	50	0.633
	F	80	0.636	G	100	0.610	H	120	0.631	I	160	0.666	J	200	0.626
2,4,6-Trichlorophenol				B	5.0	0.358	C	10	0.394	D	20	0.412	E	50	0.443
	F	80	0.442	G	100	0.430	H	120	0.428	I	160	0.432	J	200	0.458
2,4,5-Trichlorophenol				B	5.0	0.380	C	10	0.388	D	20	0.433	E	50	0.464
	F	80	0.482	G	100	0.467	H	120	0.467	I	160	0.482	J	200	0.500
2-Chloronaphthalene	A	1.0	1.15	B	5.0	1.11	C	10	1.07	D	20	1.18	E	50	1.23
	F	80	1.23	G	100	1.18	H	120	1.21	I	160	1.21	J	200	1.25
Acenaphthene	A	1.0	1.05	B	5.0	1.06	C	10	0.986	D	20	1.06	E	50	1.10
	F	80	1.10	G	100	1.05	H	120	1.06	I	160	1.10	J	200	1.07
2-Nitroaniline	A	1.0	0.404	B	5.0	0.369	C	10	0.392	D	20	0.400	E	50	0.433
	F	80	0.433	G	100	0.399	H	120	0.414	I	160	0.427	J	200	0.398
Acenaphthylene	A	1.0	1.59	B	5.0	1.72	C	10	1.67	D	20	1.85	E	50	1.89
	F	80	1.90	G	100	1.85	H	120	1.79	I	160	1.85	J	200	1.88

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Incorporated
 Project: YTC/106-45760003

Service Request: K1703074
 Calibration Date: 04/17/2017

Initial Calibration Summary
 Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL15331
 Instrument ID: MS07

Column: MS

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
Dimethyl Phthalate	A	1.0	1.39	B	5.0	1.38	C	10	1.35	D	20	1.46	E	50	1.55
	F	80	1.53	G	100	1.47	H	120	1.45	I	160	1.47	J	200	1.44
2,6-Dinitrotoluene	A	1.0	0.312	B	5.0	0.300	C	10	0.305	D	20	0.322	E	50	0.343
	F	80	0.342	G	100	0.335	H	120	0.330	I	160	0.342	J	200	0.328
3-Nitroaniline	A	1.0	0.315	B	5.0	0.280	C	10	0.310	D	20	0.333	E	50	0.352
	F	80	0.344	G	100	0.325	H	120	0.322	I	160	0.349	J	200	0.316
2,4-Dinitrophenol	A	1.0	0.193	B	5.0	0.198	C	10	0.0456	D	20	0.103	E	50	0.181
	F	80	0.193	G	100	0.198	H	120	0.202	I	160	0.232	J	200	0.219
Dibenzofuran	A	1.0	1.66	B	5.0	1.63	C	10	1.58	D	20	1.62	E	50	1.69
	F	80	1.70	G	100	1.66	H	120	1.65	I	160	1.71	J	200	1.70
4-Nitrophenol	A	1.0	0.325	B	5.0	0.316	C	10	0.239	D	20	0.283	E	50	0.324
	F	80	0.325	G	100	0.316	H	120	0.320	I	160	0.327	J	200	0.297
2,4-Dinitrotoluene	A	1.0	0.382	B	5.0	0.399	C	10	0.428	D	20	0.442	E	50	0.492
	F	80	0.451	G	100	0.450	H	120	0.434	I	160	0.468	J	200	0.429
Fluorene	A	1.0	1.38	B	5.0	1.27	C	10	1.25	D	20	1.25	E	50	1.36
	F	80	1.35	G	100	1.29	H	120	1.28	I	160	1.35	J	200	1.25
4-Chlorophenyl Phenyl Ether	A	1.0	0.635	B	5.0	0.644	C	10	0.618	D	20	0.634	E	50	0.714
	F	80	0.713	G	100	0.694	H	120	0.698	I	160	0.722	J	200	0.700
Diethyl Phthalate	A	1.0	1.94	B	5.0	1.63	C	10	1.53	D	20	1.59	E	50	1.67
	F	80	1.63	G	100	1.53	H	120	1.54	I	160	1.62	J	200	1.47
4-Nitroaniline	A	1.0	0.266	B	5.0	0.289	C	10	0.280	D	20	0.317	E	50	0.346
	F	80	0.331	G	100	0.302	H	120	0.310	I	160	0.331	J	200	0.294
2-Methyl-4,6-dinitrophenol	A	1.0	0.194	B	5.0	0.194	C	10	0.194	D	20	0.194	E	50	0.277
	F	80	0.261	G	100	0.263	H	120	0.269	I	160	0.282	J	200	0.266
N-Nitrosodiphenylamine	A	1.0	0.973	B	5.0	0.940	C	10	0.895	D	20	0.959	E	50	0.986
	F	80	0.940	G	100	0.978	H	120	0.965	I	160	1.01	J	200	0.914
1,2-Diphenylhydrazine	A	1.0	1.35	B	5.0	1.25	C	10	1.26	D	20	1.30	E	50	1.41
	F	80	1.35	G	100	1.23	H	120	1.26	I	160	1.28	J	200	1.19
4-Bromophenyl Phenyl Ether	A	1.0	0.240	B	5.0	0.245	C	10	0.235	D	20	0.242	E	50	0.254
	F	80	0.271	G	100	0.264	H	120	0.268	I	160	0.278	J	200	0.282
Hexachlorobenzene	A	1.0	0.285	B	5.0	0.302	C	10	0.312	D	20	0.302	E	50	0.327
	F	80	0.352	G	100	0.345	H	120	0.346	I	160	0.352	J	200	0.361
Pentachlorophenol	A	1.0	0.105	B	5.0	0.105	C	10	0.109	D	20	0.134	E	50	0.175
	F	80	0.186	G	100	0.187	H	120	0.187	I	160	0.202	J	200	0.209
Phenanthrene	A	1.0	1.32	B	5.0	1.03	C	10	0.958	D	20	0.953	E	50	1.02
	F	80	1.01	G	100	1.01	H	120	0.977	I	160	1.02	J	200	0.996

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Calibration Date: 04/17/2017

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL15331
Instrument ID: MS07

Column: MS

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
Anthracene	A	1.0	1.11	B	5.0	1.02	C	10	1.01	D	20	0.988	E	50	1.05
	F	80	1.06	G	100	1.01	H	120	1.01	I	160	1.03	J	200	1.02
Carbazole	A	1.0	0.976	B	5.0	0.941	C	10	0.902	D	20	0.907	E	50	1.01
	F	80	0.985	G	100	0.925	H	120	0.904	I	160	0.901	J	200	0.924
Di-n-butyl Phthalate	A	1.0	1.27	B	5.0	1.19	C	10	1.14	D	20	1.15	E	50	1.29
	F	80	1.28	G	100	1.26	H	120	1.18	I	160	1.26	J	200	1.26
Fluoranthene	A	1.0	1.24	B	5.0	1.01	C	10	0.964	D	20	0.966	E	50	1.11
	F	80	1.04	G	100	0.993	H	120	0.989	I	160	1.02	J	200	1.12
Pyrene	A	1.0	1.40	B	5.0	1.16	C	10	1.20	D	20	1.13	E	50	1.27
	F	80	1.13	G	100	1.00	H	120	1.02	I	160	1.03	J	200	0.970
Butyl Benzyl Phthalate	A	1.0	0.552	B	5.0	0.514	C	10	0.533	D	20	0.553	E	50	0.591
	F	80	0.560	G	100	0.530	H	120	0.517	I	160	0.523	J	200	0.479
3,3'-Dichlorobenzidine	A	1.0	0.370	B	5.0	0.389	C	10	0.401	D	20	0.424	E	50	0.465
	F	80	0.479	G	100	0.475	H	120	0.481	I	160	0.496	J	200	0.499
Benz(a)anthracene	A	1.0	1.01	B	5.0	0.977	C	10	0.944	D	20	0.947	E	50	1.04
	F	80	1.02	G	100	0.997	H	120	0.981	I	160	0.992	J	200	0.993
Chrysene	A	1.0	0.901	B	5.0	0.902	C	10	0.923	D	20	0.923	E	50	0.993
	F	80	0.986	G	100	0.922	H	120	0.912	I	160	0.960	J	200	0.935
Bis(2-ethylhexyl) Phthalate	A	1.0	0.759	B	5.0	0.692	C	10	0.720	D	20	0.737	E	50	0.782
	F	80	0.753	G	100	0.728	H	120	0.713	I	160	0.710	J	200	0.691
Di-n-octyl Phthalate	A	1.0	1.38	B	5.0	1.21	C	10	1.23	D	20	1.23	E	50	1.32
	F	80	1.31	G	100	1.37	H	120	1.32	I	160	1.40	J	200	1.49
Benzo(b)fluoranthene	A	1.0	0.779	B	5.0	0.807	C	10	0.788	D	20	0.850	E	50	0.969
	F	80	0.997	G	100	1.00	H	120	0.987	I	160	1.05	J	200	1.06
Benzo(k)fluoranthene	A	1.0	0.809	B	5.0	0.780	C	10	0.824	D	20	0.835	E	50	0.937
	F	80	0.948	G	100	0.991	H	120	0.980	I	160	1.03	J	200	1.02
Benzo(a)pyrene	A	1.0	0.821	B	5.0	0.817	C	10	0.843	D	20	0.894	E	50	1.00
	F	80	0.996	G	100	1.00	H	120	0.994	I	160	1.00	J	200	1.04
Indeno(1,2,3-cd)pyrene	A	1.0	0.878	B	5.0	0.898	C	10	0.943	D	20	1.05	E	50	1.02
	F	80	0.955	G	100	0.925	H	120	0.896	I	160	0.932	J	200	0.985
Dibenz(a,h)anthracene	A	1.0	0.907	B	5.0	0.915	C	10	0.977	D	20	1.08	E	50	1.10
	F	80	0.992	G	100	0.970	H	120	0.950	I	160	0.965	J	200	1.04
Benzo(g,h,i)perylene	A	1.0	0.895	B	5.0	0.974	C	10	1.01	D	20	1.09	E	50	1.05
	F	80	0.956	G	100	0.969	H	120	0.921	I	160	0.949	J	200	1.02
2-Fluorophenol	A	1.0	0.847	B	5.0	0.875	C	10	0.778	D	20	0.873	E	50	0.898
	F	80	0.851	G	100	0.905	H	120	0.886	I	160	0.896	J	200	0.888

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Calibration Date: 04/17/2017

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL15331
Instrument ID: MS07

Column: MS

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
Phenol-d6	A	1.0	0.855	B	5.0	1.07	C	10	0.943	D	20	1.01	E	50	1.02
	F	80	0.998	G	100	1.08	H	120	1.05	I	160	1.06	J	200	1.06
Nitrobenzene-d5	A	1.0	1.19	B	5.0	1.24	C	10	1.23	D	20	1.24	E	50	1.24
	F	80	1.20	G	100	1.29	H	120	1.28	I	160	1.26	J	200	1.24
2-Fluorobiphenyl	A	1.0	1.23	B	5.0	1.42	C	10	1.35	D	20	1.41	E	50	1.46
	F	80	1.42	G	100	1.49	H	120	1.49	I	160	1.45	J	200	1.54
2,4,6-Tribromophenol				B	5.0	0.193	C	10	0.206	D	20	0.215	E	50	0.226
	F	80	0.236	G	100	0.250	H	120	0.257	I	160	0.264	J	200	0.266
Terphenyl-d14	A	1.0	0.904	B	5.0	0.772	C	10	0.792	D	20	0.779	E	50	0.832
	F	80	0.769	G	100	0.784	H	120	0.773	I	160	0.809	J	200	0.736

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Calibration Date: 04/17/2017

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL15331
Instrument ID: MS07

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
N-Nitrosodimethylamine	MS	AverageRF	% RSD	11.1		≤20	1.07		0.010
Bis(2-chloroethyl) Ether	MS	AverageRF	% RSD	4.4		≤20	0.803		0.700
Phenol	MS	AverageRF	% RSD	2.3		≤20	0.967		0.800
2-Chlorophenol	MS	AverageRF	% RSD	3.8		≤20	1.09		0.800
1,3-Dichlorobenzene	MS	AverageRF	% RSD	3.1		≤20	1.40		0.010
1,4-Dichlorobenzene	MS	AverageRF	% RSD	3.3		≤20	1.45		0.010
1,2-Dichlorobenzene	MS	AverageRF	% RSD	2.9		≤20	1.33		0.010
Benzyl alcohol	MS	AverageRF	% RSD	9.7		≤20	0.560		0.010
Bis(2-chloroisopropyl) Ether	MS	AverageRF	% RSD	4.3		≤20	1.20		0.010
2-Methylphenol	MS	AverageRF	% RSD	3.9		≤20	0.700	*	0.700
Hexachloroethane	MS	AverageRF	% RSD	5.9		≤20	0.626		0.300
N-Nitrosodi-n-propylamine	MS	AverageRF	% RSD	6.3		≤20	0.737		0.500
4-Methylphenol	MS	AverageRF	% RSD	2.7		≤20	1.06		0.600
Nitrobenzene	MS	AverageRF	% RSD	3.4		≤20	1.14		0.200
Isophorone	MS	AverageRF	% RSD	2.5		≤20	0.556		0.400
2-Nitrophenol	MS	AverageRF	% RSD	12.1		≤20	0.191		0.100
2,4-Dimethylphenol	MS	AverageRF	% RSD	8.1		≤20	0.250		0.200
Bis(2-chloroethoxy)methane	MS	AverageRF	% RSD	2.0		≤20	0.302		0.300
2,4-Dichlorophenol	MS	AverageRF	% RSD	8.4		≤20	0.306		0.200
Benzoic acid	MS	AverageRF	% RSD	10.5		≤20	0.173		0.010
1,2,4-Trichlorobenzene	MS	AverageRF	% RSD	2.7		≤20	0.357		0.010
Naphthalene	MS	AverageRF	% RSD	2.2		≤20	0.869		0.700
4-Chloroaniline	MS	AverageRF	% RSD	6.1		≤20	0.363		0.010
Hexachlorobutadiene	MS	AverageRF	% RSD	7.6		≤20	0.273		0.010
4-Chloro-3-methylphenol	MS	AverageRF	% RSD	8.5		≤20	0.265		0.010
2-Methylnaphthalene	MS	AverageRF	% RSD	4.2		≤20	0.633		0.400
2,4,6-Trichlorophenol	MS	AverageRF	% RSD	7.2		≤20	0.422		0.200
2,4,5-Trichlorophenol	MS	AverageRF	% RSD	9.4		≤20	0.452		0.200
2-Chloronaphthalene	MS	AverageRF	% RSD	4.8		≤20	1.18		0.800
Acenaphthene	MS	AverageRF	% RSD	3.3		≤20	1.06		0.900
2-Nitroaniline	MS	AverageRF	% RSD	5.0		≤20	0.407		0.010
Acenaphthylene	MS	AverageRF	% RSD	6.0		≤20	1.80		0.900
Dimethyl Phthalate	MS	AverageRF	% RSD	4.4		≤20	1.45		0.010
2,6-Dinitrotoluene	MS	AverageRF	% RSD	4.9		≤20	0.326		0.200
3-Nitroaniline	MS	AverageRF	% RSD	6.6		≤20	0.325		0.010
2,4-Dinitrophenol	MS	Quadratic	COD	0.995		≥0.990	0.172		0.010
Dibenzofuran	MS	AverageRF	% RSD	2.6		≤20	1.66		0.800
4-Nitrophenol	MS	AverageRF	% RSD	10.0		≤20	0.304		0.010
2,4-Dinitrotoluene	MS	AverageRF	% RSD	7.2		≤20	0.437		0.200
Fluorene	MS	AverageRF	% RSD	4.1		≤20	1.30		0.900
4-Chlorophenyl Phenyl Ether	MS	AverageRF	% RSD	5.9		≤20	0.677		0.400
Diethyl Phthalate	MS	AverageRF	% RSD	8.0		≤20	1.62		0.010

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Calibration Date: 04/17/2017

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL15331
Instrument ID: MS07

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
4-Nitroaniline	MS	AverageRF	% RSD	8.2		≤ 20	0.307		0.010
2-Methyl-4,6-dinitrophenol	MS	AverageRF	% RSD	11.4		≤ 20	0.259		0.010
N-Nitrosodiphenylamine	MS	AverageRF	% RSD	3.6		≤ 20	0.956		0.010
1,2-Diphenylhydrazine	MS	AverageRF	% RSD	5.1		≤ 20	1.29		0.010
4-Bromophenyl Phenyl Ether	MS	AverageRF	% RSD	6.6		≤ 20	0.258		0.100
Hexachlorobenzene	MS	AverageRF	% RSD	8.1		≤ 20	0.328		0.100
Pentachlorophenol	MS	Quadratic	COD	1.000		≥ 0.990	0.166		0.050
Phenanthrene	MS	AverageRF	% RSD	10.1		≤ 20	1.03		0.700
Anthracene	MS	AverageRF	% RSD	3.4		≤ 20	1.03		0.700
Carbazole	MS	AverageRF	% RSD	4.3		≤ 20	0.938		0.010
Di-n-butyl Phthalate	MS	AverageRF	% RSD	4.6		≤ 20	1.23		0.010
Fluoranthene	MS	AverageRF	% RSD	8.2		≤ 20	1.04		0.600
Pyrene	MS	AverageRF	% RSD	11.9		≤ 20	1.13		0.600
Butyl Benzyl Phthalate	MS	AverageRF	% RSD	5.7		≤ 20	0.535		0.010
3,3'-Dichlorobenzidine	MS	AverageRF	% RSD	10.6		≤ 20	0.448		0.010
Benz(a)anthracene	MS	AverageRF	% RSD	2.9		≤ 20	0.989		0.800
Chrysene	MS	AverageRF	% RSD	3.5		≤ 20	0.936		0.700
Bis(2-ethylhexyl) Phthalate	MS	AverageRF	% RSD	4.1		≤ 20	0.729		0.010
Di-n-octyl Phthalate	MS	AverageRF	% RSD	6.6		≤ 20	1.33		0.010
Benzo(b)fluoranthene	MS	AverageRF	% RSD	11.9		≤ 20	0.928		0.700
Benzo(k)fluoranthene	MS	AverageRF	% RSD	10.3		≤ 20	0.916		0.700
Benzo(a)pyrene	MS	AverageRF	% RSD	9.2		≤ 20	0.941		0.700
Indeno(1,2,3-cd)pyrene	MS	AverageRF	% RSD	5.8		≤ 20	0.948		0.500
Dibenz(a,h)anthracene	MS	AverageRF	% RSD	6.5		≤ 20	0.989		0.400
Benzo(g,h,i)perylene	MS	AverageRF	% RSD	6.1		≤ 20	0.983		0.500
2-Fluorophenol	SURR	AverageRF	% RSD	4.3		≤ 20	0.870		0.010
Phenol-d6	SURR	AverageRF	% RSD	6.8		≤ 20	1.01		0.010
Nitrobenzene-d5	SURR	AverageRF	% RSD	2.5		≤ 20	1.24		0.010
2-Fluorobiphenyl	SURR	AverageRF	% RSD	6.2		≤ 20	1.43		0.010
2,4,6-Tribromophenol	SURR	AverageRF	% RSD	11.2		≤ 20	0.235		0.010
Terphenyl-d14	SURR	AverageRF	% RSD	5.8		≤ 20	0.795		0.010

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Calibration Date: 04/17/2017
Date Analyzed: 04/18/2017

Second Source Calibration Verification
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270D

Calibration ID: CAL15331
Units: ug/ml

File ID: J:\MS07\DATA\041817\0418F007.D
 J:\MS07\DATA\041817\0418F005.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
N-Nitrosodimethylamine	80	73	1.07	0.976	-9	NA	± 30 %	AverageRF
Bis(2-chloroethyl) Ether	80	81	0.803	0.815	1	NA	± 30 %	AverageRF
Phenol	80	83	0.967	1.00	3	NA	± 30 %	AverageRF
2-Chlorophenol	80	85	1.09	1.15	6	NA	± 30 %	AverageRF
1,3-Dichlorobenzene	80	79	1.40	1.39	-1	NA	± 30 %	AverageRF
1,4-Dichlorobenzene	80	79	1.45	1.44	-1	NA	± 30 %	AverageRF
1,2-Dichlorobenzene	80	81	1.33	1.34	1	NA	± 30 %	AverageRF
Benzyl alcohol	80	90	0.560	0.632	13	NA	± 30 %	AverageRF
Bis(2-chloroisopropyl) Ether	80	65	1.20	0.978	-18	NA	± 30 %	AverageRF
2-Methylphenol	80	78	0.700	0.679	-3	NA	± 30 %	AverageRF
Hexachloroethane	80	79	0.626	0.620	-1	NA	± 30 %	AverageRF
N-Nitrosodi-n-propylamine	80	73	0.737	0.672	-9	NA	± 30 %	AverageRF
4-Methylphenol	80	82	1.06	1.08	2	NA	± 30 %	AverageRF
Nitrobenzene	80	78	1.14	1.12	-2	NA	± 30 %	AverageRF
Isophorone	80	80	0.556	0.557	0	NA	± 30 %	AverageRF
2-Nitrophenol	80	89	0.191	0.213	12	NA	± 30 %	AverageRF
2,4-Dimethylphenol	80	84	0.250	0.264	6	NA	± 30 %	AverageRF
Bis(2-chloroethoxy)methane	80	84	0.302	0.315	4	NA	± 30 %	AverageRF
2,4-Dichlorophenol	80	89	0.306	0.340	11	NA	± 30 %	AverageRF
Benzoic acid	80	84	0.173	0.182	5	NA	± 30 %	AverageRF
1,2,4-Trichlorobenzene	80	84	0.357	0.375	5	NA	± 30 %	AverageRF
Naphthalene	80	81	0.869	0.877	1	NA	± 30 %	AverageRF
4-Chloroaniline	80	94	0.363	0.426	17	NA	± 30 %	AverageRF
Hexachlorobutadiene	80	84	0.273	0.286	5	NA	± 30 %	AverageRF
4-Chloro-3-methylphenol	80	87	0.265	0.289	9	NA	± 30 %	AverageRF
2-Methylnaphthalene	80	91	0.633	0.722	14	NA	± 30 %	AverageRF
2,4,6-Trichlorophenol	80	86	0.422	0.454	8	NA	± 30 %	AverageRF
2,4,5-Trichlorophenol	80	89	0.452	0.501	11	NA	± 30 %	AverageRF
2-Chloronaphthalene	80	81	1.18	1.20	2	NA	± 30 %	AverageRF
Acenaphthene	80	85	1.06	1.13	6	NA	± 30 %	AverageRF
2-Nitroaniline	80	86	0.407	0.438	8	NA	± 30 %	AverageRF
Acenaphthylene	80	84	1.80	1.88	4	NA	± 30 %	AverageRF
Dimethyl Phthalate	80	81	1.45	1.47	1	NA	± 30 %	AverageRF
2,6-Dinitrotoluene	80	81	0.326	0.329	1	NA	± 30 %	AverageRF
3-Nitroaniline	80	90	0.325	0.366	13	NA	± 30 %	AverageRF
2,4-Dinitrophenol	80	85	0.172	0.208	NA	6	± 30 %	Quadratic
Dibenzofuran	80	88	1.66	1.83	10	NA	± 30 %	AverageRF
4-Nitrophenol	80	89	0.304	0.339	11	NA	± 30 %	AverageRF
2,4-Dinitrotoluene	80	84	0.437	0.459	5	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Calibration Date: 04/17/2017
Date Analyzed: 04/18/2017

**Second Source Calibration Verification
Semi-Volatile Organic Compounds by GC/MS**

Calibration Type: Internal Standard
Analysis Method: 8270D

Calibration ID: CAL15331
Units: ug/ml

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Fluorene	80	81	1.30	1.32	1	NA	± 30 %	AverageRF
4-Chlorophenyl Phenyl Ether	80	82	0.677	0.692	2	NA	± 30 %	AverageRF
Diethyl Phthalate	80	78	1.62	1.58	-2	NA	± 30 %	AverageRF
4-Nitroaniline	80	92	0.307	0.352	15	NA	± 30 %	AverageRF
2-Methyl-4,6-dinitrophenol	80	88	0.259	0.285	10	NA	± 30 %	AverageRF
N-Nitrosodiphenylamine	80	79	0.956	0.946	-1	NA	± 30 %	AverageRF
1,2-Diphenylhydrazine	80	79	1.29	1.27	-2	NA	± 30 %	AverageRF
4-Bromophenyl Phenyl Ether	80	81	0.258	0.261	1	NA	± 30 %	AverageRF
Hexachlorobenzene	80	80	0.328	0.329	0	NA	± 30 %	AverageRF
Pentachlorophenol	80	88	0.166	0.203	NA	10	± 30 %	Quadratic
Phenanthrene	80	78	1.03	0.999	-3	NA	± 30 %	AverageRF
Anthracene	80	81	1.03	1.05	2	NA	± 30 %	AverageRF
Carbazole	80	84	0.938	0.982	5	NA	± 30 %	AverageRF
Di-n-butyl Phthalate	80	78	1.23	1.20	-2	NA	± 30 %	AverageRF
Fluoranthene	80	76	1.04	0.992	-5	NA	± 30 %	AverageRF
Pyrene	80	73	1.13	1.03	-8	NA	± 30 %	AverageRF
Butyl Benzyl Phthalate	80	79	0.535	0.526	-2	NA	± 30 %	AverageRF
3,3'-Dichlorobenzidine	80	85	0.448	0.474	6	NA	± 30 %	AverageRF
Benz(a)anthracene	80	82	0.989	1.01	2	NA	± 30 %	AverageRF
Chrysene	80	81	0.936	0.952	2	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	80	82	0.729	0.745	2	NA	± 30 %	AverageRF
Di-n-octyl Phthalate	80	77	1.33	1.28	-3	NA	± 30 %	AverageRF
Benzo(b)fluoranthene	80	82	0.928	0.951	2	NA	± 30 %	AverageRF
Benzo(k)fluoranthene	80	87	0.916	0.999	9	NA	± 30 %	AverageRF
Benzo(a)pyrene	80	85	0.941	0.995	6	NA	± 30 %	AverageRF
Indeno(1,2,3-cd)pyrene	80	80	0.948	0.953	1	NA	± 30 %	AverageRF
Dibenz(a,h)anthracene	80	79	0.989	0.974	-2	NA	± 30 %	AverageRF
Benzo(g,h,i)perylene	80	76	0.983	0.929	-6	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Date Analyzed: 04/18/2017

**Continuing Calibration Verification Summary
 Semi-Volatile Organic Compounds by GC/MS**

Calibration Type: Internal Standard
Analysis Method: 8270D

Calibration Date: 04/17/2017
Calibration ID: CAL15331
Analysis Lot: KWG1703110
Units: ug/ml

File ID: J:\MS07\DATA\041817\0418F020.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
N-Nitrosodimethylamine	80	86	0.010	1.07	1.16	8	NA	± 20	AverageRF
Bis(2-chloroethyl) Ether	80	82	0.700	0.803	0.827	3	NA	± 20	AverageRF
Phenol	80	83	0.800	0.967	1.00	4	NA	± 20	AverageRF
2-Chlorophenol	80	82	0.800	1.09	1.11	3	NA	± 20	AverageRF
1,3-Dichlorobenzene	80	84	0.010	1.40	1.47	5	NA	± 20	AverageRF
1,4-Dichlorobenzene	80	82	0.010	1.45	1.49	3	NA	± 20	AverageRF
1,2-Dichlorobenzene	80	85	0.010	1.33	1.42	6	NA	± 20	AverageRF
Benzyl alcohol	80	83	0.010	0.560	0.582	4	NA	± 20	AverageRF
Bis(2-chloroisopropyl) Ether	80	83	0.010	1.20	1.24	4	NA	± 20	AverageRF
2-Methylphenol	80	85	0.700	0.700	0.741	6	NA	± 20	AverageRF
Hexachloroethane	80	82	0.300	0.626	0.642	2	NA	± 20	AverageRF
N-Nitrosodi-n-propylamine	80	80	0.500	0.737	0.739	0	NA	± 20	AverageRF
4-Methylphenol	80	84	0.600	1.06	1.11	5	NA	± 20	AverageRF
Nitrobenzene	80	79	0.200	1.14	1.13	-1	NA	± 20	AverageRF
Isophorone	80	82	0.400	0.556	0.568	2	NA	± 20	AverageRF
2-Nitrophenol	80	84	0.100	0.191	0.200	5	NA	± 20	AverageRF
2,4-Dimethylphenol	80	86	0.200	0.250	0.269	8	NA	± 20	AverageRF
Bis(2-chloroethoxy)methane	80	84	0.300	0.302	0.317	5	NA	± 20	AverageRF
2,4-Dichlorophenol	80	84	0.200	0.306	0.320	5	NA	± 20	AverageRF
Benzoic acid	80	84	0.010	0.173	0.181	4	NA	± 20	AverageRF
1,2,4-Trichlorobenzene	80	83	0.010	0.357	0.369	3	NA	± 20	AverageRF
Naphthalene	80	84	0.700	0.869	0.908	4	NA	± 20	AverageRF
4-Chloroaniline	80	85	0.010	0.363	0.388	7	NA	± 20	AverageRF
Hexachlorobutadiene	80	86	0.010	0.273	0.292	7	NA	± 20	AverageRF
4-Chloro-3-methylphenol	80	84	0.010	0.265	0.278	5	NA	± 20	AverageRF
2-Methylnaphthalene	80	82	0.400	0.633	0.646	2	NA	± 20	AverageRF
2,4,6-Trichlorophenol	80	87	0.200	0.422	0.460	9	NA	± 20	AverageRF
2,4,5-Trichlorophenol	80	84	0.200	0.452	0.475	5	NA	± 20	AverageRF
2-Chloronaphthalene	80	85	0.800	1.18	1.26	6	NA	± 20	AverageRF
Acenaphthene	80	84	0.900	1.06	1.12	5	NA	± 20	AverageRF
2-Nitroaniline	80	83	0.010	0.407	0.422	4	NA	± 20	AverageRF
Acenaphthylene	80	83	0.900	1.80	1.86	3	NA	± 20	AverageRF
Dimethyl Phthalate	80	85	0.010	1.45	1.55	7	NA	± 20	AverageRF
2,6-Dinitrotoluene	80	84	0.200	0.326	0.343	5	NA	± 20	AverageRF
3-Nitroaniline	80	83	0.010	0.325	0.338	4	NA	± 20	AverageRF
2,4-Dinitrophenol	80	83	0.010	0.172	0.201	NA	3	± 20	Quadratic
Dibenzofuran	80	83	0.800	1.66	1.73	4	NA	± 20	AverageRF
4-Nitrophenol	80	85	0.010	0.304	0.324	7	NA	± 20	AverageRF
2,4-Dinitrotoluene	80	88	0.200	0.437	0.482	10	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074
Date Analyzed: 04/18/2017

Continuing Calibration Verification Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270D

Calibration Date: 04/17/2017
Calibration ID: CAL15331
Analysis Lot: KWG1703110
Units: ug/ml

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Fluorene	80	85	0.900	1.30	1.38	6	NA	± 20	AverageRF
4-Chlorophenyl Phenyl Ether	80	86	0.400	0.677	0.728	8	NA	± 20	AverageRF
Diethyl Phthalate	80	82	0.010	1.62	1.66	3	NA	± 20	AverageRF
4-Nitroaniline	80	90	0.010	0.307	0.344	12	NA	± 20	AverageRF
2-Methyl-4,6-dinitrophenol	80	90	0.010	0.259	0.291	12	NA	± 20	AverageRF
N-Nitrosodiphenylamine	80	78	0.010	0.956	0.933	-2	NA	± 20	AverageRF
1,2-Diphenylhydrazine	80	82	0.010	1.29	1.32	3	NA	± 20	AverageRF
4-Bromophenyl Phenyl Ether	80	86	0.100	0.258	0.276	7	NA	± 20	AverageRF
Hexachlorobenzene	80	87	0.100	0.328	0.356	8	NA	± 20	AverageRF
Pentachlorophenol	80	86	0.050	0.166	0.196	NA	7	± 20	Quadratic
Phenanthrene	80	83	0.700	1.03	1.06	4	NA	± 20	AverageRF
Anthracene	80	84	0.700	1.03	1.08	5	NA	± 20	AverageRF
Carbazole	80	84	0.010	0.938	0.988	5	NA	± 20	AverageRF
Di-n-butyl Phthalate	80	83	0.010	1.23	1.27	4	NA	± 20	AverageRF
Fluoranthene	80	84	0.600	1.04	1.10	5	NA	± 20	AverageRF
Pyrene	80	81	0.600	1.13	1.14	1	NA	± 20	AverageRF
Butyl Benzyl Phthalate	80	84	0.010	0.535	0.559	4	NA	± 20	AverageRF
3,3'-Dichlorobenzidine	80	85	0.010	0.448	0.474	6	NA	± 20	AverageRF
Benz(a)anthracene	80	84	0.800	0.989	1.04	5	NA	± 20	AverageRF
Chrysene	80	83	0.700	0.936	0.975	4	NA	± 20	AverageRF
Bis(2-ethylhexyl) Phthalate	80	83	0.010	0.729	0.760	4	NA	± 20	AverageRF
Di-n-octyl Phthalate	80	78	0.010	1.33	1.30	-2	NA	± 20	AverageRF
Benzo(b)fluoranthene	80	89	0.700	0.928	1.03	11	NA	± 20	AverageRF
Benzo(k)fluoranthene	80	86	0.700	0.916	0.988	8	NA	± 20	AverageRF
Benzo(a)pyrene	80	88	0.700	0.941	1.03	10	NA	± 20	AverageRF
Indeno(1,2,3-cd)pyrene	80	83	0.500	0.948	0.978	3	NA	± 20	AverageRF
Dibenz(a,h)anthracene	80	81	0.400	0.989	1.00	1	NA	± 20	AverageRF
Benzo(g,h,i)perylene	80	81	0.500	0.983	0.990	1	NA	± 20	AverageRF
2-Fluorophenol	80	78	0.010	0.870	0.844	-3	NA	± 20	AverageRF
Phenol-d6	80	82	0.010	1.01	1.03	2	NA	± 20	AverageRF
Nitrobenzene-d5	80	78	0.010	1.24	1.20	-3	NA	± 20	AverageRF
2-Fluorobiphenyl	80	80	0.010	1.43	1.43	0	NA	± 20	AverageRF
2,4,6-Tribromophenol	80	81	0.010	0.235	0.239	2	NA	± 20	AverageRF
Terphenyl-d14	80	76	0.010	0.795	0.757	-5	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003

Service Request: K1703074

Analysis Run Log
Semi-Volatile Organic Compounds by GC/MS

Analysis Method: 8270D

Analysis Lot: KWG1703110
Instrument ID: MS07

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0418F019.D	GC/MS Tuning - Decafluorotriphenylphosph	KWG1703110-1	4/18/2017	19:38		4/18/2017	20:09
0418F020.D	Continuing Calibration Verification	KWG1703110-2	4/18/2017	20:22		4/18/2017	20:53
0418F022.D	Method Blank	KWG1702659-5	4/18/2017	21:49		4/18/2017	22:20
0418F023.D	Lab Control Sample	KWG1702659-1	4/18/2017	22:30		4/18/2017	23:01
0418F024.D	Duplicate Lab Control Sample	KWG1702659-2	4/18/2017	23:11		4/18/2017	23:42
0418F025.D	ZZZZZZ	ZZZZZZ	4/18/2017	23:52		4/19/2017	00:23
0418F026.D	ZZZZZZ	ZZZZZZ	4/19/2017	00:33		4/19/2017	01:04
0418F027.D	FTP-1	K1703074-001	4/19/2017	01:14		4/19/2017	01:45
0418F028.D	ZZZZZZ	ZZZZZZ	4/19/2017	01:55		4/19/2017	02:26
0418F030.D	ZZZZZZ	ZZZZZZ	4/19/2017	03:17		4/19/2017	03:48
0418F031.D	ZZZZZZ	ZZZZZZ	4/19/2017	03:58		4/19/2017	04:29
0418F032.D	ZZZZZZ	ZZZZZZ	4/19/2017	04:39		4/19/2017	05:10
0418F033.D	ZZZZZZ	ZZZZZZ	4/19/2017	05:20		4/19/2017	05:51
0418F034.D	ZZZZZZ	ZZZZZZ	4/19/2017	06:01		4/19/2017	06:32
0418F035.D	ZZZZZZ	ZZZZZZ	4/19/2017	06:42		4/19/2017	07:13
0418F037.D	ZZZZZZ	ZZZZZZ	4/19/2017	08:05		4/19/2017	08:36
0418F038.D	ZZZZZZ	ZZZZZZ	4/19/2017	08:46		4/19/2017	09:17
0418F039.D	ZZZZZZ	ZZZZZZ	4/19/2017	09:26		4/19/2017	09:57
0418F040.D	ZZZZZZ	ZZZZZZ	4/19/2017	10:07		4/19/2017	10:38
0418F041.D	ZZZZZZ	ZZZZZZ	4/19/2017	10:48		4/19/2017	11:19
0418F042.D	ZZZZZZ	ZZZZZZ	4/19/2017	11:29		4/19/2017	12:00

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Tetra Tech, Incorporated
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1703074
Date Extracted: 04/05/2017

Extraction Prep Log
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3520C
Analysis Method: 8270D

Extraction Lot: KWG1702659
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
FTP-1	K1703074-001	03/29/17	03/30/17	1000ml	1ml	NA	
Method Blank	KWG1702659-5	NA	NA	1020ml	1ml	NA	
Lab Control Sample	KWG1702659-1	NA	NA	1000ml	1ml	NA	
Duplicate Lab Control Sample	KWG1702659-2	NA	NA	1000ml	1ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis



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October 27, 2017

Analytical Report for Service Request No: K1709799

Keir Craigie
Tetra Tech, Inc.
19803 North Creek Parkway
Bothell, WA 98011

RE: YTC / 106-45760003

Dear Keir,

Enclosed are the results of the sample(s) submitted to our laboratory September 14, 2017
For your reference, these analyses have been assigned our service request number **K1709799**.

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. The test results meet requirements of the current NELAP standards, where applicable, and except as noted in the laboratory case narrative provided. For a specific list of NELAP-accredited analytes, refer to the certifications section at www.alsglobal.com. All results are intended to be considered in their entirety, and ALS Group USA Corp. dba ALS Environmental (ALS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report.

DOD ELAP Accreditation: Please note that effective October 19, 2017 the DOD ELAP accreditation of the ALS-Kelso laboratory was suspended by the accrediting body. Analytical work may have been completed, or partially completed, at the time of the suspension notification; or performed with your written approval. This report is being issued while this suspension is in effect.

Please contact me if you have any questions. My extension is 3356. You may also contact me via email at Kurt.Clarkson@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Kurt Clarkson
Sr. Project Manager



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Table of Contents

Acronyms

Qualifiers

State Certifications, Accreditations, And Licenses

Case Narrative

Chain of Custody

Diesel and Residual Range Organics

Gasoline Range Organics

Volatile Organic Compounds

Semi-Volatile Organic Compounds by GCMS

Raw Data

 Diesel and Residual Range Organics

 Gasoline Range Organics

 Volatile Organic Compounds

 Semi-Volatile Organic Compounds by GCMS

Acronyms

ASTM	American Society for Testing and Materials
A2LA	American Association for Laboratory Accreditation
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
LOD	Limit of Detection
LOQ	Limit of Quantitation
LUFT	Leaking Underground Fuel Tank
M	Modified
MCL	Maximum Contaminant Level is the highest permissible concentration of a substance allowed in drinking water as established by the USEPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
NA	Not Applicable
NC	Not Calculated
NCASI	National Council of the Paper Industry for Air and Stream Improvement
ND	Not Detected
NIOSH	National Institute for Occupational Safety and Health
PQL	Practical Quantitation Limit
RCRA	Resource Conservation and Recovery Act
SIM	Selected Ion Monitoring
TPH	Total Petroleum Hydrocarbons
tr	Trace level is the concentration of an analyte that is less than the PQL but greater than or equal to the MDL.

Inorganic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- E The result is an estimate amount because the value exceeded the instrument calibration range.
- J The result is an estimated value.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.
- H The holding time for this test is immediately following sample collection. The samples were analyzed as soon as possible after receipt by the laboratory.

Metals Data Qualifiers

- # The control limit criteria is not applicable. See case narrative.
- J The result is an estimated value.
- E The percent difference for the serial dilution was greater than 10%, indicating a possible matrix interference in the sample.
- M The duplicate injection precision was not met.
- N The Matrix Spike sample recovery is not within control limits. See case narrative.
- S The reported value was determined by the Method of Standard Additions (MSA).
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
- W The post-digestion spike for furnace AA analysis is out of control limits, while sample absorbance is less than 50% of spike absorbance.
 - i The MRL/MDL or LOQ/LOD is elevated due to a matrix interference.
- X See case narrative.
- + The correlation coefficient for the MSA is less than 0.995.
- Q See case narrative. One or more quality control criteria was outside the limits.

Organic Data Qualifiers

- * The result is an outlier. See case narrative.
- # The control limit criteria is not applicable. See case narrative.
- A A tentatively identified compound, a suspected aldol-condensation product.
- B The analyte was found in the associated method blank at a level that is significant relative to the sample result as defined by the DOD or NELAC standards.
- C The analyte was qualitatively confirmed using GC/MS techniques, pattern recognition, or by comparing to historical data.
- D The reported result is from a dilution.
- E The result is an estimated value.
- J The result is an estimated value.
- N The result is presumptive. The analyte was tentatively identified, but a confirmation analysis was not performed.
- P The GC or HPLC confirmation criteria was exceeded. The relative percent difference is greater than 40% between the two analytical results.
- U The analyte was analyzed for, but was not detected ("Non-detect") at or above the MRL/MDL.
DOD-QSM 4.2 definition : Analyte was not detected and is reported as less than the LOD or as defined by the project. The detection limit is adjusted for dilution.
 - i The MRL/MDL or LOQ/LOD is elevated due to a chromatographic interference.
- X See case narrative.
- Q See case narrative. One or more quality control criteria was outside the limits.

Additional Petroleum Hydrocarbon Specific Qualifiers

- F The chromatographic fingerprint of the sample matches the elution pattern of the calibration standard.
- L The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of lighter molecular weight constituents than the calibration standard.
- H The chromatographic fingerprint of the sample resembles a petroleum product, but the elution pattern indicates the presence of a greater amount of heavier molecular weight constituents than the calibration standard.
- O The chromatographic fingerprint of the sample resembles an oil, but does not match the calibration standard.
- Y The chromatographic fingerprint of the sample resembles a petroleum product eluting in approximately the correct carbon range, but the elution pattern does not match the calibration standard.
- Z The chromatographic fingerprint does not resemble a petroleum product.

**ALS Group USA Corp. dba ALS Environmental (ALS) - Kelso
State Certifications, Accreditations, and Licenses**

Agency	Web Site	Number
Alaska DEH	http://dec.alaska.gov/eh/lab/cs/csapproval.htm	UST-040
Arizona DHS	http://www.azdhs.gov/lab/license/env.htm	AZ0339
Arkansas - DEQ	http://www.adeq.state.ar.us/techsvs/labcert.htm	88-0637
California DHS (ELAP)	http://www.cdph.ca.gov/certlic/labs/Pages/ELAP.aspx	2795
Florida DOH	http://www.doh.state.fl.us/lab/EnvLabCert/WaterCert.htm	E87412
Hawaii DOH	http://health.hawaii.gov/	-
Louisiana DEQ	http://www.deq.louisiana.gov/page/la-lab-accreditation	03016
Maine DHS	http://www.maine.gov/dhhs/	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/enforcement/oqa.html	WA005
New York - DOH	https://www.wadsworth.org/regulatory/elap	12060
North Carolina DEQ	https://deq.nc.gov/about/divisions/water-resources/water-resources-data/water-sciences-home-page/laboratory-certification-branch/non-field-lab-certification	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/EnvironmentalLabCertification/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	https://www.epa.gov/region8-waterops/epa-region-8-certified-drinking-water	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/analyte is offered by that state.



Case Narrative

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ALS ENVIRONMENTAL

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request No.: K1709799
Date Received: 09/14/17

Case Narrative

All analyses were performed consistent with the quality assurance program of ALS Environmental. This report contains analytical results for samples designated for Tier IV validation deliverables including summary forms and all of the associated raw data for each of the analyses. When appropriate to the method, method blank results have been reported with each analytical test.

Sample Receipt

Sixteen water samples were received for analysis at ALS Environmental on 09/14/17. The samples were received in good condition and consistent with the accompanying chain of custody form, except where noted on the cooler receipt and preservation form included in this report. The samples were stored in a refrigerator at 4°C upon receipt at the laboratory.

Diesel Range Organics by Method NWTPH-Dx

Sample Notes and Discussion:

Manual integration of one or more chromatographic peaks was required to correct the integration performed by the automated data processing program. The manual integration was performed in accordance with ALS policy, which is consistent with the National Environmental Laboratory Accreditation Program (NELAP), Department of Defense (DOD), and other certifying agencies. The analytes that required manual integrations are identified on each sample report contained in this data package.

Relative Percent Difference Exceptions:

The Relative Percent Difference (RPD) criterion for the replicate analysis of DRO and RRO in sample FTP-16 was not applicable because the analyte concentration was not significantly greater than the Limit of Quantitation (LOQ). Analytical values derived from measurements close to the detection limit are not subject to the same accuracy and precision criteria as results derived from measurements higher on the calibration range for the method.

Calibration Verification Exceptions:

The upper control criteria were exceeded for n-Triacontane in associated closing CCV 0926F237. The associated opening CCV met control criteria. The associated spike recoveries of target all compounds were also all in control, indicating the analysis was in control. The surrogate outlier was flagged accordingly. No further corrective action was taken.

No other anomalies associated with the analysis of these samples were observed.

Gasoline Range Organics by Method NWTPH-Gx

No anomalies associated with the analysis of these samples were observed.

Approved by



Volatile Organic Compounds by EPA Method 8260

Calibration Verification Exceptions:

The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS27\0922F023.D: Dichlorodifluoromethane and Bromoform. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

The following analyte was flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS27\0925F004.D: Dichlorodifluoromethane. In accordance with the EPA Method, 80% or more of the CCV analytes must pass within 20% of the true value. The ALS SOP allows for 40% difference for the remaining analytes. The CCV met these criteria. The quality of the sample data was not significantly affected. No further corrective action was required.

Sample Notes and Discussion:

Manual integration of one or more chromatographic peaks was required to correct the integration performed by the automated data processing program. The manual integrations were performed in accordance with ALS policy, which is consistent with the National Environmental Laboratory Accreditation Program (NELAP), Department of Defense (DOD), and other certifying agencies. The analytes that required manual integrations are identified on each sample report contained in this data package.

No other anomalies associated with the analysis of these samples were observed.

Semivolatile Organic Compounds by EPA Method 8270

Calibration Verification Exceptions:

The following analyte was flagged as outside the control criterion for Continuing Calibration Verification (CCV) 0922F002: 4-Nitrophenol, Bis(2-ethylhexyl) Phthalate, and Nitrobenzene-d5. In accordance with the EPA Method, 80% or more of the CCV analytes must have passed within 20% of the true value. The remaining analytes are allowed a 40% difference as per the ALS SOP. The data was flagged to indicate the issue. No further corrective action was taken.


The following analyte was flagged as outside the control criterion for Continuing Calibration Verification (CCV) 0925F002: Diethyl Phthalate, Di-n-butyl Phthalate, and Bis(2-ethylhexyl) Phthalate. In accordance with the EPA Method, 80% or more of the CCV analytes must have passed within 20% of the true value. The remaining analytes are allowed a 40% difference as per the ALS SOP. The data was flagged to indicate the issue. No further corrective action was taken.

Sample Notes and Discussion:

Manual integration of one or more chromatographic peaks was required to correct the integration performed by the automated data processing program. The manual integration was performed in accordance with ALS policy, which is consistent with the National Environmental Laboratory Accreditation Program (NELAP), Department of Defense (DOD), and other certifying agencies. The analytes that required manual integrations are identified on each sample report contained in this data package.

No other anomalies associated with the analysis of these samples were observed.

Approved by





Chain of Custody

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CHAIN OF CUSTODY

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001

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www.alsglobal.com

SR# K1709799
COC Set _____ of _____
COC# _____

Project Name: <u>WTC</u>		Project Number:		NUMBER OF CONTAINERS	7D	14D	1	2	3	4	5	Remarks
Project Manager: <u>MORE Inquiries</u>												
Company: <u>T+EC</u>												
Address: <u>19803 North Creek Pkwy, Bonnell WA 98011</u>												
Phone #: <u>408 270 1331</u>		email:		B270D / SVO	B260C / VOC FP	NWTPH-DX / NW_TPH	NWTPH-GX / NW_GAS					
Sampler Signature: <u>Dana Rungquist</u>		Sampler Printed Name: <u>Dana Rungquist</u>										

Report Requirements <input type="checkbox"/> I. Routine Report: Method Blank, Surrogate, as required <input type="checkbox"/> II. Report Dup., MS, MSD as required <input type="checkbox"/> III. CLP Like Summary (no raw data) <input checked="" type="checkbox"/> IV. Data Validation Report <input type="checkbox"/> V. EDD	Invoice Information P.O.# _____ Bill To: _____ _____ _____	Circle which metals are to be analyzed Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Tl Sn V Zn Hg
	Turnaround Requirements <input type="checkbox"/> 24 hr. <input type="checkbox"/> 48 hr. <input type="checkbox"/> 5 Day <input checked="" type="checkbox"/> Standard	Special Instructions/Comments: _____ *Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other _____ (Circle One)

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: <u>Dana Rungquist</u>	Signature: _____	Signature: _____	Signature: <u>CODY GRAVES</u>	Signature: _____	Signature: _____
Printed Name: <u>Dana Rungquist</u>	Printed Name: _____	Printed Name: _____	Printed Name: <u>ALS</u>	Printed Name: _____	Printed Name: _____
Firm: <u>T+EC</u>	Firm: <u>Red Ex</u>	Firm: _____	Firm: _____	Firm: _____	Firm: _____
Date/Time: <u>9/13/17 1600</u>	Date/Time: _____	Date/Time: _____	Date/Time: <u>9/14/17 0940</u>	Date/Time: _____	Date/Time: _____



CHAIN OF CUSTODY
82545

001

SR# K1704-199

COC Set _____ of _____

COC# _____

Page 2 of 2

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www.alsglobal.com

Project Name <u>HTC</u>		Project Number <u>106-45710005</u>		NUMBER OF CONTAINERS	7D	14D					Remarks			
Project Manager <u>MICHAEL BRUNSON</u>					8270D / SVO	8260C / VOC FP	NWTPH-Dx / NW_TPH	NWTPH-Gx / NW_GAS	1	2		3	4	5
Company <u>T+EC</u>									1	2		3	4	5
Address <u>see pg 1</u>					1	2	3	4	5					
Phone # _____ email _____					1	2	3	4	5					
Sampler Signature <u>Dana Ramquist</u>		Sampler Printed Name <u>Dana Ramquist</u>		1	2	3	4	5						
CLIENT SAMPLE ID	LABID	SAMPLING Date Time	Matrix											
1. POMONA												<u>02 91312</u>		
2. TRIP BLANK		9/12/17 930	W	2	X									
3. FTP - 1		9/12/17 1000	W	10	X	X	X	X						
4. FTP - 14		9/12/17 1145	W	10	X	X	X	X						
5. FTP - 15		9/12/17 1030	W	10	X	X	X	X						
6. FTP - 16		9/13/17 830	W	30	X	X	X	X				MS/MSD		
7. POMONA		9/13/17 745	W	3	X									
8. PAUL		9/13/17 800	W	3	X									
9.														
10.														

Report Requirements <input type="checkbox"/> I. Routine Report: Method Blank, Surrogate, as required <input type="checkbox"/> II. Report Dup., MS, MSD as required <input type="checkbox"/> III. CLP Like Summary (no raw data) <input checked="" type="checkbox"/> IV. Data Validation Report <input type="checkbox"/> V. EDD	Invoice Information P.O.# _____ Bill To: _____ _____ _____	Circle which metals are to be analyzed Total Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg Dissolved Metals: Al As Sb Ba Be B Ca Cd Co Cr Cu Fe Pb Mg Mn Mo Ni K Ag Na Se Sr Ti Sn V Zn Hg
	Turnaround Requirements <input type="checkbox"/> 24 hr. _____ 48 hr. <input checked="" type="checkbox"/> 5 Day Standard	Special Instructions/Comments: _____ *Indicate State Hydrocarbon Procedure: AK CA WI Northwest Other _____ (Circle One)

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature <u>Dana Ramquist</u>	Signature	Signature	Signature <u>CODY GRAVES</u>	Signature	Signature
Printed Name <u>Dana Ramquist</u>	Printed Name	Printed Name	Printed Name <u>ALS</u>	Printed Name	Printed Name
Firm <u>T+EC</u>	Firm <u>FEDEX</u>	Firm	Firm <u>ALS</u>	Firm	Firm
Date/Time <u>9/13/17/1100</u>	Date/Time	Date/Time	Date/Time <u>9/15/17 1045</u>	Date/Time	Date/Time

CG



PC KC

Cooler Receipt and Preservation Form

Client T+2C Service Request K17 09799
 Received: 9/14/17 Opened: 9/14/17 By: BR Unloaded: 9/14/17 By: BR

- Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
- Samples were received in: (circle) Cooler Box Envelope Other NA
- Were custody seals on coolers? NA N If yes, how many and where? 1 front
 If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID	Tracking Number	NA	Filed
-0.1	-0.1	0.9	0.9	0.0	381	<u>NA</u>	770249191157		
-0.5	-0.6	0.0	0.9	-0.1	365		770249190040		
-0.6	-0.5	0.6	0.7	+0.1	367		770249189856		

- Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
- Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- Were samples received in good condition (temperature, unbroken)? Indicate in the table below. NA Y N
 If applicable, tissue samples were received: Frozen Partially Thawed Thawed
- Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
- Did all sample labels and tags agree with custody papers? Indicate major discrepancies in the table on page 2. NA Y N
- Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- Were the pH-preserved bottles (see SMO GEN SOP) received at the appropriate pH? Indicate in the table below NA Y N
- Were VOA vials received without headspace? Indicate in the table below. NA Y N
- Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time

Notes, Discrepancies, & Resolutions: Missing one cooler



PC KC

Cooler Receipt and Preservation Form

Client T Tec Service Request K1709799
 Received: 9/15/17 Opened: 9/15/17 By: CG Unloaded: 9/15/17 By: CG

- Samples were received via? USPS Fed Ex UPS DHL PDX Courier Hand Delivered
- Samples were received in: (circle) Cooler Box Envelope Other NA
- Were custody seals on coolers? NA Y N If yes, how many and where? 1 Front 1 Back
 If present, were custody seals intact? Y N If present, were they signed and dated? Y N

Raw Cooler Temp	Corrected Cooler Temp	Raw Temp Blank	Corrected Temp Blank	Corr. Factor	Thermometer ID	Cooler/COC ID NA	Tracking Number NA	Filed
0.7	0.8	3.7	3.8	+0.1	352	82545	7702 4919 0702	

- Packing material: Inserts Baggies Bubble Wrap Gel Packs Wet Ice Dry Ice Sleeves
- Were custody papers properly filled out (ink, signed, etc.)? NA Y N
- Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA Y N
 If applicable, tissue samples were received: Frozen Partially Thawed Thawed
- Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
- Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
- Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
- Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
- Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
- Was C12/Res negative? NA Y N

Sample ID on Bottle	Sample ID on COC	Identified by:

Sample ID	Bottle Count	Bottle Type	Out of Temp	Head-space	Broke	pH	Reagent	Volume added	Reagent Lot Number	Initials	Time
FTP-14	1 of 6	VOA		X							
FTP-15	1 of 6	VOA		X							
FTP-16	2 of 18	VOA		X							

Notes, Discrepancies, & Resolutions: Cooler is the missing item from shipment rec'd 9/14/17.



Diesel and Residual Range Organics

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799

**Cover Page - Organic Analysis Data Package
 Diesel and Residual Range Organics**

Sample Name	Lab Code	Date Collected	Date Received
FTP-1	K1709799-011	09/12/2017	09/14/2017
FTP-14	K1709799-012	09/12/2017	09/14/2017
FTP-15	K1709799-013	09/12/2017	09/14/2017
FTP-16	K1709799-014	09/13/2017	09/14/2017
FTP-16	KWG1708406-1	09/13/2017	09/14/2017
FTP-16MS	KWG1708406-2	09/13/2017	09/14/2017
FTP-16DMS	KWG1708406-3	09/13/2017	09/14/2017

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Diesel and Residual Range Organics

Sample Name: FTP-1
Lab Code: K1709799-011
Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	35000	Y	110	21	12	1	09/21/17	09/26/17	KWG1708406	
Residual Range Organics (RRO)	4000	L	110	53	20	1	09/21/17	09/26/17	KWG1708406	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	57	50-150	09/26/17	Acceptable
n-Triacontane	60	50-150	09/26/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Diesel and Residual Range Organics

Sample Name: FTP-14
Lab Code: K1709799-012
Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	220	Y	100	20	11	1	09/21/17	09/26/17	KWG1708406	
Residual Range Organics (RRO)	110	L	100	50	19	1	09/21/17	09/26/17	KWG1708406	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	81	50-150	09/26/17	Acceptable
n-Triacontane	87	50-150	09/26/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Diesel and Residual Range Organics

Sample Name: FTP-15
Lab Code: K1709799-013
Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	210	Y	100	20	11	1	09/21/17	09/26/17	KWG1708406	
Residual Range Organics (RRO)	130	L	100	50	19	1	09/21/17	09/26/17	KWG1708406	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	73	50-150	09/26/17	Acceptable
n-Triacontane	80	50-150	09/26/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/13/2017
Date Received: 09/14/2017

Diesel and Residual Range Organics

Sample Name: FTP-16
Lab Code: K1709799-014
Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	190		110	22	12	1	09/21/17	09/26/17	KWG1708406	
Residual Range Organics (RRO)	160		110	55	21	1	09/21/17	09/26/17	KWG1708406	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	90	50-150	09/26/17	Acceptable
n-Triacontane	98	50-150	09/26/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: NA
Date Received: NA

Diesel and Residual Range Organics

Sample Name: Method Blank
Lab Code: KWG1708406-5
Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	ND	U	100	20	11	1	09/21/17	09/26/17	KWG1708406	
Residual Range Organics (RRO)	26	J	100	50	19	1	09/21/17	09/26/17	KWG1708406	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	68	50-150	09/26/17	Acceptable
n-Triacontane	73	50-150	09/26/17	Acceptable

Comments: _____

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799

**Surrogate Recovery Summary
 Diesel and Residual Range Organics**

Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: Percent
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>
FTP-1	K1709799-011	57	60
FTP-14	K1709799-012	81	87
FTP-15	K1709799-013	73	80
FTP-16	K1709799-014	90	98
FTP-16DUP	KWG1708406-1	91	99
Method Blank	KWG1708406-5	68	73
FTP-16MS	KWG1708406-2	81	85
FTP-16DMS	KWG1708406-3	93	99
Lab Control Sample	KWG1708406-4	88	94

Surrogate Recovery Control Limits (%)

Sur1 = o-Terphenyl	50-150
Sur2 = n-Triacontane	50-150

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/21/2017
Date Analyzed: 09/26/2017

Matrix Spike/Duplicate Matrix Spike Summary
Diesel and Residual Range Organics

Sample Name: FTP-16
Lab Code: K1709799-014
Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1708406

Analyte Name	Sample Result	FTP-16MS KWG1708406-2 Matrix Spike			FTP-16DMS KWG1708406-3 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Diesel Range Organics (DRO)	190	2810	3330	79	3410	3480	93	46-140	19	30
Residual Range Organics (RRO)	160	1470	1670	79	1680	1740	88	45-159	13	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/21/2017
Date Analyzed: 09/26/2017

Duplicate Sample Summary
Diesel and Residual Range Organics

Sample Name: FTP-16
Lab Code: K1709799-014
Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1708406

Analyte Name	LOQ	MDL	Sample Result	FTP-16DUP KWG1708406-1 Duplicate Sample		Relative Percent Difference	RPD Limit
				Result	Average		
Diesel Range Organics (DRO)	110	12	190	220	210	16 #	30
Residual Range Organics (RRO)	110	21	160	170	160	11 #	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/21/2017
Date Analyzed: 09/26/2017

Lab Control Spike Summary
Diesel and Residual Range Organics

Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1708406

Lab Control Sample
 KWG1708406-4
 Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Diesel Range Organics (DRO)	2730	3200	85	46-140
Residual Range Organics (RRO)	1300	1600	81	45-159

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/21/2017
Date Analyzed: 09/26/2017
Time Analyzed: 14:06

Method Blank Summary
Diesel and Residual Range Organics

Sample Name: Method Blank
Lab Code: KWG1708406-5
Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Instrument ID: GC29
File ID: J:\GC29\DATA\092617\0926F209.D
Level: Low
Extraction Lot: KWG1708406

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1708406-4	J:\GC29\DATA\092617\0926F208.D	09/26/17	13:45
FTP-14	K1709799-012	J:\GC29\DATA\092617\0926F212.D	09/26/17	15:08
FTP-15	K1709799-013	J:\GC29\DATA\092617\0926F213.D	09/26/17	15:28
FTP-16	K1709799-014	J:\GC29\DATA\092617\0926F214.D	09/26/17	15:49
FTP-16MS	KWG1708406-2	J:\GC29\DATA\092617\0926F215.D	09/26/17	16:09
FTP-16DMS	KWG1708406-3	J:\GC29\DATA\092617\0926F216.D	09/26/17	16:30
FTP-16DUP	KWG1708406-1	J:\GC29\DATA\092617\0926F217.D	09/26/17	16:50
FTP-1	K1709799-011	J:\GC29\DATA\092617\0926F219.D	09/26/17	17:31

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/21/2017
Date Analyzed: 09/26/2017
Time Analyzed: 13:45

Lab Control Sample Summary
Diesel and Residual Range Organics

Sample Name: Lab Control Sample
Lab Code: KWG1708406-4
Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Instrument ID: GC29
File ID: J:\GC29\DATA\092617\0926F208.D
Level: Low
Extraction Lot: KWG1708406

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1708406-5	J:\GC29\DATA\092617\0926F209.D	09/26/17	14:06
FTP-14	K1709799-012	J:\GC29\DATA\092617\0926F212.D	09/26/17	15:08
FTP-15	K1709799-013	J:\GC29\DATA\092617\0926F213.D	09/26/17	15:28
FTP-16	K1709799-014	J:\GC29\DATA\092617\0926F214.D	09/26/17	15:49
FTP-16MS	KWG1708406-2	J:\GC29\DATA\092617\0926F215.D	09/26/17	16:09
FTP-16DMS	KWG1708406-3	J:\GC29\DATA\092617\0926F216.D	09/26/17	16:30
FTP-16DUP	KWG1708406-1	J:\GC29\DATA\092617\0926F217.D	09/26/17	16:50
FTP-1	K1709799-011	J:\GC29\DATA\092617\0926F219.D	09/26/17	17:31

Client: Tetra Tech, Inc.
 Project: YTC/106-45760003

Service Request: K1709799
 Calibration Date: 09/05/2017

**Initial Calibration Summary
 Diesel and Residual Range Organics**

Calibration ID: CAL15535
 Instrument ID: GC29

Column: ZB-1

Level ID	File ID	Level ID	File ID
A	J:\GC29\DATA\090517F\0905F219.D	H	J:\GC29\DATA\090517F\0905F226.D
B	J:\GC29\DATA\090517F\0905F220.D	I	J:\GC29\DATA\090517F\0905F230.D
C	J:\GC29\DATA\090517F\0905F221.D	J	J:\GC29\DATA\090517F\0905F231.D
D	J:\GC29\DATA\090517F\0905F222.D	K	J:\GC29\DATA\090517F\0905F232.D
E	J:\GC29\DATA\090517F\0905F223.D	L	J:\GC29\DATA\090517F\0905F233.D
F	J:\GC29\DATA\090517F\0905F224.D	M	J:\GC29\DATA\090517F\0905F234.D
G	J:\GC29\DATA\090517F\0905F225.D		

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Diesel Range Organics (DRO)	A	20	2730	B	50	2930	C	200	3080	D	500	2890	E	2000	2800
	F	5000	2860	G	20000	2820	H	50000	2610						
Residual Range Organics (RRO)										I	50	1740	J	200	1710
				K	500	1770	L	2000	1730	M	5000	1530			
o-Terphenyl	A	1.0	4530	B	2.5	4540	C	10	4690	D	25	4290	E	100	4160
	F	250	4200												
n-Triacontane	A	1.0	3630	B	2.5	3620	C	10	3760	D	25	3480	E	100	3340
	F	250	3310												

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Calibration Date: 09/05/2017

Initial Calibration Summary
Diesel and Residual Range Organics

Calibration ID: CAL15535
Instrument ID: GC29

Column: ZB-1

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
Diesel Range Organics (DRO)	MS	AverageRF	% RSD	4.9		≤ 20
Residual Range Organics (RRO)	MS	AverageRF	% RSD	5.6		≤ 20
o-Terphenyl	SURR	AverageRF	% RSD	4.8		≤ 20
n-Triacontane	SURR	AverageRF	% RSD	5.0		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Calibration Date: 09/05/2017
Date Analyzed: 09/05/2017

Second Source Calibration Verification
Diesel and Residual Range Organics

Calibration Type: External Standard
Analysis Method: NWTPH-Dx

Calibration ID: CAL15535
Units: ppm

File ID: J:\GC29\DATA\090517F\0905F228.D
 J:\GC29\DATA\090517F\0905F236.D

Column ID: ZB-1

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Diesel Range Organics (DRO)	1000	1000	2840	2850	0	NA	± 15 %	AverageRF
Residual Range Organics (RRO)	1000	860	1690	1460	-14	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Date Analyzed: 09/26/2017

**Continuing Calibration Verification Summary
 Diesel and Residual Range Organics**

Calibration Type: External Standard
Analysis Method: NWTPH-Dx

Calibration Date: 09/05/2017
Calibration ID: CAL15535
Analysis Lot: KWG1708678
Units: ppm
Column ID: ZB-1

File ID: J:\GC29\DATA\092617\0926F203.D
 J:\GC29\DATA\092617\0926F204.D

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Diesel Range Organics (DRO)	1000	1000	2840	2890	2	NA	± 15	AverageRF
Residual Range Organics (RRO)	1000	940	1690	1600	-6	NA	± 15	AverageRF
o-Terphenyl	50	50	4400	4390	0	NA	± 15	AverageRF
n-Triacontane	50	52	3520	3680	5	NA	± 15	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Date Analyzed: 09/26/2017

**Continuing Calibration Verification Summary
 Diesel and Residual Range Organics**

Calibration Type: External Standard
Analysis Method: NWTPH-Dx

Calibration Date: 09/05/2017
Calibration ID: CAL15535
Analysis Lot: KWG1708678
Units: ppm
Column ID: ZB-1

File ID: J:\GC29\DATA\092617\0926F220.D
 J:\GC29\DATA\092617\0926F221.D

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Diesel Range Organics (DRO)	1000	950	2840	2690	-5	NA	± 15	AverageRF
Residual Range Organics (RRO)	1000	970	1690	1640	-3	NA	± 15	AverageRF
o-Terphenyl	50	45	4400	3950	-10	NA	± 15	AverageRF
n-Triacontane	50	48	3520	3420	-3	NA	± 15	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Date Analyzed: 09/26/2017 -
 09/27/2017

**Continuing Calibration Verification Summary
 Diesel and Residual Range Organics**

Calibration Type: External Standard
Analysis Method: NWTPH-Dx

Calibration Date: 09/05/2017
Calibration ID: CAL15535
Analysis Lot: KWG1708678
Units: ppm
Column ID: ZB-1

File ID: J:\GC29\DATA\092617\0926F237.D
 J:\GC29\DATA\092617\0926F238.D

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Diesel Range Organics (DRO)	1000	1100	2840	3250	14	NA	± 15	AverageRF
Residual Range Organics (RRO)	1000	1000	1690	1750	3	NA	± 15	AverageRF
o-Terphenyl	50	54	4400	4780	9	NA	± 15	AverageRF
n-Triacontane	50	58	3520	4100	16 *	NA	± 15	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Tetra Tech, Inc.
 Project: YTC/106-45760003

Service Request: K1709799

Analysis Run Log
 Diesel and Residual Range Organics

Analysis Method: NWTPH-Dx

Analysis Lot: KWG1708678
 Instrument ID: GC29
 Column: ZB-1

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0926F203.D	Continuing Calibration Verification	KWG1708678-1	9/26/2017	12:03		9/26/2017	12:18
0926F204.D	Continuing Calibration Verification	KWG1708678-1	9/26/2017	12:23		9/26/2017	12:38
0926F205.D	Instrument Blank	KWG1708678-4	9/26/2017	12:44		9/26/2017	12:59
0926F208.D	Lab Control Sample	KWG1708406-4	9/26/2017	13:45		9/26/2017	14:00
0926F209.D	Method Blank	KWG1708406-5	9/26/2017	14:06		9/26/2017	14:21
0926F210.D	ZZZZZZ	ZZZZZZ	9/26/2017	14:26		9/26/2017	14:41
0926F211.D	ZZZZZZ	ZZZZZZ	9/26/2017	14:47		9/26/2017	15:02
0926F212.D	FTP-14	K1709799-012	9/26/2017	15:08		9/26/2017	15:23
0926F213.D	FTP-15	K1709799-013	9/26/2017	15:28		9/26/2017	15:43
0926F214.D	FTP-16	K1709799-014	9/26/2017	15:49		9/26/2017	16:04
0926F215.D	FTP-16MS	KWG1708406-2	9/26/2017	16:09		9/26/2017	16:24
0926F216.D	FTP-16DMS	KWG1708406-3	9/26/2017	16:30		9/26/2017	16:45
0926F217.D	FTP-16DUP	KWG1708406-1	9/26/2017	16:50		9/26/2017	17:05
0926F218.D	ZZZZZZ	ZZZZZZ	9/26/2017	17:11		9/26/2017	17:26
0926F219.D	FTP-1	K1709799-011	9/26/2017	17:31		9/26/2017	17:46
0926F220.D	Continuing Calibration Verification	KWG1708678-2	9/26/2017	17:52		9/26/2017	18:07
0926F221.D	Continuing Calibration Verification	KWG1708678-2	9/26/2017	18:12		9/26/2017	18:27
0926F222.D	Instrument Blank	KWG1708678-5	9/26/2017	18:33		9/26/2017	18:48
0926F223.D	ZZZZZZ	ZZZZZZ	9/26/2017	18:53		9/26/2017	19:08
0926F224.D	ZZZZZZ	ZZZZZZ	9/26/2017	19:13		9/26/2017	19:28
0926F225.D	ZZZZZZ	ZZZZZZ	9/26/2017	19:34		9/26/2017	19:49
0926F226.D	ZZZZZZ	ZZZZZZ	9/26/2017	19:54		9/26/2017	20:09
0926F227.D	ZZZZZZ	ZZZZZZ	9/26/2017	20:15		9/26/2017	20:30
0926F228.D	ZZZZZZ	ZZZZZZ	9/26/2017	20:36		9/26/2017	20:51
0926F229.D	ZZZZZZ	ZZZZZZ	9/26/2017	20:56		9/26/2017	21:11
0926F230.D	ZZZZZZ	ZZZZZZ	9/26/2017	21:16		9/26/2017	21:31
0926F231.D	ZZZZZZ	ZZZZZZ	9/26/2017	21:37		9/26/2017	21:52
0926F232.D	ZZZZZZ	ZZZZZZ	9/26/2017	21:57		9/26/2017	22:12
0926F233.D	ZZZZZZ	ZZZZZZ	9/26/2017	22:17		9/26/2017	22:32
0926F234.D	ZZZZZZ	ZZZZZZ	9/26/2017	22:38		9/26/2017	22:53
0926F235.D	ZZZZZZ	ZZZZZZ	9/26/2017	22:58		9/26/2017	23:13
0926F236.D	ZZZZZZ	ZZZZZZ	9/26/2017	23:19		9/26/2017	23:34
0926F237.D	Continuing Calibration Verification	KWG1708678-3	9/26/2017	23:40		9/26/2017	23:55
0926F238.D	Continuing Calibration Verification	KWG1708678-3	9/27/2017	00:00		9/27/2017	00:15

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799

Analysis Run Log
Diesel and Residual Range Organics

Analysis Method: NWTPH-Dx

Analysis Lot: KWG1708678
Instrument ID: GC29
Column: ZB-1

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0926F239.D	Instrument Blank	KWG1708678-6	9/27/2017	00:21		9/27/2017	00:36

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/21/2017

Extraction Prep Log
Diesel and Residual Range Organics

Extraction Method: EPA 3510C
Analysis Method: NWTPH-Dx

Extraction Lot: KWG1708406
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
FTP-1	K1709799-011	09/12/17	09/14/17	480ml	1ml	NA	
FTP-14	K1709799-012	09/12/17	09/14/17	500ml	1ml	NA	
FTP-15	K1709799-013	09/12/17	09/14/17	500ml	1ml	NA	
FTP-16	K1709799-014	09/13/17	09/14/17	460ml	1ml	NA	
FTP-16DUP	KWG1708406-1	09/13/17	09/14/17	460ml	1ml	NA	
Method Blank	KWG1708406-5	NA	NA	500ml	1ml	NA	
FTP-16MS	KWG1708406-2	09/13/17	09/14/17	480ml	1ml	NA	
FTP-16DMS	KWG1708406-3	09/13/17	09/14/17	460ml	1ml	NA	
Lab Control Sample	KWG1708406-4	NA	NA	500ml	1ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis



Gasoline Range Organics

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799

**Cover Page - Organic Analysis Data Package
Gasoline Range Organics**

Sample Name	Lab Code	Date Collected	Date Received
FTP-1	K1709799-011	09/12/2017	09/14/2017
FTP-14	K1709799-012	09/12/2017	09/14/2017
FTP-15	K1709799-013	09/12/2017	09/14/2017
FTP-16	K1709799-014	09/13/2017	09/14/2017
FTP-16	KWG1708744-1	09/13/2017	09/14/2017

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Gasoline Range Organics

Sample Name: FTP-1
Lab Code: K1709799-011
Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	1000	H	250	25	12	1	09/26/17	09/26/17	KWG1708744	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	74	50-150	09/26/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Gasoline Range Organics

Sample Name: FTP-14
Lab Code: K1709799-012
Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	37	J	250	25	12	1	09/26/17	09/26/17	KWG1708744	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	79	50-150	09/26/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Gasoline Range Organics

Sample Name: FTP-15
Lab Code: K1709799-013
Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	15	J	250	25	12	1	09/26/17	09/26/17	KWG1708744	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	85	50-150	09/26/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/13/2017
Date Received: 09/14/2017

Gasoline Range Organics

Sample Name: FTP-16
Lab Code: K1709799-014
Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	25	12	1	09/26/17	09/26/17	KWG1708744	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	81	50-150	09/26/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: NA
Date Received: NA

Gasoline Range Organics

Sample Name: Method Blank
Lab Code: KWG1708744-3
Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	25	12	1	09/26/17	09/26/17	KWG1708744	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	84	50-150	09/26/17	Acceptable

Comments: _____

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799

**Surrogate Recovery Summary
 Gasoline Range Organics**

Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: Percent
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>
FTP-1	K1709799-011	74
FTP-14	K1709799-012	79
FTP-15	K1709799-013	85
FTP-16	K1709799-014	81
FTP-16DUP	KWG1708744-1	84
Method Blank	KWG1708744-3	84
Lab Control Sample	KWG1708744-2	85

Surrogate Recovery Control Limits (%)

Sur1 = 1,4-Difluorobenzene 50-150

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/26/2017
Date Analyzed: 09/26/2017

Duplicate Sample Summary
Gasoline Range Organics

Sample Name: FTP-16
Lab Code: K1709799-014
Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1708744

Analyte Name	LOQ	MDL	Sample Result	FTP-16DUP KWG1708744-1 Duplicate Sample		Relative Percent Difference	RPD Limit
				Result	Average		
Gasoline Range Organics-NWTPH	250	12	ND	ND	ND	-	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/26/2017
Date Analyzed: 09/26/2017

Lab Control Spike Summary
Gasoline Range Organics

Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1708744

Lab Control Sample
 KWG1708744-2
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Gasoline Range Organics-NWTPH	462	500	92	80-119

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/26/2017
Date Analyzed: 09/26/2017
Time Analyzed: 22:06

Method Blank Summary
Gasoline Range Organics

Sample Name: Method Blank
Lab Code: KWG1708744-3
Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Instrument ID: GC39
File ID: J:\GC39\DATA\092617\0926F013.D
Level: Low
Extraction Lot: KWG1708744

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
FTP-1	K1709799-011	J:\GC39\DATA\092617\0926F007.D	09/26/17	19:40
FTP-14	K1709799-012	J:\GC39\DATA\092617\0926F008.D	09/26/17	20:05
FTP-15	K1709799-013	J:\GC39\DATA\092617\0926F009.D	09/26/17	20:29
FTP-16	K1709799-014	J:\GC39\DATA\092617\0926F010.D	09/26/17	20:53
FTP-16DUP	KWG1708744-1	J:\GC39\DATA\092617\0926F011.D	09/26/17	21:17
Lab Control Sample	KWG1708744-2	J:\GC39\DATA\092617\0926F012.D	09/26/17	21:42

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/26/2017
Date Analyzed: 09/26/2017
Time Analyzed: 21:42

Lab Control Sample Summary
Gasoline Range Organics

Sample Name: Lab Control Sample
Lab Code: KWG1708744-2
Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Instrument ID: GC39
File ID: J:\GC39\DATA\092617\0926F012.D
Level: Low
Extraction Lot: KWG1708744

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
FTP-1	K1709799-011	J:\GC39\DATA\092617\0926F007.D	09/26/17	19:40
FTP-14	K1709799-012	J:\GC39\DATA\092617\0926F008.D	09/26/17	20:05
FTP-15	K1709799-013	J:\GC39\DATA\092617\0926F009.D	09/26/17	20:29
FTP-16	K1709799-014	J:\GC39\DATA\092617\0926F010.D	09/26/17	20:53
FTP-16DUP	KWG1708744-1	J:\GC39\DATA\092617\0926F011.D	09/26/17	21:17
Method Blank	KWG1708744-3	J:\GC39\DATA\092617\0926F013.D	09/26/17	22:06

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Calibration Date: 03/22/2017

Initial Calibration Summary
Gasoline Range Organics

Calibration ID: CAL15263
Instrument ID: GC39

Column: DB-624

Level ID	File ID	Level ID	File ID
A	J:\GC39\DATA\032217\0322F007.D	E	J:\GC39\DATA\032217\0322F011.D
B	J:\GC39\DATA\032217\0322F008.D	F	J:\GC39\DATA\032217\0322F012.D
C	J:\GC39\DATA\032217\0322F009.D	G	J:\GC39\DATA\032217\0322F013.D
D	J:\GC39\DATA\032217\0322F010.D		

Analyte Name	Level ID			Level ID			Level ID			Level ID					
	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF	ID	Amt	RF			
Gasoline Range Organics-NWTPH	A	50	82100	B	100	80200	C	200	76300	D	500	71000	E	1000	73900
	F	5000	73700	G	10000	76000									
1,4-Difluorobenzene	A	20	1.38E+5	B	25	1.38E+5	C	50	1.40E+5	D	100	1.34E+5	E	150	1.40E+5

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Calibration Date: 03/22/2017

Initial Calibration Summary
Gasoline Range Organics

Calibration ID: CAL15263
Instrument ID: GC39

Column: DB-624

Analyte Name	Compound Type	Calibration Evaluation				Control Criteria
		Fit Type	Eval.	Eval. Result	Q	
Gasoline Range Organics-NWTPH	MS	AverageRF	% RSD	5.1		≤ 20
1,4-Difluorobenzene	SURR	AverageRF	% RSD	1.9		≤ 20

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Calibration Date: 03/22/2017
Date Analyzed: 03/23/2017

**Second Source Calibration Verification
 Gasoline Range Organics**

Calibration Type: External Standard
Analysis Method: NWTPH-Gx

Calibration ID: CAL15263
Units: ug/L

File ID: J:\GC39\DATA\032217\0322F025.D

Column ID: DB-624

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Gasoline Range Organics-NWTPH	500	580	76200	87000	14	NA	± 15 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Date Analyzed: 09/26/2017

Continuing Calibration Verification Summary
Gasoline Range Organics

Calibration Type: External Standard
Analysis Method: NWTPH-Gx

Calibration Date: 03/22/2017
Calibration ID: CAL15263
Analysis Lot: KWG1708774
Units: ug/L
Column ID: DB-624

File ID: J:\GC39\DATA\092617\0926F005.D

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Gasoline Range Organics-NWTPH	500	480	76200	73000	-4	NA	± 20	AverageRF
1,4-Difluorobenzene	100	87	138000	119000	-13	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Date Analyzed: 09/27/2017

Continuing Calibration Verification Summary
Gasoline Range Organics

Calibration Type: External Standard
Analysis Method: NWTPH-Gx

Calibration Date: 03/22/2017
Calibration ID: CAL15263
Analysis Lot: KWG1708774
Units: ug/L
Column ID: DB-624

File ID: J:\GC39\DATA\092617\0926F019.D

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Gasoline Range Organics-NWTPH	500	460	76200	69400	-9	NA	± 20	AverageRF
1,4-Difluorobenzene	100	85	138000	117000	-15	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

Client: Tetra Tech, Inc.
 Project: YTC/106-45760003

Service Request: K1709799

Analysis Run Log
 Gasoline Range Organics

Analysis Method: NWTPH-Gx

Analysis Lot: KWG1708774
 Instrument ID: GC39
 Column: DB-624

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0926F005.D	Continuing Calibration Verification	KWG1708774-1	9/26/2017	18:52		9/26/2017	19:07
0926F006.D	Instrument Blank	KWG1708774-2	9/26/2017	19:16		9/26/2017	19:31
0926F007.D	FTP-1	K1709799-011	9/26/2017	19:40		9/26/2017	19:55
0926F008.D	FTP-14	K1709799-012	9/26/2017	20:05		9/26/2017	20:20
0926F009.D	FTP-15	K1709799-013	9/26/2017	20:29		9/26/2017	20:44
0926F010.D	FTP-16	K1709799-014	9/26/2017	20:53		9/26/2017	21:08
0926F011.D	FTP-16DUP	KWG1708744-1	9/26/2017	21:17		9/26/2017	21:32
0926F012.D	Lab Control Sample	KWG1708744-2	9/26/2017	21:42		9/26/2017	21:57
0926F013.D	Method Blank	KWG1708744-3	9/26/2017	22:06		9/26/2017	22:21
0926F014.D	ZZZZZZ	ZZZZZZ	9/26/2017	22:30		9/26/2017	22:45
0926F015.D	ZZZZZZ	ZZZZZZ	9/26/2017	22:54		9/26/2017	23:09
0926F016.D	ZZZZZZ	ZZZZZZ	9/26/2017	23:19		9/26/2017	23:34
0926F017.D	ZZZZZZ	ZZZZZZ	9/26/2017	23:43		9/26/2017	23:58
0926F018.D	ZZZZZZ	ZZZZZZ	9/27/2017	00:07		9/27/2017	00:22
0926F019.D	Continuing Calibration Verification	KWG1708774-3	9/27/2017	00:32		9/27/2017	00:47
0926F020.D	Instrument Blank	KWG1708774-4	9/27/2017	00:56		9/27/2017	01:11
0926F021.D	ZZZZZZ	ZZZZZZ	9/27/2017	01:20		9/27/2017	01:35
0926F022.D	ZZZZZZ	ZZZZZZ	9/27/2017	01:44		9/27/2017	01:59
0926F023.D	ZZZZZZ	ZZZZZZ	9/27/2017	02:08		9/27/2017	02:23
0926F024.D	ZZZZZZ	ZZZZZZ	9/27/2017	02:32		9/27/2017	02:47
0926F025.D	ZZZZZZ	ZZZZZZ	9/27/2017	02:57		9/27/2017	03:12
0926F026.D	ZZZZZZ	ZZZZZZ	9/27/2017	03:21		9/27/2017	03:36
0926F027.D	ZZZZZZ	ZZZZZZ	9/27/2017	03:45		9/27/2017	04:00
0926F028.D	ZZZZZZ	ZZZZZZ	9/27/2017	04:09		9/27/2017	04:24
0926F029.D	ZZZZZZ	ZZZZZZ	9/27/2017	04:34		9/27/2017	04:49
0926F030.D	ZZZZZZ	ZZZZZZ	9/27/2017	04:58		9/27/2017	05:13
0926F031.D	ZZZZZZ	ZZZZZZ	9/27/2017	05:22		9/27/2017	05:37
0926F032.D	ZZZZZZ	ZZZZZZ	9/27/2017	05:46		9/27/2017	06:01
0926F033.D	ZZZZZZ	ZZZZZZ	9/27/2017	06:11		9/27/2017	06:26
0926F034.D	ZZZZZZ	ZZZZZZ	9/27/2017	06:35		9/27/2017	06:50
0926F035.D	ZZZZZZ	ZZZZZZ	9/27/2017	06:59		9/27/2017	07:14
0926F036.D	ZZZZZZ	ZZZZZZ	9/27/2017	07:23		9/27/2017	07:38
0926F037.D	ZZZZZZ	ZZZZZZ	9/27/2017	07:48		9/27/2017	08:03
0926F038.D	Continuing Calibration Verification	KWG1708774-5	9/27/2017	08:12		9/27/2017	08:27
0926F039.D	Instrument Blank	KWG1708774-6	9/27/2017	08:36		9/27/2017	08:51

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799

Analysis Run Log
Gasoline Range Organics

Analysis Method: NWTPH-Gx

Analysis Lot: KWG1708774
Instrument ID: GC39
Column: DB-624

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0926F040.D	ZZZZZZ	ZZZZZZ	9/27/2017	09:01		9/27/2017	09:16
0926F041.D	ZZZZZZ	ZZZZZZ	9/27/2017	09:25		9/27/2017	09:40
0926F042.D	ZZZZZZ	ZZZZZZ	9/27/2017	09:49		9/27/2017	10:04
0926F043.D	Continuing Calibration Verification	KWG1708774-7	9/27/2017	10:13		9/27/2017	10:28
0926F044.D	Instrument Blank	KWG1708774-8	9/27/2017	10:37		9/27/2017	10:52

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/26/2017

Extraction Prep Log
Gasoline Range Organics

Extraction Method: EPA 5030B
Analysis Method: NWTPH-Gx

Extraction Lot: KWG1708744
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
FTP-1	K1709799-011	09/12/17	09/14/17	10ml	10ml	NA	
FTP-14	K1709799-012	09/12/17	09/14/17	10ml	10ml	NA	
FTP-15	K1709799-013	09/12/17	09/14/17	10ml	10ml	NA	
FTP-16	K1709799-014	09/13/17	09/14/17	10ml	10ml	NA	
FTP-16DUP	KWG1708744-1	09/13/17	09/14/17	10ml	10ml	NA	
Method Blank	KWG1708744-3	NA	NA	10ml	10ml	NA	
Lab Control Sample	KWG1708744-2	NA	NA	10ml	10ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis



Volatile Organic Compounds

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799

**Cover Page - Organic Analysis Data Package
 Volatile Organic Compounds**

Sample Name	Lab Code	Date Collected	Date Received
815-2	K1709799-001	09/12/2017	09/14/2017
TVR-5	K1709799-002	09/12/2017	09/14/2017
TVR-6	K1709799-003	09/12/2017	09/14/2017
TVR-7	K1709799-004	09/12/2017	09/14/2017
TVR-3	K1709799-005	09/12/2017	09/14/2017
TVR-1	K1709799-006	09/12/2017	09/14/2017
MTS-1	K1709799-007	09/12/2017	09/14/2017
MTS-2	K1709799-008	09/12/2017	09/14/2017
MTS-4	K1709799-009	09/12/2017	09/14/2017
TRIP BLANK	K1709799-010	09/12/2017	09/14/2017
FTP-1	K1709799-011	09/12/2017	09/14/2017
FTP-14	K1709799-012	09/12/2017	09/14/2017
FTP-15	K1709799-013	09/12/2017	09/14/2017
FTP-16	K1709799-014	09/13/2017	09/14/2017
POMONA	K1709799-015	09/13/2017	09/14/2017
PAIC	K1709799-016	09/13/2017	09/14/2017
FTP-16MS	KWG1708554-1	09/13/2017	09/14/2017
FTP-16DMS	KWG1708554-2	09/13/2017	09/14/2017

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: 815-2
Lab Code: K1709799-001
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/22/17	09/23/17	KWG1708579	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/22/17	09/23/17	KWG1708579	
Acetone	3.9	J	20	10	3.3	1	09/22/17	09/23/17	KWG1708579	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/22/17	09/23/17	KWG1708579	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/22/17	09/23/17	KWG1708579	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/22/17	09/23/17	KWG1708579	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/22/17	09/23/17	KWG1708579	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroform	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/22/17	09/23/17	KWG1708579	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Benzene	ND	U	0.50	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/22/17	09/23/17	KWG1708579	
Trichloroethene (TCE)	0.64		0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/22/17	09/23/17	KWG1708579	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/22/17	09/23/17	KWG1708579	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/22/17	09/23/17	KWG1708579	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/22/17	09/23/17	KWG1708579	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/22/17	09/23/17	KWG1708579	
Toluene	ND	U	0.50	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/22/17	09/23/17	KWG1708579	
Tetrachloroethene (PCE)	0.18	J	0.50	0.20	0.099	1	09/22/17	09/23/17	KWG1708579	
2-Hexanone	ND	U	20	10	2.7	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/22/17	09/23/17	KWG1708579	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/22/17	09/23/17	KWG1708579	

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: 815-2
Lab Code: K1709799-001
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/22/17	09/23/17	KWG1708579	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/22/17	09/23/17	KWG1708579	
Styrene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Bromoform	ND	U	0.50	0.50	0.16	1	09/22/17	09/23/17	KWG1708579	*
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/22/17	09/23/17	KWG1708579	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/22/17	09/23/17	KWG1708579	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/22/17	09/23/17	KWG1708579	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/22/17	09/23/17	KWG1708579	

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: 815-2
Lab Code: K1709799-001

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	85-115	09/23/17	Acceptable
1,2-Dichloroethane-d4	99	70-120	09/23/17	Acceptable
Toluene-d8	90	85-120	09/23/17	Acceptable
4-Bromofluorobenzene	88	75-120	09/23/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: TVR-5
Lab Code: K1709799-002
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/22/17	09/23/17	KWG1708579	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/22/17	09/23/17	KWG1708579	
Acetone	3.7	J	20	10	3.3	1	09/22/17	09/23/17	KWG1708579	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/22/17	09/23/17	KWG1708579	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/22/17	09/23/17	KWG1708579	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/22/17	09/23/17	KWG1708579	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/22/17	09/23/17	KWG1708579	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroform	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/22/17	09/23/17	KWG1708579	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Benzene	ND	U	0.50	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/22/17	09/23/17	KWG1708579	
Trichloroethene (TCE)	0.12	J	0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/22/17	09/23/17	KWG1708579	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/22/17	09/23/17	KWG1708579	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/22/17	09/23/17	KWG1708579	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/22/17	09/23/17	KWG1708579	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/22/17	09/23/17	KWG1708579	
Toluene	ND	U	0.50	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/22/17	09/23/17	KWG1708579	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/22/17	09/23/17	KWG1708579	
2-Hexanone	ND	U	20	10	2.7	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/22/17	09/23/17	KWG1708579	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/22/17	09/23/17	KWG1708579	

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: TVR-5
Lab Code: K1709799-002
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/22/17	09/23/17	KWG1708579	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/22/17	09/23/17	KWG1708579	
Styrene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Bromoform	ND	U	0.50	0.50	0.16	1	09/22/17	09/23/17	KWG1708579	*
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/22/17	09/23/17	KWG1708579	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/22/17	09/23/17	KWG1708579	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/22/17	09/23/17	KWG1708579	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/22/17	09/23/17	KWG1708579	

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: TVR-5
Lab Code: K1709799-002

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	98	85-115	09/23/17	Acceptable
1,2-Dichloroethane-d4	100	70-120	09/23/17	Acceptable
Toluene-d8	91	85-120	09/23/17	Acceptable
4-Bromofluorobenzene	84	75-120	09/23/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: TVR-6
Lab Code: K1709799-003
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/22/17	09/23/17	KWG1708579	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/22/17	09/23/17	KWG1708579	
Acetone	ND	U	20	10	3.3	1	09/22/17	09/23/17	KWG1708579	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/22/17	09/23/17	KWG1708579	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/22/17	09/23/17	KWG1708579	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/22/17	09/23/17	KWG1708579	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/22/17	09/23/17	KWG1708579	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroform	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/22/17	09/23/17	KWG1708579	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Benzene	ND	U	0.50	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/22/17	09/23/17	KWG1708579	
Trichloroethene (TCE)	1.7		0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/22/17	09/23/17	KWG1708579	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/22/17	09/23/17	KWG1708579	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/22/17	09/23/17	KWG1708579	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/22/17	09/23/17	KWG1708579	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/22/17	09/23/17	KWG1708579	
Toluene	ND	U	0.50	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/22/17	09/23/17	KWG1708579	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/22/17	09/23/17	KWG1708579	
2-Hexanone	ND	U	20	10	2.7	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/22/17	09/23/17	KWG1708579	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/22/17	09/23/17	KWG1708579	

Comments:

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: TVR-6
Lab Code: K1709799-003
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/22/17	09/23/17	KWG1708579	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/22/17	09/23/17	KWG1708579	
Styrene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Bromoform	ND	U	0.50	0.50	0.16	1	09/22/17	09/23/17	KWG1708579	*
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/22/17	09/23/17	KWG1708579	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/22/17	09/23/17	KWG1708579	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/22/17	09/23/17	KWG1708579	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/22/17	09/23/17	KWG1708579	

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: TVR-6
Lab Code: K1709799-003

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	97	85-115	09/23/17	Acceptable
1,2-Dichloroethane-d4	101	70-120	09/23/17	Acceptable
Toluene-d8	89	85-120	09/23/17	Acceptable
4-Bromofluorobenzene	85	75-120	09/23/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: TVR-7
Lab Code: K1709799-004
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/22/17	09/23/17	KWG1708579	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/22/17	09/23/17	KWG1708579	
Acetone	ND	U	20	10	3.3	1	09/22/17	09/23/17	KWG1708579	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/22/17	09/23/17	KWG1708579	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/22/17	09/23/17	KWG1708579	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/22/17	09/23/17	KWG1708579	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/22/17	09/23/17	KWG1708579	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroform	0.13	J	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/22/17	09/23/17	KWG1708579	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Benzene	ND	U	0.50	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/22/17	09/23/17	KWG1708579	
Trichloroethene (TCE)	6.4		0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/22/17	09/23/17	KWG1708579	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/22/17	09/23/17	KWG1708579	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/22/17	09/23/17	KWG1708579	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/22/17	09/23/17	KWG1708579	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/22/17	09/23/17	KWG1708579	
Toluene	ND	U	0.50	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/22/17	09/23/17	KWG1708579	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/22/17	09/23/17	KWG1708579	
2-Hexanone	ND	U	20	10	2.7	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/22/17	09/23/17	KWG1708579	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/22/17	09/23/17	KWG1708579	

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: TVR-7
Lab Code: K1709799-004
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/22/17	09/23/17	KWG1708579	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/22/17	09/23/17	KWG1708579	
Styrene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Bromoform	ND	U	0.50	0.50	0.16	1	09/22/17	09/23/17	KWG1708579	*
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/22/17	09/23/17	KWG1708579	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/22/17	09/23/17	KWG1708579	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/22/17	09/23/17	KWG1708579	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/22/17	09/23/17	KWG1708579	

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: TVR-7
Lab Code: K1709799-004

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	95	85-115	09/23/17	Acceptable
1,2-Dichloroethane-d4	101	70-120	09/23/17	Acceptable
Toluene-d8	89	85-120	09/23/17	Acceptable
4-Bromofluorobenzene	86	75-120	09/23/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: TVR-3
Lab Code: K1709799-005
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/22/17	09/23/17	KWG1708579	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/22/17	09/23/17	KWG1708579	
Acetone	ND	U	20	10	3.3	1	09/22/17	09/23/17	KWG1708579	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/22/17	09/23/17	KWG1708579	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/22/17	09/23/17	KWG1708579	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/22/17	09/23/17	KWG1708579	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/22/17	09/23/17	KWG1708579	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroform	0.15	J	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/22/17	09/23/17	KWG1708579	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Benzene	ND	U	0.50	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/22/17	09/23/17	KWG1708579	
Trichloroethene (TCE)	2.9		0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/22/17	09/23/17	KWG1708579	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/22/17	09/23/17	KWG1708579	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/22/17	09/23/17	KWG1708579	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/22/17	09/23/17	KWG1708579	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/22/17	09/23/17	KWG1708579	
Toluene	ND	U	0.50	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/22/17	09/23/17	KWG1708579	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/22/17	09/23/17	KWG1708579	
2-Hexanone	ND	U	20	10	2.7	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/22/17	09/23/17	KWG1708579	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/22/17	09/23/17	KWG1708579	

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: TVR-3
Lab Code: K1709799-005
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/22/17	09/23/17	KWG1708579	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/22/17	09/23/17	KWG1708579	
Styrene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Bromoform	ND	U	0.50	0.50	0.16	1	09/22/17	09/23/17	KWG1708579	*
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/22/17	09/23/17	KWG1708579	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/22/17	09/23/17	KWG1708579	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/22/17	09/23/17	KWG1708579	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/22/17	09/23/17	KWG1708579	

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: TVR-3
Lab Code: K1709799-005

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	97	85-115	09/23/17	Acceptable
1,2-Dichloroethane-d4	104	70-120	09/23/17	Acceptable
Toluene-d8	90	85-120	09/23/17	Acceptable
4-Bromofluorobenzene	85	75-120	09/23/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: TVR-1
Lab Code: K1709799-006
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/22/17	09/23/17	KWG1708579	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/22/17	09/23/17	KWG1708579	
Acetone	ND	U	20	10	3.3	1	09/22/17	09/23/17	KWG1708579	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/22/17	09/23/17	KWG1708579	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/22/17	09/23/17	KWG1708579	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/22/17	09/23/17	KWG1708579	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/22/17	09/23/17	KWG1708579	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroform	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/22/17	09/23/17	KWG1708579	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Benzene	ND	U	0.50	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/22/17	09/23/17	KWG1708579	
Trichloroethene (TCE)	8.3		0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/22/17	09/23/17	KWG1708579	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/22/17	09/23/17	KWG1708579	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/22/17	09/23/17	KWG1708579	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/22/17	09/23/17	KWG1708579	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/22/17	09/23/17	KWG1708579	
Toluene	ND	U	0.50	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/22/17	09/23/17	KWG1708579	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/22/17	09/23/17	KWG1708579	
2-Hexanone	ND	U	20	10	2.7	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/22/17	09/23/17	KWG1708579	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/22/17	09/23/17	KWG1708579	

Comments:

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: TVR-1
Lab Code: K1709799-006
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/22/17	09/23/17	KWG1708579	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/22/17	09/23/17	KWG1708579	
Styrene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Bromoform	ND	U	0.50	0.50	0.16	1	09/22/17	09/23/17	KWG1708579	*
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/22/17	09/23/17	KWG1708579	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/22/17	09/23/17	KWG1708579	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/22/17	09/23/17	KWG1708579	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/22/17	09/23/17	KWG1708579	

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: TVR-1
Lab Code: K1709799-006

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	100	85-115	09/23/17	Acceptable
1,2-Dichloroethane-d4	102	70-120	09/23/17	Acceptable
Toluene-d8	92	85-120	09/23/17	Acceptable
4-Bromofluorobenzene	85	75-120	09/23/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: MTS-1
Lab Code: K1709799-007
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/22/17	09/23/17	KWG1708579	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/22/17	09/23/17	KWG1708579	
Acetone	3.9	J	20	10	3.3	1	09/22/17	09/23/17	KWG1708579	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/22/17	09/23/17	KWG1708579	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/22/17	09/23/17	KWG1708579	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/22/17	09/23/17	KWG1708579	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/22/17	09/23/17	KWG1708579	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroform	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/22/17	09/23/17	KWG1708579	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Benzene	ND	U	0.50	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/22/17	09/23/17	KWG1708579	
Trichloroethene (TCE)	3.5		0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/22/17	09/23/17	KWG1708579	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/22/17	09/23/17	KWG1708579	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/22/17	09/23/17	KWG1708579	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/22/17	09/23/17	KWG1708579	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/22/17	09/23/17	KWG1708579	
Toluene	ND	U	0.50	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/22/17	09/23/17	KWG1708579	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/22/17	09/23/17	KWG1708579	
2-Hexanone	ND	U	20	10	2.7	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/22/17	09/23/17	KWG1708579	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/22/17	09/23/17	KWG1708579	

Comments:

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: MTS-1
Lab Code: K1709799-007
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/22/17	09/23/17	KWG1708579	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/22/17	09/23/17	KWG1708579	
Styrene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Bromoform	ND	U	0.50	0.50	0.16	1	09/22/17	09/23/17	KWG1708579	*
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/22/17	09/23/17	KWG1708579	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/22/17	09/23/17	KWG1708579	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/22/17	09/23/17	KWG1708579	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/22/17	09/23/17	KWG1708579	

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: MTS-1
Lab Code: K1709799-007

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	99	85-115	09/23/17	Acceptable
1,2-Dichloroethane-d4	104	70-120	09/23/17	Acceptable
Toluene-d8	92	85-120	09/23/17	Acceptable
4-Bromofluorobenzene	86	75-120	09/23/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: MTS-2
Lab Code: K1709799-008
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/22/17	09/23/17	KWG1708579	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethane	ND	U	0.50	0.20	0.080	1	09/22/17	09/23/17	KWG1708579	
Acetone	4.3	J	20	10	3.3	1	09/22/17	09/23/17	KWG1708579	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/22/17	09/23/17	KWG1708579	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/22/17	09/23/17	KWG1708579	
cis-1,2-Dichloroethene	0.12	J	0.50	0.20	0.067	1	09/22/17	09/23/17	KWG1708579	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/22/17	09/23/17	KWG1708579	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroform	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/22/17	09/23/17	KWG1708579	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Benzene	ND	U	0.50	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/22/17	09/23/17	KWG1708579	
Trichloroethene (TCE)	5.3		0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/22/17	09/23/17	KWG1708579	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/22/17	09/23/17	KWG1708579	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/22/17	09/23/17	KWG1708579	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/22/17	09/23/17	KWG1708579	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/22/17	09/23/17	KWG1708579	
Toluene	ND	U	0.50	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/22/17	09/23/17	KWG1708579	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/22/17	09/23/17	KWG1708579	
2-Hexanone	ND	U	20	10	2.7	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/22/17	09/23/17	KWG1708579	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/22/17	09/23/17	KWG1708579	

Comments:

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: MTS-2
Lab Code: K1709799-008
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/22/17	09/23/17	KWG1708579	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/22/17	09/23/17	KWG1708579	
Styrene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Bromoform	ND	U	0.50	0.50	0.16	1	09/22/17	09/23/17	KWG1708579	*
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/22/17	09/23/17	KWG1708579	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/22/17	09/23/17	KWG1708579	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/22/17	09/23/17	KWG1708579	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/22/17	09/23/17	KWG1708579	

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: MTS-2
Lab Code: K1709799-008

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	99	85-115	09/23/17	Acceptable
1,2-Dichloroethane-d4	102	70-120	09/23/17	Acceptable
Toluene-d8	91	85-120	09/23/17	Acceptable
4-Bromofluorobenzene	88	75-120	09/23/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: MTS-4
Lab Code: K1709799-009
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/22/17	09/23/17	KWG1708579	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/22/17	09/23/17	KWG1708579	
Acetone	ND	U	20	10	3.3	1	09/22/17	09/23/17	KWG1708579	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/22/17	09/23/17	KWG1708579	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/22/17	09/23/17	KWG1708579	
cis-1,2-Dichloroethene	0.17	J	0.50	0.20	0.067	1	09/22/17	09/23/17	KWG1708579	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/22/17	09/23/17	KWG1708579	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroform	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/22/17	09/23/17	KWG1708579	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Benzene	ND	U	0.50	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/22/17	09/23/17	KWG1708579	
Trichloroethene (TCE)	5.1		0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/22/17	09/23/17	KWG1708579	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/22/17	09/23/17	KWG1708579	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/22/17	09/23/17	KWG1708579	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/22/17	09/23/17	KWG1708579	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/22/17	09/23/17	KWG1708579	
Toluene	ND	U	0.50	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/22/17	09/23/17	KWG1708579	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/22/17	09/23/17	KWG1708579	
2-Hexanone	ND	U	20	10	2.7	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/22/17	09/23/17	KWG1708579	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/22/17	09/23/17	KWG1708579	

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: MTS-4
Lab Code: K1709799-009
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/22/17	09/23/17	KWG1708579	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/22/17	09/23/17	KWG1708579	
Styrene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Bromoform	ND	U	0.50	0.50	0.16	1	09/22/17	09/23/17	KWG1708579	*
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/22/17	09/23/17	KWG1708579	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/22/17	09/23/17	KWG1708579	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/22/17	09/23/17	KWG1708579	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/22/17	09/23/17	KWG1708579	

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: MTS-4
Lab Code: K1709799-009

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	102	85-115	09/23/17	Acceptable
1,2-Dichloroethane-d4	103	70-120	09/23/17	Acceptable
Toluene-d8	91	85-120	09/23/17	Acceptable
4-Bromofluorobenzene	84	75-120	09/23/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: TRIP BLANK
Lab Code: K1709799-010
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/22/17	09/23/17	KWG1708579	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/22/17	09/23/17	KWG1708579	
Acetone	4.4	J	20	10	3.3	1	09/22/17	09/23/17	KWG1708579	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/22/17	09/23/17	KWG1708579	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/22/17	09/23/17	KWG1708579	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/22/17	09/23/17	KWG1708579	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/22/17	09/23/17	KWG1708579	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroform	0.12	J	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/22/17	09/23/17	KWG1708579	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Benzene	ND	U	0.50	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/22/17	09/23/17	KWG1708579	
Trichloroethene (TCE)	ND	U	0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/22/17	09/23/17	KWG1708579	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/22/17	09/23/17	KWG1708579	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/22/17	09/23/17	KWG1708579	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/22/17	09/23/17	KWG1708579	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/22/17	09/23/17	KWG1708579	
Toluene	ND	U	0.50	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/22/17	09/23/17	KWG1708579	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/22/17	09/23/17	KWG1708579	
2-Hexanone	ND	U	20	10	2.7	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/22/17	09/23/17	KWG1708579	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/22/17	09/23/17	KWG1708579	

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: TRIP BLANK
Lab Code: K1709799-010
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/22/17	09/23/17	KWG1708579	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/22/17	09/23/17	KWG1708579	
Styrene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Bromoform	ND	U	0.50	0.50	0.16	1	09/22/17	09/23/17	KWG1708579	*
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/22/17	09/23/17	KWG1708579	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/22/17	09/23/17	KWG1708579	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/22/17	09/23/17	KWG1708579	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/22/17	09/23/17	KWG1708579	

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: TRIP BLANK
Lab Code: K1709799-010

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	99	85-115	09/23/17	Acceptable
1,2-Dichloroethane-d4	104	70-120	09/23/17	Acceptable
Toluene-d8	90	85-120	09/23/17	Acceptable
4-Bromofluorobenzene	87	75-120	09/23/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: FTP-1
Lab Code: K1709799-011
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/22/17	09/23/17	KWG1708579	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethane	ND	U	0.50	0.20	0.080	1	09/22/17	09/23/17	KWG1708579	
Acetone	5.8	J	20	10	3.3	1	09/22/17	09/23/17	KWG1708579	
Carbon Disulfide	0.11	J	0.50	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/22/17	09/23/17	KWG1708579	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/22/17	09/23/17	KWG1708579	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/22/17	09/23/17	KWG1708579	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/22/17	09/23/17	KWG1708579	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroform	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/22/17	09/23/17	KWG1708579	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Benzene	4.1		0.50	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/22/17	09/23/17	KWG1708579	
Trichloroethene (TCE)	0.10	J	0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/22/17	09/23/17	KWG1708579	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/22/17	09/23/17	KWG1708579	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/22/17	09/23/17	KWG1708579	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/22/17	09/23/17	KWG1708579	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/22/17	09/23/17	KWG1708579	
Toluene	0.54		0.50	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/22/17	09/23/17	KWG1708579	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/22/17	09/23/17	KWG1708579	
2-Hexanone	ND	U	20	10	2.7	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/22/17	09/23/17	KWG1708579	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/22/17	09/23/17	KWG1708579	

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: FTP-1
Lab Code: K1709799-011
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
Ethylbenzene	6.4		0.50	0.10	0.050	1	09/22/17	09/23/17	KWG1708579	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
m,p-Xylenes	0.11	J	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
o-Xylene	0.78		0.50	0.20	0.074	1	09/22/17	09/23/17	KWG1708579	
Styrene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Bromoform	ND	U	0.50	0.50	0.16	1	09/22/17	09/23/17	KWG1708579	*
Isopropylbenzene	6.2		2.0	0.20	0.051	1	09/22/17	09/23/17	KWG1708579	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Propylbenzene	9.5		2.0	0.20	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/22/17	09/23/17	KWG1708579	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	
tert-Butylbenzene	0.31	J	2.0	0.20	0.059	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trimethylbenzene	77		2.0	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
sec-Butylbenzene	3.9		2.0	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
4-Isopropyltoluene	4.6		2.0	0.20	0.060	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,4-Dichlorobenzene	0.17	J	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Butylbenzene	5.7		2.0	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichlorobenzene	1.0		0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/22/17	09/23/17	KWG1708579	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
Naphthalene	86	D	20	3.0	0.88	10	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/22/17	09/23/17	KWG1708579	

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: FTP-1
Lab Code: K1709799-011

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	97	85-115	09/23/17	Acceptable
1,2-Dichloroethane-d4	97	70-120	09/23/17	Acceptable
Toluene-d8	90	85-120	09/23/17	Acceptable
4-Bromofluorobenzene	92	75-120	09/23/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: FTP-14
Lab Code: K1709799-012
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/22/17	09/23/17	KWG1708579	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/22/17	09/23/17	KWG1708579	
Acetone	ND	U	20	10	3.3	1	09/22/17	09/23/17	KWG1708579	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/22/17	09/23/17	KWG1708579	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/22/17	09/23/17	KWG1708579	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/22/17	09/23/17	KWG1708579	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/22/17	09/23/17	KWG1708579	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroform	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/22/17	09/23/17	KWG1708579	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Benzene	ND	U	0.50	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/22/17	09/23/17	KWG1708579	
Trichloroethene (TCE)	ND	U	0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/22/17	09/23/17	KWG1708579	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/22/17	09/23/17	KWG1708579	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/22/17	09/23/17	KWG1708579	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/22/17	09/23/17	KWG1708579	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/22/17	09/23/17	KWG1708579	
Toluene	ND	U	0.50	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/22/17	09/23/17	KWG1708579	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/22/17	09/23/17	KWG1708579	
2-Hexanone	ND	U	20	10	2.7	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/22/17	09/23/17	KWG1708579	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/22/17	09/23/17	KWG1708579	

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: FTP-14
Lab Code: K1709799-012
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/22/17	09/23/17	KWG1708579	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/22/17	09/23/17	KWG1708579	
Styrene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Bromoform	ND	U	0.50	0.50	0.16	1	09/22/17	09/23/17	KWG1708579	*
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/22/17	09/23/17	KWG1708579	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/22/17	09/23/17	KWG1708579	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
sec-Butylbenzene	0.13	J	2.0	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/22/17	09/23/17	KWG1708579	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/22/17	09/23/17	KWG1708579	

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: FTP-14
Lab Code: K1709799-012

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	99	85-115	09/23/17	Acceptable
1,2-Dichloroethane-d4	101	70-120	09/23/17	Acceptable
Toluene-d8	90	85-120	09/23/17	Acceptable
4-Bromofluorobenzene	86	75-120	09/23/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: FTP-15
Lab Code: K1709799-013
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/22/17	09/23/17	KWG1708579	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/22/17	09/23/17	KWG1708579	
Acetone	3.7	J	20	10	3.3	1	09/22/17	09/23/17	KWG1708579	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/22/17	09/23/17	KWG1708579	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/22/17	09/23/17	KWG1708579	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/22/17	09/23/17	KWG1708579	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/22/17	09/23/17	KWG1708579	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Chloroform	ND	U	0.50	0.20	0.072	1	09/22/17	09/23/17	KWG1708579	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/22/17	09/23/17	KWG1708579	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/22/17	09/23/17	KWG1708579	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Benzene	ND	U	0.50	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/22/17	09/23/17	KWG1708579	
Trichloroethene (TCE)	ND	U	0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/22/17	09/23/17	KWG1708579	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/22/17	09/23/17	KWG1708579	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/22/17	09/23/17	KWG1708579	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/22/17	09/23/17	KWG1708579	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/22/17	09/23/17	KWG1708579	
Toluene	ND	U	0.50	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/22/17	09/23/17	KWG1708579	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/22/17	09/23/17	KWG1708579	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/22/17	09/23/17	KWG1708579	
2-Hexanone	ND	U	20	10	2.7	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/22/17	09/23/17	KWG1708579	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/22/17	09/23/17	KWG1708579	

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: FTP-15
Lab Code: K1709799-013
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/22/17	09/23/17	KWG1708579	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/22/17	09/23/17	KWG1708579	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/22/17	09/23/17	KWG1708579	
Styrene	ND	U	0.50	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
Bromoform	ND	U	0.50	0.50	0.16	1	09/22/17	09/23/17	KWG1708579	*
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/22/17	09/23/17	KWG1708579	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/23/17	KWG1708579	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/22/17	09/23/17	KWG1708579	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/22/17	09/23/17	KWG1708579	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/22/17	09/23/17	KWG1708579	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/22/17	09/23/17	KWG1708579	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/22/17	09/23/17	KWG1708579	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/22/17	09/23/17	KWG1708579	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/22/17	09/23/17	KWG1708579	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/22/17	09/23/17	KWG1708579	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/23/17	KWG1708579	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/22/17	09/23/17	KWG1708579	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/22/17	09/23/17	KWG1708579	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/22/17	09/23/17	KWG1708579	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/22/17	09/23/17	KWG1708579	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/22/17	09/23/17	KWG1708579	

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: FTP-15
Lab Code: K1709799-013

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	98	85-115	09/23/17	Acceptable
1,2-Dichloroethane-d4	100	70-120	09/23/17	Acceptable
Toluene-d8	89	85-120	09/23/17	Acceptable
4-Bromofluorobenzene	85	75-120	09/23/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/13/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: FTP-16
Lab Code: K1709799-014
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/25/17	09/25/17	KWG1708554	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/25/17	09/25/17	KWG1708554	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/25/17	09/25/17	KWG1708554	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/25/17	09/25/17	KWG1708554	
Chloroethane	0.74		0.50	0.20	0.16	1	09/25/17	09/25/17	KWG1708554	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/25/17	09/25/17	KWG1708554	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/25/17	09/25/17	KWG1708554	
Acetone	ND	U	20	10	3.3	1	09/25/17	09/25/17	KWG1708554	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/25/17	09/25/17	KWG1708554	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/25/17	09/25/17	KWG1708554	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/25/17	09/25/17	KWG1708554	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/25/17	09/25/17	KWG1708554	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/25/17	09/25/17	KWG1708554	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/25/17	09/25/17	KWG1708554	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/25/17	09/25/17	KWG1708554	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/25/17	09/25/17	KWG1708554	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/25/17	09/25/17	KWG1708554	
Chloroform	ND	U	0.50	0.20	0.072	1	09/25/17	09/25/17	KWG1708554	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/25/17	09/25/17	KWG1708554	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/25/17	09/25/17	KWG1708554	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/25/17	09/25/17	KWG1708554	
Benzene	ND	U	0.50	0.10	0.062	1	09/25/17	09/25/17	KWG1708554	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/25/17	09/25/17	KWG1708554	
Trichloroethene (TCE)	ND	U	0.50	0.20	0.10	1	09/25/17	09/25/17	KWG1708554	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/25/17	09/25/17	KWG1708554	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/25/17	09/25/17	KWG1708554	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/25/17	09/25/17	KWG1708554	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/25/17	09/25/17	KWG1708554	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/25/17	09/25/17	KWG1708554	
Toluene	ND	U	0.50	0.10	0.054	1	09/25/17	09/25/17	KWG1708554	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/25/17	09/25/17	KWG1708554	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/25/17	09/25/17	KWG1708554	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/25/17	09/25/17	KWG1708554	
2-Hexanone	ND	U	20	10	2.7	1	09/25/17	09/25/17	KWG1708554	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/25/17	09/25/17	KWG1708554	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/25/17	09/25/17	KWG1708554	

Comments:

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/13/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: FTP-16
Lab Code: K1709799-014
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/25/17	09/25/17	KWG1708554	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/25/17	09/25/17	KWG1708554	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/25/17	09/25/17	KWG1708554	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/25/17	09/25/17	KWG1708554	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/25/17	09/25/17	KWG1708554	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/25/17	09/25/17	KWG1708554	
Styrene	ND	U	0.50	0.20	0.089	1	09/25/17	09/25/17	KWG1708554	
Bromoform	ND	U	0.50	0.50	0.16	1	09/25/17	09/25/17	KWG1708554	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/25/17	09/25/17	KWG1708554	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/25/17	09/25/17	KWG1708554	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/25/17	09/25/17	KWG1708554	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/25/17	09/25/17	KWG1708554	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/25/17	09/25/17	KWG1708554	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/25/17	09/25/17	KWG1708554	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/25/17	09/25/17	KWG1708554	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/25/17	09/25/17	KWG1708554	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/25/17	09/25/17	KWG1708554	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/25/17	09/25/17	KWG1708554	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/25/17	09/25/17	KWG1708554	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/25/17	09/25/17	KWG1708554	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/25/17	09/25/17	KWG1708554	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/25/17	09/25/17	KWG1708554	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/25/17	09/25/17	KWG1708554	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/25/17	09/25/17	KWG1708554	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/25/17	09/25/17	KWG1708554	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/25/17	09/25/17	KWG1708554	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/25/17	09/25/17	KWG1708554	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/25/17	09/25/17	KWG1708554	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/25/17	09/25/17	KWG1708554	

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/13/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: FTP-16
Lab Code: K1709799-014

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	101	85-115	09/25/17	Acceptable
1,2-Dichloroethane-d4	102	70-120	09/25/17	Acceptable
Toluene-d8	90	85-120	09/25/17	Acceptable
4-Bromofluorobenzene	84	75-120	09/25/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/13/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: POMONA
Lab Code: K1709799-015
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/25/17	09/25/17	KWG1708554	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/25/17	09/25/17	KWG1708554	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/25/17	09/25/17	KWG1708554	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/25/17	09/25/17	KWG1708554	
Chloroethane	0.83		0.50	0.20	0.16	1	09/25/17	09/25/17	KWG1708554	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/25/17	09/25/17	KWG1708554	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/25/17	09/25/17	KWG1708554	
Acetone	3.4	J	20	10	3.3	1	09/25/17	09/25/17	KWG1708554	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/25/17	09/25/17	KWG1708554	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/25/17	09/25/17	KWG1708554	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/25/17	09/25/17	KWG1708554	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/25/17	09/25/17	KWG1708554	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/25/17	09/25/17	KWG1708554	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/25/17	09/25/17	KWG1708554	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/25/17	09/25/17	KWG1708554	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/25/17	09/25/17	KWG1708554	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/25/17	09/25/17	KWG1708554	
Chloroform	ND	U	0.50	0.20	0.072	1	09/25/17	09/25/17	KWG1708554	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/25/17	09/25/17	KWG1708554	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/25/17	09/25/17	KWG1708554	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/25/17	09/25/17	KWG1708554	
Benzene	ND	U	0.50	0.10	0.062	1	09/25/17	09/25/17	KWG1708554	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/25/17	09/25/17	KWG1708554	
Trichloroethene (TCE)	ND	U	0.50	0.20	0.10	1	09/25/17	09/25/17	KWG1708554	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/25/17	09/25/17	KWG1708554	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/25/17	09/25/17	KWG1708554	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/25/17	09/25/17	KWG1708554	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/25/17	09/25/17	KWG1708554	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/25/17	09/25/17	KWG1708554	
Toluene	ND	U	0.50	0.10	0.054	1	09/25/17	09/25/17	KWG1708554	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/25/17	09/25/17	KWG1708554	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/25/17	09/25/17	KWG1708554	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/25/17	09/25/17	KWG1708554	
2-Hexanone	ND	U	20	10	2.7	1	09/25/17	09/25/17	KWG1708554	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/25/17	09/25/17	KWG1708554	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/25/17	09/25/17	KWG1708554	

Comments:

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/13/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: POMONA
Lab Code: K1709799-015
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/25/17	09/25/17	KWG1708554	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/25/17	09/25/17	KWG1708554	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/25/17	09/25/17	KWG1708554	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/25/17	09/25/17	KWG1708554	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/25/17	09/25/17	KWG1708554	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/25/17	09/25/17	KWG1708554	
Styrene	ND	U	0.50	0.20	0.089	1	09/25/17	09/25/17	KWG1708554	
Bromoform	ND	U	0.50	0.50	0.16	1	09/25/17	09/25/17	KWG1708554	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/25/17	09/25/17	KWG1708554	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/25/17	09/25/17	KWG1708554	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/25/17	09/25/17	KWG1708554	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/25/17	09/25/17	KWG1708554	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/25/17	09/25/17	KWG1708554	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/25/17	09/25/17	KWG1708554	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/25/17	09/25/17	KWG1708554	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/25/17	09/25/17	KWG1708554	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/25/17	09/25/17	KWG1708554	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/25/17	09/25/17	KWG1708554	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/25/17	09/25/17	KWG1708554	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/25/17	09/25/17	KWG1708554	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/25/17	09/25/17	KWG1708554	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/25/17	09/25/17	KWG1708554	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/25/17	09/25/17	KWG1708554	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/25/17	09/25/17	KWG1708554	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/25/17	09/25/17	KWG1708554	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/25/17	09/25/17	KWG1708554	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/25/17	09/25/17	KWG1708554	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/25/17	09/25/17	KWG1708554	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/25/17	09/25/17	KWG1708554	

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/13/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: POMONA
Lab Code: K1709799-015

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	102	85-115	09/25/17	Acceptable
1,2-Dichloroethane-d4	105	70-120	09/25/17	Acceptable
Toluene-d8	90	85-120	09/25/17	Acceptable
4-Bromofluorobenzene	86	75-120	09/25/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/13/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: PAIC
Lab Code: K1709799-016
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/25/17	09/25/17	KWG1708554	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/25/17	09/25/17	KWG1708554	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/25/17	09/25/17	KWG1708554	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/25/17	09/25/17	KWG1708554	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/25/17	09/25/17	KWG1708554	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/25/17	09/25/17	KWG1708554	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/25/17	09/25/17	KWG1708554	
Acetone	ND	U	20	10	3.3	1	09/25/17	09/25/17	KWG1708554	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/25/17	09/25/17	KWG1708554	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/25/17	09/25/17	KWG1708554	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/25/17	09/25/17	KWG1708554	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/25/17	09/25/17	KWG1708554	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/25/17	09/25/17	KWG1708554	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/25/17	09/25/17	KWG1708554	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/25/17	09/25/17	KWG1708554	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/25/17	09/25/17	KWG1708554	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/25/17	09/25/17	KWG1708554	
Chloroform	ND	U	0.50	0.20	0.072	1	09/25/17	09/25/17	KWG1708554	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/25/17	09/25/17	KWG1708554	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/25/17	09/25/17	KWG1708554	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/25/17	09/25/17	KWG1708554	
Benzene	ND	U	0.50	0.10	0.062	1	09/25/17	09/25/17	KWG1708554	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/25/17	09/25/17	KWG1708554	
Trichloroethene (TCE)	ND	U	0.50	0.20	0.10	1	09/25/17	09/25/17	KWG1708554	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/25/17	09/25/17	KWG1708554	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/25/17	09/25/17	KWG1708554	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/25/17	09/25/17	KWG1708554	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/25/17	09/25/17	KWG1708554	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/25/17	09/25/17	KWG1708554	
Toluene	ND	U	0.50	0.10	0.054	1	09/25/17	09/25/17	KWG1708554	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/25/17	09/25/17	KWG1708554	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/25/17	09/25/17	KWG1708554	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/25/17	09/25/17	KWG1708554	
2-Hexanone	ND	U	20	10	2.7	1	09/25/17	09/25/17	KWG1708554	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/25/17	09/25/17	KWG1708554	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/25/17	09/25/17	KWG1708554	

Comments:

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/13/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: PAIC
Lab Code: K1709799-016
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/25/17	09/25/17	KWG1708554	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/25/17	09/25/17	KWG1708554	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/25/17	09/25/17	KWG1708554	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/25/17	09/25/17	KWG1708554	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/25/17	09/25/17	KWG1708554	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/25/17	09/25/17	KWG1708554	
Styrene	ND	U	0.50	0.20	0.089	1	09/25/17	09/25/17	KWG1708554	
Bromoform	ND	U	0.50	0.50	0.16	1	09/25/17	09/25/17	KWG1708554	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/25/17	09/25/17	KWG1708554	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/25/17	09/25/17	KWG1708554	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/25/17	09/25/17	KWG1708554	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/25/17	09/25/17	KWG1708554	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/25/17	09/25/17	KWG1708554	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/25/17	09/25/17	KWG1708554	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/25/17	09/25/17	KWG1708554	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/25/17	09/25/17	KWG1708554	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/25/17	09/25/17	KWG1708554	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/25/17	09/25/17	KWG1708554	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/25/17	09/25/17	KWG1708554	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/25/17	09/25/17	KWG1708554	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/25/17	09/25/17	KWG1708554	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/25/17	09/25/17	KWG1708554	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/25/17	09/25/17	KWG1708554	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/25/17	09/25/17	KWG1708554	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/25/17	09/25/17	KWG1708554	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/25/17	09/25/17	KWG1708554	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/25/17	09/25/17	KWG1708554	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/25/17	09/25/17	KWG1708554	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/25/17	09/25/17	KWG1708554	

* See Case Narrative

Comments:

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/13/2017
Date Received: 09/14/2017

Volatile Organic Compounds

Sample Name: PAIC
Lab Code: K1709799-016

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	103	85-115	09/25/17	Acceptable
1,2-Dichloroethane-d4	101	70-120	09/25/17	Acceptable
Toluene-d8	92	85-120	09/25/17	Acceptable
4-Bromofluorobenzene	86	75-120	09/25/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1708554-4
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/25/17	09/25/17	KWG1708554	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/25/17	09/25/17	KWG1708554	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/25/17	09/25/17	KWG1708554	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/25/17	09/25/17	KWG1708554	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/25/17	09/25/17	KWG1708554	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/25/17	09/25/17	KWG1708554	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/25/17	09/25/17	KWG1708554	
Acetone	ND	U	20	10	3.3	1	09/25/17	09/25/17	KWG1708554	
Carbon Disulfide	0.070	J	0.50	0.20	0.069	1	09/25/17	09/25/17	KWG1708554	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/25/17	09/25/17	KWG1708554	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/25/17	09/25/17	KWG1708554	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/25/17	09/25/17	KWG1708554	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/25/17	09/25/17	KWG1708554	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/25/17	09/25/17	KWG1708554	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/25/17	09/25/17	KWG1708554	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/25/17	09/25/17	KWG1708554	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/25/17	09/25/17	KWG1708554	
Chloroform	ND	U	0.50	0.20	0.072	1	09/25/17	09/25/17	KWG1708554	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/25/17	09/25/17	KWG1708554	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/25/17	09/25/17	KWG1708554	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/25/17	09/25/17	KWG1708554	
Benzene	ND	U	0.50	0.10	0.062	1	09/25/17	09/25/17	KWG1708554	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/25/17	09/25/17	KWG1708554	
Trichloroethene (TCE)	ND	U	0.50	0.20	0.10	1	09/25/17	09/25/17	KWG1708554	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/25/17	09/25/17	KWG1708554	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/25/17	09/25/17	KWG1708554	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/25/17	09/25/17	KWG1708554	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/25/17	09/25/17	KWG1708554	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/25/17	09/25/17	KWG1708554	
Toluene	0.060	J	0.50	0.10	0.054	1	09/25/17	09/25/17	KWG1708554	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/25/17	09/25/17	KWG1708554	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/25/17	09/25/17	KWG1708554	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/25/17	09/25/17	KWG1708554	
2-Hexanone	ND	U	20	10	2.7	1	09/25/17	09/25/17	KWG1708554	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/25/17	09/25/17	KWG1708554	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/25/17	09/25/17	KWG1708554	

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1708554-4
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/25/17	09/25/17	KWG1708554	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/25/17	09/25/17	KWG1708554	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/25/17	09/25/17	KWG1708554	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/25/17	09/25/17	KWG1708554	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/25/17	09/25/17	KWG1708554	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/25/17	09/25/17	KWG1708554	
Styrene	ND	U	0.50	0.20	0.089	1	09/25/17	09/25/17	KWG1708554	
Bromoform	ND	U	0.50	0.50	0.16	1	09/25/17	09/25/17	KWG1708554	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/25/17	09/25/17	KWG1708554	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/25/17	09/25/17	KWG1708554	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/25/17	09/25/17	KWG1708554	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/25/17	09/25/17	KWG1708554	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/25/17	09/25/17	KWG1708554	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/25/17	09/25/17	KWG1708554	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/25/17	09/25/17	KWG1708554	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/25/17	09/25/17	KWG1708554	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/25/17	09/25/17	KWG1708554	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/25/17	09/25/17	KWG1708554	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/25/17	09/25/17	KWG1708554	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/25/17	09/25/17	KWG1708554	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/25/17	09/25/17	KWG1708554	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/25/17	09/25/17	KWG1708554	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/25/17	09/25/17	KWG1708554	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/25/17	09/25/17	KWG1708554	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/25/17	09/25/17	KWG1708554	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/25/17	09/25/17	KWG1708554	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/25/17	09/25/17	KWG1708554	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/25/17	09/25/17	KWG1708554	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/25/17	09/25/17	KWG1708554	

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1708554-4

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	100	85-115	09/25/17	Acceptable
1,2-Dichloroethane-d4	99	70-120	09/25/17	Acceptable
Toluene-d8	90	85-120	09/25/17	Acceptable
4-Bromofluorobenzene	89	75-120	09/25/17	Acceptable

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1708579-3
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/22/17	09/22/17	KWG1708579	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/22/17	09/22/17	KWG1708579	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/22/17	09/22/17	KWG1708579	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/22/17	09/22/17	KWG1708579	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/22/17	KWG1708579	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/22/17	09/22/17	KWG1708579	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/22/17	09/22/17	KWG1708579	
Acetone	ND	U	20	10	3.3	1	09/22/17	09/22/17	KWG1708579	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/22/17	09/22/17	KWG1708579	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/22/17	09/22/17	KWG1708579	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/22/17	09/22/17	KWG1708579	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/22/17	09/22/17	KWG1708579	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/22/17	09/22/17	KWG1708579	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/22/17	09/22/17	KWG1708579	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/22/17	09/22/17	KWG1708579	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/22/17	09/22/17	KWG1708579	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/22/17	KWG1708579	
Chloroform	ND	U	0.50	0.20	0.072	1	09/22/17	09/22/17	KWG1708579	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/22/17	09/22/17	KWG1708579	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/22/17	09/22/17	KWG1708579	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/22/17	09/22/17	KWG1708579	
Benzene	ND	U	0.50	0.10	0.062	1	09/22/17	09/22/17	KWG1708579	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/22/17	09/22/17	KWG1708579	
Trichloroethene (TCE)	ND	U	0.50	0.20	0.10	1	09/22/17	09/22/17	KWG1708579	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/22/17	09/22/17	KWG1708579	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/22/17	09/22/17	KWG1708579	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/22/17	09/22/17	KWG1708579	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/22/17	09/22/17	KWG1708579	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/22/17	09/22/17	KWG1708579	
Toluene	0.070	J	0.50	0.10	0.054	1	09/22/17	09/22/17	KWG1708579	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/22/17	09/22/17	KWG1708579	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/22/17	09/22/17	KWG1708579	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/22/17	09/22/17	KWG1708579	
2-Hexanone	ND	U	20	10	2.7	1	09/22/17	09/22/17	KWG1708579	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/22/17	09/22/17	KWG1708579	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/22/17	09/22/17	KWG1708579	

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1708579-3
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/22/17	09/22/17	KWG1708579	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/22/17	09/22/17	KWG1708579	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/22/17	09/22/17	KWG1708579	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/22/17	09/22/17	KWG1708579	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/22/17	09/22/17	KWG1708579	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/22/17	09/22/17	KWG1708579	
Styrene	ND	U	0.50	0.20	0.089	1	09/22/17	09/22/17	KWG1708579	
Bromoform	ND	U	0.50	0.50	0.16	1	09/22/17	09/22/17	KWG1708579	*
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/22/17	09/22/17	KWG1708579	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/22/17	09/22/17	KWG1708579	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/22/17	09/22/17	KWG1708579	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/22/17	09/22/17	KWG1708579	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/22/17	09/22/17	KWG1708579	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/22/17	09/22/17	KWG1708579	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/22/17	09/22/17	KWG1708579	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/22/17	09/22/17	KWG1708579	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/22/17	09/22/17	KWG1708579	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/22/17	09/22/17	KWG1708579	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/22/17	09/22/17	KWG1708579	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/22/17	09/22/17	KWG1708579	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/22/17	09/22/17	KWG1708579	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/22/17	KWG1708579	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/22/17	09/22/17	KWG1708579	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/22/17	09/22/17	KWG1708579	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/22/17	09/22/17	KWG1708579	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/22/17	09/22/17	KWG1708579	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/22/17	09/22/17	KWG1708579	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/22/17	09/22/17	KWG1708579	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/22/17	09/22/17	KWG1708579	

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1708579-3

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	97	85-115	09/22/17	Acceptable
1,2-Dichloroethane-d4	101	70-120	09/22/17	Acceptable
Toluene-d8	90	85-120	09/22/17	Acceptable
4-Bromofluorobenzene	88	75-120	09/22/17	Acceptable

Comments: _____

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799

**Surrogate Recovery Summary
 Volatile Organic Compounds**

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: Percent
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>	<u>Sur3</u>	<u>Sur4</u>
815-2	K1709799-001	96	99	90	88
TVR-5	K1709799-002	98	100	91	84
TVR-6	K1709799-003	97	101	89	85
TVR-7	K1709799-004	95	101	89	86
TVR-3	K1709799-005	97	104	90	85
TVR-1	K1709799-006	100	102	92	85
MTS-1	K1709799-007	99	104	92	86
MTS-2	K1709799-008	99	102	91	88
MTS-4	K1709799-009	102	103	91	84
TRIP BLANK	K1709799-010	99	104	90	87
FTP-1	K1709799-011	97	97	90	92
FTP-14	K1709799-012	99	101	90	86
FTP-15	K1709799-013	98	100	89	85
FTP-16	K1709799-014	101	102	90	84
POMONA	K1709799-015	102	105	90	86
PAIC	K1709799-016	103	101	92	86
Method Blank	KWG1708554-4	100	99	90	89
Method Blank	KWG1708579-3	97	101	90	88
FTP-16MS	KWG1708554-1	103	94	95	92
FTP-16DMS	KWG1708554-2	102	93	96	95
Lab Control Sample	KWG1708554-3	100	91	97	92
Lab Control Sample	KWG1708579-1	102	95	97	95
Duplicate Lab Control Sample	KWG1708579-2	102	94	97	94

Surrogate Recovery Control Limits (%)

Sur1 = Dibromofluoromethane	85-115
Sur2 = 1,2-Dichloroethane-d4	70-120
Sur3 = Toluene-d8	85-120
Sur4 = 4-Bromofluorobenzene	75-120

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Date Analyzed: 09/22/2017
Time Analyzed: 21:06

Internal Standard Area and RT Summary
Volatile Organic Compounds

File ID: J:\MS27\DATA\092217\092217F023.D
Instrument ID: MS27
Analysis Method: 8260C

Lab Code: KWG1708577-2
Analysis Lot: KWG1708577

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>
Results ==>	773,070	6.49	298,495	9.65	274,241	11.96
Upper Limit ==>	1,546,140	6.66	596,990	9.82	548,482	12.13
Lower Limit ==>	386,535	6.32	149,248	9.48	137,121	11.79
ICAL Result ==>	833,239	6.62	340,561	9.78	328,715	12.11

Associated Analyses

Lab Control Sample	KWG1708579-1	759,918	6.49	294,327	9.65	273,168	11.96
Duplicate Lab Control Sample	KWG1708579-2	792,076	6.49	307,085	9.65	287,689	11.96
Method Blank	KWG1708579-3	690,654	6.49	263,317	9.64	229,219	11.97
815-2	K1709799-001	713,464	6.49	269,981	9.64	239,332	11.97
TVR-5	K1709799-002	713,919	6.49	273,926	9.65	243,222	11.96
TVR-6	K1709799-003	707,650	6.49	270,770	9.65	233,827	11.96
TVR-7	K1709799-004	743,900	6.49	279,062	9.64	246,376	11.96
TVR-3	K1709799-005	720,864	6.49	272,993	9.64	236,152	11.96
TVR-1	K1709799-006	680,702	6.49	262,390	9.64	231,048	11.96
MTS-1	K1709799-007	708,837	6.49	273,549	9.64	246,734	11.96
MTS-2	K1709799-008	679,589	6.49	255,865	9.64	234,867	11.96
MTS-4	K1709799-009	679,444	6.49	265,060	9.64	230,801	11.97
TRIP BLANK	K1709799-010	665,467	6.49	255,163	9.64	225,404	11.96
FTP-14	K1709799-012	676,351	6.49	261,848	9.64	227,772	11.96
FTP-15	K1709799-013	699,555	6.49	263,414	9.64	230,056	11.96
FTP-1DL	K1709799-011	694,814	6.49	263,438	9.64	249,955	11.96
FTP-1	K1709799-011	739,540	6.49	297,211	9.64	279,062	11.96

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Date Analyzed: 09/25/2017
Time Analyzed: 12:05

Internal Standard Area and RT Summary
Volatile Organic Compounds

File ID: J:\MS27\DATA\092517\0925F004.D
Instrument ID: MS27
Analysis Method: 8260C

Lab Code: KWG1708553-2
Analysis Lot: KWG1708553

	Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>
Results ==>	801,362	6.49	308,016	9.64	277,844	11.96
Upper Limit ==>	1,602,724	6.66	616,032	9.81	555,688	12.13
Lower Limit ==>	400,681	6.32	154,008	9.47	138,922	11.79
ICAL Result ==>	833,239	6.62	340,561	9.78	328,715	12.11

Associated Analyses

Lab Control Sample	KWG1708554-3	845,385	6.49	323,416	9.64	300,137	11.96
FTP-16MS	KWG1708554-1	831,178	6.49	318,401	9.64	290,812	11.96
FTP-16DMS	KWG1708554-2	813,773	6.49	312,726	9.64	296,758	11.96
Method Blank	KWG1708554-4	733,271	6.49	272,548	9.64	239,858	11.96
FTP-16	K1709799-014	694,143	6.49	270,321	9.65	233,459	11.96
POMONA	K1709799-015	675,233	6.49	260,669	9.65	227,146	11.96
PAIC	K1709799-016	687,941	6.49	265,222	9.64	232,944	11.97

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/25/2017
Date Analyzed: 09/25/2017

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name: FTP-16
Lab Code: K1709799-014
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1708554

Analyte Name	Sample Result	FTP-16MS KWG1708554-1 Matrix Spike			FTP-16DMS KWG1708554-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Dichlorodifluoromethane	ND	10.4	10.0	104	10.3	10.0	103	30-155	1	30
Chloromethane	ND	10.3	10.0	103	10.2	10.0	102	40-125	1	30
Vinyl Chloride	ND	11.0	10.0	110	11.0	10.0	110	50-145	0	30
Bromomethane	ND	10.4	10.0	104	10.2	10.0	102	30-145	2	30
Chloroethane	0.74	11.1	10.0	104	10.8	10.0	100	60-135	3	30
Trichlorofluoromethane	ND	10.4	10.0	104	10.3	10.0	103	60-145	1	30
1,1-Dichloroethene	ND	10.6	10.0	106	10.5	10.0	105	70-130	1	30
Acetone	ND	55.3	50.0	111	57.9	50.0	116	40-140	5	30
Carbon Disulfide	ND	23.7	20.0	119	23.7	20.0	118	35-160	0	30
Methylene Chloride	ND	9.34	10.0	93	9.52	10.0	95	55-140	2	30
Methyl tert-Butyl Ether	ND	10.3	10.0	103	10.3	10.0	103	65-125	0	30
trans-1,2-Dichloroethene	ND	10.3	10.0	103	10.2	10.0	102	60-140	0	30
1,1-Dichloroethane	ND	11.1	10.0	111	11.2	10.0	112	70-135	2	30
2,2-Dichloropropane	ND	12.1	10.0	121	11.8	10.0	118	70-135	2	30
cis-1,2-Dichloroethene	ND	10.0	10.0	100	10.1	10.0	101	70-125	1	30
2-Butanone (MEK)	ND	49.6	50.0	99	52.4	50.0	105	30-150	6	30
Bromochloromethane	ND	9.90	10.0	99	9.85	10.0	99	65-130	1	30
Chloroform	ND	10.4	10.0	104	10.6	10.0	106	65-135	1	30
1,1,1-Trichloroethane (TCA)	ND	10.6	10.0	106	10.4	10.0	104	65-130	2	30
Carbon Tetrachloride	ND	10.8	10.0	108	10.9	10.0	109	65-140	1	30
1,1-Dichloropropene	ND	10.9	10.0	109	10.9	10.0	109	75-130	1	30
Benzene	ND	10.3	10.0	103	10.4	10.0	104	80-120	1	30
1,2-Dichloroethane (EDC)	ND	10.6	10.0	106	10.5	10.0	105	70-130	1	30
Trichloroethene (TCE)	ND	10.5	10.0	105	10.2	10.0	102	70-125	2	30
1,2-Dichloropropane	ND	10.8	10.0	108	10.8	10.0	108	75-125	0	30
Dibromomethane	ND	9.24	10.0	92	9.36	10.0	94	75-125	1	30
Bromodichloromethane	ND	10.4	10.0	104	10.3	10.0	103	75-120	2	30
cis-1,3-Dichloropropene	ND	10.5	10.0	105	10.4	10.0	104	70-130	1	30
4-Methyl-2-pentanone (MIBK)	ND	51.2	50.0	102	53.8	50.0	108	60-135	5	30
Toluene	ND	9.80	10.0	98	9.84	10.0	98	75-120	0	30
trans-1,3-Dichloropropene	ND	10.4	10.0	104	10.6	10.0	106	55-140	2	30
1,1,2-Trichloroethane	ND	10.0	10.0	100	10.1	10.0	101	75-125	1	30
Tetrachloroethene (PCE)	ND	10.3	10.0	103	10.2	10.0	102	45-150	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/25/2017
Date Analyzed: 09/25/2017

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name: FTP-16
Lab Code: K1709799-014
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1708554

Analyte Name	Sample Result	FTP-16MS KWG1708554-1 Matrix Spike			FTP-16DMS KWG1708554-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
2-Hexanone	ND	51.8	50.0	104	55.2	50.0	110	55-130	6	30
1,3-Dichloropropane	ND	9.55	10.0	96	9.77	10.0	98	75-125	2	30
Dibromochloromethane	ND	9.43	10.0	94	9.84	10.0	98	60-135	4	30
1,2-Dibromoethane (EDB)	ND	8.96	10.0	90	9.36	10.0	94	80-120	4	30
Chlorobenzene	ND	10.6	10.0	106	10.4	10.0	104	80-120	2	30
Ethylbenzene	ND	10.1	10.0	101	10.2	10.0	102	75-125	1	30
1,1,1,2-Tetrachloroethane	ND	9.72	10.0	97	9.97	10.0	100	80-130	3	30
m,p-Xylenes	ND	20.5	20.0	102	20.7	20.0	104	75-130	1	30
o-Xylene	ND	9.77	10.0	98	9.87	10.0	99	80-120	1	30
Styrene	ND	8.44	10.0	84	8.25	10.0	83	65-135	2	30
Bromoform	ND	9.01	10.0	90	9.16	10.0	92	70-130	2	30
Isopropylbenzene	ND	10.2	10.0	102	10.3	10.0	103	75-125	1	30
1,1,2,2-Tetrachloroethane	ND	10.1	10.0	101	9.74	10.0	97	65-130	4	30
Bromobenzene	ND	9.79	10.0	98	9.74	10.0	97	75-125	1	30
n-Propylbenzene	ND	11.0	10.0	110	10.7	10.0	107	70-130	3	30
1,2,3-Trichloropropane	ND	9.10	10.0	91	9.21	10.0	92	75-125	1	30
2-Chlorotoluene	ND	10.6	10.0	106	10.4	10.0	104	75-125	2	30
1,3,5-Trimethylbenzene	ND	10.8	10.0	108	10.4	10.0	104	75-130	3	30
4-Chlorotoluene	ND	11.9	10.0	119	11.6	10.0	116	75-130	2	30
tert-Butylbenzene	ND	10.6	10.0	106	10.4	10.0	104	70-130	2	30
1,2,4-Trimethylbenzene	ND	11.2	10.0	112	10.8	10.0	108	75-130	4	30
sec-Butylbenzene	ND	11.3	10.0	113	10.9	10.0	109	70-125	4	30
4-Isopropyltoluene	ND	11.3	10.0	113	11.0	10.0	110	75-130	3	30
1,3-Dichlorobenzene	ND	10.5	10.0	105	10.4	10.0	104	75-125	2	30
1,4-Dichlorobenzene	ND	10.4	10.0	104	10.0	10.0	100	75-125	3	30
n-Butylbenzene	ND	11.4	10.0	114	10.9	10.0	109	70-135	4	30
1,2-Dichlorobenzene	ND	10.3	10.0	103	9.84	10.0	98	70-120	5	30
1,2-Dibromo-3-chloropropane	ND	8.91	10.0	89	8.51	10.0	85	50-130	5	30
1,2,4-Trichlorobenzene	ND	10.1	10.0	101	9.80	10.0	98	65-135	3	30
Hexachlorobutadiene	ND	10.5	10.0	105	9.86	10.0	99	50-140	6	30
Naphthalene	ND	9.19	10.0	92	9.20	10.0	92	55-140	0	30
1,2,3-Trichlorobenzene	ND	9.84	10.0	98	9.59	10.0	96	55-140	3	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/25/2017
Date Analyzed: 09/25/2017

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1708554

Lab Control Sample
 KWG1708554-3
 Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Dichlorodifluoromethane	9.12	10.0	91	30-155
Chloromethane	9.49	10.0	95	40-125
Vinyl Chloride	9.54	10.0	95	50-145
Bromomethane	9.14	10.0	91	30-145
Chloroethane	9.53	10.0	95	60-135
Trichlorofluoromethane	8.86	10.0	89	60-145
1,1-Dichloroethene	9.30	10.0	93	70-130
Acetone	49.2	50.0	98	40-140
Carbon Disulfide	21.0	20.0	105	35-160
Methylene Chloride	8.55	10.0	86	55-140
Methyl tert-Butyl Ether	9.13	10.0	91	65-125
trans-1,2-Dichloroethene	9.26	10.0	93	60-140
1,1-Dichloroethane	9.96	10.0	100	70-135
2,2-Dichloropropane	10.5	10.0	105	70-135
cis-1,2-Dichloroethene	9.05	10.0	91	70-125
2-Butanone (MEK)	43.9	50.0	88	30-150
Bromochloromethane	8.77	10.0	88	65-130
Chloroform	9.40	10.0	94	65-135
1,1,1-Trichloroethane (TCA)	9.46	10.0	95	65-130
Carbon Tetrachloride	9.55	10.0	96	65-140
1,1-Dichloropropene	9.74	10.0	97	75-130
Benzene	9.18	10.0	92	80-120
1,2-Dichloroethane (EDC)	9.45	10.0	95	70-130
Trichloroethene (TCE)	9.36	10.0	94	70-125
1,2-Dichloropropane	9.91	10.0	99	75-125
Dibromomethane	8.47	10.0	85	75-125
Bromodichloromethane	9.32	10.0	93	75-120
cis-1,3-Dichloropropene	9.38	10.0	94	70-130
4-Methyl-2-pentanone (MIBK)	44.9	50.0	90	60-135
Toluene	8.85	10.0	89	75-120
trans-1,3-Dichloropropene	9.28	10.0	93	55-140
1,1,2-Trichloroethane	8.94	10.0	89	75-125
Tetrachloroethene (PCE)	9.27	10.0	93	45-150
2-Hexanone	45.8	50.0	92	55-130
1,3-Dichloropropane	8.64	10.0	86	75-125

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/25/2017
Date Analyzed: 09/25/2017

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1708554

Lab Control Sample
 KWG1708554-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Dibromochloromethane	8.58	10.0	86	60-135
1,2-Dibromoethane (EDB)	8.14	10.0	81	80-120
Chlorobenzene	9.49	10.0	95	80-120
Ethylbenzene	9.23	10.0	92	75-125
1,1,1,2-Tetrachloroethane	8.82	10.0	88	80-130
m,p-Xylenes	18.5	20.0	93	75-130
o-Xylene	8.87	10.0	89	80-120
Styrene	8.00	10.0	80	65-135
Bromoform	8.15	10.0	82	70-130
Isopropylbenzene	9.12	10.0	91	75-125
1,1,2,2-Tetrachloroethane	8.55	10.0	86	65-130
Bromobenzene	8.92	10.0	89	75-125
n-Propylbenzene	9.79	10.0	98	70-130
1,2,3-Trichloropropane	8.55	10.0	86	75-125
2-Chlorotoluene	9.58	10.0	96	75-125
1,3,5-Trimethylbenzene	9.55	10.0	96	75-130
4-Chlorotoluene	9.87	10.0	99	75-130
tert-Butylbenzene	9.50	10.0	95	70-130
1,2,4-Trimethylbenzene	9.83	10.0	98	75-130
sec-Butylbenzene	10.0	10.0	100	70-125
4-Isopropyltoluene	10.0	10.0	100	75-130
1,3-Dichlorobenzene	9.66	10.0	97	75-125
1,4-Dichlorobenzene	9.32	10.0	93	75-125
n-Butylbenzene	10.2	10.0	102	70-135
1,2-Dichlorobenzene	9.27	10.0	93	70-120
1,2-Dibromo-3-chloropropane	7.70	10.0	77	50-130
1,2,4-Trichlorobenzene	9.10	10.0	91	65-135
Hexachlorobutadiene	9.51	10.0	95	50-140
Naphthalene	7.66	10.0	77	55-140
1,2,3-Trichlorobenzene	8.71	10.0	87	55-140

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/22/2017
Date Analyzed: 09/22/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1708579

Analyte Name	Lab Control Sample KWG1708579-1 Lab Control Spike			Duplicate Lab Control Sample KWG1708579-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Dichlorodifluoromethane	7.63	10.0	76	6.95	10.0	70	30-155	9	30
Chloromethane	8.65	10.0	87	7.94	10.0	79	40-125	9	30
Vinyl Chloride	8.22	10.0	82	7.56	10.0	76	50-145	8	30
Bromomethane	8.43	10.0	84	8.07	10.0	81	30-145	4	30
Chloroethane	9.05	10.0	91	7.96	10.0	80	60-135	13	30
Trichlorofluoromethane	7.57	10.0	76	6.99	10.0	70	60-145	8	30
1,1-Dichloroethene	8.20	10.0	82	7.31	10.0	73	70-130	11	30
Acetone	56.8	50.0	114	52.9	50.0	106	40-140	7	30
Carbon Disulfide	18.3	20.0	91	16.6	20.0	83	35-160	10	30
Methylene Chloride	9.11	10.0	91	8.41	10.0	84	55-140	8	30
Methyl tert-Butyl Ether	10.1	10.0	101	9.44	10.0	94	65-125	7	30
trans-1,2-Dichloroethene	8.42	10.0	84	7.69	10.0	77	60-140	9	30
1,1-Dichloroethane	9.86	10.0	99	9.08	10.0	91	70-135	8	30
2,2-Dichloropropane	8.54	10.0	85	7.73	10.0	77	70-135	10	30
cis-1,2-Dichloroethene	9.19	10.0	92	8.59	10.0	86	70-125	7	30
2-Butanone (MEK)	50.2	50.0	100	45.9	50.0	92	30-150	9	30
Bromochloromethane	9.46	10.0	95	8.70	10.0	87	65-130	8	30
Chloroform	9.59	10.0	96	8.88	10.0	89	65-135	8	30
1,1,1-Trichloroethane (TCA)	8.33	10.0	83	7.65	10.0	77	65-130	9	30
Carbon Tetrachloride	8.37	10.0	84	7.40	10.0	74	65-140	12	30
1,1-Dichloropropene	8.47	10.0	85	7.85	10.0	79	75-130	8	30
Benzene	9.00	10.0	90	8.26	10.0	83	80-120	9	30
1,2-Dichloroethane (EDC)	10.3	10.0	103	9.59	10.0	96	70-130	8	30
Trichloroethene (TCE)	9.30	10.0	93	8.68	10.0	87	70-125	7	30
1,2-Dichloropropane	9.95	10.0	100	9.48	10.0	95	75-125	5	30
Dibromomethane	9.23	10.0	92	8.80	10.0	88	75-125	5	30
Bromodichloromethane	9.90	10.0	99	8.98	10.0	90	75-120	10	30
cis-1,3-Dichloropropene	9.57	10.0	96	9.02	10.0	90	70-130	6	30
4-Methyl-2-pentanone (MIBK)	52.5	50.0	105	50.5	50.0	101	60-135	4	30
Toluene	8.54	10.0	85	7.86	10.0	79	75-120	8	30
trans-1,3-Dichloropropene	9.78	10.0	98	9.04	10.0	90	55-140	8	30
1,1,2-Trichloroethane	9.74	10.0	97	9.02	10.0	90	75-125	8	30
Tetrachloroethene (PCE)	8.29	10.0	83	7.46	10.0	75	45-150	11	30
2-Hexanone	52.9	50.0	106	48.8	50.0	98	55-130	8	30
1,3-Dichloropropane	9.45	10.0	95	8.90	10.0	89	75-125	6	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/22/2017
Date Analyzed: 09/22/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1708579

Analyte Name	Lab Control Sample KWG1708579-1 Lab Control Spike			Duplicate Lab Control Sample KWG1708579-2 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Dibromochloromethane	9.14	10.0	91	8.54	10.0	85	60-135	7	30
1,2-Dibromoethane (EDB)	8.80	10.0	88	8.48	10.0	85	80-120	4	30
Chlorobenzene	9.58	10.0	96	8.85	10.0	89	80-120	8	30
Ethylbenzene	8.59	10.0	86	7.84	10.0	78	75-125	9	30
1,1,1,2-Tetrachloroethane	8.85	10.0	89	8.34	10.0	83	80-130	6	30
m,p-Xylenes	17.5	20.0	88	16.0	20.0	80	75-130	9	30
o-Xylene	8.67	10.0	87	8.01	10.0	80	80-120	8	30
Styrene	8.96	10.0	90	8.03	10.0	80	65-135	11	30
Bromoform	8.80	10.0	88	8.46	10.0	85	70-130	4	30
Isopropylbenzene	8.33	10.0	83	7.57	10.0	76	75-125	10	30
1,1,2,2-Tetrachloroethane	9.00	10.0	90	8.30	10.0	83	65-130	8	30
Bromobenzene	9.18	10.0	92	8.59	10.0	86	75-125	7	30
n-Propylbenzene	8.68	10.0	87	7.97	10.0	80	70-130	9	30
1,2,3-Trichloropropane	9.15	10.0	92	8.49	10.0	85	75-125	7	30
2-Chlorotoluene	9.26	10.0	93	8.46	10.0	85	75-125	9	30
1,3,5-Trimethylbenzene	8.91	10.0	89	8.07	10.0	81	75-130	10	30
4-Chlorotoluene	9.76	10.0	98	8.88	10.0	89	75-130	9	30
tert-Butylbenzene	8.70	10.0	87	7.82	10.0	78	70-130	11	30
1,2,4-Trimethylbenzene	9.54	10.0	95	8.61	10.0	86	75-130	10	30
sec-Butylbenzene	8.85	10.0	89	8.15	10.0	82	70-125	8	30
4-Isopropyltoluene	9.13	10.0	91	8.20	10.0	82	75-130	11	30
1,3-Dichlorobenzene	9.79	10.0	98	8.91	10.0	89	75-125	9	30
1,4-Dichlorobenzene	9.54	10.0	95	8.78	10.0	88	75-125	8	30
n-Butylbenzene	8.92	10.0	89	8.06	10.0	81	70-135	10	30
1,2-Dichlorobenzene	9.89	10.0	99	9.04	10.0	90	70-120	9	30
1,2-Dibromo-3-chloropropane	9.31	10.0	93	8.09	10.0	81	50-130	14	30
1,2,4-Trichlorobenzene	9.61	10.0	96	9.01	10.0	90	65-135	6	30
Hexachlorobutadiene	8.38	10.0	84	7.74	10.0	77	50-140	8	30
Naphthalene	8.86	10.0	89	8.29	10.0	83	55-140	7	30
1,2,3-Trichlorobenzene	9.51	10.0	95	8.83	10.0	88	55-140	7	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/25/2017
Date Analyzed: 09/25/2017
Time Analyzed: 15:26

Method Blank Summary
Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1708554-4
Extraction Method: EPA 5030B
Analysis Method: 8260C

Instrument ID: MS27
File ID: J:\MS27\DATA\092517\0925F010.D
Level: Low
Extraction Lot: KWG1708554

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1708554-3	J:\MS27\DATA\092517\0925F005.D	09/25/17	13:09
FTP-16MS	KWG1708554-1	J:\MS27\DATA\092517\0925F006.D	09/25/17	13:36
FTP-16DMS	KWG1708554-2	J:\MS27\DATA\092517\0925F007.D	09/25/17	14:04
FTP-16	K1709799-014	J:\MS27\DATA\092517\0925F024.D	09/25/17	21:51
POMONA	K1709799-015	J:\MS27\DATA\092517\0925F025.D	09/25/17	22:19
PAIC	K1709799-016	J:\MS27\DATA\092517\0925F026.D	09/25/17	22:46

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/22/2017
Date Analyzed: 09/22/2017
Time Analyzed: 23:23

Method Blank Summary
Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1708579-3
Extraction Method: EPA 5030B
Analysis Method: 8260C

Instrument ID: MS27
File ID: J:\MS27\DATA\092217\092217F028.D
Level: Low
Extraction Lot: KWG1708579

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1708579-1	J:\MS27\DATA\092217\092217F024.D	09/22/17	21:33
Duplicate Lab Control Sample	KWG1708579-2	J:\MS27\DATA\092217\092217F025.D	09/22/17	22:01
815-2	K1709799-001	J:\MS27\DATA\092217\092217F031.D	09/23/17	00:46
TVR-5	K1709799-002	J:\MS27\DATA\092217\092217F032.D	09/23/17	01:13
TVR-6	K1709799-003	J:\MS27\DATA\092217\092217F033.D	09/23/17	01:41
TVR-7	K1709799-004	J:\MS27\DATA\092217\092217F034.D	09/23/17	02:08
TVR-3	K1709799-005	J:\MS27\DATA\092217\092217F035.D	09/23/17	02:36
TVR-1	K1709799-006	J:\MS27\DATA\092217\092217F036.D	09/23/17	03:03
MTS-1	K1709799-007	J:\MS27\DATA\092217\092217F037.D	09/23/17	03:31
MTS-2	K1709799-008	J:\MS27\DATA\092217\092217F038.D	09/23/17	03:58
MTS-4	K1709799-009	J:\MS27\DATA\092217\092217F039.D	09/23/17	04:26
TRIP BLANK	K1709799-010	J:\MS27\DATA\092217\092217F040.D	09/23/17	04:53
FTP-14	K1709799-012	J:\MS27\DATA\092217\092217F041.D	09/23/17	05:21
FTP-15	K1709799-013	J:\MS27\DATA\092217\092217F042.D	09/23/17	05:48
FTP-1	K1709799-011	J:\MS27\DATA\092217\092217F043.D	09/23/17	06:16
FTP-1	K1709799-011	J:\MS27\DATA\092217\092217F044.D	09/23/17	06:43

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/25/2017
Date Analyzed: 09/25/2017
Time Analyzed: 13:09

Lab Control Sample Summary
Volatile Organic Compounds

Sample Name: Lab Control Sample
Lab Code: KWG1708554-3
Extraction Method: EPA 5030B
Analysis Method: 8260C

Instrument ID: MS27
File ID: J:\MS27\DATA\092517\0925F005.D
Level: Low
Extraction Lot: KWG1708554

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
FTP-16MS	KWG1708554-1	J:\MS27\DATA\092517\0925F006.D	09/25/17	13:36
FTP-16DMS	KWG1708554-2	J:\MS27\DATA\092517\0925F007.D	09/25/17	14:04
Method Blank	KWG1708554-4	J:\MS27\DATA\092517\0925F010.D	09/25/17	15:26
FTP-16	K1709799-014	J:\MS27\DATA\092517\0925F024.D	09/25/17	21:51
POMONA	K1709799-015	J:\MS27\DATA\092517\0925F025.D	09/25/17	22:19
PAIC	K1709799-016	J:\MS27\DATA\092517\0925F026.D	09/25/17	22:46

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/22/2017
Date Analyzed: 09/22/2017
Time Analyzed: 21:33

Lab Control Sample Summary
Volatile Organic Compounds

Sample Name: Lab Control Sample
Lab Code: KWG1708579-1
Extraction Method: EPA 5030B
Analysis Method: 8260C

Instrument ID: MS27
File ID: J:\MS27\DATA\092217\092217F024.D
Level: Low
Extraction Lot: KWG1708579

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1708579-3	J:\MS27\DATA\092217\092217F028.D	09/22/17	23:23
815-2	K1709799-001	J:\MS27\DATA\092217\092217F031.D	09/23/17	00:46
TVR-5	K1709799-002	J:\MS27\DATA\092217\092217F032.D	09/23/17	01:13
TVR-6	K1709799-003	J:\MS27\DATA\092217\092217F033.D	09/23/17	01:41
TVR-7	K1709799-004	J:\MS27\DATA\092217\092217F034.D	09/23/17	02:08
TVR-3	K1709799-005	J:\MS27\DATA\092217\092217F035.D	09/23/17	02:36
TVR-1	K1709799-006	J:\MS27\DATA\092217\092217F036.D	09/23/17	03:03
MTS-1	K1709799-007	J:\MS27\DATA\092217\092217F037.D	09/23/17	03:31
MTS-2	K1709799-008	J:\MS27\DATA\092217\092217F038.D	09/23/17	03:58
MTS-4	K1709799-009	J:\MS27\DATA\092217\092217F039.D	09/23/17	04:26
TRIP BLANK	K1709799-010	J:\MS27\DATA\092217\092217F040.D	09/23/17	04:53
FTP-14	K1709799-012	J:\MS27\DATA\092217\092217F041.D	09/23/17	05:21
FTP-15	K1709799-013	J:\MS27\DATA\092217\092217F042.D	09/23/17	05:48
FTP-1	K1709799-011	J:\MS27\DATA\092217\092217F043.D	09/23/17	06:16
FTP-1	K1709799-011	J:\MS27\DATA\092217\092217F044.D	09/23/17	06:43

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Date Analyzed: 09/22/2017
Time Analyzed: 20:38

Tune Summary
Volatile Organic Compounds

File ID: J:\MS27\DATA\092217\092217F022.D
Instrument ID: MS27
Column:

Analysis Method: 8260C
Analysis Lot: KWG1708577

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	18.0	9979	PASS
75	95	30	60	46.9	25968	PASS
95	95	100	100	100.0	55384	PASS
96	95	5	9	7.0	3866	PASS
173	174	0	2	1.4	658	PASS
174	95	50	120	87.7	48573	PASS
175	174	5	9	8.3	4036	PASS
176	174	95	101	99.7	48450	PASS
177	176	5	9	6.4	3109	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1708577-2	J:\MS27\DATA\092217\092217F023.D	09/22/2017	21:06	
Lab Control Sample	KWG1708579-1	J:\MS27\DATA\092217\092217F024.D	09/22/2017	21:33	
Duplicate Lab Control Sample	KWG1708579-2	J:\MS27\DATA\092217\092217F025.D	09/22/2017	22:01	
Method Blank	KWG1708579-3	J:\MS27\DATA\092217\092217F028.D	09/22/2017	23:23	
815-2	K1709799-001	J:\MS27\DATA\092217\092217F031.D	09/23/2017	00:46	
TVR-5	K1709799-002	J:\MS27\DATA\092217\092217F032.D	09/23/2017	01:13	
TVR-6	K1709799-003	J:\MS27\DATA\092217\092217F033.D	09/23/2017	01:41	
TVR-7	K1709799-004	J:\MS27\DATA\092217\092217F034.D	09/23/2017	02:08	
TVR-3	K1709799-005	J:\MS27\DATA\092217\092217F035.D	09/23/2017	02:36	
TVR-1	K1709799-006	J:\MS27\DATA\092217\092217F036.D	09/23/2017	03:03	
MTS-1	K1709799-007	J:\MS27\DATA\092217\092217F037.D	09/23/2017	03:31	
MTS-2	K1709799-008	J:\MS27\DATA\092217\092217F038.D	09/23/2017	03:58	
MTS-4	K1709799-009	J:\MS27\DATA\092217\092217F039.D	09/23/2017	04:26	
TRIP BLANK	K1709799-010	J:\MS27\DATA\092217\092217F040.D	09/23/2017	04:53	
FTP-14	K1709799-012	J:\MS27\DATA\092217\092217F041.D	09/23/2017	05:21	
FTP-15	K1709799-013	J:\MS27\DATA\092217\092217F042.D	09/23/2017	05:48	
FTP-1	K1709799-011	J:\MS27\DATA\092217\092217F043.D	09/23/2017	06:16	
FTP-1	K1709799-011	J:\MS27\DATA\092217\092217F044.D	09/23/2017	06:43	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Date Analyzed: 09/25/2017
Time Analyzed: 11:33

Tune Summary
Volatile Organic Compounds

File ID: J:\MS27\DATA\092517\0925F003.D
Instrument ID: MS27
Column:

Analysis Method: 8260C
Analysis Lot: KWG1708553

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	17.5	10544	PASS
75	95	30	60	47.9	28810	PASS
95	95	100	100	100.0	60170	PASS
96	95	5	9	6.8	4107	PASS
173	174	0	2	0.5	292	PASS
174	95	50	120	90.3	54344	PASS
175	174	5	9	7.3	3964	PASS
176	174	95	101	97.1	52789	PASS
177	176	5	9	6.6	3472	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1708553-2	J:\MS27\DATA\092517\0925F004.D	09/25/2017	12:05	
Lab Control Sample	KWG1708554-3	J:\MS27\DATA\092517\0925F005.D	09/25/2017	13:09	
FTP-16MS	KWG1708554-1	J:\MS27\DATA\092517\0925F006.D	09/25/2017	13:36	
FTP-16DMS	KWG1708554-2	J:\MS27\DATA\092517\0925F007.D	09/25/2017	14:04	
Method Blank	KWG1708554-4	J:\MS27\DATA\092517\0925F010.D	09/25/2017	15:26	
FTP-16	K1709799-014	J:\MS27\DATA\092517\0925F024.D	09/25/2017	21:51	
POMONA	K1709799-015	J:\MS27\DATA\092517\0925F025.D	09/25/2017	22:19	
PAIC	K1709799-016	J:\MS27\DATA\092517\0925F026.D	09/25/2017	22:46	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Calibration Date: 07/26/2017

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15494
Instrument ID: MS27

Column: MS

Level ID	File ID	Level ID	File ID
A	J:\MS27\DATA\072617\0726F008.D	G	J:\MS27\DATA\072617\0726F014.D
B	J:\MS27\DATA\072617\0726F009.D	H	J:\MS27\DATA\072617\0726F015.D
C	J:\MS27\DATA\072617\0726F010.D	I	J:\MS27\DATA\072617\0726F016.D
D	J:\MS27\DATA\072617\0726F011.D	J	J:\MS27\DATA\072617\0726F017.D
E	J:\MS27\DATA\072617\0726F012.D	K	J:\MS27\DATA\072617\0726F018.D
F	J:\MS27\DATA\072617\0726F013.D		

Analyte Name	Level ID			Level ID			Level ID			Level ID			Level ID		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
Dichlorodifluoromethane	F	5.0	0.317	G	10	0.306	C	0.50	0.262	D	1.0	0.295	E	2.0	0.339
	K	80	0.288				H	20	0.287	I	40	0.303	J	60	0.305
Chloromethane				B	0.20	0.508	C	0.50	0.492	D	1.0	0.524	E	2.0	0.556
	F	5.0	0.478	G	10	0.425	H	20	0.372	I	40	0.356	J	60	0.350
	K	80	0.329												
Vinyl Chloride	A	0.10	0.319	B	0.20	0.329	C	0.50	0.324	D	1.0	0.343	E	2.0	0.398
	F	5.0	0.380	G	10	0.363	H	20	0.340	I	40	0.357	J	60	0.355
	K	80	0.334												
Bromomethane							C	0.50	0.331	D	1.0	0.342	E	2.0	0.327
	F	5.0	0.274	G	10	0.245	H	20	0.217	I	40	0.227	J	60	0.233
Chloroethane	A	0.10	0.254	B	0.20	0.189	C	0.50	0.216	D	1.0	0.210	E	2.0	0.241
	F	5.0	0.220	G	10	0.206	H	20	0.191	I	40	0.204	J	60	0.202
	K	80	0.187												
Trichlorofluoromethane	A	0.10	0.356	B	0.20	0.379	C	0.50	0.367	D	1.0	0.432	E	2.0	0.456
	F	5.0	0.442	G	10	0.429	H	20	0.396	I	40	0.424	J	60	0.421
	K	80	0.395												
1,1-Dichloroethene	A	0.10	0.250	B	0.20	0.203	C	0.50	0.217	D	1.0	0.230	E	2.0	0.249
	F	5.0	0.243	G	10	0.236	H	20	0.226	I	40	0.239	J	60	0.240
	K	80	0.226												
Acetone	A	4.0	0.0376	B	8.0	0.0369	C	20	0.0367	D	40	0.0386	E	80	0.0378
	F	100	0.0329	G	200	0.0372	H	400	0.0380	I	800	0.0364	J	1600	0.0369
	K	2000	0.0351												
Carbon Disulfide				B	0.20	0.655	C	0.50	0.735	D	1.0	0.826	E	2.0	0.889
	F	5.0	0.843	G	10	0.830	H	20	0.787	I	40	0.839	J	60	0.842
	K	80	0.797												
Methylene Chloride							C	0.50	0.324	D	1.0	0.335	E	2.0	0.341
	F	5.0	0.317	G	10	0.288	H	20	0.275	I	40	0.288	J	60	0.283
	K	80	0.270												

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Calibration Date: 07/26/2017

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15494
Instrument ID: MS27

Column: MS

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
Methyl tert-Butyl Ether	A	0.20	0.519	B	0.40	0.469	C	1.0	0.500	D	2.0	0.557	E	4.0	0.585
	F	10	0.566	G	20	0.551	H	40	0.539	I	80	0.588	J	120	0.585
	K	160	0.553												
trans-1,2-Dichloroethene	A	0.10	0.272	B	0.20	0.256	C	0.50	0.242	D	1.0	0.287	E	2.0	0.300
	F	5.0	0.286	G	10	0.275	H	20	0.267	I	40	0.284	J	60	0.286
	K	80	0.267												
1,1-Dichloroethane	A	0.10	0.378	B	0.20	0.445	C	0.50	0.491	D	1.0	0.489	E	2.0	0.530
	F	5.0	0.504	G	10	0.482	H	20	0.457	I	40	0.496	J	60	0.491
	K	80	0.459												
2,2-Dichloropropane	A	0.10	0.296	B	0.20	0.277	C	0.50	0.299	D	1.0	0.342	E	2.0	0.381
	F	5.0	0.337	G	10	0.329	H	20	0.308	I	40	0.337	J	60	0.338
	K	80	0.312												
cis-1,2-Dichloroethene				B	0.20	0.284	C	0.50	0.276	D	1.0	0.295	E	2.0	0.340
	F	5.0	0.315	G	10	0.303	H	20	0.291	I	40	0.316	J	60	0.310
	K	80	0.293												
2-Butanone (MEK)	A	4.0	0.0135	B	8.0	0.0139	C	20	0.0148	D	40	0.0164	E	80	0.0160
	F	100	0.0144	G	200	0.0162	H	400	0.0167	I	800	0.0167	J	1600	0.0171
	K	2000	0.0164												
Bromochloromethane				B	0.20	0.0956	C	0.50	0.104	D	1.0	0.133	E	2.0	0.152
	F	5.0	0.141	G	10	0.141	H	20	0.138	I	40	0.148	J	60	0.144
	K	80	0.134												
Chloroform				B	0.20	0.449	C	0.50	0.471	D	1.0	0.489	E	2.0	0.547
	F	5.0	0.511	G	10	0.486	H	20	0.467	I	40	0.496	J	60	0.491
	K	80	0.460												
1,1,1-Trichloroethane (TCA)	A	0.10	0.342	B	0.20	0.331	C	0.50	0.378	D	1.0	0.388	E	2.0	0.444
	F	5.0	0.409	G	10	0.404	H	20	0.390	I	40	0.419	J	60	0.422
	K	80	0.397												
Carbon Tetrachloride	A	0.10	0.272	B	0.20	0.313	C	0.50	0.292	D	1.0	0.351	E	2.0	0.369
	F	5.0	0.360	G	10	0.354	H	20	0.341	I	40	0.371	J	60	0.372
	K	80	0.354												
1,1-Dichloropropene				B	0.20	0.299	C	0.50	0.324	D	1.0	0.356	E	2.0	0.382
	F	5.0	0.381	G	10	0.369	H	20	0.356	I	40	0.385	J	60	0.383
	K	80	0.360												
Benzene	A	0.10	1.07	B	0.20	0.979	C	0.50	1.00	D	1.0	1.15	E	2.0	1.22
	F	5.0	1.15	G	10	1.11	H	20	1.07	I	40	1.14	J	60	1.14
	K	80	1.07												

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Inc.
 Project: YTC/106-45760003

Service Request: K1709799
 Calibration Date: 07/26/2017

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15494
 Instrument ID: MS27

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
1,2-Dichloroethane (EDC)	A	0.10	0.277	B	0.20	0.270	C	0.50	0.285	D	1.0	0.327	E	2.0	0.341
	F	5.0	0.335	G	10	0.318	H	20	0.304	I	40	0.319	J	60	0.310
	K	80	0.287												
Trichloroethene (TCE)	A	0.10	0.263	B	0.20	0.279	C	0.50	0.259	D	1.0	0.312	E	2.0	0.313
	F	5.0	0.304	G	10	0.289	H	20	0.272	I	40	0.294	J	60	0.295
	K	80	0.277												
1,2-Dichloropropane				B	0.20	0.244	C	0.50	0.256	D	1.0	0.287	E	2.0	0.305
	F	5.0	0.292	G	10	0.280	H	20	0.277	I	40	0.295	J	60	0.294
	K	80	0.274												
Dibromomethane	A	0.10	0.145	B	0.20	0.137	C	0.50	0.128	D	1.0	0.137	E	2.0	0.163
	F	5.0	0.156	G	10	0.147	H	20	0.146	I	40	0.155	J	60	0.154
	K	80	0.143												
Bromodichloromethane	A	0.10	0.284	B	0.20	0.318	C	0.50	0.299	D	1.0	0.337	E	2.0	0.364
	F	5.0	0.352	G	10	0.341	H	20	0.333	I	40	0.360	J	60	0.360
	K	80	0.337												
cis-1,3-Dichloropropene	A	0.10	0.324	B	0.20	0.312	C	0.50	0.364	D	1.0	0.361	E	2.0	0.403
	F	5.0	0.391	G	10	0.390	H	20	0.391	I	40	0.427	J	60	0.435
	K	80	0.411												
4-Methyl-2-pentanone (MIBK)	A	4.0	0.0412	B	8.0	0.0444	C	20	0.0488	D	40	0.0546	E	80	0.0531
	F	100	0.0474	G	200	0.0548	H	400	0.0575	I	800	0.0567	J	1600	0.0582
	K	2000	0.0556												
Toluene				B	0.20	0.617	C	0.50	0.567	D	1.0	0.652	E	2.0	0.755
	F	5.0	0.709	G	10	0.680	H	20	0.653	I	40	0.697	J	60	0.705
	K	80	0.666												
trans-1,3-Dichloropropene				B	0.20	0.679	C	0.50	0.643	D	1.0	0.734	E	2.0	0.786
	F	5.0	0.777	G	10	0.744	H	20	0.771	I	40	0.863	J	60	0.850
	K	80	0.833												
1,1,2-Trichloroethane	A	0.10	0.388	B	0.20	0.361	C	0.50	0.433	D	1.0	0.479	E	2.0	0.506
	F	5.0	0.480	G	10	0.445	H	20	0.450	I	40	0.475	J	60	0.463
	K	80	0.450												
Tetrachloroethene (PCE)				B	0.20	0.549	C	0.50	0.561	D	1.0	0.623	E	2.0	0.661
	F	5.0	0.622	G	10	0.597	H	20	0.579	I	40	0.618	J	60	0.625
	K	80	0.615												
2-Hexanone	A	4.0	0.0280	B	8.0	0.0325	C	20	0.0374	D	40	0.0421	E	80	0.0424
	F	100	0.0367	G	200	0.0421	H	400	0.0450	I	800	0.0448	J	1600	0.0453
	K	2000	0.0444												

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† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Calibration Date: 07/26/2017

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15494
Instrument ID: MS27

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
1,3-Dichloropropane	A	0.10	0.778	B	0.20	0.833	C	0.50	0.857	D	1.0	0.892	E	2.0	0.919
	F	5.0	0.908	G	10	0.856	H	20	0.873	I	40	0.917	J	60	0.901
	K	80	0.874												
Dibromochloromethane	A	0.10	0.451	B	0.20	0.519	C	0.50	0.555	D	1.0	0.632	E	2.0	0.693
	F	5.0	0.655	G	10	0.643	H	20	0.660	I	40	0.715	J	60	0.713
	K	80	0.694												
1,2-Dibromoethane (EDB)				B	0.20	0.445	C	0.50	0.446	D	1.0	0.542	E	2.0	0.515
	F	5.0	0.511	G	10	0.481	H	20	0.480	I	40	0.522	J	60	0.513
	K	80	0.502												
Chlorobenzene	A	0.10	1.50	B	0.20	1.68	C	0.50	1.77	D	1.0	1.98	E	2.0	2.11
	F	5.0	2.02	G	10	1.88	H	20	1.91	I	40	1.98	J	60	1.98
	K	80	1.92												
Ethylbenzene	A	0.10	0.869	B	0.20	0.820	C	0.50	0.827	D	1.0	0.973	E	2.0	1.06
	F	5.0	1.02	G	10	0.956	H	20	0.977	I	40	1.05	J	60	1.05
	K	80	1.02												
1,1,1,2-Tetrachloroethane	A	0.10	0.551	B	0.20	0.565	C	0.50	0.582	D	1.0	0.647	E	2.0	0.711
	F	5.0	0.669	G	10	0.660	H	20	0.650	I	40	0.704	J	60	0.702
	K	80	0.694												
m,p-Xylenes	A	0.20	0.966	B	0.40	0.896	C	1.0	1.02	D	2.0	1.17	E	4.0	1.23
	F	10	1.24	G	20	1.18	H	40	1.21	I	80	1.29	J	120	1.29
	K	160	1.26												
o-Xylene	A	0.10	0.986	B	0.20	0.921	C	0.50	0.974	D	1.0	1.10	E	2.0	1.21
	F	5.0	1.21	G	10	1.15	H	20	1.17	I	40	1.24	J	60	1.27
	K	80	1.23												
Styrene							C	0.50	0.840	D	1.0	0.942	E	2.0	1.11
	F	5.0	1.08	G	10	1.06	H	20	1.10	I	40	1.17	J	60	1.18
	K	80	1.15												
Bromoform				B	0.20	0.269	C	0.50	0.339	D	1.0	0.383	E	2.0	0.391
	F	5.0	0.369	G	10	0.369	H	20	0.373	I	40	0.406	J	60	0.408
	K	80	0.400												
Isopropylbenzene	A	0.10	2.20	B	0.20	2.37	C	0.50	2.57	D	1.0	2.88	E	2.0	3.16
	F	5.0	3.09	G	10	2.96	H	20	3.02	I	40	3.22	J	60	3.24
	K	80	3.17												
1,1,2,2-Tetrachloroethane				B	0.20	0.580	C	0.50	0.581	D	1.0	0.621	E	2.0	0.704
	F	5.0	0.624	G	10	0.591	H	20	0.577	I	40	0.603	J	60	0.575
	K	80	0.552												

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Calibration Date: 07/26/2017

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15494
Instrument ID: MS27

Column: MS

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
Bromobenzene	A	0.10	0.762	B	0.20	0.692	C	0.50	0.747	D	1.0	0.886	E	2.0	0.953
	F	5.0	0.888	G	10	0.824	H	20	0.824	I	40	0.886	J	60	0.860
	K	80	0.839												
n-Propylbenzene	A	0.10	2.97	B	0.20	3.03	C	0.50	3.14	D	1.0	3.53	E	2.0	4.01
	F	5.0	3.81	G	10	3.61	H	20	3.65	I	40	3.90	J	60	3.84
	K	80	3.75												
1,2,3-Trichloropropane				B	0.20	0.144	C	0.50	0.168	D	1.0	0.181	E	2.0	0.198
	F	5.0	0.176	G	10	0.163	H	20	0.160	I	40	0.168	J	60	0.164
	K	80	0.154												
2-Chlorotoluene				B	0.20	1.92	C	0.50	2.04	D	1.0	2.21	E	2.0	2.47
	F	5.0	2.31	G	10	2.19	H	20	2.16	I	40	2.30	J	60	2.24
	K	80	2.19												
1,3,5-Trimethylbenzene				B	0.20	1.91	C	0.50	2.03	D	1.0	2.37	E	2.0	2.74
	F	5.0	2.60	G	10	2.54	H	20	2.62	I	40	2.77	J	60	2.74
	K	80	2.67												
4-Chlorotoluene	A	0.10	2.04	B	0.20	1.91	C	0.50	2.00	D	1.0	2.24	E	2.0	2.64
	F	5.0	2.43	G	10	2.31	H	20	2.33	I	40	2.38	J	60	2.33
	K	80	2.31												
tert-Butylbenzene	A	0.10	1.91	B	0.20	1.70	C	0.50	1.83	D	1.0	2.10	E	2.0	2.29
	F	5.0	2.25	G	10	2.17	H	20	2.19	I	40	2.36	J	60	2.34
	K	80	2.27												
1,2,4-Trimethylbenzene				B	0.20	1.84	C	0.50	1.98	D	1.0	2.39	E	2.0	2.74
	F	5.0	2.65	G	10	2.55	H	20	2.62	I	40	2.79	J	60	2.74
	K	80	2.66												
sec-Butylbenzene	A	0.10	2.40	B	0.20	2.61	C	0.50	2.69	D	1.0	3.03	E	2.0	3.38
	F	5.0	3.28	G	10	3.13	H	20	3.22	I	40	3.42	J	60	3.38
	K	80	3.29												
4-Isopropyltoluene				B	0.20	1.82	C	0.50	2.14	D	1.0	2.41	E	2.0	2.72
	F	5.0	2.64	G	10	2.60	H	20	2.66	I	40	2.86	J	60	2.82
	K	80	2.76												
1,3-Dichlorobenzene				B	0.20	1.49	C	0.50	1.42	D	1.0	1.61	E	2.0	1.84
	F	5.0	1.64	G	10	1.55	H	20	1.59	I	40	1.66	J	60	1.64
	K	80	1.58												
1,4-Dichlorobenzene				B	0.20	1.53	C	0.50	1.60	D	1.0	1.64	E	2.0	1.83
	F	5.0	1.67	G	10	1.58	H	20	1.57	I	40	1.67	J	60	1.63
	K	80	1.58												

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Calibration Date: 07/26/2017

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL15494
Instrument ID: MS27

Column: MS

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
n-Butylbenzene				B	0.20	1.80	C	0.50	2.15	D	1.0	2.41	E	2.0	2.50
	F	5.0	2.46	G	10	2.33	H	20	2.43	I	40	2.57	J	60	2.55
	K	80	2.47												
1,2-Dichlorobenzene				B	0.20	1.28	C	0.50	1.43	D	1.0	1.59	E	2.0	1.67
	F	5.0	1.55	G	10	1.46	H	20	1.46	I	40	1.52	J	60	1.48
	K	80	1.43												
1,2-Dibromo-3-chloropropane							C	0.50	0.0678	D	1.0	0.0613	E	2.0	0.0983
	F	5.0	0.0786	G	10	0.0835	H	20	0.0865	I	40	0.0872	J	60	0.0857
	K	80	0.0843												
1,2,4-Trichlorobenzene				B	0.20	0.974	C	0.50	0.886	D	1.0	1.07	E	2.0	1.11
	F	5.0	1.05	G	10	0.998	H	20	1.04	I	40	1.07	J	60	1.05
	K	80	1.05												
Hexachlorobutadiene				B	0.20	0.481	C	0.50	0.483	D	1.0	0.538	E	2.0	0.542
	F	5.0	0.521	G	10	0.473	H	20	0.477	I	40	0.497	J	60	0.492
	K	80	0.484												
Naphthalene				B	0.20	1.33	C	0.50	1.40	D	1.0	1.60	E	2.0	1.83
	F	5.0	1.69	G	10	1.66	H	20	1.76	I	40	1.86	J	60	1.85
	K	80	1.83												
1,2,3-Trichlorobenzene				B	0.20	0.768	C	0.50	0.791	D	1.0	0.997	E	2.0	1.02
	F	5.0	0.975	G	10	0.903	H	20	0.925	I	40	0.945	J	60	0.936
	K	80	0.927												
Dibromofluoromethane										D	4.0	0.279	E	6.0	0.276
	F	8.0	0.269	G	10	0.274	H	12	0.263	I	14	0.296	J	16	0.278
	K	20	0.256												
1,2-Dichloroethane-d4										D	4.0	0.282	E	6.0	0.274
	F	8.0	0.264	G	10	0.262	H	12	0.260	I	14	0.287	J	16	0.261
	K	20	0.241												
Toluene-d8										D	4.0	1.04	E	6.0	1.03
	F	8.0	0.990	G	10	1.02	H	12	0.945	I	14	1.10	J	16	1.03
	K	20	0.932												
4-Bromofluorobenzene										D	4.0	0.914	E	6.0	0.919
	F	8.0	0.910	G	10	0.897	H	12	0.892	I	14	0.999	J	16	0.952
	K	20	0.878												

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Calibration Date: 07/26/2017

**Initial Calibration Summary
Volatile Organic Compounds**

Calibration ID: CAL15494
Instrument ID: MS27

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Dichlorodifluoromethane	MS	AverageRF	% RSD	7.0		≤20	0.300		0.100
Chloromethane	MS	Quadratic(0,0)	COD	0.999		≥0.990	0.439		0.100
Vinyl Chloride	MS	AverageRF	% RSD	7.0		≤20	0.349		0.100
Bromomethane	MS	Linear	R2	0.999		≥0.990	0.275		0.100
Chloroethane	MS	AverageRF	% RSD	10.0		≤20	0.211		0.100
Trichlorofluoromethane	MS	AverageRF	% RSD	7.9		≤20	0.409		0.100
1,1-Dichloroethene	MS	AverageRF	% RSD	6.0		≤20	0.233		.100
Acetone	MS	AverageRF	% RSD	4.3		≤20	0.0367		0.01
Carbon Disulfide	MS	AverageRF	% RSD	8.3		≤20	0.804		0.100
Methylene Chloride	MS	AverageRF	% RSD	9.0		≤20	0.302		0.100
Methyl tert-Butyl Ether	MS	AverageRF	% RSD	6.9		≤20	0.547		0.100
trans-1,2-Dichloroethene	MS	AverageRF	% RSD	5.9		≤20	0.275		0.100
1,1-Dichloroethane	MS	AverageRF	% RSD	8.4		≤20	0.475		.200
2,2-Dichloropropane	MS	AverageRF	% RSD	8.9		≤20	0.323		0.01
cis-1,2-Dichloroethene	MS	AverageRF	% RSD	6.1		≤20	0.302		0.100
2-Butanone (MEK)	MS	AverageRF	% RSD	8.0		≤20	0.0156		0.01
Bromochloromethane	MS	AverageRF	% RSD	14.0		≤20	0.133		0.01
Chloroform	MS	AverageRF	% RSD	5.8		≤20	0.487		0.200
1,1,1-Trichloroethane (TCA)	MS	AverageRF	% RSD	8.5		≤20	0.393		.100
Carbon Tetrachloride	MS	AverageRF	% RSD	9.9		≤20	0.341		0.100
1,1-Dichloropropene	MS	AverageRF	% RSD	7.9		≤20	0.359		0.01
Benzene	MS	AverageRF	% RSD	6.4		≤20	1.10		0.500
1,2-Dichloroethane (EDC)	MS	AverageRF	% RSD	7.8		≤20	0.307		0.100
Trichloroethene (TCE)	MS	AverageRF	% RSD	6.5		≤20	0.287		0.200
1,2-Dichloropropane	MS	AverageRF	% RSD	6.6		≤20	0.280		0.100
Dibromomethane	MS	AverageRF	% RSD	6.9		≤20	0.146		0.01
Bromodichloromethane	MS	AverageRF	% RSD	7.6		≤20	0.335		0.200
cis-1,3-Dichloropropene	MS	AverageRF	% RSD	10.2		≤20	0.383		0.200
4-Methyl-2-pentanone (MIBK)	MS	AverageRF	% RSD	11.0		≤20	0.0520		0.01
Toluene	MS	AverageRF	% RSD	7.9		≤20	0.670		0.400
trans-1,3-Dichloropropene	MS	AverageRF	% RSD	9.3		≤20	0.768		0.100
1,1,2-Trichloroethane	MS	AverageRF	% RSD	9.4		≤20	0.448		.100
Tetrachloroethene (PCE)	MS	AverageRF	% RSD	5.6		≤20	0.605		0.200
2-Hexanone	MS	AverageRF	% RSD	14.3		≤20	0.0401		0.015
1,3-Dichloropropane	MS	AverageRF	% RSD	4.8		≤20	0.874		0.01
Dibromochloromethane	MS	AverageRF	% RSD	13.6		≤20	0.630		0.100
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	6.5		≤20	0.496		0.100
Chlorobenzene	MS	AverageRF	% RSD	9.2		≤20	1.88		0.500
Ethylbenzene	MS	AverageRF	% RSD	9.2		≤20	0.966		0.100
1,1,1,2-Tetrachloroethane	MS	AverageRF	% RSD	8.9		≤20	0.649		.01
m,p-Xylenes	MS	AverageRF	% RSD	11.7		≤20	1.16		0.100
o-Xylene	MS	AverageRF	% RSD	10.7		≤20	1.13		0.300

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Calibration Date: 07/26/2017

**Initial Calibration Summary
 Volatile Organic Compounds**

Calibration ID: CAL15494
Instrument ID: MS27

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
Styrene	MS	AverageRF	% RSD	10.4		≤ 20	1.07		0.300
Bromoforn	MS	AverageRF	% RSD	11.2		≤ 20	0.371		0.100
Isopropylbenzene	MS	AverageRF	% RSD	12.4		≤ 20	2.90		0.100
1,1,2,2-Tetrachloroethane	MS	AverageRF	% RSD	7.1		≤ 20	0.601		.300
Bromobenzene	MS	AverageRF	% RSD	9.0		≤ 20	0.833		0.01
n-Propylbenzene	MS	AverageRF	% RSD	10.2		≤ 20	3.57		0.01
1,2,3-Trichloropropane	MS	AverageRF	% RSD	8.9		≤ 20	0.168		0.01
2-Chlorotoluene	MS	AverageRF	% RSD	6.8		≤ 20	2.20		0.01
1,3,5-Trimethylbenzene	MS	AverageRF	% RSD	12.1		≤ 20	2.50		0.01
4-Chlorotoluene	MS	AverageRF	% RSD	9.3		≤ 20	2.27		0.01
tert-Butylbenzene	MS	AverageRF	% RSD	10.3		≤ 20	2.13		0.01
1,2,4-Trimethylbenzene	MS	AverageRF	% RSD	13.2		≤ 20	2.50		0.01
sec-Butylbenzene	MS	AverageRF	% RSD	11.5		≤ 20	3.07		0.01
4-Isopropyltoluene	MS	AverageRF	% RSD	13.0		≤ 20	2.54		0.01
1,3-Dichlorobenzene	MS	AverageRF	% RSD	6.9		≤ 20	1.60		0.600
1,4-Dichlorobenzene	MS	AverageRF	% RSD	5.1		≤ 20	1.63		0.500
n-Butylbenzene	MS	AverageRF	% RSD	9.9		≤ 20	2.37		0.01
1,2-Dichlorobenzene	MS	AverageRF	% RSD	7.0		≤ 20	1.49		0.400
1,2-Dibromo-3-chloropropane	MS	AverageRF	% RSD	13.5		≤ 20	0.0815		0.025
1,2,4-Trichlorobenzene	MS	AverageRF	% RSD	6.1		≤ 20	1.03		0.200
Hexachlorobutadiene	MS	AverageRF	% RSD	5.2		≤ 20	0.499		0.01
Naphthalene	MS	AverageRF	% RSD	11.2		≤ 20	1.68		0.01
1,2,3-Trichlorobenzene	MS	AverageRF	% RSD	8.8		≤ 20	0.918		0.01
Dibromofluoromethane	SURR	AverageRF	% RSD	4.4		≤ 20	0.274		0.01
1,2-Dichloroethane-d4	SURR	AverageRF	% RSD	5.5		≤ 20	0.266		0.01
Toluene-d8	SURR	AverageRF	% RSD	5.4		≤ 20	1.01		0.01
4-Bromofluorobenzene	SURR	AverageRF	% RSD	4.2		≤ 20	0.920		0.01

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Calibration Date: 07/26/2017
Date Analyzed: 07/26/2017 -
07/27/2017

Second Source Calibration Verification
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration ID: CAL15494
Units: PPB

File ID: J:\MS27\DATA\072617\0726F021.D
J:\MS27\DATA\072617\0726F022.D
J:\MS27\DATA\072717\0727F003.D
J:\MS27\DATA\072717\0727F005.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Dichlorodifluoromethane	10	9.6	0.300	0.288	-4	NA	± 30 %	AverageRF
Chloromethane	10	9.9	0.439	0.386	NA	-1	± 30 %	Quadratic(0,0
Vinyl Chloride	10	9.5	0.349	0.332	-5	NA	± 30 %	AverageRF
Bromomethane	10	9.5	0.275	0.227	NA	-5	± 30 %	Linear
Chloroethane	10	9.4	0.211	0.198	-6	NA	± 30 %	AverageRF
Trichlorofluoromethane	10	9.1	0.409	0.371	-9	NA	± 30 %	AverageRF
1,1-Dichloroethene	10	9.6	0.233	0.224	-4	NA	± 30 %	AverageRF
Acetone	50	53	0.0367	0.0387	5	NA	± 30 %	AverageRF
Carbon Disulfide	20	22	0.804	0.865	8	NA	± 30 %	AverageRF
Methylene Chloride	10	9.0	0.302	0.273	-10	NA	± 30 %	AverageRF
Methyl tert-Butyl Ether	10	9.8	0.547	0.535	-2	NA	± 30 %	AverageRF
trans-1,2-Dichloroethene	10	9.2	0.275	0.254	-8	NA	± 30 %	AverageRF
1,1-Dichloroethane	10	9.5	0.475	0.452	-5	NA	± 30 %	AverageRF
2,2-Dichloropropane	10	9.4	0.323	0.304	-6	NA	± 30 %	AverageRF
cis-1,2-Dichloroethene	10	9.3	0.302	0.282	-7	NA	± 30 %	AverageRF
2-Butanone (MEK)	50	51	0.0156	0.0161	3	NA	± 30 %	AverageRF
Bromochloromethane	10	9.7	0.133	0.129	-3	NA	± 30 %	AverageRF
Chloroform	10	9.4	0.487	0.460	-6	NA	± 30 %	AverageRF
1,1,1-Trichloroethane (TCA)	10	9.5	0.393	0.372	-5	NA	± 30 %	AverageRF
Carbon Tetrachloride	10	9.7	0.341	0.330	-3	NA	± 30 %	AverageRF
1,1-Dichloropropene	10	9.3	0.359	0.333	-7	NA	± 30 %	AverageRF
Benzene	10	9.2	1.10	1.01	-8	NA	± 30 %	AverageRF
1,2-Dichloroethane (EDC)	10	9.7	0.307	0.298	-3	NA	± 30 %	AverageRF
Trichloroethene (TCE)	10	9.5	0.287	0.271	-5	NA	± 30 %	AverageRF
1,2-Dichloropropane	10	9.8	0.280	0.274	-2	NA	± 30 %	AverageRF
Dibromomethane	10	9.8	0.146	0.143	-2	NA	± 30 %	AverageRF
Bromodichloromethane	10	9.9	0.335	0.332	-1	NA	± 30 %	AverageRF
cis-1,3-Dichloropropene	10	9.8	0.383	0.375	-2	NA	± 30 %	AverageRF
4-Methyl-2-pentanone (MIBK)	50	53	0.0520	0.0554	6	NA	± 30 %	AverageRF
Toluene	10	9.3	0.670	0.625	-7	NA	± 30 %	AverageRF
trans-1,3-Dichloropropene	10	9.3	0.768	0.712	-7	NA	± 30 %	AverageRF
1,1,2-Trichloroethane	10	9.5	0.448	0.428	-5	NA	± 30 %	AverageRF
Tetrachloroethene (PCE)	10	9.2	0.605	0.559	-8	NA	± 30 %	AverageRF
2-Hexanone	50	54	0.0401	0.0430	7	NA	± 30 %	AverageRF
1,3-Dichloropropane	10	9.1	0.874	0.791	-9	NA	± 30 %	AverageRF
Dibromochloromethane	10	9.4	0.630	0.591	-6	NA	± 30 %	AverageRF
1,2-Dibromoethane (EDB)	10	9.1	0.496	0.449	-9	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Calibration Date: 07/26/2017
Date Analyzed: 07/26/2017 -
07/27/2017

**Second Source Calibration Verification
Volatile Organic Compounds**

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration ID: CAL15494
Units: PPB

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Chlorobenzene	10	9.6	1.88	1.80	-4	NA	± 30 %	AverageRF
Ethylbenzene	10	9.5	0.966	0.914	-5	NA	± 30 %	AverageRF
1,1,1,2-Tetrachloroethane	10	9.0	0.649	0.582	-10	NA	± 30 %	AverageRF
m,p-Xylenes	20	19	1.16	1.11	-4	NA	± 30 %	AverageRF
o-Xylene	10	9.4	1.13	1.06	-6	NA	± 30 %	AverageRF
Styrene	10	9.3	1.07	0.991	-7	NA	± 30 %	AverageRF
Bromoform	10	9.4	0.371	0.347	-6	NA	± 30 %	AverageRF
Isopropylbenzene	10	9.4	2.90	2.73	-6	NA	± 30 %	AverageRF
1,1,2,2-Tetrachloroethane	10	9.4	0.601	0.563	-6	NA	± 30 %	AverageRF
Bromobenzene	10	9.4	0.833	0.785	-6	NA	± 30 %	AverageRF
n-Propylbenzene	10	9.3	3.57	3.33	-7	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	10	9.5	0.168	0.159	-5	NA	± 30 %	AverageRF
2-Chlorotoluene	10	9.1	2.20	2.01	-9	NA	± 30 %	AverageRF
1,3,5-Trimethylbenzene	10	9.5	2.50	2.37	-5	NA	± 30 %	AverageRF
4-Chlorotoluene	10	9.6	2.27	2.17	-4	NA	± 30 %	AverageRF
tert-Butylbenzene	10	9.5	2.13	2.02	-5	NA	± 30 %	AverageRF
1,2,4-Trimethylbenzene	10	9.8	2.50	2.43	-2	NA	± 30 %	AverageRF
sec-Butylbenzene	10	9.7	3.07	2.97	-3	NA	± 30 %	AverageRF
4-Isopropyltoluene	10	9.7	2.54	2.47	-3	NA	± 30 %	AverageRF
1,3-Dichlorobenzene	10	9.7	1.60	1.55	-3	NA	± 30 %	AverageRF
1,4-Dichlorobenzene	10	9.4	1.63	1.53	-6	NA	± 30 %	AverageRF
n-Butylbenzene	10	9.2	2.37	2.17	-8	NA	± 30 %	AverageRF
1,2-Dichlorobenzene	10	9.5	1.49	1.41	-5	NA	± 30 %	AverageRF
1,2-Dibromo-3-chloropropane	10	8.8	0.0815	0.0714	-12	NA	± 30 %	AverageRF
1,2,4-Trichlorobenzene	10	9.3	1.03	0.953	-7	NA	± 30 %	AverageRF
Hexachlorobutadiene	10	9.0	0.499	0.450	-10	NA	± 30 %	AverageRF
Naphthalene	10	9.0	1.68	1.52	-10	NA	± 30 %	AverageRF
1,2,3-Trichlorobenzene	10	9.3	0.918	0.855	-7	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Date Analyzed: 09/22/2017

**Continuing Calibration Verification Summary
 Volatile Organic Compounds**

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 07/26/2017
Calibration ID: CAL15494
Analysis Lot: KWG1708577
Units: PPB

File ID: J:\MS27\DATA\092217\092217F023.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Dichlorodifluoromethane	10	7.3	0.100	0.300	0.219	-27 *	NA	± 20	AverageRF
Chloromethane	10	8.3	0.100	0.439	0.325	NA	-17	± 20	Quadratic(0,0)
Vinyl Chloride	10	9.2	0.100	0.349	0.320	-8	NA	± 20	AverageRF
Bromomethane	10	9.5	0.100	0.275	0.227	NA	-5	± 20	Linear
Chloroethane	10	9.3	0.100	0.211	0.197	-7	NA	± 20	AverageRF
Trichlorofluoromethane	10	9.5	0.100	0.409	0.387	-5	NA	± 20	AverageRF
1,1-Dichloroethene	10	8.8	.100	0.233	0.204	-12	NA	± 20	AverageRF
Acetone	200	210	0.01	0.0367	0.0390	6	NA	± 20	AverageRF
Carbon Disulfide	10	8.6	0.100	0.804	0.690	-14	NA	± 20	AverageRF
Methylene Chloride	10	8.3	0.100	0.302	0.252	-17	NA	± 20	AverageRF
Methyl tert-Butyl Ether	20	17	0.100	0.547	0.476	-13	NA	± 20	AverageRF
trans-1,2-Dichloroethene	10	8.9	0.100	0.275	0.243	-11	NA	± 20	AverageRF
1,1-Dichloroethane	10	9.4	.200	0.475	0.448	-6	NA	± 20	AverageRF
2,2-Dichloropropane	10	9.1	0.01	0.323	0.294	-9	NA	± 20	AverageRF
cis-1,2-Dichloroethene	10	8.8	0.100	0.302	0.266	-12	NA	± 20	AverageRF
2-Butanone (MEK)	200	200	0.01	0.0156	0.0157	0	NA	± 20	AverageRF
Bromochloromethane	10	9.2	0.01	0.133	0.123	-8	NA	± 20	AverageRF
Chloroform	10	9.0	0.200	0.487	0.438	-10	NA	± 20	AverageRF
1,1,1-Trichloroethane (TCA)	10	8.9	.100	0.393	0.349	-11	NA	± 20	AverageRF
Carbon Tetrachloride	10	8.8	0.100	0.341	0.301	-12	NA	± 20	AverageRF
1,1-Dichloropropene	10	9.4	0.01	0.359	0.338	-6	NA	± 20	AverageRF
Benzene	10	9.3	0.500	1.10	1.02	-7	NA	± 20	AverageRF
1,2-Dichloroethane (EDC)	10	9.4	0.100	0.307	0.288	-6	NA	± 20	AverageRF
Trichloroethene (TCE)	10	9.2	0.200	0.287	0.265	-8	NA	± 20	AverageRF
1,2-Dichloropropane	10	9.5	0.100	0.280	0.266	-5	NA	± 20	AverageRF
Dibromomethane	10	8.9	0.01	0.146	0.130	-11	NA	± 20	AverageRF
Bromodichloromethane	10	8.7	0.200	0.335	0.291	-13	NA	± 20	AverageRF
cis-1,3-Dichloropropene	10	8.8	0.200	0.383	0.337	-12	NA	± 20	AverageRF
4-Methyl-2-pentanone (MIBK)	200	210	0.01	0.0520	0.0537	3	NA	± 20	AverageRF
Toluene	10	9.1	0.400	0.670	0.607	-9	NA	± 20	AverageRF
trans-1,3-Dichloropropene	10	8.8	0.100	0.768	0.675	-12	NA	± 20	AverageRF
1,1,2-Trichloroethane	10	8.9	.100	0.448	0.401	-11	NA	± 20	AverageRF
Tetrachloroethene (PCE)	10	8.5	0.200	0.605	0.511	-15	NA	± 20	AverageRF
2-Hexanone	200	210	0.015	0.0401	0.0421	5	NA	± 20	AverageRF
1,3-Dichloropropane	10	8.9	0.01	0.874	0.780	-11	NA	± 20	AverageRF
Dibromochloromethane	10	8.7	0.100	0.630	0.545	-14	NA	± 20	AverageRF
1,2-Dibromoethane (EDB)	10	8.5	0.100	0.496	0.422	-15	NA	± 20	AverageRF
Chlorobenzene	10	9.1	0.500	1.88	1.71	-9	NA	± 20	AverageRF
Ethylbenzene	10	9.0	0.100	0.966	0.866	-10	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Date Analyzed: 09/22/2017

**Continuing Calibration Verification Summary
 Volatile Organic Compounds**

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 07/26/2017
Calibration ID: CAL15494
Analysis Lot: KWG1708577
Units: PPB

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,1,1,2-Tetrachloroethane	10	8.5	.01	0.649	0.550	-15	NA	± 20	AverageRF
m,p-Xylenes	20	18	0.100	1.16	1.04	-10	NA	± 20	AverageRF
o-Xylene	10	8.8	0.300	1.13	0.995	-12	NA	± 20	AverageRF
Styrene	10	8.5	0.300	1.07	0.906	-15	NA	± 20	AverageRF
Bromoform	10	7.7	0.100	0.371	0.286	-23	*	± 20	AverageRF
Isopropylbenzene	10	8.8	0.100	2.90	2.55	-12	NA	± 20	AverageRF
1,1,2,2-Tetrachloroethane	10	8.0	.300	0.601	0.482	-20	NA	± 20	AverageRF
Bromobenzene	10	8.9	0.01	0.833	0.738	-11	NA	± 20	AverageRF
n-Propylbenzene	10	9.6	0.01	3.57	3.42	-4	NA	± 20	AverageRF
1,2,3-Trichloropropane	10	8.5	0.01	0.168	0.142	-15	NA	± 20	AverageRF
2-Chlorotoluene	10	9.3	0.01	2.20	2.05	-7	NA	± 20	AverageRF
1,3,5-Trimethylbenzene	10	9.3	0.01	2.50	2.33	-7	NA	± 20	AverageRF
4-Chlorotoluene	10	9.8	0.01	2.27	2.21	-2	NA	± 20	AverageRF
tert-Butylbenzene	10	9.2	0.01	2.13	1.96	-8	NA	± 20	AverageRF
1,2,4-Trimethylbenzene	10	9.3	0.01	2.50	2.33	-7	NA	± 20	AverageRF
sec-Butylbenzene	10	9.7	0.01	3.07	2.98	-3	NA	± 20	AverageRF
4-Isopropyltoluene	10	9.3	0.01	2.54	2.37	-7	NA	± 20	AverageRF
1,3-Dichlorobenzene	10	9.1	0.600	1.60	1.47	-9	NA	± 20	AverageRF
1,4-Dichlorobenzene	10	9.0	0.500	1.63	1.46	-10	NA	± 20	AverageRF
n-Butylbenzene	10	9.5	0.01	2.37	2.26	-5	NA	± 20	AverageRF
1,2-Dichlorobenzene	10	9.1	0.400	1.49	1.35	-9	NA	± 20	AverageRF
1,2-Dibromo-3-chloropropane	10	8.3	0.025	0.0815	0.0678	-17	NA	± 20	AverageRF
1,2,4-Trichlorobenzene	10	9.0	0.200	1.03	0.931	-10	NA	± 20	AverageRF
Hexachlorobutadiene	10	8.9	0.01	0.499	0.441	-12	NA	± 20	AverageRF
Naphthalene	10	8.2	0.01	1.68	1.38	-18	NA	± 20	AverageRF
1,2,3-Trichlorobenzene	10	8.9	0.01	0.918	0.821	-11	NA	± 20	AverageRF
Dibromofluoromethane	10	9.4	0.01	0.274	0.258	-6	NA	± 20	AverageRF
1,2-Dichloroethane-d4	10	9.4	0.01	0.266	0.251	-6	NA	± 20	AverageRF
Toluene-d8	10	9.7	0.01	1.01	0.979	-3	NA	± 20	AverageRF
4-Bromofluorobenzene	10	9.5	0.01	0.920	0.874	-5	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Date Analyzed: 09/25/2017

**Continuing Calibration Verification Summary
 Volatile Organic Compounds**

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 07/26/2017
Calibration ID: CAL15494
Analysis Lot: KWG1708553
Units: PPB

File ID: J:\MS27\DATA\092517\0925F004.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Dichlorodifluoromethane	10	7.1	0.100	0.300	0.213	-29 *	NA	± 20	AverageRF
Chloromethane	10	8.7	0.100	0.439	0.338	NA	-14	± 20	Quadratic(0,0)
Vinyl Chloride	10	9.4	0.100	0.349	0.329	-6	NA	± 20	AverageRF
Bromomethane	10	10	0.100	0.275	0.240	NA	1	± 20	Linear
Chloroethane	10	9.7	0.100	0.211	0.204	-3	NA	± 20	AverageRF
Trichlorofluoromethane	10	9.3	0.100	0.409	0.381	-7	NA	± 20	AverageRF
1,1-Dichloroethene	10	8.6	.100	0.233	0.199	-14	NA	± 20	AverageRF
Acetone	200	190	0.01	0.0367	0.0343	-7	NA	± 20	AverageRF
Carbon Disulfide	10	8.5	0.100	0.804	0.681	-15	NA	± 20	AverageRF
Methylene Chloride	10	8.9	0.100	0.302	0.268	-11	NA	± 20	AverageRF
Methyl tert-Butyl Ether	20	17	0.100	0.547	0.476	-13	NA	± 20	AverageRF
trans-1,2-Dichloroethene	10	9.0	0.100	0.275	0.248	-10	NA	± 20	AverageRF
1,1-Dichloroethane	10	9.9	.200	0.475	0.468	-1	NA	± 20	AverageRF
2,2-Dichloropropane	10	10	0.01	0.323	0.330	2	NA	± 20	AverageRF
cis-1,2-Dichloroethene	10	9.0	0.100	0.302	0.271	-10	NA	± 20	AverageRF
2-Butanone (MEK)	200	180	0.01	0.0156	0.0138	-12	NA	± 20	AverageRF
Bromochloromethane	10	9.7	0.01	0.133	0.129	-3	NA	± 20	AverageRF
Chloroform	10	9.3	0.200	0.487	0.450	-7	NA	± 20	AverageRF
1,1,1-Trichloroethane (TCA)	10	9.0	.100	0.393	0.353	-10	NA	± 20	AverageRF
Carbon Tetrachloride	10	8.9	0.100	0.341	0.303	-11	NA	± 20	AverageRF
1,1-Dichloropropene	10	9.4	0.01	0.359	0.338	-6	NA	± 20	AverageRF
Benzene	10	9.4	0.500	1.10	1.04	-6	NA	± 20	AverageRF
1,2-Dichloroethane (EDC)	10	9.7	0.100	0.307	0.298	-3	NA	± 20	AverageRF
Trichloroethene (TCE)	10	9.0	0.200	0.287	0.257	-10	NA	± 20	AverageRF
1,2-Dichloropropane	10	10	0.100	0.280	0.280	0	NA	± 20	AverageRF
Dibromomethane	10	8.9	0.01	0.146	0.131	-11	NA	± 20	AverageRF
Bromodichloromethane	10	9.3	0.200	0.335	0.312	-7	NA	± 20	AverageRF
cis-1,3-Dichloropropene	10	9.6	0.200	0.383	0.367	-4	NA	± 20	AverageRF
4-Methyl-2-pentanone (MIBK)	200	180	0.01	0.0520	0.0466	-11	NA	± 20	AverageRF
Toluene	10	9.2	0.400	0.670	0.615	-8	NA	± 20	AverageRF
trans-1,3-Dichloropropene	10	9.7	0.100	0.768	0.747	-3	NA	± 20	AverageRF
1,1,2-Trichloroethane	10	9.4	.100	0.448	0.421	-6	NA	± 20	AverageRF
Tetrachloroethene (PCE)	10	8.6	0.200	0.605	0.522	-14	NA	± 20	AverageRF
2-Hexanone	200	180	0.015	0.0401	0.0365	-9	NA	± 20	AverageRF
1,3-Dichloropropane	10	9.4	0.01	0.874	0.818	-6	NA	± 20	AverageRF
Dibromochloromethane	10	9.3	0.100	0.630	0.583	-7	NA	± 20	AverageRF
1,2-Dibromoethane (EDB)	10	9.1	0.100	0.496	0.450	-9	NA	± 20	AverageRF
Chlorobenzene	10	9.5	0.500	1.88	1.79	-5	NA	± 20	AverageRF
Ethylbenzene	10	9.3	0.100	0.966	0.897	-7	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Date Analyzed: 09/25/2017

**Continuing Calibration Verification Summary
 Volatile Organic Compounds**

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 07/26/2017
Calibration ID: CAL15494
Analysis Lot: KWG1708553
Units: PPB

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,1,1,2-Tetrachloroethane	10	9.4	.01	0.649	0.606	-7	NA	± 20	AverageRF
m,p-Xylenes	20	19	0.100	1.16	1.09	-6	NA	± 20	AverageRF
o-Xylene	10	9.2	0.300	1.13	1.05	-8	NA	± 20	AverageRF
Styrene	10	8.3	0.300	1.07	0.890	-17	NA	± 20	AverageRF
Bromoform	10	8.4	0.100	0.371	0.311	-16	NA	± 20	AverageRF
Isopropylbenzene	10	9.2	0.100	2.90	2.66	-8	NA	± 20	AverageRF
1,1,2,2-Tetrachloroethane	10	9.4	.300	0.601	0.562	-7	NA	± 20	AverageRF
Bromobenzene	10	9.7	0.01	0.833	0.807	-3	NA	± 20	AverageRF
n-Propylbenzene	10	10	0.01	3.57	3.64	2	NA	± 20	AverageRF
1,2,3-Trichloropropane	10	9.1	0.01	0.168	0.152	-10	NA	± 20	AverageRF
2-Chlorotoluene	10	10	0.01	2.20	2.22	1	NA	± 20	AverageRF
1,3,5-Trimethylbenzene	10	10	0.01	2.50	2.51	0	NA	± 20	AverageRF
4-Chlorotoluene	10	11	0.01	2.27	2.41	7	NA	± 20	AverageRF
tert-Butylbenzene	10	9.8	0.01	2.13	2.09	-2	NA	± 20	AverageRF
1,2,4-Trimethylbenzene	10	10	0.01	2.50	2.55	2	NA	± 20	AverageRF
sec-Butylbenzene	10	10	0.01	3.07	3.19	4	NA	± 20	AverageRF
4-Isopropyltoluene	10	10	0.01	2.54	2.58	1	NA	± 20	AverageRF
1,3-Dichlorobenzene	10	10	0.600	1.60	1.62	1	NA	± 20	AverageRF
1,4-Dichlorobenzene	10	9.9	0.500	1.63	1.61	-1	NA	± 20	AverageRF
n-Butylbenzene	10	10	0.01	2.37	2.46	4	NA	± 20	AverageRF
1,2-Dichlorobenzene	10	9.8	0.400	1.49	1.46	-2	NA	± 20	AverageRF
1,2-Dibromo-3-chloropropane	10	9.5	0.025	0.0815	0.0774	-5	NA	± 20	AverageRF
1,2,4-Trichlorobenzene	10	10	0.200	1.03	1.04	1	NA	± 20	AverageRF
Hexachlorobutadiene	10	10	0.01	0.499	0.518	4	NA	± 20	AverageRF
Naphthalene	10	9.1	0.01	1.68	1.53	-9	NA	± 20	AverageRF
1,2,3-Trichlorobenzene	10	10	0.01	0.918	0.921	0	NA	± 20	AverageRF
Dibromofluoromethane	10	9.4	0.01	0.274	0.258	-6	NA	± 20	AverageRF
1,2-Dichloroethane-d4	10	9.4	0.01	0.266	0.249	-6	NA	± 20	AverageRF
Toluene-d8	10	9.6	0.01	1.01	0.970	-4	NA	± 20	AverageRF
4-Bromofluorobenzene	10	9.5	0.01	0.920	0.873	-5	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799

Analysis Run Log
Volatile Organic Compounds

Analysis Method: 8260C

Analysis Lot: KWG1708553
Instrument ID: MS27

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0925F003.D	GC/MS Tuning - Bromofluorobenzene	KWG1708553-1	9/25/2017	11:33		9/25/2017	11:50
0925F004.D	Continuing Calibration Verification	KWG1708553-2	9/25/2017	12:05		9/25/2017	12:22
0925F005.D	Lab Control Sample	KWG1708554-3	9/25/2017	13:09		9/25/2017	13:26
0925F006.D	FTP-16MS	KWG1708554-1	9/25/2017	13:36		9/25/2017	13:53
0925F007.D	FTP-16DMS	KWG1708554-2	9/25/2017	14:04		9/25/2017	14:21
0925F010.D	Method Blank	KWG1708554-4	9/25/2017	15:26		9/25/2017	15:43
0925F011.D	ZZZZZZ	ZZZZZZ	9/25/2017	15:54		9/25/2017	16:11
0925F012.D	ZZZZZZ	ZZZZZZ	9/25/2017	16:21		9/25/2017	16:38
0925F013.D	ZZZZZZ	ZZZZZZ	9/25/2017	16:49		9/25/2017	17:06
0925F014.D	ZZZZZZ	ZZZZZZ	9/25/2017	17:16		9/25/2017	17:33
0925F015.D	ZZZZZZ	ZZZZZZ	9/25/2017	17:44		9/25/2017	18:01
0925F016.D	ZZZZZZ	ZZZZZZ	9/25/2017	18:11		9/25/2017	18:28
0925F017.D	ZZZZZZ	ZZZZZZ	9/25/2017	18:39		9/25/2017	18:56
0925F018.D	ZZZZZZ	ZZZZZZ	9/25/2017	19:06		9/25/2017	19:23
0925F019.D	ZZZZZZ	ZZZZZZ	9/25/2017	19:34		9/25/2017	19:51
0925F020.D	ZZZZZZ	ZZZZZZ	9/25/2017	20:01		9/25/2017	20:18
0925F021.D	ZZZZZZ	ZZZZZZ	9/25/2017	20:29		9/25/2017	20:46
0925F022.D	ZZZZZZ	ZZZZZZ	9/25/2017	20:56		9/25/2017	21:13
0925F023.D	ZZZZZZ	ZZZZZZ	9/25/2017	21:24		9/25/2017	21:41
0925F024.D	FTP-16	K1709799-014	9/25/2017	21:51		9/25/2017	22:08
0925F025.D	POMONA	K1709799-015	9/25/2017	22:19		9/25/2017	22:36
0925F026.D	PAIC	K1709799-016	9/25/2017	22:46		9/25/2017	23:03
0925F027.D	Continuing Calibration Verification	KWG1708553-3	9/25/2017	23:14		9/25/2017	23:31

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799

Analysis Run Log
Volatile Organic Compounds

Analysis Method: 8260C

Analysis Lot: KWG1708577
Instrument ID: MS27

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
2217F022.D	GC/MS Tuning - Bromofluorobenzene	KWG1708577-1	9/22/2017	20:38		9/22/2017	20:55
2217F023.D	Continuing Calibration Verification	KWG1708577-2	9/22/2017	21:06		9/22/2017	21:23
2217F024.D	Lab Control Sample	KWG1708579-1	9/22/2017	21:33		9/22/2017	21:50
2217F025.D	Duplicate Lab Control Sample	KWG1708579-2	9/22/2017	22:01		9/22/2017	22:18
2217F028.D	Method Blank	KWG1708579-3	9/22/2017	23:23		9/22/2017	23:40
2217F029.D	ZZZZZZ	ZZZZZZ	9/22/2017	23:51		9/23/2017	00:08
2217F030.D	ZZZZZZ	ZZZZZZ	9/23/2017	00:18		9/23/2017	00:35
2217F031.D	815-2	K1709799-001	9/23/2017	00:46		9/23/2017	01:03
2217F032.D	TVR-5	K1709799-002	9/23/2017	01:13		9/23/2017	01:30
2217F033.D	TVR-6	K1709799-003	9/23/2017	01:41		9/23/2017	01:58
2217F034.D	TVR-7	K1709799-004	9/23/2017	02:08		9/23/2017	02:25
2217F035.D	TVR-3	K1709799-005	9/23/2017	02:36		9/23/2017	02:53
2217F036.D	TVR-1	K1709799-006	9/23/2017	03:03		9/23/2017	03:20
2217F037.D	MTS-1	K1709799-007	9/23/2017	03:31		9/23/2017	03:48
2217F038.D	MTS-2	K1709799-008	9/23/2017	03:58		9/23/2017	04:15
2217F039.D	MTS-4	K1709799-009	9/23/2017	04:26		9/23/2017	04:43
2217F040.D	TRIP BLANK	K1709799-010	9/23/2017	04:53		9/23/2017	05:10
2217F041.D	FTP-14	K1709799-012	9/23/2017	05:21		9/23/2017	05:38
2217F042.D	FTP-15	K1709799-013	9/23/2017	05:48		9/23/2017	06:05
2217F043.D	FTP-1	K1709799-011	9/23/2017	06:16		9/23/2017	06:33
2217F044.D	FTP-1	K1709799-011	9/23/2017	06:43		9/23/2017	07:00
2217F045.D	Continuing Calibration Verification	KWG1708577-3	9/23/2017	07:11		9/23/2017	07:28

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/25/2017

Extraction Prep Log
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Extraction Lot: KWG1708554
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
FTP-16	K1709799-014	09/13/17	09/14/17	10ml	10ml	NA	
POMONA	K1709799-015	09/13/17	09/14/17	10ml	10ml	NA	
PAIC	K1709799-016	09/13/17	09/14/17	10ml	10ml	NA	
Method Blank	KWG1708554-4	NA	NA	10ml	10ml	NA	
FTP-16MS	KWG1708554-1	09/13/17	09/14/17	10ml	10ml	NA	
FTP-16DMS	KWG1708554-2	09/13/17	09/14/17	10ml	10ml	NA	
Lab Control Sample	KWG1708554-3	NA	NA	10ml	10ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/22/2017

Extraction Prep Log
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Extraction Lot: KWG1708579
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
815-2	K1709799-001	09/12/17	09/14/17	10ml	10ml	NA	
TVR-5	K1709799-002	09/12/17	09/14/17	10ml	10ml	NA	
TVR-6	K1709799-003	09/12/17	09/14/17	10ml	10ml	NA	
TVR-7	K1709799-004	09/12/17	09/14/17	10ml	10ml	NA	
TVR-3	K1709799-005	09/12/17	09/14/17	10ml	10ml	NA	
TVR-1	K1709799-006	09/12/17	09/14/17	10ml	10ml	NA	
MTS-1	K1709799-007	09/12/17	09/14/17	10ml	10ml	NA	
MTS-2	K1709799-008	09/12/17	09/14/17	10ml	10ml	NA	
MTS-4	K1709799-009	09/12/17	09/14/17	10ml	10ml	NA	
TRIP BLANK	K1709799-010	09/12/17	09/14/17	10ml	10ml	NA	
FTP-1DL	K1709799-011	09/12/17	09/14/17	10ml	10ml	NA	
FTP-1	K1709799-011	09/12/17	09/14/17	10ml	10ml	NA	
FTP-14	K1709799-012	09/12/17	09/14/17	10ml	10ml	NA	
FTP-15	K1709799-013	09/12/17	09/14/17	10ml	10ml	NA	
Method Blank	KWG1708579-3	NA	NA	10ml	10ml	NA	
Lab Control Sample	KWG1708579-1	NA	NA	10ml	10ml	NA	
Duplicate Lab Control Sample	KWG1708579-2	NA	NA	10ml	10ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis



Semi-Volatile Organic Compounds by GC/MS

ALS Environmental—Kelso Laboratory
1317 South 13th Avenue, Kelso, WA 98626
Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799

**Cover Page - Organic Analysis Data Package
 Semi-Volatile Organic Compounds by GC/MS**

Sample Name	Lab Code	Date Collected	Date Received
FTP-1	K1709799-011	09/12/2017	09/14/2017
FTP-14	K1709799-012	09/12/2017	09/14/2017
FTP-15	K1709799-013	09/12/2017	09/14/2017
FTP-16	K1709799-014	09/13/2017	09/14/2017
FTP-16MS	KWG1708261-1	09/13/2017	09/14/2017
FTP-16DMS	KWG1708261-2	09/13/2017	09/14/2017

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Semi-Volatile Organic Compounds by GC/MS

Sample Name: FTP-1
Lab Code: K1709799-011
Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	25	5.0	0.48	1	09/18/17	09/25/17	KWG1708261	
Bis(2-chloroethyl) Ether	ND	U	10	0.50	0.33	1	09/18/17	09/25/17	KWG1708261	
Phenol	0.57	J	10	0.50	0.32	1	09/18/17	09/25/17	KWG1708261	
2-Chlorophenol	ND	U	10	0.50	0.31	1	09/18/17	09/25/17	KWG1708261	
1,3-Dichlorobenzene	ND	U	10	0.50	0.35	1	09/18/17	09/25/17	KWG1708261	
1,4-Dichlorobenzene	ND	U	10	0.50	0.32	1	09/18/17	09/25/17	KWG1708261	
1,2-Dichlorobenzene	0.69	J	10	0.50	0.43	1	09/18/17	09/25/17	KWG1708261	
Benzyl alcohol	ND	U	10	0.50	0.38	1	09/18/17	09/25/17	KWG1708261	
Bis(2-chloroisopropyl) Ether	ND	U	10	0.50	0.31	1	09/18/17	09/25/17	KWG1708261	
2-Methylphenol	ND	U	10	0.50	0.33	1	09/18/17	09/25/17	KWG1708261	
Hexachloroethane	ND	U	10	2.0	0.29	1	09/18/17	09/25/17	KWG1708261	
N-Nitrosodi-n-propylamine	ND	U	10	2.0	0.50	1	09/18/17	09/25/17	KWG1708261	
4-Methylphenol†	0.72	J	10	0.50	0.48	1	09/18/17	09/25/17	KWG1708261	
Nitrobenzene	ND	U	10	0.57	0.57	1	09/18/17	09/25/17	KWG1708261	
Isophorone	ND	U	10	1.0	0.25	1	09/18/17	09/25/17	KWG1708261	
2-Nitrophenol	ND	U	10	0.50	0.37	1	09/18/17	09/25/17	KWG1708261	
2,4-Dimethylphenol	ND	U	10	2.0	0.26	1	09/18/17	09/25/17	KWG1708261	
Bis(2-chloroethoxy)methane	ND	U	10	0.50	0.28	1	09/18/17	09/25/17	KWG1708261	
2,4-Dichlorophenol	ND	U	10	0.50	0.30	1	09/18/17	09/25/17	KWG1708261	
Benzoic acid	ND	U	25	25	5.8	1	09/18/17	09/25/17	KWG1708261	
1,2,4-Trichlorobenzene	ND	U	10	0.50	0.36	1	09/18/17	09/25/17	KWG1708261	
Naphthalene	34		10	0.50	0.37	1	09/18/17	09/25/17	KWG1708261	
4-Chloroaniline	ND	U	10	2.0	0.38	1	09/18/17	09/25/17	KWG1708261	
Hexachlorobutadiene	ND	U	10	0.50	0.29	1	09/18/17	09/25/17	KWG1708261	
4-Chloro-3-methylphenol	ND	U	10	0.50	0.49	1	09/18/17	09/25/17	KWG1708261	
2-Methylnaphthalene	50		10	0.50	0.24	1	09/18/17	09/25/17	KWG1708261	
2,4,6-Trichlorophenol	ND	U	10	1.0	0.20	1	09/18/17	09/25/17	KWG1708261	
2,4,5-Trichlorophenol	ND	U	10	0.50	0.38	1	09/18/17	09/25/17	KWG1708261	
2-Chloronaphthalene	ND	U	10	0.50	0.29	1	09/18/17	09/25/17	KWG1708261	
Acenaphthene	3.1	J	10	0.50	0.28	1	09/18/17	09/25/17	KWG1708261	
2-Nitroaniline	ND	U	25	0.50	0.34	1	09/18/17	09/25/17	KWG1708261	
Acenaphthylene	ND	Ui	10	1.4	1.4	1	09/18/17	09/25/17	KWG1708261	
Dimethyl Phthalate	ND	U	10	2.0	0.25	1	09/18/17	09/25/17	KWG1708261	
2,6-Dinitrotoluene	ND	U	10	0.50	0.35	1	09/18/17	09/25/17	KWG1708261	
3-Nitroaniline	ND	U	25	1.0	3.3	1	09/18/17	09/25/17	KWG1708261	

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Semi-Volatile Organic Compounds by GC/MS

Sample Name: FTP-1
Lab Code: K1709799-011
Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4-Dinitrophenol	ND	U	25	25	2.2	1	09/18/17	09/25/17	KWG1708261	
Dibenzofuran	5.7	J	10	0.50	0.33	1	09/18/17	09/25/17	KWG1708261	
4-Nitrophenol	ND	U	25	10	1.9	1	09/18/17	09/25/17	KWG1708261	
2,4-Dinitrotoluene	ND	U	10	1.0	0.27	1	09/18/17	09/25/17	KWG1708261	
Fluorene	9.9	J	10	0.50	0.32	1	09/18/17	09/25/17	KWG1708261	
4-Chlorophenyl Phenyl Ether	ND	U	10	0.50	0.28	1	09/18/17	09/25/17	KWG1708261	
Diethyl Phthalate	ND	U	10	0.50	0.29	1	09/18/17	09/25/17	KWG1708261	
4-Nitroaniline	ND	U	25	4.0	4.0	1	09/18/17	09/25/17	KWG1708261	
2-Methyl-4,6-dinitrophenol	ND	U	25	10	2.1	1	09/18/17	09/25/17	KWG1708261	
N-Nitrosodiphenylamine	6.0	JX	10	0.50	0.48	1	09/18/17	09/25/17	KWG1708261	
1,2-Diphenylhydrazine†	ND	U	10	0.50	0.51	1	09/18/17	09/25/17	KWG1708261	
4-Bromophenyl Phenyl Ether	ND	U	10	0.50	0.27	1	09/18/17	09/25/17	KWG1708261	
Hexachlorobenzene	ND	U	10	0.63	0.63	1	09/18/17	09/25/17	KWG1708261	
Pentachlorophenol	ND	U	25	5.0	2.4	1	09/18/17	09/25/17	KWG1708261	
Phenanthrene	7.5	J	10	0.50	0.48	1	09/18/17	09/25/17	KWG1708261	
Anthracene	0.68	J	10	0.61	0.61	1	09/18/17	09/25/17	KWG1708261	
Carbazole	ND	U	10	0.50	0.36	1	09/18/17	09/25/17	KWG1708261	
Di-n-butyl Phthalate	ND	U	10	0.65	0.65	1	09/18/17	09/25/17	KWG1708261	
Fluoranthene	ND	U	10	0.65	0.65	1	09/18/17	09/25/17	KWG1708261	
Pyrene	0.99	J	10	0.73	0.73	1	09/18/17	09/25/17	KWG1708261	
Butyl Benzyl Phthalate	ND	U	10	0.50	0.47	1	09/18/17	09/25/17	KWG1708261	
3,3'-Dichlorobenzidine	ND	U	25	2.0	0.27	1	09/18/17	09/25/17	KWG1708261	
Benz(a)anthracene	ND	U	10	0.59	0.59	1	09/18/17	09/25/17	KWG1708261	
Chrysene	ND	U	10	1.0	0.79	1	09/18/17	09/25/17	KWG1708261	
Bis(2-ethylhexyl) Phthalate	8.2	J	10	2.0	1.9	1	09/18/17	09/25/17	KWG1708261	*
Di-n-octyl Phthalate	ND	U	10	0.63	0.63	1	09/18/17	09/25/17	KWG1708261	
Benzo(b)fluoranthene	ND	U	10	0.58	0.58	1	09/18/17	09/25/17	KWG1708261	
Benzo(k)fluoranthene	ND	U	10	0.83	0.83	1	09/18/17	09/25/17	KWG1708261	
Benzo(a)pyrene	ND	U	10	1.0	0.65	1	09/18/17	09/25/17	KWG1708261	
Indeno(1,2,3-cd)pyrene	ND	U	10	0.68	0.68	1	09/18/17	09/25/17	KWG1708261	
Dibenz(a,h)anthracene	ND	U	10	1.0	0.75	1	09/18/17	09/25/17	KWG1708261	
Benzo(g,h,i)perylene	ND	U	10	0.81	0.81	1	09/18/17	09/25/17	KWG1708261	

* See Case Narrative

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Semi-Volatile Organic Compounds by GC/MS

Sample Name: FTP-1
Lab Code: K1709799-011

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	75	20-110	09/25/17	Acceptable
Phenol-d6	77	10-115	09/25/17	Acceptable
Nitrobenzene-d5	78	40-110	09/25/17	Acceptable
2-Fluorobiphenyl	85	50-110	09/25/17	Acceptable
2,4,6-Tribromophenol	84	40-125	09/25/17	Acceptable
Terphenyl-d14	61	50-135	09/25/17	Acceptable

† Analyte Comments

4-Methylphenol This analyte cannot be separated from 3-Methylphenol.
 1,2-Diphenylhydrazine This compound is quantitated as Azobenzene.

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Semi-Volatile Organic Compounds by GC/MS

Sample Name: FTP-14
Lab Code: K1709799-012
Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	25	5.0	0.48	1	09/18/17	09/25/17	KWG1708261	
Bis(2-chloroethyl) Ether	ND	U	10	0.50	0.33	1	09/18/17	09/25/17	KWG1708261	
Phenol	ND	U	10	0.50	0.32	1	09/18/17	09/25/17	KWG1708261	
2-Chlorophenol	ND	U	10	0.50	0.31	1	09/18/17	09/25/17	KWG1708261	
1,3-Dichlorobenzene	ND	U	10	0.50	0.35	1	09/18/17	09/25/17	KWG1708261	
1,4-Dichlorobenzene	ND	U	10	0.50	0.32	1	09/18/17	09/25/17	KWG1708261	
1,2-Dichlorobenzene	ND	U	10	0.50	0.43	1	09/18/17	09/25/17	KWG1708261	
Benzyl alcohol	ND	U	10	0.50	0.38	1	09/18/17	09/25/17	KWG1708261	
Bis(2-chloroisopropyl) Ether	ND	U	10	0.50	0.31	1	09/18/17	09/25/17	KWG1708261	
2-Methylphenol	ND	U	10	0.50	0.33	1	09/18/17	09/25/17	KWG1708261	
Hexachloroethane	ND	U	10	2.0	0.29	1	09/18/17	09/25/17	KWG1708261	
N-Nitrosodi-n-propylamine	ND	U	10	2.0	0.50	1	09/18/17	09/25/17	KWG1708261	
4-Methylphenol†	ND	U	10	0.50	0.48	1	09/18/17	09/25/17	KWG1708261	
Nitrobenzene	ND	U	10	0.57	0.57	1	09/18/17	09/25/17	KWG1708261	
Isophorone	ND	U	10	1.0	0.25	1	09/18/17	09/25/17	KWG1708261	
2-Nitrophenol	ND	U	10	0.50	0.37	1	09/18/17	09/25/17	KWG1708261	
2,4-Dimethylphenol	ND	U	10	2.0	0.26	1	09/18/17	09/25/17	KWG1708261	
Bis(2-chloroethoxy)methane	ND	U	10	0.50	0.28	1	09/18/17	09/25/17	KWG1708261	
2,4-Dichlorophenol	ND	U	10	0.50	0.30	1	09/18/17	09/25/17	KWG1708261	
Benzoic acid	ND	U	25	25	5.8	1	09/18/17	09/25/17	KWG1708261	
1,2,4-Trichlorobenzene	ND	U	10	0.50	0.36	1	09/18/17	09/25/17	KWG1708261	
Naphthalene	ND	U	10	0.50	0.37	1	09/18/17	09/25/17	KWG1708261	
4-Chloroaniline	ND	U	10	2.0	0.38	1	09/18/17	09/25/17	KWG1708261	
Hexachlorobutadiene	ND	U	10	0.50	0.29	1	09/18/17	09/25/17	KWG1708261	
4-Chloro-3-methylphenol	ND	U	10	0.50	0.49	1	09/18/17	09/25/17	KWG1708261	
2-Methylnaphthalene	ND	U	10	0.50	0.24	1	09/18/17	09/25/17	KWG1708261	
2,4,6-Trichlorophenol	ND	U	10	1.0	0.20	1	09/18/17	09/25/17	KWG1708261	
2,4,5-Trichlorophenol	ND	U	10	0.50	0.38	1	09/18/17	09/25/17	KWG1708261	
2-Chloronaphthalene	ND	U	10	0.50	0.29	1	09/18/17	09/25/17	KWG1708261	
Acenaphthene	ND	U	10	0.50	0.28	1	09/18/17	09/25/17	KWG1708261	
2-Nitroaniline	ND	U	25	0.50	0.34	1	09/18/17	09/25/17	KWG1708261	
Acenaphthylene	ND	U	10	0.50	0.24	1	09/18/17	09/25/17	KWG1708261	
Dimethyl Phthalate	ND	U	10	2.0	0.25	1	09/18/17	09/25/17	KWG1708261	
2,6-Dinitrotoluene	ND	U	10	0.50	0.35	1	09/18/17	09/25/17	KWG1708261	
3-Nitroaniline	ND	U	25	1.0	3.3	1	09/18/17	09/25/17	KWG1708261	

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Semi-Volatile Organic Compounds by GC/MS

Sample Name: FTP-14
Lab Code: K1709799-012
Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4-Dinitrophenol	ND	U	25	25	2.2	1	09/18/17	09/25/17	KWG1708261	
Dibenzofuran	ND	U	10	0.50	0.33	1	09/18/17	09/25/17	KWG1708261	
4-Nitrophenol	ND	U	25	10	1.9	1	09/18/17	09/25/17	KWG1708261	
2,4-Dinitrotoluene	ND	U	10	1.0	0.27	1	09/18/17	09/25/17	KWG1708261	
Fluorene	ND	U	10	0.50	0.32	1	09/18/17	09/25/17	KWG1708261	
4-Chlorophenyl Phenyl Ether	ND	U	10	0.50	0.28	1	09/18/17	09/25/17	KWG1708261	
Diethyl Phthalate	ND	U	10	0.50	0.29	1	09/18/17	09/25/17	KWG1708261	
4-Nitroaniline	ND	U	25	4.0	4.0	1	09/18/17	09/25/17	KWG1708261	
2-Methyl-4,6-dinitrophenol	ND	U	25	10	2.1	1	09/18/17	09/25/17	KWG1708261	
N-Nitrosodiphenylamine	ND	U	10	0.50	0.48	1	09/18/17	09/25/17	KWG1708261	
1,2-Diphenylhydrazine†	ND	U	10	0.50	0.51	1	09/18/17	09/25/17	KWG1708261	
4-Bromophenyl Phenyl Ether	ND	U	10	0.50	0.27	1	09/18/17	09/25/17	KWG1708261	
Hexachlorobenzene	ND	U	10	0.63	0.63	1	09/18/17	09/25/17	KWG1708261	
Pentachlorophenol	ND	U	25	5.0	2.4	1	09/18/17	09/25/17	KWG1708261	
Phenanthrene	ND	U	10	0.50	0.48	1	09/18/17	09/25/17	KWG1708261	
Anthracene	ND	U	10	0.61	0.61	1	09/18/17	09/25/17	KWG1708261	
Carbazole	ND	U	10	0.50	0.36	1	09/18/17	09/25/17	KWG1708261	
Di-n-butyl Phthalate	ND	U	10	0.65	0.65	1	09/18/17	09/25/17	KWG1708261	
Fluoranthene	ND	U	10	0.65	0.65	1	09/18/17	09/25/17	KWG1708261	
Pyrene	ND	U	10	0.73	0.73	1	09/18/17	09/25/17	KWG1708261	
Butyl Benzyl Phthalate	ND	U	10	0.50	0.47	1	09/18/17	09/25/17	KWG1708261	
3,3'-Dichlorobenzidine	ND	U	25	2.0	0.27	1	09/18/17	09/25/17	KWG1708261	
Benz(a)anthracene	ND	U	10	0.59	0.59	1	09/18/17	09/25/17	KWG1708261	
Chrysene	ND	U	10	1.0	0.79	1	09/18/17	09/25/17	KWG1708261	
Bis(2-ethylhexyl) Phthalate	ND	U	10	2.0	1.9	1	09/18/17	09/25/17	KWG1708261	
Di-n-octyl Phthalate	ND	U	10	0.63	0.63	1	09/18/17	09/25/17	KWG1708261	
Benzo(b)fluoranthene	ND	U	10	0.58	0.58	1	09/18/17	09/25/17	KWG1708261	
Benzo(k)fluoranthene	ND	U	10	0.83	0.83	1	09/18/17	09/25/17	KWG1708261	
Benzo(a)pyrene	ND	U	10	1.0	0.65	1	09/18/17	09/25/17	KWG1708261	
Indeno(1,2,3-cd)pyrene	ND	U	10	0.68	0.68	1	09/18/17	09/25/17	KWG1708261	
Dibenz(a,h)anthracene	ND	U	10	1.0	0.75	1	09/18/17	09/25/17	KWG1708261	
Benzo(g,h,i)perylene	ND	U	10	0.81	0.81	1	09/18/17	09/25/17	KWG1708261	

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Semi-Volatile Organic Compounds by GC/MS

Sample Name: FTP-14
Lab Code: K1709799-012

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	75	20-110	09/25/17	Acceptable
Phenol-d6	73	10-115	09/25/17	Acceptable
Nitrobenzene-d5	75	40-110	09/25/17	Acceptable
2-Fluorobiphenyl	76	50-110	09/25/17	Acceptable
2,4,6-Tribromophenol	80	40-125	09/25/17	Acceptable
Terphenyl-d14	84	50-135	09/25/17	Acceptable

† Analyte Comments

4-Methylphenol This analyte cannot be separated from 3-Methylphenol.
 1,2-Diphenylhydrazine This compound is quantitated as Azobenzene.

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Semi-Volatile Organic Compounds by GC/MS

Sample Name: FTP-15
Lab Code: K1709799-013
Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	25	5.0	0.48	1	09/18/17	09/25/17	KWG1708261	
Bis(2-chloroethyl) Ether	ND	U	10	0.50	0.33	1	09/18/17	09/25/17	KWG1708261	
Phenol	ND	U	10	0.50	0.32	1	09/18/17	09/25/17	KWG1708261	
2-Chlorophenol	ND	U	10	0.50	0.31	1	09/18/17	09/25/17	KWG1708261	
1,3-Dichlorobenzene	ND	U	10	0.50	0.35	1	09/18/17	09/25/17	KWG1708261	
1,4-Dichlorobenzene	ND	U	10	0.50	0.32	1	09/18/17	09/25/17	KWG1708261	
1,2-Dichlorobenzene	ND	U	10	0.50	0.43	1	09/18/17	09/25/17	KWG1708261	
Benzyl alcohol	ND	U	10	0.50	0.38	1	09/18/17	09/25/17	KWG1708261	
Bis(2-chloroisopropyl) Ether	ND	U	10	0.50	0.31	1	09/18/17	09/25/17	KWG1708261	
2-Methylphenol	ND	U	10	0.50	0.33	1	09/18/17	09/25/17	KWG1708261	
Hexachloroethane	ND	U	10	2.0	0.29	1	09/18/17	09/25/17	KWG1708261	
N-Nitrosodi-n-propylamine	ND	U	10	2.0	0.50	1	09/18/17	09/25/17	KWG1708261	
4-Methylphenol†	ND	U	10	0.50	0.48	1	09/18/17	09/25/17	KWG1708261	
Nitrobenzene	ND	U	10	0.57	0.57	1	09/18/17	09/25/17	KWG1708261	
Isophorone	ND	U	10	1.0	0.25	1	09/18/17	09/25/17	KWG1708261	
2-Nitrophenol	ND	U	10	0.50	0.37	1	09/18/17	09/25/17	KWG1708261	
2,4-Dimethylphenol	ND	U	10	2.0	0.26	1	09/18/17	09/25/17	KWG1708261	
Bis(2-chloroethoxy)methane	ND	U	10	0.50	0.28	1	09/18/17	09/25/17	KWG1708261	
2,4-Dichlorophenol	ND	U	10	0.50	0.30	1	09/18/17	09/25/17	KWG1708261	
Benzoic acid	ND	U	25	25	5.8	1	09/18/17	09/25/17	KWG1708261	
1,2,4-Trichlorobenzene	ND	U	10	0.50	0.36	1	09/18/17	09/25/17	KWG1708261	
Naphthalene	ND	U	10	0.50	0.37	1	09/18/17	09/25/17	KWG1708261	
4-Chloroaniline	ND	U	10	2.0	0.38	1	09/18/17	09/25/17	KWG1708261	
Hexachlorobutadiene	ND	U	10	0.50	0.29	1	09/18/17	09/25/17	KWG1708261	
4-Chloro-3-methylphenol	ND	U	10	0.50	0.49	1	09/18/17	09/25/17	KWG1708261	
2-Methylnaphthalene	ND	U	10	0.50	0.24	1	09/18/17	09/25/17	KWG1708261	
2,4,6-Trichlorophenol	ND	U	10	1.0	0.20	1	09/18/17	09/25/17	KWG1708261	
2,4,5-Trichlorophenol	ND	U	10	0.50	0.38	1	09/18/17	09/25/17	KWG1708261	
2-Chloronaphthalene	ND	U	10	0.50	0.29	1	09/18/17	09/25/17	KWG1708261	
Acenaphthene	ND	U	10	0.50	0.28	1	09/18/17	09/25/17	KWG1708261	
2-Nitroaniline	ND	U	25	0.50	0.34	1	09/18/17	09/25/17	KWG1708261	
Acenaphthylene	ND	U	10	0.50	0.24	1	09/18/17	09/25/17	KWG1708261	
Dimethyl Phthalate	ND	U	10	2.0	0.25	1	09/18/17	09/25/17	KWG1708261	
2,6-Dinitrotoluene	ND	U	10	0.50	0.35	1	09/18/17	09/25/17	KWG1708261	
3-Nitroaniline	ND	U	25	1.0	3.3	1	09/18/17	09/25/17	KWG1708261	

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Semi-Volatile Organic Compounds by GC/MS

Sample Name: FTP-15
Lab Code: K1709799-013
Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4-Dinitrophenol	ND	U	25	25	2.2	1	09/18/17	09/25/17	KWG1708261	
Dibenzofuran	ND	U	10	0.50	0.33	1	09/18/17	09/25/17	KWG1708261	
4-Nitrophenol	ND	U	25	10	1.9	1	09/18/17	09/25/17	KWG1708261	
2,4-Dinitrotoluene	ND	U	10	1.0	0.27	1	09/18/17	09/25/17	KWG1708261	
Fluorene	ND	U	10	0.50	0.32	1	09/18/17	09/25/17	KWG1708261	
4-Chlorophenyl Phenyl Ether	ND	U	10	0.50	0.28	1	09/18/17	09/25/17	KWG1708261	
Diethyl Phthalate	ND	U	10	0.50	0.29	1	09/18/17	09/25/17	KWG1708261	
4-Nitroaniline	ND	U	25	4.0	4.0	1	09/18/17	09/25/17	KWG1708261	
2-Methyl-4,6-dinitrophenol	ND	U	25	10	2.1	1	09/18/17	09/25/17	KWG1708261	
N-Nitrosodiphenylamine	ND	U	10	0.50	0.48	1	09/18/17	09/25/17	KWG1708261	
1,2-Diphenylhydrazine†	ND	U	10	0.50	0.51	1	09/18/17	09/25/17	KWG1708261	
4-Bromophenyl Phenyl Ether	ND	U	10	0.50	0.27	1	09/18/17	09/25/17	KWG1708261	
Hexachlorobenzene	ND	U	10	0.63	0.63	1	09/18/17	09/25/17	KWG1708261	
Pentachlorophenol	ND	U	25	5.0	2.4	1	09/18/17	09/25/17	KWG1708261	
Phenanthrene	ND	U	10	0.50	0.48	1	09/18/17	09/25/17	KWG1708261	
Anthracene	ND	U	10	0.61	0.61	1	09/18/17	09/25/17	KWG1708261	
Carbazole	ND	U	10	0.50	0.36	1	09/18/17	09/25/17	KWG1708261	
Di-n-butyl Phthalate	ND	U	10	0.65	0.65	1	09/18/17	09/25/17	KWG1708261	
Fluoranthene	ND	U	10	0.65	0.65	1	09/18/17	09/25/17	KWG1708261	
Pyrene	ND	U	10	0.73	0.73	1	09/18/17	09/25/17	KWG1708261	
Butyl Benzyl Phthalate	ND	U	10	0.50	0.47	1	09/18/17	09/25/17	KWG1708261	
3,3'-Dichlorobenzidine	ND	U	25	2.0	0.27	1	09/18/17	09/25/17	KWG1708261	
Benz(a)anthracene	ND	U	10	0.59	0.59	1	09/18/17	09/25/17	KWG1708261	
Chrysene	ND	U	10	1.0	0.79	1	09/18/17	09/25/17	KWG1708261	
Bis(2-ethylhexyl) Phthalate	ND	U	10	2.0	1.9	1	09/18/17	09/25/17	KWG1708261	
Di-n-octyl Phthalate	ND	U	10	0.63	0.63	1	09/18/17	09/25/17	KWG1708261	
Benzo(b)fluoranthene	ND	U	10	0.58	0.58	1	09/18/17	09/25/17	KWG1708261	
Benzo(k)fluoranthene	ND	U	10	0.83	0.83	1	09/18/17	09/25/17	KWG1708261	
Benzo(a)pyrene	ND	U	10	1.0	0.65	1	09/18/17	09/25/17	KWG1708261	
Indeno(1,2,3-cd)pyrene	ND	U	10	0.68	0.68	1	09/18/17	09/25/17	KWG1708261	
Dibenz(a,h)anthracene	ND	U	10	1.0	0.75	1	09/18/17	09/25/17	KWG1708261	
Benzo(g,h,i)perylene	ND	U	10	0.81	0.81	1	09/18/17	09/25/17	KWG1708261	

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/12/2017
Date Received: 09/14/2017

Semi-Volatile Organic Compounds by GC/MS

Sample Name: FTP-15
Lab Code: K1709799-013

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	65	20-110	09/25/17	Acceptable
Phenol-d6	66	10-115	09/25/17	Acceptable
Nitrobenzene-d5	62	40-110	09/25/17	Acceptable
2-Fluorobiphenyl	72	50-110	09/25/17	Acceptable
2,4,6-Tribromophenol	80	40-125	09/25/17	Acceptable
Terphenyl-d14	91	50-135	09/25/17	Acceptable

† Analyte Comments

4-Methylphenol This analyte cannot be separated from 3-Methylphenol.
 1,2-Diphenylhydrazine This compound is quantitated as Azobenzene.

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/13/2017
Date Received: 09/14/2017

Semi-Volatile Organic Compounds by GC/MS

Sample Name: FTP-16
Lab Code: K1709799-014
Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	25	5.0	0.48	1	09/18/17	09/22/17	KWG1708261	
Bis(2-chloroethyl) Ether	ND	U	10	0.50	0.33	1	09/18/17	09/22/17	KWG1708261	
Phenol	ND	U	10	0.50	0.32	1	09/18/17	09/22/17	KWG1708261	
2-Chlorophenol	ND	U	10	0.50	0.31	1	09/18/17	09/22/17	KWG1708261	
1,3-Dichlorobenzene	ND	U	10	0.50	0.35	1	09/18/17	09/22/17	KWG1708261	
1,4-Dichlorobenzene	ND	U	10	0.50	0.32	1	09/18/17	09/22/17	KWG1708261	
1,2-Dichlorobenzene	ND	U	10	0.50	0.43	1	09/18/17	09/22/17	KWG1708261	
Benzyl alcohol	ND	U	10	0.50	0.38	1	09/18/17	09/22/17	KWG1708261	
Bis(2-chloroisopropyl) Ether	ND	U	10	0.50	0.31	1	09/18/17	09/22/17	KWG1708261	
2-Methylphenol	ND	U	10	0.50	0.33	1	09/18/17	09/22/17	KWG1708261	
Hexachloroethane	ND	U	10	2.0	0.29	1	09/18/17	09/22/17	KWG1708261	
N-Nitrosodi-n-propylamine	ND	U	10	2.0	0.50	1	09/18/17	09/22/17	KWG1708261	
4-Methylphenol†	ND	U	10	0.50	0.48	1	09/18/17	09/22/17	KWG1708261	
Nitrobenzene	ND	U	10	0.57	0.57	1	09/18/17	09/22/17	KWG1708261	
Isophorone	ND	U	10	1.0	0.25	1	09/18/17	09/22/17	KWG1708261	
2-Nitrophenol	ND	U	10	0.50	0.37	1	09/18/17	09/22/17	KWG1708261	
2,4-Dimethylphenol	ND	U	10	2.0	0.26	1	09/18/17	09/22/17	KWG1708261	
Bis(2-chloroethoxy)methane	ND	U	10	0.50	0.28	1	09/18/17	09/22/17	KWG1708261	
2,4-Dichlorophenol	ND	U	10	0.50	0.30	1	09/18/17	09/22/17	KWG1708261	
Benzoic acid	ND	U	25	25	5.8	1	09/18/17	09/22/17	KWG1708261	
1,2,4-Trichlorobenzene	ND	U	10	0.50	0.36	1	09/18/17	09/22/17	KWG1708261	
Naphthalene	ND	U	10	0.50	0.37	1	09/18/17	09/22/17	KWG1708261	
4-Chloroaniline	ND	U	10	2.0	0.38	1	09/18/17	09/22/17	KWG1708261	
Hexachlorobutadiene	ND	U	10	0.50	0.29	1	09/18/17	09/22/17	KWG1708261	
4-Chloro-3-methylphenol	ND	U	10	0.50	0.49	1	09/18/17	09/22/17	KWG1708261	
2-Methylnaphthalene	ND	U	10	0.50	0.24	1	09/18/17	09/22/17	KWG1708261	
2,4,6-Trichlorophenol	ND	U	10	1.0	0.20	1	09/18/17	09/22/17	KWG1708261	
2,4,5-Trichlorophenol	ND	U	10	0.50	0.38	1	09/18/17	09/22/17	KWG1708261	
2-Chloronaphthalene	ND	U	10	0.50	0.29	1	09/18/17	09/22/17	KWG1708261	
Acenaphthene	ND	U	10	0.50	0.28	1	09/18/17	09/22/17	KWG1708261	
2-Nitroaniline	ND	U	25	0.50	0.34	1	09/18/17	09/22/17	KWG1708261	
Acenaphthylene	ND	U	10	0.50	0.24	1	09/18/17	09/22/17	KWG1708261	
Dimethyl Phthalate	ND	U	10	2.0	0.25	1	09/18/17	09/22/17	KWG1708261	
2,6-Dinitrotoluene	ND	U	10	0.50	0.35	1	09/18/17	09/22/17	KWG1708261	
3-Nitroaniline	ND	U	25	1.0	3.3	1	09/18/17	09/22/17	KWG1708261	

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/13/2017
Date Received: 09/14/2017

Semi-Volatile Organic Compounds by GC/MS

Sample Name: FTP-16
Lab Code: K1709799-014
Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4-Dinitrophenol	ND	U	25	25	2.2	1	09/18/17	09/22/17	KWG1708261	
Dibenzofuran	ND	U	10	0.50	0.33	1	09/18/17	09/22/17	KWG1708261	
4-Nitrophenol	ND	U	25	10	1.9	1	09/18/17	09/22/17	KWG1708261	
2,4-Dinitrotoluene	ND	U	10	1.0	0.27	1	09/18/17	09/22/17	KWG1708261	
Fluorene	ND	U	10	0.50	0.32	1	09/18/17	09/22/17	KWG1708261	
4-Chlorophenyl Phenyl Ether	ND	U	10	0.50	0.28	1	09/18/17	09/22/17	KWG1708261	
Diethyl Phthalate	ND	U	10	0.50	0.29	1	09/18/17	09/22/17	KWG1708261	
4-Nitroaniline	ND	U	25	4.0	4.0	1	09/18/17	09/22/17	KWG1708261	
2-Methyl-4,6-dinitrophenol	ND	U	25	10	2.1	1	09/18/17	09/22/17	KWG1708261	
N-Nitrosodiphenylamine	ND	U	10	0.50	0.48	1	09/18/17	09/22/17	KWG1708261	
1,2-Diphenylhydrazine†	ND	U	10	0.50	0.51	1	09/18/17	09/22/17	KWG1708261	
4-Bromophenyl Phenyl Ether	ND	U	10	0.50	0.27	1	09/18/17	09/22/17	KWG1708261	
Hexachlorobenzene	ND	U	10	0.63	0.63	1	09/18/17	09/22/17	KWG1708261	
Pentachlorophenol	ND	U	25	5.0	2.4	1	09/18/17	09/22/17	KWG1708261	
Phenanthrene	ND	U	10	0.50	0.48	1	09/18/17	09/22/17	KWG1708261	
Anthracene	ND	U	10	0.61	0.61	1	09/18/17	09/22/17	KWG1708261	
Carbazole	ND	U	10	0.50	0.36	1	09/18/17	09/22/17	KWG1708261	
Di-n-butyl Phthalate	ND	U	10	0.65	0.65	1	09/18/17	09/22/17	KWG1708261	
Fluoranthene	ND	U	10	0.65	0.65	1	09/18/17	09/22/17	KWG1708261	
Pyrene	ND	U	10	0.73	0.73	1	09/18/17	09/22/17	KWG1708261	
Butyl Benzyl Phthalate	ND	U	10	0.50	0.47	1	09/18/17	09/22/17	KWG1708261	
3,3'-Dichlorobenzidine	ND	U	25	2.0	0.27	1	09/18/17	09/22/17	KWG1708261	
Benz(a)anthracene	ND	U	10	0.59	0.59	1	09/18/17	09/22/17	KWG1708261	
Chrysene	ND	U	10	1.0	0.79	1	09/18/17	09/22/17	KWG1708261	
Bis(2-ethylhexyl) Phthalate	ND	U	10	2.0	1.9	1	09/18/17	09/22/17	KWG1708261	
Di-n-octyl Phthalate	ND	U	10	0.63	0.63	1	09/18/17	09/22/17	KWG1708261	
Benzo(b)fluoranthene	ND	U	10	0.58	0.58	1	09/18/17	09/22/17	KWG1708261	
Benzo(k)fluoranthene	ND	U	10	0.83	0.83	1	09/18/17	09/22/17	KWG1708261	
Benzo(a)pyrene	ND	U	10	1.0	0.65	1	09/18/17	09/22/17	KWG1708261	
Indeno(1,2,3-cd)pyrene	ND	U	10	0.68	0.68	1	09/18/17	09/22/17	KWG1708261	
Dibenz(a,h)anthracene	ND	U	10	1.0	0.75	1	09/18/17	09/22/17	KWG1708261	
Benzo(g,h,i)perylene	ND	U	10	0.81	0.81	1	09/18/17	09/22/17	KWG1708261	

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: 09/13/2017
Date Received: 09/14/2017

Semi-Volatile Organic Compounds by GC/MS

Sample Name: FTP-16
Lab Code: K1709799-014

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	71	20-110	09/22/17	Acceptable
Phenol-d6	72	10-115	09/22/17	Acceptable
Nitrobenzene-d5	76	40-110	09/22/17	Acceptable
2-Fluorobiphenyl	74	50-110	09/22/17	Acceptable
2,4,6-Tribromophenol	78	40-125	09/22/17	Acceptable
Terphenyl-d14	83	50-135	09/22/17	Acceptable

† Analyte Comments

4-Methylphenol This analyte cannot be separated from 3-Methylphenol.
 1,2-Diphenylhydrazine This compound is quantitated as Azobenzene.

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: NA
Date Received: NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: KWG1708261-5
Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
N-Nitrosodimethylamine	ND	U	25	5.0	0.48	1	09/18/17	09/22/17	KWG1708261	
Bis(2-chloroethyl) Ether	ND	U	9.7	0.50	0.33	1	09/18/17	09/22/17	KWG1708261	
Phenol	ND	U	9.7	0.50	0.32	1	09/18/17	09/22/17	KWG1708261	
2-Chlorophenol	ND	U	9.7	0.50	0.31	1	09/18/17	09/22/17	KWG1708261	
1,3-Dichlorobenzene	ND	U	9.7	0.50	0.35	1	09/18/17	09/22/17	KWG1708261	
1,4-Dichlorobenzene	ND	U	9.7	0.50	0.32	1	09/18/17	09/22/17	KWG1708261	
1,2-Dichlorobenzene	ND	U	9.7	0.50	0.43	1	09/18/17	09/22/17	KWG1708261	
Benzyl alcohol	ND	U	9.7	0.50	0.38	1	09/18/17	09/22/17	KWG1708261	
Bis(2-chloroisopropyl) Ether	ND	U	9.7	0.50	0.31	1	09/18/17	09/22/17	KWG1708261	
2-Methylphenol	ND	U	9.7	0.50	0.33	1	09/18/17	09/22/17	KWG1708261	
Hexachloroethane	ND	U	9.7	2.0	0.29	1	09/18/17	09/22/17	KWG1708261	
N-Nitrosodi-n-propylamine	ND	U	9.7	2.0	0.50	1	09/18/17	09/22/17	KWG1708261	
4-Methylphenol†	ND	U	9.7	0.50	0.48	1	09/18/17	09/22/17	KWG1708261	
Nitrobenzene	ND	U	9.7	0.57	0.57	1	09/18/17	09/22/17	KWG1708261	
Isophorone	ND	U	9.7	1.0	0.25	1	09/18/17	09/22/17	KWG1708261	
2-Nitrophenol	ND	U	9.7	0.50	0.37	1	09/18/17	09/22/17	KWG1708261	
2,4-Dimethylphenol	ND	U	9.7	2.0	0.26	1	09/18/17	09/22/17	KWG1708261	
Bis(2-chloroethoxy)methane	ND	U	9.7	0.50	0.28	1	09/18/17	09/22/17	KWG1708261	
2,4-Dichlorophenol	ND	U	9.7	0.50	0.30	1	09/18/17	09/22/17	KWG1708261	
Benzoic acid	ND	U	25	25	5.8	1	09/18/17	09/22/17	KWG1708261	
1,2,4-Trichlorobenzene	ND	U	9.7	0.50	0.36	1	09/18/17	09/22/17	KWG1708261	
Naphthalene	ND	U	9.7	0.50	0.37	1	09/18/17	09/22/17	KWG1708261	
4-Chloroaniline	ND	U	9.7	2.0	0.38	1	09/18/17	09/22/17	KWG1708261	
Hexachlorobutadiene	ND	U	9.7	0.50	0.29	1	09/18/17	09/22/17	KWG1708261	
4-Chloro-3-methylphenol	ND	U	9.7	0.50	0.49	1	09/18/17	09/22/17	KWG1708261	
2-Methylnaphthalene	ND	U	9.7	0.50	0.24	1	09/18/17	09/22/17	KWG1708261	
2,4,6-Trichlorophenol	ND	U	9.7	1.0	0.20	1	09/18/17	09/22/17	KWG1708261	
2,4,5-Trichlorophenol	ND	U	9.7	0.50	0.38	1	09/18/17	09/22/17	KWG1708261	
2-Chloronaphthalene	ND	U	9.7	0.50	0.29	1	09/18/17	09/22/17	KWG1708261	
Acenaphthene	ND	U	9.7	0.50	0.28	1	09/18/17	09/22/17	KWG1708261	
2-Nitroaniline	ND	U	25	0.50	0.34	1	09/18/17	09/22/17	KWG1708261	
Acenaphthylene	ND	U	9.7	0.50	0.24	1	09/18/17	09/22/17	KWG1708261	
Dimethyl Phthalate	ND	U	9.7	2.0	0.25	1	09/18/17	09/22/17	KWG1708261	
2,6-Dinitrotoluene	ND	U	9.7	0.50	0.35	1	09/18/17	09/22/17	KWG1708261	
3-Nitroaniline	ND	U	25	1.0	3.3	1	09/18/17	09/22/17	KWG1708261	

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: NA
Date Received: NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: KWG1708261-5
Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,4-Dinitrophenol	ND	U	25	25	2.2	1	09/18/17	09/22/17	KWG1708261	
Dibenzofuran	ND	U	9.7	0.50	0.33	1	09/18/17	09/22/17	KWG1708261	
4-Nitrophenol	ND	U	25	10	1.9	1	09/18/17	09/22/17	KWG1708261	
2,4-Dinitrotoluene	ND	U	9.7	1.0	0.27	1	09/18/17	09/22/17	KWG1708261	
Fluorene	ND	U	9.7	0.50	0.32	1	09/18/17	09/22/17	KWG1708261	
4-Chlorophenyl Phenyl Ether	ND	U	9.7	0.50	0.28	1	09/18/17	09/22/17	KWG1708261	
Diethyl Phthalate	ND	U	9.7	0.50	0.29	1	09/18/17	09/22/17	KWG1708261	
4-Nitroaniline	ND	U	25	4.0	4.0	1	09/18/17	09/22/17	KWG1708261	
2-Methyl-4,6-dinitrophenol	ND	U	25	10	2.1	1	09/18/17	09/22/17	KWG1708261	
N-Nitrosodiphenylamine	ND	U	9.7	0.50	0.48	1	09/18/17	09/22/17	KWG1708261	
1,2-Diphenylhydrazine†	ND	U	9.7	0.50	0.51	1	09/18/17	09/22/17	KWG1708261	
4-Bromophenyl Phenyl Ether	ND	U	9.7	0.50	0.27	1	09/18/17	09/22/17	KWG1708261	
Hexachlorobenzene	ND	U	9.7	0.63	0.63	1	09/18/17	09/22/17	KWG1708261	
Pentachlorophenol	ND	U	25	5.0	2.4	1	09/18/17	09/22/17	KWG1708261	
Phenanthrene	ND	U	9.7	0.50	0.48	1	09/18/17	09/22/17	KWG1708261	
Anthracene	ND	U	9.7	0.61	0.61	1	09/18/17	09/22/17	KWG1708261	
Carbazole	ND	U	9.7	0.50	0.36	1	09/18/17	09/22/17	KWG1708261	
Di-n-butyl Phthalate	ND	U	9.7	0.65	0.65	1	09/18/17	09/22/17	KWG1708261	
Fluoranthene	ND	U	9.7	0.65	0.65	1	09/18/17	09/22/17	KWG1708261	
Pyrene	ND	U	9.7	0.73	0.73	1	09/18/17	09/22/17	KWG1708261	
Butyl Benzyl Phthalate	ND	U	9.7	0.50	0.47	1	09/18/17	09/22/17	KWG1708261	
3,3'-Dichlorobenzidine	ND	U	25	2.0	0.27	1	09/18/17	09/22/17	KWG1708261	
Benz(a)anthracene	ND	U	9.7	0.59	0.59	1	09/18/17	09/22/17	KWG1708261	
Chrysene	ND	U	9.7	1.0	0.79	1	09/18/17	09/22/17	KWG1708261	
Bis(2-ethylhexyl) Phthalate	ND	U	9.7	2.0	1.9	1	09/18/17	09/22/17	KWG1708261	
Di-n-octyl Phthalate	ND	U	9.7	0.63	0.63	1	09/18/17	09/22/17	KWG1708261	
Benzo(b)fluoranthene	ND	U	9.7	0.58	0.58	1	09/18/17	09/22/17	KWG1708261	
Benzo(k)fluoranthene	ND	U	9.7	0.83	0.83	1	09/18/17	09/22/17	KWG1708261	
Benzo(a)pyrene	ND	U	9.7	1.0	0.65	1	09/18/17	09/22/17	KWG1708261	
Indeno(1,2,3-cd)pyrene	ND	U	9.7	0.68	0.68	1	09/18/17	09/22/17	KWG1708261	
Dibenz(a,h)anthracene	ND	U	9.7	1.0	0.75	1	09/18/17	09/22/17	KWG1708261	
Benzo(g,h,i)perylene	ND	U	9.7	0.81	0.81	1	09/18/17	09/22/17	KWG1708261	

Comments: _____

Analytical Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Collected: NA
Date Received: NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: KWG1708261-5

Units: ug/L
Basis: NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	72	20-110	09/22/17	Acceptable
Phenol-d6	71	10-115	09/22/17	Acceptable
Nitrobenzene-d5	76	40-110	09/22/17	Acceptable
2-Fluorobiphenyl	80	50-110	09/22/17	Acceptable
2,4,6-Tribromophenol	78	40-125	09/22/17	Acceptable
Terphenyl-d14	90	50-135	09/22/17	Acceptable

† Analyte Comments

4-Methylphenol This analyte cannot be separated from 3-Methylphenol.
 1,2-Diphenylhydrazine This compound is quantitated as Azobenzene.

Comments: _____

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: Percent
Level: Low

<u>Sample Name</u>	<u>Lab Code</u>	<u>Sur1</u>	<u>Sur2</u>	<u>Sur3</u>	<u>Sur4</u>	<u>Sur5</u>	<u>Sur6</u>
FTP-1	K1709799-011	75	77	78	85	84	61
FTP-14	K1709799-012	75	73	75	76	80	84
FTP-15	K1709799-013	65	66	62	72	80	91
FTP-16	K1709799-014	71	72	76	74	78	83
Method Blank	KWG1708261-5	72	71	76	80	78	90
FTP-16MS	KWG1708261-1	71	73	77	77	90	92
FTP-16DMS	KWG1708261-2	68	70	75	73	85	89
Lab Control Sample	KWG1708261-3	72	71	77	76	92	91
Duplicate Lab Control Sample	KWG1708261-4	73	75	82	79	86	92

Surrogate Recovery Control Limits (%)

Sur1 = 2-Fluorophenol	20-110	Sur5 = 2,4,6-Tribromophenol	40-125
Sur2 = Phenol-d6	10-115	Sur6 = Terphenyl-d14	50-135
Sur3 = Nitrobenzene-d5	40-110		
Sur4 = 2-Fluorobiphenyl	50-110		

Results flagged with an asterisk (*) indicate values outside control criteria.
 Results flagged with a pound (#) indicate the control criteria is not applicable.

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Date Analyzed: 09/22/2017
Time Analyzed: 16:06

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\092217\0922F002.D
Instrument ID: MS07
Analysis Method: 8270D

Lab Code: KWG1708589-2
Analysis Lot: KWG1708589

	1,4-Dichlorobenzene-d4		Naphthalene-d8		Acenaphthene-d10	
	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>
ICAL Result ==>	31,335	9.64	130,231	11.74	63,541	14.61
Upper Limit ==>	62,670	10.14	260,462	12.24	127,082	15.11
Lower Limit ==>	15,668	9.14	65,116	11.24	31,771	14.11

Associated Analyses

Continuing Calibration VerificationCCV	KWG1708589-2	25,870	9.46	105,024	11.55	52,841	14.42
Method Blank	KWG1708261-5	25,626	9.45	96,084	11.54	42,939	14.41
Lab Control Sample	KWG1708261-3	26,535	9.46	101,139	11.55	47,078	14.41
Duplicate Lab Control Sample	KWG1708261-4	27,242	9.45	110,256	11.55	51,382	14.42
FTP-16MS	KWG1708261-1	27,329	9.45	106,844	11.55	50,143	14.42
FTP-16DMS	KWG1708261-2	25,724	9.45	101,053	11.55	49,077	14.42
FTP-16	K1709799-014	26,072	9.45	103,380	11.54	46,697	14.41

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Date Analyzed: 09/22/2017
Time Analyzed: 16:06

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\092217\0922F002.D
Instrument ID: MS07
Analysis Method: 8270D

Lab Code: KWG1708589-2
Analysis Lot: KWG1708589

	Phenanthrene-d10		Chrysene-d12		Perylene-d12	
	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>
ICAL Result ==>	93,695	17.02	76,165	21.55	85,013	24.83
Upper Limit ==>	187,390	17.52	152,330	22.05	170,026	25.33
Lower Limit ==>	46,848	16.52	38,083	21.05	42,507	24.33

Associated Analyses

Continuing Calibration VerificationCCV	KWG1708589-2	86,361	16.83	67,857	21.31	72,319	24.53
Method Blank	KWG1708261-5	78,905	16.82	63,521	21.30	66,488	24.52
Lab Control Sample	KWG1708261-3	78,283	16.82	63,677	21.31	68,241	24.53
Duplicate Lab Control Sample	KWG1708261-4	85,703	16.83	66,624	21.30	72,093	24.53
FTP-16MS	KWG1708261-1	79,964	16.83	64,850	21.30	70,815	24.53
FTP-16DMS	KWG1708261-2	81,892	16.83	63,757	21.30	71,215	24.53
FTP-16	K1709799-014	79,852	16.82	64,659	21.29	66,595	24.51

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Date Analyzed: 09/25/2017
Time Analyzed: 11:02

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\092517\0925F002.D
Instrument ID: MS07
Analysis Method: 8270D

Lab Code: KWG1708595-2
Analysis Lot: KWG1708595

	1,4-Dichlorobenzene-d4		Naphthalene-d8		Acenaphthene-d10	
	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>
ICAL Result ==>	31,335	9.64	130,231	11.74	63,541	14.61
Upper Limit ==>	62,670	10.14	260,462	12.24	127,082	15.11
Lower Limit ==>	15,668	9.14	65,116	11.24	31,771	14.11

Associated Analyses

Continuing Calibration VerificationCCV	KWG1708595-2	32,438	9.46	130,026	11.55	59,377	14.41
FTP-1	K1709799-011	32,505	9.45	123,662	11.55	49,921	14.42
FTP-14	K1709799-012	29,061	9.45	114,036	11.54	52,415	14.41
FTP-15	K1709799-013	32,114	9.45	119,438	11.54	52,764	14.41

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Date Analyzed: 09/25/2017
Time Analyzed: 11:02

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\092517\0925F002.D
Instrument ID: MS07
Analysis Method: 8270D

Lab Code: KWG1708595-2
Analysis Lot: KWG1708595

	Phenanthrene-d10		Chrysene-d12		Perylene-d12	
	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>	<u>Area</u>	<u>RT</u>
ICAL Result ==>	93,695	17.02	76,165	21.55	85,013	24.83
Upper Limit ==>	187,390	17.52	152,330	22.05	170,026	25.33
Lower Limit ==>	46,848	16.52	38,083	21.05	42,507	24.33

Associated Analyses

Continuing Calibration Verification	CCV	KWG1708595-2	99,205	16.82	80,259	21.31	84,218	24.52
FTP-1		K1709799-011	84,280	16.83	82,674	21.31	85,759	24.56
FTP-14		K1709799-012	90,952	16.82	73,611	21.29	77,969	24.52
FTP-15		K1709799-013	90,097	16.82	74,134	21.29	80,226	24.52

Results flagged with an asterisk (*) indicate values outside control criteria.

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/18/2017
Date Analyzed: 09/22/2017

Matrix Spike/Duplicate Matrix Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name: FTP-16
Lab Code: K1709799-014
Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1708261

Analyte Name	Sample Result	FTP-16MS KWG1708261-1 Matrix Spike			FTP-16DMS KWG1708261-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
N-Nitrosodimethylamine	ND	96.3	99.0	97	90.9	99.0	92	25-110	6	30
Bis(2-chloroethyl) Ether	ND	72.7	99.0	73	71.8	99.0	73	35-110	1	30
Phenol	ND	72.6	99.0	73	72.0	99.0	73	0-115	1	30
2-Chlorophenol	ND	78.8	99.0	80	76.2	99.0	77	35-105	3	30
1,3-Dichlorobenzene	ND	72.9	99.0	74	69.3	99.0	70	30-100	5	30
1,4-Dichlorobenzene	ND	73.9	99.0	75	70.0	99.0	71	30-100	5	30
1,2-Dichlorobenzene	ND	75.9	99.0	77	71.1	99.0	72	35-100	6	30
Benzyl alcohol	ND	78.8	99.0	80	77.1	99.0	78	30-110	2	30
Bis(2-chloroisopropyl) Ether	ND	75.2	99.0	76	72.4	99.0	73	25-130	4	30
2-Methylphenol	ND	77.4	99.0	78	75.8	99.0	77	40-110	2	30
Hexachloroethane	ND	75.6	99.0	76	72.9	99.0	74	30-100	4	30
N-Nitrosodi-n-propylamine	ND	84.3	99.0	85	80.1	99.0	81	35-130	5	30
4-Methylphenol	ND	83.8	99.0	85	82.9	99.0	84	30-110	1	30
Nitrobenzene	ND	84.0	99.0	85	82.7	99.0	84	45-110	2	30
Isophorone	ND	88.3	99.0	89	85.3	99.0	86	50-110	4	30
2-Nitrophenol	ND	87.5	99.0	88	85.6	99.0	86	40-115	2	30
2,4-Dimethylphenol	ND	77.1	99.0	78	79.4	99.0	80	30-110	3	30
Bis(2-chloroethoxy)methane	ND	82.4	99.0	83	82.1	99.0	83	45-105	0	30
2,4-Dichlorophenol	ND	85.0	99.0	86	81.1	99.0	82	50-105	5	30
Benzoic acid	ND	86.1	99.0	87	85.5	99.0	86	0-125	1	30
1,2,4-Trichlorobenzene	ND	79.6	99.0	80	75.1	99.0	76	35-105	6	30
Naphthalene	ND	79.2	99.0	80	76.2	99.0	77	40-100	4	30
4-Chloroaniline	ND	76.1	99.0	77	76.9	99.0	78	15-110	1	30
Hexachlorobutadiene	ND	81.5	99.0	82	77.9	99.0	79	25-105	4	30
4-Chloro-3-methylphenol	ND	89.7	99.0	91	90.3	99.0	91	45-110	1	30
2-Methylnaphthalene	ND	82.1	99.0	83	78.1	99.0	79	45-105	5	30
2,4,6-Trichlorophenol	ND	91.8	99.0	93	87.1	99.0	88	50-115	5	30
2,4,5-Trichlorophenol	ND	91.6	99.0	92	87.1	99.0	88	50-110	5	30
2-Chloronaphthalene	ND	84.5	99.0	85	78.1	99.0	79	50-105	8	30
Acenaphthene	ND	87.1	99.0	88	82.4	99.0	83	45-110	5	30
2-Nitroaniline	ND	98.2	99.0	99	94.9	99.0	96	50-115	3	30
Acenaphthylene	ND	85.2	99.0	86	82.1	99.0	83	50-105	4	30
Dimethyl Phthalate	ND	100	99.0	101	94.4	99.0	95	25-125	6	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/18/2017
Date Analyzed: 09/22/2017

Matrix Spike/Duplicate Matrix Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name: FTP-16
Lab Code: K1709799-014
Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1708261

Analyte Name	Sample Result	FTP-16MS KWG1708261-1 Matrix Spike			FTP-16DMS KWG1708261-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
2,6-Dinitrotoluene	ND	98.9	99.0	100	92.2	99.0	93	50-115	7	30
3-Nitroaniline	ND	80.0	99.0	81	79.1	99.0	80	20-125	1	30
2,4-Dinitrophenol	ND	101	99.0	102	99.4	99.0	100	15-140	2	30
Dibenzofuran	ND	88.1	99.0	89	82.3	99.0	83	55-105	7	30
4-Nitrophenol	ND	115	99.0	116	112	99.0	113	0-125	3	30
2,4-Dinitrotoluene	ND	101	99.0	102	96.4	99.0	97	50-120	5	30
Fluorene	ND	87.6	99.0	88	85.5	99.0	86	50-110	2	30
4-Chlorophenyl Phenyl Ether	ND	86.7	99.0	88	85.7	99.0	87	50-110	1	30
Diethyl Phthalate	ND	110	99.0	111	108	99.0	109	40-120	2	30
4-Nitroaniline	ND	88.6	99.0	90	86.8	99.0	88	30-120	2	30
2-Methyl-4,6-dinitrophenol	ND	103	99.0	104	104	99.0	105	40-130	1	30
N-Nitrosodiphenylamine	ND	84.8	99.0	86	82.8	99.0	84	50-110	2	30
1,2-Diphenylhydrazine	ND	90.6	99.0	91	87.4	99.0	88	55-115	4	30
4-Bromophenyl Phenyl Ether	ND	95.4	99.0	96	90.8	99.0	92	50-115	5	30
Hexachlorobenzene	ND	96.9	99.0	98	92.6	99.0	93	50-110	5	30
Pentachlorophenol	ND	92.1	99.0	93	85.2	99.0	86	40-115	8	30
Phenanthrene	ND	91.4	99.0	92	86.5	99.0	87	50-115	5	30
Anthracene	ND	89.7	99.0	91	83.0	99.0	84	55-110	8	30
Carbazole	ND	96.8	99.0	98	91.8	99.0	93	50-115	5	30
Di-n-butyl Phthalate	ND	112	99.0	113	104	99.0	105	55-115	7	30
Fluoranthene	ND	102	99.0	103	98.1	99.0	99	55-115	4	30
Pyrene	ND	96.4	99.0	97	94.0	99.0	95	50-130	2	30
Butyl Benzyl Phthalate	ND	106	99.0	107	98.2	99.0	99	45-115	7	30
3,3'-Dichlorobenzidine	ND	60.5	99.0	61	59.1	99.0	60	20-110	2	30
Benz(a)anthracene	ND	95.4	99.0	96	88.9	99.0	90	55-110	7	30
Chrysene	ND	92.1	99.0	93	91.2	99.0	92	55-110	1	30
Bis(2-ethylhexyl) Phthalate	ND	111	99.0	112	109	99.0	110	40-125	2	30
Di-n-octyl Phthalate	ND	102	99.0	103	95.9	99.0	97	35-135	6	30
Benzo(b)fluoranthene	ND	93.2	99.0	94	89.1	99.0	90	45-120	4	30
Benzo(k)fluoranthene	ND	93.0	99.0	94	87.8	99.0	89	45-125	6	30
Benzo(a)pyrene	ND	90.5	99.0	91	87.0	99.0	88	55-110	4	30
Indeno(1,2,3-cd)pyrene	ND	97.1	99.0	98	89.3	99.0	90	45-125	8	30
Dibenz(a,h)anthracene	ND	96.2	99.0	97	92.2	99.0	93	40-125	4	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/18/2017
Date Analyzed: 09/22/2017

Matrix Spike/Duplicate Matrix Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name: FTP-16
Lab Code: K1709799-014
Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1708261

Analyte Name	Sample Result	FTP-16MS KWG1708261-1 Matrix Spike			FTP-16DMS KWG1708261-2 Duplicate Matrix Spike			%Rec Limits	RPD	RPD Limit
		Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
Benzo(g,h,i)perylene	ND	92.4	99.0	93	87.4	99.0	88	40-125	6	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Results flagged with a pound (#) indicate the control criteria is not applicable.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/18/2017
Date Analyzed: 09/22/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1708261

Analyte Name	Lab Control Sample KWG1708261-3 Lab Control Spike			Duplicate Lab Control Sample KWG1708261-4 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
N-Nitrosodimethylamine	98.6	100	99	109	100	109	25-110	10	30
Bis(2-chloroethyl) Ether	75.6	100	76	83.4	100	83	35-110	10	30
Phenol	74.1	100	74	76.9	100	77	0-115	4	30
2-Chlorophenol	78.4	100	78	86.7	100	87	35-105	10	30
1,3-Dichlorobenzene	69.3	100	69	81.4	100	81	30-100	16	30
1,4-Dichlorobenzene	72.2	100	72	80.1	100	80	30-100	10	30
1,2-Dichlorobenzene	74.5	100	74	83.5	100	83	35-100	11	30
Benzyl alcohol	83.0	100	83	89.7	100	90	30-110	8	30
Bis(2-chloroisopropyl) Ether	76.0	100	76	83.0	100	83	25-130	9	30
2-Methylphenol	76.9	100	77	84.6	100	85	40-110	10	30
Hexachloroethane	72.0	100	72	82.1	100	82	30-100	13	30
N-Nitrosodi-n-propylamine	86.8	100	87	97.2	100	97	35-130	11	30
4-Methylphenol	82.3	100	82	89.3	100	89	30-110	8	30
Nitrobenzene	85.9	100	86	93.9	100	94	45-110	9	30
Isophorone	88.6	100	89	92.8	100	93	50-110	5	30
2-Nitrophenol	89.8	100	90	91.5	100	92	40-115	2	30
2,4-Dimethylphenol	71.2	100	71	74.2	100	74	30-110	4	30
Bis(2-chloroethoxy)methane	87.1	100	87	88.5	100	89	45-105	2	30
2,4-Dichlorophenol	84.8	100	85	88.8	100	89	50-105	5	30
Benzoic acid	72.9	100	73	76.9	100	77	0-125	5	30
1,2,4-Trichlorobenzene	77.9	100	78	83.8	100	84	35-105	7	30
Naphthalene	81.7	100	82	83.8	100	84	40-100	3	30
4-Chloroaniline	83.1	100	83	86.5	100	87	15-110	4	30
Hexachlorobutadiene	81.1	100	81	88.5	100	89	25-105	9	30
4-Chloro-3-methylphenol	94.1	100	94	92.8	100	93	45-110	1	30
2-Methylnaphthalene	84.3	100	84	86.8	100	87	45-105	3	30
2,4,6-Trichlorophenol	94.0	100	94	95.7	100	96	50-115	2	30
2,4,5-Trichlorophenol	92.5	100	92	92.9	100	93	50-110	0	30
2-Chloronaphthalene	87.8	100	88	90.1	100	90	50-105	3	30
Acenaphthene	90.0	100	90	90.5	100	90	45-110	0	30
2-Nitroaniline	104	100	104	102	100	102	50-115	2	30
Acenaphthylene	90.1	100	90	89.8	100	90	50-105	0	30
Dimethyl Phthalate	107	100	107	101	100	101	25-125	6	30
2,6-Dinitrotoluene	105	100	105	100	100	100	50-115	4	30
3-Nitroaniline	93.1	100	93	89.9	100	90	20-125	4	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/18/2017
Date Analyzed: 09/22/2017

Lab Control Spike/Duplicate Lab Control Spike Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3520C
Analysis Method: 8270D

Units: ug/L
Basis: NA
Level: Low
Extraction Lot: KWG1708261

Analyte Name	Lab Control Sample KWG1708261-3 Lab Control Spike			Duplicate Lab Control Sample KWG1708261-4 Duplicate Lab Control Spike			%Rec Limits	RPD	RPD Limit
	Result	Spike Amount	%Rec	Result	Spike Amount	%Rec			
2,4-Dinitrophenol	73.7	100	74	79.0	100	79	15-140	7	30
Dibenzofuran	89.6	100	90	89.8	100	90	55-105	0	30
4-Nitrophenol	116	100	116	112	100	112	0-125	4	30
2,4-Dinitrotoluene	107	100	107	101	100	101	50-120	5	30
Fluorene	92.5	100	92	89.5	100	89	50-110	3	30
4-Chlorophenyl Phenyl Ether	94.7	100	95	93.0	100	93	50-110	2	30
Diethyl Phthalate	120	100	120	114	100	114	40-120	5	30
4-Nitroaniline	98.6	100	99	91.6	100	92	30-120	7	30
2-Methyl-4,6-dinitrophenol	101	100	101	97.8	100	98	40-130	3	30
N-Nitrosodiphenylamine	92.8	100	93	90.4	100	90	50-110	3	30
1,2-Diphenylhydrazine	96.9	100	97	92.8	100	93	55-115	4	30
4-Bromophenyl Phenyl Ether	95.7	100	96	92.4	100	92	50-115	3	30
Hexachlorobenzene	98.0	100	98	94.4	100	94	50-110	4	30
Pentachlorophenol	79.5	100	80	78.0	100	78	40-115	2	30
Phenanthrene	93.3	100	93	88.6	100	89	50-115	5	30
Anthracene	91.9	100	92	88.1	100	88	55-110	4	30
Carbazole	98.6	100	99	95.1	100	95	50-115	4	30
Di-n-butyl Phthalate	113	100	113	109	100	109	55-115	4	30
Fluoranthene	102	100	102	100	100	100	55-115	2	30
Pyrene	99.4	100	99	98.0	100	98	50-130	1	30
Butyl Benzyl Phthalate	106	100	106	106	100	106	45-115	0	30
3,3'-Dichlorobenzidine	76.2	100	76	83.5	100	84	20-110	9	30
Benz(a)anthracene	91.7	100	92	94.8	100	95	55-110	3	30
Chrysene	95.3	100	95	94.2	100	94	55-110	1	30
Bis(2-ethylhexyl) Phthalate	117	100	117	116	100	116	40-125	0	30
Di-n-octyl Phthalate	103	100	103	106	100	106	35-135	3	30
Benzo(b)fluoranthene	90.7	100	91	93.8	100	94	45-120	3	30
Benzo(k)fluoranthene	96.7	100	97	94.5	100	94	45-125	2	30
Benzo(a)pyrene	92.4	100	92	93.2	100	93	55-110	1	30
Indeno(1,2,3-cd)pyrene	101	100	101	97.9	100	98	45-125	3	30
Dibenz(a,h)anthracene	97.7	100	98	96.5	100	97	40-125	1	30
Benzo(g,h,i)perylene	93.8	100	94	94.8	100	95	40-125	1	30

Results flagged with an asterisk (*) indicate values outside control criteria.

Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/18/2017
Date Analyzed: 09/22/2017
Time Analyzed: 16:47

Method Blank Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: KWG1708261-5
Extraction Method: EPA 3520C
Analysis Method: 8270D

Instrument ID: MS07
File ID: J:\MS07\DATA\092217\0922F003.D
Level: Low
Extraction Lot: KWG1708261

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1708261-3	J:\MS07\DATA\092217\0922F004.D	09/22/17	17:28
Duplicate Lab Control Sample	KWG1708261-4	J:\MS07\DATA\092217\0922F005.D	09/22/17	18:09
FTP-16MS	KWG1708261-1	J:\MS07\DATA\092217\0922F006.D	09/22/17	18:50
FTP-16DMS	KWG1708261-2	J:\MS07\DATA\092217\0922F007.D	09/22/17	19:31
FTP-16	K1709799-014	J:\MS07\DATA\092217\0922F008.D	09/22/17	20:12
FTP-1	K1709799-011	J:\MS07\DATA\092517\0925F010.D	09/25/17	16:46
FTP-14	K1709799-012	J:\MS07\DATA\092517\0925F011.D	09/25/17	17:27
FTP-15	K1709799-013	J:\MS07\DATA\092517\0925F012.D	09/25/17	18:08

QA/QC Report

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/18/2017
Date Analyzed: 09/22/2017
Time Analyzed: 17:28

Lab Control Sample Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name: Lab Control Sample
Lab Code: KWG1708261-3
Extraction Method: EPA 3520C
Analysis Method: 8270D

Instrument ID: MS07
File ID: J:\MS07\DATA\092217\0922F004.D
Level: Low
Extraction Lot: KWG1708261

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1708261-5	J:\MS07\DATA\092217\0922F003.D	09/22/17	16:47
FTP-16MS	KWG1708261-1	J:\MS07\DATA\092217\0922F006.D	09/22/17	18:50
FTP-16DMS	KWG1708261-2	J:\MS07\DATA\092217\0922F007.D	09/22/17	19:31
FTP-16	K1709799-014	J:\MS07\DATA\092217\0922F008.D	09/22/17	20:12
FTP-1	K1709799-011	J:\MS07\DATA\092517\0925F010.D	09/25/17	16:46
FTP-14	K1709799-012	J:\MS07\DATA\092517\0925F011.D	09/25/17	17:27
FTP-15	K1709799-013	J:\MS07\DATA\092517\0925F012.D	09/25/17	18:08

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Date Analyzed: 09/22/2017
Time Analyzed: 15:25

Tune Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\092217\0922F001.D
Instrument ID: MS07
Column:

Analysis Method: 8270D
Analysis Lot: KWG1708589

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	58.8	8483	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	72.3	10439	PASS
70	69	0	2	0.0	0	PASS
127	198	25	75	48.5	7008	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	14439	PASS
199	198	5	9	6.7	972	PASS
275	198	10	30	20.4	2947	PASS
365	198	1	100	2.0	295	PASS
441	443	0	100	78.5	1453	PASS
442	198	40	110	66.3	9573	PASS
443	442	15	24	19.3	1851	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1708589-2	J:\MS07\DATA\092217\0922F002.D	09/22/2017	16:06	
Method Blank	KWG1708261-5	J:\MS07\DATA\092217\0922F003.D	09/22/2017	16:47	
Lab Control Sample	KWG1708261-3	J:\MS07\DATA\092217\0922F004.D	09/22/2017	17:28	
Duplicate Lab Control Sample	KWG1708261-4	J:\MS07\DATA\092217\0922F005.D	09/22/2017	18:09	
FTP-16MS	KWG1708261-1	J:\MS07\DATA\092217\0922F006.D	09/22/2017	18:50	
FTP-16DMS	KWG1708261-2	J:\MS07\DATA\092217\0922F007.D	09/22/2017	19:31	
FTP-16	K1709799-014	J:\MS07\DATA\092217\0922F008.D	09/22/2017	20:12	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

QA/QC Results

Client: Tetra Tech, Inc.
 Project: YTC/106-45760003

Service Request: K1709799
 Date Analyzed: 09/25/2017
 Time Analyzed: 10:20

Tune Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\092517\0925F001.D
 Instrument ID: MS07
 Column:

Analysis Method: 8270D
 Analysis Lot: KWG1708595

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	56.0	9801	PASS
68	69	0	2	0.0	0	PASS
69	198	0	100	66.6	11646	PASS
70	69	0	2	0.0	0	PASS
127	198	25	75	47.5	8311	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	17499	PASS
199	198	5	9	7.0	1231	PASS
275	198	10	30	20.6	3606	PASS
365	198	1	100	2.0	356	PASS
441	443	0	100	74.7	1736	PASS
442	198	40	110	67.5	11807	PASS
443	442	15	24	19.7	2325	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1708595-2	J:\MS07\DATA\092517\0925F002.D	09/25/2017	11:02	
FTP-1	K1709799-011	J:\MS07\DATA\092517\0925F010.D	09/25/2017	16:46	
FTP-14	K1709799-012	J:\MS07\DATA\092517\0925F011.D	09/25/2017	17:27	
FTP-15	K1709799-013	J:\MS07\DATA\092517\0925F012.D	09/25/2017	18:08	

Results flagged with an asterisk (*) indicate the analysis performed outside specified tune window

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Calibration Date: 09/13/2017

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL15546
Instrument ID: MS07

Column: MS

Level ID	File ID	Level ID	File ID
A	J:\MS07\DATA\091317\0913F003.D	G	J:\MS07\DATA\091317\0913F011.D
B	J:\MS07\DATA\091317\0913F004.D	H	J:\MS07\DATA\091317\0913F012.D
C	J:\MS07\DATA\091317\0913F005.D	I	J:\MS07\DATA\091417\0914F003.D
D	J:\MS07\DATA\091317\0913F008.D	J	J:\MS07\DATA\091417\0914F004.D
E	J:\MS07\DATA\091317\0913F009.D		
F	J:\MS07\DATA\091317\0913F010.D		

Analyte Name	Level ID			Level ID			Level ID			Level ID			Level ID		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
N-Nitrosodimethylamine	F	120	0.938	G	160	0.904	C	10	1.09	D	80	0.892	E	100	0.945
							H	200	0.942	I	20	0.854	J	50	0.926
Bis(2-chloroethyl) Ether	A	1.0	1.45	B	5.0	1.42	C	10	1.52	D	80	1.41	E	100	1.45
	F	120	1.46	G	160	1.44	H	200	1.51	I	20	1.50	J	50	1.58
Phenol	A	1.0	2.02	B	5.0	1.91	C	10	2.01	D	80	1.92	E	100	1.97
	F	120	1.93	G	160	1.96	H	200	2.04	I	20	1.91	J	50	2.02
2-Chlorophenol	A	1.0	1.29	B	5.0	1.40	C	10	1.50	D	80	1.44	E	100	1.43
	F	120	1.47	G	160	1.45	H	200	1.49	I	20	1.44	J	50	1.56
1,3-Dichlorobenzene	A	1.0	1.58	B	5.0	1.40	C	10	1.50	D	80	1.42	E	100	1.42
	F	120	1.43	G	160	1.41	H	200	1.49	I	20	1.47	J	50	1.56
1,4-Dichlorobenzene	A	1.0	1.46	B	5.0	1.46	C	10	1.50	D	80	1.47	E	100	1.46
	F	120	1.47	G	160	1.44	H	200	1.50	I	20	1.47	J	50	1.56
1,2-Dichlorobenzene	A	1.0	1.46	B	5.0	1.33	C	10	1.45	D	80	1.32	E	100	1.36
	F	120	1.33	G	160	1.30	H	200	1.37	I	20	1.38	J	50	1.41
Benzyl alcohol	A	1.0	0.859	B	5.0	0.882	C	10	0.976	D	80	0.995	E	100	1.02
	F	120	0.950	G	160	0.997	H	200	1.04	I	20	0.952	J	50	1.02
Bis(2-chloroisopropyl) Ether	A	1.0	3.14	B	5.0	2.77	C	10	2.80	D	80	2.70	E	100	2.84
	F	120	2.73	G	160	2.67	H	200	2.78	I	20	2.75	J	50	2.92
2-Methylphenol	A	1.0	1.16	B	5.0	1.08	C	10	1.20	D	80	1.15	E	100	1.20
	F	120	1.16	G	160	1.17	H	200	1.18	I	20	1.12	J	50	1.23
Hexachloroethane	A	1.0	0.705	B	5.0	0.666	C	10	0.713	D	80	0.695	E	100	0.728
	F	120	0.707	G	160	0.703	H	200	0.718	I	20	0.679	J	50	0.740
N-Nitrosodi-n-propylamine	A	1.0	1.22	B	5.0	1.14	C	10	1.24	D	80	1.19	E	100	1.27
	F	120	1.16	G	160	1.21	H	200	1.26	I	20	1.11	J	50	1.28
4-Methylphenol	A	1.0	1.55	B	5.0	1.56	C	10	1.71	D	80	1.66	E	100	1.80
	F	120	1.67	G	160	1.72	H	200	1.74	I	20	1.63	J	50	1.81
Nitrobenzene	A	1.0	1.63	B	5.0	1.48	C	10	1.63	D	80	1.60	E	100	1.72
	F	120	1.66	G	160	1.63	H	200	1.67	I	20	1.53	J	50	1.69

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Inc.
 Project: YTC/106-45760003

Service Request: K1709799
 Calibration Date: 09/13/2017

Initial Calibration Summary
 Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL15546
 Instrument ID: MS07

Column: MS

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
Isophorone	A	1.0	0.743	B	5.0	0.783	C	10	0.800	D	80	0.767	E	100	0.775
	F	120	0.757	G	160	0.788	H	200	0.802	I	20	0.782	J	50	0.813
2-Nitrophenol				B	5.0	0.141	C	10	0.169	D	80	0.184	E	100	0.195
	F	120	0.198	G	160	0.202	H	200	0.210	I	20	0.185	J	50	0.197
2,4-Dimethylphenol	A	1.0	0.320	B	5.0	0.308	C	10	0.313	D	80	0.300	E	100	0.311
	F	120	0.299	G	160	0.317	H	200	0.320	I	20	0.319	J	50	0.328
Bis(2-chloroethoxy)methane	A	1.0	0.393	B	5.0	0.420	C	10	0.448	D	80	0.428	E	100	0.434
	F	120	0.423	G	160	0.436	H	200	0.446	I	20	0.450	J	50	0.452
2,4-Dichlorophenol				B	5.0	0.245	C	10	0.274	D	80	0.287	E	100	0.285
	F	120	0.284	G	160	0.287	H	200	0.295	I	20	0.283	J	50	0.297
Benzoic acid							C	10	0.0779	D	80	0.196	E	100	0.204
	F	120	0.199	G	160	0.216	H	200	0.229	I	20	0.136	J	50	0.187
1,2,4-Trichlorobenzene	A	1.0	0.335	B	5.0	0.328	C	10	0.332	D	80	0.308	E	100	0.315
	F	120	0.320	G	160	0.324	H	200	0.334	I	20	0.329	J	50	0.335
Naphthalene	A	1.0	1.05	B	5.0	0.973	C	10	1.02	D	80	0.948	E	100	0.939
	F	120	0.947	G	160	0.966	H	200	0.997	I	20	1.01	J	50	1.03
4-Chloroaniline	A	1.0	0.388	B	5.0	0.415	C	10	0.433	D	80	0.435	E	100	0.419
	F	120	0.425	G	160	0.434	H	200	0.433	I	20	0.424	J	50	0.459
Hexachlorobutadiene	A	1.0	0.185	B	5.0	0.193	C	10	0.199	D	80	0.188	E	100	0.195
	F	120	0.195	G	160	0.195	H	200	0.206	I	20	0.202	J	50	0.201
4-Chloro-3-methylphenol	A	1.0	0.273	B	5.0	0.311	C	10	0.330	D	80	0.329	E	100	0.330
	F	120	0.315	G	160	0.318	H	200	0.316	I	20	0.326	J	50	0.342
2-Methylnaphthalene	A	1.0	0.589	B	5.0	0.591	C	10	0.609	D	80	0.597	E	100	0.608
	F	120	0.581	G	160	0.601	H	200	0.618	I	20	0.627	J	50	0.638
2,4,6-Trichlorophenol				B	5.0	0.351	C	10	0.438	D	80	0.453	E	100	0.474
	F	120	0.493	G	160	0.480	H	200	0.531	I	20	0.441	J	50	0.497
2,4,5-Trichlorophenol				B	5.0	0.398	C	10	0.506	D	80	0.508	E	100	0.517
	F	120	0.516	G	160	0.509	H	200	0.551	I	20	0.513	J	50	0.538
2-Chloronaphthalene	A	1.0	1.16	B	5.0	1.12	C	10	1.21	D	80	1.18	E	100	1.21
	F	120	1.25	G	160	1.26	H	200	1.29	I	20	1.18	J	50	1.26
Acenaphthene	A	1.0	1.12	B	5.0	1.07	C	10	1.18	D	80	1.02	E	100	1.05
	F	120	1.08	G	160	1.06	H	200	1.13	I	20	1.10	J	50	1.13
2-Nitroaniline	A	1.0	0.402	B	5.0	0.425	C	10	0.479	D	80	0.437	E	100	0.457
	F	120	0.465	G	160	0.447	H	200	0.474	I	20	0.459	J	50	0.483
Acenaphthylene	A	1.0	1.81	B	5.0	1.78	C	10	2.00	D	80	1.80	E	100	1.81
	F	120	1.90	G	160	1.85	H	200	1.91	I	20	1.91	J	50	2.00

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† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Inc.
 Project: YTC/106-45760003

Service Request: K1709799
 Calibration Date: 09/13/2017

Initial Calibration Summary
 Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL15546
 Instrument ID: MS07

Column: MS

Analyte Name	Level			Level			Level			Level			Level		
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF
Dimethyl Phthalate	A	1.0	1.27	B	5.0	1.27	C	10	1.37	D	80	1.14	E	100	1.21
	F	120	1.23	G	160	1.19	H	200	1.26	I	20	1.36	J	50	1.34
2,6-Dinitrotoluene				B	5.0	0.285	C	10	0.325	D	80	0.284	E	100	0.297
	F	120	0.303	G	160	0.291	H	200	0.314	I	20	0.317	J	50	0.317
3-Nitroaniline	A	1.0	0.309	B	5.0	0.354	C	10	0.391	D	80	0.306	E	100	0.338
	F	120	0.347	G	160	0.325	H	200	0.361	I	20	0.367	J	50	0.357
2,4-Dinitrophenol							C	10	0.0302	D	80	0.111	E	100	0.133
	F	120	0.152	G	160	0.160	H	200	0.196	I	20	0.0625	J	50	0.112
Dibenzofuran	A	1.0	1.70	B	5.0	1.70	C	10	1.84	D	80	1.61	E	100	1.68
	F	120	1.68	G	160	1.62	H	200	1.74	I	20	1.75	J	50	1.80
4-Nitrophenol				B	5.0	0.133	C	10	0.159	D	80	0.159	E	100	0.171
	F	120	0.186	G	160	0.175	H	200	0.195	I	20	0.156	J	50	0.169
2,4-Dinitrotoluene				B	5.0	0.327	C	10	0.377	D	80	0.315	E	100	0.351
	F	120	0.360	G	160	0.348	H	200	0.383	I	20	0.363	J	50	0.362
Fluorene	A	1.0	1.43	B	5.0	1.37	C	10	1.49	D	80	1.20	E	100	1.28
	F	120	1.27	G	160	1.22	H	200	1.28	I	20	1.39	J	50	1.40
4-Chlorophenyl Phenyl Ether	A	1.0	0.769	B	5.0	0.755	C	10	0.826	D	80	0.677	E	100	0.712
	F	120	0.716	G	160	0.685	H	200	0.725	I	20	0.789	J	50	0.762
Diethyl Phthalate	A	1.0	1.30	B	5.0	1.10	C	10	1.16	D	80	1.03	E	100	1.13
	F	120	1.16	G	160	1.09	H	200	1.19	I	20	1.20	J	50	1.16
4-Nitroaniline	A	1.0	0.250	B	5.0	0.303	C	10	0.340	D	80	0.275	E	100	0.303
	F	120	0.321	G	160	0.311	H	200	0.352	I	20	0.291	J	50	0.299
2-Methyl-4,6-dinitrophenol				B	5.0	0.0476	C	10	0.0803	D	80	0.174	E	100	0.205
	F	120	0.224	G	160	0.225	H	200	0.264	I	20	0.137	J	50	0.185
N-Nitrosodiphenylamine	A	1.0	0.982	B	5.0	1.03	C	10	1.10	D	80	0.811	E	100	0.834
	F	120	0.808	G	160	0.822	H	200	0.862	I	20	1.02	J	50	0.871
1,2-Diphenylhydrazine	A	1.0	1.81	B	5.0	1.79	C	10	1.92	D	80	1.48	E	100	1.54
	F	120	1.54	G	160	1.49	H	200	1.58	I	20	1.77	J	50	1.70
4-Bromophenyl Phenyl Ether	A	1.0	0.202	B	5.0	0.220	C	10	0.242	D	80	0.243	E	100	0.237
	F	120	0.239	G	160	0.245	H	200	0.252	I	20	0.244	J	50	0.258
Hexachlorobenzene	A	1.0	0.264	B	5.0	0.246	C	10	0.280	D	80	0.257	E	100	0.259
	F	120	0.263	G	160	0.265	H	200	0.276	I	20	0.272	J	50	0.284
Pentachlorophenol										D	80	0.138	E	100	0.145
	F	120	0.154	G	160	0.163	H	200	0.177	I	20	0.114	J	50	0.144
Phenanthrene	A	1.0	1.03	B	5.0	0.952	C	10	1.03	D	80	0.907	E	100	0.948
	F	120	0.945	G	160	0.948	H	200	1.02	I	20	0.965	J	50	0.968

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† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Inc.
 Project: YTC/106-45760003

Service Request: K1709799
 Calibration Date: 09/13/2017

Initial Calibration Summary
 Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL15546
 Instrument ID: MS07

Column: MS

Analyte Name	Level			Level			Level			Level					
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF			
Anthracene	A	1.0	1.04	B	5.0	0.978	C	10	1.03	D	80	0.912	E	100	0.939
	F	120	0.977	G	160	0.985	H	200	1.06	I	20	1.01	J	50	1.02
Carbazole	A	1.0	0.789	B	5.0	0.735	C	10	0.769	D	80	0.803	E	100	0.803
	F	120	0.840	G	160	0.886	H	200	0.983	I	20	0.698	J	50	0.791
Di-n-butyl Phthalate	A	1.0	0.836	B	5.0	0.803	C	10	0.877	D	80	1.01	E	100	1.01
	F	120	1.07	G	160	1.14	H	200	1.14	I	20	0.866	J	50	0.971
Fluoranthene	A	1.0	0.923	B	5.0	0.776	C	10	0.820	D	80	0.973	E	100	0.978
	F	120	1.02	G	160	1.10	H	200	1.23	I	20	0.810	J	50	0.949
Pyrene	A	1.0	1.55	B	5.0	1.33	C	10	1.28	D	80	1.27	E	100	1.32
	F	120	1.34	G	160	1.39	H	200	1.41	I	20	1.24	J	50	1.36
Butyl Benzyl Phthalate	A	1.0	0.553	B	5.0	0.519	C	10	0.579	D	80	0.631	E	100	0.621
	F	120	0.626	G	160	0.608	H	200	0.628	I	20	0.631	J	50	0.653
3,3'-Dichlorobenzidine	A	1.0	0.369	B	5.0	0.424	C	10	0.441	D	80	0.441	E	100	0.462
	F	120	0.482	G	160	0.516	H	200	0.563	I	20	0.446	J	50	0.462
Benz(a)anthracene	A	1.0	1.15	B	5.0	1.03	C	10	1.07	D	80	1.10	E	100	1.09
	F	120	1.11	G	160	1.11	H	200	1.18	I	20	1.10	J	50	1.15
Chrysene	A	1.0	1.08	B	5.0	1.06	C	10	1.09	D	80	1.07	E	100	1.04
	F	120	1.08	G	160	1.09	H	200	1.17	I	20	1.06	J	50	1.13
Bis(2-ethylhexyl) Phthalate	A	1.0	0.684	B	5.0	0.630	C	10	0.678	D	80	0.793	E	100	0.774
	F	120	0.787	G	160	0.788	H	200	0.835	I	20	0.725	J	50	0.843
Di-n-octyl Phthalate	A	1.0	1.20	B	5.0	1.15	C	10	1.22	D	80	1.19	E	100	1.17
	F	120	1.26	G	160	1.25	H	200	1.30	I	20	1.31	J	50	1.25
Benzo(b)fluoranthene	A	1.0	1.05	B	5.0	0.975	C	10	1.02	D	80	1.03	E	100	1.01
	F	120	1.09	G	160	1.09	H	200	1.25	I	20	1.09	J	50	1.07
Benzo(k)fluoranthene	A	1.0	0.922	B	5.0	0.986	C	10	1.04	D	80	1.00	E	100	1.02
	F	120	1.05	G	160	1.03	H	200	1.05	I	20	1.04	J	50	1.04
Benzo(a)pyrene	A	1.0	0.864	B	5.0	0.870	C	10	0.922	D	80	0.952	E	100	0.958
	F	120	1.01	G	160	1.00	H	200	1.03	I	20	0.956	J	50	1.01
Indeno(1,2,3-cd)pyrene	A	1.0	0.822	B	5.0	0.806	C	10	0.916	D	80	0.985	E	100	0.966
	F	120	0.990	G	160	0.950	H	200	1.05	I	20	1.10	J	50	1.06
Dibenz(a,h)anthracene	A	1.0	0.696	B	5.0	0.780	C	10	0.908	D	80	0.922	E	100	0.918
	F	120	0.941	G	160	0.932	H	200	0.958	I	20	1.07	J	50	1.01
Benzo(g,h,i)perylene	A	1.0	0.865	B	5.0	0.880	C	10	0.971	D	80	0.953	E	100	0.930
	F	120	0.994	G	160	0.937	H	200	0.967	I	20	1.16	J	50	1.05
2-Fluorophenol	A	1.0	1.47	B	5.0	1.47	C	10	1.60	D	80	1.54	E	100	1.58
	F	120	1.45	G	160	1.56	H	200	1.48	I	20	1.52	J	50	1.55

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Calibration Date: 09/13/2017

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL15546
Instrument ID: MS07

Column: MS

Analyte Name	Level			Level			Level			Level					
	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF	ID	Amt	RRF			
Phenol-d6	A	1.0	1.99	B	5.0	1.92	C	10	2.09	D	80	2.09	E	100	2.11
	F	120	1.86	G	160	2.00	H	200	1.99	I	20	1.95	J	50	2.04
Nitrobenzene-d5	A	1.0	1.74	B	5.0	1.63	C	10	1.81	D	80	1.84	E	100	1.93
	F	120	1.71	G	160	1.79	H	200	1.80	I	20	1.71	J	50	1.78
2-Fluorobiphenyl	A	1.0	1.58	B	5.0	1.52	C	10	1.71	D	80	1.64	E	100	1.66
	F	120	1.61	G	160	1.64	H	200	1.72	I	20	1.61	J	50	1.56
2,4,6-Tribromophenol							C	10	0.158	D	80	0.196	E	100	0.192
	F	120	0.182	G	160	0.190	H	200	0.199	I	20	0.182	J	50	0.192
Terphenyl-d14	A	1.0	0.989	B	5.0	0.855	C	10	0.896	D	80	0.991	E	100	0.978
	F	120	0.923	G	160	0.970	H	200	0.955	I	20	0.863	J	50	0.907

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† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Calibration Date: 09/13/2017

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL15546
Instrument ID: MS07

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
N-Nitrosodimethylamine	MS	AverageRF	% RSD	7.5		≤20	0.937		0.010
Bis(2-chloroethyl) Ether	MS	AverageRF	% RSD	3.6		≤20	1.47		0.700
Phenol	MS	AverageRF	% RSD	2.6		≤20	1.97		0.800
2-Chlorophenol	MS	AverageRF	% RSD	5.0		≤20	1.45		0.800
1,3-Dichlorobenzene	MS	AverageRF	% RSD	4.3		≤20	1.47		0.010
1,4-Dichlorobenzene	MS	AverageRF	% RSD	2.1		≤20	1.48		0.010
1,2-Dichlorobenzene	MS	AverageRF	% RSD	3.8		≤20	1.37		0.010
Benzyl alcohol	MS	AverageRF	% RSD	6.2		≤20	0.970		0.010
Bis(2-chloroisopropyl) Ether	MS	AverageRF	% RSD	4.8		≤20	2.81		0.010
2-Methylphenol	MS	AverageRF	% RSD	3.8		≤20	1.17		0.700
Hexachloroethane	MS	AverageRF	% RSD	3.1		≤20	0.705		0.300
N-Nitrosodi-n-propylamine	MS	AverageRF	% RSD	4.6		≤20	1.21		0.500
4-Methylphenol	MS	AverageRF	% RSD	5.3		≤20	1.69		0.600
Nitrobenzene	MS	AverageRF	% RSD	4.4		≤20	1.62		0.200
Isophorone	MS	AverageRF	% RSD	2.7		≤20	0.781		0.400
2-Nitrophenol	MS	AverageRF	% RSD	11.2		≤20	0.187		0.100
2,4-Dimethylphenol	MS	AverageRF	% RSD	3.0		≤20	0.314		0.200
Bis(2-chloroethoxy)methane	MS	AverageRF	% RSD	4.2		≤20	0.433		0.300
2,4-Dichlorophenol	MS	AverageRF	% RSD	5.5		≤20	0.282		0.200
Benzoic acid	MS	Quadratic	COD	0.999		≥0.990	0.180		0.010
1,2,4-Trichlorobenzene	MS	AverageRF	% RSD	2.8		≤20	0.326		0.010
Naphthalene	MS	AverageRF	% RSD	4.0		≤20	0.988		0.700
4-Chloroaniline	MS	AverageRF	% RSD	4.2		≤20	0.426		0.010
Hexachlorobutadiene	MS	AverageRF	% RSD	3.3		≤20	0.196		0.010
4-Chloro-3-methylphenol	MS	AverageRF	% RSD	5.8		≤20	0.319		0.010
2-Methylnaphthalene	MS	AverageRF	% RSD	3.0		≤20	0.606		0.400
2,4,6-Trichlorophenol	MS	AverageRF	% RSD	11.1		≤20	0.462		0.200
2,4,5-Trichlorophenol	MS	AverageRF	% RSD	8.6		≤20	0.506		0.200
2-Chloronaphthalene	MS	AverageRF	% RSD	4.3		≤20	1.21		0.800
Acenaphthene	MS	AverageRF	% RSD	4.3		≤20	1.09		0.900
2-Nitroaniline	MS	AverageRF	% RSD	5.7		≤20	0.453		0.010
Acenaphthylene	MS	AverageRF	% RSD	4.3		≤20	1.88		0.900
Dimethyl Phthalate	MS	AverageRF	% RSD	6.0		≤20	1.26		0.010
2,6-Dinitrotoluene	MS	AverageRF	% RSD	5.0		≤20	0.304		0.200
3-Nitroaniline	MS	AverageRF	% RSD	7.7		≤20	0.345		0.010
2,4-Dinitrophenol	MS	Quadratic	COD	0.996		≥0.990	0.120		0.010
Dibenzofuran	MS	AverageRF	% RSD	4.3		≤20	1.71		0.800
4-Nitrophenol	MS	AverageRF	% RSD	10.8		≤20	0.167		0.010
2,4-Dinitrotoluene	MS	AverageRF	% RSD	6.2		≤20	0.354		0.200
Fluorene	MS	AverageRF	% RSD	7.2		≤20	1.33		0.900
4-Chlorophenyl Phenyl Ether	MS	AverageRF	% RSD	6.3		≤20	0.742		0.400
Diethyl Phthalate	MS	AverageRF	% RSD	6.3		≤20	1.15		0.010

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

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Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Calibration Date: 09/13/2017

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL15546
Instrument ID: MS07

Column: MS

Analyte Name	Compound Type	Calibration Evaluation					RRF Evaluation		
		Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
4-Nitroaniline	MS	AverageRF	% RSD	9.7		≤20	0.304		0.010
2-Methyl-4,6-dinitrophenol	MS	Quadratic	COD	0.996		≥0.990	0.171		0.010
N-Nitrosodiphenylamine	MS	AverageRF	% RSD	11.8		≤20	0.914		0.010
1,2-Diphenylhydrazine	MS	AverageRF	% RSD	9.3		≤20	1.66		0.010
4-Bromophenyl Phenyl Ether	MS	AverageRF	% RSD	6.8		≤20	0.238		0.100
Hexachlorobenzene	MS	AverageRF	% RSD	4.4		≤20	0.267		0.100
Pentachlorophenol	MS	AverageRF	% RSD	13.4		≤20	0.148		0.050
Phenanthrene	MS	AverageRF	% RSD	4.2		≤20	0.971		0.700
Anthracene	MS	AverageRF	% RSD	4.5		≤20	0.994		0.700
Carbazole	MS	AverageRF	% RSD	9.9		≤20	0.810		0.010
Di-n-butyl Phthalate	MS	AverageRF	% RSD	11.9		≤20	0.953		0.010
Fluoranthene	MS	AverageRF	% RSD	14.6		≤20	0.959		0.600
Pyrene	MS	AverageRF	% RSD	6.6		≤20	1.35		0.600
Butyl Benzyl Phthalate	MS	AverageRF	% RSD	6.9		≤20	0.605		0.010
3,3'-Dichlorobenzidine	MS	AverageRF	% RSD	11.3		≤20	0.461		0.010
Benz(a)anthracene	MS	AverageRF	% RSD	3.9		≤20	1.11		0.800
Chrysene	MS	AverageRF	% RSD	3.4		≤20	1.09		0.700
Bis(2-ethylhexyl) Phthalate	MS	AverageRF	% RSD	9.4		≤20	0.754		0.010
Di-n-octyl Phthalate	MS	AverageRF	% RSD	4.3		≤20	1.23		0.010
Benzo(b)fluoranthene	MS	AverageRF	% RSD	6.9		≤20	1.07		0.700
Benzo(k)fluoranthene	MS	AverageRF	% RSD	3.9		≤20	1.02		0.700
Benzo(a)pyrene	MS	AverageRF	% RSD	6.0		≤20	0.957		0.700
Indeno(1,2,3-cd)pyrene	MS	AverageRF	% RSD	10.0		≤20	0.965		0.500
Dibenz(a,h)anthracene	MS	AverageRF	% RSD	11.7		≤20	0.914		0.400
Benzo(g,h,i)perylene	MS	AverageRF	% RSD	8.8		≤20	0.971		0.500
2-Fluorophenol	SURR	AverageRF	% RSD	3.5		≤20	1.52		0.010
Phenol-d6	SURR	AverageRF	% RSD	4.0		≤20	2.00		0.010
Nitrobenzene-d5	SURR	AverageRF	% RSD	4.6		≤20	1.77		0.010
2-Fluorobiphenyl	SURR	AverageRF	% RSD	3.9		≤20	1.63		0.010
2,4,6-Tribromophenol	SURR	AverageRF	% RSD	6.9		≤20	0.186		0.010
Terphenyl-d14	SURR	AverageRF	% RSD	5.5		≤20	0.933		0.010

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Calibration Date: 09/13/2017
Date Analyzed: 09/14/2017

Second Source Calibration Verification
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270D

Calibration ID: CAL15546
Units: ug/ml

File ID: J:\MS07\DATA\091417\0914F005.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
N-Nitrosodimethylamine	80	76	0.937	0.888	-5	NA	± 30 %	AverageRF
Bis(2-chloroethyl) Ether	80	76	1.47	1.39	-5	NA	± 30 %	AverageRF
Phenol	80	84	1.97	2.06	5	NA	± 30 %	AverageRF
2-Chlorophenol	80	87	1.45	1.58	9	NA	± 30 %	AverageRF
1,3-Dichlorobenzene	80	78	1.47	1.43	-3	NA	± 30 %	AverageRF
1,4-Dichlorobenzene	80	80	1.48	1.48	0	NA	± 30 %	AverageRF
1,2-Dichlorobenzene	80	80	1.37	1.36	-1	NA	± 30 %	AverageRF
Benzyl alcohol	80	88	0.970	1.07	10	NA	± 30 %	AverageRF
Bis(2-chloroisopropyl) Ether	80	66	2.81	2.30	-18	NA	± 30 %	AverageRF
2-Methylphenol	80	84	1.17	1.23	5	NA	± 30 %	AverageRF
Hexachloroethane	80	81	0.705	0.711	1	NA	± 30 %	AverageRF
N-Nitrosodi-n-propylamine	80	75	1.21	1.14	-6	NA	± 30 %	AverageRF
4-Methylphenol	80	89	1.69	1.88	12	NA	± 30 %	AverageRF
Nitrobenzene	80	79	1.62	1.60	-2	NA	± 30 %	AverageRF
Isophorone	80	78	0.781	0.759	-3	NA	± 30 %	AverageRF
2-Nitrophenol	80	93	0.187	0.216	16	NA	± 30 %	AverageRF
2,4-Dimethylphenol	80	86	0.314	0.337	7	NA	± 30 %	AverageRF
Bis(2-chloroethoxy)methane	80	81	0.433	0.439	1	NA	± 30 %	AverageRF
2,4-Dichlorophenol	80	90	0.282	0.316	12	NA	± 30 %	AverageRF
Benzoic acid	80	92	0.180	0.228	NA	16	± 30 %	Quadratic
1,2,4-Trichlorobenzene	80	79	0.326	0.322	-1	NA	± 30 %	AverageRF
Naphthalene	80	76	0.988	0.941	-5	NA	± 30 %	AverageRF
4-Chloroaniline	80	93	0.426	0.494	16	NA	± 30 %	AverageRF
Hexachlorobutadiene	80	78	0.196	0.191	-3	NA	± 30 %	AverageRF
4-Chloro-3-methylphenol	80	93	0.319	0.371	16	NA	± 30 %	AverageRF
2-Methylnaphthalene	80	86	0.606	0.653	8	NA	± 30 %	AverageRF
2,4,6-Trichlorophenol	80	89	0.462	0.515	11	NA	± 30 %	AverageRF
2,4,5-Trichlorophenol	80	90	0.506	0.567	12	NA	± 30 %	AverageRF
2-Chloronaphthalene	80	78	1.21	1.18	-2	NA	± 30 %	AverageRF
Acenaphthene	80	77	1.09	1.05	-4	NA	± 30 %	AverageRF
2-Nitroaniline	80	84	0.453	0.473	4	NA	± 30 %	AverageRF
Acenaphthylene	80	69	1.88	1.63	-13	NA	± 30 %	AverageRF
Dimethyl Phthalate	80	74	1.26	1.17	-8	NA	± 30 %	AverageRF
2,6-Dinitrotoluene	80	75	0.304	0.285	-6	NA	± 30 %	AverageRF
3-Nitroaniline	80	78	0.345	0.338	-2	NA	± 30 %	AverageRF
2,4-Dinitrophenol	80	90	0.120	0.141	NA	13	± 30 %	Quadratic
Dibenzofuran	80	84	1.71	1.80	5	NA	± 30 %	AverageRF
4-Nitrophenol	80	85	0.167	0.177	6	NA	± 30 %	AverageRF
2,4-Dinitrotoluene	80	73	0.354	0.324	-9	NA	± 30 %	AverageRF
Fluorene	80	75	1.33	1.26	-6	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Calibration Date: 09/13/2017
Date Analyzed: 09/14/2017

Second Source Calibration Verification
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270D

Calibration ID: CAL15546
Units: ug/ml

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
4-Chlorophenyl Phenyl Ether	80	76	0.742	0.706	-5	NA	± 30 %	AverageRF
Diethyl Phthalate	80	74	1.15	1.07	-7	NA	± 30 %	AverageRF
4-Nitroaniline	80	81	0.304	0.307	1	NA	± 30 %	AverageRF
2-Methyl-4,6-dinitrophenol	80	86	0.171	0.206	NA	7	± 30 %	Quadratic
N-Nitrosodiphenylamine	80	68	0.914	0.772	-15	NA	± 30 %	AverageRF
1,2-Diphenylhydrazine	80	68	1.66	1.41	-15	NA	± 30 %	AverageRF
4-Bromophenyl Phenyl Ether	80	84	0.238	0.251	5	NA	± 30 %	AverageRF
Hexachlorobenzene	80	78	0.267	0.258	-3	NA	± 30 %	AverageRF
Pentachlorophenol	80	96	0.148	0.177	20	NA	± 30 %	AverageRF
Phenanthrene	80	78	0.971	0.942	-3	NA	± 30 %	AverageRF
Anthracene	80	77	0.994	0.962	-3	NA	± 30 %	AverageRF
Carbazole	80	85	0.810	0.858	6	NA	± 30 %	AverageRF
Di-n-butyl Phthalate	80	84	0.953	1.01	6	NA	± 30 %	AverageRF
Fluoranthene	80	79	0.959	0.946	-1	NA	± 30 %	AverageRF
Pyrene	80	73	1.35	1.23	-9	NA	± 30 %	AverageRF
Butyl Benzyl Phthalate	80	84	0.605	0.637	5	NA	± 30 %	AverageRF
3,3'-Dichlorobenzidine	80	82	0.461	0.474	3	NA	± 30 %	AverageRF
Benz(a)anthracene	80	81	1.11	1.13	2	NA	± 30 %	AverageRF
Chrysene	80	79	1.09	1.07	-2	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	80	85	0.754	0.799	6	NA	± 30 %	AverageRF
Di-n-octyl Phthalate	80	79	1.23	1.21	-1	NA	± 30 %	AverageRF
Benzo(b)fluoranthene	80	77	1.07	1.03	-4	NA	± 30 %	AverageRF
Benzo(k)fluoranthene	80	81	1.02	1.03	2	NA	± 30 %	AverageRF
Benzo(a)pyrene	80	85	0.957	1.02	6	NA	± 30 %	AverageRF
Indeno(1,2,3-cd)pyrene	80	82	0.965	0.984	2	NA	± 30 %	AverageRF
Dibenz(a,h)anthracene	80	84	0.914	0.961	5	NA	± 30 %	AverageRF
Benzo(g,h,i)perylene	80	81	0.971	0.987	2	NA	± 30 %	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-4576003

Service Request: K1709799
Date Analyzed: 09/22/2017

Continuing Calibration Verification Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270D

Calibration Date: 09/13/2017
Calibration ID: CAL15546
Analysis Lot: KWG1708589
Units: ug/ml

File ID: J:\MS07\DATA\092217\0922F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
N-Nitrosodimethylamine	80	93	0.010	0.937	1.09	16	NA	± 20	AverageRF
Bis(2-chloroethyl) Ether	80	81	0.700	1.47	1.48	1	NA	± 20	AverageRF
Phenol	80	77	0.800	1.97	1.89	-4	NA	± 20	AverageRF
2-Chlorophenol	80	83	0.800	1.45	1.50	3	NA	± 20	AverageRF
1,3-Dichlorobenzene	80	82	0.010	1.47	1.49	2	NA	± 20	AverageRF
1,4-Dichlorobenzene	80	83	0.010	1.48	1.53	3	NA	± 20	AverageRF
1,2-Dichlorobenzene	80	84	0.010	1.37	1.44	5	NA	± 20	AverageRF
Benzyl alcohol	80	89	0.010	0.970	1.08	11	NA	± 20	AverageRF
Bis(2-chloroisopropyl) Ether	80	82	0.010	2.81	2.87	2	NA	± 20	AverageRF
2-Methylphenol	80	84	0.700	1.17	1.22	5	NA	± 20	AverageRF
Hexachloroethane	80	88	0.300	0.705	0.777	10	NA	± 20	AverageRF
N-Nitrosodi-n-propylamine	80	93	0.500	1.21	1.41	17	NA	± 20	AverageRF
4-Methylphenol	80	87	0.600	1.69	1.84	9	NA	± 20	AverageRF
Nitrobenzene	80	90	0.200	1.62	1.84	13	NA	± 20	AverageRF
Isophorone	80	90	0.400	0.781	0.882	13	NA	± 20	AverageRF
2-Nitrophenol	80	91	0.100	0.187	0.213	14	NA	± 20	AverageRF
2,4-Dimethylphenol	80	82	0.200	0.314	0.322	3	NA	± 20	AverageRF
Bis(2-chloroethoxy)methane	80	88	0.300	0.433	0.475	10	NA	± 20	AverageRF
2,4-Dichlorophenol	80	86	0.200	0.282	0.304	8	NA	± 20	AverageRF
Benzoic acid	80	84	0.010	0.180	0.204	NA	5	± 20	Quadratic
1,2,4-Trichlorobenzene	80	85	0.010	0.326	0.346	6	NA	± 20	AverageRF
Naphthalene	80	83	0.700	0.988	1.03	4	NA	± 20	AverageRF
4-Chloroaniline	80	85	0.010	0.426	0.455	7	NA	± 20	AverageRF
Hexachlorobutadiene	80	92	0.010	0.196	0.225	15	NA	± 20	AverageRF
4-Chloro-3-methylphenol	80	91	0.010	0.319	0.364	14	NA	± 20	AverageRF
2-Methylnaphthalene	80	88	0.400	0.606	0.664	10	NA	± 20	AverageRF
2,4,6-Trichlorophenol	80	85	0.200	0.462	0.490	6	NA	± 20	AverageRF
2,4,5-Trichlorophenol	80	83	0.200	0.506	0.528	4	NA	± 20	AverageRF
2-Chloronaphthalene	80	84	0.800	1.21	1.27	5	NA	± 20	AverageRF
Acenaphthene	80	82	0.900	1.09	1.11	2	NA	± 20	AverageRF
2-Nitroaniline	80	89	0.010	0.453	0.505	12	NA	± 20	AverageRF
Acenaphthylene	80	83	0.900	1.88	1.96	4	NA	± 20	AverageRF
Dimethyl Phthalate	80	91	0.010	1.26	1.44	14	NA	± 20	AverageRF
2,6-Dinitrotoluene	80	88	0.200	0.304	0.332	9	NA	± 20	AverageRF
3-Nitroaniline	80	77	0.010	0.345	0.331	-4	NA	± 20	AverageRF
2,4-Dinitrophenol	80	66	0.010	0.120	0.0901	NA	-18	± 20	Quadratic
Dibenzofuran	80	80	0.800	1.71	1.72	1	NA	± 20	AverageRF
4-Nitrophenol	80	99	0.010	0.167	0.208	24	*	± 20	AverageRF
2,4-Dinitrotoluene	80	88	0.200	0.354	0.391	11	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003

Service Request: K1709799
Date Analyzed: 09/22/2017

Continuing Calibration Verification Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270D

Calibration Date: 09/13/2017
Calibration ID: CAL15546
Analysis Lot: KWG1708589
Units: ug/ml

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Fluorene	80	81	0.900	1.33	1.36	2	NA	± 20	AverageRF
4-Chlorophenyl Phenyl Ether	80	82	0.400	0.742	0.759	2	NA	± 20	AverageRF
Diethyl Phthalate	80	100	0.010	1.15	1.44	25 *	NA	± 20	AverageRF
4-Nitroaniline	80	81	0.010	0.304	0.309	2	NA	± 20	AverageRF
2-Methyl-4,6-dinitrophenol	80	88	0.010	0.171	0.212	NA	10	± 20	Quadratic
N-Nitrosodiphenylamine	80	76	0.010	0.914	0.870	-5	NA	± 20	AverageRF
1,2-Diphenylhydrazine	80	84	0.010	1.66	1.75	5	NA	± 20	AverageRF
4-Bromophenyl Phenyl Ether	80	84	0.100	0.238	0.251	5	NA	± 20	AverageRF
Hexachlorobenzene	80	86	0.100	0.267	0.285	7	NA	± 20	AverageRF
Pentachlorophenol	80	75	0.050	0.148	0.138	-6	NA	± 20	AverageRF
Phenanthrene	80	80	0.700	0.971	0.976	1	NA	± 20	AverageRF
Anthracene	80	80	0.700	0.994	0.994	0	NA	± 20	AverageRF
Carbazole	80	84	0.010	0.810	0.850	5	NA	± 20	AverageRF
Di-n-butyl Phthalate	80	93	0.010	0.953	1.11	16	NA	± 20	AverageRF
Fluoranthene	80	90	0.600	0.959	1.07	12	NA	± 20	AverageRF
Pyrene	80	88	0.600	1.35	1.49	11	NA	± 20	AverageRF
Butyl Benzyl Phthalate	80	93	0.010	0.605	0.705	17	NA	± 20	AverageRF
3,3'-Dichlorobenzidine	80	85	0.010	0.461	0.491	7	NA	± 20	AverageRF
Benz(a)anthracene	80	84	0.800	1.11	1.17	5	NA	± 20	AverageRF
Chrysene	80	82	0.700	1.09	1.11	2	NA	± 20	AverageRF
Bis(2-ethylhexyl) Phthalate	80	100	0.010	0.754	0.956	27 *	NA	± 20	AverageRF
Di-n-octyl Phthalate	80	94	0.010	1.23	1.45	18	NA	± 20	AverageRF
Benzo(b)fluoranthene	80	82	0.700	1.07	1.09	3	NA	± 20	AverageRF
Benzo(k)fluoranthene	80	83	0.700	1.02	1.06	4	NA	± 20	AverageRF
Benzo(a)pyrene	80	86	0.700	0.957	1.03	7	NA	± 20	AverageRF
Indeno(1,2,3-cd)pyrene	80	88	0.500	0.965	1.06	10	NA	± 20	AverageRF
Dibenz(a,h)anthracene	80	86	0.400	0.914	0.985	8	NA	± 20	AverageRF
Benzo(g,h,i)perylene	80	87	0.500	0.971	1.05	9	NA	± 20	AverageRF
2-Fluorophenol	80	84	0.010	1.52	1.60	5	NA	± 20	AverageRF
Phenol-d6	80	86	0.010	2.00	2.16	8	NA	± 20	AverageRF
Nitrobenzene-d5	80	97	0.010	1.77	2.14	21 *	NA	± 20	AverageRF
2-Fluorobiphenyl	80	85	0.010	1.63	1.73	7	NA	± 20	AverageRF
2,4,6-Tribromophenol	80	89	0.010	0.186	0.208	12	NA	± 20	AverageRF
Terphenyl-d14	80	96	0.010	0.933	1.12	20	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Inc.
 Project: YTC/106-4576003

Service Request: K1709799
 Date Analyzed: 09/25/2017

Continuing Calibration Verification Summary
 Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
 Analysis Method: 8270D

Calibration Date: 09/13/2017
 Calibration ID: CAL15546
 Analysis Lot: KWG1708595
 Units: ug/ml

File ID: J:\MS07\DATA\092517\0925F002.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
N-Nitrosodimethylamine	80	84	0.010	0.937	0.985	5	NA	± 20	AverageRF
Bis(2-chloroethyl) Ether	80	79	0.700	1.47	1.46	-1	NA	± 20	AverageRF
Phenol	80	74	0.800	1.97	1.82	-7	NA	± 20	AverageRF
2-Chlorophenol	80	81	0.800	1.45	1.46	1	NA	± 20	AverageRF
1,3-Dichlorobenzene	80	78	0.010	1.47	1.42	-3	NA	± 20	AverageRF
1,4-Dichlorobenzene	80	81	0.010	1.48	1.49	1	NA	± 20	AverageRF
1,2-Dichlorobenzene	80	81	0.010	1.37	1.39	1	NA	± 20	AverageRF
Benzyl alcohol	80	85	0.010	0.970	1.03	6	NA	± 20	AverageRF
Bis(2-chloroisopropyl) Ether	80	77	0.010	2.81	2.70	-4	NA	± 20	AverageRF
2-Methylphenol	80	80	0.700	1.17	1.16	0	NA	± 20	AverageRF
Hexachloroethane	80	80	0.300	0.705	0.709	0	NA	± 20	AverageRF
N-Nitrosodi-n-propylamine	80	81	0.500	1.21	1.22	1	NA	± 20	AverageRF
4-Methylphenol	80	83	0.600	1.69	1.76	4	NA	± 20	AverageRF
Nitrobenzene	80	83	0.200	1.62	1.69	4	NA	± 20	AverageRF
Isophorone	80	79	0.400	0.781	0.773	-1	NA	± 20	AverageRF
2-Nitrophenol	80	86	0.100	0.187	0.202	8	NA	± 20	AverageRF
2,4-Dimethylphenol	80	80	0.200	0.314	0.312	-1	NA	± 20	AverageRF
Bis(2-chloroethoxy)methane	80	80	0.300	0.433	0.433	0	NA	± 20	AverageRF
2,4-Dichlorophenol	80	82	0.200	0.282	0.290	3	NA	± 20	AverageRF
Benzoic acid	80	83	0.010	0.180	0.200	NA	4	± 20	Quadratic
1,2,4-Trichlorobenzene	80	82	0.010	0.326	0.335	3	NA	± 20	AverageRF
Naphthalene	80	80	0.700	0.988	0.984	0	NA	± 20	AverageRF
4-Chloroaniline	80	76	0.010	0.426	0.405	-5	NA	± 20	AverageRF
Hexachlorobutadiene	80	85	0.010	0.196	0.209	7	NA	± 20	AverageRF
4-Chloro-3-methylphenol	80	83	0.010	0.319	0.331	4	NA	± 20	AverageRF
2-Methylnaphthalene	80	81	0.400	0.606	0.612	1	NA	± 20	AverageRF
2,4,6-Trichlorophenol	80	87	0.200	0.462	0.503	9	NA	± 20	AverageRF
2,4,5-Trichlorophenol	80	84	0.200	0.506	0.529	4	NA	± 20	AverageRF
2-Chloronaphthalene	80	84	0.800	1.21	1.28	5	NA	± 20	AverageRF
Acenaphthene	80	83	0.900	1.09	1.13	4	NA	± 20	AverageRF
2-Nitroaniline	80	87	0.010	0.453	0.490	8	NA	± 20	AverageRF
Acenaphthylene	80	83	0.900	1.88	1.94	3	NA	± 20	AverageRF
Dimethyl Phthalate	80	92	0.010	1.26	1.45	15	NA	± 20	AverageRF
2,6-Dinitrotoluene	80	93	0.200	0.304	0.352	16	NA	± 20	AverageRF
3-Nitroaniline	80	79	0.010	0.345	0.343	-1	NA	± 20	AverageRF
2,4-Dinitrophenol	80	74	0.010	0.120	0.106	NA	-8	± 20	Quadratic
Dibenzofuran	80	80	0.800	1.71	1.72	0	NA	± 20	AverageRF
4-Nitrophenol	80	90	0.010	0.167	0.188	13	NA	± 20	AverageRF
2,4-Dinitrotoluene	80	92	0.200	0.354	0.408	15	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

QA/QC Results

Client: Tetra Tech, Inc.
 Project: YTC/106-45760003

Service Request: K1709799
 Date Analyzed: 09/25/2017

Continuing Calibration Verification Summary
 Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
 Analysis Method: 8270D

Calibration Date: 09/13/2017
 Calibration ID: CAL15546
 Analysis Lot: KWG1708595
 Units: ug/ml

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Fluorene	80	77	0.900	1.33	1.29	-4	NA	± 20	AverageRF
4-Chlorophenyl Phenyl Ether	80	80	0.400	0.742	0.744	0	NA	± 20	AverageRF
Diethyl Phthalate	80	100	0.010	1.15	1.47	28 *	NA	± 20	AverageRF
4-Nitroaniline	80	85	0.010	0.304	0.324	6	NA	± 20	AverageRF
2-Methyl-4,6-dinitrophenol	80	94	0.010	0.171	0.232	NA	18	± 20	Quadratic
N-Nitrosodiphenylamine	80	81	0.010	0.914	0.926	1	NA	± 20	AverageRF
1,2-Diphenylhydrazine	80	79	0.010	1.66	1.64	-1	NA	± 20	AverageRF
4-Bromophenyl Phenyl Ether	80	84	0.100	0.238	0.252	6	NA	± 20	AverageRF
Hexachlorobenzene	80	86	0.100	0.267	0.285	7	NA	± 20	AverageRF
Pentachlorophenol	80	81	0.050	0.148	0.149	1	NA	± 20	AverageRF
Phenanthrene	80	77	0.700	0.971	0.932	-4	NA	± 20	AverageRF
Anthracene	80	77	0.700	0.994	0.963	-3	NA	± 20	AverageRF
Carbazole	80	87	0.010	0.810	0.878	8	NA	± 20	AverageRF
Di-n-butyl Phthalate	80	97	0.010	0.953	1.15	21 *	NA	± 20	AverageRF
Fluoranthene	80	90	0.600	0.959	1.08	12	NA	± 20	AverageRF
Pyrene	80	88	0.600	1.35	1.48	10	NA	± 20	AverageRF
Butyl Benzyl Phthalate	80	91	0.010	0.605	0.685	13	NA	± 20	AverageRF
3,3'-Dichlorobenzidine	80	87	0.010	0.461	0.502	9	NA	± 20	AverageRF
Benz(a)anthracene	80	85	0.800	1.11	1.18	6	NA	± 20	AverageRF
Chrysene	80	82	0.700	1.09	1.12	3	NA	± 20	AverageRF
Bis(2-ethylhexyl) Phthalate	80	97	0.010	0.754	0.918	22 *	NA	± 20	AverageRF
Di-n-octyl Phthalate	80	94	0.010	1.23	1.45	18	NA	± 20	AverageRF
Benzo(b)fluoranthene	80	84	0.700	1.07	1.12	5	NA	± 20	AverageRF
Benzo(k)fluoranthene	80	87	0.700	1.02	1.11	9	NA	± 20	AverageRF
Benzo(a)pyrene	80	85	0.700	0.957	1.01	6	NA	± 20	AverageRF
Indeno(1,2,3-cd)pyrene	80	89	0.500	0.965	1.07	11	NA	± 20	AverageRF
Dibenz(a,h)anthracene	80	91	0.400	0.914	1.04	14	NA	± 20	AverageRF
Benzo(g,h,i)perylene	80	86	0.500	0.971	1.05	8	NA	± 20	AverageRF
2-Fluorophenol	80	82	0.010	1.52	1.57	3	NA	± 20	AverageRF
Phenol-d6	80	82	0.010	2.00	2.06	3	NA	± 20	AverageRF
Nitrobenzene-d5	80	85	0.010	1.77	1.89	6	NA	± 20	AverageRF
2-Fluorobiphenyl	80	85	0.010	1.63	1.74	7	NA	± 20	AverageRF
2,4,6-Tribromophenol	80	89	0.010	0.186	0.208	12	NA	± 20	AverageRF
Terphenyl-d14	80	92	0.010	0.933	1.07	15	NA	± 20	AverageRF

Results flagged with an asterisk (*) indicate values outside control criteria.

† SPCC Compound

‡ CCC Compound

Client: Tetra Tech, Inc.
 Project: YTC/106-45760003

Service Request: K1709799

Analysis Run Log
 Semi-Volatile Organic Compounds by GC/MS

Analysis Method: 8270D

Analysis Lot: KWG1708589
 Instrument ID: MS07

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0922F001.D	GC/MS Tuning - Decafluorotriphenylphosph	KWG1708589-1	9/22/2017	15:25		9/22/2017	15:56
0922F002.D	Continuing Calibration Verification	KWG1708589-2	9/22/2017	16:06		9/22/2017	16:37
0922F003.D	Method Blank	KWG1708261-5	9/22/2017	16:47		9/22/2017	17:18
0922F004.D	Lab Control Sample	KWG1708261-3	9/22/2017	17:28		9/22/2017	17:59
0922F005.D	Duplicate Lab Control Sample	KWG1708261-4	9/22/2017	18:09		9/22/2017	18:40
0922F006.D	FTP-16MS	KWG1708261-1	9/22/2017	18:50		9/22/2017	19:21
0922F007.D	FTP-16DMS	KWG1708261-2	9/22/2017	19:31		9/22/2017	20:02
0922F008.D	FTP-16	K1709799-014	9/22/2017	20:12		9/22/2017	20:43
0922F009.D	ZZZZZZ	ZZZZZZ	9/22/2017	20:53		9/22/2017	21:24
0922F010.D	ZZZZZZ	ZZZZZZ	9/22/2017	21:34		9/22/2017	22:05
0922F011.D	ZZZZZZ	ZZZZZZ	9/22/2017	22:15		9/22/2017	22:46
0922F012.D	ZZZZZZ	ZZZZZZ	9/22/2017	22:56		9/22/2017	23:27
0922F013.D	ZZZZZZ	ZZZZZZ	9/22/2017	23:37		9/23/2017	00:08
0922F014.D	ZZZZZZ	ZZZZZZ	9/23/2017	00:18		9/23/2017	00:49
0922F015.D	ZZZZZZ	ZZZZZZ	9/23/2017	00:59		9/23/2017	01:30
0922F016.D	ZZZZZZ	ZZZZZZ	9/23/2017	01:40		9/23/2017	02:11
0922F017.D	ZZZZZZ	ZZZZZZ	9/23/2017	02:21		9/23/2017	02:52
0922F018.D	ZZZZZZ	ZZZZZZ	9/23/2017	03:02		9/23/2017	03:33

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

Client: Tetra Tech, Inc.
 Project: YTC/106-45760003

Service Request: K1709799

Analysis Run Log
 Semi-Volatile Organic Compounds by GC/MS

Analysis Method: 8270D

Analysis Lot: KWG1708595
 Instrument ID: MS07

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
0925F001.D	GC/MS Tuning - Decafluorotriphenylphosph	KWG1708595-1	9/25/2017	10:20		9/25/2017	10:51
0925F002.D	Continuing Calibration Verification	KWG1708595-2	9/25/2017	11:02		9/25/2017	11:33
0925F003.D	Continuing Calibration Verification	KWG1708595-2	9/25/2017	11:44		9/25/2017	12:15
0925F004.D	ZZZZZZ	ZZZZZZ	9/25/2017	12:39		9/25/2017	13:10
0925F005.D	ZZZZZZ	ZZZZZZ	9/25/2017	13:20		9/25/2017	13:51
0925F006.D	ZZZZZZ	ZZZZZZ	9/25/2017	14:02		9/25/2017	14:33
0925F007.D	ZZZZZZ	ZZZZZZ	9/25/2017	14:43		9/25/2017	15:14
0925F008.D	ZZZZZZ	ZZZZZZ	9/25/2017	15:24		9/25/2017	15:55
0925F009.D	ZZZZZZ	ZZZZZZ	9/25/2017	16:05		9/25/2017	16:36
0925F010.D	FTP-1	K1709799-011	9/25/2017	16:46		9/25/2017	17:17
0925F011.D	FTP-14	K1709799-012	9/25/2017	17:27		9/25/2017	17:58
0925F012.D	FTP-15	K1709799-013	9/25/2017	18:08		9/25/2017	18:39
0925F013.D	ZZZZZZ	ZZZZZZ	9/25/2017	18:49		9/25/2017	19:20
0925F014.D	ZZZZZZ	ZZZZZZ	9/25/2017	19:30		9/25/2017	20:01
0925F015.D	ZZZZZZ	ZZZZZZ	9/25/2017	20:11		9/25/2017	20:42
0925F016.D	ZZZZZZ	ZZZZZZ	9/25/2017	20:52		9/25/2017	21:23

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

QA/QC Results

Client: Tetra Tech, Inc.
Project: YTC/106-45760003
Sample Matrix: Water

Service Request: K1709799
Date Extracted: 09/18/2017

Extraction Prep Log
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3520C
Analysis Method: 8270D

Extraction Lot: KWG1708261
Level: Low

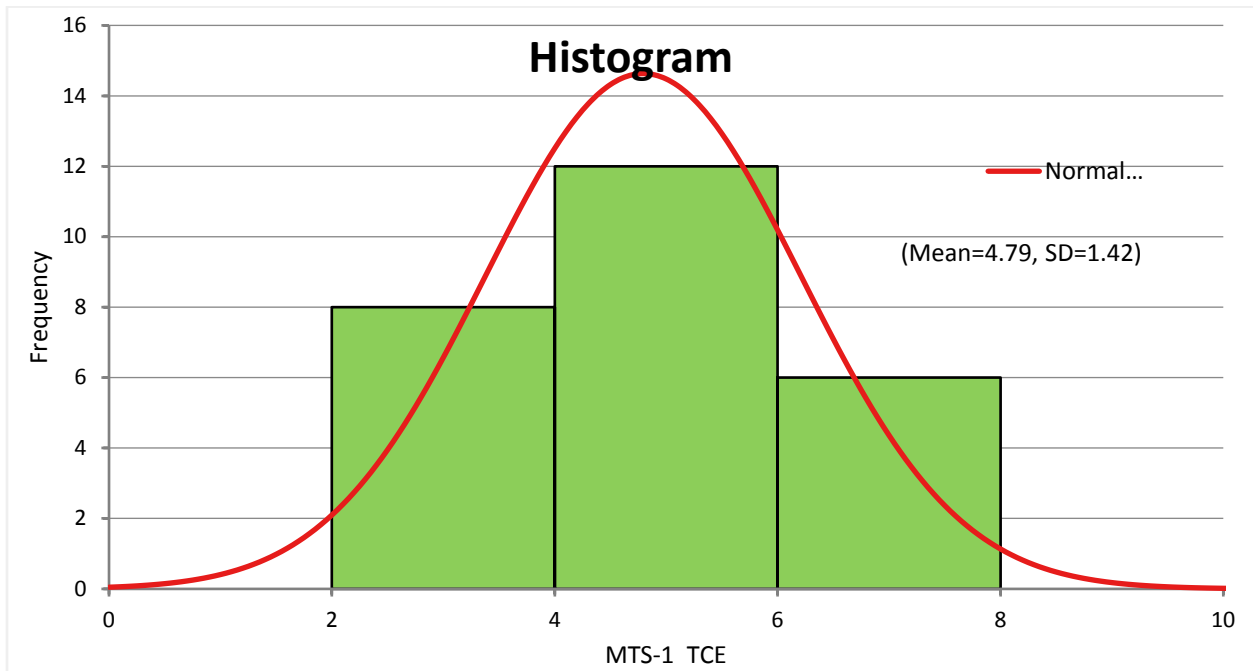
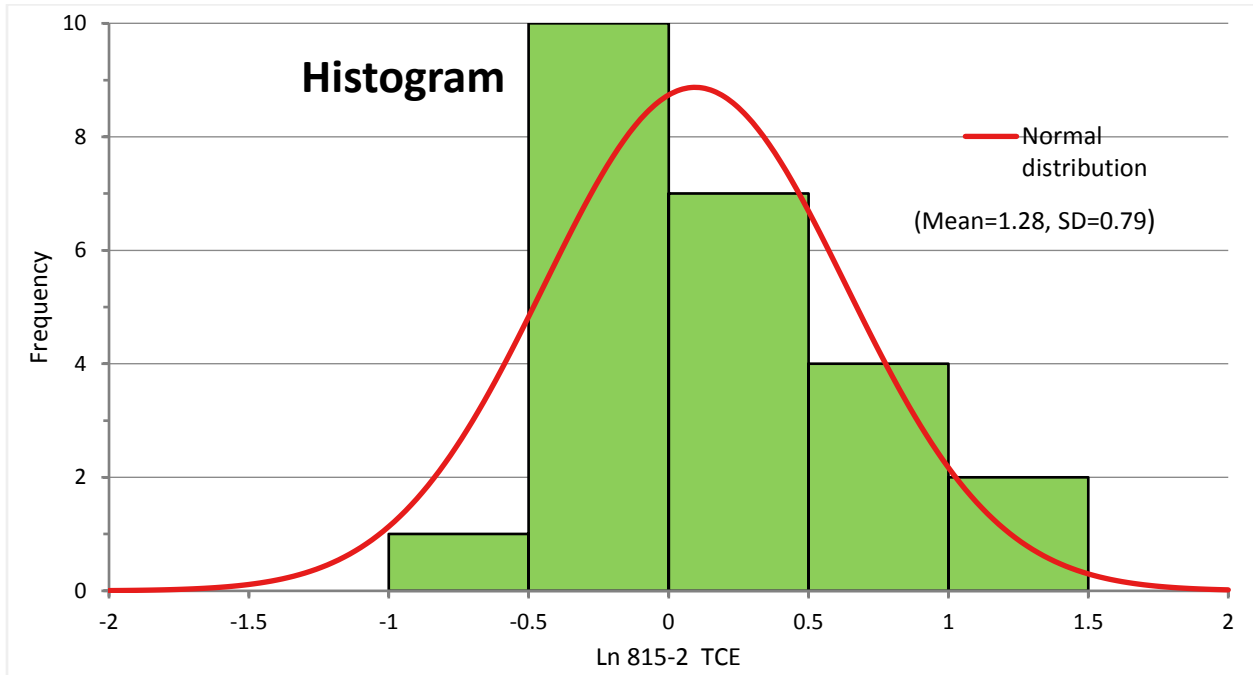
Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
FTP-1	K1709799-011	09/12/17	09/14/17	1010ml	1ml	NA	
FTP-14	K1709799-012	09/12/17	09/14/17	1010ml	1ml	NA	
FTP-15	K1709799-013	09/12/17	09/14/17	1010ml	1ml	NA	
FTP-16	K1709799-014	09/13/17	09/14/17	1010ml	1ml	NA	
Method Blank	KWG1708261-5	NA	NA	1040ml	1ml	NA	
FTP-16MS	KWG1708261-1	09/13/17	09/14/17	1010ml	1ml	NA	
FTP-16DMS	KWG1708261-2	09/13/17	09/14/17	1010ml	1ml	NA	
Lab Control Sample	KWG1708261-3	NA	NA	1000ml	1ml	NA	
Duplicate Lab Control Sample	KWG1708261-4	NA	NA	1000ml	1ml	NA	

Results flagged with an asterisk (*) indicate the holding time was exceeded for the analysis

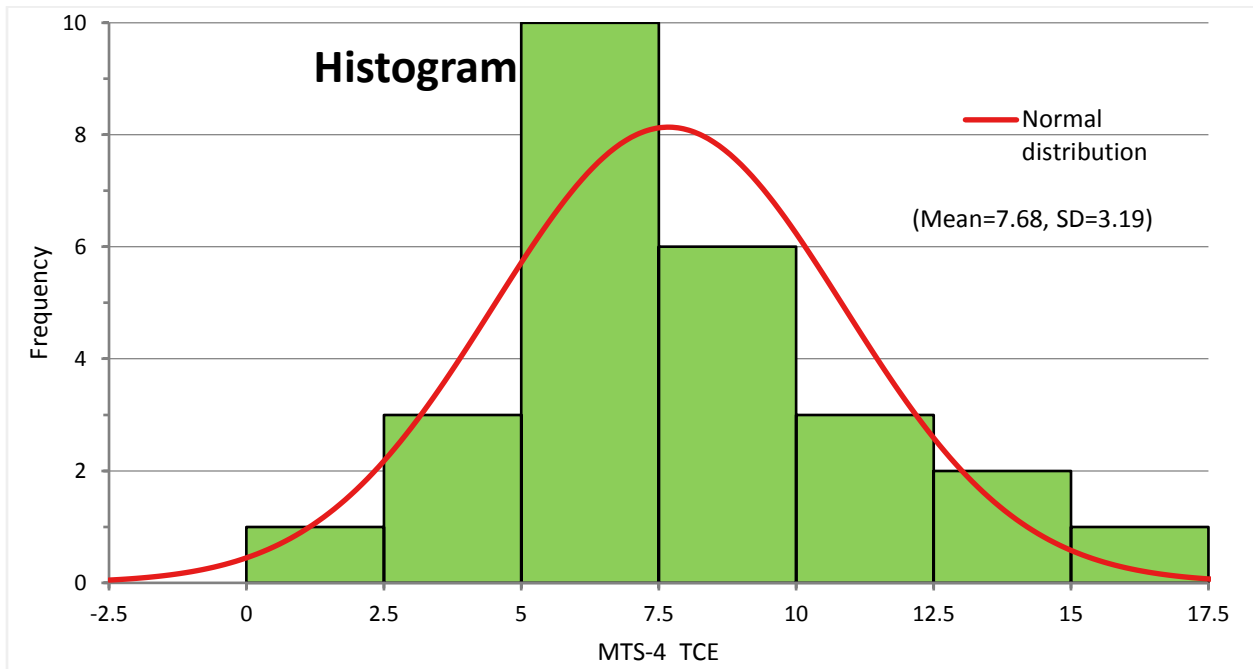
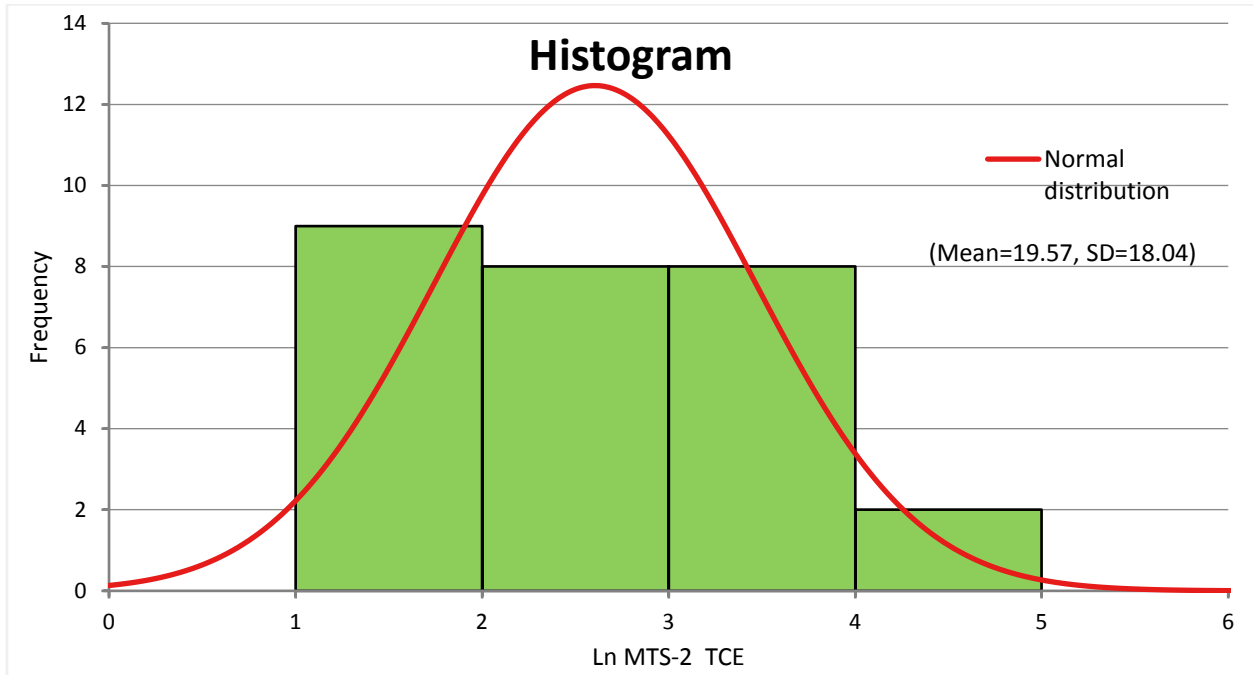
APPENDIX C
HISTOGRAMS, SCATTER PLOTS WITH FIT, AND MANN–KENDALL
CORRELATION SCATTER PLOTS

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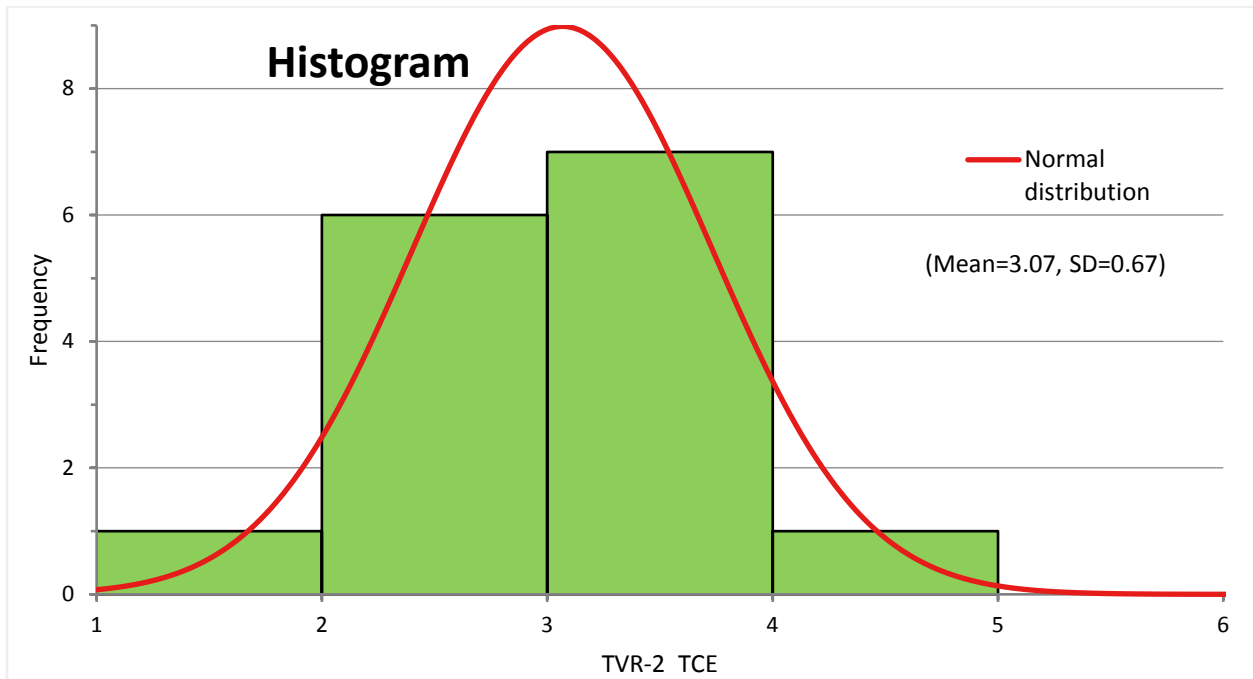
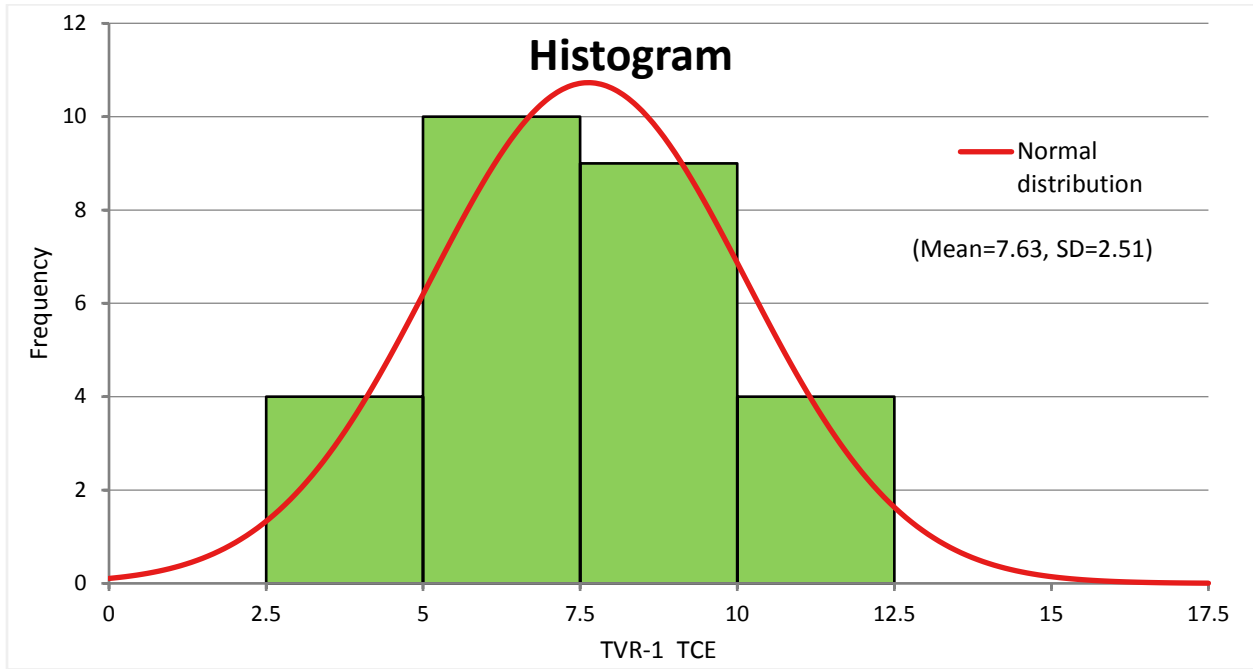
APPENDIX C
FTP-1 AND TVR/OLD MATES STATISTICS GRAPHS
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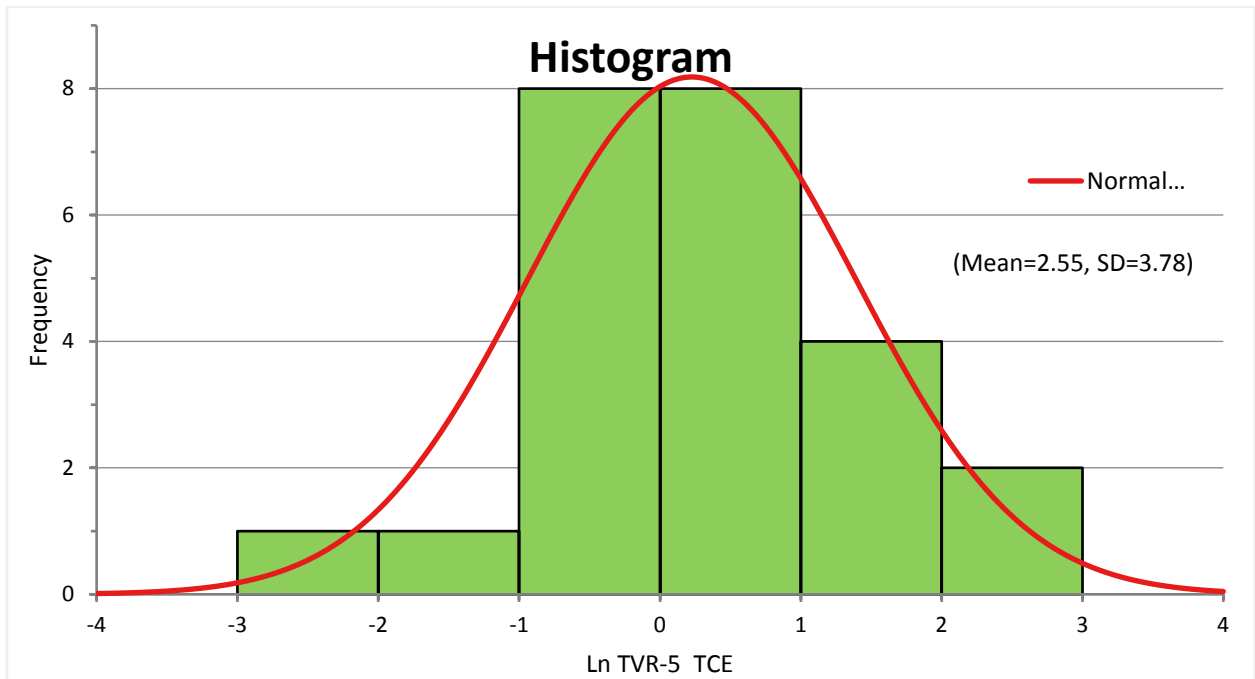
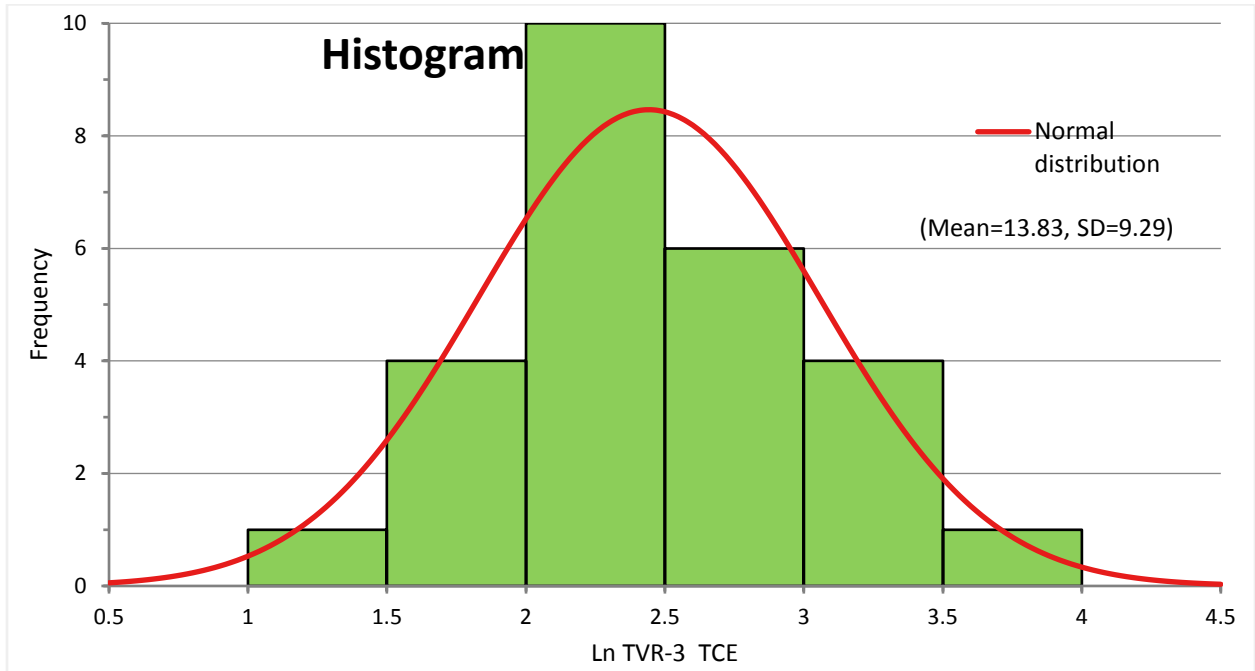
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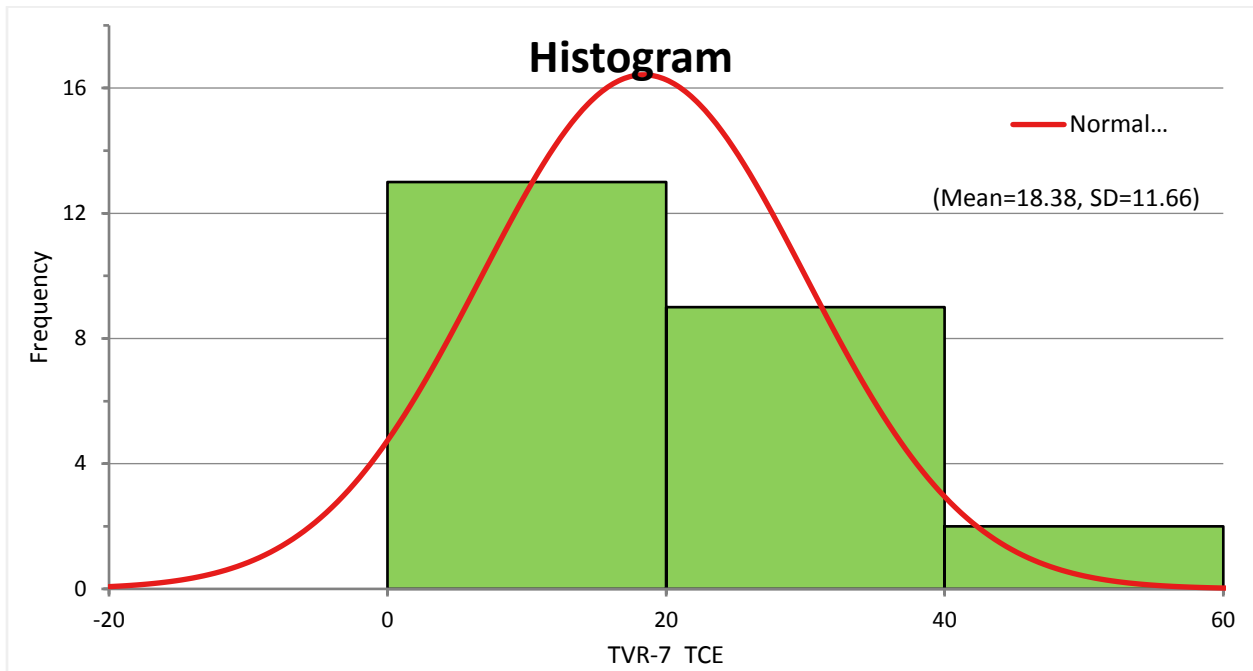
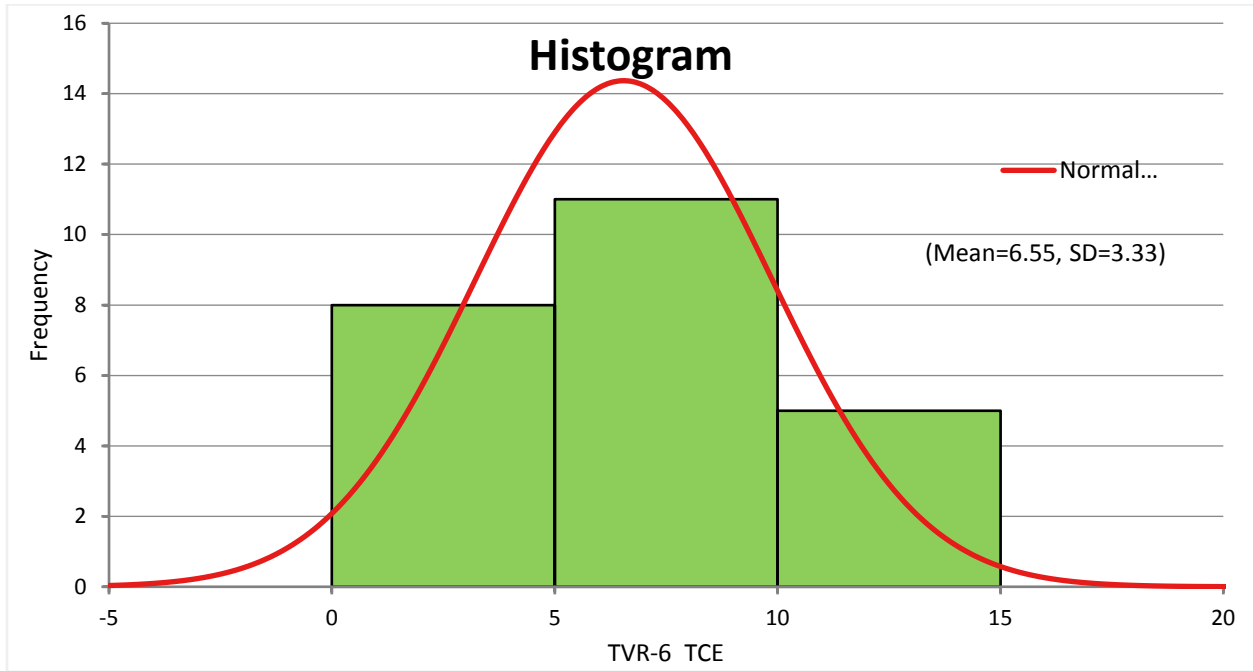
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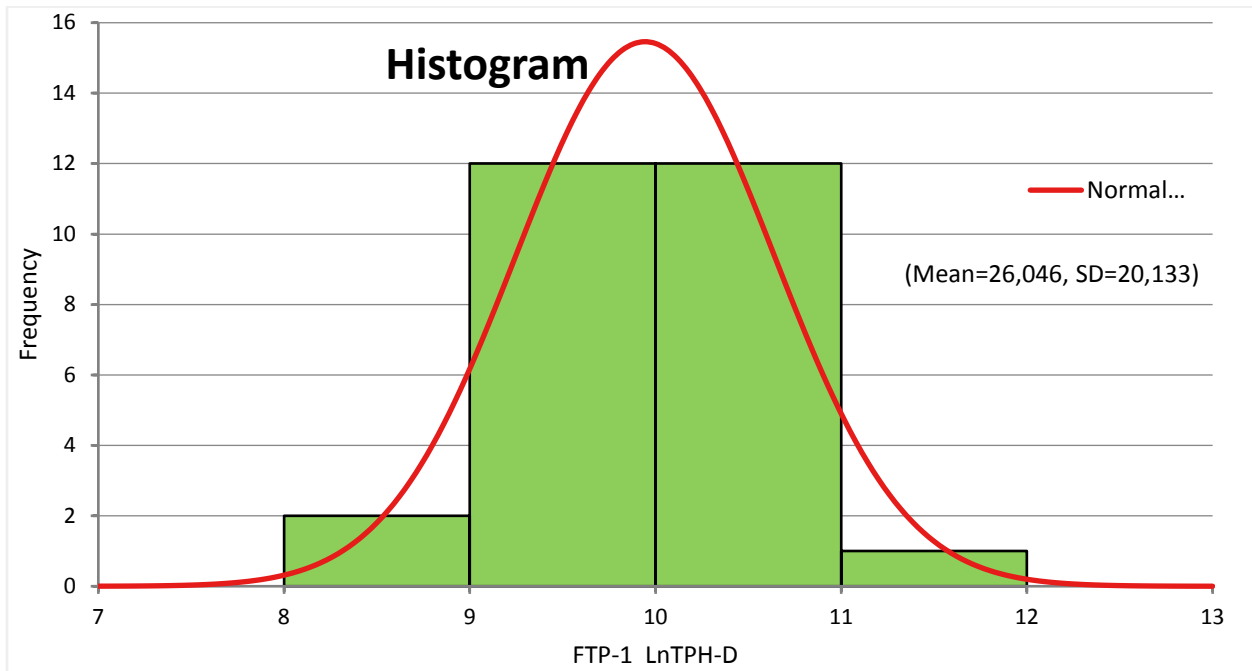
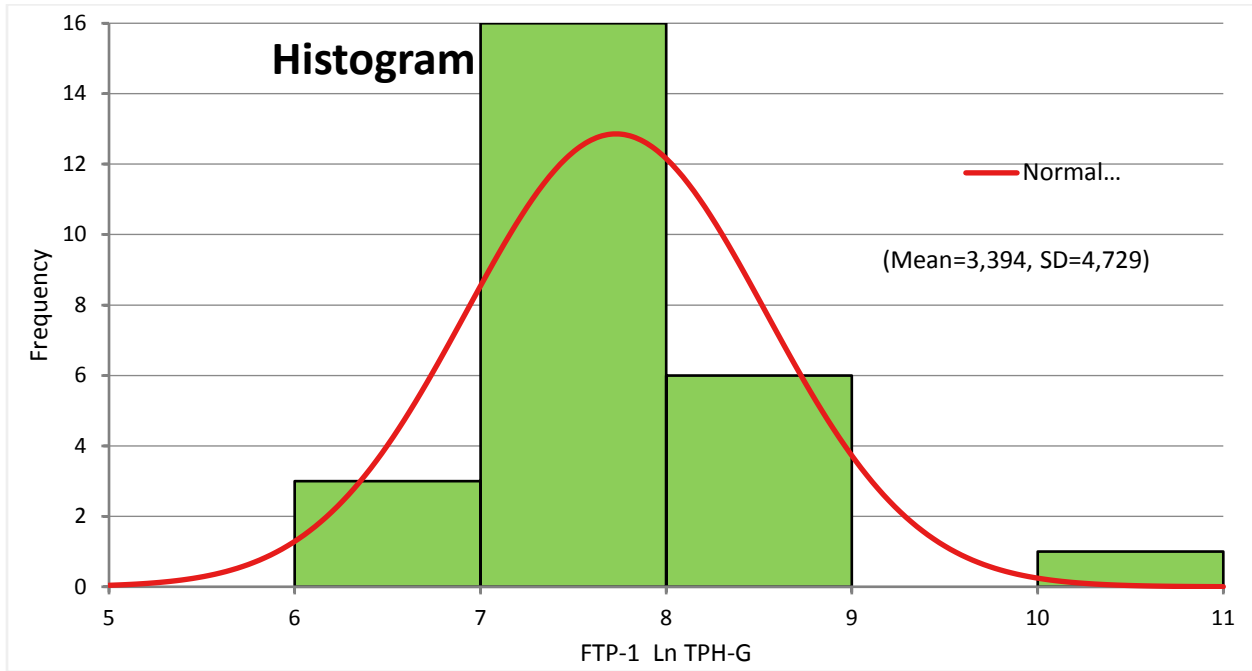
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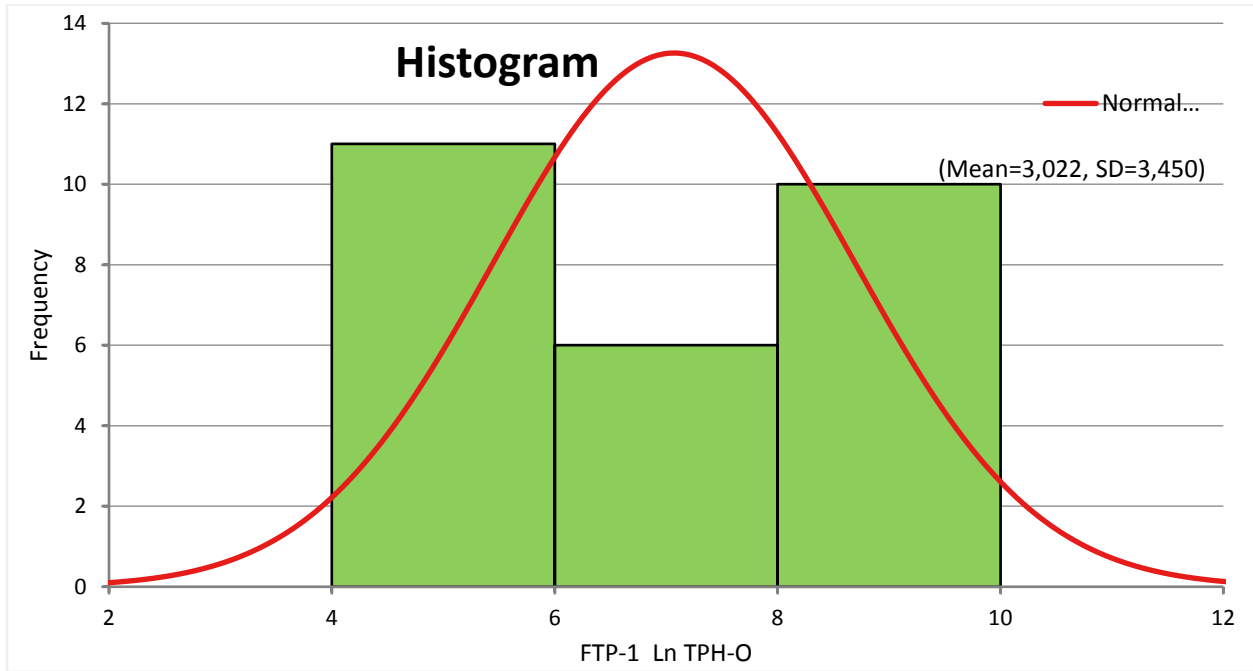
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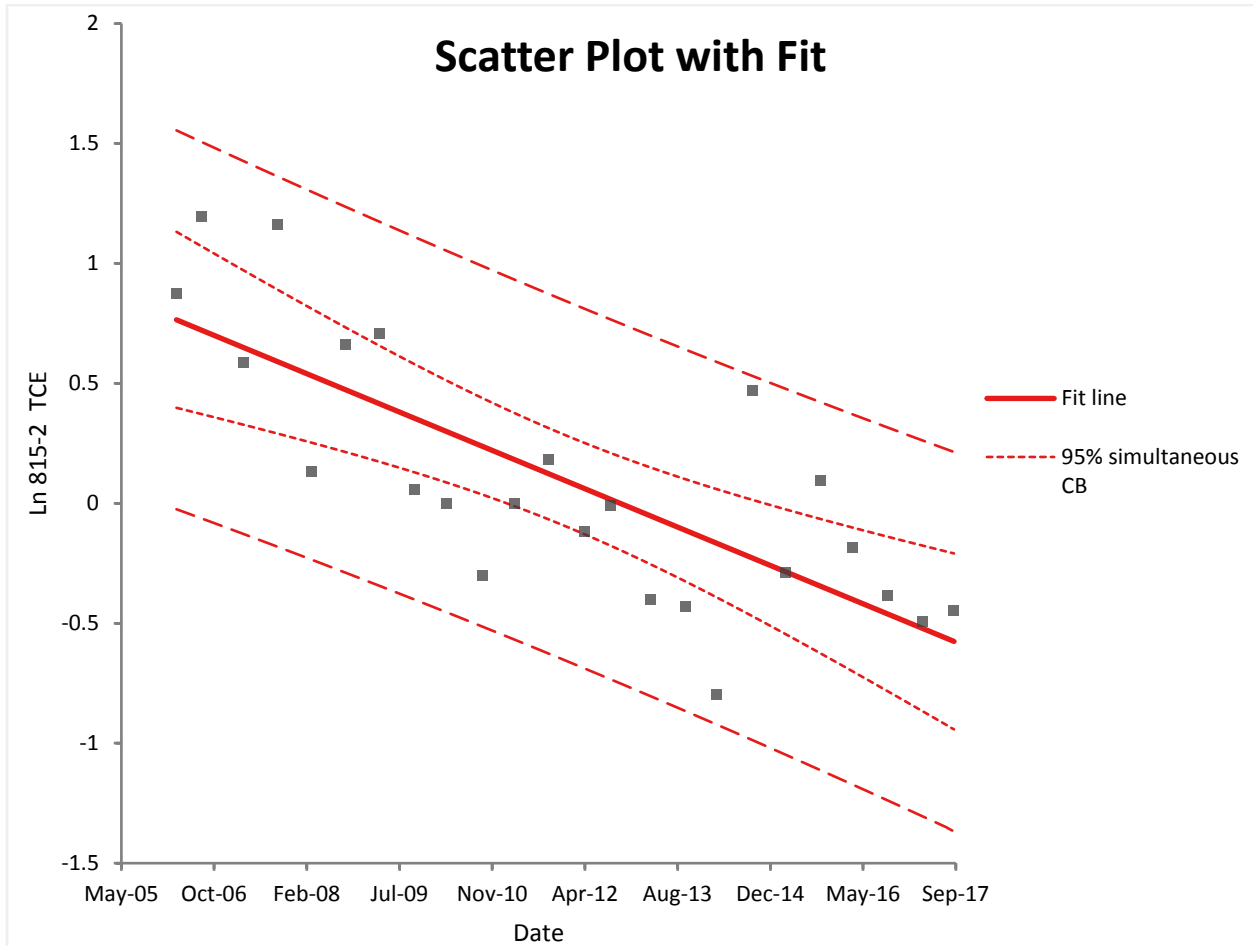
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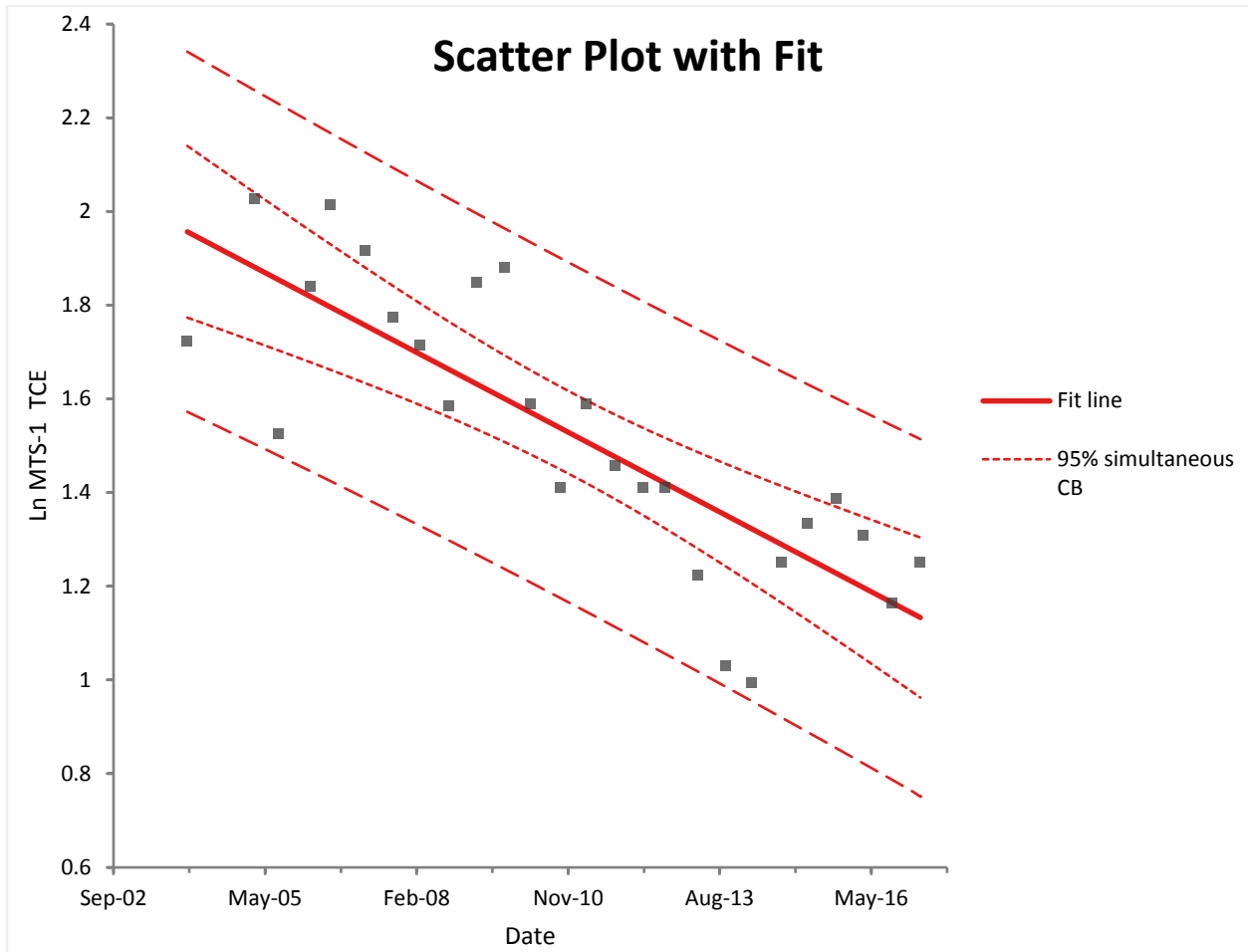
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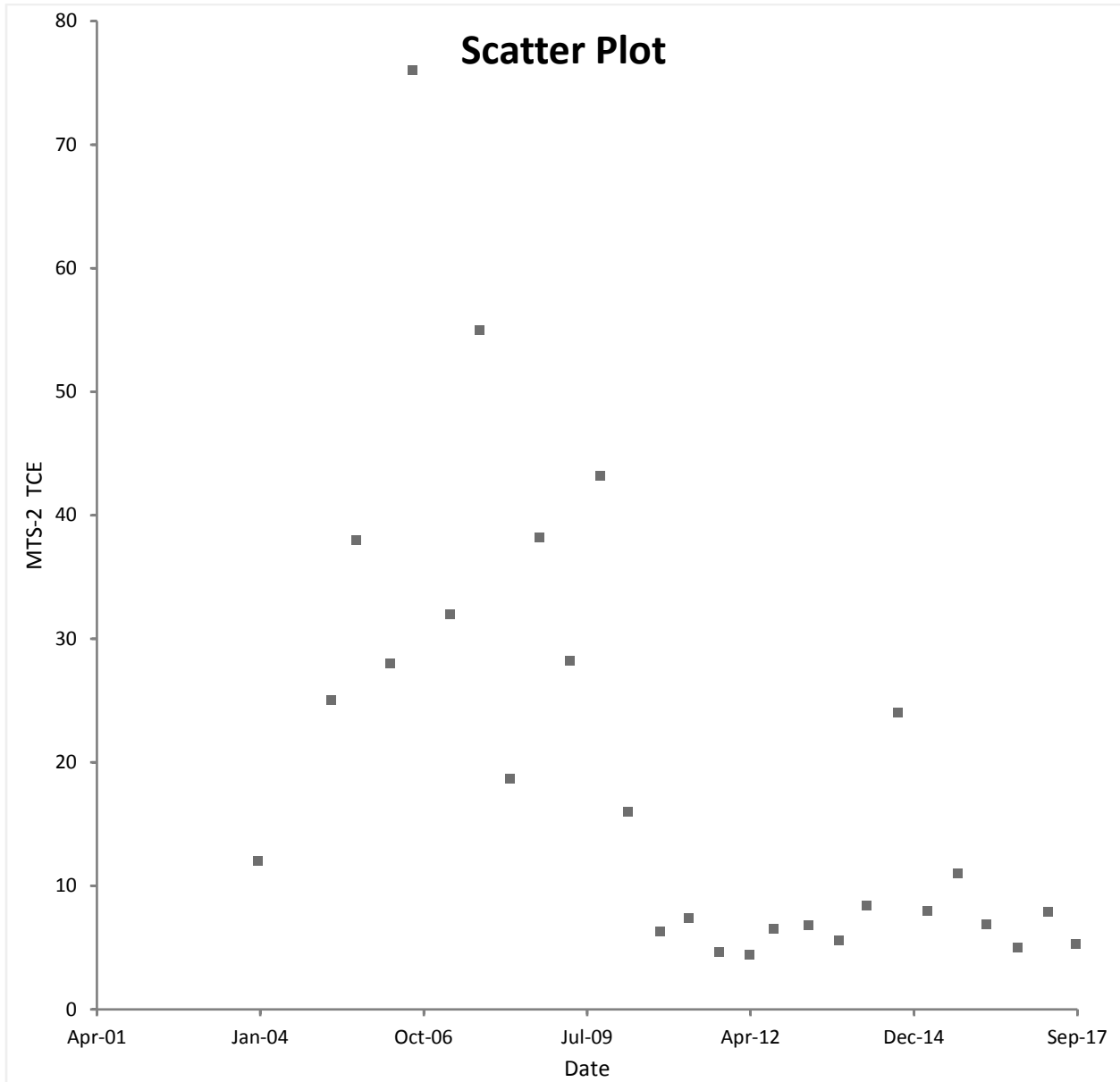
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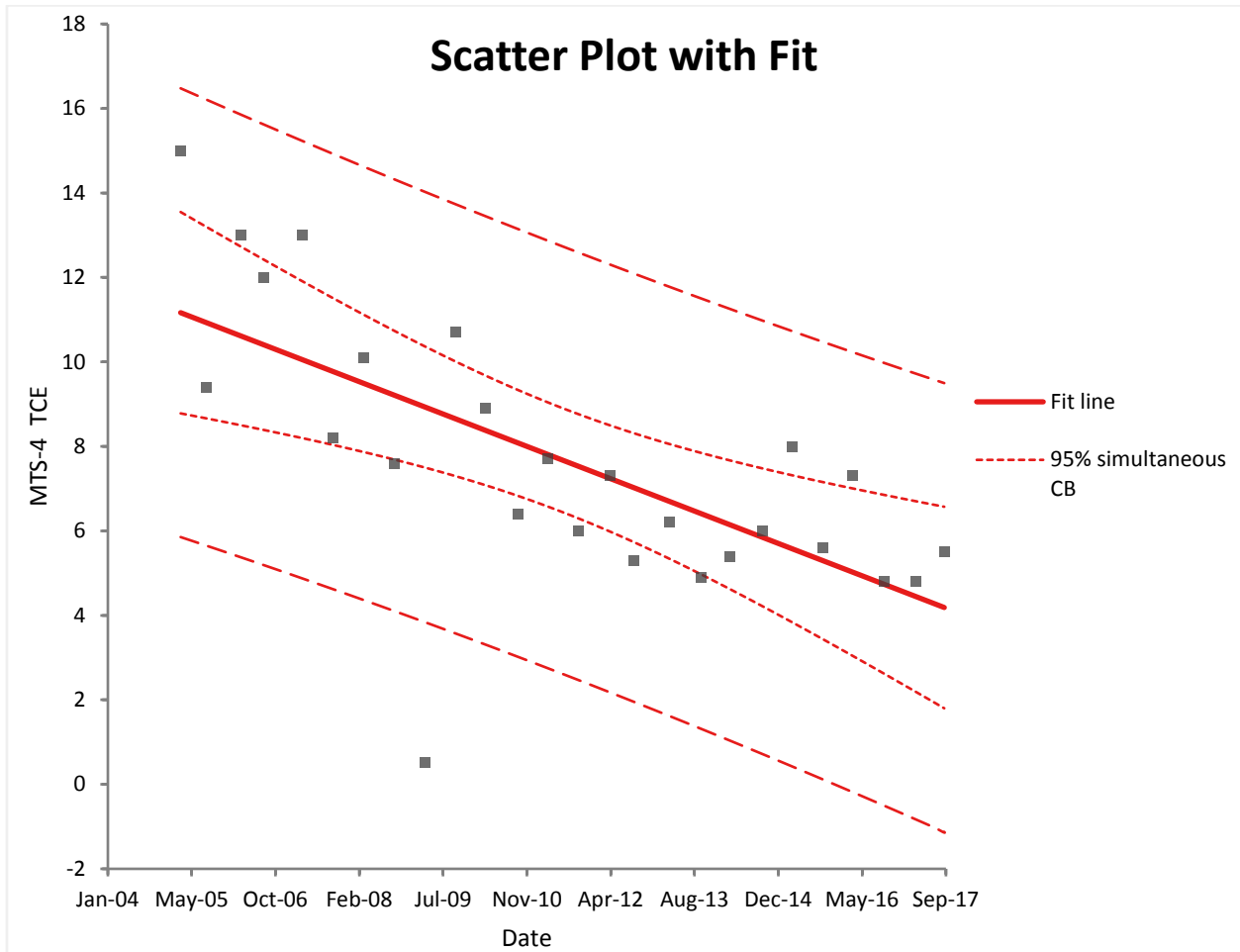
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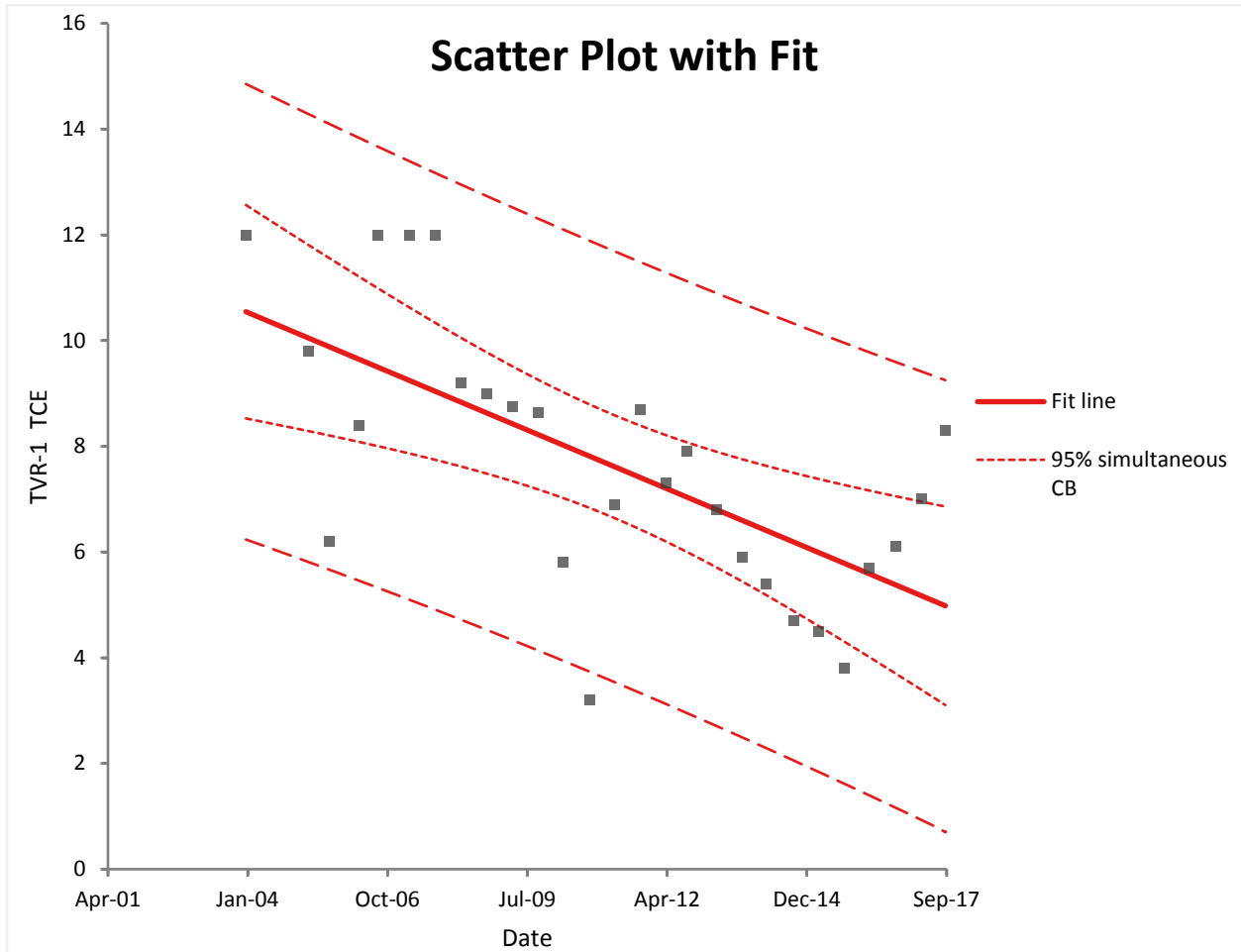
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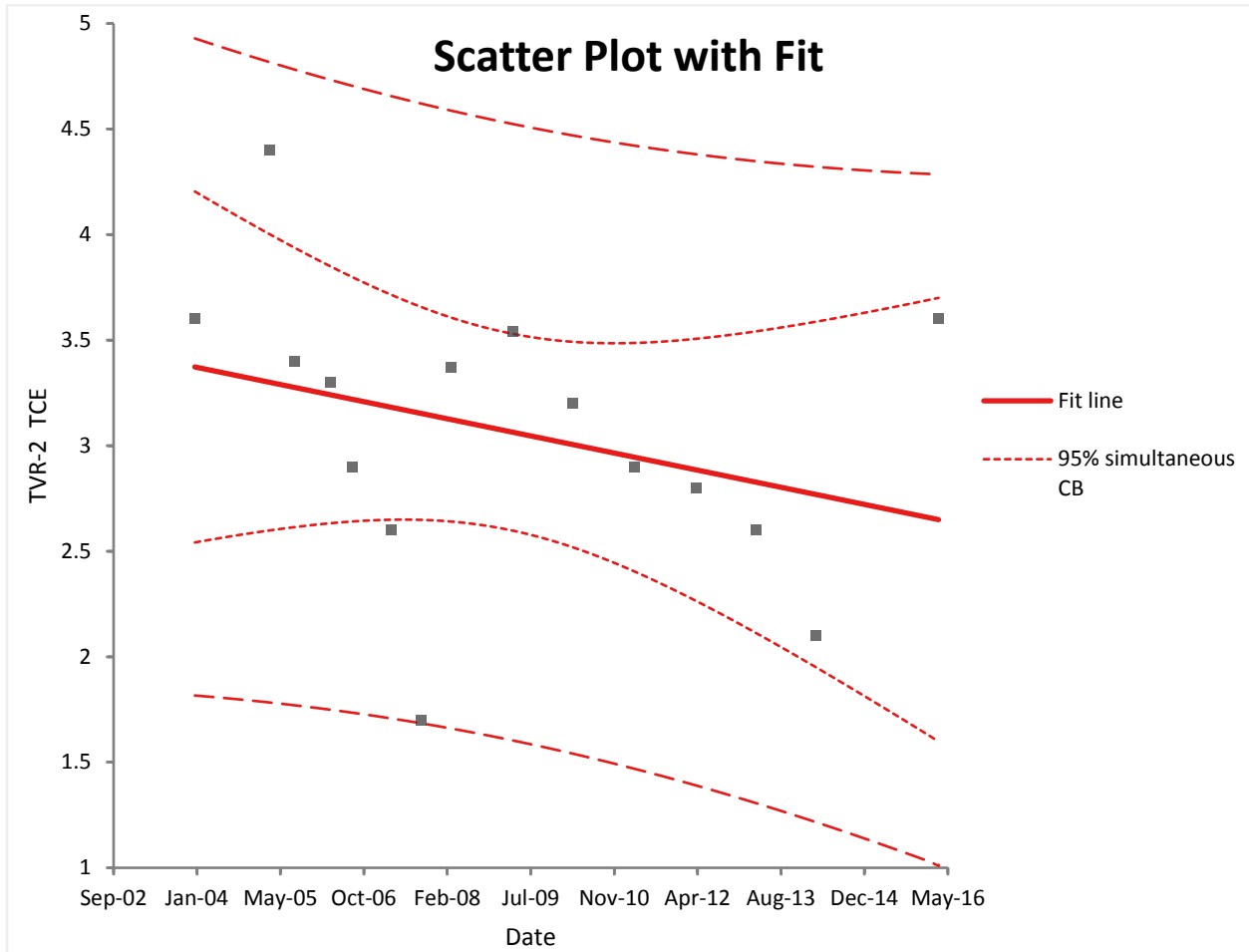
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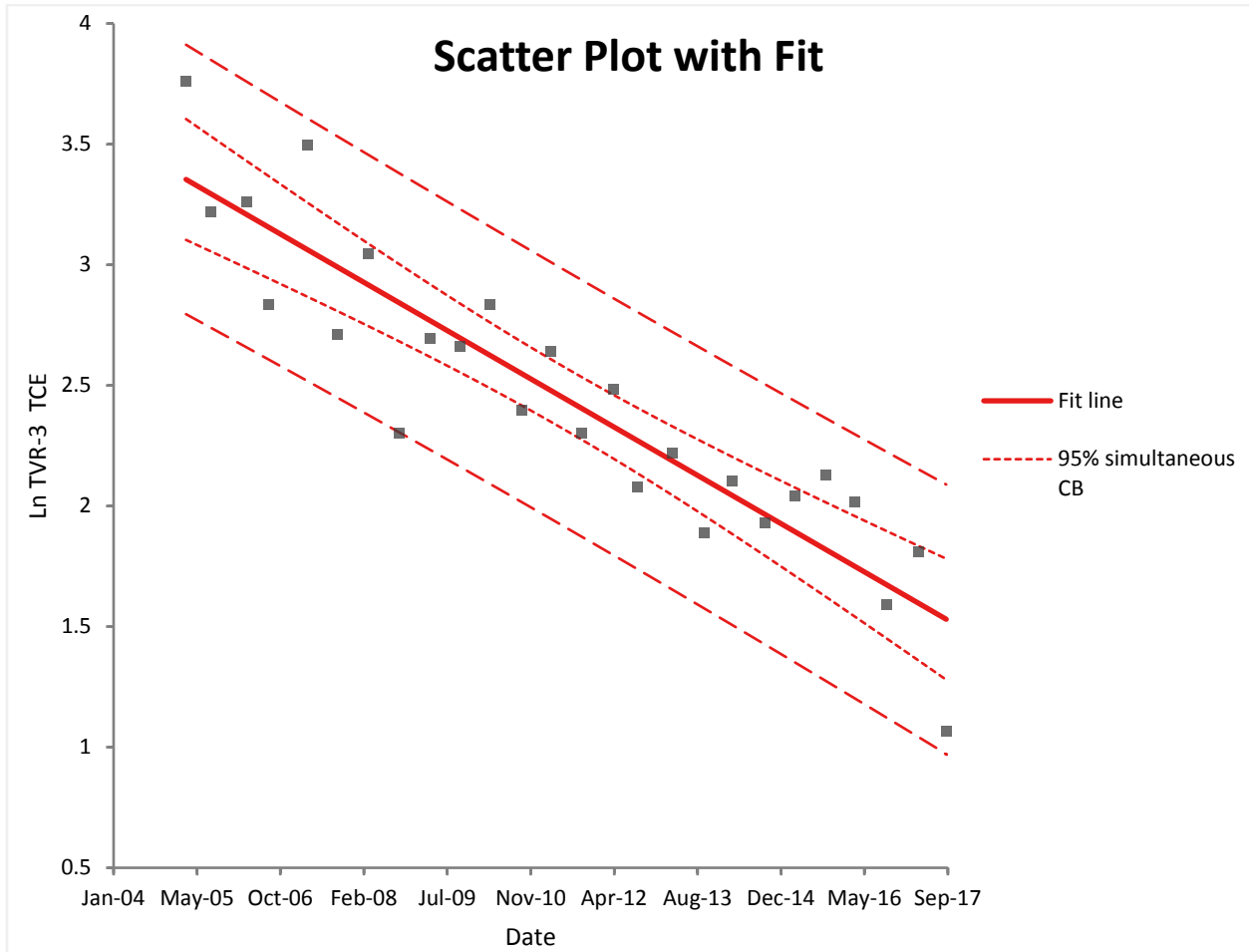
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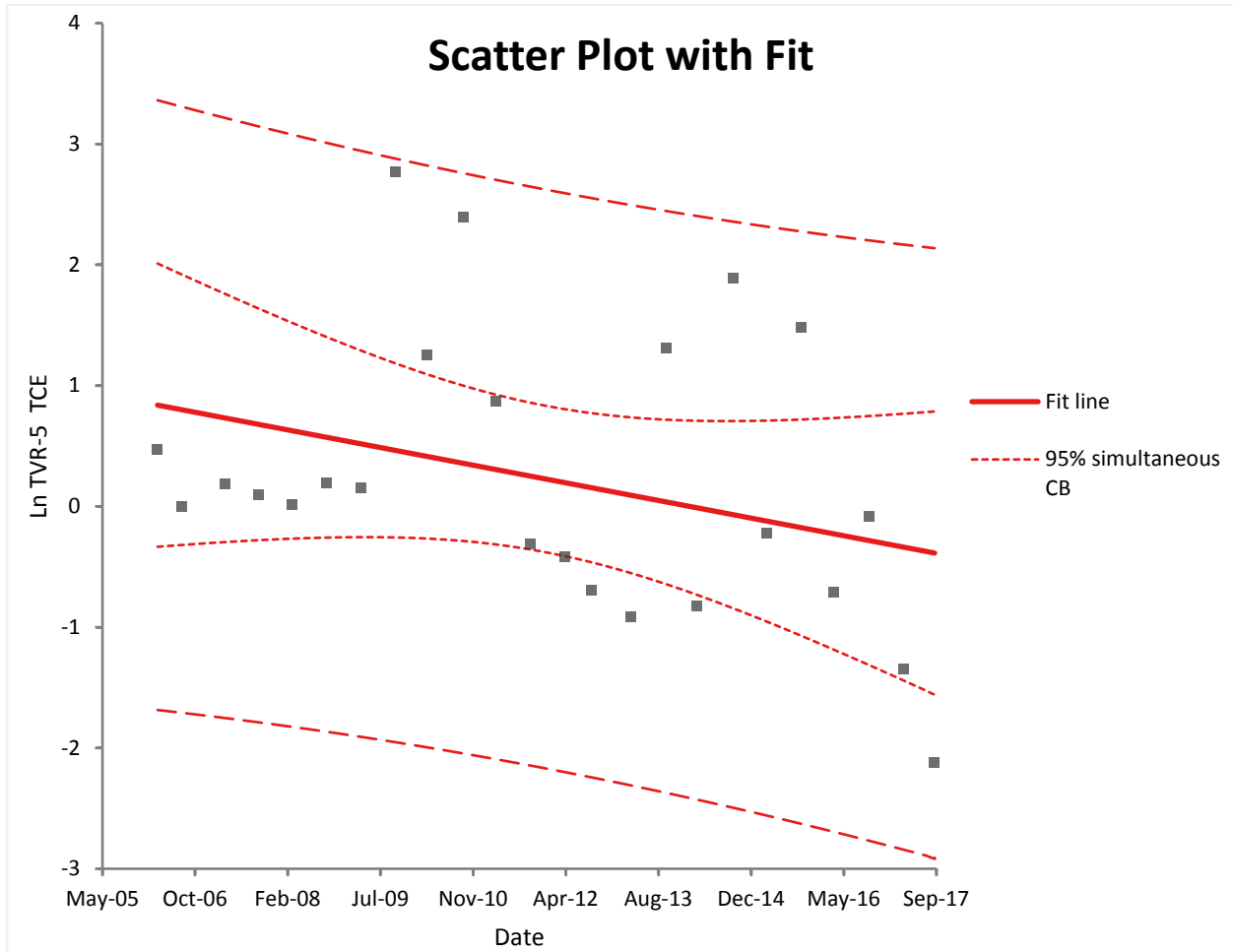
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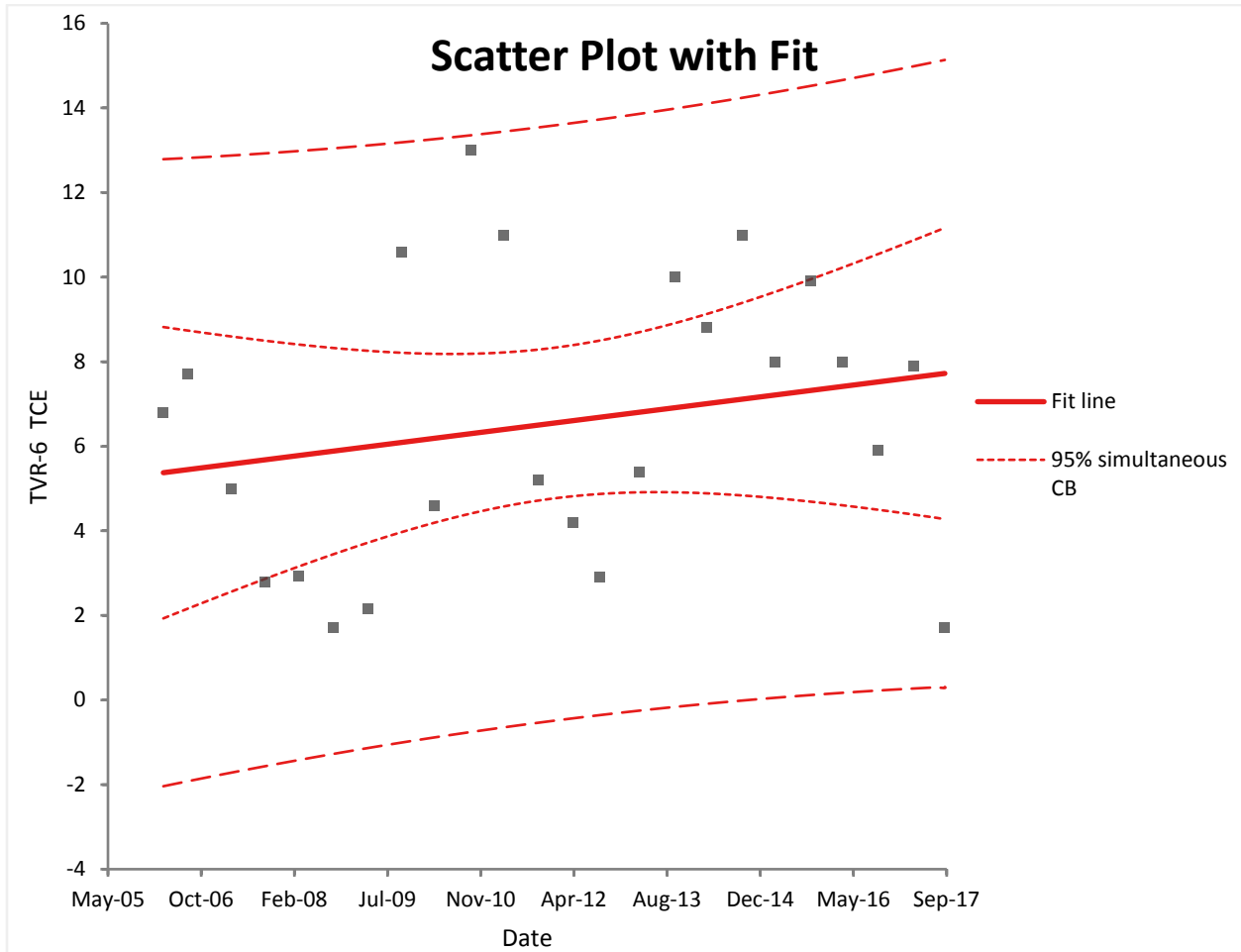
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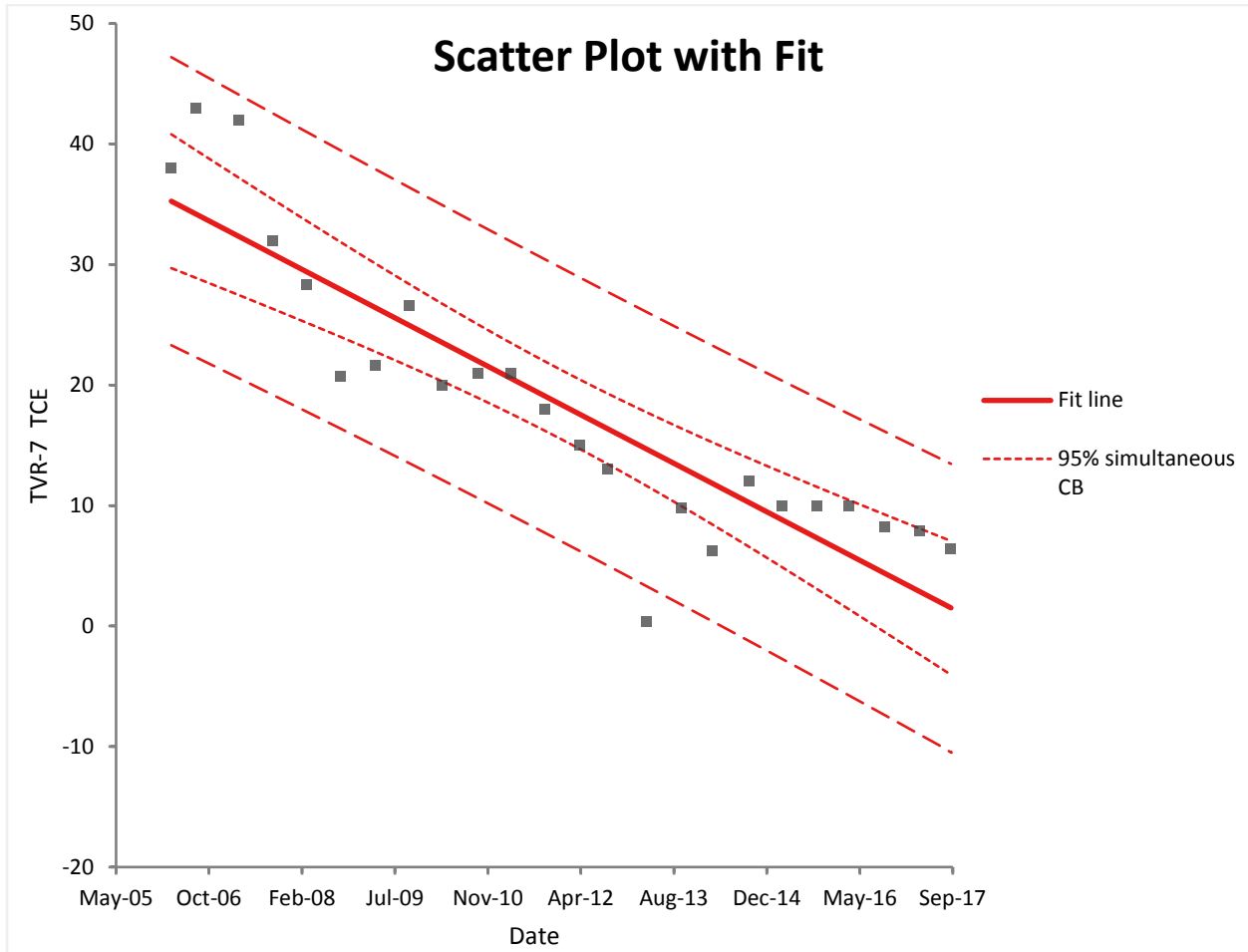
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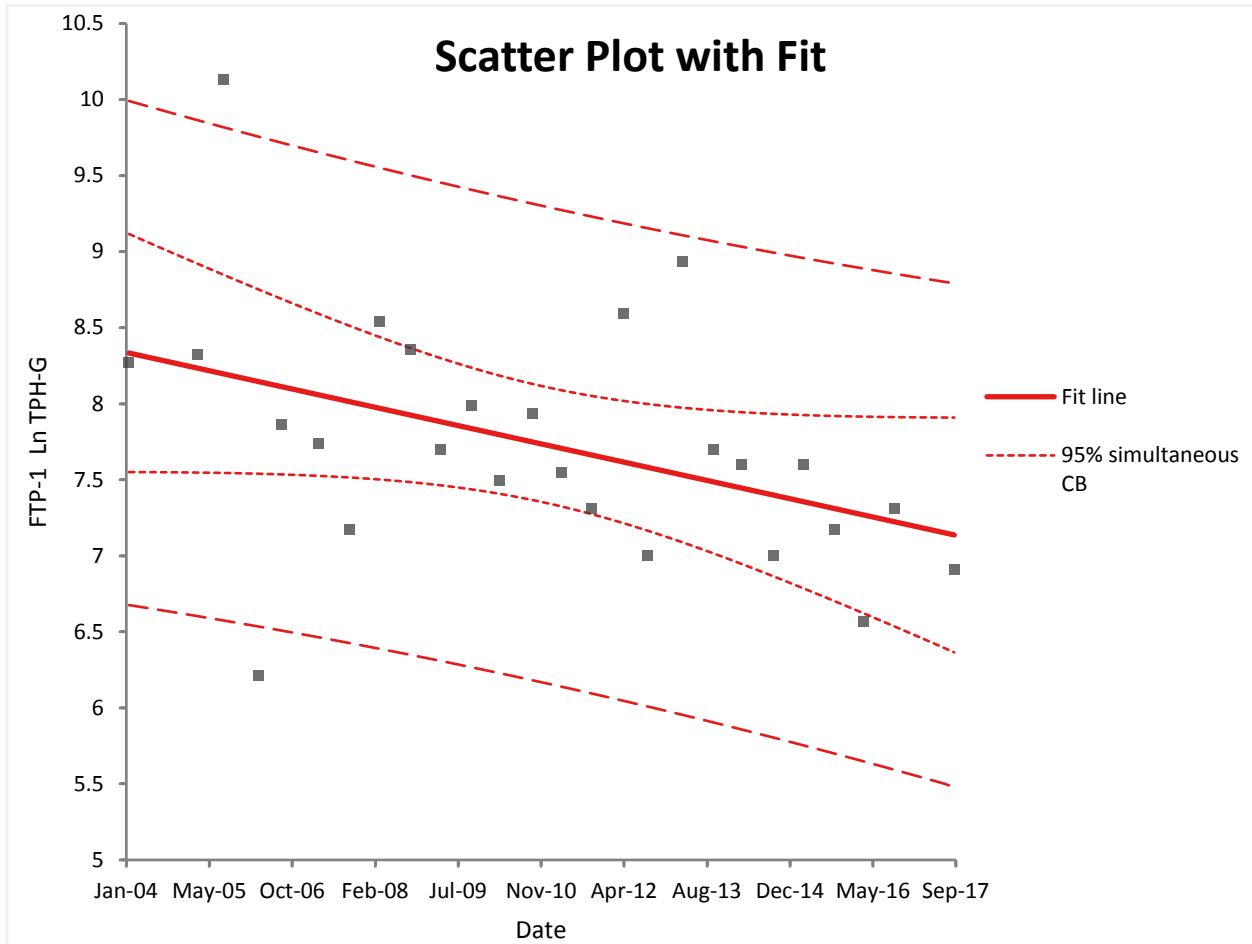
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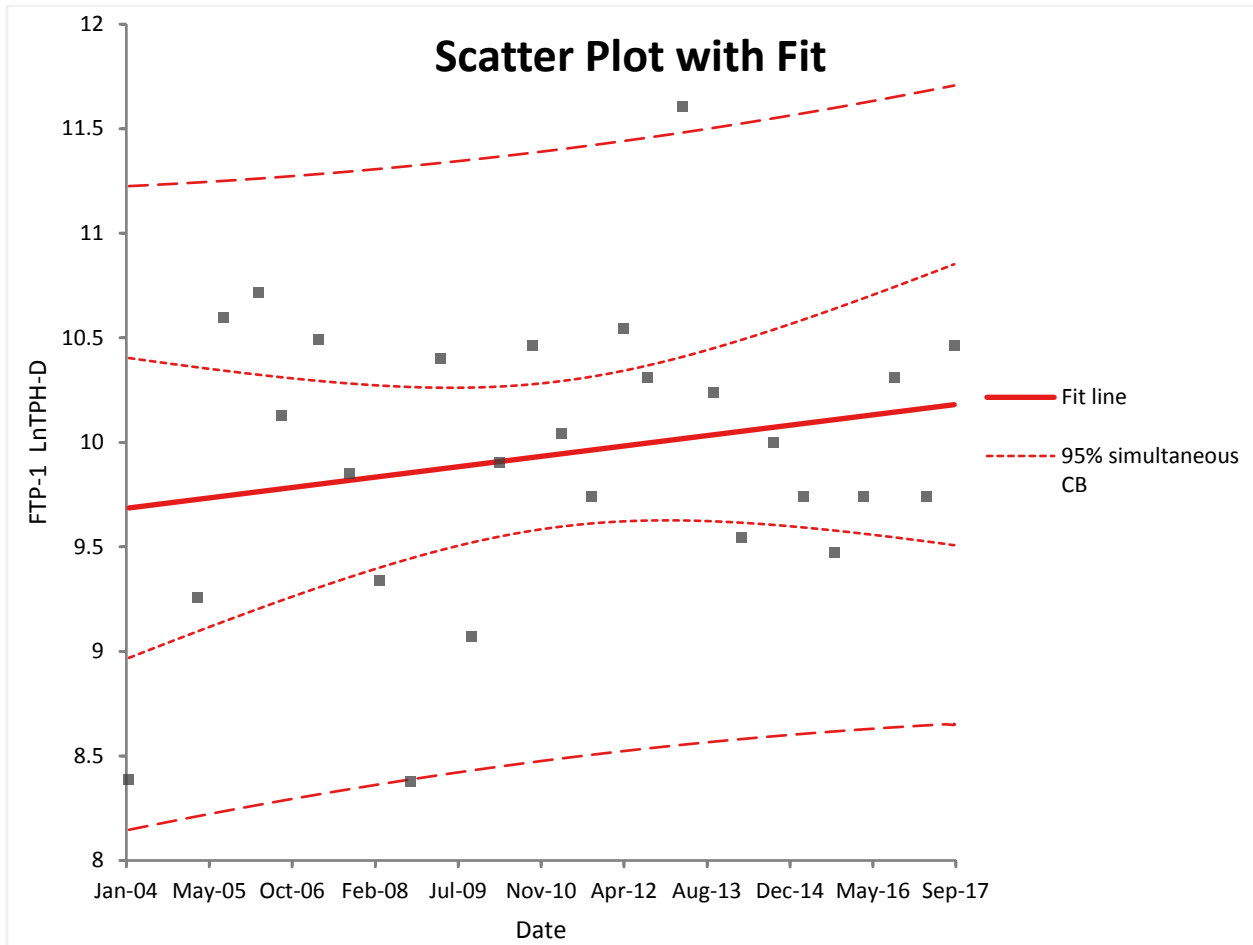
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