DEPARTMENT OF THE ARMY
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REPLY TO
ATTENTION OF

Public Works

June 12, 2015

Mr. Brian Dixon
Washington Department of Ecology
15 West Yakima Avenue
Yakima, Washington 98902

Dear Mr. Dixon:

Enclosed for your review is one hard copy and one CD of the 2014 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 2014. These groundwater events were conducted in accordance with the Groundwater Sample and Analysis Plan dated August 2013.

Total petroleum hydrocarbon concentrations in FTP resource protection wells reported during 2014 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 2014 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 eight site wells.

If you have any questions or need clarification, please contact either myself (253) 477-3742 or Mr. Tom Lynott (253)-966-1802.

Sincerely,

William W. Myers
Installation Restoration Program Manager

CF: Mr. Greg Caron, Central Region, Ecology

JUNE 2015

2014 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

2014 ANNUAL GROUNDWATER MONITORING REPORT

JUNE 2015

FTP AND TVR-OLD MATES SITES
JOINT BASE LEWIS-MCCHORD YAKIMA TRAINING CENTER
YAKIMA, WASHINGTON

DCN: TTEC-BTL-1031-003-15-020

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

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TETRA TECH EC, INC
A SUBCONTRACTOR TO
SEALASKA ENVIRONMENTAL SERVICES, LLC
POULSBO, WASHINGTON

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ABBREVIATIONS AND ACRONYMS

BTEX	benzene, toluene, ethyl-benzene, and xylenes
bgs	below ground surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CFR	*Code of Federal Regulations*
cis-1,2-DCE	cis-1,2-dichloroethylene
cPAHs	carcinogenic polycyclic aromatic hydrocarbons
DNAPL	dense non-aqueous phase liquid
E&E	Ecology & Environment
EPA	United States 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
LUC	land use control
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MMP	main motor pool
MTS	Old MATES
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
PAIC	Pomona Artesian Irrigation Company
PAH	polycyclic aromatic hydrocarbon
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	semi-volatile 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
USACE	U.S. Army Corps of Engineers
UST	underground storage tank
VOC	volatile organic compound
WAC	*Washington Administrative Code*
YTC	Yakima Training Center

1. INTRODUCTION

This Annual Groundwater Monitoring Report documents the March (spring) and September (fall) 2014 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 2013 Sampling and Analysis Plan (Versar 2013), 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 2014.

1.1 YTC BACKGROUND

YTC is an active United States 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 (FTP)

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.

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. TCE and other VOCs have not been detected in either of the currently active water supply wells—the Pomona and Pomona Artesian Irrigation Company (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. 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 (µg/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 August 2013, IRP personnel updated the groundwater Sampling and Analysis Plan for the former FTP and TVR/Old MATES sites (Versar 2013). Changes to the sampling program began with the September 2013 sampling event.

1.4.2 Fire Training Pit

The uppermost 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.

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

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" event, is typically conducted in February or March of each year. The other sampling event, considered the "dry season" 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 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, Old MATES (MTS), 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.

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. One sample collected from FTP was analyzed for SVOCs. The samples collected from the TVR/Old MATES site were analyzed for VOCs. Summary statistics 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 non-parametric TCE 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 2013 Groundwater Sampling and Analyses Plan (Versar 2013). 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. 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.

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. 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. 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 of benz(a)pyrene for each cPAH. The TEFs are then added together to obtain the total TEC of benz(a)pyrene 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 2014 sampling events, none of the six specified cPAHs were detected, and a TEF was not calculated.

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2. FIELD ACTIVITIES

Two groundwater sampling events were completed at the FTP and TVR/Old MATES sites in 2014: one by Versar on 11 and 12 March (spring), and one by TtEC on 22 and 23 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). An electronic interface probe was used to measure depth-to-water and any LNAPL or DNAPL thicknesses in well FTP-1. There were no measurable amounts of LNAPL or DNAPL in well FTP-1 during either sampling events.

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 2014. Groundwater samples were collected using the disposable bailer once the wells had recharged to at least 80 percent of the initial depth of water. A field duplicate sample was collected from FTP-14 during the spring sampling event.

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 2014, and were hung in June 2014 for the groundwater sampling event on September 22 and 23, 2014. The PDBs were redeployed in the TVR/Old MATES wells on December 9, 2014 for the March 2015 sampling event. 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 well MTS-4 during the fall sampling event.

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

- Gasoline range total petroleum hydrocarbons (TPH-G) using Method NWTPH-Gx (FTP-1, FTP-13 [spring only], FTP-14, FTP-15, and FTP-16)
- Diesel and heavy oil range TPH (TPH-D and TPH-O) using Method NWTPH-Dx (FTP-1, FTP-13 [spring only], 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 (Versar 2013) as follows:

- Purge water and decontamination water from FTP-13 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 CONTROLS FIELD INSPECTIONS AND INTERVIEWS

The 2014 land use control (LUC) field inspection and interviews were conducted on December 10 and 22, 2014 during the fourth quarter sampling event at YTC's limited purpose landfill. A copy of the LUC monitoring checklist is included in Appendix A. All personnel were contacted in 2014 for interviews. New geographic information system (GIS) data for YTC is being managed and updated at YTC by David Theirl; however, JBLM GIS and IRP staff are able to access the data when needed.

3. RESULTS AND CONCLUSIONS

Monitoring well construction details for wells from both sites are shown in Table 1. Copies of field notes and laboratory analytical reports for both 2014 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) 2014 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. Historical TPH-G, TPH-D, and TPH-O concentrations in well FTP-1 are presented on Figure 4.

In 2014 TPH-G was detected at 2,000 µg/L (spring) and at 1,100 µg/L (fall) in samples collected from well FTP-1 (Table 2). These concentrations 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 (Table 2). During the 2014 fall event, low levels of TPH-G were also reported in wells FTP-14 (22 µg/L) and FTP-15 (14J µg/L) for the first time since 2012; however, the ALS laboratory level of quantitation (LOQ) was lower during the fall event (110 µg/L) versus the LOQ used by Analytical Resources during spring event (250 µg/L). TPH-G was not detected in FTP-16.

TPH-D was detected at 14,000 µg/L (spring) and 22,000 µg/L (fall) in samples collected from FTP-1. These concentrations exceed the 500 µg/L MTCA Method A cleanup level for TPH-D. The 14,000 µg/L detected in spring was the lowest concentration reported from FTP-1 since 2009 (Table 2). TPH-D was also detected in samples collected from FTP-14 (250 µg/L in spring and 290 µg/L in fall), FTP-15 (46J µg/L in fall only), and FTP-16 (150 µg/L in spring and 290 µg/L in fall).

TPH-O was detected at 1,700 µg/L (spring) and 3,400 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 (360 µg/L in fall only), FTP-15 (110J µg/L in fall only), and FTP-16 (180 µg/L in fall only).

Other constituents of concern detected in well FTP-1 include benzene at 3.4 µg/L (spring) and 6.4 µg/L (fall), and total polycyclic aromatic hydrocarbons (PAHs) at 248.4 µg/L (spring) and 177.8 µg/L (fall). The benzene concentration reported in the fall is above the MTCA Method A cleanup level for benzene (5 µg/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 plot are included in Appendix C. Trends suggest that TPH-G concentrations have been decreasing over time in FTP-1; however, not statistically. Trends suggest that TPH-D concentrations have been increasing over time in FTP-1; however, not statistically. This trend changed from 2012 when a decreasing trend was calculated; however, also not statistically. Trends also suggest that TPH-O concentrations are increasing (statistically) in samples collected from FTP-1. Statistic analyses could not be performed on other datasets from the FTP wells because most sample results were non-detect.

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 have not migrated 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 2014 monitoring events for the TVR/Old MATES site. Figures 6 and 7 present TCE concentration contours based on samples collected during the 2014 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-3, TVR-6, and TVR-7) had TCE concentrations above the 5 µg/L MTCA Method A Cleanup level during both the 2014 spring and fall events. In addition, one sample from TVR-1 (spring event), and one sample from TVR-5 (fall event) also had TCE above the 5 µg/L MTCA Method A Cleanup level. The fall 2014 TCE concentrations in four of the wells were double, or almost double, compared to the TCE concentrations detected during the spring 2014 event. The wells included 815-2 (TCE from

0.45 to 1.6 µg/L), well MTS-2 (TCE from 8.4 to 24 µg/L), well TVR-5 (TCE from 0.4 to 6.6 µg/L), and well TVR-7 (TCE from 6.2 to 12.0 µg/L) (see Table 5).

TCE and cis-1,2-DCE were not detected in either of the 2014 spring or fall events in the samples collected from the Pomona and PAIC domestic production wells.

Linear regression graphs for historical TCE concentrations at the site are presented in Appendix C. Review of these graphs suggests the following trends:

- No statistically significant upward trends for TCE were found in the TVR/Old MATES monitoring wells in 2014.
- An upward trend for TCE was seen in only one TVR/Old MATES well (TVR-6), however, the trend was not statistically significant.
- The downward trend in TCE concentrations in TVR/Old MATES wells 815-2, MTS-1, MTS-2, MTS-4, TVR-1, TVR-2, TVR-3, and TVR-7 were statistically significant.
- The downward trend for TCE seen in one TVR/Old MATES well (TVR-5) was not statistically significant.

The TCE concentration in well TVR-6 has been above 5 µg/L in 11 of 18 samples collected since sampling began in March 2006. The highest concentration of TCE from well TVR-6 was 13 µg/L in September 2010. Well TVR-6 is the only well where the TCE concentrations have shown an overall general upward trend; however, not a statistically significant trend. Both the 2014 spring and fall samples from TVR-6 were above 5 µg/L (6.2 µg/L and 12 µg/L, respectively). Since TCE concentrations are trending downward overall in all of the other 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 fall 2014 sampling event. The data quality review documentation is included in Appendix B. The review found that the data quality objectives for both the FTP and TVR/Old MATES sites during the fall event were met. The data are considered acceptable for use and for comparison with other site data.

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FIGURES

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N

0 12,500 25,000 50,000

Feet

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

JBLM
Yakima Training Center
Location Map

Figure
1

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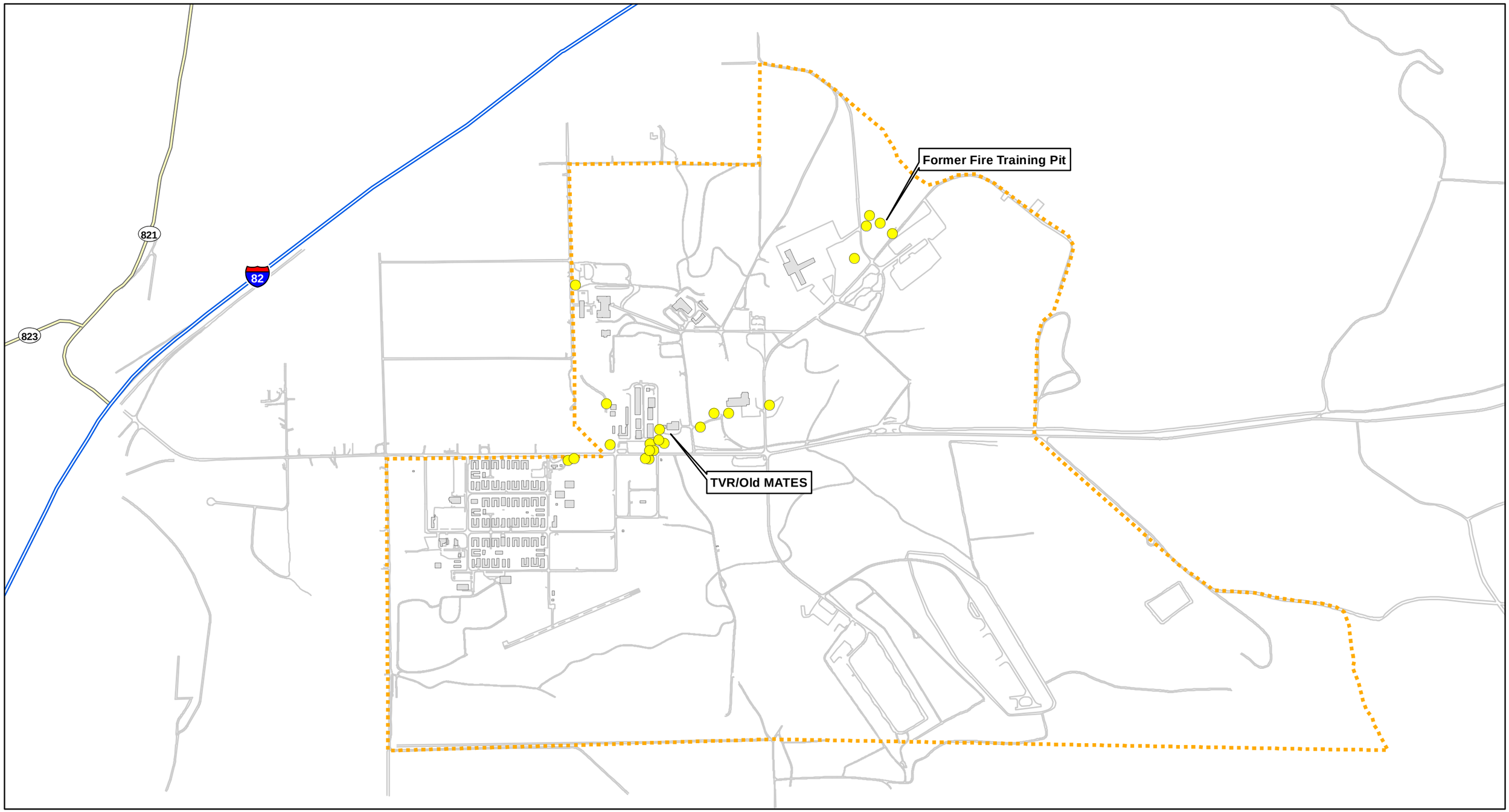

Monitoring Well

Cantonment Boundary

Building

N

0 1,550 3,100 6,200

Feet

1 inch = 1,250 feet

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

PROJECT LOCATION MAP

Figure 2

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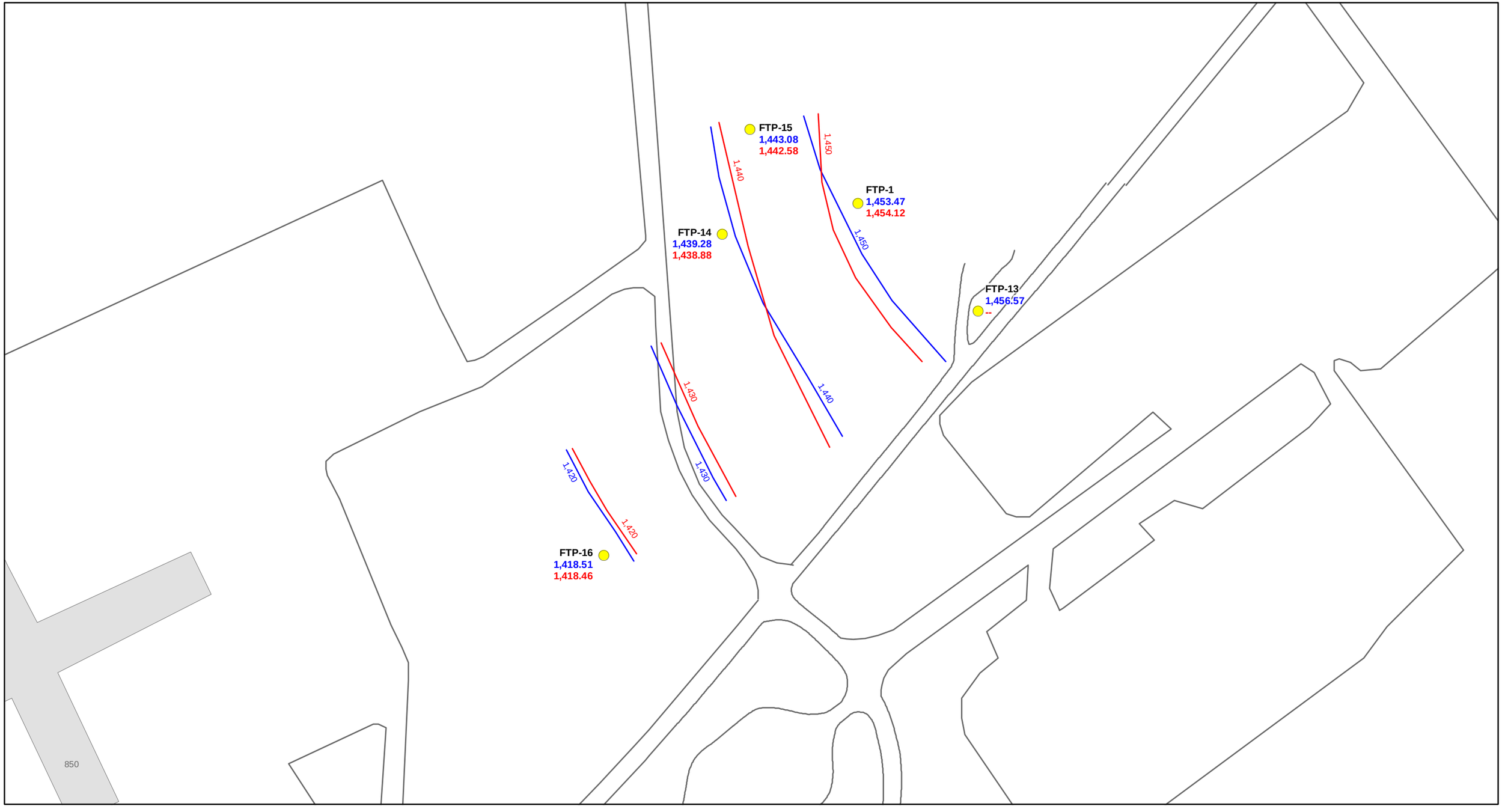

Monitoring Well
Contours - Spring
Contours - Fall
Building

Labels
Well ID: FTP-1
Spring WL (Ft/AMSL): 1,453.47
Fall WL (Ft/AMSL): 1,454.12
Not Measured: -- or --

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

2014

Figure
3

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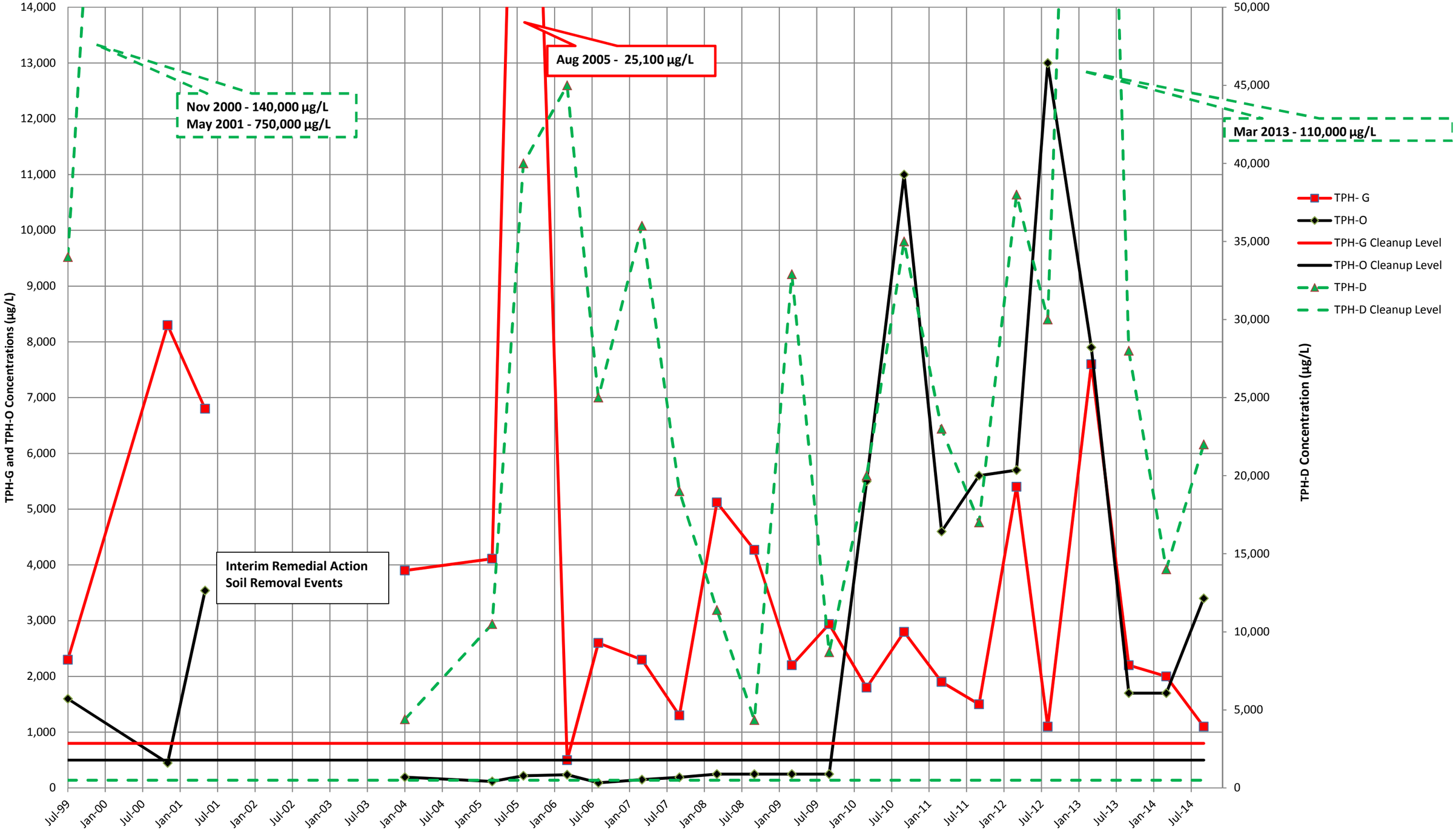
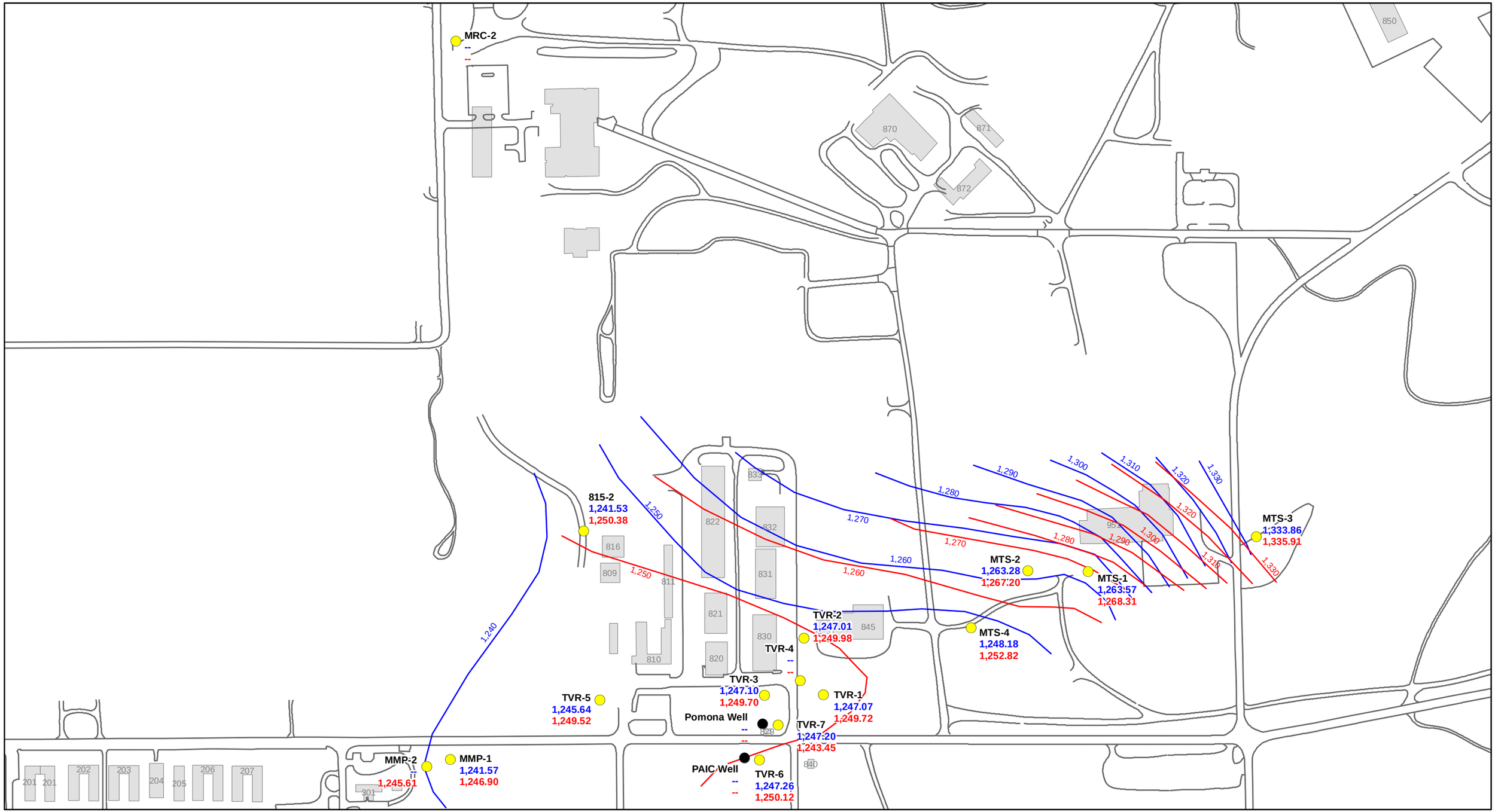
Figure 4 - Change in Total Petroleum Hydrocarbon Concentrations Over Time in Well FTP 1
Fire Training Pit, Yakima Training Center, Washington



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): 1,241.53
Fall WL (Ft/AMSL): 1,250.38
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

2014

Figure
5

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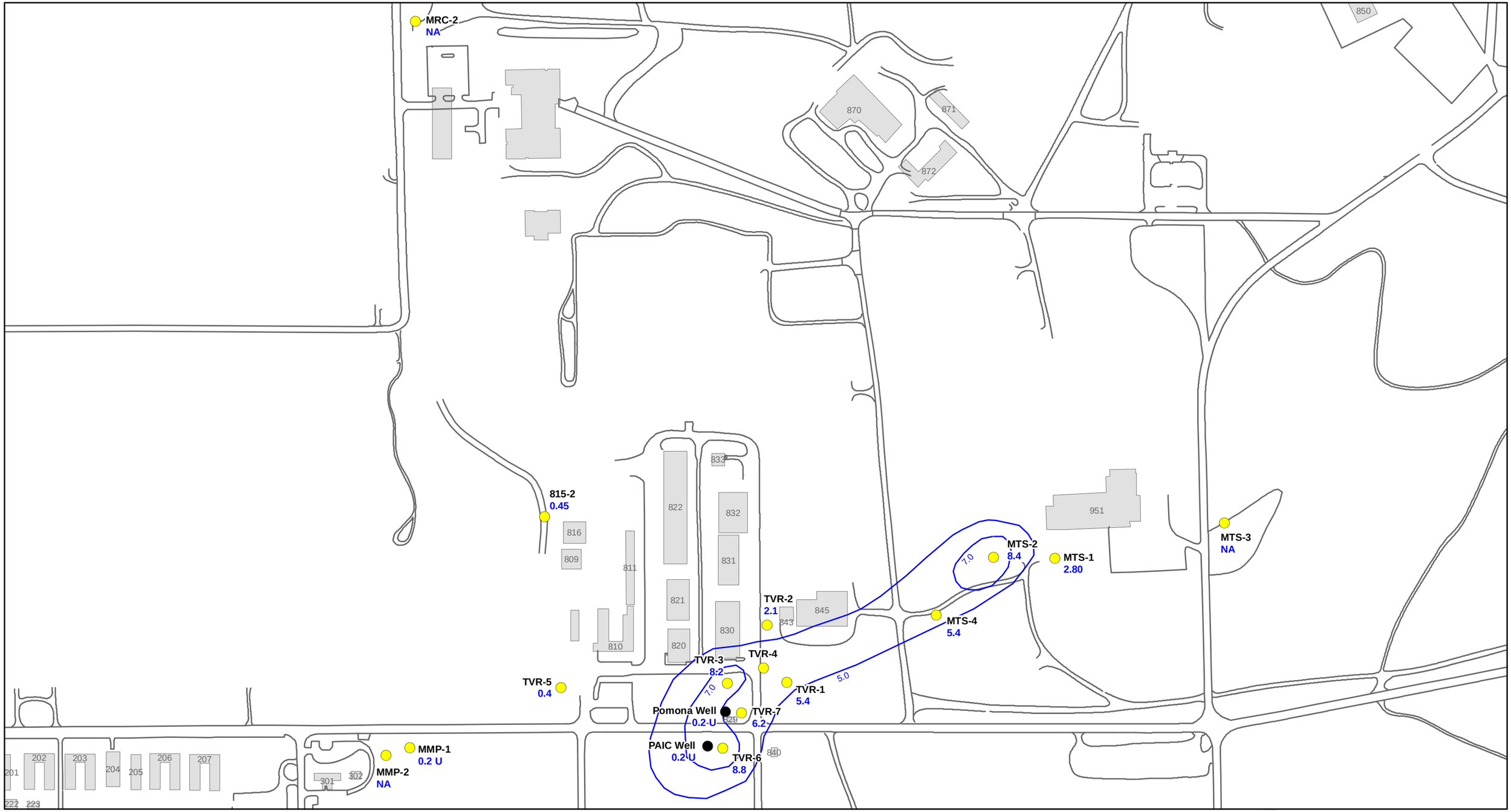

Monitoring Well
Production Well
Contours - Spring
Building

Labels
Well ID: 815-2
Spring TCE (ug/L): 0.45
Not Analyzed: NA

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

2014

Figure
6

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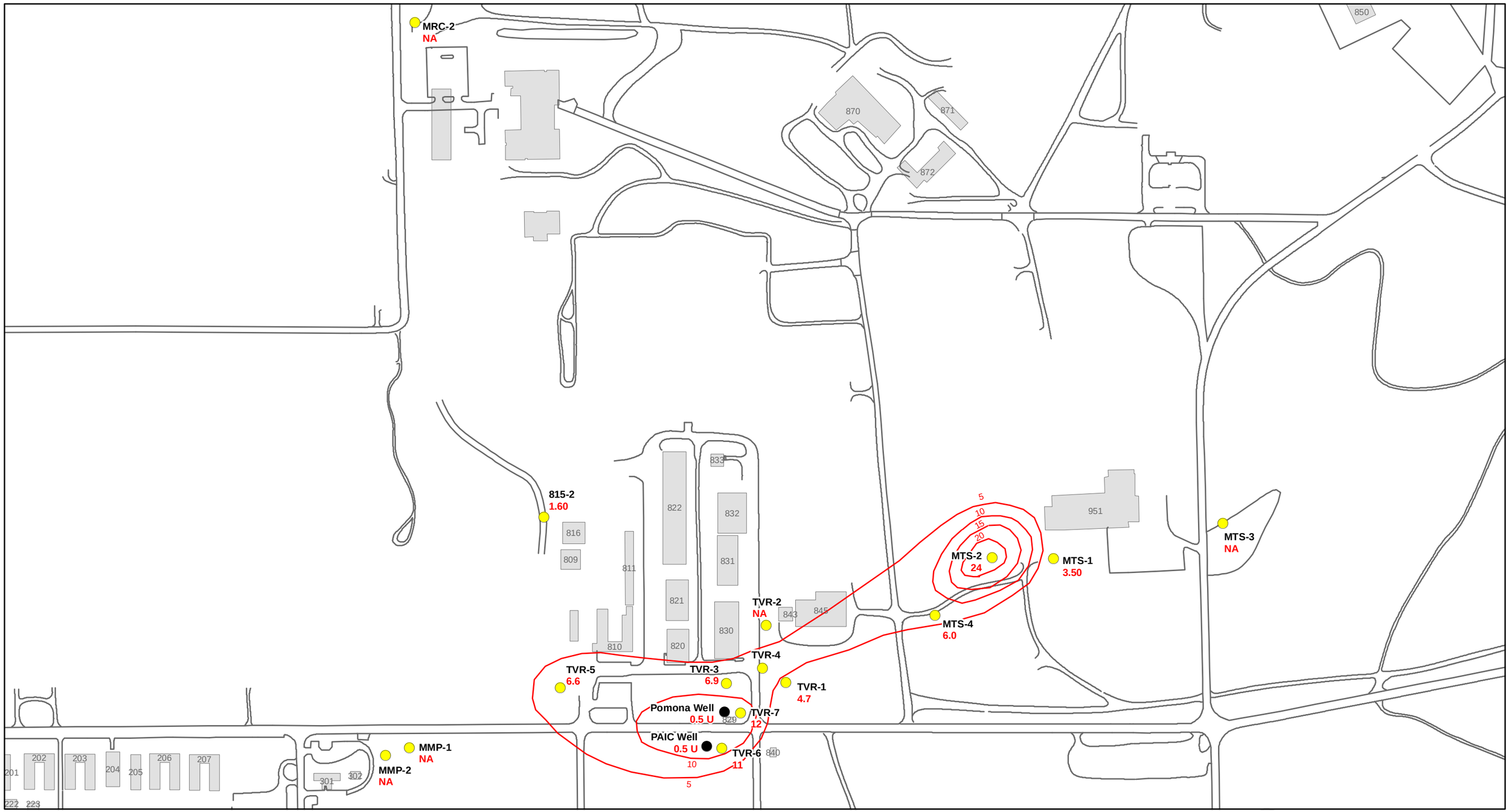

Monitoring Well
Production Well
Contours - Fall
Building

Labels
Well ID: 815-2
FALL TCE (ug/L): 1.60
Not Analyzed: NA

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

2014

Figure
7

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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
m – meter
TOC – top-of-casing

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Table 2

Depth-to-Water Measurements and Compounds 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	1-Mar-93	–	–	–	2,600,000J	3,500	50U	50U	**60.0**	1,100.0
1467.72	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	–	–	–	–
	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	-	–	–	–
	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	–	–	–	–
	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	–	–	–	–	–	–
	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	–	–	–	–
	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 Compounds 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	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**
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	–	–	–	–	–	–	–
	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	–	–	–	–	–	–	–
	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	–	–	–	–	–	–	–	–	–

Table 2 (continued)

Depth-to-Water Measurements and Compounds 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	1-Jul-99	17.63	1,439.85	100U	**480J**	0.192U	0.4U	0.4U	0.4U	1.2U
1457.48	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	–	–	–	–
	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	–	–	–	–	–	–
	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	–	–	–	–
Duplicate	11-Mar-14	18.20	1,439.28	250U	**240**	200U	–	–	–	–
	22-Sep-14	18.60	1,438.88	**22**	**290**	**360**	–	–	–	–

Table 2 (continued)

Depth-to-Water Measurements and Compounds 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	1-Jul-99	16.68	1,444.20	100U	240U	0	0.4U	0.4U	0.4U	1.2U
1460.88	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	–	–	–	–
	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**	–	–	–	–
	22-Mar-11	17.85	1,443.03	50U	120U	240U	–	–	–	–
Duplicate	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	–	–	–	–
Duplicate	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	–	–	–	–
Duplicate	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**	–	–	–	–

Table 2 (continued)

Depth-to-Water Measurements and Compounds 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	1-Jul-99	26.32	1,418.49	100U	**360J**	**2**	0.4U	0.4U	0.4U	1.2U
1444.81	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
	18-Mar-08	26.09	1,418.72	100U	100U	500U	–	–	–	–
	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**	–	–	–	–
MTCA Method A Cleanup Level				800	500	500	5	1,000	700	1,000
MTCA Method B Cleanup Level				–	–	–	–	–	–	–

Table 2 (continued)

Depth-to-Water Measurements and Compounds of Concern Concentrations

Fire Training Pit, Yakima Training Center, Washington

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
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).

Table 3

Selected VOCs, PAHs, 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)	Flourene (µg/L)	Total Naphthalenes (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**	–
	23-Mar-09	0.5U	0.5U	0.5U	2.5U	–	**9.1**	**93.2**	–
Duplicate	23-Mar-09	0.5U	0.5U	0.5U	2.5U	–	–	–	–
	23-Sep-09	0.5U	0.5U	0.5U	2.5U	15U	**5.4**	**121.1**	–
Duplicate	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**	–

Table 3 (continued)

Selected VOCs, PAHs, 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)	Flourene (µg/L)	Total Naphthalenes (µg/L)	Total PCBs (µg/L)
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	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	–
	19-Sep-07	0.5U	0.5U	0.5U	2.5U	**0.63J**	500U	–	–

Table 3 (continued)

Selected VOCs, PAHs, 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)	Flourene (µg/L)	Total Naphthalenes (µg/L)	Total PCBs (µg/L)
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, 1-methyl naphthalene and 2-methyl naphthalene.
– = not applicable, not sampled

Abbreviations and Acronyms:
– = not applicable, not sampled
µg/L – micrograms per liter
cis-DCE – cis 1,2-dichloroetheylene
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 PAHs and Total PAHs 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)	TEF Total (µg/L)	Total PAHs (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**

Table 4 (continued)

Carcinogenic PAHs and Total PAHs 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)	TEF Total (µg/L)	Total PAHs (µg/L)
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 PAHs and Total PAHs 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)	TEF Total (µg/L)	Total PAHs (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 PAHs and Total PAHs 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

Abbreviations and Acronyms:
µg/L – micrograms per liter
cPAHS – carcinogenic polycyclic aromatic hydrocarbons
ND – non-detect
PAHs – polycyclic aromatic hydrocarbons
PCBs – polychlorinated biphenyls
TEF – toxicity equivalency factor. TEF values from Table 708-2 in WAC 173-340-900 (TEF total is sum of all concentrations of cPAHs listed in table multiplied by their TEF values.)
U – Analyte not detected above laboratory PQL.

Table 5

Depth-to-Water Measurements and 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	21-Mar-06	66.35	1,237.93	**2.40**	0.5U
1304.28	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
	19-Mar-13	58.62	1,245.66	**0.67**	0.2U
Duplicate	19-Mar-13	58.62	1,245.66	**0.66**	0.2U
	26-Sep-13	54.37	1,249.91	**0.65**	0.2U
Duplicate	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
MMP-1	1-Mar-93	–	1,239.41	5U	5U
1301.37	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
	23-Sep-09	58.47	1,242.90	–	–
	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

Table 5 (continued)

Depth-to-Water Measurements and TCE, and cis-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	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	–	–
MMP-2	1-Mar-93	–	1,239.35	5U	5U
1301.31	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	–	–
	26-Sep-13	–	–	–	–
	12-Mar-14	–	–	–	–
	23-Sep-14	55.70	1,245.61	–	–
MRC-2	1-Mar-93	–	1,236.27	5U	5U
1312.11	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	–	–
	21-Mar-06	–	–	–	–
	1-Aug-06	–	–	–	–
	21-Mar-07			0.5U [2]	0.5U [2]
	19-Sep-07	–	–	–	–

Table 5 (continued)

Depth-to-Water Measurements and TCE, and cis-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)
MRC-2	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	–	–
MTS-1	1-Mar-93	–	1,257.88	**7.90**	5U
1361.02	28-Feb-95	–	–	–	–
	1997[1]	–	–	–	–
	1-Aug-99	–	–	–	–
	1-Jan-04		1,261.96	**5.60**	0.5U
	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

Table 5 (continued)

Depth-to-Water Measurements and TCE, and cis-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	1-Mar-93	–	1,256.80	**7.4**	5U
1351.88	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**
	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**
Duplicate	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
	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**
MTS-3	23-Mar-05	29.14	1,333.22	0.5U	0.5U
1362.36	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	–	–

Table 5 (continued)

Depth-to-Water Measurements and TCE, and cis-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	20-Aug-12	25.64	1,336.72	–	–
	19-Mar-13	27.87	1,334.49	–	–
	26-Sep-13	27.24	1,335.12	–	–
	12-Mar-14	28.50	1,333.86	–	–
	23-Sep-14	26.45	1,335.91	–	–
MTS-4	23-Mar-05	89.70	1,242.18	**15.0**	0.5U
1331.88	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
	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**
Duplicate	23-Sep-14	79.06	1,252.82	**6.0**	**0.18J**
TVR-1	1-Mar-93	–	1,246.81	**35.00**	5U
1320.17	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
	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
	23-Mar-09	76.76	1,243.41	**8.8**	0.5U

Table 5 (continued)

Depth-to-Water Measurements and TCE, and cis-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)
Duplicate	23-Mar-09	76.76	1,243.41	**9.0**	0.5U
TVR-1	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
TVR-2	1-Mar-93	–	1,247.03	**14.0**	5U
1317.56	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	–	–
	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	–	–
	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	–	–
TVR-3	23-Mar-05	69.63	1,240.97	**43.0**	1.30
1310.60	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

Table 5 (continued)

Depth-to-Water Measurements and TCE, and cis-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	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
Duplicate	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**
TVR-5	21-Mar-06	60.48	1,241.56	**1.6**	0.5U
1302.04	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
	19-Sep-08	54.31	1,247.73	**1.2**	0.5U
	23-Mar-09	59.85	1,242.19	**1.2**	0.5U
	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
	19-Mar-13	52.58	1,249.46	**0.4**	0.2U
	26-Sep-13	51.60	1,250.44	**3.7**	0.2U
	12-Mar-14	56.40	1,245.64	**0.4**	0.2U
	22-Sep-14	52.52	1,249.52	**6.6**	0.5U

Table 5 (continued)

Depth-to-Water Measurements and TCE, and cis-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	21-Mar-06	67.03	1,243.03	**6.8**	0.5U
1310.06	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
	16-Mar-10	66.41	1,243.65	**4.6**	1U
	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
	12-Mar-14	62.80	1,247.26	**8.8**	0.2U
	23-Sep-14	59.94	1,250.12	**11**	**0.090J**
TVR-7	21-Mar-06	67.89	1,243.06	**38.0**	**1.30**
1310.95	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**
Duplicate	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
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

Table 5 (continued)

Depth-to-Water Measurements and TCE, and cis-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)
PAIC Well	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
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
	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

Table 5 (continued)

Depth-to-Water Measurements and TCE, and cis-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	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
MTCA Method A Cleanup Level		–	–	5.0	–
MTCA Method B Cleanup Level		–	–	–	70

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-DCE – cis 1,2-dichloroethene
DTW – depth-to-water
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

Yakima Training Center, Washington

Site	Fire Training Pit			TVR/Old MATES							TVR/Old MATES						
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**
Compound	**TPH-G**	**TPH-D**	**TPH-O**	**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-Sep-06	1-Mar-93	1-Mar-93	1-Mar-93	1-Mar-93	1-Mar-93	23-Mar-05	23-Mar-05	1-Mar-93	1-Mar-93	23-Mar-05	21-Mar-06	21-Mar-06	21-Mar-06
Last Sample Date	22-Sep-14			22-Sep-14	19-Mar-13	21-Mar-07	19-Mar-13	22-Sep-14	22-Sep-14	22-Sep-14	22-Sep-14	22-Sep-14	12-Mar-14	22-Sep-14	22-Sep-14	22-Sep-14	22-Sep-14
Number of Samples	21			18	11	5	8	21	21	3	20	21	14	20	18	18	18
Number of NDs	1	0	7	1	11	5	8	0	0	3	0	0	0	0	0	0	0
Sample Mean	3,892.38	27,344.76	2,966.59	1.45	-	-	-	5.07	23.06	-	8.16	8.12	3.03	16.10	3.01	6.43	21.59
Standard Deviation	5,152.62	22,351.69	3,877.30	0.84	-	-	-	1.44	19.08	-	3.44	2.52	0.67	9.43	4.21	3.55	11.82
Minimum Concentration	500	4,350	93	0.45	-	-	-	2.7	4.4	-	0.52	3.2	1.7	6.6	0.4	1.71	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	-	-	-	1-Mar-93	1-Aug-06	-	23-Mar-05	1-Mar-93	1-Mar-93	23-Mar-05	23-Sep-09	29-Sep-10	1-Aug-06
	Distribution of Data			**Distribution of Data**							**Distribution of Data**						
P Value	<0.0001	<0.0001	<0.0001	0.020	-	-	-	0.951	0.009	-	0.911	0.382	0.220	0.004	<0.0001	0.155	0.541
Normally Distributed?	No	No	No	No	-	-	-	Yes	No	-	Yes	Yes	Yes	No	No	Yes	Yes
Log P Value	0.285	0.293	0.006	0.882	-	-	-	-	0.511	-	-	-	-	0.113	0.227	-	-
Log Normally Distributed?	Yes	Yes	No	Yes	-	-	-	-	Yes	-	-	-	-	Yes	Yes	-	-
	Trend Analysis			**Trend Analysis**													
Linear Regression P Value	0.28	0.15	-	0.0002	-	-	-	<0.0001	0.0030	-	0.0005	0.0008	0.0480	<0.0001	0.9820	0.1570	<0.0001
Slope	-0.0002	0.0002	-	-0.0004	-	-	-	-0.0010	-0.0005	-	-0.0023	-0.0014	-0.0003	-0.0004	-0.000006	0.0013	-0.1110
Trend**	Down	Up	-	Down	-	-	-	Down	Down	-	Down	Down	Down	Down	Down	Up	Down
Statistically Significant?	No	No	-	Yes	-	-	-	Yes	Yes	-	Yes	Yes	Yes	Yes	No	No	Yes
Tau Statistic	-	-	0.0002	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Two Tailed P Value	-	-	0.58	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Trend	-	-	Up	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Statistically Significant?	-	-	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.

Abbreviations and Acronyms:
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
ND – non-detects

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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 / (No)
Former ASP Burn Pits	2. Any family housing within site boundary?	Yes / (No)
	3. Any obvious recent construction/excavation in site boundary?	Yes / (No)
1969 – 1994 Landfill	4. Any family housing within landfill boundary?	Yes / (No)
	5. Any obvious recent construction/excavation within landfill?	Yes / (No)
1954 – 1968 Landfill/Burn Pits	6. Any family housing within landfill boundary?	Yes / (No)
	7. Any obvious recent construction/excavation within landfill?	Yes / (No)
Former Fire Training Pit	8. Any apparent new drinking water wells within site boundary?	Yes / (No)
Building 218	9. Has Building 218 been torn down?	Yes / (No)
Bldg 301 Former UST Site	10. Building 301 been torn down?	Yes / (No)
TVR/Old MATES	11. Any apparent new drinking water wells within 1000 ft of site boundary?	Yes / (No)
	12. Building 843 been torn down? wash rack adjacent 845	Yes / (No)
Centralized Fueling Point	13. Has hard stand been penetrated?	Yes / (No)
	14. Any obvious excavation within boundaries of the hard stand?	Yes / (No)

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

16. Inspection Date: 12-10-14

B. INTERVIEWS

Position	Name	Question	Answer	
JBLM PW GIS Lab	Theresa Hanson	17. Are you still storing LUC data layer in GIS?	(Yes) / No	
		18. Is LUC data layer still available to GIS users?	(Yes) / No	JBLM PW Lewis not updated
YTC PW GIS	David Thom	19. Do you still have LUC data layer in GIS?	(Yes) / No	
JBLM Master Planner	Gary Stedtfeld	20. Do you still have access to LUC data when you need it?	(Yes) / No	
		21. Are you still using the LUC data for a Master Plan overlay?	(Yes) / No	
		22. Any plans for future family housing at YTC?	Yes / (No)	
		23. Any plans for property conveyance in YTC Cantonment Area?	Yes / (No)	
YTC Natural Resources Program Mgr	Pete Nissen	24. Do you still have access to LUC data when you need it?	(Yes) / No	
		25. Are you still using the LUC data as environmental review overlay?	(Yes) / No	
		26. Any plans to take down Buildings 218, 301, or 843?	(Yes) / No	not aware of any plans
YTC Staff Engineer	Phil Fischer	27. Do you still have access to LUC data when you need it?	(Yes) / No	
		28. Are you still aware that relevant LUC data needs to (be added / remain) in future SWSMP updates?	(Yes) / No	
		29. Any plans for new drinking water wells in Cantonment Water System?	Yes / (No)	not aware of any
		30. Any plans for property conveyance in YTC Cantonment Area?	Yes / (No)	
YTC Cultural Resources PM	Randy Kruger	31. Do you still have access to LUC data when you need it?	(Yes) / No	
		32. Are you still using the LUC data for a digging permit overlay?	(Yes) / No	

33. Any comments (required for any "No" answer from Interview Questions 15-19, 22-23, 25-26, 29-30 OR for any "Yes" answer from Questions 20, 21, 24, 27, 28)? **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 back.

35. Interview Dates: 12-10-14 / 12-22-14

C. CERTIFICATION

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

Dan Root

Signature

12-22-14

Date

APPENDIX B

COMPLETED FIELD FORMS AND LABORATORY ANALYTICAL REPORTS

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Tetra Tech, Inc.
Data Review Report

Project Name:	JBLM/Yakima Training Center
Project Number	K1410441
Collection Date:	09/22/14 and 09/23/14
Laboratory:	ALS Environmental, Kelso, WA

DATA REVIEW

- Fifteen water samples were collected and received at the laboratory on 9/25/14. Of these, twelve were analyzed for volatile organic compounds by EPA method SW-846 8260C, one was analyzed for semi-volatile organic compounds by EPA method SW-846 8270D, and four were analyzed for diesel range and gasoline range organics by methods NWTPH-DX and NWTPH-GX respectively. Two trip blanks, one for 8260C and one for TPH, were also collected to assess potential contamination during sample transport. A review was performed of the following parameters as applicable:

- Chain-of-custody (C-O-C) documentation
- Holding time compliance
- Blank sample data
- Spike sample recovery
- Duplicate samples
- Surrogate recoveries

Sample Identification:

FTP-1	TVR-1
FTP-14	TVR-3
FTP-15	TVR-5
FTP-16	TVR-6
815-2	TVR-7
MTS-1	PAIC Well
MTS-2	Panoma Well
MTS-4	Trip Blank
DUP-1	Trip Blank

Review Summary

1. Holding Time

All holding times were met. The cooler arrived at acceptable temperature levels.

2. Matrix Spikes

Due to sample volume, no matrix spikes were run for semi-volatile organics, gasoline range organics, or diesel range organics. Sample VTR-6 was used for the matrix spike and the matrix spike duplicate for volatile organics. 1,1-dichloroethene was out of control high in the MSD, chloroethane was out of control high in both, and 2,2-dichloropropane was out of control low in both. There were no detections for any of these compounds. All other matrix spike and matrix spike duplicate sample recoveries were within acceptable limits of control.

3. Blanks

The method blank for diesel range organics reported detections of 23 µg/L for diesel range organics and 33 µg/L for residual range organics. Samples FTP-14, FTP-15, and FTP-16 may be considered to be biased high. Both the method blank and the trip blank for gasoline range organics were free of contamination. Three method blanks for volatiles were reported with this sample delivery group. These method blanks had reported detections of carbon disulfide, methylene chloride, acetone, 2-butanone, n-butylbenzene, 1,2,4-trichlorobenzene, hexachlorobutadiene, naphthalene, and 1,2,3-trichlorobenzene. As a result, the following compounds and the associated sample concentrations should be considered biased high. 2-butanone in sample VTR-6, carbon disulfide in samples FTP-1, TVR-7, and VTR-1, methylene chloride in the PAIC Well, and naphthalene in sample 815-2. All other sample concentrations were not affected due to the magnitude of their reported concentrations. The trip blank for these samples reported only methylene chloride, already discussed above.

4. Duplicates

Sample DUP-1 was collected as a field duplicate for sample MTS-4. The concentrations of 2-butanone, acetone, cis-1,2-dichloroethene, and trichloroethene were within acceptable limits of control for duplicate RPD. All LCS/LCSD and MS/MSD RPDs were within control limits.

5. Laboratory Control Samples

Three laboratory control samples were analyzed for 8260C with this delivery group. Acetone was out of control high in two of the laboratory control samples and 2,2-dichloropropane was out of control low in one LCS. There were no detections for 2,2-dichloropropane. Any acetone detections may be considered biased high. For 8270D, an LCS and an LCSD were analyzed. All recoveries and duplicate RPD's were within acceptable limits of control. One LCS was analyzed for gasoline range organics and an LCS/LCSD was analyzed for diesel range organics. All laboratory control sample recoveries and duplicate RPD's were within acceptable limits of control.

6. Surrogates

All surrogate recoveries for volatile, semi-volatile, diesel range and gasoline range organics were within acceptable limits of control.

7. Comments

All data are complete and usable.

2014Q01 Groundwater Sampling Event - YTC TVR / Old MATES

Yakima Training Center, WA

Monitoring Well	PDB Installation Date	~~Depth to Water~~	Sample Date	Sample Time	DTW ~~Notes~~
Pomona Well	POC: ~~I don't remember the guy's name~~ - 509-577-3407, 509-577-3400 CHRIS		12MAR14	0950	
PAIC Well	POC: Lyndon Rogers - 509-961-4446 Peter Dell: 509-949-3500		12MAR14	09 ~~0810~~	
815-2	17DEC13	~~59.3~~	12MAR14	0935	62.75
MMP-1	17DEC13	~~57.0~~ ~~[illegible]~~	12MAR14	0710	59.8
MTS-1	17DEC13	97.35 ~~[illegible]~~	12MAR14	0745	DUP-2 0700
MTS-2	17DEC13	~~86.2~~	12MAR14	0800	88.6
MTS-3		28.5 ~~26.8~~			28.5
MTS-4	17DEC13	~~80.4~~	12MAR14	0400	83.7
TVR-1	17DEC13	~~70.0~~	12MAR14	0850 ~~0855~~	~~62.8~~ 73.1
TVR-2	17DEC13	~~67.7~~ ~~[illegible]~~	12MAR14	0810	70.55
TVR-3	17DEC13	~~60.8~~ ~~[illegible]~~	12MAR14	0815	63.50
TVR-5	17DEC13	~~53.8~~	12MAR14	0930	56.4
TVR-6	17DEC13	~~60.5~~	12MAR14	0835	62.8
TVR-7	17DEC13	~~60.7~~	12MAR14	0830	63.75

Notes:

Collect 1 Dupe Get tamalies at Hernandez'

Field Technician Signature 12MAR14 ~~Page 1 of 2~~

2014Q01 Groundwater Sampling Event - YTC Fire Training Pit
Yakima Training Center, Washington

Monitoring Well	Purge Volume (gals)	Depth to Water	Sample Date	Sample Time	Duplicate Name and Time, Notes
FTP 1 (21ft)	8	14.25	11MAR14	~~1350~~	1515
FTP 13 (20ft)		16.5	11MAR14		
FTP 14 (21ft)	8	18.2	11MAR14	1300	DUP-1 1200
FTP 15 (21ft)	7	17.8	11MAR14	1305	
FTP 16 (31ft)	10	26.3	11MAR14	1545	

1200 T. LYNOTT J BECKER ONSITE TO BEGIN SAMPLING EVENT @ FTP-13

1205 CALIBRATED DO & pH METERS

1350 OFFSITE FOR MEETING WELL CODE BACK TO SAMPLE FTP-1 & FTP-16

1500 BACK ONSITE TO SAMPLE FTP-1 & FTP-16

FTP-1 PURGE WATER WAS DUMPED AT WASH RACK W/ OIL/ WATER SEPARATOR 1600 OFFSITE

Field Technician Signature

Groundwater Sampling Field Parameters
Joint Base Lewis McChord, Washington 98433

Sample ID FTP-15 Sample Date/Time 11MAR14, 1315

Time	1235	3 gal	3 gal	2
DTW	17.8			
pH		7.28	7.40	7.41
Cond.		1149	1161	1241
Turb.				
DO		5.88 58.2%	6.20 61.3%	5.55 53.8%
Temp		14.3	13.8	14.2
ORP		-18	-26	-26

Sample ID FTP-16 Sample Date/Time 11MAR14, 1545

Time	1510	3 gal	3 gal	4 gal
DTW	26.3	ALMOST BAILED DRY		
pH		7.23	7.39	7.47
Cond.		2454	2486	2719
DO		4.86 51.0%	4.35 43.3%	4.93 48.4%
Turb.				
Temp		15.9	15.4	14.9
ORP		-16	-24	-28

39.5

Project 41C FTP

Signature Tom Lyf Date

Groundwater Sampling Field Parameters
Joint Base Lewis McChord, Washington 98433

Sample ID	FTP-14	Sample Date/Time	11 MAR 14	1300
Time	1235	3 GAL	3 GAL	2
DTW	18.2	—	—	18.25
pH		6.83	7.43	7.5
Cond.		1159	1104	1236
Turb.		—	—	—
DO		3.0 29.9%	2.64 25.9	2.58 25%
Temp		15.6	14.6	14.7
ORP		-2	-27	-31

Dup-1
1200

Sample ID		Sample Date/Time		
Time				
DTW				
pH				
Cond.				
DO				
Turb.				
Temp				
ORP				

Project YTC FTP

Signature

Date

2014Q01 Groundwater Sampling Event - YTC TVR / Old MATES
Yakima Training Center, WA

Monitoring Well	PDB Installation Date	Depth to Water	Sample Date	Sample Time	Notes

TUES. 17 DEC 2013 J. BECKER ONSITE @ YTC FOR SAMPLING EVENT @ 1220. WILL BEGIN DROPPING PDB'S WHILE WAITING FOR PW/ECY. PDB'S DEPLOYED BY 1415. MADE CONTACT W/ JOAN BARTZ FOR LANDFILL ACCESS. [redacted]

[redacted]

J. Becker

Field Technician Signature

12 MAR 14

Analytical Resources, Incorporated
Analytical Chemists and Consultants

March 26, 2014

Thomas Lynott
Department of the Army
Directorate of Public Works
Attn Environmental Division (T. Lynott)
2012 Liggett Ave Box 339500 MS 17
Joint Base Lewis-McChord, Washington 98433-9500
Official Business

RE: Client Project: TVR FTP
ARI Job No.: YC58

Dear Mr. Lynott:

Please find enclosed the original Chain-of-Custody record (COC), sample receipt documentation, and the final data for the project referenced above. Analytical Resources, Inc. (ARI) accepted twenty water samples on March 12, 2014. For further details regarding sample receipt please refer to the enclosed Cooler Receipt Form.

The samples were analyzed for NWTPH-Dx, NWTPH-Gx, VOCs and SVOCs, as requested on the COCs.

The SVOCs LCS and LCSD sample duplicate RPD is outside of the +/-40% control limts for 4-Chloroaniline.

The VOCs CCALs are out of control high for all associated FORM III "Q" flagged analytes. All associated samples that contain analyte have been flagged with a "Q" qualifier.

The VOCs 3/17/14 LCS and LCSD are out of control high for acetone.

The 3/17/14 VOCs LCS is out of control low for vinyl chloride. The LCSD is in control and no further corrective action was taken.

An electronic copy of this report and all supporting raw data will remain on file with ARI. Should you have any questions or problems, please feel free to contact me at your convenience.

Respectfully,
ANALYTICAL RESOURCES, INC.

Kelly Bottem
Client Services Manager
(206) 695-6211
kellyb@arilabs.com
www.arilabs.com

eFile: YC58

4611 South 134th Place, Suite 100 • Tukwila WA 98168 • **206-695-6200** • **206-695-6201** fax

TO 0021

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number:	Turn-around Requested: STANDARD TAT	Page: 2 of 2	
ARI Client Company: JOINT BASE LEWIS-MCCHORD PUBLIC WORKS	Phone: 253-966-1802	Date: 12 MAR 14	Ice Present? Y
Client Contact: TOM J LYNOTT		No. of Coolers: 3	Cooler Temps: 4.6, 1.8, 5.8
Client Project Name: TVR, FTP			
Client Project #:	Samplers: J. BECKER, T. LYNOTT		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No Containers	Analysis Requested: 1006A VOCs	1003B GX	1003F DX	1007A SVOCs					Notes/Comments
TVR-7	12MAR14	0830	WATER	2	X								TOTAL VOCS
POMONA	12MAR14	0950	WATER	2	X								TPH-GX
PAIC	12MAR14	0910	WATER	2	X								TPH-DX
FTP-1	11MAR14	1515	WATER	9	X	X	X	X					SVOCs
FTP-14	11MAR14	1300	WATER	4		X	X						
FTP-15	11MAR14	1315	WATER	4		X	X						
FTP-16	11MAR14	1545	WATER	4		X	X						
DUP-1	11MAR14	1200	WATER	4		X	X						
DUP-2	12MAR14	0700	WATER	2	X								
TB-1	12MAR14	0630	WATER	2	X								

Comments/Special Instructions	Relinquished by (Signature)	Received by (Signature)	Relinquished by (Signature)	Received by (Signature)
	Printed Name: TOM J LYNOTT	Printed Name: Jennifer Millsap	Printed Name:	Printed Name:
	Company: VERSAR	Company: ARI	Company:	Company:
	Date & Time: 12 MAR 14 1600	Date & Time: 3/12/14 1600	Date & Time:	Date & Time:

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

TO 0021

Chain of Custody Record & Laboratory Analysis Request

ARI Assigned Number: YC-58	Turn-around Requested: STANDARD TAT	Page: 1 of 2	
ARI Client Company: JOINT BASE LEWIS-MCCHORD PUBLIC WORKS	Phone: 253-966-1802	Date: 12 MAR 14	Ice Present? Y
Client Contact: TOM J LYNOTT		No. of Coolers: 3	Cooler Temps: 4.6, 1.8, 5.8
Client Project Name: TVR, FTP			
Client Project #:	Samplers: J. BECKER, T. LYNOTT		

Analytical Resources, Incorporated
Analytical Chemists and Consultants
4611 South 134th Place, Suite 100
Tukwila, WA 98168
206-695-6200 206-695-6201 (fax)

Sample ID	Date	Time	Matrix	No Containers	Analysis Requested: 1006A	Notes/Comments
815-2	12MAR14	0935	WATER	2	X	TOTAL
MMP-1	12MAR14	0710	WATER	2	X	VOCs
MTS-1	12MAR14	0745	WATER	2	X	
MTS-2	12MAR14	0800	WATER	2	X	
MTS-4	12MAR14	0900	WATER	2	X	
TVR-1	12MAR14	0850	WATER	2	X	
TVR-2	12MAR14	0810	WATER	2	X	
TVR-3	12MAR14	0815	WATER	2	X	
TVR-5	12MAR14	0930	WATER	2	X	
TVR-6	12MAR14	0835	WATER	2	X	

Comments/Special Instructions	Relinquished by (Signature)	Received by (Signature)	Relinquished by (Signature)	Received by (Signature)
	Printed Name: TOM J LYNOTT	Printed Name: Jennifer Millsap	Printed Name	Printed Name
	Company: VERSAR	Company: ARI	Company	Company
	Date & Time: 12MAR 14	Date & Time: 3/12/14 1600	Date & Time	Date & Time

Limits of Liability: *ARI will perform all requested services in accordance with appropriate methodology following ARI Standard Operating Procedures and the ARI Quality Assurance Program. This program meets standards for the industry. The total liability of ARI, its officers, agents, employees, or successors, arising out of or in connection with the requested services, shall not exceed the Invoiced amount for said services. The acceptance by the client of a proposal for services by ARI release ARI from any liability in excess thereof, not withstanding any provision to the contrary in any contract, purchase order or co-signed agreement between ARI and the Client.*

Sample Retention Policy: All samples submitted to ARI will be appropriately discarded no sooner than 90 days after receipt or 60 days after submission of hardcopy data, whichever is longer, unless alternate retention schedules have been established by work-order or contract.

Sample ID Cross Reference Report

ANALYTICAL RESOURCES INCORPORATED

ARI Job No: YC58
Client: Joint Base Lewis McChord
Project Event: N/A
Project Name: TVR,FTP

	Sample ID	ARI Lab ID	ARI LIMS ID	Matrix	Sample Date/Time	VTSR
1.	815-2	YC58A	14-4176	Water	03/12/14 09:35	03/12/14 16:00
2.	MMP-1	YC58B	14-4177	Water	03/12/14 07:10	03/12/14 16:00
3.	MTS-1	YC58C	14-4178	Water	03/12/14 07:45	03/12/14 16:00
4.	MTS-2	YC58D	14-4179	Water	03/12/14 08:00	03/12/14 16:00
5.	MTS-4	YC58E	14-4180	Water	03/12/14 09:00	03/12/14 16:00
6.	TVR-1	YC58F	14-4181	Water	03/12/14 08:50	03/12/14 16:00
7.	TVR-2	YC58G	14-4182	Water	03/12/14 08:10	03/12/14 16:00
8.	TVR-3	YC58H	14-4183	Water	03/12/14 08:15	03/12/14 16:00
9.	TVR-5	YC58I	14-4184	Water	03/12/14 09:30	03/12/14 16:00
10.	TVR-6	YC58J	14-4185	Water	03/12/14 08:35	03/12/14 16:00
11.	TVR-7	YC58K	14-4186	Water	03/12/14 08:30	03/12/14 16:00
12.	POMONA	YC58L	14-4187	Water	03/12/14 09:50	03/12/14 16:00
13.	PAIC	YC58M	14-4188	Water	03/12/14 09:10	03/12/14 16:00
14.	DUP-2	YC58N	14-4189	Water	03/12/14 07:00	03/12/14 16:00
15.	TB-1	YC58O	14-4190	Water	03/12/14 06:30	03/12/14 16:00
16.	FTP-1	YC58P	14-4191	Water	03/11/14 15:15	03/12/14 16:00
17.	FTP-14	YC58Q	14-4192	Water	03/11/14 13:00	03/12/14 16:00
18.	FTP-15	YC58R	14-4193	Water	03/11/14 13:15	03/12/14 16:00
19.	FTP-16	YC58S	14-4194	Water	03/11/14 15:45	03/12/14 16:00
20.	DUP-1	YC58T	14-4195	Water	03/11/14 12:00	03/12/14 16:00

Analytical Resources, Incorporated
Analytical Chemists and Consultants

Cooler Receipt Form

ARI Client: JBCM Project Name: TUR, FTP

COC No(s): _____ (NA) Delivered by: Fed-Ex UPS Courier (Hand Delivered) Other: _____

Assigned ARI Job No. YC58 Tracking No: _____ (NA)

Preliminary Examination Phase:

Were intact, properly signed and dated custody seals attached to the outside of to cooler?	YES	(NO)
Were custody papers included with the cooler?	(YES)	NO
Were custody papers properly filled out (ink, signed, etc.)	(YES)	NO

Temperature of Cooler(s) (°C) (recommended 2 0-6.0 °C for chemistry): 4.6 1.8 5.8

Time: 1600 If cooler temperature is out of compliance fill out form 00070F Temp Gun ID#: 90877452

Cooler Accepted by: JM Date: 3/12/14 Time: 1600

Complete custody forms and attach all shipping documents

Log-In Phase:

Was a temperature blank included in the cooler?		YES	(NO)
What kind of packing material was used?	Bubble Wrap (Wet Ice) Gel Packs Baggies Foam Block Paper Other: _____		
Was sufficient ice used (if appropriate)?	NA	(YES)	NO
Were all bottles sealed in individual plastic bags?		YES	(NO)
Did all bottles arrive in good condition (unbroken)?		(YES)	NO
Were all bottle labels complete and legible?		(YES)	NO
Did the number of containers listed on COC match with the number of containers received?		(YES)	NO
Did all bottle labels and tags agree with custody papers?		(YES)	NO
Were all bottles used correct for the requested analyses?		(YES)	NO
Do any of the analyses (bottles) require preservation? (attach preservation sheet, excluding VOCs)..	NA	YES	NO
Were all VOC vials free of air bubbles?	NA	YES	NO
Was sufficient amount of sample sent in each bottle?		YES	NO
Date VOC Trip Blank was made at ARI..	NA	_____	

Was Sample Split by ARI NA YES Date/Time: _____ Equipment: _____ Split by: _____

Samples Logged by _____ Date: _____ Time: _____

***** Notify Project Manager of discrepancies or concerns *****

Sample ID on Bottle	Sample ID on COC	Sample ID on Bottle	Sample ID on COC

Additional Notes, Discrepancies, & Resolutions:

By: Date:

Small Air Bubbles ~2mm	Peabubbles 2-4 mm	LARGE Air Bubbles > 4 mm
• • •	• • •	● ● ●

Small → "sm" (< 2 mm)
Peabubbles → "pb" (2 to < 4 mm)
Large → "lg" (4 to < 6 mm)
Headspace → "hs" (> 6 mm)

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: 815-2**
Page 1 of 2 **SAMPLE**

Lab Sample ID: YC58A
LIMS ID: 14-4176
Matrix: Water
Data Release Authorized:
Reported: 03/19/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Date Sampled: 03/12/14
Date Received: 03/12/14

Instrument/Analyst: NT3/PAB
Date Analyzed: 03/17/14 18:22

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	**Acetone**	**5.0**	**10**	**Q**
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	**Trichloroethene**	**0.20**	**0.45**	
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	**m,p-Xylene**	**0.40**	**0.42**	
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: 815-2**
 SAMPLE

Lab Sample ID: YC58A
LIMS ID: 14-4176
Matrix: Water
Date Analyzed: 03/17/14 18:22

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Iodomethane	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	**1,2,4-Trimethylbenzene**	**0.20**	**0.32**	
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	1,2-Dibromoethane	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	**Naphthalene**	**0.50**	**0.90**	**Q**
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	100%
d8-Toluene	97.2%
Bromofluorobenzene	92.7%
d4-1,2-Dichlorobenzene	102%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MMP-1**
 SAMPLE

Lab Sample ID: YC58B
LIMS ID: 14-4177
Matrix: Water
Data Release Authorized:
Reported: 03/19/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Date Sampled: 03/12/14
Date Received: 03/12/14

Instrument/Analyst: NT3/PAB
Date Analyzed: 03/17/14 18:51

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	**Acetone**	**5.0**	**11**	**Q**
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MMP-1**
 SAMPLE

Lab Sample ID: YC58B
LIMS ID: 14-4177
Matrix: Water
Date Analyzed: 03/17/14 18:51

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Iodomethane	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	1,2-Dibromoethane	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	101%
d8-Toluene	98.3%
Bromofluorobenzene	92.9%
d4-1,2-Dichlorobenzene	102%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MTS-1**
 SAMPLE

Lab Sample ID: YC58C
LIMS ID: 14-4178
Matrix: Water
Data Release Authorized:
Reported: 03/19/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Date Sampled: 03/12/14
Date Received: 03/12/14

Instrument/Analyst: NT3/PAB
Date Analyzed: 03/17/14 19:20

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	**Acetone**	**5.0**	**8.6**	**Q**
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	**Trichloroethene**	**0.20**	**2.7**	
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MTS-1**
 SAMPLE

Lab Sample ID: YC58C
LIMS ID: 14-4178
Matrix: Water
Date Analyzed: 03/17/14 19:20

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Iodomethane	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	1,2-Dibromoethane	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	100%
d8-Toluene	97.7%
Bromofluorobenzene	93.2%
d4-1,2-Dichlorobenzene	99.3%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MTS-2**
Page 1 of 2 **SAMPLE**

Lab Sample ID: YC58D
LIMS ID: 14-4179
Matrix: Water
Data Release Authorized:
Reported: 03/19/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Date Sampled: 03/12/14
Date Received: 03/12/14

Instrument/Analyst: NT3/PAB
Date Analyzed: 03/17/14 19:49

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	**Acetone**	**5.0**	**12**	**Q**
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	**Trichloroethene**	**0.20**	**8.4**	
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MTS-2**
 SAMPLE

Lab Sample ID: YC58D QC Report No: YC58-Joint Base Lewis McChord
LIMS ID: 14-4179 Project: TVR,FTP
Matrix: Water
Date Analyzed: 03/17/14 19:49

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Iodomethane	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	1,2-Dibromoethane	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	97.8%
Bromofluorobenzene	94.0%
d4-1,2-Dichlorobenzene	101%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MTS-4**
 SAMPLE

Lab Sample ID: YC58E
LIMS ID: 14-4180
Matrix: Water
Data Release Authorized:
Reported: 03/19/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Date Sampled: 03/12/14
Date Received: 03/12/14

Instrument/Analyst: NT3/PAB
Date Analyzed: 03/18/14 13:27

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	**Acetone**	**5.0**	**9.0**	**Q**
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	**Trichloroethene**	**0.20**	**5.4**	
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MTS-4**
Page 2 of 2 **SAMPLE**

Lab Sample ID: YC58E
LIMS ID: 14-4180
Matrix: Water
Date Analyzed: 03/18/14 13:27

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Iodomethane	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	1,2-Dibromoethane	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	98.3%
d8-Toluene	95.0%
Bromofluorobenzene	91.4%
d4-1,2-Dichlorobenzene	99.5%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: TVR-1**
Page 1 of 2 **SAMPLE**

Lab Sample ID: YC58F
LIMS ID: 14-4181
Matrix: Water
Data Release Authorized:
Reported: 03/19/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Date Sampled: 03/12/14
Date Received: 03/12/14

Instrument/Analyst: NT3/PAB
Date Analyzed: 03/18/14 13:56

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	**Acetone**	**5.0**	**9.6**	**Q**
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	**Trichloroethene**	**0.20**	**5.4**	
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: TVR-1**
 SAMPLE

Lab Sample ID: YC58F
LIMS ID: 14-4181
Matrix: Water
Date Analyzed: 03/18/14 13:56

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Iodomethane	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	1,2-Dibromoethane	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	103%
d8-Toluene	99.5%
Bromofluorobenzene	94.6%
d4-1,2-Dichlorobenzene	102%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: TVR-2**
 SAMPLE

Lab Sample ID: YC58G
LIMS ID: 14-4182
Matrix: Water
Data Release Authorized:
Reported: 03/19/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Date Sampled: 03/12/14
Date Received: 03/12/14

Instrument/Analyst: NT3/PAB
Date Analyzed: 03/18/14 14:26

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	**Acetone**	**5.0**	**12**	**Q**
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	**Trichloroethene**	**0.20**	**2.1**	
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: TVR-2**
 SAMPLE

Lab Sample ID: YC58G
LIMS ID: 14-4182
Matrix: Water
Date Analyzed: 03/18/14 14:26

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Iodomethane	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	1,2-Dibromoethane	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.1%
d8-Toluene	96.1%
Bromofluorobenzene	92.0%
d4-1,2-Dichlorobenzene	101%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: TVR-3**
Page 1 of 2 **SAMPLE**

Lab Sample ID: YC58H
LIMS ID: 14-4183
Matrix: Water
Data Release Authorized:
Reported: 03/19/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Date Sampled: 03/12/14
Date Received: 03/12/14

Instrument/Analyst: NT3/PAB
Date Analyzed: 03/18/14 14:55

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	**Acetone**	**5.0**	**11**	**Q**
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	**cis-1,2-Dichloroethene**	**0.20**	**0.22**	
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	**Trichloroethene**	**0.20**	**8.2**	
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: TVR-3**
 SAMPLE

Lab Sample ID: YC58H QC Report No: YC58-Joint Base Lewis McChord
LIMS ID: 14-4183 Project: TVR,FTP
Matrix: Water
Date Analyzed: 03/18/14 14:55

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Iodomethane	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	1,2-Dibromoethane	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	104%
d8-Toluene	96.0%
Bromofluorobenzene	93.2%
d4-1,2-Dichlorobenzene	101%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: TVR-5**
Page 1 of 2 **SAMPLE**

Lab Sample ID: YC58I
LIMS ID: 14-4184
Matrix: Water
Data Release Authorized:
Reported: 03/19/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Date Sampled: 03/12/14
Date Received: 03/12/14

Instrument/Analyst: NT3/PAB
Date Analyzed: 03/18/14 15:24

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	**Acetone**	**5.0**	**10**	**Q**
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	**Trichloroethene**	**0.20**	**0.44**	
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: TVR-5**
 SAMPLE

Lab Sample ID: YC58I QC Report No: YC58-Joint Base Lewis McChord
LIMS ID: 14-4184 Project: TVR,FTP
Matrix: Water
Date Analyzed: 03/18/14 15:24

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Iodomethane	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	1,2-Dibromoethane	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	101%
d8-Toluene	97.2%
Bromofluorobenzene	91.8%
d4-1,2-Dichlorobenzene	101%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: TVR-6**
Page 1 of 2 **SAMPLE**

Lab Sample ID: YC58J
LIMS ID: 14-4185
Matrix: Water
Data Release Authorized:
Reported: 03/19/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Date Sampled: 03/12/14
Date Received: 03/12/14

Instrument/Analyst: NT3/PAB
Date Analyzed: 03/18/14 15:53

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	**Acetone**	**5.0**	**11**	**Q**
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	**Trichloroethene**	**0.20**	**8.8**	
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: TVR-6**
Page 2 of 2 **SAMPLE**

Lab Sample ID: YC58J QC Report No: YC58-Joint Base Lewis McChord
LIMS ID: 14-4185 Project: TVR,FTP
Matrix: Water
Date Analyzed: 03/18/14 15:53

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Iodomethane	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	1,2-Dibromoethane	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	97.6%
d8-Toluene	97.4%
Bromofluorobenzene	94.5%
d4-1,2-Dichlorobenzene	102%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: TVR-7**
Page 1 of 2 **SAMPLE**

Lab Sample ID: YC58K
LIMS ID: 14-4186
Matrix: Water
Data Release Authorized:
Reported: 03/19/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Date Sampled: 03/12/14
Date Received: 03/12/14

Instrument/Analyst: NT3/PAB
Date Analyzed: 03/18/14 16:23

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	**Acetone**	**5.0**	**9.4**	**Q**
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	**Trichloroethene**	**0.20**	**6.2**	
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: TVR-7**
 SAMPLE

Lab Sample ID: YC58K
LIMS ID: 14-4186
Matrix: Water
Date Analyzed: 03/18/14 16:23

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Iodomethane	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	1,2-Dibromoethane	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.8%
d8-Toluene	98.9%
Bromofluorobenzene	89.9%
d4-1,2-Dichlorobenzene	103%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: POMONA SAMPLE**

Lab Sample ID: YC58L
LIMS ID: 14-4187
Matrix: Water
Data Release Authorized:
Reported: 03/19/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Date Sampled: 03/12/14
Date Received: 03/12/14

Instrument/Analyst: NT3/PAB
Date Analyzed: 03/18/14 16:52

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: POMONA SAMPLE**

Lab Sample ID: YC58L
LIMS ID: 14-4187
Matrix: Water
Date Analyzed: 03/18/14 16:52

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Iodomethane	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	1,2-Dibromoethane	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.2%
d8-Toluene	97.3%
Bromofluorobenzene	91.7%
d4-1,2-Dichlorobenzene	100%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: PAIC SAMPLE**

Lab Sample ID: YC58M
LIMS ID: 14-4188
Matrix: Water
Data Release Authorized:
Reported: 03/19/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Date Sampled: 03/12/14
Date Received: 03/12/14

Instrument/Analyst: NT3/PAB
Date Analyzed: 03/18/14 17:20

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: PAIC SAMPLE**

Lab Sample ID: YC58M
LIMS ID: 14-4188
Matrix: Water
Date Analyzed: 03/18/14 17:20

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Iodomethane	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	1,2-Dibromoethane	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	95.9%
Bromofluorobenzene	93.5%
d4-1,2-Dichlorobenzene	100%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: DUP-2**
Page 1 of 2 **SAMPLE**

Lab Sample ID: YC58N
LIMS ID: 14-4189
Matrix: Water
Data Release Authorized:
Reported: 03/19/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Date Sampled: 03/12/14
Date Received: 03/12/14

Instrument/Analyst: NT3/PAB
Date Analyzed: 03/18/14 17:49

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	**Acetone**	**5.0**	**9.8**	**Q**
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	**Trichloroethene**	**0.20**	**2.8**	
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: DUP-2**
 SAMPLE

Lab Sample ID: YC58N
LIMS ID: 14-4189
Matrix: Water
Date Analyzed: 03/18/14 17:49

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Iodomethane	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	1,2-Dibromoethane	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	102%
d8-Toluene	98.8%
Bromofluorobenzene	94.2%
d4-1,2-Dichlorobenzene	100%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: TB-1**
Page 1 of 2 **SAMPLE**

Lab Sample ID: YC58O
LIMS ID: 14-4190
Matrix: Water
Data Release Authorized:
Reported: 03/19/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Date Sampled: 03/12/14
Date Received: 03/12/14

Instrument/Analyst: NT3/PAB
Date Analyzed: 03/18/14 18:19

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: TB-1**
 SAMPLE

Lab Sample ID: YC58O
LIMS ID: 14-4190
Matrix: Water
Date Analyzed: 03/18/14 18:19

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Iodomethane	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	1,2-Dibromoethane	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery	
d4-1,2-Dichloroethane	102%
d8-Toluene	96.9%
Bromofluorobenzene	93.0%
d4-1,2-Dichlorobenzene	101%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

YC58A : 00028

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: FTP-1**
Page 1 of 2 **SAMPLE**

Lab Sample ID: YC58P
LIMS ID: 14-4191
Matrix: Water
Data Release Authorized:
Reported: 03/19/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Date Sampled: 03/11/14
Date Received: 03/12/14

Instrument/Analyst: NT3/PAB
Date Analyzed: 03/18/14 18:48

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	**Acetone**	**5.0**	**12**	**Q**
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	**Benzene**	**0.20**	**3.4**	
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	**Ethylbenzene**	**0.20**	**4.5**	
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	**o-Xylene**	**0.20**	**0.95**	
95-50-1	**1,2-Dichlorobenzene**	**0.20**	**0.81**	
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: FTP-1**
 SAMPLE

Lab Sample ID: YC58P
LIMS ID: 14-4191
Matrix: Water
Date Analyzed: 03/18/14 18:48

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Iodomethane	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	**1,2,4-Trimethylbenzene**	**0.20**	**41**	
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	1,2-Dibromoethane	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	**Isopropylbenzene**	**0.20**	**4.0**	
103-65-1	**n-Propylbenzene**	**0.20**	**5.4**	
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	**sec-Butylbenzene**	**0.20**	**2.5**	
99-87-6	**4-Isopropyltoluene**	**0.20**	**3.9**	
104-51-8	**n-Butylbenzene**	**0.20**	**3.3**	
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	**Naphthalene**	**0.50**	**66**	**Q**
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	101%
d8-Toluene	97.3%
Bromofluorobenzene	96.2%
d4-1,2-Dichlorobenzene	102%

2-Chloroethylvinylether is an acid labile compound and may not be recovered from an acid preserved sample.

EPA SW-846 indicates that vinyl chloride and styrene may degrade in the presence of acid preservative.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-031714A**
 METHOD BLANK

Lab Sample ID: MB-031714A
LIMS ID: 14-4176
Matrix: Water
Data Release Authorized:
Reported: 03/19/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT3/PAB
Date Analyzed: 03/17/14 12:56

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-031714A**
 METHOD BLANK

Lab Sample ID: MB-031714A QC Report No: YC58-Joint Base Lewis McChord
LIMS ID: 14-4176 Project: TVR,FTP
Matrix: Water
Date Analyzed: 03/17/14 12:56

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Iodomethane	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	1,2-Dibromoethane	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery

d4-1,2-Dichloroethane	99.2%
d8-Toluene	96.9%
Bromofluorobenzene	94.7%
d4-1,2-Dichlorobenzene	102%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-031814A**
 METHOD BLANK

Lab Sample ID: MB-031814A
LIMS ID: 14-4180
Matrix: Water
Data Release Authorized:
Reported: 03/19/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Date Sampled: NA
Date Received: NA

Instrument/Analyst: NT3/PAB
Date Analyzed: 03/18/14 12:56

Sample Amount: 10.0 mL
Purge Volume: 10.0 mL

CAS Number	Analyte	LOQ	Result	Q
74-87-3	Chloromethane	0.50	< 0.50	U
74-83-9	Bromomethane	1.0	< 1.0	U
75-01-4	Vinyl Chloride	0.20	< 0.20	U
75-00-3	Chloroethane	0.20	< 0.20	U
75-09-2	Methylene Chloride	1.0	< 1.0	U
67-64-1	Acetone	5.0	< 5.0	U
75-15-0	Carbon Disulfide	0.20	< 0.20	U
75-35-4	1,1-Dichloroethene	0.20	< 0.20	U
75-34-3	1,1-Dichloroethane	0.20	< 0.20	U
156-60-5	trans-1,2-Dichloroethene	0.20	< 0.20	U
156-59-2	cis-1,2-Dichloroethene	0.20	< 0.20	U
67-66-3	Chloroform	0.20	< 0.20	U
107-06-2	1,2-Dichloroethane	0.20	< 0.20	U
78-93-3	2-Butanone	5.0	< 5.0	U
71-55-6	1,1,1-Trichloroethane	0.20	< 0.20	U
56-23-5	Carbon Tetrachloride	0.20	< 0.20	U
108-05-4	Vinyl Acetate	0.20	< 0.20	U
75-27-4	Bromodichloromethane	0.20	< 0.20	U
78-87-5	1,2-Dichloropropane	0.20	< 0.20	U
10061-01-5	cis-1,3-Dichloropropene	0.20	< 0.20	U
79-01-6	Trichloroethene	0.20	< 0.20	U
124-48-1	Dibromochloromethane	0.20	< 0.20	U
79-00-5	1,1,2-Trichloroethane	0.20	< 0.20	U
71-43-2	Benzene	0.20	< 0.20	U
10061-02-6	trans-1,3-Dichloropropene	0.20	< 0.20	U
110-75-8	2-Chloroethylvinylether	1.0	< 1.0	U
75-25-2	Bromoform	0.20	< 0.20	U
108-10-1	4-Methyl-2-Pentanone (MIBK)	5.0	< 5.0	U
591-78-6	2-Hexanone	5.0	< 5.0	U
127-18-4	Tetrachloroethene	0.20	< 0.20	U
79-34-5	1,1,2,2-Tetrachloroethane	0.20	< 0.20	U
108-88-3	Toluene	0.20	< 0.20	U
108-90-7	Chlorobenzene	0.20	< 0.20	U
100-41-4	Ethylbenzene	0.20	< 0.20	U
100-42-5	Styrene	0.20	< 0.20	U
75-69-4	Trichlorofluoromethane	0.20	< 0.20	U
76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	0.20	< 0.20	U
179601-23-1	m,p-Xylene	0.40	< 0.40	U
95-47-6	o-Xylene	0.20	< 0.20	U
95-50-1	1,2-Dichlorobenzene	0.20	< 0.20	U
541-73-1	1,3-Dichlorobenzene	0.20	< 0.20	U
106-46-7	1,4-Dichlorobenzene	0.20	< 0.20	U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: MB-031814A**
 METHOD BLANK

Lab Sample ID: MB-031814A QC Report No: YC58-Joint Base Lewis McChord
LIMS ID: 14-4180 Project: TVR,FTP
Matrix: Water
Date Analyzed: 03/18/14 12:56

CAS Number	Analyte	LOQ	Result	Q
107-02-8	Acrolein	5.0	< 5.0	U
74-88-4	Iodomethane	1.0	< 1.0	U
74-96-4	Bromoethane	0.20	< 0.20	U
107-13-1	Acrylonitrile	1.0	< 1.0	U
563-58-6	1,1-Dichloropropene	0.20	< 0.20	U
74-95-3	Dibromomethane	0.20	< 0.20	U
630-20-6	1,1,1,2-Tetrachloroethane	0.20	< 0.20	U
96-12-8	1,2-Dibromo-3-chloropropane	0.50	< 0.50	U
96-18-4	1,2,3-Trichloropropane	0.50	< 0.50	U
110-57-6	trans-1,4-Dichloro-2-butene	1.0	< 1.0	U
108-67-8	1,3,5-Trimethylbenzene	0.20	< 0.20	U
95-63-6	1,2,4-Trimethylbenzene	0.20	< 0.20	U
87-68-3	Hexachlorobutadiene	0.50	< 0.50	U
106-93-4	1,2-Dibromoethane	0.20	< 0.20	U
74-97-5	Bromochloromethane	0.20	< 0.20	U
594-20-7	2,2-Dichloropropane	0.20	< 0.20	U
142-28-9	1,3-Dichloropropane	0.20	< 0.20	U
98-82-8	Isopropylbenzene	0.20	< 0.20	U
103-65-1	n-Propylbenzene	0.20	< 0.20	U
108-86-1	Bromobenzene	0.20	< 0.20	U
95-49-8	2-Chlorotoluene	0.20	< 0.20	U
106-43-4	4-Chlorotoluene	0.20	< 0.20	U
98-06-6	tert-Butylbenzene	0.20	< 0.20	U
135-98-8	sec-Butylbenzene	0.20	< 0.20	U
99-87-6	4-Isopropyltoluene	0.20	< 0.20	U
104-51-8	n-Butylbenzene	0.20	< 0.20	U
120-82-1	1,2,4-Trichlorobenzene	0.50	< 0.50	U
91-20-3	Naphthalene	0.50	< 0.50	U
87-61-6	1,2,3-Trichlorobenzene	0.50	< 0.50	U

Reported in µg/L (ppb)

Volatile Surrogate Recovery	
d4-1,2-Dichloroethane	103%
d8-Toluene	96.5%
Bromofluorobenzene	91.5%
d4-1,2-Dichlorobenzene	101%

ANALYTICAL RESOURCES INCORPORATED

VOA SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

ARI ID	Client ID	PV	DCE	TOL	BFB	DCB	TOT OUT
MB-031714A	Method Blank	10	99.2%	96.9%	94.7%	102%	0
LCS-031714A	Lab Control	10	102%	96.9%	96.3%	101%	0
LCSD-031714A	Lab Control Dup	10	101%	96.9%	94.1%	101%	0
YC58A	815-2	10	100%	97.2%	92.7%	102%	0
YC58B	MMP-1	10	101%	98.3%	92.9%	102%	0
YC58C	MTS-1	10	100%	97.7%	93.2%	99.3%	0
YC58D	MTS-2	10	102%	97.8%	94.0%	101%	0
MB-031814A	Method Blank	10	103%	96.5%	91.5%	101%	0
LCS-031814A	Lab Control	10	100%	97.1%	95.9%	99.7%	0
LCSD-031814A	Lab Control Dup	10	102%	98.4%	93.1%	100%	0
YC58E	MTS-4	10	98.3%	95.0%	91.4%	99.5%	0
YC58F	TVR-1	10	103%	99.5%	94.6%	102%	0
YC58G	TVR-2	10	99.1%	96.1%	92.0%	101%	0
YC58H	TVR-3	10	104%	96.0%	93.2%	101%	0
YC58I	TVR-5	10	101%	97.2%	91.8%	101%	0
YC58J	TVR-6	10	97.6%	97.4%	94.5%	102%	0
YC58K	TVR-7	10	99.8%	98.9%	89.9%	103%	0
YC58L	POMONA	10	99.2%	97.3%	91.7%	100%	0
YC58M	PAIC	10	102%	95.9%	93.5%	100%	0
YC58N	DUP-2	10	102%	98.8%	94.2%	100%	0
YC58O	TB-1	10	102%	96.9%	93.0%	101%	0
YC58P	FTP-1	10	101%	97.3%	96.2%	102%	0

	LCS/MB LIMITS	QC LIMITS
SW8260C		
(DCE) = d4-1,2-Dichloroethane	(80-120)	(80-130)
(TOL) = d8-Toluene	(80-120)	(80-120)
(BFB) = Bromofluorobenzene	(80-120)	(80-120)
(DCB) = d4-1,2-Dichlorobenzene	(80-120)	(80-120)

Prep Method: SW5030B
Log Number Range: 14-4176 to 14-4191

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-031714A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-031714A QC Report No: YC58-Joint Base Lewis McChord
LIMS ID: 14-4176 Project: TVR,FTP
Matrix: Water
Data Release Authorized: Date Sampled: NA
Reported: 03/19/14 Date Received: NA

Instrument/Analyst LCS: NT3/PAB Sample Amount LCS: 10.0 mL
LCSD: NT3/PAB LCSD: 10.0 mL
Date Analyzed LCS: 03/17/14 11:58 Purge Volume LCS: 10.0 mL
LCSD: 03/17/14 12:27 LCSD: 10.0 mL

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	9.46	10.0	94.6%	9.37	10.0	93.7%	1.0%
Bromomethane	8.87	10.0	88.7%	9.17	10.0	91.7%	3.3%
Vinyl Chloride	9.32	10.0	93.2%	9.11	10.0	91.1%	2.3%
Chloroethane	8.66	10.0	86.6%	8.74	10.0	87.4%	0.9%
Methylene Chloride	8.98	10.0	89.8%	9.14	10.0	91.4%	1.8%
Acetone	63.2 Q	50.0	126%	63.5 Q	50.0	127%	0.5%
Carbon Disulfide	9.33	10.0	93.3%	9.44	10.0	94.4%	1.2%
1,1-Dichloroethene	9.23	10.0	92.3%	8.93	10.0	89.3%	3.3%
1,1-Dichloroethane	9.45	10.0	94.5%	9.50	10.0	95.0%	0.5%
trans-1,2-Dichloroethene	9.43	10.0	94.3%	9.61	10.0	96.1%	1.9%
cis-1,2-Dichloroethene	9.54	10.0	95.4%	9.15	10.0	91.5%	4.2%
Chloroform	9.30	10.0	93.0%	9.32	10.0	93.2%	0.2%
1,2-Dichloroethane	9.83	10.0	98.3%	9.77	10.0	97.7%	0.6%
2-Butanone	58.6 Q	50.0	117%	60.6 Q	50.0	121%	3.4%
1,1,1-Trichloroethane	9.41	10.0	94.1%	9.36	10.0	93.6%	0.5%
Carbon Tetrachloride	9.70	10.0	97.0%	9.73	10.0	97.3%	0.3%
Vinyl Acetate	9.78	10.0	97.8%	9.99	10.0	99.9%	2.1%
Bromodichloromethane	9.91	10.0	99.1%	9.75	10.0	97.5%	1.6%
1,2-Dichloropropane	9.52	10.0	95.2%	9.53	10.0	95.3%	0.1%
cis-1,3-Dichloropropene	9.80	10.0	98.0%	9.45	10.0	94.5%	3.6%
Trichloroethene	9.55	10.0	95.5%	9.53	10.0	95.3%	0.2%
Dibromochloromethane	11.6	10.0	116%	11.2	10.0	112%	3.5%
1,1,2-Trichloroethane	10.3	10.0	103%	10.6	10.0	106%	2.9%
Benzene	9.98	10.0	99.8%	9.75	10.0	97.5%	2.3%
trans-1,3-Dichloropropene	9.65	10.0	96.5%	9.51	10.0	95.1%	1.5%
2-Chloroethylvinylether	10.3	10.0	103%	10.4	10.0	104%	1.0%
Bromoform	12.4 Q	10.0	124%	12.6 Q	10.0	126%	1.6%
4-Methyl-2-Pentanone (MIBK)	56.3	50.0	113%	57.8	50.0	116%	2.6%
2-Hexanone	60.1 Q	50.0	120%	61.4 Q	50.0	123%	2.1%
Tetrachloroethene	10.2	10.0	102%	10.1	10.0	101%	1.0%
1,1,2,2-Tetrachloroethane	11.6	10.0	116%	11.6	10.0	116%	0.0%
Toluene	9.78	10.0	97.8%	9.55	10.0	95.5%	2.4%
Chlorobenzene	10.7	10.0	107%	10.3	10.0	103%	3.8%
Ethylbenzene	10.1	10.0	101%	9.87	10.0	98.7%	2.3%
Styrene	10.9	10.0	109%	10.7	10.0	107%	1.9%
Trichlorofluoromethane	9.47	10.0	94.7%	9.40	10.0	94.0%	0.7%
1,1,2-Trichloro-1,2,2-trifluoroetha	9.50	10.0	95.0%	9.36	10.0	93.6%	1.5%
m,p-Xylene	21.6	20.0	108%	21.4	20.0	107%	0.9%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-031714A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-031714A QC Report No: YC58-Joint Base Lewis McChord
LIMS ID: 14-4176 Project: TVR,FTP
Matrix: Water

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
o-Xylene	10.4	10.0	104%	10.1	10.0	101%	2.9%
1,2-Dichlorobenzene	10.8	10.0	108%	10.6	10.0	106%	1.9%
1,3-Dichlorobenzene	11.1	10.0	111%	10.9	10.0	109%	1.8%
1,4-Dichlorobenzene	10.9	10.0	109%	10.8	10.0	108%	0.9%
Acrolein	59.3 Q	50.0	119%	61.0 Q	50.0	122%	2.8%
Iodomethane	8.78	10.0	87.8%	8.75	10.0	87.5%	0.3%
Bromoethane	8.44	10.0	84.4%	8.27	10.0	82.7%	2.0%
Acrylonitrile	11.1	10.0	111%	11.5	10.0	115%	3.5%
1,1-Dichloropropene	9.51	10.0	95.1%	9.27	10.0	92.7%	2.6%
Dibromomethane	9.91	10.0	99.1%	9.96	10.0	99.6%	0.5%
1,1,1,2-Tetrachloroethane	10.5	10.0	105%	10.5	10.0	105%	0.0%
1,2-Dibromo-3-chloropropane	12.0 Q	10.0	120%	12.0 Q	10.0	120%	0.0%
1,2,3-Trichloropropane	11.7	10.0	117%	11.6	10.0	116%	0.9%
trans-1,4-Dichloro-2-butene	11.5	10.0	115%	11.3	10.0	113%	1.8%
1,3,5-Trimethylbenzene	10.6	10.0	106%	10.4	10.0	104%	1.9%
1,2,4-Trimethylbenzene	10.4	10.0	104%	10.2	10.0	102%	1.9%
Hexachlorobutadiene	11.6 Q	10.0	116%	11.4 Q	10.0	114%	1.7%
1,2-Dibromoethane	10.2	10.0	102%	10.2	10.0	102%	0.0%
Bromochloromethane	9.64	10.0	96.4%	9.65	10.0	96.5%	0.1%
2,2-Dichloropropane	8.84	10.0	88.4%	8.74	10.0	87.4%	1.1%
1,3-Dichloropropane	10.6	10.0	106%	10.4	10.0	104%	1.9%
Isopropylbenzene	10.5	10.0	105%	10.4	10.0	104%	1.0%
n-Propylbenzene	10.6	10.0	106%	10.3	10.0	103%	2.9%
Bromobenzene	10.3	10.0	103%	10.0	10.0	100%	3.0%
2-Chlorotoluene	9.40	10.0	94.0%	10.3	10.0	103%	9.1%
4-Chlorotoluene	10.1	10.0	101%	9.92	10.0	99.2%	1.8%
tert-Butylbenzene	10.3	10.0	103%	10.1	10.0	101%	2.0%
sec-Butylbenzene	10.7	10.0	107%	10.5	10.0	105%	1.9%
4-Isopropyltoluene	10.8	10.0	108%	10.4	10.0	104%	3.8%
n-Butylbenzene	10.9	10.0	109%	10.6	10.0	106%	2.8%
1,2,4-Trichlorobenzene	11.2	10.0	112%	11.1	10.0	111%	0.9%
Naphthalene	13.1 Q	10.0	131%	13.3 Q	10.0	133%	1.5%
1,2,3-Trichlorobenzene	11.7	10.0	117%	11.5	10.0	115%	1.7%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	102%	101%
d8-Toluene	96.9%	96.9%
Bromofluorobenzene	96.3%	94.1%
d4-1,2-Dichlorobenzene	101%	101%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-031814A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-031814A
LIMS ID: 14-4180
Matrix: Water
Data Release Authorized: B
Reported: 03/19/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Date Sampled: NA
Date Received: NA

Instrument/Analyst LCS: NT3/PAB
LCSD: NT3/PAB
Date Analyzed LCS: 03/18/14 11:58
LCSD: 03/18/14 12:27

Sample Amount LCS: 10.0 mL
LCSD: 10.0 mL
Purge Volume LCS: 10.0 mL
LCSD: 10.0 mL

Analyte	LCS		Spike Added-LCS	LCS Recovery	LCSD		Spike Added-LCSD	LCSD Recovery	RPD
Chloromethane	8.81		10.0	88.1%	8.97		10.0	89.7%	1.8%
Bromomethane	8.13		10.0	81.3%	8.89		10.0	88.9%	8.9%
Vinyl Chloride	7.29		10.0	72.9%	7.93		10.0	79.3%	8.4%
Chloroethane	7.39		10.0	73.9%	8.09		10.0	80.9%	9.0%
Methylene Chloride	8.88		10.0	88.8%	8.18		10.0	81.8%	8.2%
Acetone	60.1	Q	50.0	120%	61.2	Q	50.0	122%	1.8%
Carbon Disulfide	8.95		10.0	89.5%	8.93		10.0	89.3%	0.2%
1,1-Dichloroethene	8.93		10.0	89.3%	8.91		10.0	89.1%	0.2%
1,1-Dichloroethane	9.26		10.0	92.6%	9.01		10.0	90.1%	2.7%
trans-1,2-Dichloroethene	9.23		10.0	92.3%	9.09		10.0	90.9%	1.5%
cis-1,2-Dichloroethene	9.11		10.0	91.1%	9.17		10.0	91.7%	0.7%
Chloroform	9.10		10.0	91.0%	9.19		10.0	91.9%	1.0%
1,2-Dichloroethane	9.56		10.0	95.6%	9.55		10.0	95.5%	0.1%
2-Butanone	56.0		50.0	112%	58.3		50.0	117%	4.0%
1,1,1-Trichloroethane	9.12		10.0	91.2%	9.15		10.0	91.5%	0.3%
Carbon Tetrachloride	9.76		10.0	97.6%	9.41		10.0	94.1%	3.7%
Vinyl Acetate	9.09		10.0	90.9%	9.21		10.0	92.1%	1.3%
Bromodichloromethane	9.69		10.0	96.9%	9.68		10.0	96.8%	0.1%
1,2-Dichloropropane	9.20		10.0	92.0%	9.30		10.0	93.0%	1.1%
cis-1,3-Dichloropropene	9.42		10.0	94.2%	9.29		10.0	92.9%	1.4%
Trichloroethene	9.31		10.0	93.1%	9.40		10.0	94.0%	1.0%
Dibromochloromethane	11.4		10.0	114%	11.2		10.0	112%	1.8%
1,1,2-Trichloroethane	9.83		10.0	98.3%	9.78		10.0	97.8%	0.5%
Benzene	9.75		10.0	97.5%	9.58		10.0	95.8%	1.8%
trans-1,3-Dichloropropene	9.17		10.0	91.7%	9.26		10.0	92.6%	1.0%
2-Chloroethylvinylether	9.99		10.0	99.9%	10.2		10.0	102%	2.1%
Bromoform	12.2	Q	10.0	122%	12.0	Q	10.0	120%	1.7%
4-Methyl-2-Pentanone (MIBK)	54.3		50.0	109%	56.3		50.0	113%	3.6%
2-Hexanone	57.9	Q	50.0	116%	58.8	Q	50.0	118%	1.5%
Tetrachloroethene	10.2		10.0	102%	9.88		10.0	98.8%	3.2%
1,1,2,2-Tetrachloroethane	10.7		10.0	107%	11.0		10.0	110%	2.8%
Toluene	9.44		10.0	94.4%	9.55		10.0	95.5%	1.2%
Chlorobenzene	10.5		10.0	105%	10.2		10.0	102%	2.9%
Ethylbenzene	10.1		10.0	101%	9.87		10.0	98.7%	2.3%
Styrene	10.9		10.0	109%	10.6		10.0	106%	2.8%
Trichlorofluoromethane	9.17		10.0	91.7%	9.06		10.0	90.6%	1.2%
1,1,2-Trichloro-1,2,2-trifluoroetha	9.21		10.0	92.1%	8.93		10.0	89.3%	3.1%
m,p-Xylene	21.4		20.0	107%	21.0		20.0	105%	1.9%

YC58 : 000115

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Volatiles by Purge & Trap GC/MS-Method SW8260C **Sample ID: LCS-031814A**
 LAB CONTROL SAMPLE

Lab Sample ID: LCS-031814A QC Report No: YC58-Joint Base Lewis McChord
LIMS ID: 14-4180 Project: TVR,FTP
Matrix: Water

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
o-Xylene	10.0	10.0	100%	9.80	10.0	98.0%	2.0%
1,2-Dichlorobenzene	10.4	10.0	104%	10.4	10.0	104%	0.0%
1,3-Dichlorobenzene	10.7	10.0	107%	10.6	10.0	106%	0.9%
1,4-Dichlorobenzene	10.5	10.0	105%	10.2	10.0	102%	2.9%
Acrolein	57.4	50.0	115%	58.4	50.0	117%	1.7%
Iodomethane	8.85	10.0	88.5%	8.66	10.0	86.6%	2.2%
Bromoethane	8.04	10.0	80.4%	8.59	10.0	85.9%	6.6%
Acrylonitrile	10.5	10.0	105%	11.2	10.0	112%	6.5%
1,1-Dichloropropene	9.18	10.0	91.8%	9.21	10.0	92.1%	0.3%
Dibromomethane	9.81	10.0	98.1%	9.73	10.0	97.3%	0.8%
1,1,1,2-Tetrachloroethane	10.5	10.0	105%	10.3	10.0	103%	1.9%
1,2-Dibromo-3-chloropropane	11.5 Q	10.0	115%	11.2 Q	10.0	112%	2.6%
1,2,3-Trichloropropane	11.0	10.0	110%	11.3	10.0	113%	2.7%
trans-1,4-Dichloro-2-butene	11.0	10.0	110%	10.8	10.0	108%	1.8%
1,3,5-Trimethylbenzene	10.3	10.0	103%	10.2	10.0	102%	1.0%
1,2,4-Trimethylbenzene	10.2	10.0	102%	9.94	10.0	99.4%	2.6%
Hexachlorobutadiene	11.0	10.0	110%	11.2	10.0	112%	1.8%
1,2-Dibromoethane	9.96	10.0	99.6%	10.0	10.0	100%	0.4%
Bromochloromethane	9.55	10.0	95.5%	9.28	10.0	92.8%	2.9%
2,2-Dichloropropane	8.49	10.0	84.9%	8.48	10.0	84.8%	0.1%
1,3-Dichloropropane	10.4	10.0	104%	10.2	10.0	102%	1.9%
Isopropylbenzene	10.2	10.0	102%	10.1	10.0	101%	1.0%
n-Propylbenzene	10.3	10.0	103%	10.1	10.0	101%	2.0%
Bromobenzene	9.92	10.0	99.2%	9.90	10.0	99.0%	0.2%
2-Chlorotoluene	10.2	10.0	102%	9.99	10.0	99.9%	2.1%
4-Chlorotoluene	9.93	10.0	99.3%	9.73	10.0	97.3%	2.0%
tert-Butylbenzene	9.85	10.0	98.5%	9.73	10.0	97.3%	1.2%
sec-Butylbenzene	10.4	10.0	104%	10.3	10.0	103%	1.0%
4-Isopropyltoluene	10.4	10.0	104%	10.4	10.0	104%	0.0%
n-Butylbenzene	10.8	10.0	108%	10.5	10.0	105%	2.8%
1,2,4-Trichlorobenzene	10.9	10.0	109%	10.8	10.0	108%	0.9%
Naphthalene	12.7 Q	10.0	127%	12.8 Q	10.0	128%	0.8%
1,2,3-Trichlorobenzene	11.1	10.0	111%	11.1	10.0	111%	0.0%

Reported in µg/L (ppb)

RPD calculated using sample concentrations per SW846.

Volatile Surrogate Recovery

	LCS	LCSD
d4-1,2-Dichloroethane	100%	102%
d8-Toluene	97.1%	98.4%
Bromofluorobenzene	95.9%	93.1%
d4-1,2-Dichlorobenzene	99.7%	100%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: FTP-1**
Extraction Method: SW3520C **SAMPLE**

Lab Sample ID: YC58P
LIMS ID: 14-4191
Matrix: Water
Data Release Authorized:
Reported: 03/25/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP
NA
Date Sampled: 03/11/14
Date Received: 03/12/14

Date Extracted: 03/14/14
Date Analyzed: 03/24/14 13:57
Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	2.0	< 2.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	3.0	< 3.0 U
65-85-0	Benzoic Acid	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	**Naphthalene**	**1.0**	**42**
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	3.0	< 3.0 U
91-57-6	**2-Methylnaphthalene**	**1.0**	**83 E**
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	3.0	< 3.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	3.0	< 3.0 U
83-32-9	**Acenaphthene**	**1.0**	**1.9**
51-28-5	2,4-Dinitrophenol	20	< 20 U
100-02-7	4-Nitrophenol	10	< 10 U
132-64-9	**Dibenzofuran**	**1.0**	**3.7**
606-20-2	2,6-Dinitrotoluene	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	3.0	< 3.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: FTP-1**
Extraction Method: SW3520C **SAMPLE**

Lab Sample ID: YC58P
LIMS ID: 14-4191
Matrix: Water
Date Analyzed: 03/24/14 13:57

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP
NA

CAS Number	Analyte	RL	Result
84-66-2	Diethylphthalate	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	**Fluorene**	**1.0**	**6.3**
100-01-6	4-Nitroaniline	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	10	< 10 U
85-01-8	**Phenanthrene**	**1.0**	**5.4**
86-74-8	**Carbazole**	**1.0**	**4.8**
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	3.0	< 3.0 U
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
90-12-0	**1-Methylnaphthalene**	**1.0**	**75**
TOTBFA	Total Benzofluoranthenes	5.0	< 5.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	64.8%	2-Fluorobiphenyl	62.0%
d14-p-Terphenyl	52.0%	d4-1,2-Dichlorobenzene	60.4%
d5-Phenol	64.5%	2-Fluorophenol	62.4%
2,4,6-Tribromophenol	95.5%	d4-2-Chlorophenol	66.4%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: FTP-1**
Extraction Method: SW3520C **DILUTION**

Lab Sample ID: YC58P
LIMS ID: 14-4191
Matrix: Water
Data Release Authorized:
Reported: 03/25/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP
NA
Date Sampled: 03/11/14
Date Received: 03/12/14

Date Extracted: 03/14/14
Date Analyzed: 03/24/14 18:28
Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 3.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	3.0	< 3.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	3.0	< 3.0 U
95-57-8	2-Chlorophenol	3.0	< 3.0 U
541-73-1	1,3-Dichlorobenzene	3.0	< 3.0 U
106-46-7	1,4-Dichlorobenzene	3.0	< 3.0 U
100-51-6	Benzyl Alcohol	6.0	< 6.0 U
95-50-1	1,2-Dichlorobenzene	3.0	< 3.0 U
95-48-7	2-Methylphenol	3.0	< 3.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	3.0	< 3.0 U
106-44-5	4-Methylphenol	6.0	< 6.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	3.0	< 3.0 U
67-72-1	Hexachloroethane	6.0	< 6.0 U
98-95-3	Nitrobenzene	3.0	< 3.0 U
78-59-1	Isophorone	3.0	< 3.0 U
88-75-5	2-Nitrophenol	9.0	< 9.0 U
105-67-9	2,4-Dimethylphenol	9.0	< 9.0 U
65-85-0	Benzoic Acid	60	< 60 U
111-91-1	bis(2-Chloroethoxy) Methane	3.0	< 3.0 U
120-83-2	2,4-Dichlorophenol	9.0	< 9.0 U
120-82-1	1,2,4-Trichlorobenzene	3.0	< 3.0 U
91-20-3	**Naphthalene**	**3.0**	**46**
106-47-8	4-Chloroaniline	15	< 15 U
87-68-3	Hexachlorobutadiene	9.0	< 9.0 U
59-50-7	4-Chloro-3-methylphenol	9.0	< 9.0 U
91-57-6	**2-Methylnaphthalene**	**3.0**	**99**
77-47-4	Hexachlorocyclopentadiene	15	< 15 U
88-06-2	2,4,6-Trichlorophenol	9.0	< 9.0 U
95-95-4	2,4,5-Trichlorophenol	15	< 15 U
91-58-7	2-Chloronaphthalene	3.0	< 3.0 U
88-74-4	2-Nitroaniline	9.0	< 9.0 U
131-11-3	Dimethylphthalate	3.0	< 3.0 U
208-96-8	Acenaphthylene	3.0	< 3.0 U
99-09-2	3-Nitroaniline	9.0	< 9.0 U
83-32-9	Acenaphthene	3.0	< 3.0 U
51-28-5	2,4-Dinitrophenol	60	< 60 U
100-02-7	4-Nitrophenol	30	< 30 U
132-64-9	**Dibenzofuran**	**3.0**	**3.9**
606-20-2	2,6-Dinitrotoluene	9.0	< 9.0 U
121-14-2	2,4-Dinitrotoluene	9.0	< 9.0 U

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: FTP-1**
Extraction Method: SW3520C **DILUTION**

Lab Sample ID: YC58P
LIMS ID: 14-4191
Matrix: Water
Date Analyzed: 03/24/14 18:28

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP
NA

CAS Number	Analyte	RL	Result
84-66-2	Diethylphthalate	3.0	< 3.0 U
7005-72-3	4-Chlorophenyl-phenylether	3.0	< 3.0 U
86-73-7	**Fluorene**	**3.0**	**5.8**
100-01-6	4-Nitroaniline	9.0	< 9.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	30	< 30 U
86-30-6	N-Nitrosodiphenylamine	3.0	< 3.0 U
101-55-3	4-Bromophenyl-phenylether	3.0	< 3.0 U
118-74-1	Hexachlorobenzene	3.0	< 3.0 U
87-86-5	Pentachlorophenol	30	< 30 U
85-01-8	**Phenanthrene**	**3.0**	**5.4**
86-74-8	**Carbazole**	**3.0**	**4.3**
120-12-7	Anthracene	3.0	< 3.0 U
84-74-2	Di-n-Butylphthalate	3.0	< 3.0 U
206-44-0	Fluoranthene	3.0	< 3.0 U
129-00-0	Pyrene	3.0	< 3.0 U
85-68-7	Butylbenzylphthalate	3.0	< 3.0 U
91-94-1	3,3'-Dichlorobenzidine	15	< 15 U
56-55-3	Benzo(a)anthracene	3.0	< 3.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	9.0	< 9.0 U
218-01-9	Chrysene	3.0	< 3.0 U
117-84-0	Di-n-Octyl phthalate	3.0	< 3.0 U
50-32-8	Benzo(a)pyrene	3.0	< 3.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	3.0	< 3.0 U
53-70-3	Dibenz(a,h)anthracene	3.0	< 3.0 U
191-24-2	Benzo(g,h,i)perylene	3.0	< 3.0 U
90-12-0	**1-Methylnaphthalene**	**3.0**	**84**
TOTBFA	Total Benzofluoranthenes	15	< 15 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	65.4%	2-Fluorobiphenyl	62.2%
d14-p-Terphenyl	54.5%	d4-1,2-Dichlorobenzene	61.8%
d5-Phenol	62.6%	2-Fluorophenol	61.0%
2,4,6-Tribromophenol	98.4%	d4-2-Chlorophenol	67.0%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS
Extraction Method: SW3520C

Sample ID: MB-031414
METHOD BLANK

Lab Sample ID: MB-031414
LIMS ID: 14-4191
Matrix: Water
Data Release Authorized:
Reported: 03/25/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP
NA
Date Sampled: NA
Date Received: NA

Date Extracted: 03/14/14
Date Analyzed: 03/22/14 23:37
Instrument/Analyst: NT6/JZ

Sample Amount: 500 mL
Final Extract Volume: 0.50 mL
Dilution Factor: 1.00

CAS Number	Analyte	RL	Result
108-95-2	Phenol	1.0	< 1.0 U
111-44-4	Bis-(2-Chloroethyl) Ether	1.0	< 1.0 U
95-57-8	2-Chlorophenol	1.0	< 1.0 U
541-73-1	1,3-Dichlorobenzene	1.0	< 1.0 U
106-46-7	1,4-Dichlorobenzene	1.0	< 1.0 U
100-51-6	Benzyl Alcohol	2.0	< 2.0 U
95-50-1	1,2-Dichlorobenzene	1.0	< 1.0 U
95-48-7	2-Methylphenol	1.0	< 1.0 U
108-60-1	2,2'-Oxybis(1-Chloropropane)	1.0	< 1.0 U
106-44-5	4-Methylphenol	2.0	< 2.0 U
621-64-7	N-Nitroso-Di-N-Propylamine	1.0	< 1.0 U
67-72-1	Hexachloroethane	2.0	< 2.0 U
98-95-3	Nitrobenzene	1.0	< 1.0 U
78-59-1	Isophorone	1.0	< 1.0 U
88-75-5	2-Nitrophenol	3.0	< 3.0 U
105-67-9	2,4-Dimethylphenol	3.0	< 3.0 U
65-85-0	Benzoic Acid	20	< 20 U
111-91-1	bis(2-Chloroethoxy) Methane	1.0	< 1.0 U
120-83-2	2,4-Dichlorophenol	3.0	< 3.0 U
120-82-1	1,2,4-Trichlorobenzene	1.0	< 1.0 U
91-20-3	Naphthalene	1.0	< 1.0 U
106-47-8	4-Chloroaniline	5.0	< 5.0 U
87-68-3	Hexachlorobutadiene	3.0	< 3.0 U
59-50-7	4-Chloro-3-methylphenol	3.0	< 3.0 U
91-57-6	2-Methylnaphthalene	1.0	< 1.0 U
77-47-4	Hexachlorocyclopentadiene	5.0	< 5.0 U
88-06-2	2,4,6-Trichlorophenol	3.0	< 3.0 U
95-95-4	2,4,5-Trichlorophenol	5.0	< 5.0 U
91-58-7	2-Chloronaphthalene	1.0	< 1.0 U
88-74-4	2-Nitroaniline	3.0	< 3.0 U
131-11-3	Dimethylphthalate	1.0	< 1.0 U
208-96-8	Acenaphthylene	1.0	< 1.0 U
99-09-2	3-Nitroaniline	3.0	< 3.0 U
83-32-9	Acenaphthene	1.0	< 1.0 U
51-28-5	2,4-Dinitrophenol	20	< 20 U
100-02-7	4-Nitrophenol	10	< 10 U
132-64-9	Dibenzofuran	1.0	< 1.0 U
606-20-2	2,6-Dinitrotoluene	3.0	< 3.0 U
121-14-2	2,4-Dinitrotoluene	3.0	< 3.0 U

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS **Sample ID: MB-031414**
Extraction Method: SW3520C **METHOD BLANK**

Lab Sample ID: MB-031414 QC Report No: YC58-Joint Base Lewis McChord
LIMS ID: 14-4191 Project: TVR,FTP
Matrix: Water NA
Date Analyzed: 03/22/14 23:37

CAS Number	Analyte	RL	Result
84-66-2	Diethylphthalate	1.0	< 1.0 U
7005-72-3	4-Chlorophenyl-phenylether	1.0	< 1.0 U
86-73-7	Fluorene	1.0	< 1.0 U
100-01-6	4-Nitroaniline	3.0	< 3.0 U
534-52-1	4,6-Dinitro-2-Methylphenol	10	< 10 U
86-30-6	N-Nitrosodiphenylamine	1.0	< 1.0 U
101-55-3	4-Bromophenyl-phenylether	1.0	< 1.0 U
118-74-1	Hexachlorobenzene	1.0	< 1.0 U
87-86-5	Pentachlorophenol	10	< 10 U
85-01-8	Phenanthrene	1.0	< 1.0 U
86-74-8	Carbazole	1.0	< 1.0 U
120-12-7	Anthracene	1.0	< 1.0 U
84-74-2	Di-n-Butylphthalate	1.0	< 1.0 U
206-44-0	Fluoranthene	1.0	< 1.0 U
129-00-0	Pyrene	1.0	< 1.0 U
85-68-7	Butylbenzylphthalate	1.0	< 1.0 U
91-94-1	3,3'-Dichlorobenzidine	5.0	< 5.0 U
56-55-3	Benzo(a)anthracene	1.0	< 1.0 U
117-81-7	bis(2-Ethylhexyl)phthalate	3.0	< 3.0 U
218-01-9	Chrysene	1.0	< 1.0 U
117-84-0	Di-n-Octyl phthalate	1.0	< 1.0 U
50-32-8	Benzo(a)pyrene	1.0	< 1.0 U
193-39-5	Indeno(1,2,3-cd)pyrene	1.0	< 1.0 U
53-70-3	Dibenz(a,h)anthracene	1.0	< 1.0 U
191-24-2	Benzo(g,h,i)perylene	1.0	< 1.0 U
90-12-0	1-Methylnaphthalene	1.0	< 1.0 U
TOTBFA	Total Benzofluoranthenes	5.0	< 5.0 U

Reported in µg/L (ppb)

Semivolatile Surrogate Recovery

d5-Nitrobenzene	72.8%	2-Fluorobiphenyl	64.8%
d14-p-Terphenyl	79.6%	d4-1,2-Dichlorobenzene	58.4%
d5-Phenol	69.6%	2-Fluorophenol	67.5%
2,4,6-Tribromophenol	70.1%	d4-2-Chlorophenol	69.6%

ANALYTICAL RESOURCES INCORPORATED

SW8270 SEMIVOLATILES WATER SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Client ID	NBZ	FBP	TPH	DCB	PHL	2FP	TBP	2CP	TOT OUT
MB-031414	72.8%	64.8%	79.6%	58.4%	69.6%	67.5%	70.1%	69.6%	0
LCS-031414	76.0%	73.6%	83.2%	62.8%	73.1%	71.2%	92.5%	72.8%	0
LCSD-031414	78.4%	76.0%	77.6%	63.2%	70.7%	69.9%	92.8%	73.3%	0
FTP-1	64.8%	62.0%	52.0%	60.4%	64.5%	62.4%	95.5%	66.4%	0
FTP-1 DL	65.4%	62.2%	54.5%	61.8%	62.6%	61.0%	98.4%	67.0%	0

	LCS/MB LIMITS	QC LIMITS
(NBZ) = d5-Nitrobenzene	(42-120)	(27-120)
(FBP) = 2-Fluorobiphenyl	(43-120)	(33-120)
(TPH) = d14-p-Terphenyl	(53-120)	(28-120)
(DCB) = d4-1,2-Dichlorobenzene	(29-120)	(20-120)
(PHL) = d5-Phenol	(45-120)	(38-120)
(2FP) = 2-Fluorophenol	(41-120)	(33-120)
(TBP) = 2,4,6-Tribromophenol	(53-126)	(52-120)
(2CP) = d4-2-Chlorophenol	(49-120)	(41-120)

Prep Method: SW3520C
Log Number Range: 14-4191 to 14-4191

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-031414
LCS/LCSD

Lab Sample ID: LCS-031414
LIMS ID: 14-4191
Matrix: Water
Data Release Authorized:
Reported: 03/25/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Date Sampled: 03/11/14
Date Received: 03/12/14

Date Extracted LCS/LCSD: 03/14/14

Date Analyzed LCS: 03/23/14 00:12
LCSD: 03/23/14 00:46

Instrument/Analyst LCS: NT6/JZ
LCSD: NT6/JZ

GPC Cleanup: NO

Sample Amount LCS: 500 mL
LCSD: 500 mL

Final Extract Volume LCS: 0.50 mL
LCSD: 0.50 mL

Dilution Factor LCS: 1.00
LCSD: 1.00

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Phenol	17.3	25.0	69.2%	18.4	25.0	73.6%	6.2%
Bis-(2-Chloroethyl) Ether	16.0	25.0	64.0%	17.3	25.0	69.2%	7.8%
2-Chlorophenol	16.9	25.0	67.6%	18.0	25.0	72.0%	6.3%
1,3-Dichlorobenzene	11.8	25.0	47.2%	13.0	25.0	52.0%	9.7%
1,4-Dichlorobenzene	12.5	25.0	50.0%	13.3	25.0	53.2%	6.2%
Benzyl Alcohol	17.9	25.0	71.6%	18.8	25.0	75.2%	4.9%
1,2-Dichlorobenzene	12.7	25.0	50.8%	13.7	25.0	54.8%	7.6%
2-Methylphenol	17.9	25.0	71.6%	19.1	25.0	76.4%	6.5%
2,2'-Oxybis(1-Chloropropane)	15.3	25.0	61.2%	16.4	25.0	65.6%	6.9%
4-Methylphenol	35.8	50.0	71.6%	38.9	50.0	77.8%	8.3%
N-Nitroso-Di-N-Propylamine	15.5	25.0	62.0%	17.3	25.0	69.2%	11.0%
Hexachloroethane	11.4	25.0	45.6%	12.4	25.0	49.6%	8.4%
Nitrobenzene	18.0	25.0	72.0%	19.0	25.0	76.0%	5.4%
Isophorone	18.3	25.0	73.2%	19.6	25.0	78.4%	6.9%
2-Nitrophenol	21.0	25.0	84.0%	22.6	25.0	90.4%	7.3%
2,4-Dimethylphenol	48.2	75.0	64.3%	53.8	75.0	71.7%	11.0%
Benzoic Acid	121	138	87.7%	126	138	91.3%	4.0%
bis(2-Chloroethoxy) Methane	16.4	25.0	65.6%	17.7	25.0	70.8%	7.6%
2,4-Dichlorophenol	57.2	75.0	76.3%	60.8	75.0	81.1%	6.1%
1,2,4-Trichlorobenzene	13.2	25.0	52.8%	14.5	25.0	58.0%	9.4%
Naphthalene	16.4	25.0	65.6%	17.7	25.0	70.8%	7.6%
4-Chloroaniline	65.7	75.0	87.6%	34.6	75.0	46.1%	62.0%
Hexachlorobutadiene	12.0	25.0	48.0%	13.2	25.0	52.8%	9.5%
4-Chloro-3-methylphenol	57.6	75.0	76.8%	61.0	75.0	81.3%	5.7%
2-Methylnaphthalene	16.1	25.0	64.4%	17.6	25.0	70.4%	8.9%
Hexachlorocyclopentadiene	27.1	75.0	36.1%	33.3	75.0	44.4%	20.5%
2,4,6-Trichlorophenol	59.8	75.0	79.7%	63.6	75.0	84.8%	6.2%
2,4,5-Trichlorophenol	63.6	75.0	84.8%	68.9	75.0	91.9%	8.0%
2-Chloronaphthalene	17.4	25.0	69.6%	18.9	25.0	75.6%	8.3%
2-Nitroaniline	60.1	75.0	80.1%	61.2	75.0	81.6%	1.8%
Dimethylphthalate	18.4	25.0	73.6%	19.1	25.0	76.4%	3.7%
Acenaphthylene	17.9	25.0	71.6%	19.1	25.0	76.4%	6.5%
3-Nitroaniline	77.4	75.0	103%	75.3	75.0	100%	2.8%
Acenaphthene	18.2	25.0	72.8%	19.5	25.0	78.0%	6.9%
2,4-Dinitrophenol	140	138	101%	149	138	108%	6.2%
4-Nitrophenol	83.2	75.0	111%	84.8	75.0	113%	1.9%
Dibenzofuran	18.2	25.0	72.8%	19.4	25.0	77.6%	6.4%
2,6-Dinitrotoluene	60.2	75.0	80.3%	60.0	75.0	80.0%	0.3%
2,4-Dinitrotoluene	53.5	75.0	71.3%	53.4	75.0	71.2%	0.2%
Diethylphthalate	18.7	25.0	74.8%	19.6	25.0	78.4%	4.7%
4-Chlorophenyl-phenylether	18.2	25.0	72.8%	19.1	25.0	76.4%	4.8%
Fluorene	19.5	25.0	78.0%	20.4	25.0	81.6%	4.5%
4-Nitroaniline	76.2	75.0	102%	77.1	75.0	103%	1.2%
4,6-Dinitro-2-Methylphenol	125	138	90.6%	131	138	94.9%	4.7%
N-Nitrosodiphenylamine	15.8	25.0	63.2%	16.5	25.0	66.0%	4.3%

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
Semivolatiles by SW8270D GC/MS

Sample ID: LCS-031414
LCS/LCSD

Lab Sample ID: LCS-031414
LIMS ID: 14-4191
Matrix: Water
Date Analyzed LCS: 03/23/14 00:12
LCSD: 03/23/14 00:46

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
4-Bromophenyl-phenylether	18.0	25.0	72.0%	19.4	25.0	77.6%	7.5%
Hexachlorobenzene	18.3	25.0	73.2%	19.2	25.0	76.8%	4.8%
Pentachlorophenol	59.4	75.0	79.2%	62.4	75.0	83.2%	4.9%
Phenanthrene	19.4	25.0	77.6%	20.2	25.0	80.8%	4.0%
Carbazole	19.7	25.0	78.8%	20.0	25.0	80.0%	1.5%
Anthracene	18.7	25.0	74.8%	19.3	25.0	77.2%	3.2%
Di-n-Butylphthalate	19.0	25.0	76.0%	19.4	25.0	77.6%	2.1%
Fluoranthene	20.7	25.0	82.8%	20.8	25.0	83.2%	0.5%
Pyrene	22.0	25.0	88.0%	22.6	25.0	90.4%	2.7%
Butylbenzylphthalate	19.4	25.0	77.6%	19.8	25.0	79.2%	2.0%
3,3'-Dichlorobenzidine	44.4	75.0	59.2%	42.4	75.0	56.5%	4.6%
Benzo(a)anthracene	19.4	25.0	77.6%	20.0	25.0	80.0%	3.0%
bis(2-Ethylhexyl)phthalate	19.5	25.0	78.0%	19.6	25.0	78.4%	0.5%
Chrysene	18.9	25.0	75.6%	19.2	25.0	76.8%	1.6%
Di-n-Octyl phthalate	19.1	25.0	76.4%	19.2	25.0	76.8%	0.5%
Benzo(a)pyrene	18.4	25.0	73.6%	18.7	25.0	74.8%	1.6%
Indeno(1,2,3-cd)pyrene	19.0	25.0	76.0%	19.1	25.0	76.4%	0.5%
Dibenz(a,h)anthracene	14.1	25.0	56.4%	13.9	25.0	55.6%	1.4%
Benzo(g,h,i)perylene	15.7	25.0	62.8%	15.7	25.0	62.8%	0.0%
1-Methylnaphthalene	16.4	25.0	65.6%	18.0	25.0	72.0%	9.3%
Total Benzofluoranthenes	39.1	50.0	78.2%	39.3	50.0	78.6%	0.5%

Semivolatile Surrogate Recovery

	LCS	LCSD
d5-Nitrobenzene	76.0%	78.4%
2-Fluorobiphenyl	73.6%	76.0%
d14-p-Terphenyl	83.2%	77.6%
d4-1,2-Dichlorobenzene	62.8%	63.2%
d5-Phenol	73.1%	70.7%
2-Fluorophenol	71.2%	69.9%
2,4,6-Tribromophenol	92.5%	92.8%
d4-2-Chlorophenol	72.8%	73.3%

Results reported in µg/L
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TOTAL DIESEL RANGE HYDROCARBONS
NWTPHD by GC/FID
Extraction Method: SW3510C
Page 1 of 1

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Matrix: Water

Date Received: 03/12/14

Data Release Authorized:
Reported: 03/21/14

ARI ID	Sample ID	Extraction Date	Analysis Date	EFV DF	Range/Surrogate	RL	Result
MB-031714	Method Blank	03/17/14	03/20/14	1.00	Diesel Range	0.10	< 0.10 U
14-4191	HC ID: ---		FID3B	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		90.5%
YC58P	FTP-1	03/17/14	03/20/14	1.00	**Diesel Range**	**0.10**	**15 E**
14-4191	HC ID: **DIESEL/RRO**		FID3B	1.0	**Motor Oil Range**	**0.20**	**1.7**
					o-Terphenyl		72.9%
YC58P DL	FTP-1	03/17/14	03/20/14	1.00	**Diesel Range**	**1.0**	**14**
14-4191	HC ID: **DIESEL**		FID3B	10	Motor Oil Range	2.0	< 2.0 U
					o-Terphenyl		66.7%
YC58Q	FTP-14	03/17/14	03/20/14	1.00	**Diesel Range**	**0.10**	**0.25**
14-4192	HC ID: **DRO**		FID3B	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		81.3%
YC58R	FTP-15	03/17/14	03/20/14	1.00	Diesel Range	0.10	< 0.10 U
14-4193	HC ID: ---		FID3B	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		91.4%
YC58S	FTP-16	03/17/14	03/20/14	1.00	**Diesel Range**	**0.10**	**0.15**
14-4194	HC ID: **DRO**		FID3B	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		79.2%
YC58T	DUP-1	03/17/14	03/20/14	1.00	**Diesel Range**	**0.10**	**0.24**
14-4195	HC ID: **DRO**		FID3B	1.0	Motor Oil Range	0.20	< 0.20 U
					o-Terphenyl		77.1%

Reported in mg/L (ppm)

EFV-Effective Final Volume in mL.
DL-Dilution of extract prior to analysis.
RL-Reporting limit.

Diesel range quantitation on total peaks in the range from C12 to C24.
Motor Oil range quantitation on total peaks in the range from C24 to C38.
HC ID: DRO/RRO indicates results of organics or additional hydrocarbons in ranges are not identifiable.

ANALYTICAL RESOURCES INCORPORATED

TPHD SURROGATE RECOVERY SUMMARY

Matrix: Water

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Client ID	OTER	TOT OUT
MB-031714	90.5%	0
LCS-031714	82.8%	0
LCSD-031714	72.9%	0
FTP-1	72.9%	0
FTP-1 DL	66.7%	0
FTP-14	81.3%	0
FTP-15	91.4%	0
FTP-16	79.2%	0
DUP-1	77.1%	0

	LCS/MB LIMITS	QC LIMITS
(OTER) = o-Terphenyl	(50-150)	(50-150)

Prep Method: SW3510C
Log Number Range: 14-4191 to 14-4195

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
NWTPHD by GC/FID
Page 1 of 1

Sample ID: LCS-031714
LCS/LCSD

Lab Sample ID: LCS-031714
LIMS ID: 14-4191
Matrix: Water
Data Release Authorized:
Reported: 03/21/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP

Date Sampled: NA
Date Received: NA

Date Extracted LCS/LCSD: 03/17/14

Date Analyzed LCS: 03/20/14 03:48
LCSD: 03/20/14 04:12

Instrument/Analyst LCS: FID3B/JLW
LCSD: FID3B/JLW

Sample Amount LCS: 500 mL
LCSD: 500 mL

Final Extract Volume LCS: 1.0 mL
LCSD: 1.0 mL

Dilution Factor LCS: 1.00
LCSD: 1.00

Range	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Diesel	2.51	3.00	83.7%	2.51	3.00	83.7%	0.0%

TPHD Surrogate Recovery

	LCS	LCSD
o-Terphenyl	82.8%	72.9%

Results reported in mg/L
RPD calculated using sample concentrations per SW846.

ANALYTICAL RESOURCES INCORPORATED

TOTAL DIESEL RANGE HYDROCARBONS-EXTRACTION REPORT

ARI Job: YC58
Matrix: Water Project: TVR,FTP
Date Received: 03/12/14

ARI ID	Client ID	Samp Amt	Final Vol	Prep Date
14-4191-031714MB1	Method Blank	500 mL	1.00 mL	03/17/14
14-4191-031714LCS1	Lab Control	500 mL	1.00 mL	03/17/14
14-4191-031714LCSD1	Lab Control Dup	500 mL	1.00 mL	03/17/14
14-4191-YC58P	FTP-1	500 mL	1.00 mL	03/17/14
14-4192-YC58Q	FTP-14	500 mL	1.00 mL	03/17/14
14-4193-YC58R	FTP-15	500 mL	1.00 mL	03/17/14
14-4194-YC58S	FTP-16	500 mL	1.00 mL	03/17/14
14-4195-YC58T	DUP-1	500 mL	1.00 mL	03/17/14

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Matrix: Water

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP
Event: NA

Data Release Authorized: MW
Reported: 03/25/14

ARI ID	Client ID	Analysis Date	DL	Range	Result
MB-032114	Method Blank	03/21/14	1.0	Gasoline	< 0.25 U
14-4191		PID1		HC ID	---
				Trifluorotoluene	101%
				Bromobenzene	94.7%
YC58P	FTP-1	03/21/14	1.0	**Gasoline**	**2.0**
14-4191		PID1		HC ID	GAS
				Trifluorotoluene	102%
				Bromobenzene	103%
YC58Q	FTP-14	03/21/14	1.0	Gasoline	< 0.25 U
14-4192		PID1		HC ID	---
				Trifluorotoluene	101%
				Bromobenzene	101%
YC58R	FTP-15	03/21/14	1.0	Gasoline	< 0.25 U
14-4193		PID1		HC ID	---
				Trifluorotoluene	102%
				Bromobenzene	103%
YC58S	FTP-16	03/21/14	1.0	Gasoline	< 0.25 U
14-4194		PID1		HC ID	---
				Trifluorotoluene	103%
				Bromobenzene	101%
YC58T	DUP-1	03/21/14	1.0	Gasoline	< 0.25 U
14-4195		PID1		HC ID	---
				Trifluorotoluene	102%
				Bromobenzene	98.2%

Gasoline values reported in mg/L (ppm)

Quantitation on total peaks in the gasoline range from Toluene to Naphthalene.

GAS: Indicates the presence of gasoline or weathered gasoline.
GRO: Positive result that does not match an identifiable gasoline pattern.

YC58R : 00001

ANALYTICAL RESOURCES INCORPORATED

TPHG WATER SURROGATE RECOVERY SUMMARY

ARI Job: YC58
Matrix: Water

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP
Event: NA

Client ID	TFT	BBZ	TOT OUT
MB-032114	101%	94.7%	0
LCS-032114	97.6%	94.2%	0
LCSD-032114	105%	101%	0
FTP-1	102%	103%	0
FTP-14	101%	101%	0
FTP-15	102%	103%	0
FTP-16	103%	101%	0
DUP-1	102%	98.2%	0

	LCS/MB LIMITS	QC LIMITS
(TFT) = Trifluorotoluene	(80-120)	(80-120)
(BBZ) = Bromobenzene	(80-120)	(80-120)

Log Number Range: 14-4191 to 14-4195

YC58R:BOARD

ANALYTICAL RESOURCES INCORPORATED

ORGANICS ANALYSIS DATA SHEET
TPHG by Method NWTPHG
Page 1 of 1

Sample ID: LCS-032114
LAB CONTROL SAMPLE

Lab Sample ID: LCS-032114
LIMS ID: 14-4191
Matrix: Water
Data Release Authorized: MW
Reported: 03/25/14

QC Report No: YC58-Joint Base Lewis McChord
Project: TVR,FTP
Event: NA
Date Sampled: NA
Date Received: NA

Date Analyzed LCS: 03/21/14 11:37
LCSD: 03/21/14 12:06
Instrument/Analyst LCS: PID1/JLW
LCSD: PID1/JLW

Purge Volume: 5.0 mL
Dilution Factor LCS: 1.0
LCSD: 1.0

Analyte	LCS	Spike Added-LCS	LCS Recovery	LCSD	Spike Added-LCSD	LCSD Recovery	RPD
Gasoline Range Hydrocarbons	0.93	1.00	93.0%	0.98	1.00	98.0%	5.2%

Reported in mg/L (ppm)

RPD calculated using sample concentrations per SW846.

TPHG Surrogate Recovery

	LCS	LCSD
Trifluorotoluene	97.6%	105%
Bromobenzene	94.2%	101%

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: MW-4 Date Well Purged: 9-22-14 Date Well Sampled: 9.23.14

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 88.30 Purge Method: grundfos

Water Sample Data

Sample Number: MW-4 Time Sample Collected: 0930
Sampling Method: grundfos
Sampling Personnel: D Ramquist, M Farrow
Remarks: dedicated tubing

Checklist

☑ Well capped and locked (pre-sampling) new lock - master 22 - key #337

☑ 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
	0924	8.16	15.10	9.26	.350	117	47.5
	0927	8.27	14.20	8.08	.354	124	30.4
	0930	8.39	14.70	7.68	.353	132	29.4

purged well on 9/22 @ ~ 200 mL

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: MW-4 Date Well Purged: 9 22 14 Date Well Sampled: 9 23 14

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 40.4' Purge Method: grundfos

Water Sample Data

Sample Number: MW-4 Time Sample Collected: 0955
Sampling Method: grundfos
Sampling Personnel: D Ramquist M Faurow
Remarks: dedicated tubing, replaced lock

Checklist

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

Liters Out	Time	PH	Temp	DO	Spec. Cond.	ORP	Turb
	9:58	8.33	16.5	7.92	0.456	197	379
	955	8.08	14.2	7.93	0.416	209	138

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: FTP-1 Date Well Purged: 9-22-14 Date Well Sampled: 9-22-14

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 13.6 Purge Method: Bailer

Water Sample Data

Sample Number: FTP-1 Time Sample Collected: 1515
Sampling Method: bailer
Sampling Personnel: D Ramquist / M. Favreau
Remarks: TPH odor

Checklist

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

Liters Out	Time	PH	Temp	DO	Spec. Cond.	ORP	Turb

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: FTP-14 Date Well Purged: 9-22-14 Date Well Sampled: 9-22-14

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 18.4 Purge Method: bailer

Water Sample Data

Sample Number: FTP-14 Time Sample Collected: 1445
Sampling Method: bailer
Sampling Personnel: D Ramquist, M Farrow
Remarks:

Checklist

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

Liters Out	Time	PH	Temp	DO	Spec. Cond.	ORP	Turb

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: FTP-15 Date Well Purged: 9.22.14 Date Well Sampled: 9.22.14

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 18.3 Purge Method: bailer

Water Sample Data

Sample Number: FTP-15 Time Sample Collected: 1400
Sampling Method: Bailer
Sampling Personnel: DRamquist M. Fawcett
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

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: FTP-16 Date Well Purged: 9-22-14 Date Well Sampled: 9-22-14

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 24.35 Purge Method: bail

Water Sample Data

Sample Number: FTP-16 Time Sample Collected: 1600
Sampling Method: bailer
Sampling Personnel: DZamanist, M Fawcett
Remarks:

Checklist

☑ Well capped and locked (pre-sampling) New lock Master 22 key #357

☑ 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

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: 815-2 Date Well Purged: NA Date Well Sampled: 92314

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 53.9 Purge Method: NA

Water Sample Data

Sample Number: 815-2 Time Sample Collected: 1155
Sampling Method: PDB
Sampling Personnel: D Ramquist / M Farrow
Remarks:

Checklist

☒ Well capped and locked (pre-sampling) replaced lock w/ master key 337

☒ 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

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: MTS-1 Date Well Purged: — Date Well Sampled: 9.23.14

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 92.71 Purge Method: NA

Water Sample Data

Sample Number: MTS-1 Time Sample Collected: 1105
Sampling Method: PDB
Sampling Personnel: DRamquist / M Fawson
Remarks:

Checklist

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

Liters Out	Time	PH	Temp	DO	Spec. Cond.	ORP	Turb

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: MTS-2 Date Well Purged: NA Date Well Sampled: 9 23 14

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 84.68 Purge Method: NA

Water Sample Data

Sample Number: MTS-2 Time Sample Collected: 1110
Sampling Method: PDB
Sampling Personnel: D Rumanist, M. Faurew
Remarks:

Checklist

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

Liters Out	Time	PH	Temp	DO	Spec. Cond.	ORP	Turb

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: MTS-4 Date Well Purged: NA Date Well Sampled: 9-23-14

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 79.04 Purge Method: NA

Water Sample Data

Sample Number: MTS-4 Time Sample Collected: 1125
Sampling Method: PDB
Sampling Personnel: D Ramquist, M Baron
Remarks: Dup taken

Checklist

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

Liters Out	Time	PH	Temp	DO	Spec. Cond.	ORP	Turb

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: TNR-1 Date Well Purged: NA Date Well Sampled: 9/22/14

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 70.45 Purge Method: NA

Water Sample Data

Sample Number: TNR-1 Time Sample Collected: 1650
Sampling Method: PDB
Sampling Personnel: DRangnist, M Farrow
Remarks: replaced lock

Checklist

- [x] Well capped and locked (pre-sampling)
- [x] Water level measured
- [x] Appropriate sample containers filled and capped
- [x] Samples placed in cooler with blue ice
- [ ] PDB deployed (if applicable)
- [x] Well capped and locked (post-sampling) replaced lock w/ master 22 key #337

Liters Out	Time	PH	Temp	DO	Spec. Cond.	ORP	Turb

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: TNR-3 Date Well Purged: — Date Well Sampled: 9.22.14

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 60.90 Purge Method: NA

Water Sample Data

Sample Number: TNR-3 Time Sample Collected: 1035
Sampling Method: PDB
Sampling Personnel: DRamquist / M. Farrow
Remarks:

Checklist

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

Liters Out	Time	PH	Temp	DO	Spec. Cond.	ORP	Turb

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: TVR-5 Date Well Purged: NA Date Well Sampled: 9.22.14

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 52.52 Purge Method: NA

Water Sample Data

Sample Number: TVR-5 Time Sample Collected: 1700
Sampling Method: PDB
Sampling Personnel: D Ramquist, M Farrow
Remarks:

Checklist

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

Liters Out	Time	PH	Temp	DO	Spec. Cond.	ORP	Turb

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: TVR-6 Date Well Purged: — Date Well Sampled: 9.23.14

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 59.94 Purge Method: —

Water Sample Data

Sample Number: TVR-6 Time Sample Collected: 1140
Sampling Method: PDB
Sampling Personnel: DRamquist M Fawcett
Remarks: MS/MSD

Checklist

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

Liters Out	Time	PH	Temp	DO	Spec. Cond.	ORP	Turb

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: TVR-7 Date Well Purged: NA Date Well Sampled: 9.23.14

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 67.5 Purge Method: PP 1015 NA

Water Sample Data

Sample Number: TVR-7 Time Sample Collected: 1015
Sampling Method: PDB
Sampling Personnel: DRamquist, M Fawcett
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

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: Pomona Date Well Purged: NA Date Well Sampled: 9.23.14

Well Data

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

Water Sample Data

Sample Number: Pomona Well Time Sample Collected: 1020
Sampling Method: direct from tap
Sampling Personnel: D Ramquist
Remarks:

Checklist

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

Liters Out	Time	PH	Temp	DO	Spec. Cond.	ORP	Turb

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: PAIC Date Well Purged: NA Date Well Sampled: 9231L

Well Data

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

Water Sample Data

Sample Number: PAIC WELL Time Sample Collected: 1025
Sampling Method: direct from tap
Sampling Personnel: DRamquist
Remarks:

Checklist

☒ Well capped and locked (pre-sampling) gate locked

☐ 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) gate locked

Liters Out	Time	PH	Temp	DO	Spec. Cond.	ORP	Turb

ALS Environmental
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www.alsglobal.com

October 22, 2014 Analytical Report for Service Request No: K1410441

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

RE: JBLM-YRC/194-8468

Dear Keir:

Enclosed are the results of the samples submitted to our laboratory on September 25, 2014. For your reference, these analyses have been assigned our service request number K1410441.

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 call if you have any questions. My extension is 3376. You may also contact me via Email at Gregory.Salata@alsglobal.com.

Respectfully submitted,

ALS Group USA Corp. dba ALS Environmental

Gregory Salata

Gregory Salata, Ph.D.
Client Services Manager

GS/aj

ALS Environmental
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Table of Contents

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	-
Idaho DHW	http://www.healthandwelfare.idaho.gov/Health/Labs/CertificationDrinkingWaterLabs/tabid/1833/Default.aspx	-
ISO 17025	http://www.pjlabs.com/	L14-50
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Michigan DEQ	http://www.michigan.gov/deq/0,1607,7-135-3307_4131_4156---,00.html	9949
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
Wisconsin DNR	http://dnr.wi.gov/	998386840
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/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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Phone (360)577-7222 Fax (360)636-1068
www.alsglobal.com

ALS ENVIRONMENTAL

Client:	Tetra Tech, Incorporated	**Service Request No.:**	K1410441
Project:	JBLM-YRC/ 194-8468	**Date Received:**	09/25/14
Sample Matrix:	Water		

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

Seventeen water samples were received for analysis at ALS Environmental on 09/25/14. 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 4ºC 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.

Elevated Detection Limits:
Sample FTP-1 required dilution due to the presence of elevated levels of target analyte. The reporting limits were adjusted to reflect the dilution.

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

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. Refer to the raw data for the compounds impacted by the manual integration.

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) MS13\1002F003.D: Dichlorodifluoromethane, Carbon Disulfide and Naphthalene. 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.

Approved by_____

The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS18\1003F008.D: Chloromethane, Bromomethane, Carbon Disulfide and 2,2-Dichloropropane. 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 analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) MS18\1006F003.D: Acetone, Carbon Disulfide, 2,2-Dichloropropane and 4-Methyl-2-pentanone. 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.

Lab Control Sample Exceptions:
The advisory criterion was exceeded for Acetone in Laboratory Control Sample (LCS) KWG1413516-1. As per the ALS/Kelso Standard Operating Procedure (SOP) for this method, these compounds are not included in the subset of analytes used to control the analysis. The recovery information reported for these analytes is for advisory purposes only (i.e. to provide additional detail related to the performance of each individual compound). No further corrective action was required.

The advisory criterion was exceeded for Acetone and 2,2-Dichloropropane in Laboratory Control Sample (LCS) KWG1413475-3. As per the ALS/Kelso Standard Operating Procedure (SOP) for this method, these compounds are not included in the subset of analytes used to control the analysis. The recovery information reported for these analytes is for advisory purposes only (i.e. to provide additional detail related to the performance of each individual compound). No further corrective action was required.

Matrix Spike Recovery Exceptions:
The matrix spike recovery of Chloroethane and 1,1-Dichloroethene for sample VTR-6 was outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. The matrix spike outlier suggested a potential high bias in this matrix. No further corrective action was appropriate.

The matrix spike recovery of 2,2-Dichloropropane for sample VTR-6 was outside control criteria. Recovery in the Laboratory Control Sample (LCS) was acceptable, which indicated the analytical batch was in control. The matrix spike outlier suggested a potential low bias in this matrix. No further corrective action was appropriate.

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

Semivolatile Organic Compounds by EPA Method 8270

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.

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

Approved by_____

Chain of Custody

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SR# 614 10444

COC Set____of____

COC#_____

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www.alsglobal.com

Project Name: JBLM-YTC	Project Number: 154-84608
Project Manager: Mark Ingersoll	
Company: Tetra Tech	
Address: 19803 Warm Creek Parkway	
Phone #: 406.270.6339	email: mark.ingersoll@ttrakeh.com
Sampler Signature:	Sampler Printed Name: Dana Ramquist

CLIENT SAMPLE ID	LABID	SAMPLING Date	Time	Matrix	NUMBER OF CONTAINERS	6H: SM 9221 B / Tot Coli MT	48H: 300.0 / NO2	48H: 300.0 / NO3	48H: 300.0 / NO3 Diss	48H: SM 5210 B / BOD 5 Day	7D: 8270D / PAH SIM	7D: 8270D / SVO 82 70C	7D: 8330B / NitramAroEsters	7D: SM 2540 C / TDS	14D: 8260C / VOC FP 8260B	14D: NWTPH-Dx / NW_TPH	14D: NWTPH-Gx / NW_GAS	14D: SM 2320 B / Alkalinity D	14D: SM 2320 B / Bicarb Alk	14D: SM 4500-CN- E / CN T	28D: 300.0 / Cl D	28D: 300.0 / SO4 D	28D: 353.2 / NO2 NO3 T	28D: 7470A / Hg T	28D: 9060 / TOC T	28D: SM 4500-NH3 G / Ammonia	28D: SM 5220 C / COD T	180D: 200.7 / Metals D	Remarks
1. FTP-1		9.22.14	1515		8							X			X	X	X												
2. FTP-14		9.22.14	1405		4											X	X												
3. FTP-15		9.22.14	1400		4											X	X												
4. FTP-16		9.22.14	1600		4											X	X												
5. EB-2		9/23/14	1155		2										X														
6. MTS-1		9.23.14	1105		2										X														
7. MTS-2		9.23.14	1110		2										X														
8. MTS-4		9.23.14	1125		2										X														
9. DUP-1		9.23.14	1130		2										X														
10. VTR-1		9.22.14	1650		2										X														

Report Requirements

- ___ I. Routine Report: Method Blank, Surrogate, as required
- X 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
- X 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 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

Special Instructions/Comments:

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

2 coolers

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature: Dana Ramquist	Signature	Signature	Signature	Signature	Signature
Printed Name: Dana Ramquist	Printed Name	Printed Name	Printed Name: Les Kennedy	Printed Name	Printed Name
Firm: Tetra Tech	Firm: FedEx	Firm	Firm: ALS	Firm	Firm
Date/Time: 9.24.14, 1200	Date/Time	Date/Time	Date/Time: 9/25/14 1000	Date/Time	Date/Time

ALS Environmental

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CHAIN OF CUSTODY

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SR# K141544

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: BLM - YTC	Project Number: 141-84168
Project Manager: Mark Ingersoll	
Company: TetraTech	
Address: 19803 North Creek Parkway Bothell	
Phone #: 406-270-6339	email: Mark.Ingersoll@tetratech.com
Sampler Signature: Dana Ramquist	Sampler Printed Name: Dana Ramquist

CLIENT SAMPLE ID	LABID	SAMPLING Date	Time	Matrix	NUMBER OF CONTAINERS	6H: SM 9221 B / Tot Coli MT	48H: 300.0 / NO2	48H: 300.0 / NO3	48H: 300.0 / NO3 Diss	48H: SM 5210 B / BOD 5 Day	7D: 8270D / PAH SIM	7D: 8270D / SVO	7D: 8330B / NitramAroEsters	7D: SM 2540 C / TDS	14D: 8260C / VOC FP 8260B	14D: NWTPH-Dx / NW_TPH	14D: NWTPH-Gx / NW_GAS	14D: SM 2320 B / Alkalinity D	14D: SM 2320 B / Bicarb Alk	14D: SM 4500-CN- E / CN T	28D: 300.0 / Cl D	28D: 300.0 / SO4 D	28D: 353.2 / NO2 NO3 T	28D: 7470A / Hg T	28D: 9060 / TOC T	28D: SM 4500-NH3 G / Ammonia	28D: SM 5220 C / COD T	180D: 200.7 / Metals D	Remarks
1. VTR-3		9.22.14	1035	W	2										X														
2. VTR-5		9.22.14	1700	W	2										X														
3. VTR-6		9.23.14	1140	W	5										X														MS/MSD
4. PMC Well		9.23.14	1025	W	2										X														
5. Pamena Well		9.23.14	1020	W	2										X														
6. Trip Blank															X														
7. Trip Blank																	X												
8.																													
9.	9.24.14																												
10.																													

Report Requirements

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

X 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

X 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 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

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: Dana Ramquist	Signature	Signature	Signature: Les Kennedy	Signature	Signature
Printed Name: Dana Ramquist	Printed Name	Printed Name	Printed Name: Les Kennedy	Printed Name	Printed Name
Firm: TetraTech	Firm: FedEx	Firm	Firm: ALS	Firm	Firm
Date/Time: 9.24.14 1200	Date/Time	Date/Time	Date/Time: 9/25/14 1000	Date/Time	Date/Time

PC 65

Cooler Receipt and Preservation Form

Client / Project: Tetra Tech Service Request K14 1044/1

Received: 9/25/14 Opened: 9/25/14 By: ML Unloaded: 9/25/14 By: ML

1. Samples were received via? *Mail* (*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
   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
0.6	0.6	0.9	0.9	0	276	52879	9708 5357 6152	
0.5	0.7	4.5	4.7	+0.2	308	"	9708 5357 6141	
2.8	2.6	5.7	5.5	-0.2	336	"	9708 5357 6130	

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. Did all bottles arrive in good condition (unbroken)? *Indicate in the table below.* NA (Y) N
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: Received 2 VOA vials labeled TVR-7 that is not listed on the COC. 9/26/14 1015

Rec'd 4 Trip Blank VOA's not on COC

Page _____ *of* _____

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 **Service Request:** K1410441
Project: JBLM-YRC/194-8468

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

Sample Name	Lab Code	Date Collected	Date Received
FTP-1	K1410441-001	09/22/2014	09/25/2014
FTP-14	K1410441-002	09/22/2014	09/25/2014
FTP-15	K1410441-003	09/22/2014	09/25/2014
FTP-16	K1410441-004	09/22/2014	09/25/2014

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/22/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Diesel and Residual Range Organics

Sample Name:	FTP-1	**Units:**	ug/L
Lab Code:	K1410441-001	**Basis:**	NA
Extraction Method:	Method	**Level:**	Low
Analysis Method:	NWTPH-Dx		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	**22000**	DY	1100	200	110	10	09/26/14	10/14/14	KWG1413414	
Residual Range Organics (RRO)	**3400**	DL	1100	500	190	10	09/26/14	10/14/14	KWG1413414	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	127	50-150	10/14/14	Acceptable
n-Triacontane	120	50-150	10/14/14	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/22/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Diesel and Residual Range Organics

Sample Name:	FTP-14	**Units:**	ug/L
Lab Code:	K1410441-002	**Basis:**	NA
Extraction Method:	Method	**Level:**	Low
Analysis Method:	NWTPH-Dx		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	**290**	Y	110	20	11	1	09/26/14	10/14/14	KWG1413414	
Residual Range Organics (RRO)	**360**	L	110	50	19	1	09/26/14	10/14/14	KWG1413414	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	110	50-150	10/14/14	Acceptable
n-Triacontane	111	50-150	10/14/14	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/22/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Diesel and Residual Range Organics

Sample Name:	FTP-15	**Units:**	ug/L
Lab Code:	K1410441-003	**Basis:**	NA
Extraction Method:	Method	**Level:**	Low
Analysis Method:	NWTPH-Dx		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	**46**	J	110	20	11	1	09/26/14	10/14/14	KWG1413414	
Residual Range Organics (RRO)	**110**	J	110	50	19	1	09/26/14	10/14/14	KWG1413414	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	56	50-150	10/14/14	Acceptable
n-Triacontane	58	50-150	10/14/14	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/22/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Diesel and Residual Range Organics

Sample Name:	FTP-16	**Units:**	ug/L
Lab Code:	K1410441-004	**Basis:**	NA
Extraction Method:	Method	**Level:**	Low
Analysis Method:	NWTPH-Dx		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	**290**	Y	110	20	11	1	09/26/14	10/14/14	KWG1413414	
Residual Range Organics (RRO)	**180**	L	110	50	19	1	09/26/14	10/14/14	KWG1413414	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	92	50-150	10/14/14	Acceptable
n-Triacontane	97	50-150	10/14/14	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Diesel and Residual Range Organics

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1413414-3	**Basis:**	NA
Extraction Method:	Method	**Level:**	Low
Analysis Method:	NWTPH-Dx		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Diesel Range Organics (DRO)	**23**	J	50	20	11	1	09/26/14	10/14/14	KWG1413414	
Residual Range Organics (RRO)	**33**	J	50	50	19	1	09/26/14	10/14/14	KWG1413414	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	103	50-150	10/14/14	Acceptable
n-Triacontane	108	50-150	10/14/14	Acceptable

Comments:

Client: Tetra Tech, Incorporated **Service Request:** K1410441
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Surrogate Recovery Summary
Diesel and Residual Range Organics

Extraction Method: Method **Units:** Percent
Analysis Method: NWTPH-Dx **Level:** Low

Sample Name	Lab Code	Sur1	Sur2
FTP-1	K1410441-001	127 D	120 D
FTP-14	K1410441-002	110	111
FTP-15	K1410441-003	56	58
FTP-16	K1410441-004	92	97
Method Blank	KWG1413414-3	103	108
Lab Control Sample	KWG1413414-1	114	116
Duplicate Lab Control Sample	KWG1413414-2	118	121

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	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Extracted:**	09/26/2014
Sample Matrix:	Water	**Date Analyzed:**	10/14/2014

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

Extraction Method:	Method	**Units:**	ug/L
Analysis Method:	NWTPH-Dx	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1413414

	Lab Control Sample KWG1413414-1 Lab Control Spike			Duplicate Lab Control Sample KWG1413414-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
Diesel Range Organics (DRO)	1680	1600	105	1740	1600	109	46-140	4	30
Residual Range Organics (RRO)	1160	800	145	1200	800	150	45-159	3	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	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Extracted:**	09/26/2014
Sample Matrix:	Water	**Date Analyzed:**	10/14/2014
		Time Analyzed:	01:44

Method Blank Summary
Diesel and Residual Range Organics

Sample Name:	Method Blank	**Instrument ID:**	GC21
Lab Code:	KWG1413414-3	**File ID:**	J:\GC21\DATA\101314B\1013F095.D
Extraction Method:	Method	**Level:**	Low
Analysis Method:	NWTPH-Dx	**Extraction Lot:**	KWG1413414

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1413414-1	J:\GC21\DATA\101314B\1013F091.D	10/14/14	01:00
Duplicate Lab Control Sample	KWG1413414-2	J:\GC21\DATA\101314B\1013F093.D	10/14/14	01:22
FTP-14	K1410441-002	J:\GC21\DATA\101314B\1013F097.D	10/14/14	02:06
FTP-15	K1410441-003	J:\GC21\DATA\101314B\1013F099.D	10/14/14	02:29
FTP-16	K1410441-004	J:\GC21\DATA\101314B\1013F101.D	10/14/14	02:51
FTP-1	K1410441-001	J:\GC21\DATA\101314B\1013F109.D	10/14/14	04:20

QA/QC Report

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Extracted:**	09/26/2014
Sample Matrix:	Water	**Date Analyzed:**	10/14/2014
		Time Analyzed:	01:00

Lab Control Sample Summary
Diesel and Residual Range Organics

Sample Name:	Lab Control Sample	**Instrument ID:**	GC21
Lab Code:	KWG1413414-1	**File ID:**	J:\GC21\DATA\101314B\1013F091.D
Extraction Method:	Method	**Level:**	Low
Analysis Method:	NWTPH-Dx	**Extraction Lot:**	KWG1413414

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1413414-3	J:\GC21\DATA\101314B\1013F095.D	10/14/14	01:44
FTP-14	K1410441-002	J:\GC21\DATA\101314B\1013F097.D	10/14/14	02:06
FTP-15	K1410441-003	J:\GC21\DATA\101314B\1013F099.D	10/14/14	02:29
FTP-16	K1410441-004	J:\GC21\DATA\101314B\1013F101.D	10/14/14	02:51
FTP-1	K1410441-001	J:\GC21\DATA\101314B\1013F109.D	10/14/14	04:20

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 10/09/2014

Initial Calibration Summary
Diesel and Residual Range Organics

Calibration ID: CAL13602
Instrument ID: GC21

Column: ZB-1

Level ID	File ID
A	J:\GC21\DATA\100914B\1009F027.D
B	J:\GC21\DATA\100914B\1009F029.D
C	J:\GC21\DATA\100914B\1009F031.D
D	J:\GC21\DATA\100914B\1009F033.D
E	J:\GC21\DATA\100914B\1009F035.D
F	J:\GC21\DATA\100914B\1009F041.D
G	J:\GC21\DATA\100914B\1009F043.D
H	J:\GC21\DATA\100914B\1009F045.D
I	J:\GC21\DATA\100914B\1009F047.D
J	J:\GC21\DATA\100914B\1009F049.D
K	J:\GC21\DATA\100914B\1009F051.D
L	J:\GC21\DATA\100914B\1009F053.D
M	J:\GC21\DATA\100914B\1009F055.D
N	J:\GC21\DATA\101014B\1010FX23.D
O	J:\GC21\DATA\101014B\1010FX24.D
P	J:\GC21\DATA\101014B\1010FX25.D
Q	J:\GC21\DATA\101014B\1010F023.D
R	J:\GC21\DATA\101014B\1010F025.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)	F	20	1470	G	50	1410	H	200	1310	I	500	1340	J	2000	1290
	K	5000	1310	L	20000	1210	M	50000	1240						
Residual Range Organics (RRO)										N	50	666	O	200	625
	P	500	622	Q	2000	586	R	5000	616						
o-Terphenyl	F	1.0	1760	G	2.5	1770	H	10	1740	I	25	1770	J	100	1750
	K	250	1720												
n-Triacontane	F	1.0	1500	G	2.5	1510	H	10	1490	I	25	1520	J	100	1500
	K	250	1490												

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

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 10/09/2014

Initial Calibration Summary
Diesel and Residual Range Organics

Calibration ID: CAL13602
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	6.5		≤ 20
Residual Range Organics (RRO)	MS	AverageRF	% RSD	4.6		≤ 20
o-Terphenyl	SURR	AverageRF	% RSD	1.1		≤ 20
n-Triacontane	SURR	AverageRF	% RSD	0.6		≤ 20

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

QA/QC Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 10/09/2014
Date Analyzed: 10/09/2014 - 10/10/2014

Second Source Calibration Verification
Diesel and Residual Range Organics

Calibration Type: External Standard
Analysis Method: NWTPH-Dx

Calibration ID: CAL13602
Units: ppm

File ID: J:\GC21\DATA\100914B\1009F039.D
J:\GC21\DATA\100914B\1009F059.D
J:\GC21\DATA\101014B\1010F029.D

Column ID: ZB-1

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Diesel Range Organics (DRO)	1000	950	1320	1260	-5	NA	± 15 %	AverageRF
Residual Range Organics (RRO)	1000	940	623	588	-6	NA	± 15 %	AverageRF

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Date Analyzed: 10/13/2014

Continuing Calibration Verification Summary
Diesel and Residual Range Organics

Calibration Type: External Standard
Analysis Method: NWTPH-Dx

Calibration Date: 10/09/2014
Calibration ID: CAL13602
Analysis Lot: KWG1413895
Units: ppm

File ID: J:\GC21\DATA\101314B\1013F079.D
J:\GC21\DATA\101314B\1013F081.D

Column ID: ZB-1

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Diesel Range Organics (DRO)	1000	970	1320	1280	-3	NA	± 15 %	AverageRF
Residual Range Organics (RRO)	1000	1000	623	630	1	NA	± 15 %	AverageRF
o-Terphenyl	50	49	1750	1720	-2	NA	± 15 %	AverageRF
n-Triacontane	50	49	1500	1460	-3	NA	± 15 %	AverageRF

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

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Date Analyzed: 10/14/2014

Continuing Calibration Verification Summary
Diesel and Residual Range Organics

Calibration Type: External Standard
Analysis Method: NWTPH-Dx

Calibration Date: 10/09/2014
Calibration ID: CAL13602
Analysis Lot: KWG1413895
Units: ppm

File ID: J:\GC21\DATA\101314B\1013F111.D
J:\GC21\DATA\101314B\1013F113.D

Column ID: ZB-1

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Diesel Range Organics (DRO)	1000	950	1320	1250	-5	NA	± 15 %	AverageRF
Residual Range Organics (RRO)	1000	1000	623	621	0	NA	± 15 %	AverageRF
o-Terphenyl	50	48	1750	1680	-4	NA	± 15 %	AverageRF
n-Triacontane	50	48	1500	1440	-4	NA	± 15 %	AverageRF

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Tetra Tech, Incorporated **Service Request:** K1410441
Project: JBLM-YRC/194-8468

Analysis Run Log
Diesel and Residual Range Organics

Analysis Method: NWTPH-Dx **Analysis Lot:** KWG1413895
Instrument ID: GC21
Column: ZB-1

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1013F021.D	Continuing Calibration Verification	KWG1413895-1	10/13/2014	11:55		10/13/2014	12:11
1013F023.D	Continuing Calibration Verification	KWG1413895-1	10/13/2014	12:18		10/13/2014	12:34
1013F025.D	Instrument Blank	KWG1413895-6	10/13/2014	12:40		10/13/2014	12:56
1013F027.D	ZZZZZZ	ZZZZZZ	10/13/2014	13:03		10/13/2014	13:19
1013F029.D	ZZZZZZ	ZZZZZZ	10/13/2014	13:26		10/13/2014	13:42
1013F031.D	ZZZZZZ	ZZZZZZ	10/13/2014	13:48		10/13/2014	14:04
1013F033.D	ZZZZZZ	ZZZZZZ	10/13/2014	14:10		10/13/2014	14:26
1013F035.D	ZZZZZZ	ZZZZZZ	10/13/2014	14:33		10/13/2014	14:49
1013F037.D	ZZZZZZ	ZZZZZZ	10/13/2014	14:55		10/13/2014	15:11
1013F039.D	ZZZZZZ	ZZZZZZ	10/13/2014	15:17		10/13/2014	15:33
1013F041.D	ZZZZZZ	ZZZZZZ	10/13/2014	15:39		10/13/2014	15:55
1013F043.D	ZZZZZZ	ZZZZZZ	10/13/2014	16:01		10/13/2014	16:17
1013F045.D	ZZZZZZ	ZZZZZZ	10/13/2014	16:24		10/13/2014	16:40
1013F047.D	Continuing Calibration Verification	KWG1413895-2	10/13/2014	16:46		10/13/2014	17:02
1013F049.D	Continuing Calibration Verification	KWG1413895-2	10/13/2014	17:08		10/13/2014	17:24
1013F051.D	Instrument Blank	KWG1413895-7	10/13/2014	17:30		10/13/2014	17:46
1013F053.D	ZZZZZZ	ZZZZZZ	10/13/2014	17:52		10/13/2014	18:08
1013F055.D	ZZZZZZ	ZZZZZZ	10/13/2014	18:14		10/13/2014	18:30
1013F057.D	ZZZZZZ	ZZZZZZ	10/13/2014	18:37		10/13/2014	18:53
1013F059.D	ZZZZZZ	ZZZZZZ	10/13/2014	18:59		10/13/2014	19:15
1013F061.D	ZZZZZZ	ZZZZZZ	10/13/2014	19:21		10/13/2014	19:37
1013F063.D	ZZZZZZ	ZZZZZZ	10/13/2014	19:44		10/13/2014	20:00
1013F065.D	ZZZZZZ	ZZZZZZ	10/13/2014	20:06		10/13/2014	20:22
1013F067.D	ZZZZZZ	ZZZZZZ	10/13/2014	20:28		10/13/2014	20:44
1013F069.D	ZZZZZZ	ZZZZZZ	10/13/2014	20:51		10/13/2014	21:07
1013F071.D	ZZZZZZ	ZZZZZZ	10/13/2014	21:13		10/13/2014	21:29
1013F073.D	ZZZZZZ	ZZZZZZ	10/13/2014	21:36		10/13/2014	21:52
1013F075.D	ZZZZZZ	ZZZZZZ	10/13/2014	21:58		10/13/2014	22:14
1013F077.D	ZZZZZZ	ZZZZZZ	10/13/2014	22:21		10/13/2014	22:37
1013F079.D	Continuing Calibration Verification	KWG1413895-3	10/13/2014	22:43		10/13/2014	22:59
1013F081.D	Continuing Calibration Verification	KWG1413895-3	10/13/2014	23:06		10/13/2014	23:22
1013F083.D	Instrument Blank	KWG1413895-8	10/13/2014	23:29		10/13/2014	23:45
1013F085.D	ZZZZZZ	ZZZZZZ	10/13/2014	23:52		10/14/2014	00:08
1013F087.D	ZZZZZZ	ZZZZZZ	10/14/2014	00:14		10/14/2014	00:30

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

Client: Tetra Tech, Incorporated **Service Request:** K1410441
Project: JBLM-YRC/194-8468

Analysis Run Log
Diesel and Residual Range Organics

Analysis Method: NWTPH-Dx **Analysis Lot:** KWG1413895
Instrument ID: GC21
Column: ZB-1

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1013F089.D	ZZZZZZ	ZZZZZZ	10/14/2014	00:37		10/14/2014	00:53
1013F091.D	Lab Control Sample	KWG1413414-1	10/14/2014	01:00		10/14/2014	01:16
1013F093.D	Duplicate Lab Control Sample	KWG1413414-2	10/14/2014	01:22		10/14/2014	01:38
1013F095.D	Method Blank	KWG1413414-3	10/14/2014	01:44		10/14/2014	02:00
1013F097.D	FTP-14	K1410441-002	10/14/2014	02:06		10/14/2014	02:22
1013F099.D	FTP-15	K1410441-003	10/14/2014	02:29		10/14/2014	02:45
1013F101.D	FTP-16	K1410441-004	10/14/2014	02:51		10/14/2014	03:07
1013F103.D	ZZZZZZ	ZZZZZZ	10/14/2014	03:13		10/14/2014	03:29
1013F105.D	ZZZZZZ	ZZZZZZ	10/14/2014	03:36		10/14/2014	03:52
1013F107.D	ZZZZZZ	ZZZZZZ	10/14/2014	03:58		10/14/2014	04:14
1013F109.D	FTP-1	K1410441-001	10/14/2014	04:20		10/14/2014	04:36
1013F111.D	Continuing Calibration Verification	KWG1413895-4	10/14/2014	04:42		10/14/2014	04:58
1013F113.D	Continuing Calibration Verification	KWG1413895-4	10/14/2014	05:05		10/14/2014	05:21
1013F115.D	Instrument Blank	KWG1413895-9	10/14/2014	05:27		10/14/2014	05:43
1013F117.D	ZZZZZZ	ZZZZZZ	10/14/2014	05:49		10/14/2014	06:05
1013F119.D	ZZZZZZ	ZZZZZZ	10/14/2014	06:12		10/14/2014	06:28
1013F121.D	ZZZZZZ	ZZZZZZ	10/14/2014	06:34		10/14/2014	06:50
1013F123.D	ZZZZZZ	ZZZZZZ	10/14/2014	06:56		10/14/2014	07:12
1013F125.D	ZZZZZZ	ZZZZZZ	10/14/2014	07:19		10/14/2014	07:35
1013F127.D	ZZZZZZ	ZZZZZZ	10/14/2014	07:41		10/14/2014	07:57
1013F129.D	ZZZZZZ	ZZZZZZ	10/14/2014	08:03		10/14/2014	08:19
1013F131.D	ZZZZZZ	ZZZZZZ	10/14/2014	08:26		10/14/2014	08:42
1013F133.D	ZZZZZZ	ZZZZZZ	10/14/2014	08:48		10/14/2014	09:04
1013F135.D	ZZZZZZ	ZZZZZZ	10/14/2014	09:10		10/14/2014	09:26
1013F137.D	ZZZZZZ	ZZZZZZ	10/14/2014	09:33		10/14/2014	09:49
1013F139.D	ZZZZZZ	ZZZZZZ	10/14/2014	09:55		10/14/2014	10:11
1013F141.D	ZZZZZZ	ZZZZZZ	10/14/2014	10:17		10/14/2014	10:33
1013F143.D	Continuing Calibration Verification	KWG1413895-5	10/14/2014	10:40		10/14/2014	10:56
1013F145.D	Continuing Calibration Verification	KWG1413895-5	10/14/2014	11:02		10/14/2014	11:18
1013F147.D	Instrument Blank	KWG1413895-10	10/14/2014	11:24		10/14/2014	11:40

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

QA/QC Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Extracted: 09/26/2014

Extraction Prep Log
Diesel and Residual Range Organics

Extraction Method: Method
Analysis Method: NWTPH-Dx

Extraction Lot: KWG1413414
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
FTP-1	K1410441-001	09/22/14	09/25/14	950mL	1mL	NA	
FTP-14	K1410441-002	09/22/14	09/25/14	950mL	1mL	NA	
FTP-15	K1410441-003	09/22/14	09/25/14	950mL	1mL	NA	
FTP-16	K1410441-004	09/22/14	09/25/14	950mL	1mL	NA	
Method Blank	KWG1413414-3	NA	NA	1000mL	1mL	NA	
Lab Control Sample	KWG1413414-1	NA	NA	1000mL	1mL	NA	
Duplicate Lab Control Sample	KWG1413414-2	NA	NA	1000mL	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 **Service Request:** K1410441
Project: JBLM-YRC/194-8468

Cover Page - Organic Analysis Data Package
Gasoline Range Organics

Sample Name	Lab Code	Date Collected	Date Received
FTP-1	K1410441-001	09/22/2014	09/25/2014
FTP-14	K1410441-002	09/22/2014	09/25/2014
FTP-15	K1410441-003	09/22/2014	09/25/2014
FTP-16	K1410441-004	09/22/2014	09/25/2014
Trip Blank	K1410441-016	09/23/2014	09/25/2014
FTP-1	KWG1413663-1	09/22/2014	09/25/2014

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/22/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Gasoline Range Organics

Sample Name:	FTP-1	**Units:**	ug/L
Lab Code:	K1410441-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	**1100**	Y	250	25	13	1	10/01/14	10/01/14	KWG1413663	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	100	50-150	10/01/14	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/22/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Gasoline Range Organics

Sample Name:	FTP-14	**Units:**	ug/L
Lab Code:	K1410441-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	**22**	J	250	25	13	1	10/01/14	10/01/14	KWG1413663	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	103	50-150	10/01/14	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/22/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Gasoline Range Organics

Sample Name:	FTP-15	**Units:**	ug/L
Lab Code:	K1410441-003	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	**14**	J	250	25	13	1	10/01/14	10/01/14	KWG1413663	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	101	50-150	10/01/14	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/22/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Gasoline Range Organics

Sample Name:	FTP-16	**Units:**	ug/L
Lab Code:	K1410441-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	25	13	1	10/01/14	10/01/14	KWG1413663	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	103	50-150	10/01/14	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/23/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Gasoline Range Organics

Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	K1410441-016	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	25	13	1	10/01/14	10/01/14	KWG1413663	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	104	50-150	10/01/14	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Gasoline Range Organics

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1413663-3	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Gasoline Range Organics-NWTPH	ND	U	250	25	13	1	10/01/14	10/01/14	KWG1413663	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	104	50-150	10/01/14	Acceptable

Comments:

Client: Tetra Tech, Incorporated **Service Request:** K1410441
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Surrogate Recovery Summary
Gasoline Range Organics

Extraction Method: EPA 5030B **Units:** Percent
Analysis Method: NWTPH-Gx **Level:** Low

Sample Name	Lab Code	Sur1
FTP-1	K1410441-001	100
FTP-14	K1410441-002	103
FTP-15	K1410441-003	101
FTP-16	K1410441-004	103
Trip Blank	K1410441-016	104
FTP-1DUP	KWG1413663-1	99
Method Blank	KWG1413663-3	104
Lab Control Sample	KWG1413663-2	104

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, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Extracted:**	10/01/2014
Sample Matrix:	Water	**Date Analyzed:**	10/01/2014

Duplicate Sample Summary
Gasoline Range Organics

Sample Name:	FTP-1	**Units:**	ug/L
Lab Code:	K1410441-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx	**Extraction Lot:**	KWG1413663

Analyte Name	LOQ	MDL	Sample Result	FTP-1DUP KWG1413663-1 Duplicate Sample Result	Average	Relative Percent Difference	RPD Limit
Gasoline Range Organics-NWTPH	250	13	1100	1300	1200	9	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, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Extracted:**	10/01/2014
Sample Matrix:	Water	**Date Analyzed:**	10/01/2014

Lab Control Spike Summary
Gasoline Range Organics

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	NWTPH-Gx	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1413663

	Lab Control Sample KWG1413663-2 Lab Control Spike			
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**
Gasoline Range Organics-NWTPH	446	500	89	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, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Extracted:**	10/01/2014
Sample Matrix:	Water	**Date Analyzed:**	10/01/2014
		Time Analyzed:	22:00

Method Blank Summary
Gasoline Range Organics

Sample Name:	Method Blank	**Instrument ID:**	GC39
Lab Code:	KWG1413663-3	**File ID:**	J:\GC39\DATA\100114\1001F035.D
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx	**Extraction Lot:**	KWG1413663

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
FTP-14	K1410441-002	J:\GC39\DATA\100114\1001F013.D	10/01/14	13:06
Trip Blank	K1410441-016	J:\GC39\DATA\100114\1001F015.D	10/01/14	13:54
FTP-1	K1410441-001	J:\GC39\DATA\100114\1001F021.D	10/01/14	16:21
FTP-1DUP	KWG1413663-1	J:\GC39\DATA\100114\1001F022.D	10/01/14	16:45
FTP-15	K1410441-003	J:\GC39\DATA\100114\1001F024.D	10/01/14	17:36
FTP-16	K1410441-004	J:\GC39\DATA\100114\1001F025.D	10/01/14	18:00
Lab Control Sample	KWG1413663-2	J:\GC39\DATA\100114\1001F034.D	10/01/14	21:36

QA/QC Report

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Extracted:**	10/01/2014
Sample Matrix:	Water	**Date Analyzed:**	10/01/2014
		Time Analyzed:	21:36

Lab Control Sample Summary
Gasoline Range Organics

Sample Name:	Lab Control Sample	**Instrument ID:**	GC39
Lab Code:	KWG1413663-2	**File ID:**	J:\GC39\DATA\100114\1001F034.D
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	NWTPH-Gx	**Extraction Lot:**	KWG1413663

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
FTP-14	K1410441-002	J:\GC39\DATA\100114\1001F013.D	10/01/14	13:06
Trip Blank	K1410441-016	J:\GC39\DATA\100114\1001F015.D	10/01/14	13:54
FTP-1	K1410441-001	J:\GC39\DATA\100114\1001F021.D	10/01/14	16:21
FTP-1DUP	KWG1413663-1	J:\GC39\DATA\100114\1001F022.D	10/01/14	16:45
FTP-15	K1410441-003	J:\GC39\DATA\100114\1001F024.D	10/01/14	17:36
FTP-16	K1410441-004	J:\GC39\DATA\100114\1001F025.D	10/01/14	18:00
Method Blank	KWG1413663-3	J:\GC39\DATA\100114\1001F035.D	10/01/14	22:00

QA/QC Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 07/08/2014

Initial Calibration Summary
Gasoline Range Organics

Calibration ID: CAL13430
Instrument ID: GC39

Column: DB-624

Level ID	File ID
A	J:\GC39\Data\070814\0708F006.D
B	J:\GC39\Data\070814\0708F007.D
C	J:\GC39\Data\070814\0708F008.D
D	J:\GC39\Data\070814\0708F009.D
E	J:\GC39\Data\070814\0708F010.D
F	J:\GC39\Data\070814\0708F011.D
G	J:\GC39\Data\070814\0708F012.D

Analyte Name	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF	Level ID	Amt	RF
Gasoline Range Organics-NWTPH	A	50	73900	B	100	78800	C	200	72100	D	500	71700	E	1000	65100
	F	5000	70600	G	10000	72300									
1,4-Difluorobenzene	A	100	1.25E+5	B	100	1.28E+5	C	100	1.25E+5	D	100	1.28E+5	E	100	1.28E+5

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

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 07/08/2014

Initial Calibration Summary
Gasoline Range Organics

Calibration ID: CAL13430
Instrument ID: GC39

Column: DB-624

Analyte Name	Compound Type	Calibration Evaluation				
		Fit Type	Eval.	Eval. Result	Q	Control Criteria
Gasoline Range Organics-NWTPH	MS	AverageRF	% RSD	5.6		≤ 20
1,4-Difluorobenzene	SURR	AverageRF	% RSD	1.1		≤ 20

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

QA/QC Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 07/08/2014
Date Analyzed: 07/08/2014

Second Source Calibration Verification
Gasoline Range Organics

Calibration Type: External Standard
Analysis Method: NWTPH-Gx

Calibration ID: CAL13430
Units: ug/L

File ID: J:\GC39\Data\070814\0708F016.D

Column ID: DB-624

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Gasoline Range Organics-NWTPH	500	480	72100	69600	-3	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: JBLM-YRC/194-8468

Service Request: K1410441
Date Analyzed: 10/01/2014

Continuing Calibration Verification Summary
Gasoline Range Organics

Calibration Type: External Standard
Analysis Method: NWTPH-Gx

Calibration Date: 07/08/2014
Calibration ID: CAL13430
Analysis Lot: KWG1413660
Units: ug/L

File ID: J:\GC39\DATA\100114\1001F002.D

Column ID: DB-624

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Gasoline Range Organics-NWTPH	500	450	72100	65200	-10	NA	± 20 %	AverageRF
1,4-Difluorobenzene	100	110	127000	136000	7	NA	± 20 %	AverageRF

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

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Date Analyzed: 10/01/2014

Continuing Calibration Verification Summary
Gasoline Range Organics

Calibration Type: External Standard
Analysis Method: NWTPH-Gx

Calibration Date: 07/08/2014
Calibration ID: CAL13430
Analysis Lot: KWG1413660
Units: ug/L

File ID: J:\GC39\DATA\100114\1001F019.D

Column ID: DB-624

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Gasoline Range Organics-NWTPH	500	480	72100	69000	-4	NA	± 20 %	AverageRF
1,4-Difluorobenzene	100	110	127000	134000	6	NA	± 20 %	AverageRF

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

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Date Analyzed: 10/01/2014

Continuing Calibration Verification Summary
Gasoline Range Organics

Calibration Type: External Standard
Analysis Method: NWTPH-Gx

Calibration Date: 07/08/2014
Calibration ID: CAL13430
Analysis Lot: KWG1413660
Units: ug/L

File ID: J:\GC39\DATA\100114\1001F036.D

Column ID: DB-624

Analyte Name	Expected	Result	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
Gasoline Range Organics-NWTPH	500	480	72100	68800	-4	NA	± 20 %	AverageRF
1,4-Difluorobenzene	100	100	127000	132000	4	NA	± 20 %	AverageRF

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

ALS Group USA, Corp. dba ALS Environmental

QA/QC Results

Client: Tetra Tech, Incorporated **Service Request:** K1410441
Project: JBLM-YRC/194-8468

Analysis Run Log
Gasoline Range Organics

Analysis Method: NWTPH-Gx **Analysis Lot:** KWG1413660
Instrument ID: GC39
Column: DB-624

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1001F002.D	Continuing Calibration Verification	KWG1413660-1	10/1/2014	08:29		10/1/2014	08:44
1001F003.D	Instrument Blank	KWG1413660-6	10/1/2014	09:05		10/1/2014	09:20
1001F004.D	ZZZZZZ	ZZZZZZ	10/1/2014	09:29		10/1/2014	09:44
1001F005.D	ZZZZZZ	ZZZZZZ	10/1/2014	09:53		10/1/2014	10:08
1001F006.D	ZZZZZZ	ZZZZZZ	10/1/2014	10:17		10/1/2014	10:32
1001F007.D	ZZZZZZ	ZZZZZZ	10/1/2014	10:41		10/1/2014	10:56
1001F008.D	ZZZZZZ	ZZZZZZ	10/1/2014	11:05		10/1/2014	11:20
1001F009.D	ZZZZZZ	ZZZZZZ	10/1/2014	11:29		10/1/2014	11:44
1001F010.D	ZZZZZZ	ZZZZZZ	10/1/2014	11:53		10/1/2014	12:08
1001F011.D	ZZZZZZ	ZZZZZZ	10/1/2014	12:17		10/1/2014	12:32
1001F012.D	ZZZZZZ	ZZZZZZ	10/1/2014	12:42		10/1/2014	12:57
1001F013.D	FTP-14	K1410441-002	10/1/2014	13:06		10/1/2014	13:21
1001F015.D	Trip Blank	K1410441-016	10/1/2014	13:54		10/1/2014	14:09
1001F019.D	Continuing Calibration Verification	KWG1413660-2	10/1/2014	15:33		10/1/2014	15:48
1001F020.D	Instrument Blank	KWG1413660-7	10/1/2014	15:57		10/1/2014	16:12
1001F021.D	FTP-1	K1410441-001	10/1/2014	16:21		10/1/2014	16:36
1001F022.D	FTP-1DUP	KWG1413663-1	10/1/2014	16:45		10/1/2014	17:00
1001F024.D	FTP-15	K1410441-003	10/1/2014	17:36		10/1/2014	17:51
1001F025.D	FTP-16	K1410441-004	10/1/2014	18:00		10/1/2014	18:15
1001F027.D	ZZZZZZ	ZZZZZZ	10/1/2014	18:48		10/1/2014	19:03
1001F028.D	ZZZZZZ	ZZZZZZ	10/1/2014	19:12		10/1/2014	19:27
1001F029.D	ZZZZZZ	ZZZZZZ	10/1/2014	19:36		10/1/2014	19:51
1001F030.D	ZZZZZZ	ZZZZZZ	10/1/2014	20:00		10/1/2014	20:15
1001F031.D	ZZZZZZ	ZZZZZZ	10/1/2014	20:24		10/1/2014	20:39
1001F033.D	ZZZZZZ	ZZZZZZ	10/1/2014	21:12		10/1/2014	21:27
1001F034.D	Lab Control Sample	KWG1413663-2	10/1/2014	21:36		10/1/2014	21:51
1001F035.D	Method Blank	KWG1413663-3	10/1/2014	22:00		10/1/2014	22:15
1001F036.D	Continuing Calibration Verification	KWG1413660-3	10/1/2014	22:24		10/1/2014	22:39
1001F037.D	Instrument Blank	KWG1413660-8	10/1/2014	22:48		10/1/2014	23:03
1001F038.D	ZZZZZZ	ZZZZZZ	10/1/2014	23:12		10/1/2014	23:27
1001F039.D	ZZZZZZ	ZZZZZZ	10/1/2014	23:36		10/1/2014	23:51
1001F040.D	ZZZZZZ	ZZZZZZ	10/2/2014	00:01		10/2/2014	00:16
1001F041.D	ZZZZZZ	ZZZZZZ	10/2/2014	00:25		10/2/2014	00:40
1001F042.D	ZZZZZZ	ZZZZZZ	10/2/2014	00:49		10/2/2014	01:04

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

Client: Tetra Tech, Incorporated **Service Request:** K1410441
Project: JBLM-YRC/194-8468

Analysis Run Log
Gasoline Range Organics

Analysis Method: NWTPH-Gx **Analysis Lot:** KWG1413660
Instrument ID: GC39
Column: DB-624

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1001F043.D	ZZZZZZ	ZZZZZZ	10/2/2014	01:13		10/2/2014	01:28
1001F044.D	ZZZZZZ	ZZZZZZ	10/2/2014	01:37		10/2/2014	01:52
1001F045.D	ZZZZZZ	ZZZZZZ	10/2/2014	02:01		10/2/2014	02:16
1001F046.D	ZZZZZZ	ZZZZZZ	10/2/2014	02:25		10/2/2014	02:40
1001F047.D	ZZZZZZ	ZZZZZZ	10/2/2014	02:49		10/2/2014	03:04
1001F048.D	ZZZZZZ	ZZZZZZ	10/2/2014	03:13		10/2/2014	03:28
1001F049.D	ZZZZZZ	ZZZZZZ	10/2/2014	03:37		10/2/2014	03:52
1001F050.D	ZZZZZZ	ZZZZZZ	10/2/2014	04:01		10/2/2014	04:16
1001F051.D	Continuing Calibration Verification	KWG1413660-4	10/2/2014	04:25		10/2/2014	04:40
1001F052.D	Instrument Blank	KWG1413660-9	10/2/2014	04:49		10/2/2014	05:04
1001F053.D	ZZZZZZ	ZZZZZZ	10/2/2014	05:13		10/2/2014	05:28
1001F054.D	ZZZZZZ	ZZZZZZ	10/2/2014	05:37		10/2/2014	05:52
1001F055.D	Continuing Calibration Verification	KWG1413660-5	10/2/2014	06:01		10/2/2014	06:16
1001F056.D	Instrument Blank	KWG1413660-10	10/2/2014	06:25		10/2/2014	06:40

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

QA/QC Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Extracted: 10/01/2014

Extraction Prep Log
Gasoline Range Organics

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

Extraction Lot: KWG1413663
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
FTP-1	K1410441-001	09/22/14	09/25/14	10ml	10ml	NA	
FTP-14	K1410441-002	09/22/14	09/25/14	10ml	10ml	NA	
FTP-15	K1410441-003	09/22/14	09/25/14	10ml	10ml	NA	
FTP-16	K1410441-004	09/22/14	09/25/14	10ml	10ml	NA	
Trip Blank	K1410441-016	09/23/14	09/25/14	10ml	10ml	NA	
FTP-1DUP	KWG1413663-1	09/22/14	09/25/14	10ml	10ml	NA	
Method Blank	KWG1413663-3	NA	NA	10ml	10ml	NA	
Lab Control Sample	KWG1413663-2	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 **Service Request:** K1410441
Project: JBLM-YRC/194-8468

Cover Page - Organic Analysis Data Package
Volatile Organic Compounds

Sample Name	Lab Code	Date Collected	Date Received
FTP-1	K1410441-001	09/22/2014	09/25/2014
815-2	K1410441-005	09/23/2014	09/25/2014
MTS-1	K1410441-006	09/23/2014	09/25/2014
MTS-2	K1410441-007	09/23/2014	09/25/2014
MTS-4	K1410441-008	09/23/2014	09/25/2014
DUP-1	K1410441-009	09/23/2014	09/25/2014
VTR-1	K1410441-010	09/23/2014	09/25/2014
VTR-3	K1410441-011	09/23/2014	09/25/2014
VTR-5	K1410441-012	09/23/2014	09/25/2014
VTR-6	K1410441-013	09/23/2014	09/25/2014
PAIC Well	K1410441-014	09/23/2014	09/25/2014
Pamona Well	K1410441-015	09/23/2014	09/25/2014
Trip Blank	K1410441-016	09/23/2014	09/25/2014
TVR-7	K1410441-017	09/23/2014	09/25/2014
VTR-6MS	KWG1413516-4	09/23/2014	09/25/2014
VTR-6DMS	KWG1413516-5	09/23/2014	09/25/2014

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/22/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: FTP-1
Lab Code: K1410441-001

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

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	10/02/14	10/02/14	KWG1413403	
Chloromethane	ND	U	0.50	0.20	0.068	1	10/02/14	10/02/14	KWG1413403	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	10/02/14	10/02/14	KWG1413403	
Bromomethane	ND	U	0.50	0.30	0.10	1	10/02/14	10/02/14	KWG1413403	
Chloroethane	ND	U	0.50	0.20	0.16	1	10/02/14	10/02/14	KWG1413403	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	10/02/14	10/02/14	KWG1413403	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	10/02/14	10/02/14	KWG1413403	
Acetone	ND	U	20	10	3.3	1	10/02/14	10/02/14	KWG1413403	
Carbon Disulfide	**0.29**	J	0.50	0.20	0.069	1	10/02/14	10/02/14	KWG1413403	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	10/02/14	10/02/14	KWG1413403	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	10/02/14	10/02/14	KWG1413403	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	10/02/14	10/02/14	KWG1413403	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	10/02/14	10/02/14	KWG1413403	
2,2-Dichloropropane	ND	U	0.50	0.20	0.060	1	10/02/14	10/02/14	KWG1413403	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	10/02/14	10/02/14	KWG1413403	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	10/02/14	10/02/14	KWG1413403	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	10/02/14	10/02/14	KWG1413403	
Chloroform	ND	U	0.50	0.20	0.072	1	10/02/14	10/02/14	KWG1413403	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	10/02/14	10/02/14	KWG1413403	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	10/02/14	10/02/14	KWG1413403	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	10/02/14	10/02/14	KWG1413403	
Benzene	**6.4**		0.50	0.10	0.062	1	10/02/14	10/02/14	KWG1413403	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	10/02/14	10/02/14	KWG1413403	
Trichloroethene (TCE)	**0.11**	J	0.50	0.10	0.10	1	10/02/14	10/02/14	KWG1413403	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	10/02/14	10/02/14	KWG1413403	
Dibromomethane	ND	U	0.50	0.50	0.15	1	10/02/14	10/02/14	KWG1413403	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	10/02/14	10/02/14	KWG1413403	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	10/02/14	10/02/14	KWG1413403	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	10/02/14	10/02/14	KWG1413403	
Toluene	**0.22**	J	0.50	0.10	0.054	1	10/02/14	10/02/14	KWG1413403	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	10/02/14	10/02/14	KWG1413403	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	10/02/14	10/02/14	KWG1413403	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	10/02/14	10/02/14	KWG1413403	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/22/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: FTP-1
Lab Code: K1410441-001

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
2-Hexanone	ND	U	20	10	2.7	1	10/02/14	10/02/14	KWG1413403	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	10/02/14	10/02/14	KWG1413403	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	10/02/14	10/02/14	KWG1413403	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	10/02/14	10/02/14	KWG1413403	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	10/02/14	10/02/14	KWG1413403	
Ethylbenzene	**6.6**		0.50	0.10	0.050	1	10/02/14	10/02/14	KWG1413403	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	10/02/14	10/02/14	KWG1413403	
m,p-Xylenes	**0.19**	J	0.50	0.20	0.11	1	10/02/14	10/02/14	KWG1413403	
o-Xylene	**1.3**		0.50	0.20	0.074	1	10/02/14	10/02/14	KWG1413403	
Styrene	ND	U	0.50	0.20	0.089	1	10/02/14	10/02/14	KWG1413403	
Bromoform	ND	U	0.50	0.50	0.16	1	10/02/14	10/02/14	KWG1413403	
Isopropylbenzene	**6.1**		2.0	0.20	0.051	1	10/02/14	10/02/14	KWG1413403	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	10/02/14	10/02/14	KWG1413403	
Bromobenzene	ND	U	2.0	0.20	0.12	1	10/02/14	10/02/14	KWG1413403	
n-Propylbenzene	**7.6**		2.0	0.20	0.054	1	10/02/14	10/02/14	KWG1413403	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	10/02/14	10/02/14	KWG1413403	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	10/02/14	10/02/14	KWG1413403	
1,3,5-Trimethylbenzene	**0.15**	J	2.0	0.20	0.089	1	10/02/14	10/02/14	KWG1413403	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	10/02/14	10/02/14	KWG1413403	
tert-Butylbenzene	**0.28**	J	2.0	0.20	0.059	1	10/02/14	10/02/14	KWG1413403	
1,2,4-Trimethylbenzene	**64**		2.0	0.20	0.069	1	10/02/14	10/02/14	KWG1413403	
sec-Butylbenzene	**3.0**		2.0	0.10	0.062	1	10/02/14	10/02/14	KWG1413403	
4-Isopropyltoluene	**4.1**		2.0	0.20	0.060	1	10/02/14	10/02/14	KWG1413403	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	10/02/14	10/02/14	KWG1413403	
1,4-Dichlorobenzene	**0.15**	J	0.50	0.20	0.12	1	10/02/14	10/02/14	KWG1413403	
n-Butylbenzene	**5.1**		2.0	0.10	0.054	1	10/02/14	10/02/14	KWG1413403	
1,2-Dichlorobenzene	**0.84**		0.50	0.20	0.12	1	10/02/14	10/02/14	KWG1413403	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.20	1	10/02/14	10/02/14	KWG1413403	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	10/02/14	10/02/14	KWG1413403	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	10/02/14	10/02/14	KWG1413403	
Naphthalene	**100**	D	10	1.5	0.44	5	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	10/02/14	10/02/14	KWG1413403	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/22/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Volatile Organic Compounds

Sample Name:	FTP-1	**Units:**	ug/L
Lab Code:	K1410441-001	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	103	85-115	10/02/14	Acceptable
1,2-Dichloroethane-d4	96	70-120	10/02/14	Acceptable
Toluene-d8	100	85-120	10/02/14	Acceptable
4-Bromofluorobenzene	97	75-120	10/02/14	Acceptable

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: 815-2
Lab Code: K1410441-005

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

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	10/03/14	10/03/14	KWG1413475	
Chloromethane	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	10/03/14	10/03/14	KWG1413475	
Bromomethane	ND	U	0.50	0.30	0.10	1	10/03/14	10/03/14	KWG1413475	*
Chloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	10/03/14	10/03/14	KWG1413475	
Acetone	**36**		20	10	3.3	1	10/03/14	10/03/14	KWG1413475	*
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	10/03/14	10/03/14	KWG1413475	
2,2-Dichloropropane	ND	U	0.50	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	*
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	10/03/14	10/03/14	KWG1413475	
2-Butanone (MEK)	**12**	J	20	4.0	1.9	1	10/03/14	10/03/14	KWG1413475	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Chloroform	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	10/03/14	10/03/14	KWG1413475	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Benzene	ND	U	0.50	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	10/03/14	10/03/14	KWG1413475	
Trichloroethene (TCE)	**1.6**		0.50	0.10	0.10	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	10/03/14	10/03/14	KWG1413475	
Dibromomethane	ND	U	0.50	0.50	0.15	1	10/03/14	10/03/14	KWG1413475	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	10/03/14	10/03/14	KWG1413475	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	10/03/14	10/03/14	KWG1413475	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	10/03/14	10/03/14	KWG1413475	
Toluene	ND	U	0.50	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	10/03/14	10/03/14	KWG1413475	
Tetrachloroethene (PCE)	**0.18**	J	0.50	0.20	0.099	1	10/03/14	10/03/14	KWG1413475	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: 815-2
Lab Code: K1410441-005

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	10	2.7	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	10/03/14	10/03/14	KWG1413475	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	10/03/14	10/03/14	KWG1413475	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
o-Xylene	ND	U	0.50	0.20	0.074	1	10/03/14	10/03/14	KWG1413475	
Styrene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Bromoform	ND	U	0.50	0.50	0.16	1	10/03/14	10/03/14	KWG1413475	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	10/03/14	10/03/14	KWG1413475	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Bromobenzene	ND	U	2.0	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	10/03/14	10/03/14	KWG1413475	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	10/03/14	10/03/14	KWG1413475	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.20	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	10/03/14	10/03/14	KWG1413475	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
Naphthalene	**0.28**	J	2.0	0.30	0.088	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	10/03/14	10/03/14	KWG1413475	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/23/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Volatile Organic Compounds

Sample Name:	815-2	**Units:**	ug/L
Lab Code:	K1410441-005	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	94	85-115	10/03/14	Acceptable
1,2-Dichloroethane-d4	103	70-120	10/03/14	Acceptable
Toluene-d8	95	85-120	10/03/14	Acceptable
4-Bromofluorobenzene	93	75-120	10/03/14	Acceptable

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: MTS-1
Lab Code: K1410441-006

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

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	10/03/14	10/03/14	KWG1413475	
Chloromethane	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	10/03/14	10/03/14	KWG1413475	
Bromomethane	ND	U	0.50	0.30	0.10	1	10/03/14	10/03/14	KWG1413475	*
Chloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	10/03/14	10/03/14	KWG1413475	
Acetone	**26**		20	10	3.3	1	10/03/14	10/03/14	KWG1413475	*
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	10/03/14	10/03/14	KWG1413475	
2,2-Dichloropropane	ND	U	0.50	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	*
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	10/03/14	10/03/14	KWG1413475	
2-Butanone (MEK)	**5.2**	J	20	4.0	1.9	1	10/03/14	10/03/14	KWG1413475	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Chloroform	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	10/03/14	10/03/14	KWG1413475	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Benzene	ND	U	0.50	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	10/03/14	10/03/14	KWG1413475	
Trichloroethene (TCE)	**3.5**		0.50	0.10	0.10	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	10/03/14	10/03/14	KWG1413475	
Dibromomethane	ND	U	0.50	0.50	0.15	1	10/03/14	10/03/14	KWG1413475	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	10/03/14	10/03/14	KWG1413475	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	10/03/14	10/03/14	KWG1413475	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	10/03/14	10/03/14	KWG1413475	
Toluene	**0.080**	J	0.50	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	10/03/14	10/03/14	KWG1413475	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	10/03/14	10/03/14	KWG1413475	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: MTS-1
Lab Code: K1410441-006

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
2-Hexanone	ND	U	20	10	2.7	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	10/03/14	10/03/14	KWG1413475	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	10/03/14	10/03/14	KWG1413475	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
o-Xylene	ND	U	0.50	0.20	0.074	1	10/03/14	10/03/14	KWG1413475	
Styrene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Bromoform	ND	U	0.50	0.50	0.16	1	10/03/14	10/03/14	KWG1413475	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	10/03/14	10/03/14	KWG1413475	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Bromobenzene	ND	U	2.0	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	10/03/14	10/03/14	KWG1413475	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	10/03/14	10/03/14	KWG1413475	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.20	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	10/03/14	10/03/14	KWG1413475	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
Naphthalene	ND	U	2.0	0.30	0.088	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	10/03/14	10/03/14	KWG1413475	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/23/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Volatile Organic Compounds

Sample Name:	MTS-1	**Units:**	ug/L
Lab Code:	K1410441-006	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	93	85-115	10/03/14	Acceptable
1,2-Dichloroethane-d4	105	70-120	10/03/14	Acceptable
Toluene-d8	95	85-120	10/03/14	Acceptable
4-Bromofluorobenzene	91	75-120	10/03/14	Acceptable

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: MTS-2
Lab Code: K1410441-007

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

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	10/03/14	10/03/14	KWG1413475	
Chloromethane	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	10/03/14	10/03/14	KWG1413475	
Bromomethane	ND	U	0.50	0.30	0.10	1	10/03/14	10/03/14	KWG1413475	*
Chloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	10/03/14	10/03/14	KWG1413475	
Acetone	**23**		20	10	3.3	1	10/03/14	10/03/14	KWG1413475	*
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	10/03/14	10/03/14	KWG1413475	
2,2-Dichloropropane	ND	U	0.50	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	*
cis-1,2-Dichloroethene	**0.47**	J	0.50	0.20	0.067	1	10/03/14	10/03/14	KWG1413475	
2-Butanone (MEK)	**4.3**	J	20	4.0	1.9	1	10/03/14	10/03/14	KWG1413475	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Chloroform	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	10/03/14	10/03/14	KWG1413475	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Benzene	ND	U	0.50	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	10/03/14	10/03/14	KWG1413475	
Trichloroethene (TCE)	**24**		0.50	0.10	0.10	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	10/03/14	10/03/14	KWG1413475	
Dibromomethane	ND	U	0.50	0.50	0.15	1	10/03/14	10/03/14	KWG1413475	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	10/03/14	10/03/14	KWG1413475	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	10/03/14	10/03/14	KWG1413475	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	10/03/14	10/03/14	KWG1413475	
Toluene	**0.060**	J	0.50	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	10/03/14	10/03/14	KWG1413475	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	10/03/14	10/03/14	KWG1413475	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: MTS-2
Lab Code: K1410441-007

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	10	2.7	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	10/03/14	10/03/14	KWG1413475	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	10/03/14	10/03/14	KWG1413475	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
o-Xylene	ND	U	0.50	0.20	0.074	1	10/03/14	10/03/14	KWG1413475	
Styrene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Bromoform	ND	U	0.50	0.50	0.16	1	10/03/14	10/03/14	KWG1413475	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	10/03/14	10/03/14	KWG1413475	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Bromobenzene	ND	U	2.0	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	10/03/14	10/03/14	KWG1413475	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	10/03/14	10/03/14	KWG1413475	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.20	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	10/03/14	10/03/14	KWG1413475	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
Naphthalene	ND	U	2.0	0.30	0.088	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	10/03/14	10/03/14	KWG1413475	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/23/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Volatile Organic Compounds

Sample Name:	MTS-2	**Units:**	ug/L
Lab Code:	K1410441-007	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	94	85-115	10/03/14	Acceptable
1,2-Dichloroethane-d4	106	70-120	10/03/14	Acceptable
Toluene-d8	97	85-120	10/03/14	Acceptable
4-Bromofluorobenzene	92	75-120	10/03/14	Acceptable

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: MTS-4
Lab Code: K1410441-008

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

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	10/03/14	10/03/14	KWG1413475	
Chloromethane	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	10/03/14	10/03/14	KWG1413475	
Bromomethane	ND	U	0.50	0.30	0.10	1	10/03/14	10/03/14	KWG1413475	*
Chloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	10/03/14	10/03/14	KWG1413475	
Acetone	**24**		20	10	3.3	1	10/03/14	10/03/14	KWG1413475	*
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	10/03/14	10/03/14	KWG1413475	
2,2-Dichloropropane	ND	U	0.50	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	*
cis-1,2-Dichloroethene	**0.16**	J	0.50	0.20	0.067	1	10/03/14	10/03/14	KWG1413475	
2-Butanone (MEK)	**4.2**	J	20	4.0	1.9	1	10/03/14	10/03/14	KWG1413475	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Chloroform	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	10/03/14	10/03/14	KWG1413475	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Benzene	ND	U	0.50	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	10/03/14	10/03/14	KWG1413475	
Trichloroethene (TCE)	**5.6**		0.50	0.10	0.10	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	10/03/14	10/03/14	KWG1413475	
Dibromomethane	ND	U	0.50	0.50	0.15	1	10/03/14	10/03/14	KWG1413475	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	10/03/14	10/03/14	KWG1413475	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	10/03/14	10/03/14	KWG1413475	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	10/03/14	10/03/14	KWG1413475	
Toluene	ND	U	0.50	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	10/03/14	10/03/14	KWG1413475	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	10/03/14	10/03/14	KWG1413475	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: MTS-4
Lab Code: K1410441-008

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
2-Hexanone	ND	U	20	10	2.7	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	10/03/14	10/03/14	KWG1413475	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	10/03/14	10/03/14	KWG1413475	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
o-Xylene	ND	U	0.50	0.20	0.074	1	10/03/14	10/03/14	KWG1413475	
Styrene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Bromoform	ND	U	0.50	0.50	0.16	1	10/03/14	10/03/14	KWG1413475	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	10/03/14	10/03/14	KWG1413475	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Bromobenzene	ND	U	2.0	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	10/03/14	10/03/14	KWG1413475	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	10/03/14	10/03/14	KWG1413475	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.20	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	10/03/14	10/03/14	KWG1413475	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
Naphthalene	ND	U	2.0	0.30	0.088	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	10/03/14	10/03/14	KWG1413475	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/23/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Volatile Organic Compounds

Sample Name:	MTS-4	**Units:**	ug/L
Lab Code:	K1410441-008	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	92	85-115	10/03/14	Acceptable
1,2-Dichloroethane-d4	108	70-120	10/03/14	Acceptable
Toluene-d8	95	85-120	10/03/14	Acceptable
4-Bromofluorobenzene	91	75-120	10/03/14	Acceptable

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: DUP-1
Lab Code: K1410441-009

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

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	10/03/14	10/03/14	KWG1413475	
Chloromethane	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	10/03/14	10/03/14	KWG1413475	
Bromomethane	ND	U	0.50	0.30	0.10	1	10/03/14	10/03/14	KWG1413475	*
Chloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	10/03/14	10/03/14	KWG1413475	
Acetone	**25**		20	10	3.3	1	10/03/14	10/03/14	KWG1413475	*
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	10/03/14	10/03/14	KWG1413475	
2,2-Dichloropropane	ND	U	0.50	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	*
cis-1,2-Dichloroethene	**0.18**	J	0.50	0.20	0.067	1	10/03/14	10/03/14	KWG1413475	
2-Butanone (MEK)	**3.5**	J	20	4.0	1.9	1	10/03/14	10/03/14	KWG1413475	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Chloroform	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	10/03/14	10/03/14	KWG1413475	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Benzene	ND	U	0.50	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	10/03/14	10/03/14	KWG1413475	
Trichloroethene (TCE)	**6.0**		0.50	0.10	0.10	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	10/03/14	10/03/14	KWG1413475	
Dibromomethane	ND	U	0.50	0.50	0.15	1	10/03/14	10/03/14	KWG1413475	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	10/03/14	10/03/14	KWG1413475	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	10/03/14	10/03/14	KWG1413475	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	10/03/14	10/03/14	KWG1413475	
Toluene	**0.060**	J	0.50	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	10/03/14	10/03/14	KWG1413475	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	10/03/14	10/03/14	KWG1413475	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: DUP-1
Lab Code: K1410441-009

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	10	2.7	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	10/03/14	10/03/14	KWG1413475	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	10/03/14	10/03/14	KWG1413475	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
o-Xylene	ND	U	0.50	0.20	0.074	1	10/03/14	10/03/14	KWG1413475	
Styrene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Bromoform	ND	U	0.50	0.50	0.16	1	10/03/14	10/03/14	KWG1413475	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	10/03/14	10/03/14	KWG1413475	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Bromobenzene	ND	U	2.0	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	10/03/14	10/03/14	KWG1413475	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	10/03/14	10/03/14	KWG1413475	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.20	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	10/03/14	10/03/14	KWG1413475	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
Naphthalene	ND	U	2.0	0.30	0.088	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	10/03/14	10/03/14	KWG1413475	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/23/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Volatile Organic Compounds

Sample Name:	DUP-1	**Units:**	ug/L
Lab Code:	K1410441-009	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	95	85-115	10/03/14	Acceptable
1,2-Dichloroethane-d4	108	70-120	10/03/14	Acceptable
Toluene-d8	96	85-120	10/03/14	Acceptable
4-Bromofluorobenzene	92	75-120	10/03/14	Acceptable

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: VTR-1
Lab Code: K1410441-010

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

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	10/03/14	10/03/14	KWG1413475	
Chloromethane	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	10/03/14	10/03/14	KWG1413475	
Bromomethane	ND	U	0.50	0.30	0.10	1	10/03/14	10/03/14	KWG1413475	*
Chloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	10/03/14	10/03/14	KWG1413475	
Acetone	**26**		20	10	3.3	1	10/03/14	10/03/14	KWG1413475	*
Carbon Disulfide	**0.090**	J	0.50	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	10/03/14	10/03/14	KWG1413475	
2,2-Dichloropropane	ND	U	0.50	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	*
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	10/03/14	10/03/14	KWG1413475	
2-Butanone (MEK)	**4.8**	J	20	4.0	1.9	1	10/03/14	10/03/14	KWG1413475	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Chloroform	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	10/03/14	10/03/14	KWG1413475	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Benzene	ND	U	0.50	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	10/03/14	10/03/14	KWG1413475	
Trichloroethene (TCE)	**4.7**		0.50	0.10	0.10	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	10/03/14	10/03/14	KWG1413475	
Dibromomethane	ND	U	0.50	0.50	0.15	1	10/03/14	10/03/14	KWG1413475	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	10/03/14	10/03/14	KWG1413475	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	10/03/14	10/03/14	KWG1413475	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	10/03/14	10/03/14	KWG1413475	
Toluene	**0.080**	J	0.50	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	10/03/14	10/03/14	KWG1413475	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	10/03/14	10/03/14	KWG1413475	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: VTR-1
Lab Code: K1410441-010

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	10	2.7	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	10/03/14	10/03/14	KWG1413475	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	10/03/14	10/03/14	KWG1413475	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
o-Xylene	ND	U	0.50	0.20	0.074	1	10/03/14	10/03/14	KWG1413475	
Styrene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Bromoform	ND	U	0.50	0.50	0.16	1	10/03/14	10/03/14	KWG1413475	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	10/03/14	10/03/14	KWG1413475	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Bromobenzene	ND	U	2.0	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	10/03/14	10/03/14	KWG1413475	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	10/03/14	10/03/14	KWG1413475	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.20	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	10/03/14	10/03/14	KWG1413475	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
Naphthalene	ND	U	2.0	0.30	0.088	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	10/03/14	10/03/14	KWG1413475	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/23/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Volatile Organic Compounds

Sample Name:	VTR-1	**Units:**	ug/L
Lab Code:	K1410441-010	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	95	85-115	10/03/14	Acceptable
1,2-Dichloroethane-d4	105	70-120	10/03/14	Acceptable
Toluene-d8	96	85-120	10/03/14	Acceptable
4-Bromofluorobenzene	92	75-120	10/03/14	Acceptable

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: VTR-3
Lab Code: K1410441-011

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

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	10/03/14	10/03/14	KWG1413475	
Chloromethane	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	10/03/14	10/03/14	KWG1413475	
Bromomethane	ND	U	0.50	0.30	0.10	1	10/03/14	10/03/14	KWG1413475	*
Chloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	10/03/14	10/03/14	KWG1413475	
Acetone	**24**		20	10	3.3	1	10/03/14	10/03/14	KWG1413475	*
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	10/03/14	10/03/14	KWG1413475	
2,2-Dichloropropane	ND	U	0.50	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	*
cis-1,2-Dichloroethene	**0.10**	J	0.50	0.20	0.067	1	10/03/14	10/03/14	KWG1413475	
2-Butanone (MEK)	**4.7**	J	20	4.0	1.9	1	10/03/14	10/03/14	KWG1413475	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Chloroform	**0.12**	J	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	10/03/14	10/03/14	KWG1413475	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Benzene	ND	U	0.50	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	10/03/14	10/03/14	KWG1413475	
Trichloroethene (TCE)	**6.9**		0.50	0.10	0.10	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	10/03/14	10/03/14	KWG1413475	
Dibromomethane	ND	U	0.50	0.50	0.15	1	10/03/14	10/03/14	KWG1413475	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	10/03/14	10/03/14	KWG1413475	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	10/03/14	10/03/14	KWG1413475	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	10/03/14	10/03/14	KWG1413475	
Toluene	**0.060**	J	0.50	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	10/03/14	10/03/14	KWG1413475	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	10/03/14	10/03/14	KWG1413475	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: VTR-3
Lab Code: K1410441-011

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	10	2.7	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	10/03/14	10/03/14	KWG1413475	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	10/03/14	10/03/14	KWG1413475	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
o-Xylene	ND	U	0.50	0.20	0.074	1	10/03/14	10/03/14	KWG1413475	
Styrene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Bromoform	ND	U	0.50	0.50	0.16	1	10/03/14	10/03/14	KWG1413475	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	10/03/14	10/03/14	KWG1413475	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Bromobenzene	ND	U	2.0	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	10/03/14	10/03/14	KWG1413475	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	10/03/14	10/03/14	KWG1413475	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.20	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	10/03/14	10/03/14	KWG1413475	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
Naphthalene	ND	U	2.0	0.30	0.088	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	10/03/14	10/03/14	KWG1413475	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/23/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Volatile Organic Compounds

Sample Name:	VTR-3	**Units:**	ug/L
Lab Code:	K1410441-011	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	94	85-115	10/03/14	Acceptable
1,2-Dichloroethane-d4	105	70-120	10/03/14	Acceptable
Toluene-d8	95	85-120	10/03/14	Acceptable
4-Bromofluorobenzene	92	75-120	10/03/14	Acceptable

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: VTR-5
Lab Code: K1410441-012

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

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	10/03/14	10/03/14	KWG1413475	
Chloromethane	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	10/03/14	10/03/14	KWG1413475	
Bromomethane	ND	U	0.50	0.30	0.10	1	10/03/14	10/03/14	KWG1413475	*
Chloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	10/03/14	10/03/14	KWG1413475	
Acetone	**27**		20	10	3.3	1	10/03/14	10/03/14	KWG1413475	*
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	10/03/14	10/03/14	KWG1413475	
2,2-Dichloropropane	ND	U	0.50	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	*
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	10/03/14	10/03/14	KWG1413475	
2-Butanone (MEK)	**4.5**	J	20	4.0	1.9	1	10/03/14	10/03/14	KWG1413475	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Chloroform	**0.080**	J	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	10/03/14	10/03/14	KWG1413475	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Benzene	ND	U	0.50	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	10/03/14	10/03/14	KWG1413475	
Trichloroethene (TCE)	**6.6**		0.50	0.10	0.10	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	10/03/14	10/03/14	KWG1413475	
Dibromomethane	ND	U	0.50	0.50	0.15	1	10/03/14	10/03/14	KWG1413475	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	10/03/14	10/03/14	KWG1413475	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	10/03/14	10/03/14	KWG1413475	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	10/03/14	10/03/14	KWG1413475	
Toluene	**0.070**	J	0.50	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	10/03/14	10/03/14	KWG1413475	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	10/03/14	10/03/14	KWG1413475	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: VTR-5
Lab Code: K1410441-012

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	10	2.7	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	10/03/14	10/03/14	KWG1413475	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	10/03/14	10/03/14	KWG1413475	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
o-Xylene	ND	U	0.50	0.20	0.074	1	10/03/14	10/03/14	KWG1413475	
Styrene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Bromoform	ND	U	0.50	0.50	0.16	1	10/03/14	10/03/14	KWG1413475	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	10/03/14	10/03/14	KWG1413475	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Bromobenzene	ND	U	2.0	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	10/03/14	10/03/14	KWG1413475	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	10/03/14	10/03/14	KWG1413475	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.20	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	10/03/14	10/03/14	KWG1413475	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
Naphthalene	ND	U	2.0	0.30	0.088	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	10/03/14	10/03/14	KWG1413475	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/23/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Volatile Organic Compounds

Sample Name:	VTR-5	**Units:**	ug/L
Lab Code:	K1410441-012	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	91	85-115	10/03/14	Acceptable
1,2-Dichloroethane-d4	106	70-120	10/03/14	Acceptable
Toluene-d8	94	85-120	10/03/14	Acceptable
4-Bromofluorobenzene	92	75-120	10/03/14	Acceptable

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: VTR-6
Lab Code: K1410441-013

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

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	10/06/14	10/06/14	KWG1413516	
Chloromethane	ND	U	0.50	0.20	0.068	1	10/06/14	10/06/14	KWG1413516	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	10/06/14	10/06/14	KWG1413516	
Bromomethane	ND	U	0.50	0.30	0.10	1	10/06/14	10/06/14	KWG1413516	
Chloroethane	ND	U	0.50	0.20	0.16	1	10/06/14	10/06/14	KWG1413516	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	10/06/14	10/06/14	KWG1413516	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	10/06/14	10/06/14	KWG1413516	
Acetone	**24**		20	10	3.3	1	10/06/14	10/06/14	KWG1413516	*
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	10/06/14	10/06/14	KWG1413516	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	10/06/14	10/06/14	KWG1413516	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	10/06/14	10/06/14	KWG1413516	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	10/06/14	10/06/14	KWG1413516	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	10/06/14	10/06/14	KWG1413516	
2,2-Dichloropropane	ND	U	0.50	0.20	0.060	1	10/06/14	10/06/14	KWG1413516	*
cis-1,2-Dichloroethene	**0.090**	J	0.50	0.20	0.067	1	10/06/14	10/06/14	KWG1413516	
2-Butanone (MEK)	**3.6**	J	20	4.0	1.9	1	10/06/14	10/06/14	KWG1413516	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	10/06/14	10/06/14	KWG1413516	
Chloroform	**0.12**	J	0.50	0.20	0.072	1	10/06/14	10/06/14	KWG1413516	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	10/06/14	10/06/14	KWG1413516	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	10/06/14	10/06/14	KWG1413516	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	10/06/14	10/06/14	KWG1413516	
Benzene	ND	U	0.50	0.10	0.062	1	10/06/14	10/06/14	KWG1413516	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	10/06/14	10/06/14	KWG1413516	
Trichloroethene (TCE)	**11**		0.50	0.10	0.10	1	10/06/14	10/06/14	KWG1413516	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	10/06/14	10/06/14	KWG1413516	
Dibromomethane	ND	U	0.50	0.50	0.15	1	10/06/14	10/06/14	KWG1413516	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	10/06/14	10/06/14	KWG1413516	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	10/06/14	10/06/14	KWG1413516	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	10/06/14	10/06/14	KWG1413516	
Toluene	ND	U	0.50	0.10	0.054	1	10/06/14	10/06/14	KWG1413516	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	10/06/14	10/06/14	KWG1413516	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	10/06/14	10/06/14	KWG1413516	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	10/06/14	10/06/14	KWG1413516	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: VTR-6
Lab Code: K1410441-013

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	10	2.7	1	10/06/14	10/06/14	KWG1413516	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	10/06/14	10/06/14	KWG1413516	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	10/06/14	10/06/14	KWG1413516	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	10/06/14	10/06/14	KWG1413516	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	10/06/14	10/06/14	KWG1413516	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	10/06/14	10/06/14	KWG1413516	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	10/06/14	10/06/14	KWG1413516	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	10/06/14	10/06/14	KWG1413516	
o-Xylene	ND	U	0.50	0.20	0.074	1	10/06/14	10/06/14	KWG1413516	
Styrene	ND	U	0.50	0.20	0.089	1	10/06/14	10/06/14	KWG1413516	
Bromoform	ND	U	0.50	0.50	0.16	1	10/06/14	10/06/14	KWG1413516	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	10/06/14	10/06/14	KWG1413516	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	10/06/14	10/06/14	KWG1413516	
Bromobenzene	ND	U	2.0	0.20	0.12	1	10/06/14	10/06/14	KWG1413516	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	10/06/14	10/06/14	KWG1413516	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	10/06/14	10/06/14	KWG1413516	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	10/06/14	10/06/14	KWG1413516	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	10/06/14	10/06/14	KWG1413516	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	10/06/14	10/06/14	KWG1413516	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	10/06/14	10/06/14	KWG1413516	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	10/06/14	10/06/14	KWG1413516	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	10/06/14	10/06/14	KWG1413516	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	10/06/14	10/06/14	KWG1413516	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	10/06/14	10/06/14	KWG1413516	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/06/14	10/06/14	KWG1413516	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	10/06/14	10/06/14	KWG1413516	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/06/14	10/06/14	KWG1413516	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.20	1	10/06/14	10/06/14	KWG1413516	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	10/06/14	10/06/14	KWG1413516	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	10/06/14	10/06/14	KWG1413516	
Naphthalene	ND	U	2.0	0.30	0.088	1	10/06/14	10/06/14	KWG1413516	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	10/06/14	10/06/14	KWG1413516	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/23/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Volatile Organic Compounds

Sample Name:	VTR-6	**Units:**	ug/L
Lab Code:	K1410441-013	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	95	85-115	10/06/14	Acceptable
1,2-Dichloroethane-d4	107	70-120	10/06/14	Acceptable
Toluene-d8	96	85-120	10/06/14	Acceptable
4-Bromofluorobenzene	93	75-120	10/06/14	Acceptable

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: PAIC Well
Lab Code: K1410441-014

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

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	10/03/14	10/03/14	KWG1413475	
Chloromethane	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	10/03/14	10/03/14	KWG1413475	
Bromomethane	ND	U	0.50	0.30	0.10	1	10/03/14	10/03/14	KWG1413475	*
Chloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	10/03/14	10/03/14	KWG1413475	
Acetone	ND	U	20	10	3.3	1	10/03/14	10/03/14	KWG1413475	*
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	*
Methylene Chloride	**0.10**	J	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	10/03/14	10/03/14	KWG1413475	
2,2-Dichloropropane	ND	U	0.50	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	*
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	10/03/14	10/03/14	KWG1413475	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	10/03/14	10/03/14	KWG1413475	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Chloroform	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	10/03/14	10/03/14	KWG1413475	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Benzene	ND	U	0.50	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	10/03/14	10/03/14	KWG1413475	
Trichloroethene (TCE)	ND	U	0.50	0.10	0.10	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	10/03/14	10/03/14	KWG1413475	
Dibromomethane	ND	U	0.50	0.50	0.15	1	10/03/14	10/03/14	KWG1413475	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	10/03/14	10/03/14	KWG1413475	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	10/03/14	10/03/14	KWG1413475	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	10/03/14	10/03/14	KWG1413475	
Toluene	**0.060**	J	0.50	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	10/03/14	10/03/14	KWG1413475	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	10/03/14	10/03/14	KWG1413475	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: PAIC Well
Lab Code: K1410441-014

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	10	2.7	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	10/03/14	10/03/14	KWG1413475	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	10/03/14	10/03/14	KWG1413475	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
o-Xylene	ND	U	0.50	0.20	0.074	1	10/03/14	10/03/14	KWG1413475	
Styrene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Bromoform	ND	U	0.50	0.50	0.16	1	10/03/14	10/03/14	KWG1413475	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	10/03/14	10/03/14	KWG1413475	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Bromobenzene	ND	U	2.0	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	10/03/14	10/03/14	KWG1413475	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	10/03/14	10/03/14	KWG1413475	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.20	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	10/03/14	10/03/14	KWG1413475	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
Naphthalene	ND	U	2.0	0.30	0.088	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	10/03/14	10/03/14	KWG1413475	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/23/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Volatile Organic Compounds

Sample Name:	PAIC Well	**Units:**	ug/L
Lab Code:	K1410441-014	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	91	85-115	10/03/14	Acceptable
1,2-Dichloroethane-d4	109	70-120	10/03/14	Acceptable
Toluene-d8	95	85-120	10/03/14	Acceptable
4-Bromofluorobenzene	91	75-120	10/03/14	Acceptable

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: Pamona Well
Lab Code: K1410441-015

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

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	10/03/14	10/03/14	KWG1413475	
Chloromethane	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	10/03/14	10/03/14	KWG1413475	
Bromomethane	ND	U	0.50	0.30	0.10	1	10/03/14	10/03/14	KWG1413475	*
Chloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	10/03/14	10/03/14	KWG1413475	
Acetone	ND	U	20	10	3.3	1	10/03/14	10/03/14	KWG1413475	*
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	10/03/14	10/03/14	KWG1413475	
2,2-Dichloropropane	ND	U	0.50	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	*
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	10/03/14	10/03/14	KWG1413475	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	10/03/14	10/03/14	KWG1413475	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Chloroform	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	10/03/14	10/03/14	KWG1413475	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Benzene	ND	U	0.50	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	10/03/14	10/03/14	KWG1413475	
Trichloroethene (TCE)	ND	U	0.50	0.10	0.10	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	10/03/14	10/03/14	KWG1413475	
Dibromomethane	ND	U	0.50	0.50	0.15	1	10/03/14	10/03/14	KWG1413475	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	10/03/14	10/03/14	KWG1413475	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	10/03/14	10/03/14	KWG1413475	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	10/03/14	10/03/14	KWG1413475	
Toluene	**0.13**	J	0.50	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	10/03/14	10/03/14	KWG1413475	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	10/03/14	10/03/14	KWG1413475	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: Pamona Well
Lab Code: K1410441-015

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
2-Hexanone	ND	U	20	10	2.7	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	10/03/14	10/03/14	KWG1413475	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	10/03/14	10/03/14	KWG1413475	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
o-Xylene	ND	U	0.50	0.20	0.074	1	10/03/14	10/03/14	KWG1413475	
Styrene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Bromoform	ND	U	0.50	0.50	0.16	1	10/03/14	10/03/14	KWG1413475	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	10/03/14	10/03/14	KWG1413475	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Bromobenzene	ND	U	2.0	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	10/03/14	10/03/14	KWG1413475	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	10/03/14	10/03/14	KWG1413475	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.20	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	10/03/14	10/03/14	KWG1413475	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
Naphthalene	ND	U	2.0	0.30	0.088	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	10/03/14	10/03/14	KWG1413475	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/23/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Volatile Organic Compounds

Sample Name:	Pamona Well	**Units:**	ug/L
Lab Code:	K1410441-015	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	94	85-115	10/03/14	Acceptable
1,2-Dichloroethane-d4	108	70-120	10/03/14	Acceptable
Toluene-d8	96	85-120	10/03/14	Acceptable
4-Bromofluorobenzene	91	75-120	10/03/14	Acceptable

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: Trip Blank
Lab Code: K1410441-016

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

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	10/03/14	10/03/14	KWG1413475	
Chloromethane	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	10/03/14	10/03/14	KWG1413475	
Bromomethane	ND	U	0.50	0.30	0.10	1	10/03/14	10/03/14	KWG1413475	*
Chloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	10/03/14	10/03/14	KWG1413475	
Acetone	ND	U	20	10	3.3	1	10/03/14	10/03/14	KWG1413475	*
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	*
Methylene Chloride	**0.35**	J	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	10/03/14	10/03/14	KWG1413475	
2,2-Dichloropropane	ND	U	0.50	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	*
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	10/03/14	10/03/14	KWG1413475	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	10/03/14	10/03/14	KWG1413475	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Chloroform	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	10/03/14	10/03/14	KWG1413475	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Benzene	ND	U	0.50	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	10/03/14	10/03/14	KWG1413475	
Trichloroethene (TCE)	ND	U	0.50	0.10	0.10	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	10/03/14	10/03/14	KWG1413475	
Dibromomethane	ND	U	0.50	0.50	0.15	1	10/03/14	10/03/14	KWG1413475	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	10/03/14	10/03/14	KWG1413475	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	10/03/14	10/03/14	KWG1413475	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	10/03/14	10/03/14	KWG1413475	
Toluene	ND	U	0.50	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	10/03/14	10/03/14	KWG1413475	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	10/03/14	10/03/14	KWG1413475	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: Trip Blank
Lab Code: K1410441-016

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	10	2.7	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	10/03/14	10/03/14	KWG1413475	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	10/03/14	10/03/14	KWG1413475	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
o-Xylene	ND	U	0.50	0.20	0.074	1	10/03/14	10/03/14	KWG1413475	
Styrene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Bromoform	ND	U	0.50	0.50	0.16	1	10/03/14	10/03/14	KWG1413475	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	10/03/14	10/03/14	KWG1413475	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Bromobenzene	ND	U	2.0	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	10/03/14	10/03/14	KWG1413475	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	10/03/14	10/03/14	KWG1413475	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.20	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	10/03/14	10/03/14	KWG1413475	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
Naphthalene	ND	U	2.0	0.30	0.088	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	10/03/14	10/03/14	KWG1413475	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/23/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Volatile Organic Compounds

Sample Name:	Trip Blank	**Units:**	ug/L
Lab Code:	K1410441-016	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	94	85-115	10/03/14	Acceptable
1,2-Dichloroethane-d4	108	70-120	10/03/14	Acceptable
Toluene-d8	96	85-120	10/03/14	Acceptable
4-Bromofluorobenzene	91	75-120	10/03/14	Acceptable

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: TVR-7
Lab Code: K1410441-017

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

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	10/03/14	10/03/14	KWG1413475	
Chloromethane	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	10/03/14	10/03/14	KWG1413475	
Bromomethane	ND	U	0.50	0.30	0.10	1	10/03/14	10/03/14	KWG1413475	*
Chloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	10/03/14	10/03/14	KWG1413475	
Acetone	**25**		20	10	3.3	1	10/03/14	10/03/14	KWG1413475	*
Carbon Disulfide	**0.18**	J	0.50	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	10/03/14	10/03/14	KWG1413475	
2,2-Dichloropropane	ND	U	0.50	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	*
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	10/03/14	10/03/14	KWG1413475	
2-Butanone (MEK)	**3.8**	J	20	4.0	1.9	1	10/03/14	10/03/14	KWG1413475	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Chloroform	**0.10**	J	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	10/03/14	10/03/14	KWG1413475	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Benzene	ND	U	0.50	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	10/03/14	10/03/14	KWG1413475	
Trichloroethene (TCE)	**12**		0.50	0.10	0.10	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	10/03/14	10/03/14	KWG1413475	
Dibromomethane	ND	U	0.50	0.50	0.15	1	10/03/14	10/03/14	KWG1413475	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	10/03/14	10/03/14	KWG1413475	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	10/03/14	10/03/14	KWG1413475	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	10/03/14	10/03/14	KWG1413475	
Toluene	ND	U	0.50	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	10/03/14	10/03/14	KWG1413475	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	10/03/14	10/03/14	KWG1413475	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/23/2014
Date Received: 09/25/2014

Volatile Organic Compounds

Sample Name: TVR-7
Lab Code: K1410441-017

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2-Hexanone	ND	U	20	10	2.7	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	10/03/14	10/03/14	KWG1413475	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	10/03/14	10/03/14	KWG1413475	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
o-Xylene	ND	U	0.50	0.20	0.074	1	10/03/14	10/03/14	KWG1413475	
Styrene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Bromoform	ND	U	0.50	0.50	0.16	1	10/03/14	10/03/14	KWG1413475	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	10/03/14	10/03/14	KWG1413475	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Bromobenzene	ND	U	2.0	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	10/03/14	10/03/14	KWG1413475	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	10/03/14	10/03/14	KWG1413475	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.20	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	10/03/14	10/03/14	KWG1413475	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
Naphthalene	ND	U	2.0	0.30	0.088	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	10/03/14	10/03/14	KWG1413475	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/23/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Volatile Organic Compounds

Sample Name:	TVR-7	**Units:**	ug/L
Lab Code:	K1410441-017	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	85-115	10/03/14	Acceptable
1,2-Dichloroethane-d4	106	70-120	10/03/14	Acceptable
Toluene-d8	97	85-120	10/03/14	Acceptable
4-Bromofluorobenzene	92	75-120	10/03/14	Acceptable

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1413403-4

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	10/02/14	10/02/14	KWG1413403	
Chloromethane	ND	U	0.50	0.20	0.068	1	10/02/14	10/02/14	KWG1413403	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	10/02/14	10/02/14	KWG1413403	
Bromomethane	ND	U	0.50	0.30	0.10	1	10/02/14	10/02/14	KWG1413403	
Chloroethane	ND	U	0.50	0.20	0.16	1	10/02/14	10/02/14	KWG1413403	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	10/02/14	10/02/14	KWG1413403	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	10/02/14	10/02/14	KWG1413403	
Acetone	ND	U	20	10	3.3	1	10/02/14	10/02/14	KWG1413403	
Carbon Disulfide	**0.12**	J	0.50	0.20	0.069	1	10/02/14	10/02/14	KWG1413403	*
Methylene Chloride	**0.27**	J	2.0	0.20	0.10	1	10/02/14	10/02/14	KWG1413403	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	10/02/14	10/02/14	KWG1413403	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	10/02/14	10/02/14	KWG1413403	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	10/02/14	10/02/14	KWG1413403	
2,2-Dichloropropane	ND	U	0.50	0.20	0.060	1	10/02/14	10/02/14	KWG1413403	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	10/02/14	10/02/14	KWG1413403	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	10/02/14	10/02/14	KWG1413403	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	10/02/14	10/02/14	KWG1413403	
Chloroform	ND	U	0.50	0.20	0.072	1	10/02/14	10/02/14	KWG1413403	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	10/02/14	10/02/14	KWG1413403	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	10/02/14	10/02/14	KWG1413403	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	10/02/14	10/02/14	KWG1413403	
Benzene	ND	U	0.50	0.10	0.062	1	10/02/14	10/02/14	KWG1413403	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	10/02/14	10/02/14	KWG1413403	
Trichloroethene (TCE)	ND	U	0.50	0.10	0.10	1	10/02/14	10/02/14	KWG1413403	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	10/02/14	10/02/14	KWG1413403	
Dibromomethane	ND	U	0.50	0.50	0.15	1	10/02/14	10/02/14	KWG1413403	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	10/02/14	10/02/14	KWG1413403	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	10/02/14	10/02/14	KWG1413403	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	10/02/14	10/02/14	KWG1413403	
Toluene	ND	U	0.50	0.10	0.054	1	10/02/14	10/02/14	KWG1413403	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	10/02/14	10/02/14	KWG1413403	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	10/02/14	10/02/14	KWG1413403	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	10/02/14	10/02/14	KWG1413403	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1413403-4

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
2-Hexanone	ND	U	20	10	2.7	1	10/02/14	10/02/14	KWG1413403	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	10/02/14	10/02/14	KWG1413403	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	10/02/14	10/02/14	KWG1413403	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	10/02/14	10/02/14	KWG1413403	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	10/02/14	10/02/14	KWG1413403	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	10/02/14	10/02/14	KWG1413403	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	10/02/14	10/02/14	KWG1413403	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	10/02/14	10/02/14	KWG1413403	
o-Xylene	ND	U	0.50	0.20	0.074	1	10/02/14	10/02/14	KWG1413403	
Styrene	ND	U	0.50	0.20	0.089	1	10/02/14	10/02/14	KWG1413403	
Bromoform	ND	U	0.50	0.50	0.16	1	10/02/14	10/02/14	KWG1413403	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	10/02/14	10/02/14	KWG1413403	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	10/02/14	10/02/14	KWG1413403	
Bromobenzene	ND	U	2.0	0.20	0.12	1	10/02/14	10/02/14	KWG1413403	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	10/02/14	10/02/14	KWG1413403	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	10/02/14	10/02/14	KWG1413403	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	10/02/14	10/02/14	KWG1413403	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	10/02/14	10/02/14	KWG1413403	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	10/02/14	10/02/14	KWG1413403	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	10/02/14	10/02/14	KWG1413403	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	10/02/14	10/02/14	KWG1413403	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	10/02/14	10/02/14	KWG1413403	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	10/02/14	10/02/14	KWG1413403	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	10/02/14	10/02/14	KWG1413403	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/02/14	10/02/14	KWG1413403	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	10/02/14	10/02/14	KWG1413403	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/02/14	10/02/14	KWG1413403	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.20	1	10/02/14	10/02/14	KWG1413403	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	10/02/14	10/02/14	KWG1413403	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	10/02/14	10/02/14	KWG1413403	
Naphthalene	ND	U	2.0	0.30	0.088	1	10/02/14	10/02/14	KWG1413403	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	10/02/14	10/02/14	KWG1413403	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1413403-4	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	104	85-115	10/02/14	Acceptable
1,2-Dichloroethane-d4	94	70-120	10/02/14	Acceptable
Toluene-d8	100	85-120	10/02/14	Acceptable
4-Bromofluorobenzene	96	75-120	10/02/14	Acceptable

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1413475-4

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	10/03/14	10/03/14	KWG1413475	
Chloromethane	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	10/03/14	10/03/14	KWG1413475	
Bromomethane	ND	U	0.50	0.30	0.10	1	10/03/14	10/03/14	KWG1413475	*
Chloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	10/03/14	10/03/14	KWG1413475	
Acetone	ND	U	20	10	3.3	1	10/03/14	10/03/14	KWG1413475	*
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	*
Methylene Chloride	**0.42**	J	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	10/03/14	10/03/14	KWG1413475	
2,2-Dichloropropane	ND	U	0.50	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	*
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	10/03/14	10/03/14	KWG1413475	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	10/03/14	10/03/14	KWG1413475	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Chloroform	ND	U	0.50	0.20	0.072	1	10/03/14	10/03/14	KWG1413475	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	10/03/14	10/03/14	KWG1413475	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	10/03/14	10/03/14	KWG1413475	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Benzene	ND	U	0.50	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	10/03/14	10/03/14	KWG1413475	
Trichloroethene (TCE)	ND	U	0.50	0.10	0.10	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	10/03/14	10/03/14	KWG1413475	
Dibromomethane	ND	U	0.50	0.50	0.15	1	10/03/14	10/03/14	KWG1413475	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	10/03/14	10/03/14	KWG1413475	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	10/03/14	10/03/14	KWG1413475	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	10/03/14	10/03/14	KWG1413475	
Toluene	ND	U	0.50	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	10/03/14	10/03/14	KWG1413475	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	10/03/14	10/03/14	KWG1413475	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	10/03/14	10/03/14	KWG1413475	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1413475-4

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
2-Hexanone	ND	U	20	10	2.7	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	10/03/14	10/03/14	KWG1413475	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	10/03/14	10/03/14	KWG1413475	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	10/03/14	10/03/14	KWG1413475	
o-Xylene	ND	U	0.50	0.20	0.074	1	10/03/14	10/03/14	KWG1413475	
Styrene	ND	U	0.50	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
Bromoform	ND	U	0.50	0.50	0.16	1	10/03/14	10/03/14	KWG1413475	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	10/03/14	10/03/14	KWG1413475	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	10/03/14	10/03/14	KWG1413475	
Bromobenzene	ND	U	2.0	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	10/03/14	10/03/14	KWG1413475	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	10/03/14	10/03/14	KWG1413475	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	10/03/14	10/03/14	KWG1413475	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	10/03/14	10/03/14	KWG1413475	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	10/03/14	10/03/14	KWG1413475	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	10/03/14	10/03/14	KWG1413475	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	10/03/14	10/03/14	KWG1413475	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
n-Butylbenzene	**0.060**	J	2.0	0.10	0.054	1	10/03/14	10/03/14	KWG1413475	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/03/14	10/03/14	KWG1413475	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.20	1	10/03/14	10/03/14	KWG1413475	
1,2,4-Trichlorobenzene	**0.17**	J	2.0	0.30	0.096	1	10/03/14	10/03/14	KWG1413475	
Hexachlorobutadiene	**0.12**	J	2.0	0.30	0.11	1	10/03/14	10/03/14	KWG1413475	
Naphthalene	**0.11**	J	2.0	0.30	0.088	1	10/03/14	10/03/14	KWG1413475	
1,2,3-Trichlorobenzene	**0.16**	J	2.0	0.40	0.11	1	10/03/14	10/03/14	KWG1413475	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1413475-4	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	97	85-115	10/03/14	Acceptable
1,2-Dichloroethane-d4	109	70-120	10/03/14	Acceptable
Toluene-d8	99	85-120	10/03/14	Acceptable
4-Bromofluorobenzene	94	75-120	10/03/14	Acceptable

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1413516-3

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	10/06/14	10/06/14	KWG1413516	
Chloromethane	ND	U	0.50	0.20	0.068	1	10/06/14	10/06/14	KWG1413516	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	10/06/14	10/06/14	KWG1413516	
Bromomethane	ND	U	0.50	0.30	0.10	1	10/06/14	10/06/14	KWG1413516	
Chloroethane	ND	U	0.50	0.20	0.16	1	10/06/14	10/06/14	KWG1413516	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	10/06/14	10/06/14	KWG1413516	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	10/06/14	10/06/14	KWG1413516	
Acetone	**3.5**	J	20	10	3.3	1	10/06/14	10/06/14	KWG1413516	*
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	10/06/14	10/06/14	KWG1413516	*
Methylene Chloride	**0.48**	J	2.0	0.20	0.10	1	10/06/14	10/06/14	KWG1413516	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	10/06/14	10/06/14	KWG1413516	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	10/06/14	10/06/14	KWG1413516	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	10/06/14	10/06/14	KWG1413516	
2,2-Dichloropropane	ND	U	0.50	0.20	0.060	1	10/06/14	10/06/14	KWG1413516	*
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	10/06/14	10/06/14	KWG1413516	
2-Butanone (MEK)	**2.1**	J	20	4.0	1.9	1	10/06/14	10/06/14	KWG1413516	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	10/06/14	10/06/14	KWG1413516	
Chloroform	ND	U	0.50	0.20	0.072	1	10/06/14	10/06/14	KWG1413516	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	10/06/14	10/06/14	KWG1413516	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	10/06/14	10/06/14	KWG1413516	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	10/06/14	10/06/14	KWG1413516	
Benzene	ND	U	0.50	0.10	0.062	1	10/06/14	10/06/14	KWG1413516	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	10/06/14	10/06/14	KWG1413516	
Trichloroethene (TCE)	ND	U	0.50	0.10	0.10	1	10/06/14	10/06/14	KWG1413516	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	10/06/14	10/06/14	KWG1413516	
Dibromomethane	ND	U	0.50	0.50	0.15	1	10/06/14	10/06/14	KWG1413516	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	10/06/14	10/06/14	KWG1413516	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	10/06/14	10/06/14	KWG1413516	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	10/06/14	10/06/14	KWG1413516	
Toluene	ND	U	0.50	0.10	0.054	1	10/06/14	10/06/14	KWG1413516	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	10/06/14	10/06/14	KWG1413516	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	10/06/14	10/06/14	KWG1413516	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	10/06/14	10/06/14	KWG1413516	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: NA
Date Received: NA

Volatile Organic Compounds

Sample Name: Method Blank
Lab Code: KWG1413516-3

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
2-Hexanone	ND	U	20	10	2.7	1	10/06/14	10/06/14	KWG1413516	
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	10/06/14	10/06/14	KWG1413516	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	10/06/14	10/06/14	KWG1413516	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	10/06/14	10/06/14	KWG1413516	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	10/06/14	10/06/14	KWG1413516	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	10/06/14	10/06/14	KWG1413516	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	10/06/14	10/06/14	KWG1413516	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	10/06/14	10/06/14	KWG1413516	
o-Xylene	ND	U	0.50	0.20	0.074	1	10/06/14	10/06/14	KWG1413516	
Styrene	ND	U	0.50	0.20	0.089	1	10/06/14	10/06/14	KWG1413516	
Bromoform	ND	U	0.50	0.50	0.16	1	10/06/14	10/06/14	KWG1413516	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	10/06/14	10/06/14	KWG1413516	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	10/06/14	10/06/14	KWG1413516	
Bromobenzene	ND	U	2.0	0.20	0.12	1	10/06/14	10/06/14	KWG1413516	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	10/06/14	10/06/14	KWG1413516	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	10/06/14	10/06/14	KWG1413516	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	10/06/14	10/06/14	KWG1413516	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	10/06/14	10/06/14	KWG1413516	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	10/06/14	10/06/14	KWG1413516	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	10/06/14	10/06/14	KWG1413516	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	10/06/14	10/06/14	KWG1413516	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	10/06/14	10/06/14	KWG1413516	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	10/06/14	10/06/14	KWG1413516	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	10/06/14	10/06/14	KWG1413516	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/06/14	10/06/14	KWG1413516	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	10/06/14	10/06/14	KWG1413516	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	10/06/14	10/06/14	KWG1413516	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.20	1	10/06/14	10/06/14	KWG1413516	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	10/06/14	10/06/14	KWG1413516	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	10/06/14	10/06/14	KWG1413516	
Naphthalene	ND	U	2.0	0.30	0.088	1	10/06/14	10/06/14	KWG1413516	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	10/06/14	10/06/14	KWG1413516	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Volatile Organic Compounds

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1413516-3	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	94	85-115	10/06/14	Acceptable
1,2-Dichloroethane-d4	108	70-120	10/06/14	Acceptable
Toluene-d8	96	85-120	10/06/14	Acceptable
4-Bromofluorobenzene	91	75-120	10/06/14	Acceptable

Comments:

Client: Tetra Tech, Incorporated **Service Request:** K1410441
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Surrogate Recovery Summary
Volatile Organic Compounds

Extraction Method: EPA 5030B **Units:** Percent
Analysis Method: 8260C **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	Sur4
FTP-1	K1410441-001	103	96	100	97
815-2	K1410441-005	94	103	95	93
MTS-1	K1410441-006	93	105	95	91
MTS-2	K1410441-007	94	106	97	92
MTS-4	K1410441-008	92	108	95	91
DUP-1	K1410441-009	95	108	96	92
VTR-1	K1410441-010	95	105	96	92
VTR-3	K1410441-011	94	105	95	92
VTR-5	K1410441-012	91	106	94	92
VTR-6	K1410441-013	95	107	96	93
PAIC Well	K1410441-014	91	109	95	91
Pamona Well	K1410441-015	94	108	96	91
Trip Blank	K1410441-016	94	108	96	91
TVR-7	K1410441-017	96	106	97	92
Method Blank	KWG1413403-4	104	94	100	96
Method Blank	KWG1413475-4	97	109	99	94
Method Blank	KWG1413516-3	94	108	96	91
VTR-6MS	KWG1413516-4	98	107	97	96
VTR-6DMS	KWG1413516-5	99	109	100	95
Lab Control Sample	KWG1413403-3	100	91	105	103
Lab Control Sample	KWG1413475-3	98	104	99	93
Lab Control Sample	KWG1413516-1	97	105	98	96

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: JBLM-YRC/194-8468

Service Request: K1410441
Date Analyzed: 10/02/2014
Time Analyzed: 11:32

Internal Standard Area and RT Summary
Volatile Organic Compounds

File ID: J:\MS13\DATA\100214\1002F003.D
Instrument ID: MS13
Analysis Method: 8260C

Lab Code: KWG1413401-2
Analysis Lot: KWG1413401

		Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	459,648	6.11	185,922	12.02	176,764	15.05
	Upper Limit ==>	919,296	6.61	371,844	12.52	353,528	15.55
	Lower Limit ==>	229,824	5.61	92,961	11.52	88,382	14.55
	ICAL Result ==>	564,474	6.11	214,895	12.03	184,778	15.05
Associated Analyses							
Lab Control Sample	KWG1413403-3	450,074	6.11	184,376	12.02	176,287	15.05
Method Blank	KWG1413403-4	449,219	6.11	180,670	12.02	162,910	15.05
FTP-1	K1410441-001	430,904	6.11	185,590	12.02	166,781	15.05

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

QA/QC Report

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Date Analyzed: 10/03/2014
Time Analyzed: 15:41

Internal Standard Area and RT Summary
Volatile Organic Compounds

File ID: J:\MS18\DATA\100314\1003F008.D
Instrument ID: GC-MS 18
Analysis Method: 8260C

Lab Code: KWG1413468-2
Analysis Lot: KWG1413468

		Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	286,758	6.31	120,363	9.64	115,303	12.05
	Upper Limit ==>	573,516	6.81	240,726	10.14	230,606	12.55
	Lower Limit ==>	143,379	5.81	60,182	9.14	57,652	11.55
	ICAL Result ==>	325,249	6.32	135,589	9.64	130,777	12.05
Associated Analyses							
Lab Control Sample	KWG1413475-3	285,934	6.32	123,431	9.64	119,152	12.05
Method Blank	KWG1413475-4	264,787	6.32	114,189	9.64	104,856	12.05
Trip Blank	K1410441-016	273,377	6.32	116,871	9.64	105,369	12.05
FTP-1DL	K1410441-001	262,885	6.32	112,280	9.64	109,161	12.05
815-2	K1410441-005	271,865	6.32	113,142	9.64	103,854	12.05
MTS-1	K1410441-006	268,561	6.32	114,446	9.64	102,419	12.05
MTS-2	K1410441-007	261,892	6.32	112,613	9.64	100,485	12.05
MTS-4	K1410441-008	264,850	6.32	110,786	9.64	99,271	12.05
DUP-1	K1410441-009	261,676	6.32	110,708	9.64	101,287	12.05
VTR-1	K1410441-010	263,974	6.32	111,555	9.64	98,965	12.05
VTR-3	K1410441-011	257,953	6.32	108,039	9.64	99,547	12.05
VTR-5	K1410441-012	219,870	6.32	93,467	9.64	82,222	12.05
PAIC Well	K1410441-014	261,783	6.32	110,220	9.64	96,543	12.05
Pamona Well	K1410441-015	262,720	6.32	113,946	9.64	96,948	12.05
TVR-7	K1410441-017	254,699	6.32	107,051	9.64	96,620	12.05

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

QA/QC Report

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Date Analyzed: 10/06/2014
Time Analyzed: 09:31

Internal Standard Area and RT Summary
Volatile Organic Compounds

File ID: J:\MS18\DATA\100614\1006F003.D
Instrument ID: GC-MS 18
Analysis Method: 8260C

Lab Code: KWG1413506-2
Analysis Lot: KWG1413506

		Fluorobenzene		Chlorobenzene-d5		1,4-Dichlorobenzene-d4	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	Results ==>	307,377	6.31	129,922	9.64	123,555	12.05
	Upper Limit ==>	614,754	6.81	259,844	10.14	247,110	12.55
	Lower Limit ==>	153,689	5.81	64,961	9.14	61,778	11.55
	ICAL Result ==>	325,249	6.32	135,589	9.64	130,777	12.05
Associated Analyses							
Lab Control Sample	KWG1413516-1	313,865	6.31	130,928	9.64	124,122	12.05
Method Blank	KWG1413516-3	299,670	6.32	126,223	9.64	115,012	12.05
VTR-6	K1410441-013	294,225	6.32	124,001	9.64	112,705	12.05
VTR-6MS	KWG1413516-4	304,780	6.32	126,550	9.64	120,866	12.05
VTR-6DMS	KWG1413516-5	306,526	6.32	130,379	9.64	122,330	12.05

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

QA/QC Report

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Extracted:**	10/06/2014
Sample Matrix:	Water	**Date Analyzed:**	10/06/2014

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name:	VTR-6	**Units:**	ug/L
Lab Code:	K1410441-013	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1413516

		VTR-6MS KWG1413516-4 Matrix Spike				VTR-6DMS KWG1413516-5 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**		**Result**	**Spike Amount**	**%Rec**		**%Rec Limits**	**RPD**	**RPD Limit**
Dichlorodifluoromethane	ND	9.45	10.0	95		9.40	10.0	94		30-155	1	30
Chloromethane	ND	10.8	10.0	108		11.1	10.0	111		40-125	3	30
Vinyl Chloride	ND	12.3	10.0	123		12.1	10.0	121		50-145	2	30
Bromomethane	ND	7.01	10.0	70		6.78	10.0	68		30-145	3	30
Chloroethane	ND	14.8	10.0	148	*	14.5	10.0	145	*	60-135	2	30
Trichlorofluoromethane	ND	10.5	10.0	105		9.92	10.0	99		60-145	5	30
1,1-Dichloroethene	ND	12.8	10.0	128		13.1	10.0	131	*	70-130	2	30
Acetone	24	88.1	50.0	128		87.9	50.0	128		40-140	0	30
Carbon Disulfide	ND	25.0	20.0	125		24.7	20.0	123		35-160	1	30
Methylene Chloride	ND	9.60	10.0	96		9.75	10.0	98		55-140	2	30
Methyl tert-Butyl Ether	ND	8.84	10.0	88		8.82	10.0	88		65-125	0	30
trans-1,2-Dichloroethene	ND	12.0	10.0	120		12.0	10.0	120		60-140	1	30
1,1-Dichloroethane	ND	12.9	10.0	129		12.6	10.0	126		70-135	2	30
2,2-Dichloropropane	ND	6.76	10.0	68	*	6.43	10.0	64	*	70-135	5	30
cis-1,2-Dichloroethene	0.090	11.5	10.0	114		11.4	10.0	113		70-125	1	30
2-Butanone (MEK)	3.6	66.2	50.0	125		65.4	50.0	124		30-150	1	30
Bromochloromethane	ND	11.5	10.0	115		11.5	10.0	115		65-130	0	30
Chloroform	0.12	11.4	10.0	113		11.5	10.0	114		65-135	1	30
1,1,1-Trichloroethane (TCA)	ND	10.4	10.0	104		10.4	10.0	104		65-130	1	30
Carbon Tetrachloride	ND	10.8	10.0	108		10.5	10.0	105		65-140	3	30
1,1-Dichloropropene	ND	12.9	10.0	129		12.8	10.0	128		75-130	1	30
Benzene	ND	11.9	10.0	119		11.9	10.0	119		80-120	1	30
1,2-Dichloroethane (EDC)	ND	11.5	10.0	115		11.4	10.0	114		70-130	1	30
Trichloroethene (TCE)	11	22.8	10.0	123		22.4	10.0	119		70-125	2	30
1,2-Dichloropropane	ND	11.6	10.0	116		11.6	10.0	116		75-125	1	30
Dibromomethane	ND	11.6	10.0	116		11.2	10.0	112		75-125	4	30
Bromodichloromethane	ND	10.7	10.0	107		10.6	10.0	106		75-120	1	30
cis-1,3-Dichloropropene	ND	9.06	10.0	91		9.08	10.0	91		70-130	0	30
4-Methyl-2-pentanone (MIBK)	ND	63.4	50.0	127		61.7	50.0	123		60-135	3	30
Toluene	ND	11.6	10.0	116		11.4	10.0	114		75-120	1	30
trans-1,3-Dichloropropene	ND	7.51	10.0	75		7.50	10.0	75		55-140	0	30
1,1,2-Trichloroethane	ND	11.4	10.0	114		11.2	10.0	112		75-125	2	30
Tetrachloroethene (PCE)	ND	11.5	10.0	115		11.4	10.0	114		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.

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Extracted: 10/06/2014
Date Analyzed: 10/06/2014

Matrix Spike/Duplicate Matrix Spike Summary
Volatile Organic Compounds

Sample Name: VTR-6
Lab Code: K1410441-013

Units: ug/L
Basis: NA

Extraction Method: EPA 5030B
Analysis Method: 8260C

Level: Low
Extraction Lot: KWG1413516

		VTR-6MS KWG1413516-4 Matrix Spike			VTR-6DMS KWG1413516-5 Duplicate Matrix Spike					
Analyte Name	**Sample Result**	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
2-Hexanone	ND	59.4	50.0	119	56.3	50.0	113	55-130	5	30
1,3-Dichloropropane	ND	12.1	10.0	121	11.6	10.0	116	75-125	4	30
Dibromochloromethane	ND	10.4	10.0	104	10.1	10.0	101	60-135	2	30
1,2-Dibromoethane (EDB)	ND	11.1	10.0	111	10.6	10.0	106	80-120	4	30
Chlorobenzene	ND	11.3	10.0	113	11.0	10.0	110	80-120	3	30
Ethylbenzene	ND	11.3	10.0	113	11.2	10.0	112	75-125	1	30
1,1,1,2-Tetrachloroethane	ND	9.88	10.0	99	9.63	10.0	96	80-130	3	30
m,p-Xylenes	ND	23.1	20.0	115	22.7	20.0	113	75-130	2	30
o-Xylene	ND	11.3	10.0	113	10.9	10.0	109	80-120	3	30
Styrene	ND	11.8	10.0	118	11.3	10.0	113	65-135	4	30
Bromoform	ND	9.47	10.0	95	8.95	10.0	90	70-130	6	30
Isopropylbenzene	ND	11.7	10.0	117	11.4	10.0	114	75-125	2	30
1,1,2,2-Tetrachloroethane	ND	12.3	10.0	123	12.3	10.0	123	65-130	0	30
Bromobenzene	ND	11.1	10.0	111	11.1	10.0	111	75-125	1	30
n-Propylbenzene	ND	12.0	10.0	120	11.9	10.0	119	70-130	1	30
1,2,3-Trichloropropane	ND	12.2	10.0	122	11.6	10.0	116	75-125	5	30
2-Chlorotoluene	ND	11.7	10.0	117	11.5	10.0	115	75-125	2	30
1,3,5-Trimethylbenzene	ND	12.2	10.0	122	12.1	10.0	121	75-130	1	30
4-Chlorotoluene	ND	11.8	10.0	118	11.5	10.0	115	75-130	3	30
tert-Butylbenzene	ND	12.2	10.0	122	12.0	10.0	120	70-130	2	30
1,2,4-Trimethylbenzene	ND	12.0	10.0	120	11.8	10.0	118	75-130	1	30
sec-Butylbenzene	ND	11.9	10.0	119	11.9	10.0	119	70-125	0	30
4-Isopropyltoluene	ND	11.9	10.0	119	12.0	10.0	120	75-130	1	30
1,3-Dichlorobenzene	ND	11.5	10.0	115	11.3	10.0	113	75-125	1	30
1,4-Dichlorobenzene	ND	11.4	10.0	114	11.3	10.0	113	75-125	1	30
n-Butylbenzene	ND	12.1	10.0	121	12.2	10.0	122	70-135	0	30
1,2-Dichlorobenzene	ND	11.6	10.0	116	11.5	10.0	115	70-120	1	30
1,2-Dibromo-3-chloropropane	ND	9.45	10.0	95	9.14	10.0	91	50-130	3	30
1,2,4-Trichlorobenzene	ND	11.1	10.0	111	11.0	10.0	110	65-135	1	30
Hexachlorobutadiene	ND	11.2	10.0	112	11.4	10.0	114	50-140	2	30
Naphthalene	ND	12.6	10.0	126	12.3	10.0	123	55-140	2	30
1,2,3-Trichlorobenzene	ND	12.1	10.0	121	11.7	10.0	117	55-140	3	30

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QA/QC Report

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Extracted:**	10/02/2014
Sample Matrix:	Water	**Date Analyzed:**	10/02/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1413403

Lab Control Sample
KWG1413403-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Dichlorodifluoromethane	7.51	10.0	75	30-155
Chloromethane	6.96	10.0	70	40-125
Vinyl Chloride	8.82	10.0	88	50-145
Bromomethane	9.48	10.0	95	30-145
Chloroethane	10.1	10.0	101	60-135
Trichlorofluoromethane	8.47	10.0	85	60-145
1,1-Dichloroethene	10.8	10.0	108	70-130
Acetone	49.4	50.0	99	40-140
Carbon Disulfide	19.4	20.0	97	35-160
Methylene Chloride	8.26	10.0	83	55-140
Methyl tert-Butyl Ether	8.26	10.0	83	65-125
trans-1,2-Dichloroethene	10.0	10.0	100	60-140
1,1-Dichloroethane	9.66	10.0	97	70-135
2,2-Dichloropropane	9.10	10.0	91	70-135
cis-1,2-Dichloroethene	9.93	10.0	99	70-125
2-Butanone (MEK)	49.4	50.0	99	30-150
Bromochloromethane	10.1	10.0	101	65-130
Chloroform	9.37	10.0	94	65-135
1,1,1-Trichloroethane (TCA)	9.63	10.0	96	65-130
Carbon Tetrachloride	10.2	10.0	102	65-140
1,1-Dichloropropene	10.5	10.0	105	75-130
Benzene	9.67	10.0	97	80-120
1,2-Dichloroethane (EDC)	8.88	10.0	89	70-130
Trichloroethene (TCE)	9.63	10.0	96	70-125
1,2-Dichloropropane	8.62	10.0	86	75-125
Dibromomethane	9.30	10.0	93	75-125
Bromodichloromethane	9.28	10.0	93	75-120
cis-1,3-Dichloropropene	9.09	10.0	91	70-130
4-Methyl-2-pentanone (MIBK)	41.9	50.0	84	60-135
Toluene	9.73	10.0	97	75-120
trans-1,3-Dichloropropene	7.54	10.0	75	55-140
1,1,2-Trichloroethane	8.50	10.0	85	75-125
Tetrachloroethene (PCE)	9.98	10.0	100	45-150
2-Hexanone	40.8	50.0	82	55-130
1,3-Dichloropropane	8.53	10.0	85	75-125

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Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Extracted:**	10/02/2014
Sample Matrix:	Water	**Date Analyzed:**	10/02/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1413403

Lab Control Sample
KWG1413403-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Dibromochloromethane	9.43	10.0	94	60-135
1,2-Dibromoethane (EDB)	8.87	10.0	89	80-120
Chlorobenzene	9.26	10.0	93	80-120
Ethylbenzene	9.50	10.0	95	75-125
1,1,1,2-Tetrachloroethane	9.38	10.0	94	80-130
m,p-Xylenes	19.6	20.0	98	75-130
o-Xylene	9.89	10.0	99	80-120
Styrene	9.87	10.0	99	65-135
Bromoform	9.71	10.0	97	70-130
Isopropylbenzene	9.82	10.0	98	75-125
1,1,2,2-Tetrachloroethane	7.67	10.0	77	65-130
Bromobenzene	8.50	10.0	85	75-125
n-Propylbenzene	8.44	10.0	84	70-130
1,2,3-Trichloropropane	7.67	10.0	77	75-125
2-Chlorotoluene	8.61	10.0	86	75-125
1,3,5-Trimethylbenzene	8.82	10.0	88	75-130
4-Chlorotoluene	8.16	10.0	82	75-130
tert-Butylbenzene	9.09	10.0	91	70-130
1,2,4-Trimethylbenzene	8.77	10.0	88	75-130
sec-Butylbenzene	8.64	10.0	86	70-125
4-Isopropyltoluene	9.09	10.0	91	75-130
1,3-Dichlorobenzene	8.52	10.0	85	75-125
1,4-Dichlorobenzene	8.32	10.0	83	75-125
n-Butylbenzene	8.72	10.0	87	70-135
1,2-Dichlorobenzene	8.48	10.0	85	70-120
1,2-Dibromo-3-chloropropane	7.68	10.0	77	50-130
1,2,4-Trichlorobenzene	8.66	10.0	87	65-135
Hexachlorobutadiene	9.05	10.0	91	50-140
Naphthalene	6.39	10.0	64	55-140
1,2,3-Trichlorobenzene	8.05	10.0	81	55-140

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QA/QC Report

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Extracted:**	10/03/2014
Sample Matrix:	Water	**Date Analyzed:**	10/03/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1413475

Lab Control Sample
KWG1413475-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec		%Rec Limits
Dichlorodifluoromethane	6.30	10.0	63		30-155
Chloromethane	8.88	10.0	89		40-125
Vinyl Chloride	9.75	10.0	98		50-145
Bromomethane	3.68	10.0	37		30-145
Chloroethane	12.2	10.0	122		60-135
Trichlorofluoromethane	8.37	10.0	84		60-145
1,1-Dichloroethene	10.8	10.0	108		70-130
Acetone	70.6	50.0	141	*	40-140
Carbon Disulfide	19.8	20.0	99		35-160
Methylene Chloride	9.10	10.0	91		55-140
Methyl tert-Butyl Ether	8.68	10.0	87		65-125
trans-1,2-Dichloroethene	10.3	10.0	103		60-140
1,1-Dichloroethane	10.9	10.0	109		70-135
2,2-Dichloropropane	6.35	10.0	64	*	70-135
cis-1,2-Dichloroethene	9.73	10.0	97		70-125
2-Butanone (MEK)	62.8	50.0	126		30-150
Bromochloromethane	10.5	10.0	105		65-130
Chloroform	9.77	10.0	98		65-135
1,1,1-Trichloroethane (TCA)	8.52	10.0	85		65-130
Carbon Tetrachloride	8.65	10.0	87		65-140
1,1-Dichloropropene	10.6	10.0	106		75-130
Benzene	10.1	10.0	101		80-120
1,2-Dichloroethane (EDC)	10.0	10.0	100		70-130
Trichloroethene (TCE)	9.79	10.0	98		70-125
1,2-Dichloropropane	9.81	10.0	98		75-125
Dibromomethane	10.1	10.0	101		75-125
Bromodichloromethane	9.26	10.0	93		75-120
cis-1,3-Dichloropropene	8.09	10.0	81		70-130
4-Methyl-2-pentanone (MIBK)	57.4	50.0	115		60-135
Toluene	9.93	10.0	99		75-120
trans-1,3-Dichloropropene	6.77	10.0	68		55-140
1,1,2-Trichloroethane	9.89	10.0	99		75-125
Tetrachloroethene (PCE)	9.50	10.0	95		45-150
2-Hexanone	57.2	50.0	114		55-130
1,3-Dichloropropane	10.2	10.0	102		75-125

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QA/QC Report

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Extracted:**	10/03/2014
Sample Matrix:	Water	**Date Analyzed:**	10/03/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1413475

Lab Control Sample
KWG1413475-3
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Dibromochloromethane	8.94	10.0	89	60-135
1,2-Dibromoethane (EDB)	9.72	10.0	97	80-120
Chlorobenzene	9.56	10.0	96	80-120
Ethylbenzene	9.43	10.0	94	75-125
1,1,1,2-Tetrachloroethane	8.21	10.0	82	80-130
m,p-Xylenes	19.5	20.0	98	75-130
o-Xylene	9.51	10.0	95	80-120
Styrene	9.74	10.0	97	65-135
Bromoform	7.78	10.0	78	70-130
Isopropylbenzene	9.51	10.0	95	75-125
1,1,2,2-Tetrachloroethane	10.4	10.0	104	65-130
Bromobenzene	9.48	10.0	95	75-125
n-Propylbenzene	9.68	10.0	97	70-130
1,2,3-Trichloropropane	10.1	10.0	101	75-125
2-Chlorotoluene	9.70	10.0	97	75-125
1,3,5-Trimethylbenzene	9.89	10.0	99	75-130
4-Chlorotoluene	9.71	10.0	97	75-130
tert-Butylbenzene	9.86	10.0	99	70-130
1,2,4-Trimethylbenzene	9.85	10.0	99	75-130
sec-Butylbenzene	9.60	10.0	96	70-125
4-Isopropyltoluene	9.95	10.0	100	75-130
1,3-Dichlorobenzene	9.68	10.0	97	75-125
1,4-Dichlorobenzene	9.64	10.0	96	75-125
n-Butylbenzene	10.0	10.0	100	70-135
1,2-Dichlorobenzene	9.81	10.0	98	70-120
1,2-Dibromo-3-chloropropane	8.43	10.0	84	50-130
1,2,4-Trichlorobenzene	9.88	10.0	99	65-135
Hexachlorobutadiene	9.49	10.0	95	50-140
Naphthalene	10.9	10.0	109	55-140
1,2,3-Trichlorobenzene	10.6	10.0	106	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.

QA/QC Report

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Extracted:**	10/06/2014
Sample Matrix:	Water	**Date Analyzed:**	10/06/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1413516

Lab Control Sample
KWG1413516-1
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Dichlorodifluoromethane	9.27	10.0	93	30-155
Chloromethane	10.6	10.0	106	40-125
Vinyl Chloride	11.6	10.0	116	50-145
Bromomethane	5.44	10.0	54	30-145
Chloroethane	13.5	10.0	135	60-135
Trichlorofluoromethane	10.0	10.0	100	60-145
1,1-Dichloroethene	12.8	10.0	128	70-130
Acetone	75.0	50.0	150 *	40-140
Carbon Disulfide	24.5	20.0	123	35-160
Methylene Chloride	10.2	10.0	102	55-140
Methyl tert-Butyl Ether	9.10	10.0	91	65-125
trans-1,2-Dichloroethene	11.8	10.0	118	60-140
1,1-Dichloroethane	12.3	10.0	123	70-135
2,2-Dichloropropane	7.88	10.0	79	70-135
cis-1,2-Dichloroethene	10.8	10.0	108	70-125
2-Butanone (MEK)	65.6	50.0	131	30-150
Bromochloromethane	11.5	10.0	115	65-130
Chloroform	11.2	10.0	112	65-135
1,1,1-Trichloroethane (TCA)	10.3	10.0	103	65-130
Carbon Tetrachloride	10.3	10.0	103	65-140
1,1-Dichloropropene	12.4	10.0	124	75-130
Benzene	11.4	10.0	114	80-120
1,2-Dichloroethane (EDC)	11.6	10.0	116	70-130
Trichloroethene (TCE)	11.5	10.0	115	70-125
1,2-Dichloropropane	11.0	10.0	110	75-125
Dibromomethane	11.1	10.0	111	75-125
Bromodichloromethane	10.9	10.0	109	75-120
cis-1,3-Dichloropropene	9.44	10.0	94	70-130
4-Methyl-2-pentanone (MIBK)	59.9	50.0	120	60-135
Toluene	11.1	10.0	111	75-120
trans-1,3-Dichloropropene	8.07	10.0	81	55-140
1,1,2-Trichloroethane	11.0	10.0	110	75-125
Tetrachloroethene (PCE)	10.5	10.0	105	45-150
2-Hexanone	57.9	50.0	116	55-130
1,3-Dichloropropane	11.4	10.0	114	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, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Extracted:**	10/06/2014
Sample Matrix:	Water	**Date Analyzed:**	10/06/2014

Lab Control Spike Summary
Volatile Organic Compounds

Extraction Method:	EPA 5030B	**Units:**	ug/L
Analysis Method:	8260C	**Basis:**	NA
		Level:	Low
		Extraction Lot:	KWG1413516

Lab Control Sample
KWG1413516-1
Lab Control Spike

Analyte Name	Result	Spike Amount	%Rec	%Rec Limits
Dibromochloromethane	10.6	10.0	106	60-135
1,2-Dibromoethane (EDB)	10.4	10.0	104	80-120
Chlorobenzene	10.9	10.0	109	80-120
Ethylbenzene	10.9	10.0	109	75-125
1,1,1,2-Tetrachloroethane	9.87	10.0	99	80-130
m,p-Xylenes	22.1	20.0	111	75-130
o-Xylene	11.0	10.0	110	80-120
Styrene	11.3	10.0	113	65-135
Bromoform	9.16	10.0	92	70-130
Isopropylbenzene	11.0	10.0	110	75-125
1,1,2,2-Tetrachloroethane	11.3	10.0	113	65-130
Bromobenzene	10.9	10.0	109	75-125
n-Propylbenzene	11.5	10.0	115	70-130
1,2,3-Trichloropropane	10.8	10.0	108	75-125
2-Chlorotoluene	11.1	10.0	111	75-125
1,3,5-Trimethylbenzene	11.8	10.0	118	75-130
4-Chlorotoluene	11.3	10.0	113	75-130
tert-Butylbenzene	11.6	10.0	116	70-130
1,2,4-Trimethylbenzene	11.6	10.0	116	75-130
sec-Butylbenzene	11.5	10.0	115	70-125
4-Isopropyltoluene	11.8	10.0	118	75-130
1,3-Dichlorobenzene	11.1	10.0	111	75-125
1,4-Dichlorobenzene	11.1	10.0	111	75-125
n-Butylbenzene	11.8	10.0	118	70-135
1,2-Dichlorobenzene	11.1	10.0	111	70-120
1,2-Dibromo-3-chloropropane	9.59	10.0	96	50-130
1,2,4-Trichlorobenzene	10.9	10.0	109	65-135
Hexachlorobutadiene	10.8	10.0	108	50-140
Naphthalene	11.7	10.0	117	55-140
1,2,3-Trichlorobenzene	11.6	10.0	116	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.

QA/QC Report

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Extracted:**	10/02/2014
Sample Matrix:	Water	**Date Analyzed:**	10/02/2014
		Time Analyzed:	13:55

Method Blank Summary
Volatile Organic Compounds

Sample Name:	Method Blank	**Instrument ID:**	MS13
Lab Code:	KWG1413403-4	**File ID:**	J:\MS13\DATA\100214\1002F008.D
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1413403

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1413403-3	J:\MS13\DATA\100214\1002F004.D	10/02/14	12:09
FTP-1	K1410441-001	J:\MS13\DATA\100214\1002F016.D	10/02/14	17:29

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Extracted:**	10/03/2014
Sample Matrix:	Water	**Date Analyzed:**	10/03/2014
		Time Analyzed:	18:17

Method Blank Summary
Volatile Organic Compounds

Sample Name:	Method Blank	**Instrument ID:**	GC-MS 18
Lab Code:	KWG1413475-4	**File ID:**	J:\MS18\DATA\100314\1003F015.D
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1413475

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1413475-3	J:\MS18\DATA\100314\1003F009.D	10/03/14	16:02
Trip Blank	K1410441-016	J:\MS18\DATA\100314\1003F017.D	10/03/14	19:00
FTP-1	K1410441-001	J:\MS18\DATA\100314\1003F020.D	10/03/14	20:03
815-2	K1410441-005	J:\MS18\DATA\100314\1003F021.D	10/03/14	20:25
MTS-1	K1410441-006	J:\MS18\DATA\100314\1003F022.D	10/03/14	20:46
MTS-2	K1410441-007	J:\MS18\DATA\100314\1003F023.D	10/03/14	21:07
MTS-4	K1410441-008	J:\MS18\DATA\100314\1003F024.D	10/03/14	21:30
DUP-1	K1410441-009	J:\MS18\DATA\100314\1003F025.D	10/03/14	21:51
VTR-1	K1410441-010	J:\MS18\DATA\100314\1003F026.D	10/03/14	22:13
VTR-3	K1410441-011	J:\MS18\DATA\100314\1003F027.D	10/03/14	22:34
VTR-5	K1410441-012	J:\MS18\DATA\100314\1003F028.D	10/03/14	22:55
PAIC Well	K1410441-014	J:\MS18\DATA\100314\1003F029.D	10/03/14	23:16
Pamona Well	K1410441-015	J:\MS18\DATA\100314\1003F030.D	10/03/14	23:38
TVR-7	K1410441-017	J:\MS18\DATA\100314\1003F031.D	10/03/14	23:59

QA/QC Report

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Extracted:**	10/06/2014
Sample Matrix:	Water	**Date Analyzed:**	10/06/2014
		Time Analyzed:	11:50

Method Blank Summary
Volatile Organic Compounds

Sample Name:	Method Blank	**Instrument ID:**	GC-MS 18
Lab Code:	KWG1413516-3	**File ID:**	J:\MS18\DATA\100614\1006F008.D
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1413516

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1413516-1	J:\MS18\DATA\100614\1006F004.D	10/06/14	10:14
VTR-6	K1410441-013	J:\MS18\DATA\100614\1006F013.D	10/06/14	13:37
VTR-6MS	KWG1413516-4	J:\MS18\DATA\100614\1006F030.D	10/06/14	19:40
VTR-6DMS	KWG1413516-5	J:\MS18\DATA\100614\1006F031.D	10/06/14	20:01

QA/QC Report

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Extracted:**	10/02/2014
Sample Matrix:	Water	**Date Analyzed:**	10/02/2014
		Time Analyzed:	12:09

Lab Control Sample Summary
Volatile Organic Compounds

Sample Name:	Lab Control Sample	**Instrument ID:**	MS13
Lab Code:	KWG1413403-3	**File ID:**	J:\MS13\DATA\100214\1002F004.D
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1413403

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1413403-4	J:\MS13\DATA\100214\1002F008.D	10/02/14	13:55
FTP-1	K1410441-001	J:\MS13\DATA\100214\1002F016.D	10/02/14	17:29

QA/QC Report

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Extracted:**	10/03/2014
Sample Matrix:	Water	**Date Analyzed:**	10/03/2014
		Time Analyzed:	16:02

Lab Control Sample Summary
Volatile Organic Compounds

Sample Name:	Lab Control Sample	**Instrument ID:**	GC-MS 18
Lab Code:	KWG1413475-3	**File ID:**	J:\MS18\DATA\100314\1003F009.D
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1413475

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1413475-4	J:\MS18\DATA\100314\1003F015.D	10/03/14	18:17
Trip Blank	K1410441-016	J:\MS18\DATA\100314\1003F017.D	10/03/14	19:00
FTP-1	K1410441-001	J:\MS18\DATA\100314\1003F020.D	10/03/14	20:03
815-2	K1410441-005	J:\MS18\DATA\100314\1003F021.D	10/03/14	20:25
MTS-1	K1410441-006	J:\MS18\DATA\100314\1003F022.D	10/03/14	20:46
MTS-2	K1410441-007	J:\MS18\DATA\100314\1003F023.D	10/03/14	21:07
MTS-4	K1410441-008	J:\MS18\DATA\100314\1003F024.D	10/03/14	21:30
DUP-1	K1410441-009	J:\MS18\DATA\100314\1003F025.D	10/03/14	21:51
VTR-1	K1410441-010	J:\MS18\DATA\100314\1003F026.D	10/03/14	22:13
VTR-3	K1410441-011	J:\MS18\DATA\100314\1003F027.D	10/03/14	22:34
VTR-5	K1410441-012	J:\MS18\DATA\100314\1003F028.D	10/03/14	22:55
PAIC Well	K1410441-014	J:\MS18\DATA\100314\1003F029.D	10/03/14	23:16
Pamona Well	K1410441-015	J:\MS18\DATA\100314\1003F030.D	10/03/14	23:38
TVR-7	K1410441-017	J:\MS18\DATA\100314\1003F031.D	10/03/14	23:59

QA/QC Report

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Extracted:**	10/06/2014
Sample Matrix:	Water	**Date Analyzed:**	10/06/2014
		Time Analyzed:	10:14

Lab Control Sample Summary
Volatile Organic Compounds

Sample Name:	Lab Control Sample	**Instrument ID:**	GC-MS 18
Lab Code:	KWG1413516-1	**File ID:**	J:\MS18\DATA\100614\1006F004.D
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C	**Extraction Lot:**	KWG1413516

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1413516-3	J:\MS18\DATA\100614\1006F008.D	10/06/14	11:50
VTR-6	K1410441-013	J:\MS18\DATA\100614\1006F013.D	10/06/14	13:37
VTR-6MS	KWG1413516-4	J:\MS18\DATA\100614\1006F030.D	10/06/14	19:40
VTR-6DMS	KWG1413516-5	J:\MS18\DATA\100614\1006F031.D	10/06/14	20:01

QA/QC Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Date Analyzed: 10/02/2014
Time Analyzed: 11:00

Tune Summary
Volatile Organic Compounds

File ID: J:\MS13\DATA\100214\1002F002.D
Instrument ID: MS13
Column:

Analysis Method: 8260C
Analysis Lot: KWG1413401

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	17.3	9348	PASS
75	95	30	60	48.0	25925	PASS
95	95	100	100	100.0	54018	PASS
96	95	5	9	6.3	3423	PASS
173	174	0	2	0.3	137	PASS
174	95	50	120	88.9	48042	PASS
175	174	5	9	7.4	3546	PASS
176	174	95	101	97.9	47050	PASS
177	176	5	9	6.3	2986	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1413401-2	J:\MS13\DATA\100214\1002F003.D	10/02/2014	11:32	
Lab Control Sample	KWG1413403-3	J:\MS13\DATA\100214\1002F004.D	10/02/2014	12:09	
Method Blank	KWG1413403-4	J:\MS13\DATA\100214\1002F008.D	10/02/2014	13:55	
FTP-1	K1410441-001	J:\MS13\DATA\100214\1002F016.D	10/02/2014	17:29	

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

QA/QC Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Date Analyzed: 10/03/2014
Time Analyzed: 14:35

Tune Summary
Volatile Organic Compounds

File ID: J:\MS18\DATA\100314\1003F006.D
Instrument ID: GC-MS 18
Column:

Analysis Method: 8260C
Analysis Lot: KWG1413468

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	20.4	11319	PASS
75	95	30	60	51.2	28448	PASS
95	95	100	100	100.0	55581	PASS
96	95	5	9	6.9	3822	PASS
173	174	0	2	0.9	409	PASS
174	95	50	120	80.8	44904	PASS
175	174	5	9	6.0	2700	PASS
176	174	95	101	96.2	43208	PASS
177	176	5	9	6.3	2729	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1413468-2	J:\MS18\DATA\100314\1003F008.D	10/03/2014	15:41	
Lab Control Sample	KWG1413475-3	J:\MS18\DATA\100314\1003F009.D	10/03/2014	16:02	
Method Blank	KWG1413475-4	J:\MS18\DATA\100314\1003F015.D	10/03/2014	18:17	
Trip Blank	K1410441-016	J:\MS18\DATA\100314\1003F017.D	10/03/2014	19:00	
FTP-1	K1410441-001	J:\MS18\DATA\100314\1003F020.D	10/03/2014	20:03	
815-2	K1410441-005	J:\MS18\DATA\100314\1003F021.D	10/03/2014	20:25	
MTS-1	K1410441-006	J:\MS18\DATA\100314\1003F022.D	10/03/2014	20:46	
MTS-2	K1410441-007	J:\MS18\DATA\100314\1003F023.D	10/03/2014	21:07	
MTS-4	K1410441-008	J:\MS18\DATA\100314\1003F024.D	10/03/2014	21:30	
DUP-1	K1410441-009	J:\MS18\DATA\100314\1003F025.D	10/03/2014	21:51	
VTR-1	K1410441-010	J:\MS18\DATA\100314\1003F026.D	10/03/2014	22:13	
VTR-3	K1410441-011	J:\MS18\DATA\100314\1003F027.D	10/03/2014	22:34	
VTR-5	K1410441-012	J:\MS18\DATA\100314\1003F028.D	10/03/2014	22:55	
PAIC Well	K1410441-014	J:\MS18\DATA\100314\1003F029.D	10/03/2014	23:16	
Pamona Well	K1410441-015	J:\MS18\DATA\100314\1003F030.D	10/03/2014	23:38	
TVR-7	K1410441-017	J:\MS18\DATA\100314\1003F031.D	10/03/2014	23:59	

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

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Date Analyzed: 10/06/2014
Time Analyzed: 08:58

Tune Summary
Volatile Organic Compounds

File ID: J:\MS18\DATA\100614\1006F002.D
Instrument ID: GC-MS 18
Column:

Analysis Method: 8260C
Analysis Lot: KWG1413506

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
50	95	15	40	20.6	12443	PASS
75	95	30	60	52.6	31712	PASS
95	95	100	100	100.0	60301	PASS
96	95	5	9	7.0	4207	PASS
173	174	0	2	0.5	212	PASS
174	95	50	120	77.9	46954	PASS
175	174	5	9	6.5	3065	PASS
176	174	95	101	98.0	46034	PASS
177	176	5	9	6.7	3089	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1413506-2	J:\MS18\DATA\100614\1006F003.D	10/06/2014	09:31	
Lab Control Sample	KWG1413516-1	J:\MS18\DATA\100614\1006F004.D	10/06/2014	10:14	
Method Blank	KWG1413516-3	J:\MS18\DATA\100614\1006F008.D	10/06/2014	11:50	
VTR-6	K1410441-013	J:\MS18\DATA\100614\1006F013.D	10/06/2014	13:37	
VTR-6MS	KWG1413516-4	J:\MS18\DATA\100614\1006F030.D	10/06/2014	19:40	
VTR-6DMS	KWG1413516-5	J:\MS18\DATA\100614\1006F031.D	10/06/2014	20:01	

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

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/17/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13556
Instrument ID: GC-MS 18

Column: MS

Level ID	File ID
A	J:\MS18\DATA\091714\0917F008.D
B	J:\MS18\DATA\091714\0917F009.D
C	J:\MS18\DATA\091714\0917F010.D
D	J:\MS18\DATA\091714\0917F011.D
E	J:\MS18\DATA\091714\0917F012.D
F	J:\MS18\DATA\091714\0917F013.D
G	J:\MS18\DATA\091714\0917F014.D
H	J:\MS18\DATA\091714\0917F015.D
I	J:\MS18\DATA\091714\0917F016.D
J	J:\MS18\DATA\091714\0917F017.D
K	J:\MS18\DATA\091714\0917F018.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Dichlorodifluoromethane				B	0.20	0.247	C	0.50	0.320	D	1.0	0.335	E	2.0	0.303
	F	5.0	0.416	G	10	0.365	H	20	0.349	I	40	0.347	J	60	0.360
	K	80	0.365												
Chloromethane	A	0.10	0.453	B	0.20	0.416	C	0.50	0.373	D	1.0	0.394	E	2.0	0.343
	F	5.0	0.426	G	10	0.366	H	20	0.356	I	40	0.380	J	60	0.391
	K	80	0.395												
Vinyl Chloride	A	0.10	0.268	B	0.20	0.358	C	0.50	0.363	D	1.0	0.368	E	2.0	0.343
	F	5.0	0.462	G	10	0.397	H	20	0.388	I	40	0.384	J	60	0.397
	K	80	0.395												
Bromomethane							C	0.50	0.373	D	1.0	0.355	E	2.0	0.288
	F	5.0	0.336	G	10	0.250	H	20	0.214	I	40	0.232	J	60	0.254
	K	80	0.272												
Chloroethane							C	0.50	0.222	D	1.0	0.216	E	2.0	0.186
	F	5.0	0.251	G	10	0.210	H	20	0.203	I	40	0.208	J	60	0.210
	K	80	0.212												
Trichlorofluoromethane	A	0.10	0.386	B	0.20	0.443	C	0.50	0.471	D	1.0	0.528	E	2.0	0.459
	F	5.0	0.634	G	10	0.540	H	20	0.526	I	40	0.520	J	60	0.543
	K	80	0.562												
1,1-Dichloroethene	A	0.10	0.164	B	0.20	0.204	C	0.50	0.213	D	1.0	0.225	E	2.0	0.197
	F	5.0	0.264	G	10	0.224	H	20	0.218	I	40	0.223	J	60	0.236
	K	80	0.236												
Acetone				B	8.0	0.0487	C	20	0.0484	D	40	0.0477	E	80	0.0448
	F	100	0.0419	G	200	0.0490	H	400	0.0491	I	800	0.0462	J	1600	0.0496
	K	2000	0.0501												
Carbon Disulfide	A	0.10	0.541	B	0.20	0.611	C	0.50	0.695	D	1.0	0.695	E	2.0	0.624
	F	5.0	0.877	G	10	0.769	H	20	0.790	I	40	0.831	J	60	0.878
	K	80	0.884												
Methylene Chloride							C	0.50	0.411	D	1.0	0.356	E	2.0	0.289
	F	5.0	0.351	G	10	0.284	H	20	0.276	I	40	0.286	J	60	0.291
	K	80	0.293												

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† **SPCC Compound** ‡ **CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/17/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13556
Instrument ID: GC-MS 18

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Methyl tert-Butyl Ether	A	0.20	0.630	B	0.40	0.655	C	1.0	0.594	D	2.0	0.670	E	4.0	0.611
	F	10	0.796	G	20	0.669	H	40	0.696	I	80	0.692	J	120	0.738
	K	160	0.733												
trans-1,2-Dichloroethene	A	0.10	0.271	B	0.20	0.264	C	0.50	0.250	D	1.0	0.269	E	2.0	0.237
	F	5.0	0.317	G	10	0.270	H	20	0.266	I	40	0.280	J	60	0.285
	K	80	0.290												
1,1-Dichloroethane	A	0.10	0.421	B	0.20	0.438	C	0.50	0.478	D	1.0	0.468	E	2.0	0.416
	F	5.0	0.567	G	10	0.484	H	20	0.485	I	40	0.493	J	60	0.506
	K	80	0.506												
2,2-Dichloropropane				B	0.20	0.360	C	0.50	0.370	D	1.0	0.353	E	2.0	0.338
	F	5.0	0.445	G	10	0.385	H	20	0.384	I	40	0.406	J	60	0.425
	K	80	0.430												
cis-1,2-Dichloroethene				B	0.20	0.285	C	0.50	0.303	D	1.0	0.331	E	2.0	0.293
	F	5.0	0.361	G	10	0.311	H	20	0.323	I	40	0.334	J	60	0.335
	K	80	0.336												
2-Butanone (MEK)	A	4.0	0.0150	B	8.0	0.0185	C	20	0.0186	D	40	0.0196	E	80	0.0180
	F	100	0.0176	G	200	0.0203	H	400	0.0208	I	800	0.0199	J	1600	0.0222
	K	2000	0.0221												
Bromochloromethane				B	0.20	0.114	C	0.50	0.135	D	1.0	0.137	E	2.0	0.120
	F	5.0	0.167	G	10	0.143	H	20	0.144	I	40	0.141	J	60	0.136
	K	80	0.129												
Chloroform				B	0.20	0.444	C	0.50	0.485	D	1.0	0.488	E	2.0	0.439
	F	5.0	0.592	G	10	0.505	H	20	0.508	I	40	0.531	J	60	0.534
	K	80	0.535												
1,1,1-Trichloroethane (TCA)	A	0.10	0.316	B	0.20	0.347	C	0.50	0.398	D	1.0	0.402	E	2.0	0.354
	F	5.0	0.512	G	10	0.431	H	20	0.439	I	40	0.460	J	60	0.481
	K	80	0.483												
Carbon Tetrachloride	A	0.10	0.242	B	0.20	0.284	C	0.50	0.327	D	1.0	0.334	E	2.0	0.304
	F	5.0	0.434	G	10	0.372	H	20	0.375	I	40	0.398	J	60	0.412
	K	80	0.428												
1,1-Dichloropropene	A	0.10	0.288	B	0.20	0.342	C	0.50	0.367	D	1.0	0.372	E	2.0	0.346
	F	5.0	0.462	G	10	0.395	H	20	0.392	I	40	0.400	J	60	0.417
	K	80	0.412												
Benzene	A	0.10	1.11	B	0.20	1.22	C	0.50	1.21	D	1.0	1.20	E	2.0	1.11
	F	5.0	1.46	G	10	1.23	H	20	1.22	I	40	1.27	J	60	1.30
	K	80	1.30												

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† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/17/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13556
Instrument ID: GC-MS 18

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)				B	0.20	0.373	C	0.50	0.367	D	1.0	0.378	E	2.0	0.355
	F	5.0	0.461	G	10	0.393	H	20	0.386	I	40	0.395	J	60	0.402
	K	80	0.400												
Trichloroethene (TCE)	A	0.10	0.220	B	0.20	0.275	C	0.50	0.247	D	1.0	0.294	E	2.0	0.254
	F	5.0	0.356	G	10	0.290	H	20	0.302	I	40	0.311	J	60	0.319
	K	80	0.312												
1,2-Dichloropropane				B	0.20	0.293	C	0.50	0.270	D	1.0	0.285	E	2.0	0.257
	F	5.0	0.344	G	10	0.303	H	20	0.301	I	40	0.318	J	60	0.320
	K	80	0.321												
Dibromomethane				B	0.20	0.143	C	0.50	0.139	D	1.0	0.155	E	2.0	0.152
	F	5.0	0.188	G	10	0.155	H	20	0.158	I	40	0.164	J	60	0.171
	K	80	0.171												
Bromodichloromethane	A	0.10	0.351	B	0.20	0.269	C	0.50	0.310	D	1.0	0.290	E	2.0	0.292
	F	5.0	0.404	G	10	0.349	H	20	0.368	I	40	0.394	J	60	0.402
	K	80	0.409												
cis-1,3-Dichloropropene	A	0.10	0.312	B	0.20	0.322	C	0.50	0.377	D	1.0	0.369	E	2.0	0.357
	F	5.0	0.494	G	10	0.442	H	20	0.463	I	40	0.494	J	60	0.506
	K	80	0.517												
4-Methyl-2-pentanone (MIBK)	A	4.0	0.0523	B	8.0	0.0585	C	20	0.0641	D	40	0.0650	E	80	0.0612
	F	100	0.0602	G	200	0.0712	H	400	0.0752	I	800	0.0714			
Toluene	A	0.10	0.798	B	0.20	0.776	C	0.50	0.743	D	1.0	0.784	E	2.0	0.714
	F	5.0	0.986	G	10	0.832	H	20	0.839	I	40	0.868	J	60	0.898
	K	80	0.898												
trans-1,3-Dichloropropene	A	0.10	0.675	B	0.20	0.627	C	0.50	0.745	D	1.0	0.742	E	2.0	0.670
	F	5.0	0.976	G	10	0.843	H	20	0.910	I	40	0.985	J	60	1.03
	K	80	1.06												
1,1,2-Trichloroethane	A	0.10	0.442	B	0.20	0.497	C	0.50	0.473	D	1.0	0.468	E	2.0	0.406
	F	5.0	0.552	G	10	0.467	H	20	0.482	I	40	0.491	J	60	0.503
	K	80	0.507												
Tetrachloroethene (PCE)	A	0.10	0.558	B	0.20	0.566	C	0.50	0.542	D	1.0	0.597	E	2.0	0.533
	F	5.0	0.709	G	10	0.615	H	20	0.620	I	40	0.664	J	60	0.665
	K	80	0.668												
2-Hexanone				B	8.0	0.0448	C	20	0.0496	D	40	0.0521	E	80	0.0494
	F	100	0.0488	G	200	0.0578	H	400	0.0598	I	800	0.0575			

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Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/17/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13556
Instrument ID: GC-MS 18

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	0.849	B	0.20	1.02	C	0.50	0.977	D	1.0	1.07	E	2.0	0.914
	F	5.0	1.23	G	10	1.07	H	20	1.07	I	40	1.10	J	60	1.11
	K	80	1.11												
Dibromochloromethane				B	0.20	0.400	C	0.50	0.476	D	1.0	0.483	E	2.0	0.435
	F	5.0	0.634	G	10	0.560	H	20	0.611	I	40	0.679			
1,2-Dibromoethane (EDB)	A	0.10	0.456	B	0.20	0.477	C	0.50	0.527	D	1.0	0.498	E	2.0	0.456
	F	5.0	0.625	G	10	0.538	H	20	0.558	I	40	0.579	J	60	0.595
	K	80	0.598												
Chlorobenzene	A	0.10	1.90	B	0.20	1.90	C	0.50	2.10	D	1.0	2.18	E	2.0	1.92
	F	5.0	2.66	G	10	2.25	H	20	2.27	I	40	2.39	J	60	2.39
	K	80	2.40												
Ethylbenzene	A	0.10	0.858	B	0.20	1.01	C	0.50	1.16	D	1.0	1.19	E	2.0	1.05
	F	5.0	1.48	G	10	1.25	H	20	1.26	I	40	1.32	J	60	1.34
	K	80	1.36												
1,1,1,2-Tetrachloroethane	A	0.10	0.577	B	0.20	0.626	C	0.50	0.545	D	1.0	0.615	E	2.0	0.555
	F	5.0	0.796	G	10	0.715	H	20	0.735	I	40	0.805	J	60	0.822
	K	80	0.839												
m,p-Xylenes	A	0.20	1.19	B	0.40	1.29	C	1.0	1.37	D	2.0	1.41	E	4.0	1.24
	F	10	1.79	G	20	1.55	H	40	1.55	I	80	1.64	J	120	1.67
	K	160	1.68												
o-Xylene	A	0.10	1.31	B	0.20	1.26	C	0.50	1.33	D	1.0	1.39	E	2.0	1.21
	F	5.0	1.77	G	10	1.48	H	20	1.52	I	40	1.60	J	60	1.61
	K	80	1.62												
Styrene				B	0.20	0.804	C	0.50	0.950	D	1.0	0.928	E	2.0	0.864
	F	5.0	1.29	G	10	1.14	H	20	1.17	I	40	1.26	J	60	1.28
	K	80	1.29												
Bromoform							C	0.50	0.247	D	1.0	0.224	E	2.0	0.221
	F	5.0	0.316	G	10	0.285	H	20	0.323	I	40	0.361	J	60	0.399
Isopropylbenzene	A	0.10	2.85	B	0.20	3.09	C	0.50	3.29	D	1.0	3.56	E	2.0	3.17
	F	5.0	4.53	G	10	3.87	H	20	3.88	I	40	4.09	J	60	4.15
	K	80	4.20												
1,1,2,2-Tetrachloroethane				B	0.20	0.558	C	0.50	0.552	D	1.0	0.601	E	2.0	0.543
	F	5.0	0.735	G	10	0.632	H	20	0.613	I	40	0.623	J	60	0.642
	K	80	0.633												

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Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/17/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13556
Instrument ID: GC-MS 18

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Bromobenzene	A	0.10	0.812	B	0.20	0.899	C	0.50	0.960	D	1.0	0.903	E	2.0	0.868
	F	5.0	1.13	G	10	0.976	H	20	0.971	I	40	1.01	J	60	1.01
	K	80	0.989												
n-Propylbenzene				B	0.20	3.88	C	0.50	4.11	D	1.0	4.22	E	2.0	3.86
	F	5.0	5.45	G	10	4.65	H	20	4.53	I	40	4.71	J	60	4.73
	K	80	4.69												
1,2,3-Trichloropropane							C	0.50	0.224	D	1.0	0.223	E	2.0	0.183
	F	5.0	0.240	G	10	0.215	H	20	0.199	I	40	0.206	J	60	0.213
	K	80	0.209												
2-Chlorotoluene							C	0.50	2.65	D	1.0	2.73	E	2.0	2.46
	F	5.0	3.25	G	10	2.75	H	20	2.67	I	40	2.79	J	60	2.76
	K	80	2.72												
1,3,5-Trimethylbenzene	A	0.10	2.35	B	0.20	2.51	C	0.50	2.72	D	1.0	2.98	E	2.0	2.67
	F	5.0	3.85	G	10	3.32	H	20	3.24	I	40	3.42	J	60	3.42
	K	80	3.41												
4-Chlorotoluene	A	0.10	2.81	B	0.20	2.78	C	0.50	3.07	D	1.0	3.13	E	2.0	2.84
	F	5.0	3.83	G	10	3.25	H	20	3.19	I	40	3.32	J	60	3.31
	K	80	3.28												
tert-Butylbenzene	A	0.10	2.08	B	0.20	2.36	C	0.50	2.69	D	1.0	2.67	E	2.0	2.55
	F	5.0	3.48	G	10	3.00	H	20	2.89	I	40	3.01	J	60	3.01
	K	80	2.99												
1,2,4-Trimethylbenzene	A	0.10	2.49	B	0.20	2.52	C	0.50	2.78	D	1.0	2.96	E	2.0	2.69
	F	5.0	3.94	G	10	3.35	H	20	3.29	I	40	3.47	J	60	3.49
	K	80	3.47												
sec-Butylbenzene	A	0.10	3.19	B	0.20	3.27	C	0.50	3.52	D	1.0	3.80	E	2.0	3.39
	F	5.0	4.91	G	10	4.23	H	20	4.10	I	40	4.26	J	60	4.31
	K	80	4.31												
4-Isopropyltoluene				B	0.20	2.23	C	0.50	2.63	D	1.0	2.92	E	2.0	2.74
	F	5.0	4.05	G	10	3.50	H	20	3.42	I	40	3.61	J	60	3.64
	K	80	3.64												
1,3-Dichlorobenzene	A	0.10	1.82	B	0.20	1.65	C	0.50	1.76	D	1.0	1.80	E	2.0	1.58
	F	5.0	2.17	G	10	1.85	H	20	1.81	I	40	1.92	J	60	1.90
	K	80	1.90												
1,4-Dichlorobenzene				B	0.20	1.80	C	0.50	1.80	D	1.0	1.78	E	2.0	1.65
	F	5.0	2.22	G	10	1.91	H	20	1.87	I	40	1.95	J	60	1.96
	K	80	1.92												

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Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/17/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13556
Instrument ID: GC-MS 18

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
n-Butylbenzene	A	0.10	2.53	B	0.20	2.24	C	0.50	2.42	D	1.0	2.50	E	2.0	2.27
	F	5.0	3.40	G	10	2.95	H	20	2.90	I	40	3.06	J	60	3.13
	K	80	3.16												
1,2-Dichlorobenzene	A	0.10	1.49	B	0.20	1.51	C	0.50	1.65	D	1.0	1.70	E	2.0	1.53
	F	5.0	2.04	G	10	1.75	H	20	1.71	I	40	1.79	J	60	1.80
	K	80	1.79												
1,2-Dibromo-3-chloropropane							C	0.50	0.0510	D	1.0	0.0643	E	2.0	0.0551
	F	5.0	0.0747	G	10	0.0690	H	20	0.0697	I	40	0.0787	J	60	0.0849
	K	80	0.0868												
1,2,4-Trichlorobenzene				B	0.20	1.10	C	0.50	0.881	D	1.0	0.869	E	2.0	0.782
	F	5.0	1.06	G	10	0.928	H	20	0.907	I	40	0.968	J	60	0.987
	K	80	0.991												
Hexachlorobutadiene				B	0.20	0.449	C	0.50	0.400	D	1.0	0.411	E	2.0	0.356
	F	5.0	0.470	G	10	0.403	H	20	0.393	I	40	0.427	J	60	0.435
	K	80	0.445												
Naphthalene				B	0.20	1.31	C	0.50	1.28	D	1.0	1.36	E	2.0	1.21
	F	5.0	1.75	G	10	1.53	H	20	1.54	I	40	1.64	J	60	1.72
	K	80	1.75												
1,2,3-Trichlorobenzene				B	0.20	0.637	C	0.50	0.651	D	1.0	0.685	E	2.0	0.558
	F	5.0	0.766	G	10	0.671	H	20	0.669	I	40	0.691	J	60	0.739
	K	80	0.741												
Dibromofluoromethane	A	10	0.213	B	10	0.215	C	10	0.205	D	10	0.212	E	10	0.221
	F	10	0.219	G	10	0.217	H	10	0.227	I	10	0.226	J	10	0.226
	K	10	0.233												
1,2-Dichloroethane-d4	A	10	0.263	B	10	0.265	C	10	0.252	D	10	0.260	E	10	0.262
	F	10	0.262	G	10	0.263	H	10	0.258	I	10	0.243	J	10	0.254
	K	10	0.261												
Toluene-d8	A	10	1.00	B	10	1.00	C	10	0.972	D	10	1.01	E	10	1.01
	F	10	0.988	G	10	1.02	H	10	1.02	I	10	1.02	J	10	1.03
	K	10	1.03												
4-Bromofluorobenzene	A	10	0.886	B	10	0.891	C	10	0.885	D	10	0.876	E	10	0.877
	F	10	0.897	G	10	0.907	H	10	0.910	I	10	0.925	J	10	0.935
	K	10	0.931												

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/17/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13556
Instrument ID: GC-MS 18

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	13.1		≤ 20	0.341		0.100
Chloromethane	MS	AverageRF	% RSD	8.2		≤ 20	0.390		0.100
Vinyl Chloride	MS	AverageRF	% RSD	12.6		≤ 20	0.375		0.100
Bromomethane	MS	AverageRF	% RSD	19.7		≤ 20	0.286		0.100
Chloroethane	MS	AverageRF	% RSD	8.1		≤ 20	0.213		0.100
Trichlorofluoromethane	MS	AverageRF	% RSD	13.1		≤ 20	0.510		0.100
1,1-Dichloroethene	MS	AverageRF	% RSD	11.6		≤ 20	0.219		.100
Acetone	MS	AverageRF	% RSD	5.3		≤ 20	0.0476		0.01
Carbon Disulfide	MS	AverageRF	% RSD	16.1		≤ 20	0.745		0.100
Methylene Chloride	MS	AverageRF	% RSD	14.7		≤ 20	0.315		0.100
Methyl tert-Butyl Ether	MS	AverageRF	% RSD	8.8		≤ 20	0.680		0.100
trans-1,2-Dichloroethene	MS	AverageRF	% RSD	7.6		≤ 20	0.273		0.100
1,1-Dichloroethane	MS	AverageRF	% RSD	9.0		≤ 20	0.478		.200
2,2-Dichloropropane	MS	AverageRF	% RSD	9.2		≤ 20	0.390		0.01
cis-1,2-Dichloroethene	MS	AverageRF	% RSD	7.2		≤ 20	0.321		0.100
2-Butanone (MEK)	MS	AverageRF	% RSD	10.9		≤ 20	0.0193		0.01
Bromochloromethane	MS	AverageRF	% RSD	10.7		≤ 20	0.137		0.01
Chloroform	MS	AverageRF	% RSD	9.0		≤ 20	0.506		0.200
1,1,1-Trichloroethane (TCA)	MS	AverageRF	% RSD	14.9		≤ 20	0.420		.100
Carbon Tetrachloride	MS	AverageRF	% RSD	17.6		≤ 20	0.355		0.100
1,1-Dichloropropene	MS	AverageRF	% RSD	12.1		≤ 20	0.381		0.01
Benzene	MS	AverageRF	% RSD	7.7		≤ 20	1.24		0.500
1,2-Dichloroethane (EDC)	MS	AverageRF	% RSD	7.4		≤ 20	0.391		0.100
Trichloroethene (TCE)	MS	AverageRF	% RSD	13.2		≤ 20	0.289		0.200
1,2-Dichloropropane	MS	AverageRF	% RSD	8.7		≤ 20	0.301		0.100
Dibromomethane	MS	AverageRF	% RSD	9.0		≤ 20	0.160		0.01
Bromodichloromethane	MS	AverageRF	% RSD	14.8		≤ 20	0.349		0.200
cis-1,3-Dichloropropene	MS	AverageRF	% RSD	18.2		≤ 20	0.423		0.200
4-Methyl-2-pentanone (MIBK)	MS	AverageRF	% RSD	11.3		≤ 20	0.0643		0.01
Toluene	MS	AverageRF	% RSD	9.5		≤ 20	0.831		0.400
trans-1,3-Dichloropropene	MS	AverageRF	% RSD	18.6		≤ 20	0.841		0.100
1,1,2-Trichloroethane	MS	AverageRF	% RSD	7.9		≤ 20	0.481		.100
Tetrachloroethene (PCE)	MS	AverageRF	% RSD	9.6		≤ 20	0.613		0.200
2-Hexanone	MS	AverageRF	% RSD	10.1		≤ 20	0.0525		0.015
1,3-Dichloropropane	MS	AverageRF	% RSD	9.9		≤ 20	1.05		0.01
Dibromochloromethane	MS	AverageRF	% RSD	18.9		≤ 20	0.535		0.100
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	11.1		≤ 20	0.537		0.100
Chlorobenzene	MS	AverageRF	% RSD	11.0		≤ 20	2.21		0.500
Ethylbenzene	MS	AverageRF	% RSD	14.8		≤ 20	1.21		0.100
1,1,1,2-Tetrachloroethane	MS	AverageRF	% RSD	16.4		≤ 20	0.694		.01
m,p-Xylenes	MS	AverageRF	% RSD	13.4		≤ 20	1.49		0.100
o-Xylene	MS	AverageRF	% RSD	12.0		≤ 20	1.46		0.300

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/17/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13556
Instrument ID: GC-MS 18

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	17.5		≤ 20	1.10		0.300
Bromoform	MS	Quadratic(0,0)	COD	1.000		≥ 0.990	0.297		0.100
Isopropylbenzene	MS	AverageRF	% RSD	14.6		≤ 20	3.70		0.100
1,1,2,2-Tetrachloroethane	MS	AverageRF	% RSD	9.1		≤ 20	0.613		.300
Bromobenzene	MS	AverageRF	% RSD	8.8		≤ 20	0.956		0.01
n-Propylbenzene	MS	AverageRF	% RSD	10.7		≤ 20	4.48		0.01
1,2,3-Trichloropropane	MS	AverageRF	% RSD	7.6		≤ 20	0.212		0.01
2-Chlorotoluene	MS	AverageRF	% RSD	7.6		≤ 20	2.75		0.01
1,3,5-Trimethylbenzene	MS	AverageRF	% RSD	15.1		≤ 20	3.08		0.01
4-Chlorotoluene	MS	AverageRF	% RSD	9.5		≤ 20	3.16		0.01
tert-Butylbenzene	MS	AverageRF	% RSD	13.5		≤ 20	2.79		0.01
1,2,4-Trimethylbenzene	MS	AverageRF	% RSD	15.0		≤ 20	3.13		0.01
sec-Butylbenzene	MS	AverageRF	% RSD	13.8		≤ 20	3.94		0.01
4-Isopropyltoluene	MS	AverageRF	% RSD	17.7		≤ 20	3.24		0.01
1,3-Dichlorobenzene	MS	AverageRF	% RSD	8.3		≤ 20	1.83		0.600
1,4-Dichlorobenzene	MS	AverageRF	% RSD	8.0		≤ 20	1.88		0.500
n-Butylbenzene	MS	AverageRF	% RSD	14.4		≤ 20	2.78		0.01
1,2-Dichlorobenzene	MS	AverageRF	% RSD	9.4		≤ 20	1.71		0.400
1,2-Dibromo-3-chloropropane	MS	AverageRF	% RSD	17.5		≤ 20	0.0705		0.025
1,2,4-Trichlorobenzene	MS	AverageRF	% RSD	9.9		≤ 20	0.947		0.200
Hexachlorobutadiene	MS	AverageRF	% RSD	7.9		≤ 20	0.419		0.01
Naphthalene	MS	AverageRF	% RSD	13.7		≤ 20	1.51		0.01
1,2,3-Trichlorobenzene	MS	AverageRF	% RSD	8.8		≤ 20	0.681		0.01
Dibromofluoromethane	SURR	AverageRF	% RSD	3.6		≤ 20	0.219		0.01
1,2-Dichloroethane-d4	SURR	AverageRF	% RSD	2.5		≤ 20	0.258		0.01
Toluene-d8	SURR	AverageRF	% RSD	1.8		≤ 20	1.01		0.01
4-Bromofluorobenzene	SURR	AverageRF	% RSD	2.4		≤ 20	0.902		0.01

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

† SPCC Compound **‡ CCC Compound**

QA/QC Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/17/2014
Date Analyzed: 09/17/2014 - 09/18/2014

Second Source Calibration Verification
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration ID: CAL13556
Units: PPB

File ID: J:\MS18\DATA\091714\0917F021.D
J:\MS18\DATA\091814\0918F003.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Dichlorodifluoromethane	10	9.7	0.341	0.331	-3	NA	± 30 %	AverageRF
Chloromethane	10	9.4	0.390	0.368	-6	NA	± 30 %	AverageRF
Vinyl Chloride	10	11	0.375	0.399	6	NA	± 30 %	AverageRF
Bromomethane	10	10	0.286	0.296	4	NA	± 30 %	AverageRF
Chloroethane	10	12	0.213	0.254	19	NA	± 30 %	AverageRF
Trichlorofluoromethane	10	9.4	0.510	0.477	-6	NA	± 30 %	AverageRF
1,1-Dichloroethene	10	12	0.219	0.257	17	NA	± 30 %	AverageRF
Acetone	50	51	0.0476	0.0487	2	NA	± 30 %	AverageRF
Carbon Disulfide	20	22	0.745	0.806	8	NA	± 30 %	AverageRF
Methylene Chloride	10	8.8	0.315	0.278	-12	NA	± 30 %	AverageRF
Methyl tert-Butyl Ether	10	9.9	0.680	0.671	-1	NA	± 30 %	AverageRF
trans-1,2-Dichloroethene	10	11	0.273	0.308	13	NA	± 30 %	AverageRF
1,1-Dichloroethane	10	11	0.478	0.549	15	NA	± 30 %	AverageRF
2,2-Dichloropropane	10	10	0.390	0.391	0	NA	± 30 %	AverageRF
cis-1,2-Dichloroethene	10	11	0.321	0.341	6	NA	± 30 %	AverageRF
2-Butanone (MEK)	50	55	0.0193	0.0211	9	NA	± 30 %	AverageRF
Bromochloromethane	10	10	0.137	0.136	0	NA	± 30 %	AverageRF
Chloroform	10	11	0.506	0.544	7	NA	± 30 %	AverageRF
1,1,1-Trichloroethane (TCA)	10	11	0.420	0.464	11	NA	± 30 %	AverageRF
Carbon Tetrachloride	10	11	0.355	0.396	11	NA	± 30 %	AverageRF
1,1-Dichloropropene	10	11	0.381	0.423	11	NA	± 30 %	AverageRF
Benzene	10	11	1.24	1.32	7	NA	± 30 %	AverageRF
1,2-Dichloroethane (EDC)	10	10	0.391	0.406	4	NA	± 30 %	AverageRF
Trichloroethene (TCE)	10	11	0.289	0.312	8	NA	± 30 %	AverageRF
1,2-Dichloropropane	10	10	0.301	0.309	3	NA	± 30 %	AverageRF
Dibromomethane	10	10	0.160	0.166	4	NA	± 30 %	AverageRF
Bromodichloromethane	10	11	0.349	0.371	6	NA	± 30 %	AverageRF
cis-1,3-Dichloropropene	10	11	0.423	0.456	8	NA	± 30 %	AverageRF
4-Methyl-2-pentanone (MIBK)	50	57	0.0643	0.0728	13	NA	± 30 %	AverageRF
Toluene	10	11	0.831	0.886	7	NA	± 30 %	AverageRF
trans-1,3-Dichloropropene	10	9.8	0.841	0.821	-2	NA	± 30 %	AverageRF
1,1,2-Trichloroethane	10	10	0.481	0.496	3	NA	± 30 %	AverageRF
Tetrachloroethene (PCE)	10	11	0.613	0.658	7	NA	± 30 %	AverageRF
2-Hexanone	50	54	0.0525	0.0571	9	NA	± 30 %	AverageRF
1,3-Dichloropropane	10	10	1.05	1.10	5	NA	± 30 %	AverageRF
Dibromochloromethane	10	11	0.535	0.601	12	NA	± 30 %	AverageRF
1,2-Dibromoethane (EDB)	10	11	0.537	0.565	5	NA	± 30 %	AverageRF
Chlorobenzene	10	11	2.21	2.39	8	NA	± 30 %	AverageRF
Ethylbenzene	10	11	1.21	1.31	9	NA	± 30 %	AverageRF

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/17/2014
Date Analyzed: 09/17/2014 - 09/18/2014

Second Source Calibration Verification
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration ID: CAL13556
Units: PPB

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
1,1,1,2-Tetrachloroethane	10	11	0.694	0.735	6	NA	± 30 %	AverageRF
m,p-Xylenes	20	22	1.49	1.63	10	NA	± 30 %	AverageRF
o-Xylene	10	11	1.46	1.58	8	NA	± 30 %	AverageRF
Styrene	10	11	1.10	1.20	9	NA	± 30 %	AverageRF
Bromoform	10	10	0.297	0.312	NA	3	± 30 %	Quadratic(0,0
Isopropylbenzene	10	11	3.70	4.03	9	NA	± 30 %	AverageRF
1,1,2,2-Tetrachloroethane	10	10	0.613	0.633	3	NA	± 30 %	AverageRF
Bromobenzene	10	11	0.956	1.03	8	NA	± 30 %	AverageRF
n-Propylbenzene	10	11	4.48	4.84	8	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	10	10	0.212	0.214	1	NA	± 30 %	AverageRF
2-Chlorotoluene	10	11	2.75	2.92	6	NA	± 30 %	AverageRF
1,3,5-Trimethylbenzene	10	11	3.08	3.46	12	NA	± 30 %	AverageRF
4-Chlorotoluene	10	11	3.16	3.39	7	NA	± 30 %	AverageRF
tert-Butylbenzene	10	11	2.79	3.07	10	NA	± 30 %	AverageRF
1,2,4-Trimethylbenzene	10	11	3.13	3.47	11	NA	± 30 %	AverageRF
sec-Butylbenzene	10	11	3.94	4.22	7	NA	± 30 %	AverageRF
4-Isopropyltoluene	10	11	3.24	3.62	12	NA	± 30 %	AverageRF
1,3-Dichlorobenzene	10	11	1.83	1.99	8	NA	± 30 %	AverageRF
1,4-Dichlorobenzene	10	11	1.88	2.01	7	NA	± 30 %	AverageRF
n-Butylbenzene	10	11	2.78	3.04	9	NA	± 30 %	AverageRF
1,2-Dichlorobenzene	10	11	1.71	1.83	7	NA	± 30 %	AverageRF
1,2-Dibromo-3-chloropropane	10	10	0.0705	0.0706	0	NA	± 30 %	AverageRF
1,2,4-Trichlorobenzene	10	10	0.947	0.978	3	NA	± 30 %	AverageRF
Hexachlorobutadiene	10	10	0.419	0.437	4	NA	± 30 %	AverageRF
Naphthalene	10	10	1.51	1.55	3	NA	± 30 %	AverageRF
1,2,3-Trichlorobenzene	10	10	0.681	0.700	3	NA	± 30 %	AverageRF

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/11/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13540
Instrument ID: MS13

Column: MS

Level ID	File ID
A	J:\MS13\DATA\091014\0910F028.D
B	J:\MS13\DATA\091014\0910F029.D
C	J:\MS13\DATA\091014\0910F030.D
D	J:\MS13\DATA\091014\0910F031.D
E	J:\MS13\DATA\091014\0910F032.D
F	J:\MS13\DATA\091014\0910F033.D
G	J:\MS13\DATA\091014\0910F034.D
H	J:\MS13\DATA\091014\0910F035.D
I	J:\MS13\DATA\091014\0910F036.D
J	J:\MS13\DATA\091014\0910F037.D
K	J:\MS13\DATA\091014\0910F038.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Dichlorodifluoromethane	A	0.10	0.263	B	0.20	0.275	C	0.50	0.239	D	1.0	0.288	E	2.0	0.296
	F	5.0	0.236	G	10	0.283	H	20	0.266	I	40	0.323	J	60	0.315
	K	80	0.316												
Chloromethane				B	0.20	0.560	C	0.50	0.416	D	1.0	0.405	E	2.0	0.380
	F	5.0	0.332	G	10	0.369	H	20	0.347	I	40	0.376	J	60	0.375
	K	80	0.372												
Vinyl Chloride	A	0.10	0.295	B	0.20	0.306	C	0.50	0.299	D	1.0	0.320	E	2.0	0.315
	F	5.0	0.264	G	10	0.312	H	20	0.298	I	40	0.344	J	60	0.344
	K	80	0.344												
Bromomethane				B	0.20	0.168	C	0.50	0.173	D	1.0	0.169	E	2.0	0.167
	F	5.0	0.156	G	10	0.176	H	20	0.170	I	40	0.187	J	60	0.195
	K	80	0.194												
Chloroethane				B	0.20	0.223	C	0.50	0.200	D	1.0	0.177	E	2.0	0.152
	F	5.0	0.148	G	10	0.167	H	20	0.156	I	40	0.172	J	60	0.172
	K	80	0.171												
Trichlorofluoromethane	A	0.10	0.393	B	0.20	0.401	C	0.50	0.370	D	1.0	0.406	E	2.0	0.388
	F	5.0	0.314	G	10	0.378	H	20	0.361	I	40	0.433	J	60	0.427
	K	80	0.430												
1,1-Dichloroethene	A	0.10	0.190	B	0.20	0.220	C	0.50	0.182	D	1.0	0.186	E	2.0	0.186
	F	5.0	0.160	G	10	0.195	H	20	0.183	I	40	0.210	J	60	0.207
	K	80	0.209												
Acetone	A	4.0	0.0436	B	8.0	0.0386	C	20	0.0354	D	40	0.0339	E	80	0.0329
	F	100	0.0298	G	200	0.0348	H	400	0.0341	I	800	0.0337	J	1600	0.0345
	K	2000	0.0340												
Carbon Disulfide	A	0.10	0.954	B	0.20	0.822	C	0.50	0.709	D	1.0	0.696	E	2.0	0.672
	F	5.0	0.578	G	10	0.681	H	20	0.644	I	40	0.745	J	60	0.751
	K	80	0.752												
Methylene Chloride										D	1.0	0.355	E	2.0	0.283
	F	5.0	0.257	G	10	0.258	H	20	0.243	I	40	0.245	J	60	0.246
	K	80	0.243												

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/11/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13540
Instrument ID: MS13

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Methyl tert-Butyl Ether	A	0.20	0.448	B	0.40	0.445	C	1.0	0.411	D	2.0	0.412	E	4.0	0.383
	F	10	0.402	G	20	0.434	H	40	0.424	I	80	0.439	J	120	0.451
	K	160	0.456												
trans-1,2-Dichloroethene	A	0.10	0.282	B	0.20	0.246	C	0.50	0.224	D	1.0	0.232	E	2.0	0.212
	F	5.0	0.200	G	10	0.232	H	20	0.222	I	40	0.240	J	60	0.242
	K	80	0.242												
1,1-Dichloroethane	A	0.10	0.382	B	0.20	0.481	C	0.50	0.421	D	1.0	0.436	E	2.0	0.419
	F	5.0	0.402	G	10	0.444	H	20	0.424	I	40	0.455	J	60	0.450
	K	80	0.451												
2,2-Dichloropropane				B	0.20	0.232	C	0.50	0.206	D	1.0	0.205	E	2.0	0.213
	F	5.0	0.179	G	10	0.215	H	20	0.214	I	40	0.257	J	60	0.267
	K	80	0.274												
cis-1,2-Dichloroethene	A	0.10	0.218	B	0.20	0.252	C	0.50	0.261	D	1.0	0.267	E	2.0	0.248
	F	5.0	0.247	G	10	0.271	H	20	0.263	I	40	0.276	J	60	0.277
	K	80	0.278												
2-Butanone (MEK)	A	4.0	0.0141	B	8.0	0.0136	C	20	0.0131	D	40	0.0137	E	80	0.0128
	F	100	0.0119	G	200	0.0145	H	400	0.0144	I	800	0.0139	J	1600	0.0148
	K	2000	0.0146												
Bromochloromethane							C	0.50	0.109	D	1.0	0.109	E	2.0	0.102
	F	5.0	0.107	G	10	0.114	H	20	0.108	I	40	0.110	J	60	0.112
	K	80	0.109												
Chloroform	A	0.10	0.426	B	0.20	0.483	C	0.50	0.407	D	1.0	0.426	E	2.0	0.401
	F	5.0	0.400	G	10	0.443	H	20	0.424	I	40	0.440	J	60	0.438
	K	80	0.433												
1,1,1-Trichloroethane (TCA)				B	0.20	0.329	C	0.50	0.303	D	1.0	0.332	E	2.0	0.319
	F	5.0	0.280	G	10	0.338	H	20	0.320	I	40	0.374	J	60	0.378
	K	80	0.379												
Carbon Tetrachloride	A	0.10	0.320	B	0.20	0.290	C	0.50	0.273	D	1.0	0.277	E	2.0	0.290
	F	5.0	0.247	G	10	0.290	H	20	0.282	I	40	0.333	J	60	0.335
	K	80	0.336												
1,1-Dichloropropene				B	0.20	0.295	C	0.50	0.292	D	1.0	0.304	E	2.0	0.294
	F	5.0	0.258	G	10	0.308	H	20	0.302	I	40	0.351	J	60	0.351
	K	80	0.353												
Benzene	A	0.10	0.996	B	0.20	1.09	C	0.50	1.04	D	1.0	1.02	E	2.0	0.989
	F	5.0	0.952	G	10	1.07	H	20	1.02	I	40	1.10	J	60	1.10
	K	80	1.10												

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/11/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13540
Instrument ID: MS13

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)				B	0.20	0.299	C	0.50	0.296	D	1.0	0.291	E	2.0	0.287
	F	5.0	0.281	G	10	0.301	H	20	0.284	I	40	0.280	J	60	0.280
	K	80	0.276												
Trichloroethene (TCE)				B	0.20	0.227	C	0.50	0.245	D	1.0	0.241	E	2.0	0.239
	F	5.0	0.220	G	10	0.252	H	20	0.244	I	40	0.271	J	60	0.276
	K	80	0.277												
1,2-Dichloropropane				B	0.20	0.289	C	0.50	0.247	D	1.0	0.264	E	2.0	0.240
	F	5.0	0.245	G	10	0.271	H	20	0.257	I	40	0.271	J	60	0.273
	K	80	0.273												
Dibromomethane							C	0.50	0.116	D	1.0	0.117	E	2.0	0.116
	F	5.0	0.118	G	10	0.120	H	20	0.116	I	40	0.118	J	60	0.119
	K	80	0.117												
Bromodichloromethane				B	0.20	0.332	C	0.50	0.309	D	1.0	0.310	E	2.0	0.292
	F	5.0	0.301	G	10	0.321	H	20	0.306	I	40	0.319	J	60	0.322
	K	80	0.323												
cis-1,3-Dichloropropene				B	0.20	0.309	C	0.50	0.326	D	1.0	0.317	E	2.0	0.304
	F	5.0	0.322	G	10	0.363	H	20	0.355	I	40	0.378	J	60	0.387
	K	80	0.392												
4-Methyl-2-pentanone (MIBK)	A	4.0	0.0602	B	8.0	0.0491	C	20	0.0465	D	40	0.0444	E	80	0.0430
	F	100	0.0405	G	200	0.0487	H	400	0.0490	I	800	0.0490	J	1600	0.0512
	K	2000	0.0506												
Toluene	A	0.10	0.645	B	0.20	0.672	C	0.50	0.667	D	1.0	0.639	E	2.0	0.628
	F	5.0	0.605	G	10	0.674	H	20	0.650	I	40	0.705	J	60	0.708
	K	80	0.708												
trans-1,3-Dichloropropene				B	0.20	0.688	C	0.50	0.632	D	1.0	0.569	E	2.0	0.573
	F	5.0	0.628	G	10	0.688	H	20	0.688	I	40	0.744	J	60	0.766
	K	80	0.785												
1,1,2-Trichloroethane				B	0.20	0.358	C	0.50	0.400	D	1.0	0.365	E	2.0	0.383
	F	5.0	0.403	G	10	0.419	H	20	0.401	I	40	0.406	J	60	0.408
	K	80	0.406												
Tetrachloroethene (PCE)				B	0.20	0.582	C	0.50	0.523	D	1.0	0.531	E	2.0	0.504
	F	5.0	0.455	G	10	0.529	H	20	0.511	I	40	0.589	J	60	0.590
	K	80	0.596												
2-Hexanone	A	4.0	0.0264	B	8.0	0.0294	C	20	0.0320	D	40	0.0326	E	80	0.0347
	F	100	0.0329	G	200	0.0401	H	400	0.0417	I	800	0.0420	J	1600	0.0433
	K	2000	0.0433												

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† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/11/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13540
Instrument ID: MS13

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	0.793	B	0.20	0.766	C	0.50	0.832	D	1.0	0.814	E	2.0	0.794
	F	5.0	0.808	G	10	0.856	H	20	0.826	I	40	0.844	J	60	0.839
	K	80	0.837												
Dibromochloromethane				B	0.20	0.472	C	0.50	0.511	D	1.0	0.505	E	2.0	0.496
	F	5.0	0.519	G	10	0.559	H	20	0.533	I	40	0.546	J	60	0.550
	K	80	0.550												
1,2-Dibromoethane (EDB)				B	0.20	0.391	C	0.50	0.416	D	1.0	0.399	E	2.0	0.387
	F	5.0	0.423	G	10	0.453	H	20	0.422	I	40	0.437	J	60	0.442
	K	80	0.440												
Chlorobenzene	A	0.10	1.79	B	0.20	1.90	C	0.50	1.77	D	1.0	1.87	E	2.0	1.73
	F	5.0	1.77	G	10	1.88	H	20	1.84	I	40	1.92	J	60	1.93
	K	80	1.93												
Ethylbenzene	A	0.10	0.814	B	0.20	1.02	C	0.50	0.882	D	1.0	0.884	E	2.0	0.918
	F	5.0	0.906	G	10	1.04	H	20	1.02	I	40	1.12	J	60	1.11
	K	80	1.13												
1,1,1,2-Tetrachloroethane	A	0.10	0.534	B	0.20	0.547	C	0.50	0.560	D	1.0	0.555	E	2.0	0.552
	F	5.0	0.563	G	10	0.611	H	20	0.597	I	40	0.623	J	60	0.627
	K	80	0.629												
m,p-Xylenes	A	0.20	0.953	B	0.40	1.17	C	1.0	1.09	D	2.0	1.11	E	4.0	1.14
	F	10	1.13	G	20	1.29	H	40	1.27	I	80	1.37	J	120	1.38
	K	160	1.39												
o-Xylene	A	0.10	0.900	B	0.20	0.890	C	0.50	0.986	D	1.0	1.07	E	2.0	1.03
	F	5.0	1.08	G	10	1.23	H	20	1.21	I	40	1.31	J	60	1.32
	K	80	1.33												
Styrene	A	0.10	0.792	B	0.20	0.770	C	0.50	0.805	D	1.0	0.849	E	2.0	0.853
	F	5.0	0.926	G	10	1.01	H	20	1.02	I	40	1.04	J	60	1.05
	K	80	1.06												
Bromoform				B	0.20	0.257	C	0.50	0.277	D	1.0	0.277	E	2.0	0.263
	F	5.0	0.282	G	10	0.298	H	20	0.300	I	40	0.314	J	60	0.318
	K	80	0.322												
Isopropylbenzene	A	0.10	2.30	B	0.20	2.51	C	0.50	2.43	D	1.0	2.74	E	2.0	2.69
	F	5.0	2.61	G	10	3.08	H	20	3.06	I	40	3.46	J	60	3.48
	K	80	3.51												
1,1,2,2-Tetrachloroethane				B	0.20	0.590	C	0.50	0.608	D	1.0	0.592	E	2.0	0.523
	F	5.0	0.574	G	10	0.598	H	20	0.583	I	40	0.575	J	60	0.567
	K	80	0.565												

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† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated **Service Request:** K1410441
Project: JBLM-YRC/194-8468 **Calibration Date:** 09/11/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13540 **Column:** MS
Instrument ID: MS13

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Bromobenzene	A	0.10	0.827	B	0.20	0.847	C	0.50	0.913	D	1.0	0.827	E	2.0	0.849
	F	5.0	0.876	G	10	0.907	H	20	0.911	I	40	0.934	J	60	0.928
	K	80	0.930												
n-Propylbenzene	A	0.10	3.69	B	0.20	3.67	C	0.50	3.88	D	1.0	3.85	E	2.0	3.94
	F	5.0	3.80	G	10	4.33	H	20	4.44	I	40	4.83	J	60	4.81
	K	80	4.83												
1,2,3-Trichloropropane							C	0.50	0.165	D	1.0	0.175	E	2.0	0.168
	F	5.0	0.168	G	10	0.172	H	20	0.175	I	40	0.170	J	60	0.168
	K	80	0.168												
2-Chlorotoluene	A	0.10	2.28	B	0.20	2.52	C	0.50	2.50	D	1.0	2.48	E	2.0	2.49
	F	5.0	2.50	G	10	2.70	H	20	2.72	I	40	2.84	J	60	2.83
	K	80	2.83												
1,3,5-Trimethylbenzene	A	0.10	2.34	B	0.20	2.47	C	0.50	2.52	D	1.0	2.60	E	2.0	2.67
	F	5.0	2.74	G	10	3.07	H	20	3.12	I	40	3.36	J	60	3.35
	K	80	3.36												
4-Chlorotoluene	A	0.10	2.67	B	0.20	2.77	C	0.50	2.90	D	1.0	2.78	E	2.0	2.85
	F	5.0	2.93	G	10	3.16	H	20	3.15	I	40	3.28	J	60	3.26
	K	80	3.26												
tert-Butylbenzene	A	0.10	1.95	B	0.20	1.96	C	0.50	2.04	D	1.0	2.16	E	2.0	2.15
	F	5.0	2.14	G	10	2.46	H	20	2.55	I	40	2.83	J	60	2.83
	K	80	2.82												
1,2,4-Trimethylbenzene	A	0.10	2.26	B	0.20	2.39	C	0.50	2.47	D	1.0	2.61	E	2.0	2.71
	F	5.0	2.81	G	10	3.17	H	20	3.20	I	40	3.37	J	60	3.36
	K	80	3.36												
sec-Butylbenzene	A	0.10	2.89	B	0.20	3.16	C	0.50	2.95	D	1.0	3.06	E	2.0	3.20
	F	5.0	3.08	G	10	3.56	H	20	3.65	I	40	4.06	J	60	4.03
	K	80	4.05												
4-Isopropyltoluene	A	0.10	2.28	B	0.20	2.44	C	0.50	2.39	D	1.0	2.50	E	2.0	2.64
	F	5.0	2.63	G	10	3.03	H	20	3.12	I	40	3.43	J	60	3.42
	K	80	3.43												
1,3-Dichlorobenzene	A	0.10	1.67	B	0.20	1.62	C	0.50	1.69	D	1.0	1.66	E	2.0	1.59
	F	5.0	1.67	G	10	1.79	H	20	1.79	I	40	1.85	J	60	1.84
	K	80	1.84												
1,4-Dichlorobenzene	A	0.10	1.78	B	0.20	1.85	C	0.50	1.87	D	1.0	1.74	E	2.0	1.66
	F	5.0	1.71	G	10	1.81	H	20	1.81	I	40	1.86	J	60	1.83
	K	80	1.84												

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† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated **Service Request:** K1410441
Project: JBLM-YRC/194-8468 **Calibration Date:** 09/11/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13540 **Column:** MS
Instrument ID: MS13

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
n-Butylbenzene	A	0.10	2.36	B	0.20	2.22	C	0.50	2.19	D	1.0	2.21	E	2.0	2.27
	F	5.0	2.26	G	10	2.67	H	20	2.72	I	40	3.04	J	60	3.00
	K	80	3.00												
1,2-Dichlorobenzene	A	0.10	1.52	B	0.20	1.52	C	0.50	1.56	D	1.0	1.53	E	2.0	1.50
	F	5.0	1.54	G	10	1.65	H	20	1.65	I	40	1.66	J	60	1.64
	K	80	1.64												
1,2-Dibromo-3-chloropropane										D	1.0	0.0748	E	2.0	0.0691
	F	5.0	0.0739	G	10	0.0796	H	20	0.0775	I	40	0.0822	J	60	0.0838
	K	80	0.0825												
1,2,4-Trichlorobenzene	A	0.10	0.800	B	0.20	0.814	C	0.50	0.792	D	1.0	0.741	E	2.0	0.766
	F	5.0	0.830	G	10	0.920	H	20	0.956	I	40	1.02	J	60	1.02
	K	80	1.04												
Hexachlorobutadiene				B	0.20	0.488	C	0.50	0.458	D	1.0	0.440	E	2.0	0.439
	F	5.0	0.395	G	10	0.443	H	20	0.463	I	40	0.494	J	60	0.496
	K	80	0.494												
Naphthalene	A	0.10	0.979	B	0.20	0.929	C	0.50	0.959	D	1.0	0.856	E	2.0	0.939
	F	5.0	1.16	G	10	1.40	H	20	1.58	I	40	1.70	J	60	1.74
	K	80	1.79												
1,2,3-Trichlorobenzene	A	0.10	0.664	B	0.20	0.712	C	0.50	0.665	D	1.0	0.619	E	2.0	0.653
	F	5.0	0.714	G	10	0.796	H	20	0.828	I	40	0.854	J	60	0.857
	K	80	0.878												
Dibromofluoromethane	A	10	0.216	B	10	0.216	C	10	0.217	D	10	0.217	E	10	0.215
	F	10	0.212	G	10	0.216	H	10	0.210	I	10	0.207	J	10	0.206
	K	10	0.212												
1,2-Dichloroethane-d4	A	10	0.212	B	10	0.219	C	10	0.208	D	10	0.220	E	10	0.212
	F	10	0.207	G	10	0.211	H	10	0.201	I	10	0.202	J	10	0.202
	K	10	0.204												
Toluene-d8	A	10	0.939	B	10	0.948	C	10	0.953	D	10	0.982	E	10	0.987
	F	10	0.964	G	10	0.998	H	10	0.987	I	10	0.969	J	10	0.973
	K	10	0.969												
4-Bromofluorobenzene	A	10	0.772	B	10	0.765	C	10	0.799	D	10	0.815	E	10	0.823
	F	10	0.838	G	10	0.843	H	10	0.827	I	10	0.824	J	10	0.818
	K	10	0.824												

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† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/11/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13540
Instrument ID: MS13

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	10.5		≤ 20	0.282		0.100
Chloromethane	MS	AverageRF	% RSD	16.1		≤ 20	0.393		0.100
Vinyl Chloride	MS	AverageRF	% RSD	7.9		≤ 20	0.313		0.100
Bromomethane	MS	AverageRF	% RSD	7.2		≤ 20	0.175		0.100
Chloroethane	MS	AverageRF	% RSD	13.0		≤ 20	0.174		0.100
Trichlorofluoromethane	MS	AverageRF	% RSD	9.0		≤ 20	0.391		0.100
1,1-Dichloroethene	MS	AverageRF	% RSD	8.8		≤ 20	0.193		.100
Acetone	MS	AverageRF	% RSD	10.1		≤ 20	0.0350		0.01
Carbon Disulfide	MS	AverageRF	% RSD	13.6		≤ 20	0.728		0.100
Methylene Chloride	MS	AverageRF	% RSD	14.3		≤ 20	0.266		0.100
Methyl tert-Butyl Ether	MS	AverageRF	% RSD	5.4		≤ 20	0.428		0.100
trans-1,2-Dichloroethene	MS	AverageRF	% RSD	9.0		≤ 20	0.234		0.100
1,1-Dichloroethane	MS	AverageRF	% RSD	6.3		≤ 20	0.433		.200
2,2-Dichloropropane	MS	AverageRF	% RSD	13.5		≤ 20	0.226		0.01
cis-1,2-Dichloroethene	MS	AverageRF	% RSD	6.9		≤ 20	0.260		0.100
2-Butanone (MEK)	MS	AverageRF	% RSD	6.4		≤ 20	0.0138		0.01
Bromochloromethane	MS	AverageRF	% RSD	3.0		≤ 20	0.109		0.01
Chloroform	MS	AverageRF	% RSD	5.4		≤ 20	0.429		0.200
1,1,1-Trichloroethane (TCA)	MS	AverageRF	% RSD	9.9		≤ 20	0.335		.100
Carbon Tetrachloride	MS	AverageRF	% RSD	9.9		≤ 20	0.298		0.100
1,1-Dichloropropene	MS	AverageRF	% RSD	10.0		≤ 20	0.311		0.01
Benzene	MS	AverageRF	% RSD	4.9		≤ 20	1.04		0.500
1,2-Dichloroethane (EDC)	MS	AverageRF	% RSD	3.0		≤ 20	0.288		0.100
Trichloroethene (TCE)	MS	AverageRF	% RSD	8.0		≤ 20	0.249		0.200
1,2-Dichloropropane	MS	AverageRF	% RSD	5.9		≤ 20	0.263		0.100
Dibromomethane	MS	AverageRF	% RSD	1.2		≤ 20	0.117		0.01
Bromodichloromethane	MS	AverageRF	% RSD	3.8		≤ 20	0.314		0.200
cis-1,3-Dichloropropene	MS	AverageRF	% RSD	9.7		≤ 20	0.345		0.200
4-Methyl-2-pentanone (MIBK)	MS	AverageRF	% RSD	10.6		≤ 20	0.0484		0.01
Toluene	MS	AverageRF	% RSD	5.2		≤ 20	0.664		0.400
trans-1,3-Dichloropropene	MS	AverageRF	% RSD	11.2		≤ 20	0.676		0.100
1,1,2-Trichloroethane	MS	AverageRF	% RSD	5.0		≤ 20	0.395		.100
Tetrachloroethene (PCE)	MS	AverageRF	% RSD	8.6		≤ 20	0.541		0.200
2-Hexanone	MS	AverageRF	% RSD	16.7		≤ 20	0.0362		0.015
1,3-Dichloropropane	MS	AverageRF	% RSD	3.3		≤ 20	0.819		0.01
Dibromochloromethane	MS	AverageRF	% RSD	5.4		≤ 20	0.524		0.100
1,2-Dibromoethane (EDB)	MS	AverageRF	% RSD	5.4		≤ 20	0.421		0.100
Chlorobenzene	MS	AverageRF	% RSD	3.9		≤ 20	1.85		0.500
Ethylbenzene	MS	AverageRF	% RSD	11.2		≤ 20	0.986		0.100
1,1,1,2-Tetrachloroethane	MS	AverageRF	% RSD	6.2		≤ 20	0.582		.01
m,p-Xylenes	MS	AverageRF	% RSD	11.6		≤ 20	1.21		0.100
o-Xylene	MS	AverageRF	% RSD	14.7		≤ 20	1.12		0.300

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/11/2014

Initial Calibration Summary
Volatile Organic Compounds

Calibration ID: CAL13540
Instrument ID: MS13

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	12.3		≤ 20	0.925		0.300
Bromoform	MS	AverageRF	% RSD	7.9		≤ 20	0.291		0.100
Isopropylbenzene	MS	AverageRF	% RSD	15.3		≤ 20	2.90		0.100
1,1,2,2-Tetrachloroethane	MS	AverageRF	% RSD	4.1		≤ 20	0.578		.300
Bromobenzene	MS	AverageRF	% RSD	4.8		≤ 20	0.886		0.01
n-Propylbenzene	MS	AverageRF	% RSD	11.3		≤ 20	4.19		0.01
1,2,3-Trichloropropane	MS	AverageRF	% RSD	2.0		≤ 20	0.170		0.01
2-Chlorotoluene	MS	AverageRF	% RSD	7.1		≤ 20	2.61		0.01
1,3,5-Trimethylbenzene	MS	AverageRF	% RSD	13.5		≤ 20	2.87		0.01
4-Chlorotoluene	MS	AverageRF	% RSD	7.5		≤ 20	3.00		0.01
tert-Butylbenzene	MS	AverageRF	% RSD	15.0		≤ 20	2.36		0.01
1,2,4-Trimethylbenzene	MS	AverageRF	% RSD	14.6		≤ 20	2.88		0.01
sec-Butylbenzene	MS	AverageRF	% RSD	13.5		≤ 20	3.43		0.01
4-Isopropyltoluene	MS	AverageRF	% RSD	15.8		≤ 20	2.85		0.01
1,3-Dichlorobenzene	MS	AverageRF	% RSD	5.5		≤ 20	1.73		0.600
1,4-Dichlorobenzene	MS	AverageRF	% RSD	3.8		≤ 20	1.80		0.500
n-Butylbenzene	MS	AverageRF	% RSD	13.9		≤ 20	2.54		0.01
1,2-Dichlorobenzene	MS	AverageRF	% RSD	4.1		≤ 20	1.58		0.400
1,2-Dibromo-3-chloropropane	MS	AverageRF	% RSD	6.5		≤ 20	0.0779		0.025
1,2,4-Trichlorobenzene	MS	AverageRF	% RSD	12.6		≤ 20	0.881		0.200
Hexachlorobutadiene	MS	AverageRF	% RSD	7.1		≤ 20	0.461		0.01
Naphthalene	MS	Quadratic(0,0)	COD	1.000		≥ 0.990	1.28		0.01
1,2,3-Trichlorobenzene	MS	AverageRF	% RSD	12.7		≤ 20	0.749		0.01
Dibromofluoromethane	SURR	AverageRF	% RSD	1.9		≤ 20	0.213		0.01
1,2-Dichloroethane-d4	SURR	AverageRF	% RSD	3.1		≤ 20	0.209		0.01
Toluene-d8	SURR	AverageRF	% RSD	1.9		≤ 20	0.970		0.01
4-Bromofluorobenzene	SURR	AverageRF	% RSD	3.1		≤ 20	0.813		0.01

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/11/2014
Date Analyzed: 09/11/2014

Second Source Calibration Verification
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration ID: CAL13540
Units: PPB

File ID: J:\MS13\DATA\091014\0910F042.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Dichlorodifluoromethane	10	8.2	0.282	0.232	-18	NA	± 30 %	AverageRF
Chloromethane	10	7.6	0.393	0.298	-24	NA	± 30 %	AverageRF
Vinyl Chloride	10	8.6	0.313	0.269	-14	NA	± 30 %	AverageRF
Bromomethane	10	10	0.175	0.178	2	NA	± 30 %	AverageRF
Chloroethane	10	9.6	0.174	0.167	-4	NA	± 30 %	AverageRF
Trichlorofluoromethane	10	7.6	0.391	0.299	-24	NA	± 30 %	AverageRF
1,1-Dichloroethene	10	9.7	0.193	0.187	-3	NA	± 30 %	AverageRF
Acetone	50	55	0.0350	0.0384	10	NA	± 30 %	AverageRF
Carbon Disulfide	20	16	0.728	0.591	-19	NA	± 30 %	AverageRF
Methylene Chloride	10	8.3	0.266	0.222	-17	NA	± 30 %	AverageRF
Methyl tert-Butyl Ether	10	8.7	0.428	0.372	-13	NA	± 30 %	AverageRF
trans-1,2-Dichloroethene	10	9.2	0.234	0.215	-8	NA	± 30 %	AverageRF
1,1-Dichloroethane	10	9.8	0.433	0.425	-2	NA	± 30 %	AverageRF
2,2-Dichloropropane	10	8.3	0.226	0.187	-17	NA	± 30 %	AverageRF
cis-1,2-Dichloroethene	10	9.5	0.260	0.247	-5	NA	± 30 %	AverageRF
2-Butanone (MEK)	50	52	0.0138	0.0143	4	NA	± 30 %	AverageRF
Bromochloromethane	10	9.4	0.109	0.103	-6	NA	± 30 %	AverageRF
Chloroform	10	9.2	0.429	0.397	-8	NA	± 30 %	AverageRF
1,1,1-Trichloroethane (TCA)	10	9.0	0.335	0.301	-10	NA	± 30 %	AverageRF
Carbon Tetrachloride	10	8.8	0.298	0.262	-12	NA	± 30 %	AverageRF
1,1-Dichloropropene	10	9.3	0.311	0.289	-7	NA	± 30 %	AverageRF
Benzene	10	9.3	1.04	0.969	-7	NA	± 30 %	AverageRF
1,2-Dichloroethane (EDC)	10	9.3	0.288	0.268	-7	NA	± 30 %	AverageRF
Trichloroethene (TCE)	10	9.3	0.249	0.232	-7	NA	± 30 %	AverageRF
1,2-Dichloropropane	10	9.0	0.263	0.236	-10	NA	± 30 %	AverageRF
Dibromomethane	10	9.3	0.117	0.110	-7	NA	± 30 %	AverageRF
Bromodichloromethane	10	9.2	0.314	0.288	-8	NA	± 30 %	AverageRF
cis-1,3-Dichloropropene	10	9.1	0.345	0.315	-9	NA	± 30 %	AverageRF
4-Methyl-2-pentanone (MIBK)	50	48	0.0484	0.0462	-5	NA	± 30 %	AverageRF
Toluene	10	9.1	0.664	0.603	-9	NA	± 30 %	AverageRF
trans-1,3-Dichloropropene	10	8.1	0.676	0.550	-19	NA	± 30 %	AverageRF
1,1,2-Trichloroethane	10	9.2	0.395	0.362	-8	NA	± 30 %	AverageRF
Tetrachloroethene (PCE)	10	8.9	0.541	0.480	-11	NA	± 30 %	AverageRF
2-Hexanone	50	53	0.0362	0.0384	6	NA	± 30 %	AverageRF
1,3-Dichloropropane	10	9.3	0.819	0.761	-7	NA	± 30 %	AverageRF
Dibromochloromethane	10	9.1	0.524	0.479	-9	NA	± 30 %	AverageRF
1,2-Dibromoethane (EDB)	10	9.4	0.421	0.396	-6	NA	± 30 %	AverageRF
Chlorobenzene	10	8.9	1.85	1.65	-11	NA	± 30 %	AverageRF
Ethylbenzene	10	8.9	0.986	0.882	-11	NA	± 30 %	AverageRF
1,1,1,2-Tetrachloroethane	10	9.1	0.582	0.527	-9	NA	± 30 %	AverageRF

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/11/2014
Date Analyzed: 09/11/2014

Second Source Calibration Verification
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration ID: CAL13540
Units: PPB

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
m,p-Xylenes	20	19	1.21	1.12	-7	NA	± 30 %	AverageRF
o-Xylene	10	9.5	1.12	1.07	-5	NA	± 30 %	AverageRF
Styrene	10	9.7	0.925	0.896	-3	NA	± 30 %	AverageRF
Bromoform	10	9.6	0.291	0.278	-4	NA	± 30 %	AverageRF
Isopropylbenzene	10	9.2	2.90	2.66	-8	NA	± 30 %	AverageRF
1,1,2,2-Tetrachloroethane	10	9.0	0.578	0.518	-10	NA	± 30 %	AverageRF
Bromobenzene	10	9.2	0.886	0.816	-8	NA	± 30 %	AverageRF
n-Propylbenzene	10	9.1	4.19	3.80	-9	NA	± 30 %	AverageRF
1,2,3-Trichloropropane	10	9.3	0.170	0.158	-7	NA	± 30 %	AverageRF
2-Chlorotoluene	10	9.6	2.61	2.50	-4	NA	± 30 %	AverageRF
1,3,5-Trimethylbenzene	10	9.6	2.87	2.75	-4	NA	± 30 %	AverageRF
4-Chlorotoluene	10	9.2	3.00	2.77	-8	NA	± 30 %	AverageRF
tert-Butylbenzene	10	9.5	2.36	2.23	-5	NA	± 30 %	AverageRF
1,2,4-Trimethylbenzene	10	9.7	2.88	2.79	-3	NA	± 30 %	AverageRF
sec-Butylbenzene	10	9.0	3.43	3.09	-10	NA	± 30 %	AverageRF
4-Isopropyltoluene	10	9.4	2.85	2.67	-6	NA	± 30 %	AverageRF
1,3-Dichlorobenzene	10	9.2	1.73	1.59	-8	NA	± 30 %	AverageRF
1,4-Dichlorobenzene	10	9.0	1.80	1.61	-10	NA	± 30 %	AverageRF
n-Butylbenzene	10	9.1	2.54	2.31	-9	NA	± 30 %	AverageRF
1,2-Dichlorobenzene	10	9.2	1.58	1.45	-8	NA	± 30 %	AverageRF
1,2-Dibromo-3-chloropropane	10	9.1	0.0779	0.0709	-9	NA	± 30 %	AverageRF
1,2,4-Trichlorobenzene	10	9.1	0.881	0.798	-9	NA	± 30 %	AverageRF
Hexachlorobutadiene	10	8.3	0.461	0.382	-17	NA	± 30 %	AverageRF
Naphthalene	10	7.8	1.28	1.23	NA	-22	± 30 %	Quadratic(0,0
1,2,3-Trichlorobenzene	10	9.3	0.749	0.697	-7	NA	± 30 %	AverageRF

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Date Analyzed: 10/02/2014

Continuing Calibration Verification Summary
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 09/11/2014
Calibration ID: CAL13540
Analysis Lot: KWG1413401
Units: PPB

File ID: J:\MS13\DATA\100214\1002F003.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D		%Drift	Criteria	Curve Fit
Dichlorodifluoromethane	10	13	0.100	0.282	0.354	26	*	NA	± 20	AverageRF
Chloromethane	10	9.5	0.100	0.393	0.373	-5		NA	± 20	AverageRF
Vinyl Chloride	10	11	0.100	0.313	0.354	13		NA	± 20	AverageRF
Bromomethane	10	11	0.100	0.175	0.199	14		NA	± 20	AverageRF
Chloroethane	10	10	0.100	0.174	0.174	0		NA	± 20	AverageRF
Trichlorofluoromethane	10	12	0.100	0.391	0.454	16		NA	± 20	AverageRF
1,1-Dichloroethene	10	11	.100	0.193	0.215	11		NA	± 20	AverageRF
Acetone	200	160	0.01	0.0350	0.0286	-18		NA	± 20	AverageRF
Carbon Disulfide	10	7.1	0.100	0.728	0.520	-29	*	NA	± 20	AverageRF
Methylene Chloride	10	9.7	0.100	0.266	0.258	-3		NA	± 20	AverageRF
Methyl tert-Butyl Ether	20	18	0.100	0.428	0.382	-11		NA	± 20	AverageRF
trans-1,2-Dichloroethene	10	11	0.100	0.234	0.255	9		NA	± 20	AverageRF
1,1-Dichloroethane	10	10	.200	0.433	0.445	3		NA	± 20	AverageRF
2,2-Dichloropropane	10	10	0.01	0.226	0.229	1		NA	± 20	AverageRF
cis-1,2-Dichloroethene	10	11	0.100	0.260	0.287	11		NA	± 20	AverageRF
2-Butanone (MEK)	200	170	0.01	0.0138	0.0119	-13		NA	± 20	AverageRF
Bromochloromethane	10	11	0.01	0.109	0.120	10		NA	± 20	AverageRF
Chloroform	10	11	0.200	0.429	0.453	6		NA	± 20	AverageRF
1,1,1-Trichloroethane (TCA)	10	11	.100	0.335	0.362	8		NA	± 20	AverageRF
Carbon Tetrachloride	10	12	0.100	0.298	0.343	15		NA	± 20	AverageRF
1,1-Dichloropropene	10	11	0.01	0.311	0.356	15		NA	± 20	AverageRF
Benzene	10	11	0.500	1.04	1.11	7		NA	± 20	AverageRF
1,2-Dichloroethane (EDC)	10	9.9	0.100	0.288	0.284	-1		NA	± 20	AverageRF
Trichloroethene (TCE)	10	11	0.200	0.249	0.271	9		NA	± 20	AverageRF
1,2-Dichloropropane	10	9.9	0.100	0.263	0.260	-1		NA	± 20	AverageRF
Dibromomethane	10	10	0.01	0.117	0.120	2		NA	± 20	AverageRF
Bromodichloromethane	10	10	0.200	0.314	0.320	2		NA	± 20	AverageRF
cis-1,3-Dichloropropene	10	10	0.200	0.345	0.353	2		NA	± 20	AverageRF
4-Methyl-2-pentanone (MIBK)	200	160	0.01	0.0484	0.0386	-20		NA	± 20	AverageRF
Toluene	10	11	0.400	0.664	0.727	9		NA	± 20	AverageRF
trans-1,3-Dichloropropene	10	9.1	0.100	0.676	0.616	-9		NA	± 20	AverageRF
1,1,2-Trichloroethane	10	9.8	.100	0.395	0.388	-2		NA	± 20	AverageRF
Tetrachloroethene (PCE)	10	11	0.200	0.541	0.608	12		NA	± 20	AverageRF
2-Hexanone	200	160	0.015	0.0362	0.0294	-19		NA	± 20	AverageRF
1,3-Dichloropropane	10	9.7	0.01	0.819	0.794	-3		NA	± 20	AverageRF
Dibromochloromethane	10	10	0.100	0.524	0.542	3		NA	± 20	AverageRF
1,2-Dibromoethane (EDB)	10	10	0.100	0.421	0.421	0		NA	± 20	AverageRF
Chlorobenzene	10	11	0.500	1.85	1.95	6		NA	± 20	AverageRF
Ethylbenzene	10	11	0.100	0.986	1.11	12		NA	± 20	AverageRF

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Date Analyzed: 10/02/2014

Continuing Calibration Verification Summary
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 09/11/2014
Calibration ID: CAL13540
Analysis Lot: KWG1413401
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	0.582	0.621	7	NA		± 20	AverageRF
m,p-Xylenes	20	22	0.100	1.21	1.36	12	NA		± 20	AverageRF
o-Xylene	10	11	0.300	1.12	1.27	13	NA		± 20	AverageRF
Styrene	10	11	0.300	0.925	1.03	12	NA		± 20	AverageRF
Bromoform	10	10	0.100	0.291	0.305	5	NA		± 20	AverageRF
Isopropylbenzene	10	11	0.100	2.90	3.31	14	NA		± 20	AverageRF
1,1,2,2-Tetrachloroethane	10	8.6	.300	0.578	0.495	-14	NA		± 20	AverageRF
Bromobenzene	10	9.5	0.01	0.886	0.841	-5	NA		± 20	AverageRF
n-Propylbenzene	10	9.7	0.01	4.19	4.08	-3	NA		± 20	AverageRF
1,2,3-Trichloropropane	10	8.6	0.01	0.170	0.145	-15	NA		± 20	AverageRF
2-Chlorotoluene	10	9.3	0.01	2.61	2.43	-7	NA		± 20	AverageRF
1,3,5-Trimethylbenzene	10	10	0.01	2.87	2.88	0	NA		± 20	AverageRF
4-Chlorotoluene	10	9.3	0.01	3.00	2.79	-7	NA		± 20	AverageRF
tert-Butylbenzene	10	10	0.01	2.36	2.43	3	NA		± 20	AverageRF
1,2,4-Trimethylbenzene	10	10	0.01	2.88	2.87	0	NA		± 20	AverageRF
sec-Butylbenzene	10	10	0.01	3.43	3.48	2	NA		± 20	AverageRF
4-Isopropyltoluene	10	10	0.01	2.85	2.95	4	NA		± 20	AverageRF
1,3-Dichlorobenzene	10	9.6	0.600	1.73	1.67	-4	NA		± 20	AverageRF
1,4-Dichlorobenzene	10	9.3	0.500	1.80	1.67	-7	NA		± 20	AverageRF
n-Butylbenzene	10	10	0.01	2.54	2.56	1	NA		± 20	AverageRF
1,2-Dichlorobenzene	10	9.3	0.400	1.58	1.47	-7	NA		± 20	AverageRF
1,2-Dibromo-3-chloropropane	10	8.8	0.025	0.0779	0.0684	-12	NA		± 20	AverageRF
1,2,4-Trichlorobenzene	10	9.7	0.200	0.881	0.852	-3	NA		± 20	AverageRF
Hexachlorobutadiene	10	10	0.01	0.461	0.467	1	NA		± 20	AverageRF
Naphthalene	10	7.6	0.01	1.28	1.19	NA	-24	*	± 20	Quadratic(0,0)
1,2,3-Trichlorobenzene	10	9.6	0.01	0.749	0.715	-5	NA		± 20	AverageRF
Dibromofluoromethane	10	10	0.01	0.213	0.212	0	NA		± 20	AverageRF
1,2-Dichloroethane-d4	10	9.2	0.01	0.209	0.193	-8	NA		± 20	AverageRF
Toluene-d8	10	11	0.01	0.970	1.04	7	NA		± 20	AverageRF
4-Bromofluorobenzene	10	11	0.01	0.813	0.857	5	NA		± 20	AverageRF

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Date Analyzed: 10/03/2014

Continuing Calibration Verification Summary
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 09/17/2014
Calibration ID: CAL13556
Analysis Lot: KWG1413468
Units: PPB

File ID: J:\MS18\DATA\100314\1003F008.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D		%Drift	Criteria	Curve Fit
Dichlorodifluoromethane	10	11	0.100	0.341	0.369	8		NA	± 20	AverageRF
Chloromethane	10	13	0.100	0.390	0.517	32	*	NA	± 20	AverageRF
Vinyl Chloride	10	12	0.100	0.375	0.431	15		NA	± 20	AverageRF
Bromomethane	10	7.1	0.100	0.286	0.202	-29	*	NA	± 20	AverageRF
Chloroethane	10	11	0.100	0.213	0.227	6		NA	± 20	AverageRF
Trichlorofluoromethane	10	10	0.100	0.510	0.518	2		NA	± 20	AverageRF
1,1-Dichloroethene	10	9.9	.100	0.219	0.216	-1		NA	± 20	AverageRF
Acetone	200	210	0.01	0.0476	0.0510	7		NA	± 20	AverageRF
Carbon Disulfide	10	6.5	0.100	0.745	0.480	-36	*	NA	± 20	AverageRF
Methylene Chloride	10	9.6	0.100	0.315	0.303	-4		NA	± 20	AverageRF
Methyl tert-Butyl Ether	20	17	0.100	0.680	0.567	-17		NA	± 20	AverageRF
trans-1,2-Dichloroethene	10	9.8	0.100	0.273	0.266	-2		NA	± 20	AverageRF
1,1-Dichloroethane	10	10	.200	0.478	0.489	2		NA	± 20	AverageRF
2,2-Dichloropropane	10	6.7	0.01	0.390	0.262	-33	*	NA	± 20	AverageRF
cis-1,2-Dichloroethene	10	10	0.100	0.321	0.322	0		NA	± 20	AverageRF
2-Butanone (MEK)	200	200	0.01	0.0193	0.0194	0		NA	± 20	AverageRF
Bromochloromethane	10	11	0.01	0.137	0.143	5		NA	± 20	AverageRF
Chloroform	10	9.9	0.200	0.506	0.503	-1		NA	± 20	AverageRF
1,1,1-Trichloroethane (TCA)	10	8.9	.100	0.420	0.372	-11		NA	± 20	AverageRF
Carbon Tetrachloride	10	8.5	0.100	0.355	0.303	-15		NA	± 20	AverageRF
1,1-Dichloropropene	10	10	0.01	0.381	0.386	1		NA	± 20	AverageRF
Benzene	10	10	0.500	1.24	1.27	2		NA	± 20	AverageRF
1,2-Dichloroethane (EDC)	10	10	0.100	0.391	0.400	2		NA	± 20	AverageRF
Trichloroethene (TCE)	10	9.9	0.200	0.289	0.287	-1		NA	± 20	AverageRF
1,2-Dichloropropane	10	10	0.100	0.301	0.311	3		NA	± 20	AverageRF
Dibromomethane	10	10	0.01	0.160	0.160	1		NA	± 20	AverageRF
Bromodichloromethane	10	9.4	0.200	0.349	0.329	-6		NA	± 20	AverageRF
cis-1,3-Dichloropropene	10	9.1	0.200	0.423	0.384	-9		NA	± 20	AverageRF
4-Methyl-2-pentanone (MIBK)	200	210	0.01	0.0643	0.0684	6		NA	± 20	AverageRF
Toluene	10	10	0.400	0.831	0.830	0		NA	± 20	AverageRF
trans-1,3-Dichloropropene	10	8.1	0.100	0.841	0.678	-19		NA	± 20	AverageRF
1,1,2-Trichloroethane	10	10	.100	0.481	0.500	4		NA	± 20	AverageRF
Tetrachloroethene (PCE)	10	9.7	0.200	0.613	0.597	-3		NA	± 20	AverageRF
2-Hexanone	200	210	0.015	0.0525	0.0543	3		NA	± 20	AverageRF
1,3-Dichloropropane	10	10	0.01	1.05	1.09	4		NA	± 20	AverageRF
Dibromochloromethane	10	9.6	0.100	0.535	0.511	-5		NA	± 20	AverageRF
1,2-Dibromoethane (EDB)	10	9.6	0.100	0.537	0.516	-4		NA	± 20	AverageRF
Chlorobenzene	10	10	0.500	2.21	2.28	3		NA	± 20	AverageRF
Ethylbenzene	10	10	0.100	1.21	1.24	2		NA	± 20	AverageRF

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Date Analyzed: 10/03/2014

Continuing Calibration Verification Summary
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 09/17/2014
Calibration ID: CAL13556
Analysis Lot: KWG1413468
Units: PPB

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,1,1,2-Tetrachloroethane	10	9.0	.01	0.694	0.624	-10	NA	± 20	AverageRF
m,p-Xylenes	20	21	0.100	1.49	1.53	3	NA	± 20	AverageRF
o-Xylene	10	10	0.300	1.46	1.47	1	NA	± 20	AverageRF
Styrene	10	10	0.300	1.10	1.15	5	NA	± 20	AverageRF
Bromoform	10	8.1	0.100	0.297	0.240	NA	-19	± 20	Quadratic(0,0)
Isopropylbenzene	10	10	0.100	3.70	3.78	2	NA	± 20	AverageRF
1,1,2,2-Tetrachloroethane	10	11	.300	0.613	0.666	9	NA	± 20	AverageRF
Bromobenzene	10	10	0.01	0.956	0.972	2	NA	± 20	AverageRF
n-Propylbenzene	10	11	0.01	4.48	4.77	6	NA	± 20	AverageRF
1,2,3-Trichloropropane	10	10	0.01	0.212	0.219	3	NA	± 20	AverageRF
2-Chlorotoluene	10	10	0.01	2.75	2.83	3	NA	± 20	AverageRF
1,3,5-Trimethylbenzene	10	11	0.01	3.08	3.29	7	NA	± 20	AverageRF
4-Chlorotoluene	10	11	0.01	3.16	3.35	6	NA	± 20	AverageRF
tert-Butylbenzene	10	10	0.01	2.79	2.90	4	NA	± 20	AverageRF
1,2,4-Trimethylbenzene	10	11	0.01	3.13	3.31	6	NA	± 20	AverageRF
sec-Butylbenzene	10	11	0.01	3.94	4.21	7	NA	± 20	AverageRF
4-Isopropyltoluene	10	11	0.01	3.24	3.42	6	NA	± 20	AverageRF
1,3-Dichlorobenzene	10	10	0.600	1.83	1.87	2	NA	± 20	AverageRF
1,4-Dichlorobenzene	10	10	0.500	1.88	1.90	1	NA	± 20	AverageRF
n-Butylbenzene	10	11	0.01	2.78	2.97	7	NA	± 20	AverageRF
1,2-Dichlorobenzene	10	10	0.400	1.71	1.76	3	NA	± 20	AverageRF
1,2-Dibromo-3-chloropropane	10	8.9	0.025	0.0705	0.0628	-11	NA	± 20	AverageRF
1,2,4-Trichlorobenzene	10	10	0.200	0.947	0.964	2	NA	± 20	AverageRF
Hexachlorobutadiene	10	9.6	0.01	0.419	0.403	-4	NA	± 20	AverageRF
Naphthalene	10	11	0.01	1.51	1.64	9	NA	± 20	AverageRF
1,2,3-Trichlorobenzene	10	11	0.01	0.681	0.736	8	NA	± 20	AverageRF
Dibromofluoromethane	10	10	0.01	0.219	0.220	0	NA	± 20	AverageRF
1,2-Dichloroethane-d4	10	10	0.01	0.258	0.263	2	NA	± 20	AverageRF
Toluene-d8	10	9.9	0.01	1.01	1.00	-1	NA	± 20	AverageRF
4-Bromofluorobenzene	10	9.9	0.01	0.902	0.895	-1	NA	± 20	AverageRF

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Date Analyzed: 10/06/2014

Continuing Calibration Verification Summary
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 09/17/2014
Calibration ID: CAL13556
Analysis Lot: KWG1413506
Units: PPB

File ID: J:\MS18\DATA\100614\1006F003.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D		%Drift	Criteria	Curve Fit
Dichlorodifluoromethane	10	9.8	0.100	0.341	0.334	-2		NA	± 20	AverageRF
Chloromethane	10	11	0.100	0.390	0.440	13		NA	± 20	AverageRF
Vinyl Chloride	10	12	0.100	0.375	0.438	17		NA	± 20	AverageRF
Bromomethane	10	8.7	0.100	0.286	0.248	-13		NA	± 20	AverageRF
Chloroethane	10	11	0.100	0.213	0.234	10		NA	± 20	AverageRF
Trichlorofluoromethane	10	11	0.100	0.510	0.537	5		NA	± 20	AverageRF
1,1-Dichloroethene	10	10	.100	0.219	0.221	1		NA	± 20	AverageRF
Acetone	200	250	0.01	0.0476	0.0587	23	*	NA	± 20	AverageRF
Carbon Disulfide	10	7.0	0.100	0.745	0.520	-30	*	NA	± 20	AverageRF
Methylene Chloride	10	10	0.100	0.315	0.324	3		NA	± 20	AverageRF
Methyl tert-Butyl Ether	20	18	0.100	0.680	0.614	-10		NA	± 20	AverageRF
trans-1,2-Dichloroethene	10	10	0.100	0.273	0.274	1		NA	± 20	AverageRF
1,1-Dichloroethane	10	11	.200	0.478	0.509	6		NA	± 20	AverageRF
2,2-Dichloropropane	10	7.5	0.01	0.390	0.291	-25	*	NA	± 20	AverageRF
cis-1,2-Dichloroethene	10	10	0.100	0.321	0.333	4		NA	± 20	AverageRF
2-Butanone (MEK)	200	230	0.01	0.0193	0.0227	17		NA	± 20	AverageRF
Bromochloromethane	10	11	0.01	0.137	0.144	5		NA	± 20	AverageRF
Chloroform	10	11	0.200	0.506	0.543	7		NA	± 20	AverageRF
1,1,1-Trichloroethane (TCA)	10	9.3	.100	0.420	0.392	-7		NA	± 20	AverageRF
Carbon Tetrachloride	10	9.5	0.100	0.355	0.339	-5		NA	± 20	AverageRF
1,1-Dichloropropene	10	11	0.01	0.381	0.400	5		NA	± 20	AverageRF
Benzene	10	11	0.500	1.24	1.31	5		NA	± 20	AverageRF
1,2-Dichloroethane (EDC)	10	11	0.100	0.391	0.414	6		NA	± 20	AverageRF
Trichloroethene (TCE)	10	11	0.200	0.289	0.314	8		NA	± 20	AverageRF
1,2-Dichloropropane	10	11	0.100	0.301	0.321	6		NA	± 20	AverageRF
Dibromomethane	10	11	0.01	0.160	0.170	7		NA	± 20	AverageRF
Bromodichloromethane	10	10	0.200	0.349	0.357	2		NA	± 20	AverageRF
cis-1,3-Dichloropropene	10	9.9	0.200	0.423	0.418	-1		NA	± 20	AverageRF
4-Methyl-2-pentanone (MIBK)	200	250	0.01	0.0643	0.0807	25	*	NA	± 20	AverageRF
Toluene	10	11	0.400	0.831	0.876	5		NA	± 20	AverageRF
trans-1,3-Dichloropropene	10	8.7	0.100	0.841	0.729	-13		NA	± 20	AverageRF
1,1,2-Trichloroethane	10	10	.100	0.481	0.501	4		NA	± 20	AverageRF
Tetrachloroethene (PCE)	10	9.8	0.200	0.613	0.601	-2		NA	± 20	AverageRF
2-Hexanone	200	240	0.015	0.0525	0.0629	20		NA	± 20	AverageRF
1,3-Dichloropropane	10	11	0.01	1.05	1.17	12		NA	± 20	AverageRF
Dibromochloromethane	10	10	0.100	0.535	0.553	3		NA	± 20	AverageRF
1,2-Dibromoethane (EDB)	10	10	0.100	0.537	0.548	2		NA	± 20	AverageRF
Chlorobenzene	10	11	0.500	2.21	2.35	6		NA	± 20	AverageRF
Ethylbenzene	10	11	0.100	1.21	1.28	6		NA	± 20	AverageRF

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Date Analyzed: 10/06/2014

Continuing Calibration Verification Summary
Volatile Organic Compounds

Calibration Type: Internal Standard
Analysis Method: 8260C

Calibration Date: 09/17/2014
Calibration ID: CAL13556
Analysis Lot: KWG1413506
Units: PPB

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
1,1,1,2-Tetrachloroethane	10	9.3	.01	0.694	0.648	-7	NA	± 20	AverageRF
m,p-Xylenes	20	21	0.100	1.49	1.60	7	NA	± 20	AverageRF
o-Xylene	10	10	0.300	1.46	1.53	4	NA	± 20	AverageRF
Styrene	10	10	0.300	1.10	1.13	3	NA	± 20	AverageRF
Bromoform	10	9.0	0.100	0.297	0.269	NA	-10	± 20	Quadratic(0,0)
Isopropylbenzene	10	11	0.100	3.70	3.96	7	NA	± 20	AverageRF
1,1,2,2-Tetrachloroethane	10	12	.300	0.613	0.709	16	NA	± 20	AverageRF
Bromobenzene	10	10	0.01	0.956	1.00	5	NA	± 20	AverageRF
n-Propylbenzene	10	11	0.01	4.48	5.02	12	NA	± 20	AverageRF
1,2,3-Trichloropropane	10	10	0.01	0.212	0.222	5	NA	± 20	AverageRF
2-Chlorotoluene	10	11	0.01	2.75	2.95	7	NA	± 20	AverageRF
1,3,5-Trimethylbenzene	10	11	0.01	3.08	3.45	12	NA	± 20	AverageRF
4-Chlorotoluene	10	11	0.01	3.16	3.48	10	NA	± 20	AverageRF
tert-Butylbenzene	10	11	0.01	2.79	3.06	9	NA	± 20	AverageRF
1,2,4-Trimethylbenzene	10	11	0.01	3.13	3.50	12	NA	± 20	AverageRF
sec-Butylbenzene	10	11	0.01	3.94	4.39	11	NA	± 20	AverageRF
4-Isopropyltoluene	10	11	0.01	3.24	3.55	10	NA	± 20	AverageRF
1,3-Dichlorobenzene	10	11	0.600	1.83	1.96	7	NA	± 20	AverageRF
1,4-Dichlorobenzene	10	11	0.500	1.88	1.99	5	NA	± 20	AverageRF
n-Butylbenzene	10	11	0.01	2.78	3.06	10	NA	± 20	AverageRF
1,2-Dichlorobenzene	10	11	0.400	1.71	1.83	7	NA	± 20	AverageRF
1,2-Dibromo-3-chloropropane	10	9.5	0.025	0.0705	0.0670	-5	NA	± 20	AverageRF
1,2,4-Trichlorobenzene	10	10	0.200	0.947	0.972	3	NA	± 20	AverageRF
Hexachlorobutadiene	10	10	0.01	0.419	0.425	2	NA	± 20	AverageRF
Naphthalene	10	11	0.01	1.51	1.65	9	NA	± 20	AverageRF
1,2,3-Trichlorobenzene	10	11	0.01	0.681	0.725	6	NA	± 20	AverageRF
Dibromofluoromethane	10	10	0.01	0.219	0.221	1	NA	± 20	AverageRF
1,2-Dichloroethane-d4	10	11	0.01	0.258	0.277	7	NA	± 20	AverageRF
Toluene-d8	10	10	0.01	1.01	1.02	1	NA	± 20	AverageRF
4-Bromofluorobenzene	10	10	0.01	0.902	0.909	1	NA	± 20	AverageRF

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated **Service Request:** K1410441
Project: JBLM-YRC/194-8468

Analysis Run Log
Volatile Organic Compounds

Analysis Method: 8260C **Analysis Lot:** KWG1413468
Instrument ID: GC-MS 18

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1003F006.D	GC/MS Tuning - Bromofluorobenzene	KWG1413468-1	10/3/2014	14:35		10/3/2014	14:51
1003F008.D	Continuing Calibration Verification	KWG1413468-2	10/3/2014	15:41		10/3/2014	15:57
1003F009.D	Lab Control Sample	KWG1413475-3	10/3/2014	16:02		10/3/2014	16:18
1003F010.D	ZZZZZZ	ZZZZZZ	10/3/2014	16:31		10/3/2014	16:47
1003F011.D	ZZZZZZ	ZZZZZZ	10/3/2014	16:52		10/3/2014	17:08
1003F012.D	ZZZZZZ	ZZZZZZ	10/3/2014	17:13		10/3/2014	17:29
1003F013.D	ZZZZZZ	ZZZZZZ	10/3/2014	17:34		10/3/2014	17:50
1003F015.D	Method Blank	KWG1413475-4	10/3/2014	18:17		10/3/2014	18:33
1003F016.D	ZZZZZZ	ZZZZZZ	10/3/2014	18:38		10/3/2014	18:54
1003F017.D	Trip Blank	K1410441-016	10/3/2014	19:00		10/3/2014	19:16
1003F018.D	ZZZZZZ	ZZZZZZ	10/3/2014	19:21		10/3/2014	19:37
1003F019.D	ZZZZZZ	ZZZZZZ	10/3/2014	19:42		10/3/2014	19:58
1003F020.D	FTP-1	K1410441-001	10/3/2014	20:03		10/3/2014	20:19
1003F021.D	815-2	K1410441-005	10/3/2014	20:25		10/3/2014	20:41
1003F022.D	MTS-1	K1410441-006	10/3/2014	20:46		10/3/2014	21:02
1003F023.D	MTS-2	K1410441-007	10/3/2014	21:07		10/3/2014	21:23
1003F024.D	MTS-4	K1410441-008	10/3/2014	21:30		10/3/2014	21:46
1003F025.D	DUP-1	K1410441-009	10/3/2014	21:51		10/3/2014	22:07
1003F026.D	VTR-1	K1410441-010	10/3/2014	22:13		10/3/2014	22:29
1003F027.D	VTR-3	K1410441-011	10/3/2014	22:34		10/3/2014	22:50
1003F028.D	VTR-5	K1410441-012	10/3/2014	22:55		10/3/2014	23:11
1003F029.D	PAIC Well	K1410441-014	10/3/2014	23:16		10/3/2014	23:32
1003F030.D	Pamona Well	K1410441-015	10/3/2014	23:38		10/3/2014	23:54
1003F031.D	TVR-7	K1410441-017	10/3/2014	23:59		10/4/2014	00:15
1003F032.D	ZZZZZZ	ZZZZZZ	10/4/2014	00:20		10/4/2014	00:36
1003F033.D	ZZZZZZ	ZZZZZZ	10/4/2014	00:42		10/4/2014	00:58
1003F034.D	ZZZZZZ	ZZZZZZ	10/4/2014	01:03		10/4/2014	01:19
1003F035.D	ZZZZZZ	ZZZZZZ	10/4/2014	01:24		10/4/2014	01:40
1003F036.D	ZZZZZZ	ZZZZZZ	10/4/2014	01:46		10/4/2014	02:02
1003F037.D	ZZZZZZ	ZZZZZZ	10/4/2014	02:07		10/4/2014	02:23

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

Client: Tetra Tech, Incorporated **Service Request:** K1410441
Project: JBLM-YRC/194-8468

Analysis Run Log
Volatile Organic Compounds

Analysis Method: 8260C **Analysis Lot:** KWG1413506
Instrument ID: GC-MS 18

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1006F002.D	GC/MS Tuning - Bromofluorobenzene	KWG1413506-1	10/6/2014	08:58		10/6/2014	09:14
1006F003.D	Continuing Calibration Verification	KWG1413506-2	10/6/2014	09:31		10/6/2014	09:47
1006F004.D	Lab Control Sample	KWG1413516-1	10/6/2014	10:14		10/6/2014	10:30
1006F008.D	Method Blank	KWG1413516-3	10/6/2014	11:50		10/6/2014	12:06
1006F009.D	ZZZZZZ	ZZZZZZ	10/6/2014	12:11		10/6/2014	12:27
1006F010.D	ZZZZZZ	ZZZZZZ	10/6/2014	12:33		10/6/2014	12:49
1006F011.D	ZZZZZZ	ZZZZZZ	10/6/2014	12:54		10/6/2014	13:10
1006F012.D	ZZZZZZ	ZZZZZZ	10/6/2014	13:16		10/6/2014	13:32
1006F013.D	VTR-6	K1410441-013	10/6/2014	13:37		10/6/2014	13:53
1006F014.D	ZZZZZZ	ZZZZZZ	10/6/2014	13:58		10/6/2014	14:14
1006F015.D	ZZZZZZ	ZZZZZZ	10/6/2014	14:20		10/6/2014	14:36
1006F016.D	ZZZZZZ	ZZZZZZ	10/6/2014	14:41		10/6/2014	14:57
1006F017.D	ZZZZZZ	ZZZZZZ	10/6/2014	15:02		10/6/2014	15:18
1006F018.D	ZZZZZZ	ZZZZZZ	10/6/2014	15:24		10/6/2014	15:40
1006F019.D	ZZZZZZ	ZZZZZZ	10/6/2014	15:45		10/6/2014	16:01
1006F020.D	ZZZZZZ	ZZZZZZ	10/6/2014	16:06		10/6/2014	16:22
1006F021.D	ZZZZZZ	ZZZZZZ	10/6/2014	16:28		10/6/2014	16:44
1006F022.D	ZZZZZZ	ZZZZZZ	10/6/2014	16:49		10/6/2014	17:05
1006F023.D	ZZZZZZ	ZZZZZZ	10/6/2014	17:10		10/6/2014	17:26
1006F024.D	ZZZZZZ	ZZZZZZ	10/6/2014	17:32		10/6/2014	17:48
1006F025.D	ZZZZZZ	ZZZZZZ	10/6/2014	17:53		10/6/2014	18:09
1006F026.D	ZZZZZZ	ZZZZZZ	10/6/2014	18:15		10/6/2014	18:31
1006F027.D	ZZZZZZ	ZZZZZZ	10/6/2014	18:36		10/6/2014	18:52
1006F028.D	ZZZZZZ	ZZZZZZ	10/6/2014	18:57		10/6/2014	19:13
1006F029.D	ZZZZZZ	ZZZZZZ	10/6/2014	19:19		10/6/2014	19:35
1006F030.D	VTR-6MS	KWG1413516-4	10/6/2014	19:40		10/6/2014	19:56
1006F031.D	VTR-6DMS	KWG1413516-5	10/6/2014	20:01		10/6/2014	20:17

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

Client: Tetra Tech, Incorporated **Service Request:** K1410441
Project: JBLM-YRC/194-8468

Analysis Run Log
Volatile Organic Compounds

Analysis Method: 8260C **Analysis Lot:** KWG1413401
Instrument ID: MS13

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1002F002.D	GC/MS Tuning - Bromofluorobenzene	KWG1413401-1	10/2/2014	11:00		10/2/2014	11:19
1002F003.D	Continuing Calibration Verification	KWG1413401-2	10/2/2014	11:32		10/2/2014	11:51
1002F004.D	Lab Control Sample	KWG1413403-3	10/2/2014	12:09		10/2/2014	12:28
1002F005.D	ZZZZZZ	ZZZZZZ	10/2/2014	12:35		10/2/2014	12:54
1002F006.D	ZZZZZZ	ZZZZZZ	10/2/2014	13:02		10/2/2014	13:21
1002F008.D	Method Blank	KWG1413403-4	10/2/2014	13:55		10/2/2014	14:14
1002F009.D	ZZZZZZ	ZZZZZZ	10/2/2014	14:22		10/2/2014	14:41
1002F010.D	ZZZZZZ	ZZZZZZ	10/2/2014	14:49		10/2/2014	15:08
1002F011.D	ZZZZZZ	ZZZZZZ	10/2/2014	15:16		10/2/2014	15:35
1002F012.D	ZZZZZZ	ZZZZZZ	10/2/2014	15:42		10/2/2014	16:01
1002F013.D	ZZZZZZ	ZZZZZZ	10/2/2014	16:09		10/2/2014	16:28
1002F014.D	ZZZZZZ	ZZZZZZ	10/2/2014	16:36		10/2/2014	16:55
1002F015.D	ZZZZZZ	ZZZZZZ	10/2/2014	17:02		10/2/2014	17:21
1002F016.D	FTP-1	K1410441-001	10/2/2014	17:29		10/2/2014	17:48
1002F017.D	ZZZZZZ	ZZZZZZ	10/2/2014	17:56		10/2/2014	18:15
1002F018.D	ZZZZZZ	ZZZZZZ	10/2/2014	18:22		10/2/2014	18:41
1002F019.D	ZZZZZZ	ZZZZZZ	10/2/2014	18:49		10/2/2014	19:08
1002F020.D	ZZZZZZ	ZZZZZZ	10/2/2014	19:16		10/2/2014	19:35
1002F021.D	ZZZZZZ	ZZZZZZ	10/2/2014	19:43		10/2/2014	20:02
1002F022.D	ZZZZZZ	ZZZZZZ	10/2/2014	20:10		10/2/2014	20:29
1002F023.D	ZZZZZZ	ZZZZZZ	10/2/2014	20:37		10/2/2014	20:56
1002F024.D	ZZZZZZ	ZZZZZZ	10/2/2014	21:03		10/2/2014	21:22
1002F025.D	ZZZZZZ	ZZZZZZ	10/2/2014	21:30		10/2/2014	21:49
1002F026.D	ZZZZZZ	ZZZZZZ	10/2/2014	21:57		10/2/2014	22:16
1002F027.D	ZZZZZZ	ZZZZZZ	10/2/2014	22:24		10/2/2014	22:43

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

QA/QC Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Extracted: 10/02/2014

Extraction Prep Log
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Extraction Lot: KWG1413403
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
FTP-1	K1410441-001	09/22/14	09/25/14	10ml	10ml	NA	
Method Blank	KWG1413403-4	NA	NA	10ml	10ml	NA	
Lab Control Sample	KWG1413403-3	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, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Extracted: 10/03/2014

Extraction Prep Log
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Extraction Lot: KWG1413475
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
FTP-1DL	K1410441-001	09/22/14	09/25/14	10ml	10ml	NA	
815-2	K1410441-005	09/23/14	09/25/14	10ml	10ml	NA	
MTS-1	K1410441-006	09/23/14	09/25/14	10ml	10ml	NA	
MTS-2	K1410441-007	09/23/14	09/25/14	10ml	10ml	NA	
MTS-4	K1410441-008	09/23/14	09/25/14	10ml	10ml	NA	
DUP-1	K1410441-009	09/23/14	09/25/14	10ml	10ml	NA	
VTR-1	K1410441-010	09/23/14	09/25/14	10ml	10ml	NA	
VTR-3	K1410441-011	09/23/14	09/25/14	10ml	10ml	NA	
VTR-5	K1410441-012	09/23/14	09/25/14	10ml	10ml	NA	
PAIC Well	K1410441-014	09/23/14	09/25/14	10ml	10ml	NA	
Pamona Well	K1410441-015	09/23/14	09/25/14	10ml	10ml	NA	
Trip Blank	K1410441-016	09/23/14	09/25/14	10ml	10ml	NA	
TVR-7	K1410441-017	09/23/14	09/25/14	10ml	10ml	NA	
Method Blank	KWG1413475-4	NA	NA	10ml	10ml	NA	
Lab Control Sample	KWG1413475-3	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, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Extracted: 10/06/2014

Extraction Prep Log
Volatile Organic Compounds

Extraction Method: EPA 5030B
Analysis Method: 8260C

Extraction Lot: KWG1413516
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
VTR-6	K1410441-013	09/23/14	09/25/14	10ml	10ml	NA	
Method Blank	KWG1413516-3	NA	NA	10ml	10ml	NA	
VTR-6MS	KWG1413516-4	09/23/14	09/25/14	10ml	10ml	NA	
VTR-6DMS	KWG1413516-5	09/23/14	09/25/14	10ml	10ml	NA	
Lab Control Sample	KWG1413516-1	NA	NA	10ml	10ml	NA	

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

Semi-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 **Service Request:** K1410441
Project: JBLM-YRC/194-8468

Cover Page - Organic Analysis Data Package
Semi-Volatile Organic Compounds by GC/MS

Sample Name	Lab Code	Date Collected	Date Received
FTP-1	K1410441-001	09/22/2014	09/25/2014

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/22/2014
Date Received: 09/25/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name: FTP-1
Lab Code: K1410441-001

Units: ug/L
Basis: NA

Extraction Method: EPA 3520C
Analysis Method: 8270D

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	09/29/14	10/07/14	KWG1413202	
Bis(2-chloroethyl) Ether	ND	U	10	0.50	0.33	1	09/29/14	10/07/14	KWG1413202	
Phenol	ND	U	10	0.50	0.32	1	09/29/14	10/07/14	KWG1413202	
2-Chlorophenol	ND	U	10	0.50	0.31	1	09/29/14	10/07/14	KWG1413202	
1,3-Dichlorobenzene	ND	U	10	0.50	0.35	1	09/29/14	10/07/14	KWG1413202	
1,4-Dichlorobenzene	ND	U	10	0.50	0.32	1	09/29/14	10/07/14	KWG1413202	
1,2-Dichlorobenzene	ND	U	10	0.50	0.43	1	09/29/14	10/07/14	KWG1413202	
Benzyl alcohol	ND	U	10	0.50	0.38	1	09/29/14	10/07/14	KWG1413202	
Bis(2-chloroisopropyl) Ether	ND	U	10	0.50	0.31	1	09/29/14	10/07/14	KWG1413202	
2-Methylphenol	ND	U	10	0.50	0.33	1	09/29/14	10/07/14	KWG1413202	
Hexachloroethane	ND	U	10	2.0	0.29	1	09/29/14	10/07/14	KWG1413202	
N-Nitrosodi-n-propylamine	ND	U	10	2.0	0.50	1	09/29/14	10/07/14	KWG1413202	
4-Methylphenol†	ND	U	10	0.50	0.48	1	09/29/14	10/07/14	KWG1413202	
Nitrobenzene	ND	U	10	0.57	0.57	1	09/29/14	10/07/14	KWG1413202	
Isophorone	ND	U	10	1.0	0.25	1	09/29/14	10/07/14	KWG1413202	
2-Nitrophenol	ND	U	10	0.50	0.37	1	09/29/14	10/07/14	KWG1413202	
2,4-Dimethylphenol	ND	U	10	2.0	0.26	1	09/29/14	10/07/14	KWG1413202	
Bis(2-chloroethoxy)methane	ND	U	10	0.50	0.28	1	09/29/14	10/07/14	KWG1413202	
2,4-Dichlorophenol	ND	U	10	0.50	0.30	1	09/29/14	10/07/14	KWG1413202	
Benzoic acid	ND	U	25	25	5.8	1	09/29/14	10/07/14	KWG1413202	
1,2,4-Trichlorobenzene	ND	U	10	0.50	0.36	1	09/29/14	10/07/14	KWG1413202	
Naphthalene	**54**		10	0.50	0.37	1	09/29/14	10/07/14	KWG1413202	
4-Chloroaniline	ND	U	10	2.0	0.38	1	09/29/14	10/07/14	KWG1413202	
Hexachlorobutadiene	ND	U	10	0.50	0.29	1	09/29/14	10/07/14	KWG1413202	
4-Chloro-3-methylphenol	ND	U	10	0.50	0.49	1	09/29/14	10/07/14	KWG1413202	
2-Methylnaphthalene	**96**		10	0.50	0.24	1	09/29/14	10/07/14	KWG1413202	
2,4,6-Trichlorophenol	ND	U	10	1.0	0.20	1	09/29/14	10/07/14	KWG1413202	
2,4,5-Trichlorophenol	ND	U	10	0.50	0.38	1	09/29/14	10/07/14	KWG1413202	
2-Chloronaphthalene	ND	U	10	0.50	0.29	1	09/29/14	10/07/14	KWG1413202	
Acenaphthene	**2.5**	J	10	0.50	0.28	1	09/29/14	10/07/14	KWG1413202	
2-Nitroaniline	ND	U	25	0.50	0.34	1	09/29/14	10/07/14	KWG1413202	
Acenaphthylene	ND	U	10	0.50	0.24	1	09/29/14	10/07/14	KWG1413202	
Dimethyl Phthalate	ND	U	10	2.0	0.25	1	09/29/14	10/07/14	KWG1413202	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: 09/22/2014
Date Received: 09/25/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name: FTP-1
Lab Code: K1410441-001

Units: ug/L
Basis: NA

Extraction Method: EPA 3520C
Analysis Method: 8270D

Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
2,6-Dinitrotoluene	ND	U	10	0.50	0.35	1	09/29/14	10/07/14	KWG1413202	
3-Nitroaniline	ND	U	25	1.0	3.3	1	09/29/14	10/07/14	KWG1413202	
2,4-Dinitrophenol	ND	U	25	25	2.2	1	09/29/14	10/07/14	KWG1413202	
Dibenzofuran	**4.6**	J	10	0.50	0.33	1	09/29/14	10/07/14	KWG1413202	
4-Nitrophenol	ND	U	25	10	1.9	1	09/29/14	10/07/14	KWG1413202	
2,4-Dinitrotoluene	ND	U	10	1.0	0.27	1	09/29/14	10/07/14	KWG1413202	
Fluorene	**7.8**	J	10	0.50	0.32	1	09/29/14	10/07/14	KWG1413202	
4-Chlorophenyl Phenyl Ether	ND	U	10	0.50	0.28	1	09/29/14	10/07/14	KWG1413202	
Diethyl Phthalate	ND	U	10	0.50	0.29	1	09/29/14	10/07/14	KWG1413202	
4-Nitroaniline	ND	U	25	4.0	4.0	1	09/29/14	10/07/14	KWG1413202	
2-Methyl-4,6-dinitrophenol	ND	U	25	10	2.1	1	09/29/14	10/07/14	KWG1413202	
N-Nitrosodiphenylamine	ND	U	10	0.50	0.48	1	09/29/14	10/07/14	KWG1413202	
1,2-Diphenylhydrazine†	ND	U	10	0.50	0.51	1	09/29/14	10/07/14	KWG1413202	
4-Bromophenyl Phenyl Ether	ND	U	10	0.50	0.27	1	09/29/14	10/07/14	KWG1413202	
Hexachlorobenzene	ND	U	10	0.63	0.63	1	09/29/14	10/07/14	KWG1413202	
Pentachlorophenol	ND	U	25	5.0	2.4	1	09/29/14	10/07/14	KWG1413202	
Phenanthrene	**7.9**	J	10	0.50	0.48	1	09/29/14	10/07/14	KWG1413202	
Anthracene	ND	U	10	0.61	0.61	1	09/29/14	10/07/14	KWG1413202	
Carbazole	**4.9**	J	10	0.50	0.36	1	09/29/14	10/07/14	KWG1413202	
Di-n-butyl Phthalate	ND	U	10	0.65	0.65	1	09/29/14	10/07/14	KWG1413202	
Fluoranthene	ND	U	10	0.65	0.65	1	09/29/14	10/07/14	KWG1413202	
Pyrene	ND	U	10	0.73	0.73	1	09/29/14	10/07/14	KWG1413202	
Butyl Benzyl Phthalate	ND	U	10	0.50	0.47	1	09/29/14	10/07/14	KWG1413202	
3,3'-Dichlorobenzidine	ND	U	25	2.0	0.27	1	09/29/14	10/07/14	KWG1413202	
Benz(a)anthracene	ND	U	10	0.59	0.59	1	09/29/14	10/07/14	KWG1413202	
Chrysene	ND	U	10	0.79	0.79	1	09/29/14	10/07/14	KWG1413202	
Bis(2-ethylhexyl) Phthalate	ND	U	10	1.9	1.9	1	09/29/14	10/07/14	KWG1413202	
Di-n-octyl Phthalate	ND	U	10	0.63	0.63	1	09/29/14	10/07/14	KWG1413202	
Benzo(b)fluoranthene	ND	U	10	0.58	0.58	1	09/29/14	10/07/14	KWG1413202	
Benzo(k)fluoranthene	ND	U	10	0.83	0.83	1	09/29/14	10/07/14	KWG1413202	
Benzo(a)pyrene	ND	U	10	0.50	0.65	1	09/29/14	10/07/14	KWG1413202	
Indeno(1,2,3-cd)pyrene	ND	U	10	0.68	0.68	1	09/29/14	10/07/14	KWG1413202	
Dibenz(a,h)anthracene	ND	U	10	0.75	0.75	1	09/29/14	10/07/14	KWG1413202	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	09/22/2014
Sample Matrix:	Water	**Date Received:**	09/25/2014

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	FTP-1	**Units:**	ug/L
Lab Code:	K1410441-001	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(g,h,i)perylene	ND	U	10	0.81	0.81	1	09/29/14	10/07/14	KWG1413202	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	66	20-110	10/07/14	Acceptable
Phenol-d6	70	10-115	10/07/14	Acceptable
Nitrobenzene-d5	71	40-110	10/07/14	Acceptable
2-Fluorobiphenyl	80	50-110	10/07/14	Acceptable
2,4,6-Tribromophenol	113	40-125	10/07/14	Acceptable
Terphenyl-d14	91	50-135	10/07/14	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: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: NA
Date Received: NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: KWG1413202-3

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	24	5.0	0.48	1	09/29/14	10/06/14	KWG1413202	
Bis(2-chloroethyl) Ether	ND	U	9.5	0.50	0.33	1	09/29/14	10/06/14	KWG1413202	
Phenol	ND	U	9.5	0.50	0.32	1	09/29/14	10/06/14	KWG1413202	
2-Chlorophenol	ND	U	9.5	0.50	0.31	1	09/29/14	10/06/14	KWG1413202	
1,3-Dichlorobenzene	ND	U	9.5	0.50	0.35	1	09/29/14	10/06/14	KWG1413202	
1,4-Dichlorobenzene	ND	U	9.5	0.50	0.32	1	09/29/14	10/06/14	KWG1413202	
1,2-Dichlorobenzene	ND	U	9.5	0.50	0.43	1	09/29/14	10/06/14	KWG1413202	
Benzyl alcohol	ND	U	9.5	0.50	0.38	1	09/29/14	10/06/14	KWG1413202	
Bis(2-chloroisopropyl) Ether	ND	U	9.5	0.50	0.31	1	09/29/14	10/06/14	KWG1413202	
2-Methylphenol	ND	U	9.5	0.50	0.33	1	09/29/14	10/06/14	KWG1413202	
Hexachloroethane	ND	U	9.5	2.0	0.29	1	09/29/14	10/06/14	KWG1413202	
N-Nitrosodi-n-propylamine	ND	U	9.5	2.0	0.50	1	09/29/14	10/06/14	KWG1413202	
4-Methylphenol†	ND	U	9.5	0.50	0.48	1	09/29/14	10/06/14	KWG1413202	
Nitrobenzene	ND	U	9.5	0.57	0.57	1	09/29/14	10/06/14	KWG1413202	
Isophorone	ND	U	9.5	1.0	0.25	1	09/29/14	10/06/14	KWG1413202	
2-Nitrophenol	ND	U	9.5	0.50	0.37	1	09/29/14	10/06/14	KWG1413202	
2,4-Dimethylphenol	ND	U	9.5	2.0	0.26	1	09/29/14	10/06/14	KWG1413202	
Bis(2-chloroethoxy)methane	ND	U	9.5	0.50	0.28	1	09/29/14	10/06/14	KWG1413202	
2,4-Dichlorophenol	ND	U	9.5	0.50	0.30	1	09/29/14	10/06/14	KWG1413202	
Benzoic acid	ND	U	25	25	5.8	1	09/29/14	10/06/14	KWG1413202	
1,2,4-Trichlorobenzene	ND	U	9.5	0.50	0.36	1	09/29/14	10/06/14	KWG1413202	
Naphthalene	ND	U	9.5	0.50	0.37	1	09/29/14	10/06/14	KWG1413202	
4-Chloroaniline	ND	U	9.5	2.0	0.38	1	09/29/14	10/06/14	KWG1413202	
Hexachlorobutadiene	ND	U	9.5	0.50	0.29	1	09/29/14	10/06/14	KWG1413202	
4-Chloro-3-methylphenol	ND	U	9.5	0.50	0.49	1	09/29/14	10/06/14	KWG1413202	
2-Methylnaphthalene	ND	U	9.5	0.50	0.24	1	09/29/14	10/06/14	KWG1413202	
2,4,6-Trichlorophenol	ND	U	9.5	1.0	0.20	1	09/29/14	10/06/14	KWG1413202	
2,4,5-Trichlorophenol	ND	U	9.5	0.50	0.38	1	09/29/14	10/06/14	KWG1413202	
2-Chloronaphthalene	ND	U	9.5	0.50	0.29	1	09/29/14	10/06/14	KWG1413202	
Acenaphthene	ND	U	9.5	0.50	0.28	1	09/29/14	10/06/14	KWG1413202	
2-Nitroaniline	ND	U	24	0.50	0.34	1	09/29/14	10/06/14	KWG1413202	
Acenaphthylene	ND	U	9.5	0.50	0.24	1	09/29/14	10/06/14	KWG1413202	
Dimethyl Phthalate	ND	U	9.5	2.0	0.25	1	09/29/14	10/06/14	KWG1413202	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Collected: NA
Date Received: NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name: Method Blank
Lab Code: KWG1413202-3

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
2,6-Dinitrotoluene	ND	U	9.5	0.50	0.35	1	09/29/14	10/06/14	KWG1413202	
3-Nitroaniline	ND	U	24	1.0	3.3	1	09/29/14	10/06/14	KWG1413202	
2,4-Dinitrophenol	ND	U	25	25	2.2	1	09/29/14	10/06/14	KWG1413202	
Dibenzofuran	ND	U	9.5	0.50	0.33	1	09/29/14	10/06/14	KWG1413202	
4-Nitrophenol	ND	U	24	10	1.9	1	09/29/14	10/06/14	KWG1413202	
2,4-Dinitrotoluene	ND	U	9.5	1.0	0.27	1	09/29/14	10/06/14	KWG1413202	
Fluorene	ND	U	9.5	0.50	0.32	1	09/29/14	10/06/14	KWG1413202	
4-Chlorophenyl Phenyl Ether	ND	U	9.5	0.50	0.28	1	09/29/14	10/06/14	KWG1413202	
Diethyl Phthalate	ND	U	9.5	0.50	0.29	1	09/29/14	10/06/14	KWG1413202	
4-Nitroaniline	ND	U	24	4.0	4.0	1	09/29/14	10/06/14	KWG1413202	
2-Methyl-4,6-dinitrophenol	ND	U	24	10	2.1	1	09/29/14	10/06/14	KWG1413202	
N-Nitrosodiphenylamine	ND	U	9.5	0.50	0.48	1	09/29/14	10/06/14	KWG1413202	
1,2-Diphenylhydrazine†	ND	U	9.5	0.50	0.51	1	09/29/14	10/06/14	KWG1413202	
4-Bromophenyl Phenyl Ether	ND	U	9.5	0.50	0.27	1	09/29/14	10/06/14	KWG1413202	
Hexachlorobenzene	ND	U	9.5	0.63	0.63	1	09/29/14	10/06/14	KWG1413202	
Pentachlorophenol	ND	U	24	5.0	2.4	1	09/29/14	10/06/14	KWG1413202	
Phenanthrene	ND	U	9.5	0.50	0.48	1	09/29/14	10/06/14	KWG1413202	
Anthracene	ND	U	9.5	0.61	0.61	1	09/29/14	10/06/14	KWG1413202	
Carbazole	ND	U	9.5	0.50	0.36	1	09/29/14	10/06/14	KWG1413202	
Di-n-butyl Phthalate	ND	U	9.5	0.65	0.65	1	09/29/14	10/06/14	KWG1413202	
Fluoranthene	ND	U	9.5	0.65	0.65	1	09/29/14	10/06/14	KWG1413202	
Pyrene	ND	U	9.5	0.73	0.73	1	09/29/14	10/06/14	KWG1413202	
Butyl Benzyl Phthalate	ND	U	9.5	0.50	0.47	1	09/29/14	10/06/14	KWG1413202	
3,3'-Dichlorobenzidine	ND	U	24	2.0	0.27	1	09/29/14	10/06/14	KWG1413202	
Benz(a)anthracene	ND	U	9.5	0.59	0.59	1	09/29/14	10/06/14	KWG1413202	
Chrysene	ND	U	9.5	0.79	0.79	1	09/29/14	10/06/14	KWG1413202	
Bis(2-ethylhexyl) Phthalate	ND	U	9.5	1.9	1.9	1	09/29/14	10/06/14	KWG1413202	
Di-n-octyl Phthalate	ND	U	9.5	0.63	0.63	1	09/29/14	10/06/14	KWG1413202	
Benzo(b)fluoranthene	ND	U	9.5	0.58	0.58	1	09/29/14	10/06/14	KWG1413202	
Benzo(k)fluoranthene	ND	U	9.5	0.83	0.83	1	09/29/14	10/06/14	KWG1413202	
Benzo(a)pyrene	ND	U	9.5	0.50	0.65	1	09/29/14	10/06/14	KWG1413202	
Indeno(1,2,3-cd)pyrene	ND	U	9.5	0.68	0.68	1	09/29/14	10/06/14	KWG1413202	
Dibenz(a,h)anthracene	ND	U	9.5	0.75	0.75	1	09/29/14	10/06/14	KWG1413202	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Units:**	ug/L
Lab Code:	KWG1413202-3	**Basis:**	NA
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Benzo(g,h,i)perylene	ND	U	9.5	0.81	0.81	1	09/29/14	10/06/14	KWG1413202	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	76	20-110	10/06/14	Acceptable
Phenol-d6	74	10-115	10/06/14	Acceptable
Nitrobenzene-d5	85	40-110	10/06/14	Acceptable
2-Fluorobiphenyl	72	50-110	10/06/14	Acceptable
2,4,6-Tribromophenol	89	40-125	10/06/14	Acceptable
Terphenyl-d14	69	50-135	10/06/14	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 **Service Request:** K1410441
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Surrogate Recovery Summary
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3520C **Units:** Percent
Analysis Method: 8270D **Level:** Low

Sample Name	Lab Code	Sur1	Sur2	Sur3	Sur4	Sur5	Sur6
FTP-1	K1410441-001	66	70	71	80	113	91
Method Blank	KWG1413202-3	76	74	85	72	89	69
Lab Control Sample	KWG1413202-1	68	68	74	78	92	79
Duplicate Lab Control Sample	KWG1413202-2	69	66	75	81	97	75

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.

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Date Analyzed: 10/06/2014
Time Analyzed: 20:31

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\100614\1006F006.D
Instrument ID: MS07
Analysis Method: 8270D

Lab Code: KWG1413620-2
Analysis Lot: KWG1413620

		1,4-Dichlorobenzene-d4		Naphthalene-d8		Acenaphthene-d10	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	ICAL Result ==>	69,792	9.21	256,342	11.31	116,440	14.17
	Upper Limit ==>	139,584	9.71	512,684	11.81	232,880	14.67
	Lower Limit ==>	34,896	8.71	128,171	10.81	58,220	13.67
Associated Analyses							
Continuing Calibration VerificationCCV	KWG1413620-2	59,932	9.23	209,209	11.34	102,779	14.20
Method Blank	KWG1413202-3	68,737	9.23	254,779	11.33	132,047	14.19
Lab Control Sample	KWG1413202-1	70,560	9.23	244,373	11.34	117,840	14.20
Duplicate Lab Control Sample	KWG1413202-2	67,763	9.23	236,537	11.34	111,605	14.19
FTP-1	K1410441-001	66,325	9.22	215,294	11.33	94,174	14.20

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

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Date Analyzed: 10/06/2014
Time Analyzed: 20:31

Internal Standard Area and RT Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\100614\1006F006.D
Instrument ID: MS07
Analysis Method: 8270D

Lab Code: KWG1413620-2
Analysis Lot: KWG1413620

		Phenanthrene-d10		Chrysene-d12		Perylene-d12	
		Area	**RT**	**Area**	**RT**	**Area**	**RT**
	ICAL Result ==>	235,150	16.58	228,474	20.98	239,923	24.12
	Upper Limit ==>	470,300	17.08	456,948	21.48	479,846	24.62
	Lower Limit ==>	117,575	16.08	114,237	20.48	119,962	23.62
Associated Analyses							
Continuing Calibration VerificationCCV	KWG1413620-2	166,472	16.60	173,223	21.00	154,826	24.15
Method Blank	KWG1413202-3	181,737	16.59	205,825	20.99	162,786	24.15
Lab Control Sample	KWG1413202-1	181,409	16.60	200,227	21.00	175,691	24.15
Duplicate Lab Control Sample	KWG1413202-2	165,597	16.60	189,074	21.00	163,632	24.15
FTP-1	K1410441-001	154,043	16.60	165,497	21.01	157,302	24.17

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

QA/QC Report

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Extracted: 09/29/2014
Date Analyzed: 10/06/2014

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: KWG1413202

	Lab Control Sample KWG1413202-1 Lab Control Spike			Duplicate Lab Control Sample KWG1413202-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
N-Nitrosodimethylamine	94.5	100	94	90.6	100	91	25-110	4	30
Bis(2-chloroethyl) Ether	66.8	100	67	67.0	100	67	35-110	0	30
Phenol	70.5	100	71	68.0	100	68	0-115	4	30
2-Chlorophenol	73.3	100	73	76.0	100	76	35-105	4	30
1,3-Dichlorobenzene	68.1	100	68	70.7	100	71	30-100	4	30
1,4-Dichlorobenzene	69.9	100	70	70.3	100	70	30-100	1	30
1,2-Dichlorobenzene	72.4	100	72	73.9	100	74	35-100	2	30
Benzyl alcohol	81.1	100	81	81.2	100	81	30-110	0	30
Bis(2-chloroisopropyl) Ether	60.0	100	60	60.2	100	60	25-130	0	30
2-Methylphenol	75.5	100	75	74.7	100	75	40-110	1	30
Hexachloroethane	66.3	100	66	69.1	100	69	30-100	4	30
N-Nitrosodi-n-propylamine	76.9	100	77	76.7	100	77	35-130	0	30
4-Methylphenol	77.9	100	78	77.0	100	77	30-110	1	30
Nitrobenzene	78.3	100	78	79.1	100	79	45-110	1	30
Isophorone	78.8	100	79	75.3	100	75	50-110	5	30
2-Nitrophenol	89.6	100	90	84.2	100	84	40-115	6	30
2,4-Dimethylphenol	77.7	100	78	73.9	100	74	30-110	5	30
Bis(2-chloroethoxy)methane	73.8	100	74	71.7	100	72	45-105	3	30
2,4-Dichlorophenol	86.9	100	87	86.7	100	87	50-105	0	30
Benzoic acid	76.7	100	77	73.1	100	73	0-125	5	30
1,2,4-Trichlorobenzene	79.0	100	79	77.5	100	77	35-105	2	30
Naphthalene	74.7	100	75	74.0	100	74	40-100	1	30
4-Chloroaniline	84.2	100	84	83.9	100	84	15-110	0	30
Hexachlorobutadiene	79.1	100	79	82.3	100	82	25-105	4	30
4-Chloro-3-methylphenol	89.2	100	89	85.2	100	85	45-110	5	30
2-Methylnaphthalene	81.7	100	82	78.2	100	78	45-105	4	30
2,4,6-Trichlorophenol	95.9	100	96	93.0	100	93	50-115	3	30
2,4,5-Trichlorophenol	91.9	100	92	88.3	100	88	50-110	4	30
2-Chloronaphthalene	75.1	100	75	81.0	100	81	50-105	8	30
Acenaphthene	83.2	100	83	80.5	100	81	45-110	3	30
2-Nitroaniline	83.0	100	83	79.6	100	80	50-115	4	30
Acenaphthylene	80.7	100	81	80.6	100	81	50-105	0	30
Dimethyl Phthalate	85.4	100	85	81.3	100	81	25-125	5	30
2,6-Dinitrotoluene	83.9	100	84	82.3	100	82	50-115	2	30
3-Nitroaniline	71.9	100	72	70.5	100	71	20-125	2	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: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Extracted: 09/29/2014
Date Analyzed: 10/06/2014

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: KWG1413202

	Lab Control Sample KWG1413202-1 Lab Control Spike			Duplicate Lab Control Sample KWG1413202-2 Duplicate Lab Control Spike					
Analyte Name	**Result**	**Spike Amount**	**%Rec**	**Result**	**Spike Amount**	**%Rec**	**%Rec Limits**	**RPD**	**RPD Limit**
2,4-Dinitrophenol	72.1	100	72	66.6	100	67	15-140	8	30
Dibenzofuran	80.6	100	81	80.1	100	80	55-105	1	30
4-Nitrophenol	80.1	100	80	75.7	100	76	0-125	6	30
2,4-Dinitrotoluene	75.1	100	75	72.6	100	73	50-120	3	30
Fluorene	80.4	100	80	78.3	100	78	50-110	3	30
4-Chlorophenyl Phenyl Ether	84.1	100	84	82.9	100	83	50-110	1	30
Diethyl Phthalate	72.1	100	72	71.8	100	72	40-120	0	30
4-Nitroaniline	68.2	100	68	65.8	100	66	30-120	4	30
2-Methyl-4,6-dinitrophenol	71.9	100	72	70.5	100	70	40-130	2	30
N-Nitrosodiphenylamine	71.8	100	72	71.4	100	71	50-110	1	30
1,2-Diphenylhydrazine	70.2	100	70	72.6	100	73	55-115	3	30
4-Bromophenyl Phenyl Ether	102	100	102	102	100	102	50-115	1	30
Hexachlorobenzene	97.8	100	98	99.6	100	100	50-110	2	30
Pentachlorophenol	92.4	100	92	87.9	100	88	40-115	5	30
Phenanthrene	85.6	100	86	88.5	100	89	50-115	3	30
Anthracene	88.9	100	89	86.0	100	86	55-110	3	30
Carbazole	87.8	100	88	88.9	100	89	50-115	1	30
Di-n-butyl Phthalate	85.1	100	85	83.5	100	83	55-115	2	30
Fluoranthene	89.7	100	90	88.1	100	88	55-115	2	30
Pyrene	82.1	100	82	81.1	100	81	50-130	1	30
Butyl Benzyl Phthalate	92.9	100	93	92.5	100	92	45-115	0	30
3,3'-Dichlorobenzidine	78.8	100	79	74.6	100	75	20-110	5	30
Benz(a)anthracene	90.5	100	90	88.0	100	88	55-110	3	30
Chrysene	83.3	100	83	86.7	100	87	55-110	4	30
Bis(2-ethylhexyl) Phthalate	95.3	100	95	91.6	100	92	40-125	4	30
Di-n-octyl Phthalate	91.1	100	91	92.2	100	92	35-135	1	30
Benzo(b)fluoranthene	92.5	100	93	92.5	100	92	45-120	0	30
Benzo(k)fluoranthene	92.4	100	92	92.0	100	92	45-125	0	30
Benzo(a)pyrene	94.0	100	94	93.0	100	93	55-110	1	30
Indeno(1,2,3-cd)pyrene	102	100	102	99.6	100	100	45-125	3	30
Dibenz(a,h)anthracene	102	100	102	96.5	100	96	40-125	5	30
Benzo(g,h,i)perylene	96.9	100	97	94.1	100	94	40-125	3	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	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Extracted:**	09/29/2014
Sample Matrix:	Water	**Date Analyzed:**	10/06/2014
		Time Analyzed:	21:29

Method Blank Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Method Blank	**Instrument ID:**	MS07
Lab Code:	KWG1413202-3	**File ID:**	J:\MS07\DATA\100614\1006F007.D
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D	**Extraction Lot:**	KWG1413202

This Method Blank applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Lab Control Sample	KWG1413202-1	J:\MS07\DATA\100614\1006F008.D	10/06/14	22:09
Duplicate Lab Control Sample	KWG1413202-2	J:\MS07\DATA\100614\1006F009.D	10/06/14	22:50
FTP-1	K1410441-001	J:\MS07\DATA\100614\1006F011.D	10/07/14	00:12

QA/QC Report

Client:	Tetra Tech, Incorporated	**Service Request:**	K1410441
Project:	JBLM-YRC/194-8468	**Date Extracted:**	09/29/2014
Sample Matrix:	Water	**Date Analyzed:**	10/06/2014
		Time Analyzed:	22:09

Lab Control Sample Summary
Semi-Volatile Organic Compounds by GC/MS

Sample Name:	Lab Control Sample	**Instrument ID:**	MS07
Lab Code:	KWG1413202-1	**File ID:**	J:\MS07\DATA\100614\1006F008.D
Extraction Method:	EPA 3520C	**Level:**	Low
Analysis Method:	8270D	**Extraction Lot:**	KWG1413202

This Lab Control Sample applies to the following analyses:

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed
Method Blank	KWG1413202-3	J:\MS07\DATA\100614\1006F007.D	10/06/14	21:29
FTP-1	K1410441-001	J:\MS07\DATA\100614\1006F011.D	10/07/14	00:12

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Date Analyzed: 10/06/2014
Time Analyzed: 19:48

Tune Summary
Semi-Volatile Organic Compounds by GC/MS

File ID: J:\MS07\DATA\100614\1006F005.D
Instrument ID: MS07
Column:

Analysis Method: 8270D
Analysis Lot: KWG1413620

Target Mass	Relative to Mass	Lower Limit%	Upper Limit%	Relative Abundance %	Raw Abundance	Result Pass/Fail
51	198	30	80	31.4	5598	PASS
68	69	0	2	0.5	40	PASS
69	198	0	100	44.5	7943	PASS
70	69	0	2	0.6	45	PASS
127	198	25	75	45.5	8118	PASS
197	198	0	1	0.0	0	PASS
198	198	100	100	100.0	17842	PASS
199	198	5	9	6.4	1147	PASS
275	198	10	30	25.1	4471	PASS
365	198	1	100	2.7	480	PASS
441	443	0	100	83.4	1979	PASS
442	198	40	110	69.1	12326	PASS
443	442	15	24	19.3	2373	PASS

Sample Name	Lab Code	File ID	Date Analyzed	Time Analyzed	Q
Continuing Calibration Verification	KWG1413620-2	J:\MS07\DATA\100614\1006F006.D	10/06/2014	20:31	
Method Blank	KWG1413202-3	J:\MS07\DATA\100614\1006F007.D	10/06/2014	21:29	
Lab Control Sample	KWG1413202-1	J:\MS07\DATA\100614\1006F008.D	10/06/2014	22:09	
Duplicate Lab Control Sample	KWG1413202-2	J:\MS07\DATA\100614\1006F009.D	10/06/2014	22:50	
FTP-1	K1410441-001	J:\MS07\DATA\100614\1006F011.D	10/07/2014	00:12	

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

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/30/2014

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL13580
Instrument ID: MS07

Column: MS

Level ID	File ID
A	J:\MS07\DATA\093014\0930F003.D
B	J:\MS07\DATA\093014\0930F004.D
C	J:\MS07\DATA\093014\0930F005.D
D	J:\MS07\DATA\093014\0930F006.D
E	J:\MS07\DATA\093014\0930F007.D
F	J:\MS07\DATA\093014\0930F008.D
G	J:\MS07\DATA\093014\0930F009.D
H	J:\MS07\DATA\093014\0930F010.D
I	J:\MS07\DATA\093014\0930F011.D
J	J:\MS07\DATA\093014\0930F012.D

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
N-Nitrosodimethylamine							C	10	0.394	D	20	0.521	E	50	0.586
	F	80	0.591	G	100	0.587	H	120	0.604	I	160	0.586	J	200	0.588
Bis(2-chloroethyl) Ether	A	1.0	1.22	B	5.0	1.22	C	10	1.24	D	20	1.24	E	50	1.01
	F	80	1.11	G	100	1.08	H	120	1.01	I	160	0.990	J	200	0.931
Phenol	A	1.0	1.51	B	5.0	1.31	C	10	1.51	D	20	1.40	E	50	1.29
	F	80	1.26	G	100	1.20	H	120	1.25	I	160	1.19	J	200	1.07
2-Chlorophenol	A	1.0	1.28	B	5.0	1.34	C	10	1.35	D	20	1.38	E	50	1.32
	F	80	1.32	G	100	1.30	H	120	1.24	I	160	1.22	J	200	1.11
1,3-Dichlorobenzene	A	1.0	1.62	B	5.0	1.59	C	10	1.66	D	20	1.59	E	50	1.52
	F	80	1.54	G	100	1.47	H	120	1.39	I	160	1.36	J	200	1.27
1,4-Dichlorobenzene	A	1.0	1.68	B	5.0	1.65	C	10	1.61	D	20	1.59	E	50	1.51
	F	80	1.50	G	100	1.40	H	120	1.41	I	160	1.34	J	200	1.25
1,2-Dichlorobenzene	A	1.0	1.51	B	5.0	1.52	C	10	1.57	D	20	1.55	E	50	1.43
	F	80	1.44	G	100	1.35	H	120	1.28	I	160	1.26	J	200	1.20
Benzyl alcohol	A	1.0	0.527	B	5.0	0.640	C	10	0.715	D	20	0.707	E	50	0.692
	F	80	0.704	G	100	0.666	H	120	0.656	I	160	0.664	J	200	0.607
Bis(2-chloroisopropyl) Ether	A	1.0	1.33	B	5.0	1.30	C	10	1.29	D	20	1.28	E	50	1.19
	F	80	1.17	G	100	1.05	H	120	1.01	I	160	0.941	J	200	0.897
2-Methylphenol	A	1.0	0.854	B	5.0	0.931	C	10	0.971	D	20	0.960	E	50	0.853
	F	80	0.877	G	100	0.850	H	120	0.808	I	160	0.756	J	200	0.714
Hexachloroethane	A	1.0	0.683	B	5.0	0.665	C	10	0.671	D	20	0.696	E	50	0.624
	F	80	0.608	G	100	0.576	H	120	0.543	I	160	0.515	J	200	0.469
N-Nitrosodi-n-propylamine	A	1.0	0.828	B	5.0	0.805	C	10	0.827	D	20	0.772	E	50	0.769
	F	80	0.721	G	100	0.747	H	120	0.644	I	160	0.702	J	200	0.636
4-Methylphenol	A	1.0	1.23	B	5.0	1.37	C	10	1.40	D	20	1.41	E	50	1.31
	F	80	1.27	G	100	1.20	H	120	1.12	I	160	1.10	J	200	0.943
Nitrobenzene	A	1.0	1.18	B	5.0	1.20	C	10	1.21	D	20	1.19	E	50	1.14
	F	80	1.14	G	100	1.04	H	120	1.03	I	160	1.01	J	200	0.975

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/30/2014

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL13580
Instrument ID: MS07

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Isophorone	A	1.0	0.631	B	5.0	0.623	C	10	0.682	D	20	0.672	E	50	0.567
	F	80	0.556	G	100	0.542	H	120	0.557	I	160	0.561	J	200	0.538
2-Nitrophenol	A	1.0	0.148	B	5.0	0.198	C	10	0.220	D	20	0.221	E	50	0.213
	F	80	0.206	G	100	0.223	H	120	0.208	I	160	0.202	J	200	0.190
2,4-Dimethylphenol	A	1.0	0.267	B	5.0	0.290	C	10	0.306	D	20	0.296	E	50	0.277
	F	80	0.250	G	100	0.260	H	120	0.252	I	160	0.243	J	200	0.232
Bis(2-chloroethoxy)methane	A	1.0	0.398	B	5.0	0.415	C	10	0.445	D	20	0.436	E	50	0.390
	F	80	0.359	G	100	0.354	H	120	0.366	I	160	0.329	J	200	0.321
2,4-Dichlorophenol	A	1.0	0.257	B	5.0	0.304	C	10	0.335	D	20	0.328	E	50	0.326
	F	80	0.290	G	100	0.307	H	120	0.289	I	160	0.286	J	200	0.268
Benzoic acid										D	20	0.131	E	50	0.159
	F	80	0.168	G	100	0.189	H	120	0.193	I	160	0.203	J	200	0.191
1,2,4-Trichlorobenzene	A	1.0	0.379	B	5.0	0.393	C	10	0.388	D	20	0.397	E	50	0.371
	F	80	0.352	G	100	0.341	H	120	0.341	I	160	0.317	J	200	0.306
Naphthalene	A	1.0	0.991	B	5.0	1.02	C	10	1.03	D	20	0.984	E	50	0.907
	F	80	0.872	G	100	0.877	H	120	0.856	I	160	0.796	J	200	0.758
4-Chloroaniline	A	1.0	0.368	B	5.0	0.378	C	10	0.425	D	20	0.418	E	50	0.387
	F	80	0.358	G	100	0.357	H	120	0.340	I	160	0.336	J	200	0.307
Hexachlorobutadiene	A	1.0	0.243	B	5.0	0.244	C	10	0.245	D	20	0.248	E	50	0.247
	F	80	0.232	G	100	0.242	H	120	0.235	I	160	0.211	J	200	0.216
4-Chloro-3-methylphenol	A	1.0	0.263	B	5.0	0.257	C	10	0.293	D	20	0.305	E	50	0.278
	F	80	0.260	G	100	0.256	H	120	0.263	I	160	0.260	J	200	0.230
2-Methylnaphthalene	A	1.0	0.634	B	5.0	0.676	C	10	0.669	D	20	0.664	E	50	0.611
	F	80	0.546	G	100	0.554	H	120	0.544	I	160	0.524	J	200	0.461
2,4,6-Trichlorophenol	A	1.0	0.319	B	5.0	0.418	C	10	0.428	D	20	0.449	E	50	0.490
	F	80	0.467	G	100	0.487	H	120	0.483	I	160	0.476	J	200	0.437
2,4,5-Trichlorophenol				B	5.0	0.458	C	10	0.493	D	20	0.472	E	50	0.506
	F	80	0.503	G	100	0.544	H	120	0.525	I	160	0.533	J	200	0.505
2-Chloronaphthalene	A	1.0	1.31	B	5.0	1.37	C	10	1.32	D	20	1.34	E	50	1.31
	F	80	1.26	G	100	1.27	H	120	1.26	I	160	1.20	J	200	1.18
Acenaphthene	A	1.0	1.11	B	5.0	1.14	C	10	1.11	D	20	1.04	E	50	1.09
	F	80	1.06	G	100	1.05	H	120	1.06	I	160	1.04	J	200	0.973
2-Nitroaniline	A	1.0	0.317	B	5.0	0.294	C	10	0.319	D	20	0.323	E	50	0.337
	F	80	0.338	G	100	0.350	H	120	0.324	I	160	0.328	J	200	0.311
Acenaphthylene	A	1.0	2.06	B	5.0	2.07	C	10	1.99	D	20	2.00	E	50	1.93
	F	80	1.94	G	100	2.03	H	120	1.92	I	160	1.87	J	200	1.78

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† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/30/2014

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL13580
Instrument ID: MS07

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Dimethyl Phthalate	A	1.0	1.45	B	5.0	1.44	C	10	1.47	D	20	1.37	E	50	1.47
	F	80	1.49	G	100	1.54	H	120	1.50	I	160	1.52	J	200	1.42
2,6-Dinitrotoluene	A	1.0	0.292	B	5.0	0.325	C	10	0.333	D	20	0.352	E	50	0.367
	F	80	0.370	G	100	0.357	H	120	0.381	I	160	0.371	J	200	0.356
3-Nitroaniline				B	5.0	0.336	C	10	0.359	D	20	0.360	E	50	0.384
	F	80	0.376	G	100	0.381	H	120	0.381	I	160	0.388	J	200	0.377
2,4-Dinitrophenol										D	20	0.0928	E	50	0.164
	F	80	0.236	G	100	0.248	H	120	0.262	I	160	0.277	J	200	0.273
Dibenzofuran	A	1.0	1.79	B	5.0	1.87	C	10	1.80	D	20	1.74	E	50	1.76
	F	80	1.68	G	100	1.75	H	120	1.68	I	160	1.68	J	200	1.53
4-Nitrophenol										D	20	0.160	E	50	0.185
	F	80	0.210	G	100	0.221	H	120	0.224	I	160	0.233	J	200	0.231
2,4-Dinitrotoluene				B	5.0	0.388	C	10	0.442	D	20	0.431	E	50	0.447
	F	80	0.484	G	100	0.496	H	120	0.468	I	160	0.483	J	200	0.478
Fluorene	A	1.0	1.38	B	5.0	1.35	C	10	1.32	D	20	1.33	E	50	1.31
	F	80	1.34	G	100	1.30	H	120	1.28	I	160	1.28	J	200	1.17
4-Chlorophenyl Phenyl Ether	A	1.0	0.749	B	5.0	0.698	C	10	0.719	D	20	0.701	E	50	0.702
	F	80	0.697	G	100	0.690	H	120	0.672	I	160	0.667	J	200	0.624
Diethyl Phthalate	A	1.0	1.59	B	5.0	1.58	C	10	1.50	D	20	1.54	E	50	1.47
	F	80	1.52	G	100	1.53	H	120	1.55	I	160	1.52	J	200	1.44
4-Nitroaniline				B	5.0	0.309	C	10	0.349	D	20	0.350	E	50	0.398
	F	80	0.431	G	100	0.442	H	120	0.430	I	160	0.427	J	200	0.404
2-Methyl-4,6-dinitrophenol										D	20	0.218	E	50	0.291
	F	80	0.312	G	100	0.326	H	120	0.341	I	160	0.332	J	200	0.328
N-Nitrosodiphenylamine	A	1.0	0.954	B	5.0	0.988	C	10	1.02	D	20	0.951	E	50	0.976
	F	80	1.01	G	100	1.03	H	120	0.988	I	160	0.958	J	200	0.946
1,2-Diphenylhydrazine	A	1.0	1.37	B	5.0	1.32	C	10	1.34	D	20	1.34	E	50	1.25
	F	80	1.21	G	100	1.22	H	120	1.16	I	160	1.13	J	200	1.09
4-Bromophenyl Phenyl Ether	A	1.0	0.253	B	5.0	0.269	C	10	0.278	D	20	0.276	E	50	0.271
	F	80	0.240	G	100	0.249	H	120	0.249	I	160	0.242	J	200	0.219
Hexachlorobenzene	A	1.0	0.353	B	5.0	0.350	C	10	0.342	D	20	0.345	E	50	0.361
	F	80	0.336	G	100	0.352	H	120	0.334	I	160	0.330	J	200	0.299
Pentachlorophenol							C	10	0.0515	D	20	0.0869	E	50	0.145
	F	80	0.166	G	100	0.186	H	120	0.184	I	160	0.191	J	200	0.185
Phenanthrene	A	1.0	1.12	B	5.0	1.10	C	10	1.04	D	20	1.02	E	50	0.997
	F	80	0.936	G	100	0.968	H	120	0.911	I	160	0.859	J	200	0.789

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† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/30/2014

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL13580
Instrument ID: MS07

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Anthracene	A	1.0	1.06	B	5.0	1.14	C	10	1.07	D	20	1.05	E	50	0.999
	F	80	0.951	G	100	0.965	H	120	0.935	I	160	0.906	J	200	0.819
Carbazole	A	1.0	0.971	B	5.0	0.981	C	10	0.977	D	20	0.960	E	50	1.02
	F	80	0.952	G	100	0.981	H	120	0.936	I	160	0.871	J	200	0.824
Di-n-butyl Phthalate	A	1.0	1.30	B	5.0	1.24	C	10	1.35	D	20	1.35	E	50	1.35
	F	80	1.26	G	100	1.25	H	120	1.21	I	160	1.10	J	200	1.04
Fluoranthene	A	1.0	1.17	B	5.0	1.13	C	10	1.14	D	20	1.19	E	50	1.18
	F	80	1.08	G	100	1.11	H	120	1.06	I	160	0.970	J	200	0.926
Pyrene	A	1.0	1.16	B	5.0	1.19	C	10	1.27	D	20	1.24	E	50	1.24
	F	80	1.22	G	100	1.16	H	120	1.19	I	160	1.13	J	200	1.06
Butyl Benzyl Phthalate	A	1.0	0.464	B	5.0	0.508	C	10	0.559	D	20	0.570	E	50	0.584
	F	80	0.560	G	100	0.534	H	120	0.579	I	160	0.562	J	200	0.522
3,3'-Dichlorobenzidine				B	5.0	0.376	C	10	0.397	D	20	0.443	E	50	0.456
	F	80	0.455	G	100	0.459	H	120	0.490	I	160	0.454	J	200	0.454
Benz(a)anthracene	A	1.0	1.11	B	5.0	0.998	C	10	1.02	D	20	1.04	E	50	1.00
	F	80	0.986	G	100	0.980	H	120	1.05	I	160	0.963	J	200	0.950
Chrysene	A	1.0	1.02	B	5.0	1.02	C	10	1.01	D	20	0.997	E	50	0.975
	F	80	1.01	G	100	0.964	H	120	1.02	I	160	0.975	J	200	0.953
Bis(2-ethylhexyl) Phthalate	A	1.0	0.558	B	5.0	0.643	C	10	0.692	D	20	0.729	E	50	0.747
	F	80	0.773	G	100	0.758	H	120	0.801	I	160	0.749	J	200	0.709
Di-n-octyl Phthalate				B	5.0	0.979	C	10	1.15	D	20	1.32	E	50	1.37
	F	80	1.41	G	100	1.33	H	120	1.46	I	160	1.36	J	200	1.41
Benzo(b)fluoranthene	A	1.0	0.790	B	5.0	0.860	C	10	0.942	D	20	1.00	E	50	1.01
	F	80	1.04	G	100	1.00	H	120	1.05	I	160	1.04	J	200	1.01
Benzo(k)fluoranthene	A	1.0	0.823	B	5.0	0.926	C	10	0.941	D	20	0.989	E	50	0.972
	F	80	1.01	G	100	0.989	H	120	1.00	I	160	0.926	J	200	0.966
Benzo(a)pyrene	A	1.0	0.858	B	5.0	0.885	C	10	0.946	D	20	0.951	E	50	0.977
	F	80	0.974	G	100	0.948	H	120	1.00	I	160	0.956	J	200	0.953
Indeno(1,2,3-cd)pyrene	A	1.0	0.683	B	5.0	0.760	C	10	0.835	D	20	0.868	E	50	0.878
	F	80	0.886	G	100	0.891	H	120	0.924	I	160	0.904	J	200	0.893
Dibenz(a,h)anthracene	A	1.0	0.653	B	5.0	0.848	C	10	0.917	D	20	0.937	E	50	0.908
	F	80	0.897	G	100	0.887	H	120	0.900	I	160	0.929	J	200	0.900
Benzo(g,h,i)perylene	A	1.0	0.880	B	5.0	0.970	C	10	0.995	D	20	0.988	E	50	0.909
	F	80	0.912	G	100	0.899	H	120	0.951	I	160	0.926	J	200	0.917
2-Fluorophenol	A	1.0	1.05	B	5.0	1.13	C	10	1.22	D	20	1.24	E	50	1.15
	F	80	1.21	G	100	1.22	H	120	1.13	I	160	1.08	J	200	1.05

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/30/2014

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL13580
Instrument ID: MS07

Column: MS

Analyte Name	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF	Level ID	Amt	RRF
Phenol-d6	A	1.0	1.37	B	5.0	1.34	C	10	1.55	D	20	1.47	E	50	1.37
	F	80	1.39	G	100	1.31	H	120	1.32	I	160	1.26	J	200	1.15
Nitrobenzene-d5	A	1.0	1.11	B	5.0	1.22	C	10	1.32	D	20	1.28	E	50	1.23
	F	80	1.26	G	100	1.22	H	120	1.17	I	160	1.17	J	200	1.13
2-Fluorobiphenyl	A	1.0	1.58	B	5.0	1.54	C	10	1.59	D	20	1.55	E	50	1.49
	F	80	1.47	G	100	1.52	H	120	1.50	I	160	1.40	J	200	1.43
2,4,6-Tribromophenol				B	5.0	0.189	C	10	0.209	D	20	0.214	E	50	0.235
	F	80	0.223	G	100	0.237	H	120	0.230	I	160	0.227	J	200	0.217
Terphenyl-d14	A	1.0	0.852	B	5.0	0.889	C	10	0.934	D	20	0.892	E	50	0.929
	F	80	0.874	G	100	0.876	H	120	0.869	I	160	0.834	J	200	0.793

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† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated **Service Request:** K1410441
Project: JBLM-YRC/194-8468 **Calibration Date:** 09/30/2014

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL13580 **Column:** MS
Instrument ID: MS07

		Calibration Evaluation					RRF Evaluation		
Analyte Name	Compound Type	Fit Type	Eval.	Eval. Result	Q	Control Criteria	Average RRF	Q	Minimum RRF
N-Nitrosodimethylamine	MS	AverageRF	% RSD	12.6		≤ 20	0.557		0.010
Bis(2-chloroethyl) Ether	MS	AverageRF	% RSD	10.6		≤ 20	1.10		0.700
Phenol	MS	AverageRF	% RSD	10.8		≤ 20	1.30		0.800
2-Chlorophenol	MS	AverageRF	% RSD	6.1		≤ 20	1.29		0.800
1,3-Dichlorobenzene	MS	AverageRF	% RSD	8.4		≤ 20	1.50		0.010
1,4-Dichlorobenzene	MS	AverageRF	% RSD	9.3		≤ 20	1.49		0.010
1,2-Dichlorobenzene	MS	AverageRF	% RSD	9.3		≤ 20	1.41		0.010
Benzyl alcohol	MS	AverageRF	% RSD	8.6		≤ 20	0.658		0.010
Bis(2-chloroisopropyl) Ether	MS	AverageRF	% RSD	14.1		≤ 20	1.15		0.010
2-Methylphenol	MS	AverageRF	% RSD	9.7		≤ 20	0.857		0.700
Hexachloroethane	MS	AverageRF	% RSD	12.8		≤ 20	0.605		0.300
N-Nitrosodi-n-propylamine	MS	AverageRF	% RSD	9.3		≤ 20	0.745		0.500
4-Methylphenol	MS	AverageRF	% RSD	12.0		≤ 20	1.23		0.600
Nitrobenzene	MS	AverageRF	% RSD	8.0		≤ 20	1.11		0.200
Isophorone	MS	AverageRF	% RSD	9.2		≤ 20	0.593		0.400
2-Nitrophenol	MS	AverageRF	% RSD	10.9		≤ 20	0.203		0.100
2,4-Dimethylphenol	MS	AverageRF	% RSD	9.1		≤ 20	0.267		0.200
Bis(2-chloroethoxy)methane	MS	AverageRF	% RSD	11.2		≤ 20	0.381		0.300
2,4-Dichlorophenol	MS	AverageRF	% RSD	8.6		≤ 20	0.299		0.200
Benzoic acid	MS	AverageRF	% RSD	14.1		≤ 20	0.176		0.010
1,2,4-Trichlorobenzene	MS	AverageRF	% RSD	9.0		≤ 20	0.359		0.010
Naphthalene	MS	AverageRF	% RSD	10.4		≤ 20	0.909		0.700
4-Chloroaniline	MS	AverageRF	% RSD	9.9		≤ 20	0.367		0.010
Hexachlorobutadiene	MS	AverageRF	% RSD	5.5		≤ 20	0.236		0.010
4-Chloro-3-methylphenol	MS	AverageRF	% RSD	7.8		≤ 20	0.267		0.010
2-Methylnaphthalene	MS	AverageRF	% RSD	12.4		≤ 20	0.588		0.400
2,4,6-Trichlorophenol	MS	AverageRF	% RSD	11.5		≤ 20	0.445		0.200
2,4,5-Trichlorophenol	MS	AverageRF	% RSD	5.5		≤ 20	0.504		0.200
2-Chloronaphthalene	MS	AverageRF	% RSD	4.6		≤ 20	1.28		0.800
Acenaphthene	MS	AverageRF	% RSD	4.6		≤ 20	1.07		0.900
2-Nitroaniline	MS	AverageRF	% RSD	4.8		≤ 20	0.324		0.010
Acenaphthylene	MS	AverageRF	% RSD	4.7		≤ 20	1.96		0.900
Dimethyl Phthalate	MS	AverageRF	% RSD	3.4		≤ 20	1.47		0.010
2,6-Dinitrotoluene	MS	AverageRF	% RSD	7.6		≤ 20	0.350		0.200
3-Nitroaniline	MS	AverageRF	% RSD	4.4		≤ 20	0.371		0.010
2,4-Dinitrophenol	MS	Quadratic	COD	0.996		≥ 0.990	0.222		0.010
Dibenzofuran	MS	AverageRF	% RSD	5.4		≤ 20	1.73		0.800
4-Nitrophenol	MS	AverageRF	% RSD	12.9		≤ 20	0.209		0.010
2,4-Dinitrotoluene	MS	AverageRF	% RSD	7.4		≤ 20	0.457		0.200
Fluorene	MS	AverageRF	% RSD	4.4		≤ 20	1.31		0.900
4-Chlorophenyl Phenyl Ether	MS	AverageRF	% RSD	4.8		≤ 20	0.692		0.400
Diethyl Phthalate	MS	AverageRF	% RSD	3.1		≤ 20	1.52		0.010

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated **Service Request:** K1410441
Project: JBLM-YRC/194-8468 **Calibration Date:** 09/30/2014

Initial Calibration Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration ID: CAL13580 **Column:** MS
Instrument ID: MS07

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	11.8		≤ 20	0.393		0.010
2-Methyl-4,6-dinitrophenol	MS	AverageRF	% RSD	13.9		≤ 20	0.307		0.010
N-Nitrosodiphenylamine	MS	AverageRF	% RSD	3.1		≤ 20	0.982		0.010
1,2-Diphenylhydrazine	MS	AverageRF	% RSD	7.9		≤ 20	1.24		0.010
4-Bromophenyl Phenyl Ether	MS	AverageRF	% RSD	7.4		≤ 20	0.255		0.100
Hexachlorobenzene	MS	AverageRF	% RSD	5.1		≤ 20	0.340		0.100
Pentachlorophenol	MS	Quadratic	COD	0.997		≥ 0.990	0.150		0.050
Phenanthrene	MS	AverageRF	% RSD	10.7		≤ 20	0.975		0.700
Anthracene	MS	AverageRF	% RSD	9.4		≤ 20	0.989		0.700
Carbazole	MS	AverageRF	% RSD	6.1		≤ 20	0.947		0.010
Di-n-butyl Phthalate	MS	AverageRF	% RSD	8.4		≤ 20	1.25		0.010
Fluoranthene	MS	AverageRF	% RSD	8.1		≤ 20	1.10		0.600
Pyrene	MS	AverageRF	% RSD	5.2		≤ 20	1.18		0.600
Butyl Benzyl Phthalate	MS	AverageRF	% RSD	6.8		≤ 20	0.544		0.010
3,3'-Dichlorobenzidine	MS	AverageRF	% RSD	7.8		≤ 20	0.443		0.010
Benz(a)anthracene	MS	AverageRF	% RSD	4.6		≤ 20	1.01		0.800
Chrysene	MS	AverageRF	% RSD	2.5		≤ 20	0.994		0.700
Bis(2-ethylhexyl) Phthalate	MS	AverageRF	% RSD	9.9		≤ 20	0.716		0.010
Di-n-octyl Phthalate	MS	AverageRF	% RSD	11.6		≤ 20	1.31		0.010
Benzo(b)fluoranthene	MS	AverageRF	% RSD	8.8		≤ 20	0.975		0.700
Benzo(k)fluoranthene	MS	AverageRF	% RSD	5.7		≤ 20	0.954		0.700
Benzo(a)pyrene	MS	AverageRF	% RSD	4.6		≤ 20	0.945		0.700
Indeno(1,2,3-cd)pyrene	MS	AverageRF	% RSD	8.8		≤ 20	0.852		0.500
Dibenz(a,h)anthracene	MS	AverageRF	% RSD	9.4		≤ 20	0.878		0.400
Benzo(g,h,i)perylene	MS	AverageRF	% RSD	4.2		≤ 20	0.935		0.500
2-Fluorophenol	SURR	AverageRF	% RSD	6.2		≤ 20	1.15		0.010
Phenol-d6	SURR	AverageRF	% RSD	8.0		≤ 20	1.35		0.010
Nitrobenzene-d5	SURR	AverageRF	% RSD	5.5		≤ 20	1.21		0.010
2-Fluorobiphenyl	SURR	AverageRF	% RSD	4.1		≤ 20	1.51		0.010
2,4,6-Tribromophenol	SURR	AverageRF	% RSD	6.8		≤ 20	0.220		0.010
Terphenyl-d14	SURR	AverageRF	% RSD	4.8		≤ 20	0.874		0.010

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/30/2014
Date Analyzed: 10/01/2014

Second Source Calibration Verification
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270D

Calibration ID: CAL13580
Units: ug/ml

File ID: J:\MS07\DATA\093014\0930F013.D
J:\MS07\DATA\093014\0930F015.D

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
N-Nitrosodimethylamine	80	65	0.557	0.449	-19	NA	± 30 %	AverageRF
Bis(2-chloroethyl) Ether	80	78	1.10	1.08	-2	NA	± 30 %	AverageRF
Phenol	80	77	1.30	1.25	-4	NA	± 30 %	AverageRF
2-Chlorophenol	80	78	1.29	1.25	-3	NA	± 30 %	AverageRF
1,3-Dichlorobenzene	80	73	1.50	1.36	-9	NA	± 30 %	AverageRF
1,4-Dichlorobenzene	80	74	1.49	1.38	-8	NA	± 30 %	AverageRF
1,2-Dichlorobenzene	80	75	1.41	1.31	-7	NA	± 30 %	AverageRF
Benzyl alcohol	80	82	0.658	0.677	3	NA	± 30 %	AverageRF
Bis(2-chloroisopropyl) Ether	80	63	1.15	0.899	-22	NA	± 30 %	AverageRF
2-Methylphenol	80	79	0.857	0.843	-2	NA	± 30 %	AverageRF
Hexachloroethane	80	74	0.605	0.560	-7	NA	± 30 %	AverageRF
N-Nitrosodi-n-propylamine	80	70	0.745	0.649	-13	NA	± 30 %	AverageRF
4-Methylphenol	80	77	1.23	1.19	-3	NA	± 30 %	AverageRF
Nitrobenzene	80	74	1.11	1.03	-7	NA	± 30 %	AverageRF
Isophorone	80	74	0.593	0.549	-7	NA	± 30 %	AverageRF
2-Nitrophenol	80	85	0.203	0.215	6	NA	± 30 %	AverageRF
2,4-Dimethylphenol	80	77	0.267	0.257	-4	NA	± 30 %	AverageRF
Bis(2-chloroethoxy)methane	80	77	0.381	0.369	-3	NA	± 30 %	AverageRF
2,4-Dichlorophenol	80	82	0.299	0.306	2	NA	± 30 %	AverageRF
Benzoic acid	80	81	0.176	0.179	2	NA	± 30 %	AverageRF
1,2,4-Trichlorobenzene	80	79	0.359	0.352	-2	NA	± 30 %	AverageRF
Naphthalene	80	78	0.909	0.884	-3	NA	± 30 %	AverageRF
4-Chloroaniline	80	71	0.367	0.325	-11	NA	± 30 %	AverageRF
Hexachlorobutadiene	80	79	0.236	0.233	-1	NA	± 30 %	AverageRF
4-Chloro-3-methylphenol	80	79	0.267	0.264	-1	NA	± 30 %	AverageRF
2-Methylnaphthalene	80	77	0.588	0.565	-4	NA	± 30 %	AverageRF
2,4,6-Trichlorophenol	80	81	0.445	0.449	1	NA	± 30 %	AverageRF
2,4,5-Trichlorophenol	80	83	0.504	0.522	4	NA	± 30 %	AverageRF
2-Chloronaphthalene	80	75	1.28	1.20	-7	NA	± 30 %	AverageRF
Acenaphthene	80	79	1.07	1.05	-1	NA	± 30 %	AverageRF
2-Nitroaniline	80	82	0.324	0.331	2	NA	± 30 %	AverageRF
Acenaphthylene	80	73	1.96	1.80	-8	NA	± 30 %	AverageRF
Dimethyl Phthalate	80	75	1.47	1.38	-6	NA	± 30 %	AverageRF
2,6-Dinitrotoluene	80	82	0.350	0.358	2	NA	± 30 %	AverageRF
3-Nitroaniline	80	78	0.371	0.360	-3	NA	± 30 %	AverageRF
2,4-Dinitrophenol	80	81	0.222	0.235	NA	1	± 30 %	Quadratic
Dibenzofuran	80	75	1.73	1.61	-7	NA	± 30 %	AverageRF
4-Nitrophenol	80	81	0.209	0.212	1	NA	± 30 %	AverageRF
2,4-Dinitrotoluene	80	83	0.457	0.473	3	NA	± 30 %	AverageRF

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Calibration Date: 09/30/2014
Date Analyzed: 10/01/2014

Second Source Calibration Verification
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270D

Calibration ID: CAL13580
Units: ug/ml

Analyte Name	Expected	Result	Average RF	SSV RF	%D	%Drift	Criteria	Curve Fit
Fluorene	80	78	1.31	1.28	-2	NA	± 30 %	AverageRF
4-Chlorophenyl Phenyl Ether	80	76	0.692	0.658	-5	NA	± 30 %	AverageRF
Diethyl Phthalate	80	76	1.52	1.45	-5	NA	± 30 %	AverageRF
4-Nitroaniline	80	82	0.393	0.403	2	NA	± 30 %	AverageRF
2-Methyl-4,6-dinitrophenol	80	81	0.307	0.310	1	NA	± 30 %	AverageRF
N-Nitrosodiphenylamine	80	74	0.982	0.907	-8	NA	± 30 %	AverageRF
1,2-Diphenylhydrazine	80	75	1.24	1.17	-6	NA	± 30 %	AverageRF
4-Bromophenyl Phenyl Ether	80	73	0.255	0.233	-9	NA	± 30 %	AverageRF
Hexachlorobenzene	80	75	0.340	0.320	-6	NA	± 30 %	AverageRF
Pentachlorophenol	80	77	0.150	0.163	NA	-4	± 30 %	Quadratic
Phenanthrene	80	75	0.975	0.918	-6	NA	± 30 %	AverageRF
Anthracene	80	72	0.989	0.894	-10	NA	± 30 %	AverageRF
Carbazole	80	78	0.947	0.923	-2	NA	± 30 %	AverageRF
Di-n-butyl Phthalate	80	82	1.25	1.28	3	NA	± 30 %	AverageRF
Fluoranthene	80	77	1.10	1.06	-3	NA	± 30 %	AverageRF
Pyrene	80	76	1.18	1.12	-5	NA	± 30 %	AverageRF
Butyl Benzyl Phthalate	80	85	0.544	0.577	6	NA	± 30 %	AverageRF
3,3'-Dichlorobenzidine	80	78	0.443	0.434	-2	NA	± 30 %	AverageRF
Benz(a)anthracene	80	78	1.01	0.980	-3	NA	± 30 %	AverageRF
Chrysene	80	80	0.994	0.994	0	NA	± 30 %	AverageRF
Bis(2-ethylhexyl) Phthalate	80	88	0.716	0.784	9	NA	± 30 %	AverageRF
Di-n-octyl Phthalate	80	85	1.31	1.39	6	NA	± 30 %	AverageRF
Benzo(b)fluoranthene	80	88	0.975	1.08	11	NA	± 30 %	AverageRF
Benzo(k)fluoranthene	80	88	0.954	1.04	10	NA	± 30 %	AverageRF
Benzo(a)pyrene	80	79	0.945	0.935	-1	NA	± 30 %	AverageRF
Indeno(1,2,3-cd)pyrene	80	84	0.852	0.895	5	NA	± 30 %	AverageRF
Dibenz(a,h)anthracene	80	82	0.878	0.898	2	NA	± 30 %	AverageRF
Benzo(g,h,i)perylene	80	78	0.935	0.914	-2	NA	± 30 %	AverageRF

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Date Analyzed: 10/06/2014

Continuing Calibration Verification Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270D

Calibration Date: 09/30/2014
Calibration ID: CAL13580
Analysis Lot: KWG1413620
Units: ug/ml

File ID: J:\MS07\DATA\100614\1006F006.D

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
N-Nitrosodimethylamine	80	96	0.010	0.557	0.668	20	NA	± 20 %	AverageRF
Bis(2-chloroethyl) Ether	80	72	0.700	1.10	0.997	-10	NA	± 20 %	AverageRF
Phenol	80	74	0.800	1.30	1.21	-7	NA	± 20 %	AverageRF
2-Chlorophenol	80	79	0.800	1.29	1.27	-1	NA	± 20 %	AverageRF
1,3-Dichlorobenzene	80	76	0.010	1.50	1.42	-5	NA	± 20 %	AverageRF
1,4-Dichlorobenzene	80	79	0.010	1.49	1.48	-1	NA	± 20 %	AverageRF
1,2-Dichlorobenzene	80	79	0.010	1.41	1.38	-2	NA	± 20 %	AverageRF
Benzyl alcohol	80	90	0.010	0.658	0.742	13	NA	± 20 %	AverageRF
Bis(2-chloroisopropyl) Ether	80	64	0.010	1.15	0.921	-20	NA	± 20 %	AverageRF
2-Methylphenol	80	79	0.700	0.857	0.842	-2	NA	± 20 %	AverageRF
Hexachloroethane	80	79	0.300	0.605	0.596	-2	NA	± 20 %	AverageRF
N-Nitrosodi-n-propylamine	80	76	0.500	0.745	0.711	-5	NA	± 20 %	AverageRF
4-Methylphenol	80	80	0.600	1.23	1.23	0	NA	± 20 %	AverageRF
Nitrobenzene	80	83	0.200	1.11	1.15	4	NA	± 20 %	AverageRF
Isophorone	80	81	0.400	0.593	0.603	2	NA	± 20 %	AverageRF
2-Nitrophenol	80	87	0.100	0.203	0.222	9	NA	± 20 %	AverageRF
2,4-Dimethylphenol	80	84	0.200	0.267	0.280	5	NA	± 20 %	AverageRF
Bis(2-chloroethoxy)methane	80	76	0.300	0.381	0.365	-4	NA	± 20 %	AverageRF
2,4-Dichlorophenol	80	86	0.200	0.299	0.320	7	NA	± 20 %	AverageRF
Benzoic acid	80	85	0.010	0.176	0.187	6	NA	± 20 %	AverageRF
1,2,4-Trichlorobenzene	80	79	0.010	0.359	0.355	-1	NA	± 20 %	AverageRF
Naphthalene	80	79	0.700	0.909	0.898	-1	NA	± 20 %	AverageRF
4-Chloroaniline	80	81	0.010	0.367	0.370	1	NA	± 20 %	AverageRF
Hexachlorobutadiene	80	90	0.010	0.236	0.266	13	NA	± 20 %	AverageRF
4-Chloro-3-methylphenol	80	83	0.010	0.267	0.277	4	NA	± 20 %	AverageRF
2-Methylnaphthalene	80	82	0.400	0.588	0.603	2	NA	± 20 %	AverageRF
2,4,6-Trichlorophenol	80	86	0.200	0.445	0.481	8	NA	± 20 %	AverageRF
2,4,5-Trichlorophenol	80	85	0.200	0.504	0.539	7	NA	± 20 %	AverageRF
2-Chloronaphthalene	80	80	0.800	1.28	1.29	0	NA	± 20 %	AverageRF
Acenaphthene	80	82	0.900	1.07	1.09	2	NA	± 20 %	AverageRF
2-Nitroaniline	80	80	0.010	0.324	0.324	0	NA	± 20 %	AverageRF
Acenaphthylene	80	78	0.900	1.96	1.92	-2	NA	± 20 %	AverageRF
Dimethyl Phthalate	80	79	0.010	1.47	1.45	-1	NA	± 20 %	AverageRF
2,6-Dinitrotoluene	80	75	0.200	0.350	0.330	-6	NA	± 20 %	AverageRF
3-Nitroaniline	80	72	0.010	0.371	0.335	-10	NA	± 20 %	AverageRF
2,4-Dinitrophenol	80	70	0.010	0.222	0.197	NA	-12	± 20 %	Quadratic
Dibenzofuran	80	78	0.800	1.73	1.68	-3	NA	± 20 %	AverageRF
4-Nitrophenol	80	73	0.010	0.209	0.190	-9	NA	± 20 %	AverageRF

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468

Service Request: K1410441
Date Analyzed: 10/06/2014

Continuing Calibration Verification Summary
Semi-Volatile Organic Compounds by GC/MS

Calibration Type: Internal Standard
Analysis Method: 8270D

Calibration Date: 09/30/2014
Calibration ID: CAL13580
Analysis Lot: KWG1413620
Units: ug/ml

Analyte Name	Expected	Result	Min RF	Average RF	CCV RF	%D	%Drift	Criteria	Curve Fit
2,4-Dinitrotoluene	80	69	0.200	0.457	0.392	-14	NA	± 20 %	AverageRF
Fluorene	80	76	0.900	1.31	1.24	-5	NA	± 20 %	AverageRF
4-Chlorophenyl Phenyl Ether	80	81	0.400	0.692	0.700	1	NA	± 20 %	AverageRF
Diethyl Phthalate	80	73	0.010	1.52	1.38	-9	NA	± 20 %	AverageRF
4-Nitroaniline	80	65	0.010	0.393	0.318	-19	NA	± 20 %	AverageRF
2-Methyl-4,6-dinitrophenol	80	71	0.010	0.307	0.274	-11	NA	± 20 %	AverageRF
N-Nitrosodiphenylamine	80	67	0.010	0.982	0.826	-16	NA	± 20 %	AverageRF
1,2-Diphenylhydrazine	80	71	0.010	1.24	1.10	-11	NA	± 20 %	AverageRF
4-Bromophenyl Phenyl Ether	80	93	0.100	0.255	0.296	16	NA	± 20 %	AverageRF
Hexachlorobenzene	80	90	0.100	0.340	0.384	13	NA	± 20 %	AverageRF
Pentachlorophenol	80	83	0.050	0.150	0.179	NA	4	± 20 %	Quadratic
Phenanthrene	80	80	0.700	0.975	0.981	1	NA	± 20 %	AverageRF
Anthracene	80	83	0.700	0.989	1.03	4	NA	± 20 %	AverageRF
Carbazole	80	80	0.010	0.947	0.947	0	NA	± 20 %	AverageRF
Di-n-butyl Phthalate	80	78	0.010	1.25	1.22	-2	NA	± 20 %	AverageRF
Fluoranthene	80	82	0.600	1.10	1.13	3	NA	± 20 %	AverageRF
Pyrene	80	77	0.600	1.18	1.14	-4	NA	± 20 %	AverageRF
Butyl Benzyl Phthalate	80	89	0.010	0.544	0.606	11	NA	± 20 %	AverageRF
3,3'-Dichlorobenzidine	80	82	0.010	0.443	0.455	3	NA	± 20 %	AverageRF
Benz(a)anthracene	80	83	0.800	1.01	1.05	4	NA	± 20 %	AverageRF
Chrysene	80	82	0.700	0.994	1.02	2	NA	± 20 %	AverageRF
Bis(2-ethylhexyl) Phthalate	80	87	0.010	0.716	0.783	9	NA	± 20 %	AverageRF
Di-n-octyl Phthalate	80	84	0.010	1.31	1.38	5	NA	± 20 %	AverageRF
Benzo(b)fluoranthene	80	88	0.700	0.975	1.07	10	NA	± 20 %	AverageRF
Benzo(k)fluoranthene	80	86	0.700	0.954	1.02	7	NA	± 20 %	AverageRF
Benzo(a)pyrene	80	88	0.700	0.945	1.04	10	NA	± 20 %	AverageRF
Indeno(1,2,3-cd)pyrene	80	92	0.500	0.852	0.982	15	NA	± 20 %	AverageRF
Dibenz(a,h)anthracene	80	92	0.400	0.878	1.01	15	NA	± 20 %	AverageRF
Benzo(g,h,i)perylene	80	89	0.500	0.935	1.04	11	NA	± 20 %	AverageRF
2-Fluorophenol	80	78	0.010	1.15	1.12	-3	NA	± 20 %	AverageRF
Phenol-d6	80	76	0.010	1.35	1.28	-5	NA	± 20 %	AverageRF
Nitrobenzene-d5	80	81	0.010	1.21	1.23	2	NA	± 20 %	AverageRF
2-Fluorobiphenyl	80	82	0.010	1.51	1.54	2	NA	± 20 %	AverageRF
2,4,6-Tribromophenol	80	88	0.010	0.220	0.243	11	NA	± 20 %	AverageRF
Terphenyl-d14	80	80	0.010	0.874	0.870	-1	NA	± 20 %	AverageRF

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

† SPCC Compound **‡ CCC Compound**

Client: Tetra Tech, Incorporated **Service Request:** K1410441
Project: JBLM-YRC/194-8468

Analysis Run Log
Semi-Volatile Organic Compounds by GC/MS

Analysis Method: 8270D **Analysis Lot:** KWG1413620
Instrument ID: MS07

File ID	Sample Name	Lab Code	Date Analysis Started	Start Time	Q	Date Analysis Finished	Finish Time
1006F005.D	GC/MS Tuning - Decafluorotriphenylphosph	KWG1413620-1	10/6/2014	19:48		10/6/2014	20:19
1006F006.D	Continuing Calibration Verification	KWG1413620-2	10/6/2014	20:31		10/6/2014	21:02
1006F007.D	Method Blank	KWG1413202-3	10/6/2014	21:29		10/6/2014	22:00
1006F008.D	Lab Control Sample	KWG1413202-1	10/6/2014	22:09		10/6/2014	22:40
1006F009.D	Duplicate Lab Control Sample	KWG1413202-2	10/6/2014	22:50		10/6/2014	23:21
1006F010.D	ZZZZZZ	ZZZZZZ	10/6/2014	23:31		10/7/2014	00:02
1006F011.D	FTP-1	K1410441-001	10/7/2014	00:12		10/7/2014	00:43
1006F012.D	ZZZZZZ	ZZZZZZ	10/7/2014	00:52		10/7/2014	01:23
1006F013.D	ZZZZZZ	ZZZZZZ	10/7/2014	01:33		10/7/2014	02:04
1006F014.D	ZZZZZZ	ZZZZZZ	10/7/2014	02:13		10/7/2014	02:44
1006F015.D	ZZZZZZ	ZZZZZZ	10/7/2014	02:54		10/7/2014	03:25
1006F016.D	ZZZZZZ	ZZZZZZ	10/7/2014	03:34		10/7/2014	04:05
1006F017.D	ZZZZZZ	ZZZZZZ	10/7/2014	04:15		10/7/2014	04:46
1006F018.D	ZZZZZZ	ZZZZZZ	10/7/2014	04:55		10/7/2014	05:26
1006F019.D	ZZZZZZ	ZZZZZZ	10/7/2014	05:36		10/7/2014	06:07
1006F020.D	ZZZZZZ	ZZZZZZ	10/7/2014	06:16		10/7/2014	06:47
1006F021.D	ZZZZZZ	ZZZZZZ	10/7/2014	06:57		10/7/2014	07:28
1006F022.D	ZZZZZZ	ZZZZZZ	10/7/2014	07:38		10/7/2014	08:09

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

QA/QC Results

Client: Tetra Tech, Incorporated
Project: JBLM-YRC/194-8468
Sample Matrix: Water

Service Request: K1410441
Date Extracted: 09/29/2014

Extraction Prep Log
Semi-Volatile Organic Compounds by GC/MS

Extraction Method: EPA 3520C
Analysis Method: 8270D

Extraction Lot: KWG1413202
Level: Low

Sample Name	Lab Code	Date Collected	Date Received	Sample Amount	Final Volume	% Solids	Note
FTP-1	K1410441-001	09/22/14	09/25/14	1000ml	1ml	NA	
Method Blank	KWG1413202-3	NA	NA	1060ml	1ml	NA	
Lab Control Sample	KWG1413202-1	NA	NA	1000ml	1ml	NA	
Duplicate Lab Control Sample	KWG1413202-2	NA	NA	1000ml	1ml	NA	

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

APPENDIX C

FTP-1 AND TVR/OLD MATES STATISTICS AND LINEAR GRAPHS

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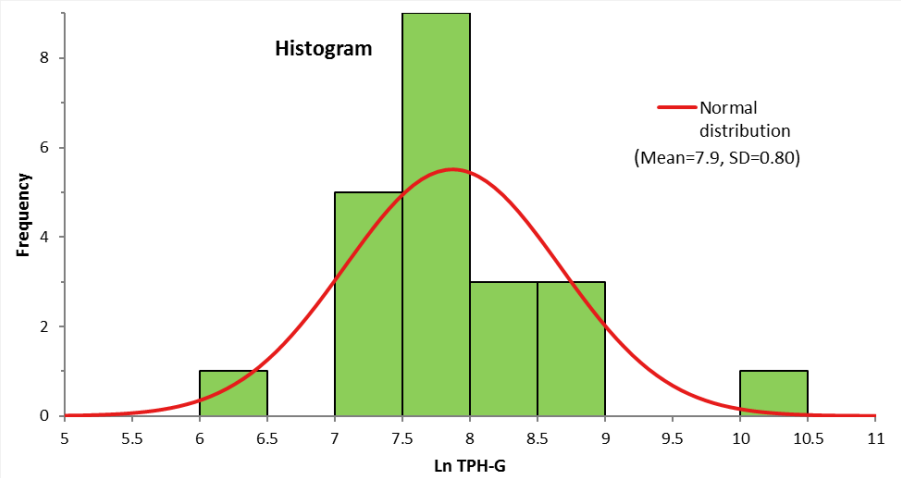
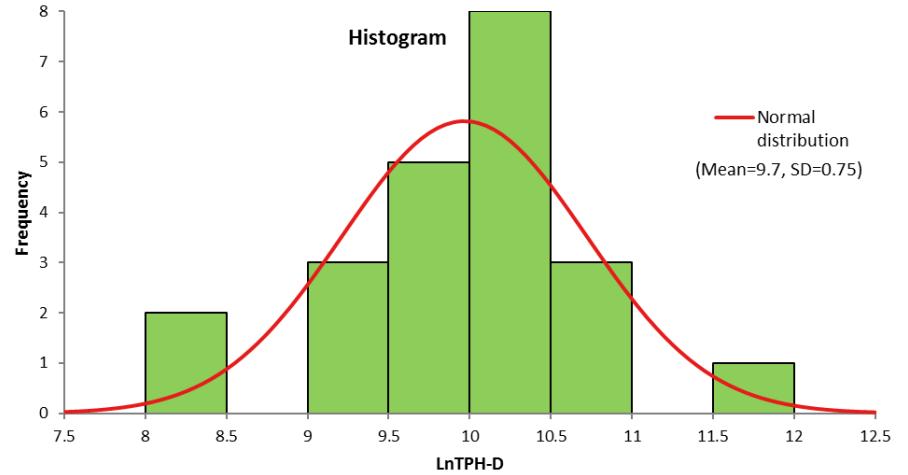
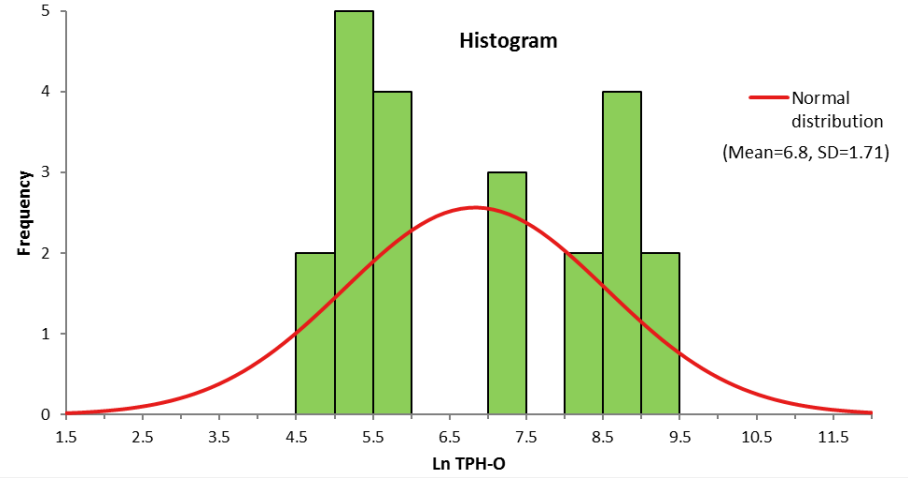
APPENDIX C

FTP-1 AND TVR/OLD MATES STATISTICS GRAPHS
FIRE TRAINING PIT (FTP-1)
YAKIMA TRAINING CENTER, WASHINGTON



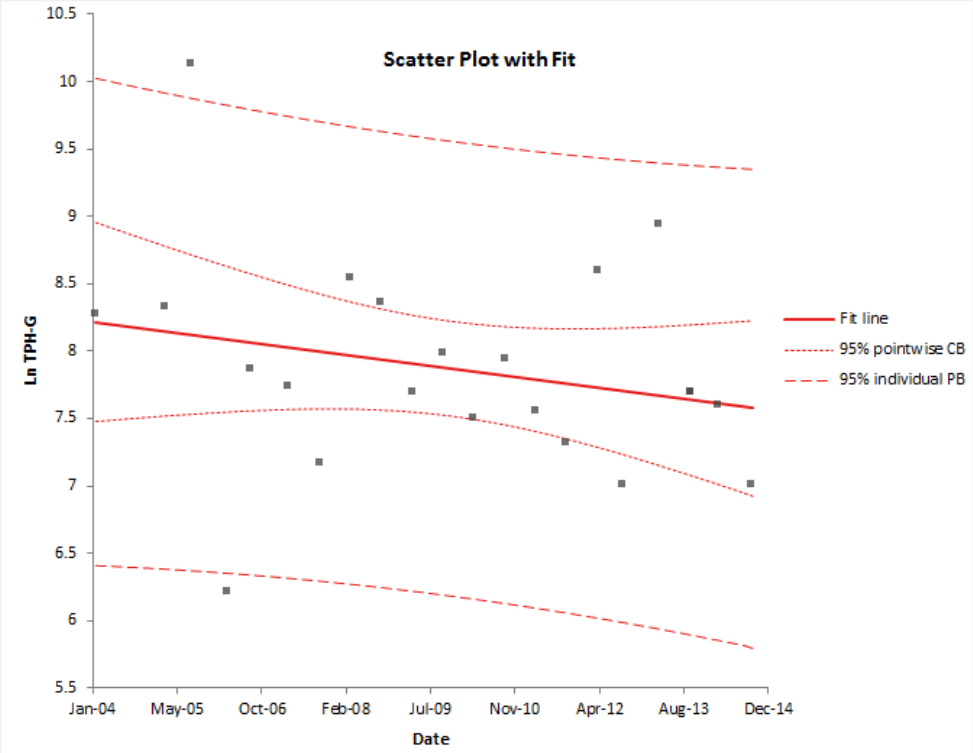


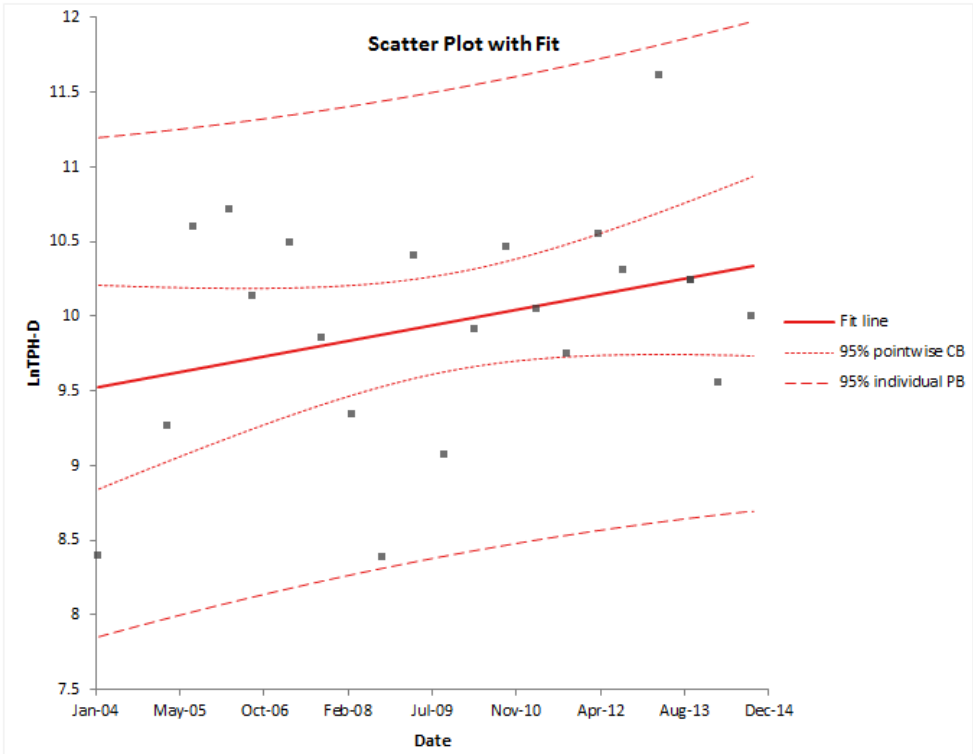


SD = standard deviation

APPENDIX C

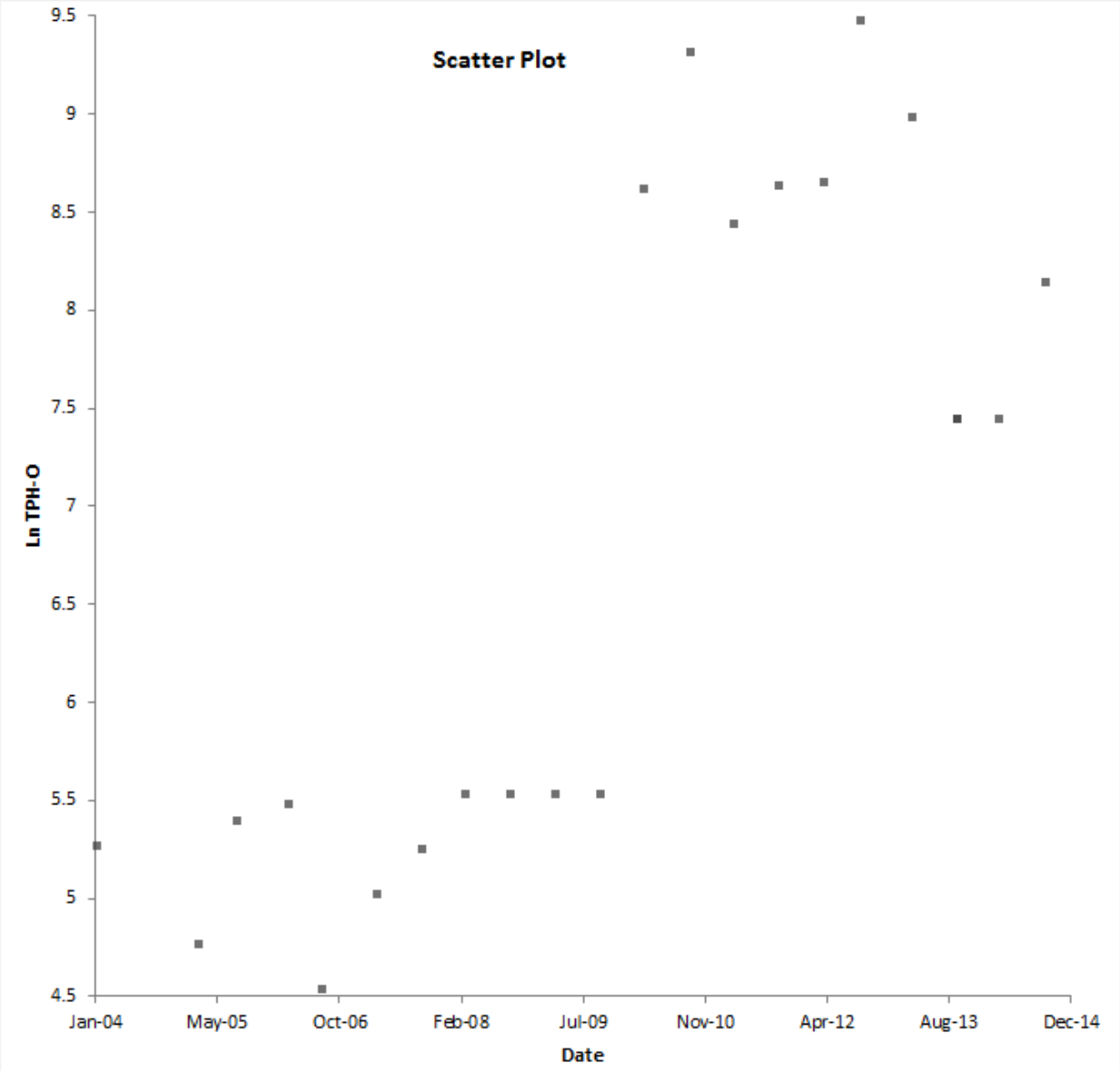
FTP-1 AND TVR/OLD MATES STATISTICS GRAPHS
FIRE TRAINING PIT (FTP-1)
YAKIMA TRAINING CENTER, WASHINGTON





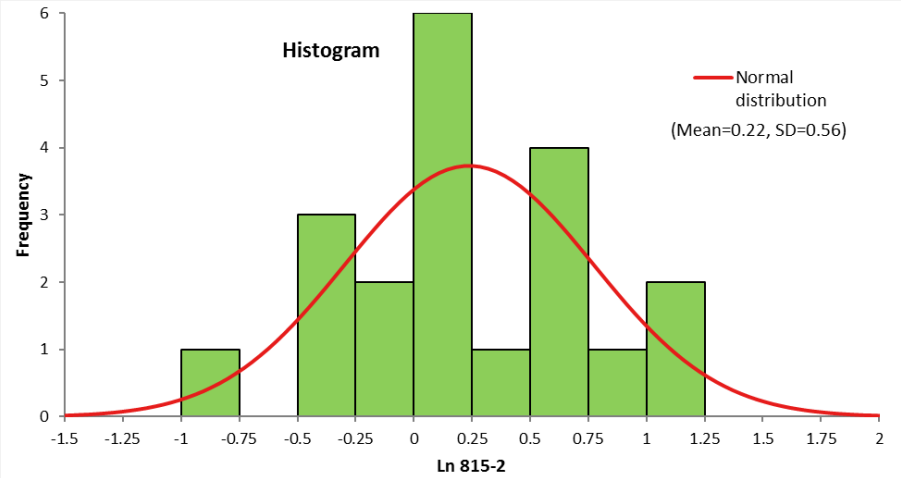
APPENDIX C

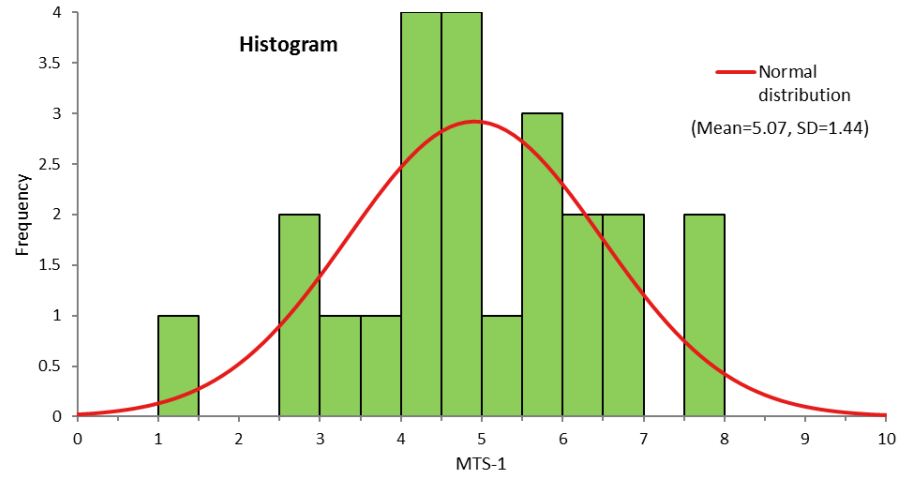
FTP-1 AND TVR/OLD MATES STATISTICS GRAPHS
FIRE TRAINING PIT (FTP-1)
YAKIMA TRAINING CENTER, WASHINGTON

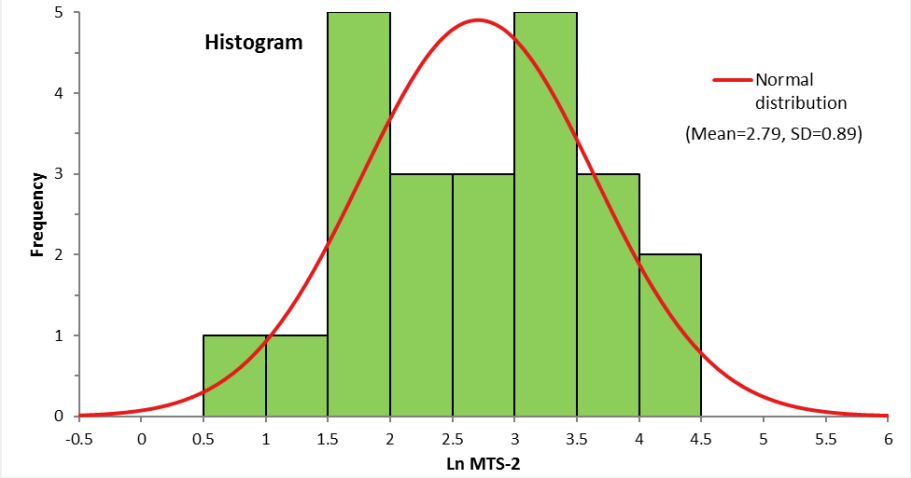


APPENDIX C

FTP-1 AND TVR/OLD MATES STATISTICS GRAPHS
FIRE TRAINING PIT (FTP-1)
YAKIMA TRAINING CENTER, WASHINGTON



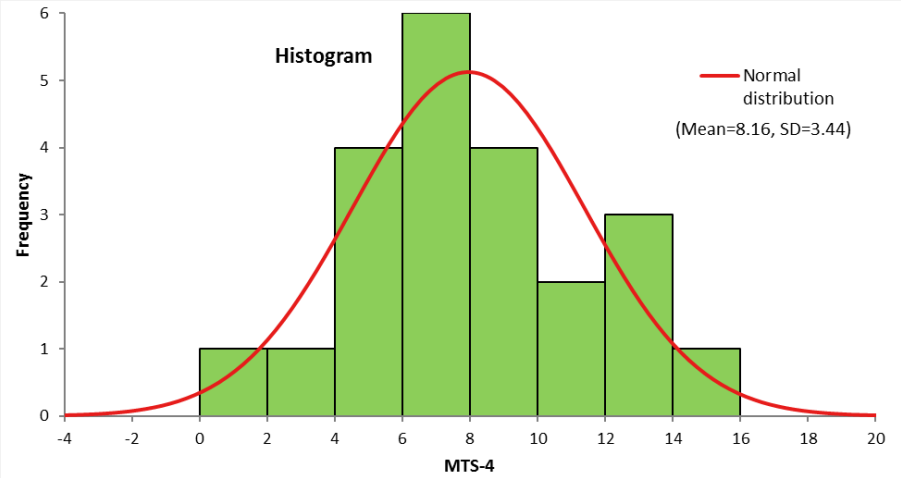


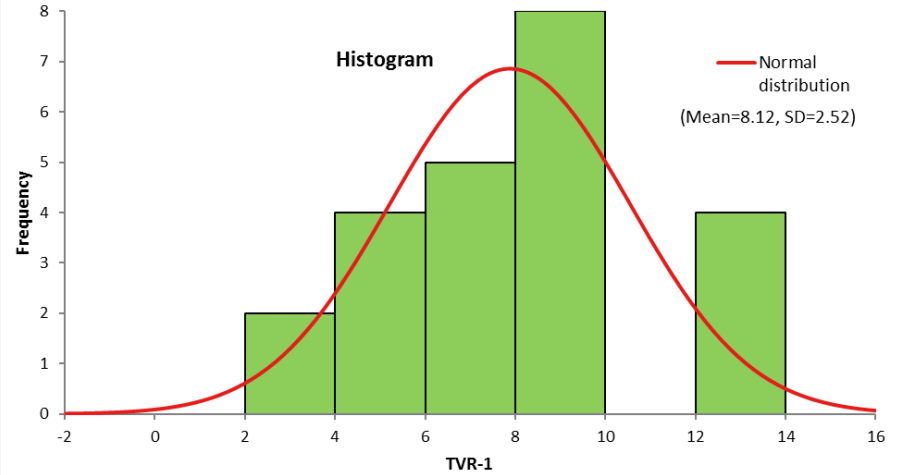


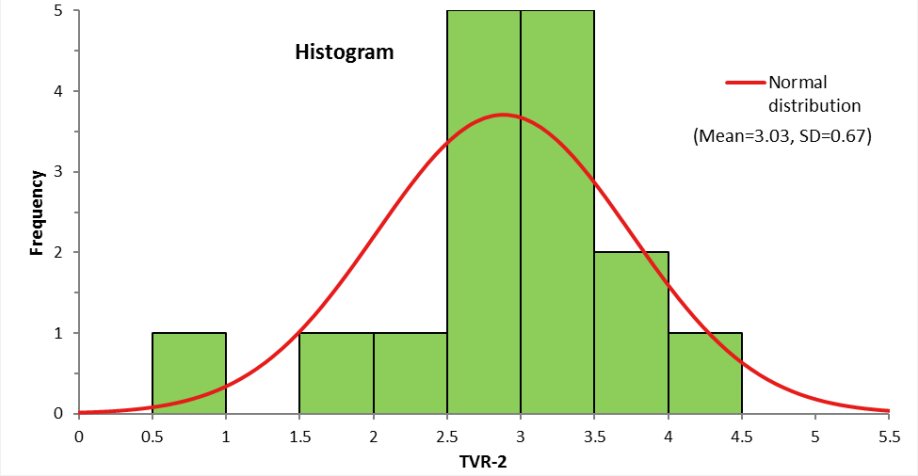
SD = standard deviation

APPENDIX C

FTP-1 AND TVR/OLD MATES STATISTICS GRAPHS
FIRE TRAINING PIT (FTP-1)
YAKIMA TRAINING CENTER, WASHINGTON



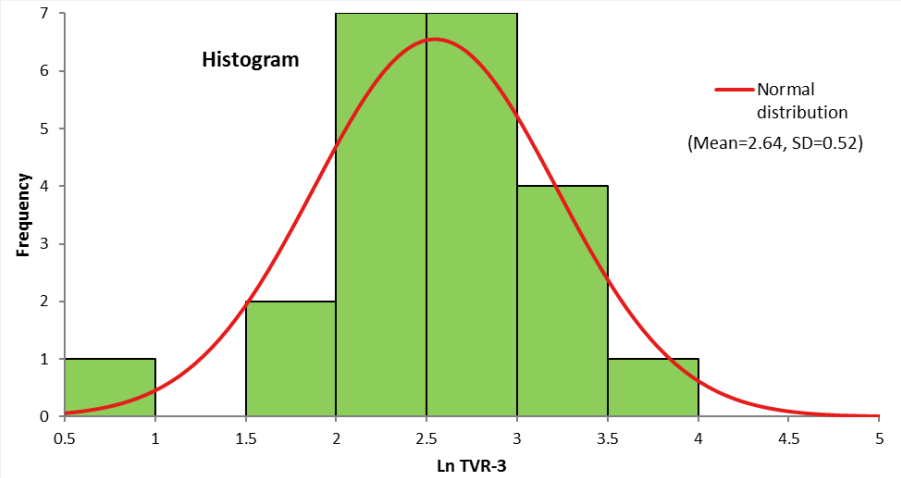


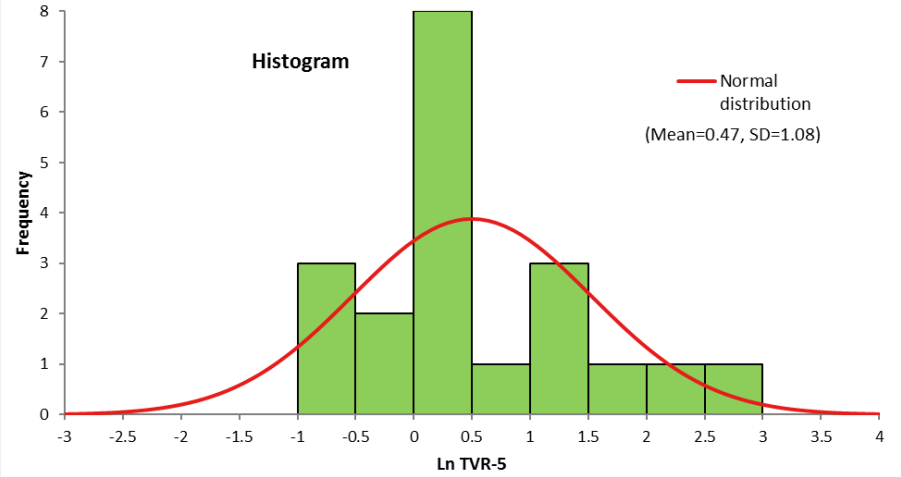


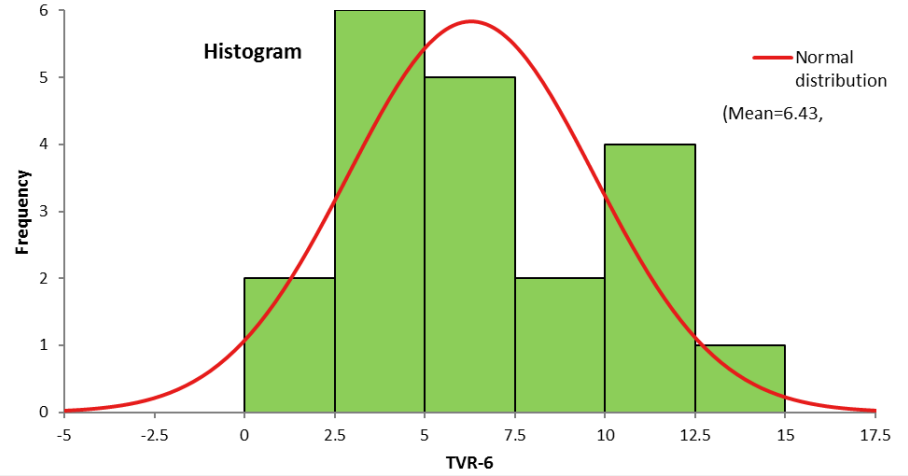
SD = standard deviation

APPENDIX C

FTP-1 AND TVR/OLD MATES STATISTICS GRAPHS
FIRE TRAINING PIT (FTP-1)
YAKIMA TRAINING CENTER, WASHINGTON



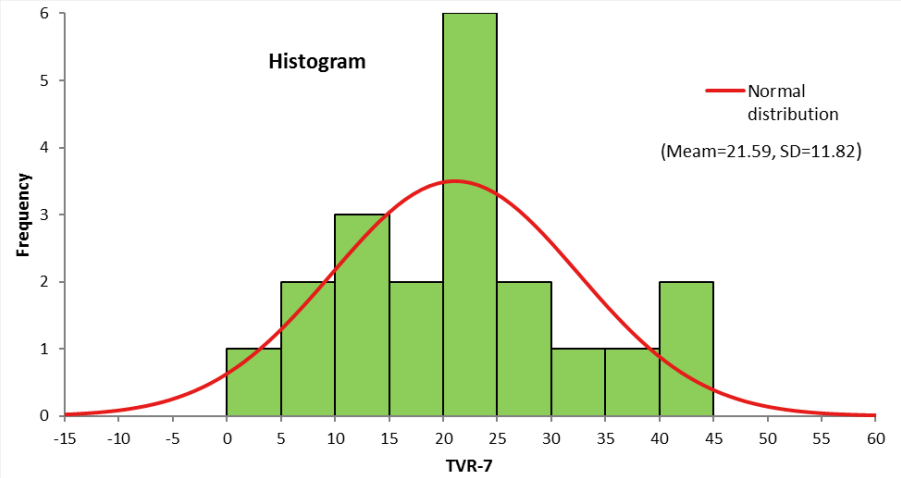




SD = standard deviation

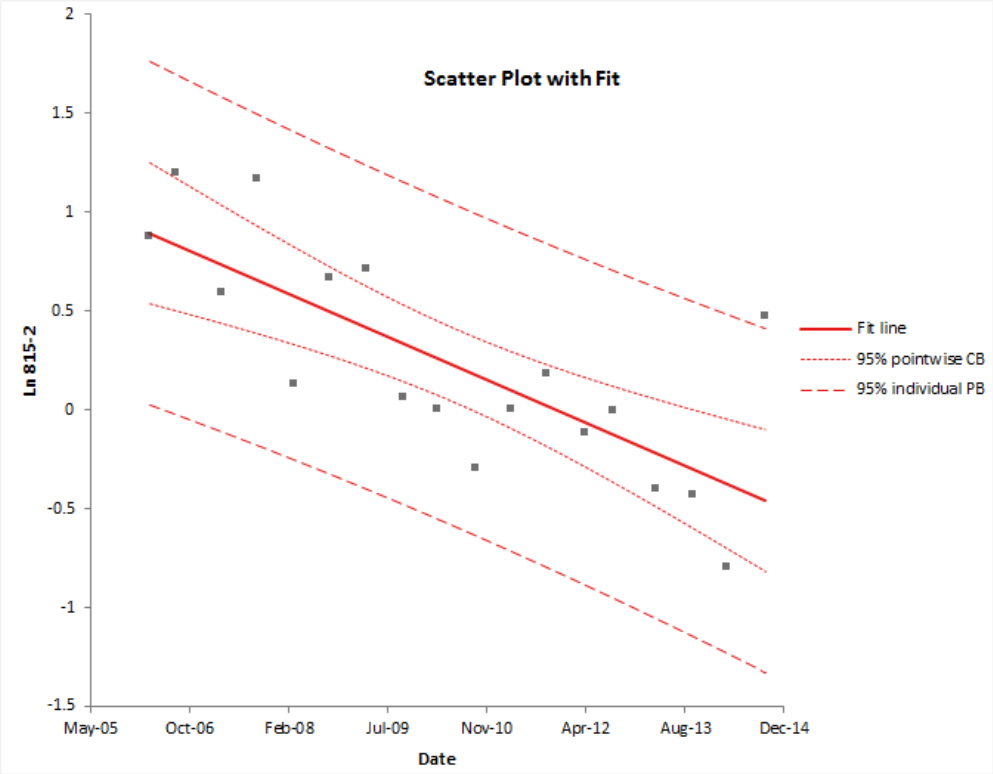
APPENDIX C

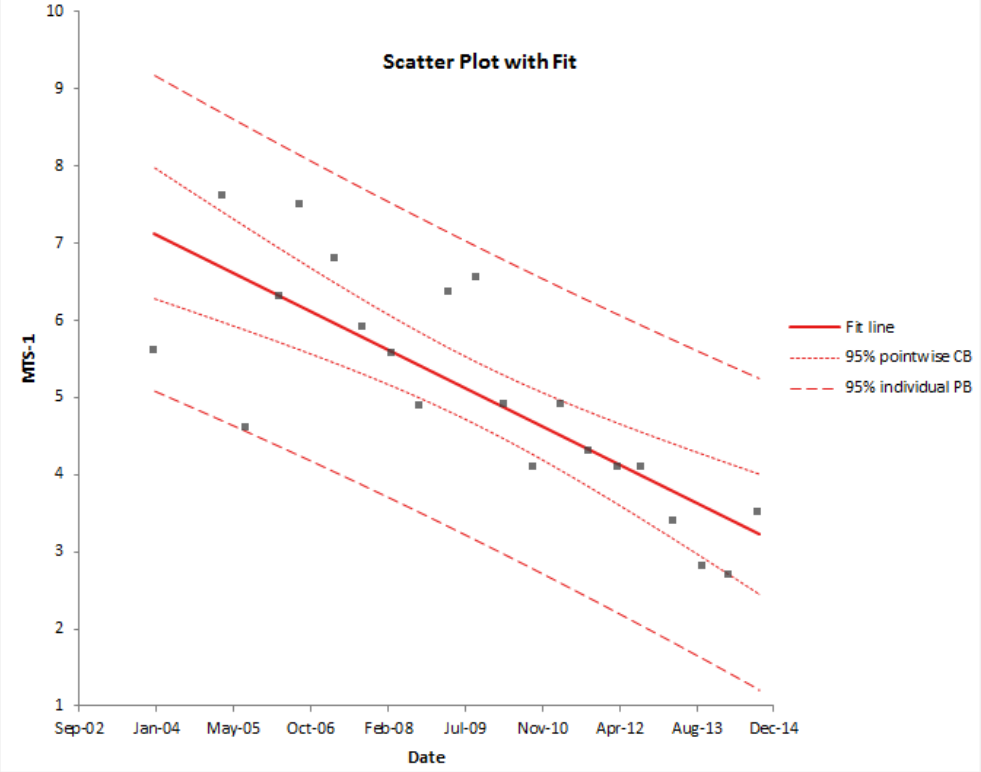
FTP-1 AND TVR/OLD MATES STATISTICS GRAPHS
FIRE TRAINING PIT (FTP-1)
YAKIMA TRAINING CENTER, WASHINGTON



APPENDIX C

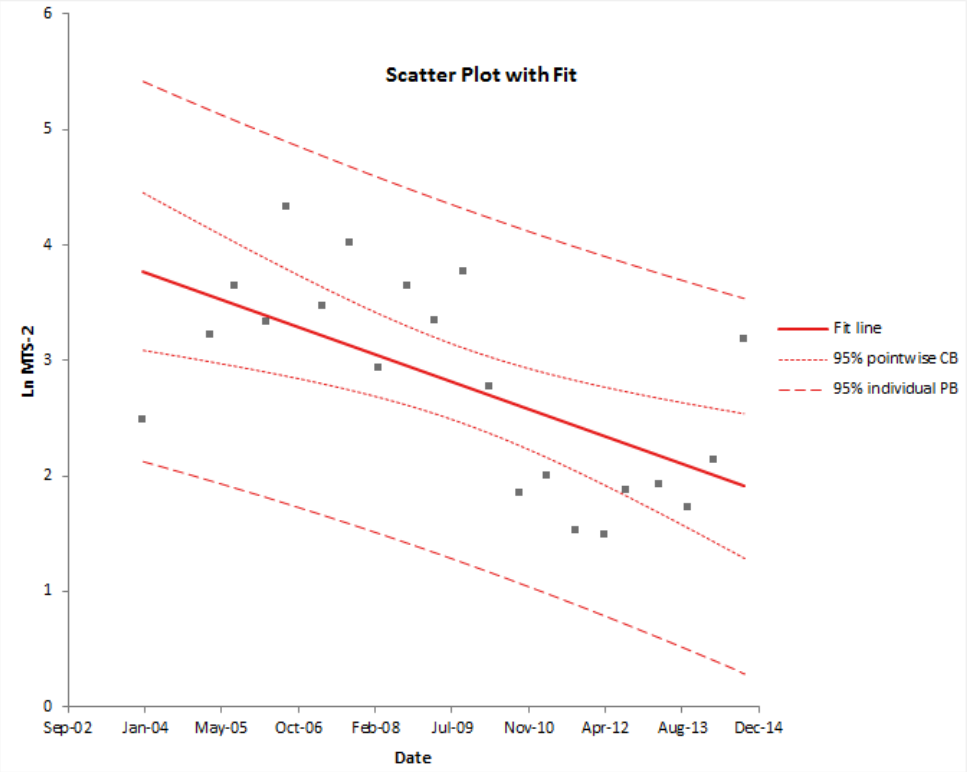
FTP-1 AND TVR/OLD MATES STATISTICS GRAPHS
FIRE TRAINING PIT (FTP-1)
YAKIMA TRAINING CENTER, WASHINGTON

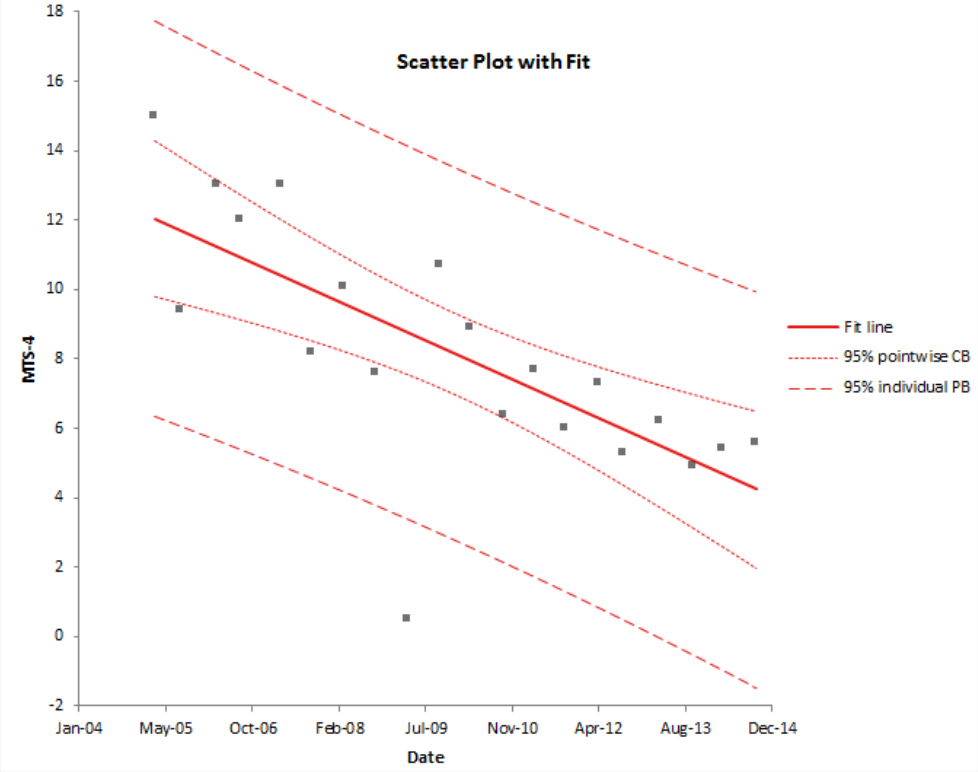




APPENDIX C

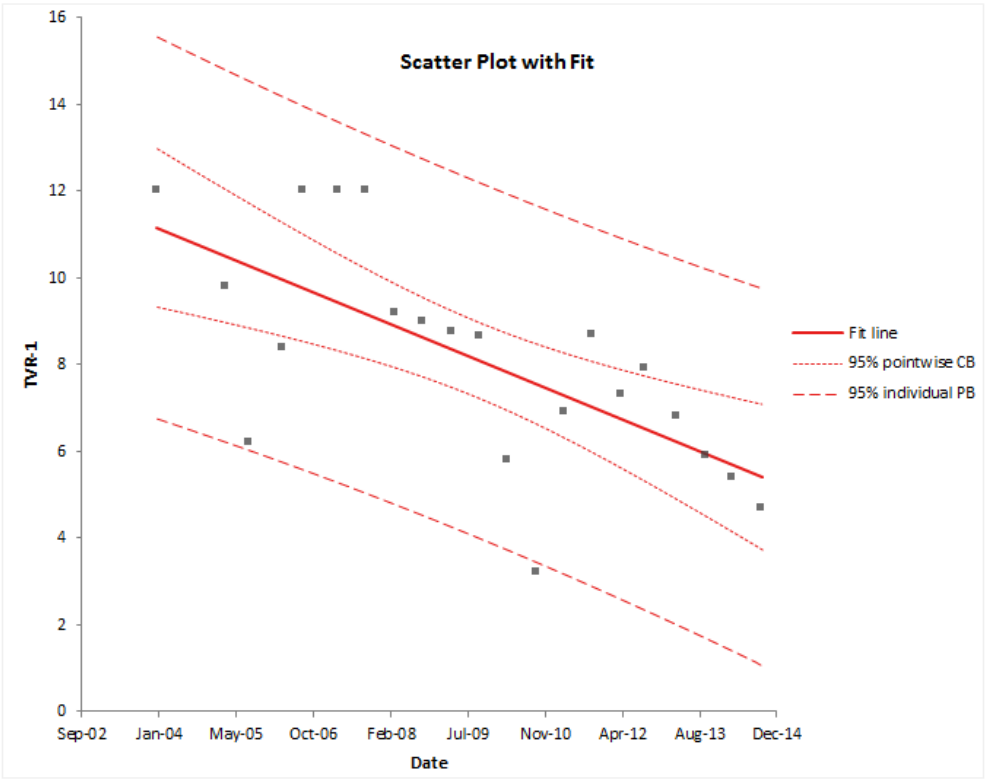
FTP-1 AND TVR/OLD MATES STATISTICS GRAPHS
FIRE TRAINING PIT (FTP-1)
YAKIMA TRAINING CENTER, WASHINGTON

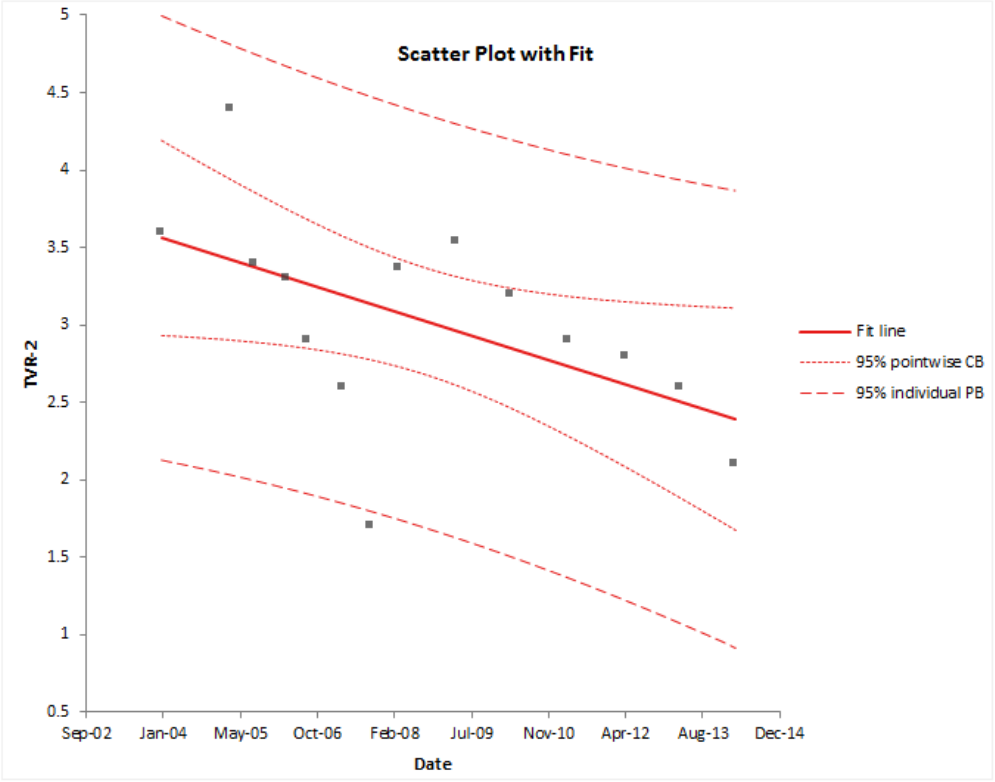




APPENDIX C

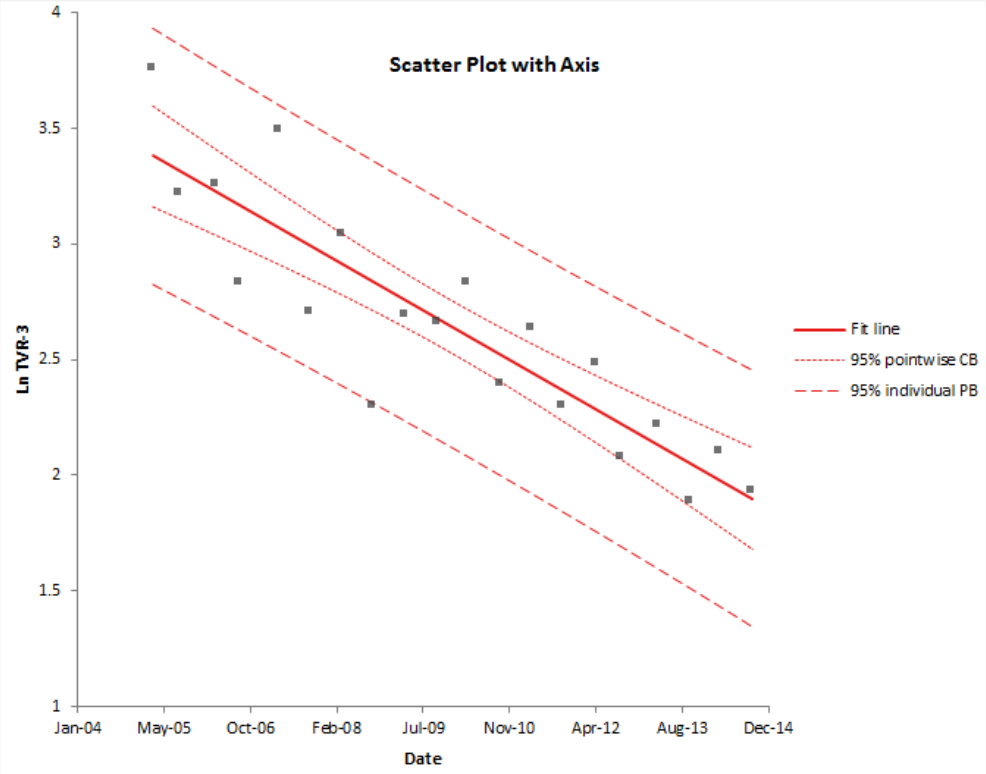
FTP-1 AND TVR/OLD MATES STATISTICS GRAPHS
FIRE TRAINING PIT (FTP-1)
YAKIMA TRAINING CENTER, WASHINGTON

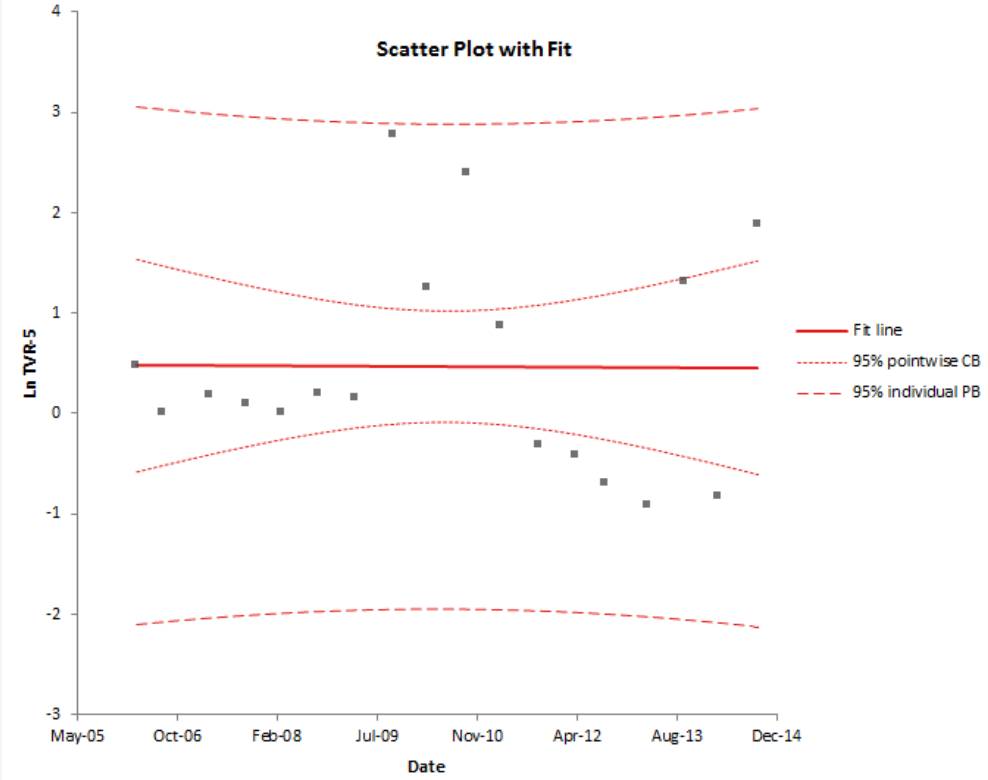




APPENDIX C

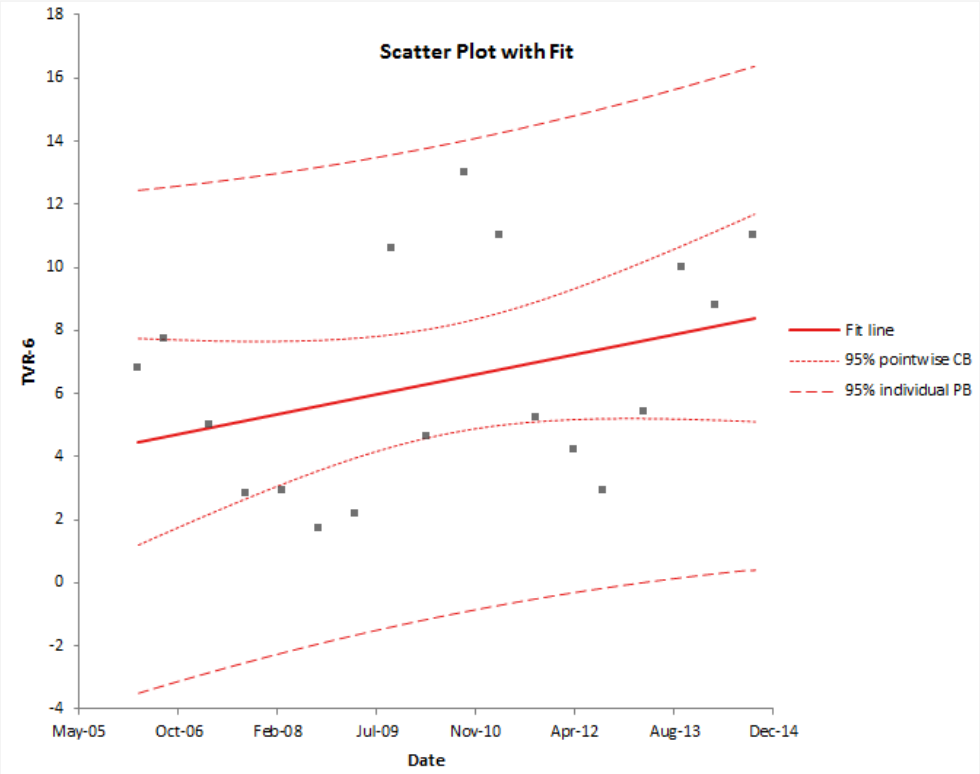
FTP-1 AND TVR/OLD MATES STATISTICS GRAPHS
FIRE TRAINING PIT (FTP-1)
YAKIMA TRAINING CENTER, WASHINGTON

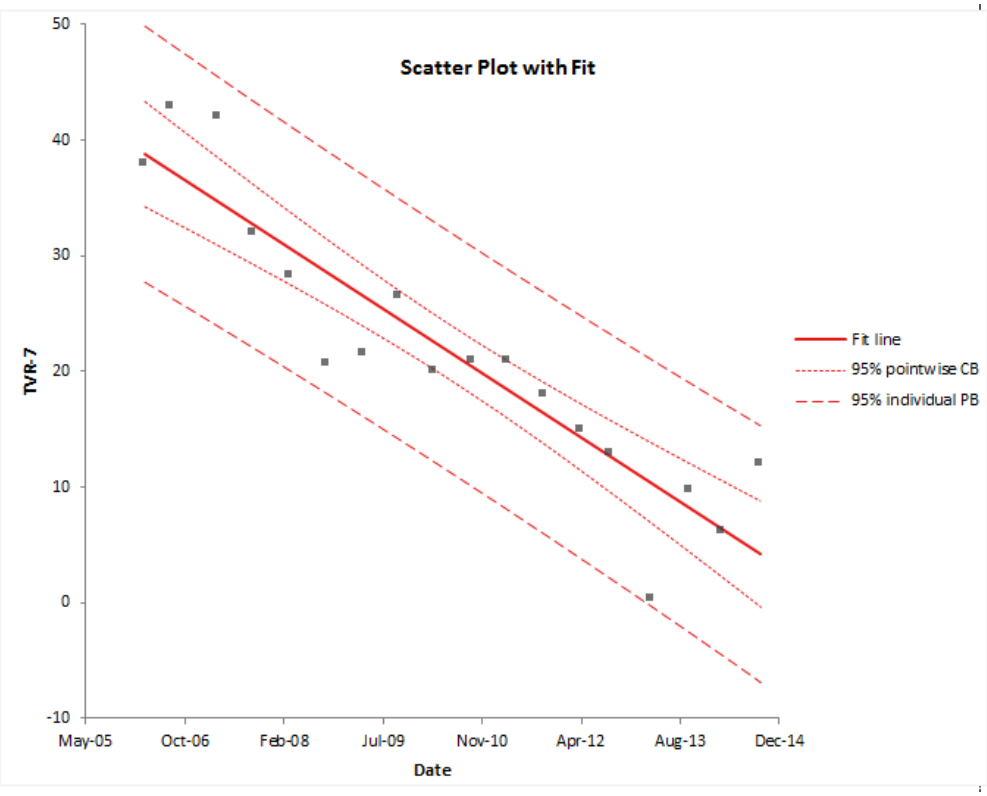




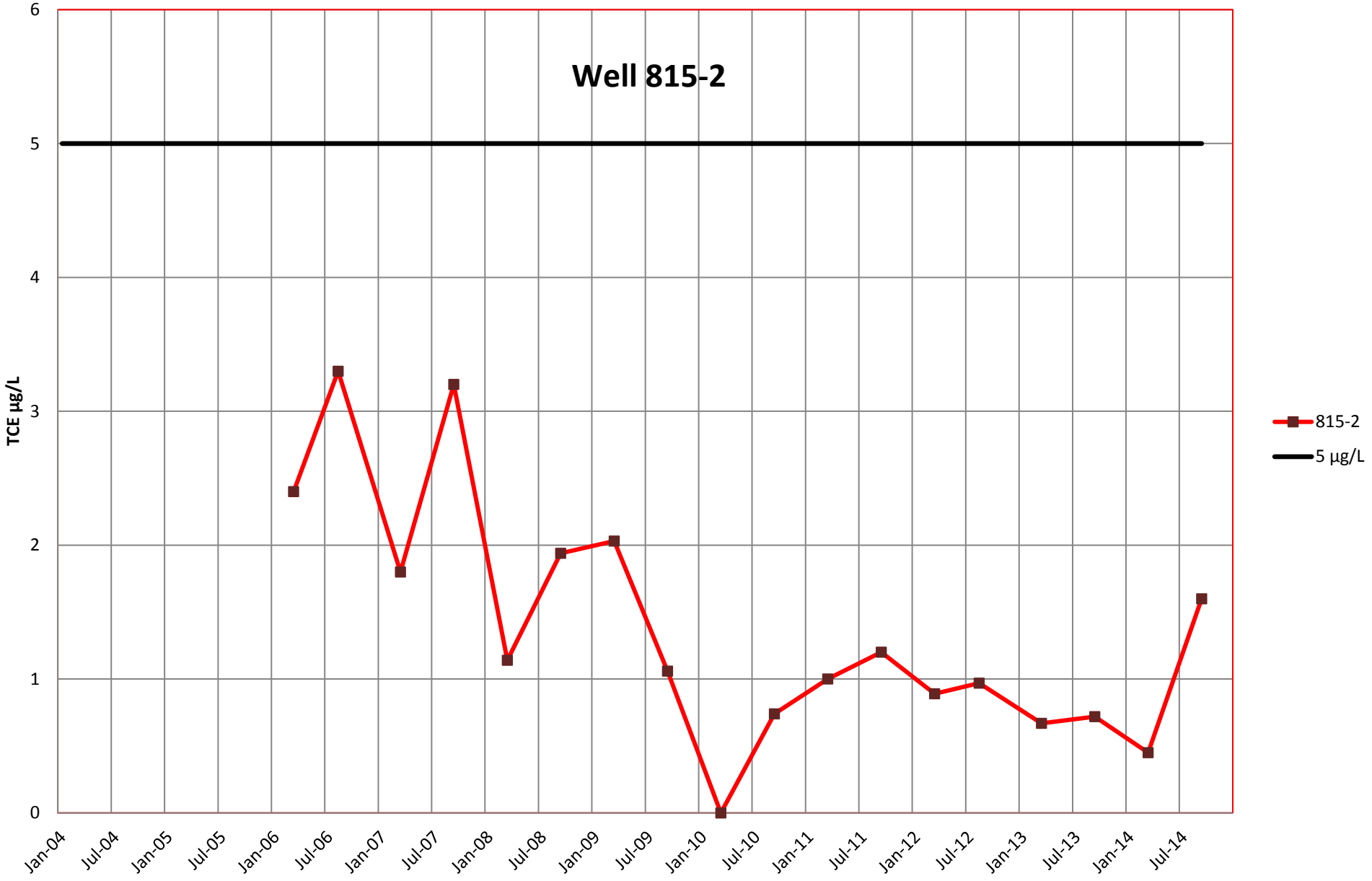
APPENDIX C

FTP-1 AND TVR/OLD MATES STATISTICS GRAPHS
FIRE TRAINING PIT (FTP-1)
YAKIMA TRAINING CENTER, WASHINGTON

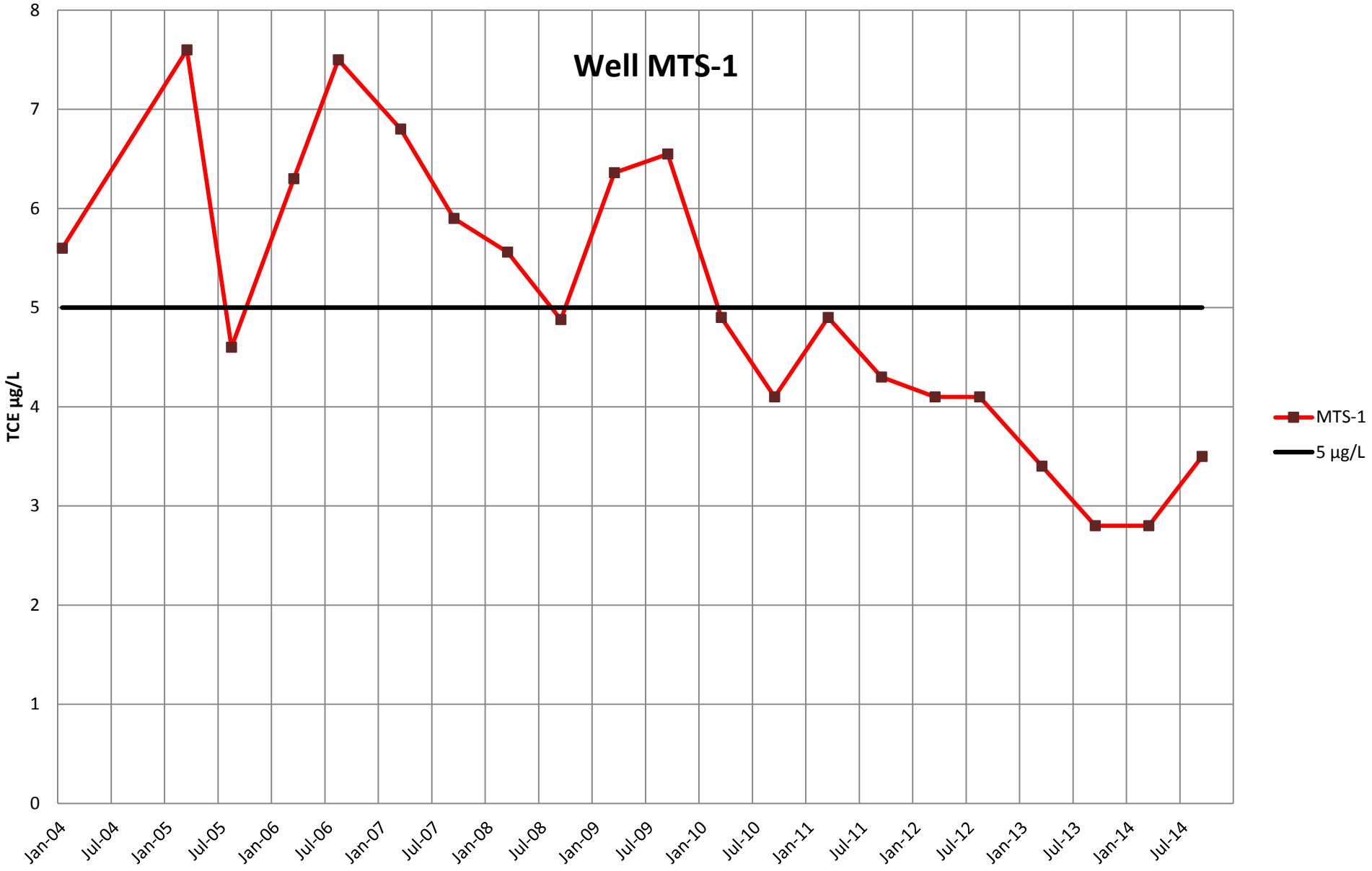




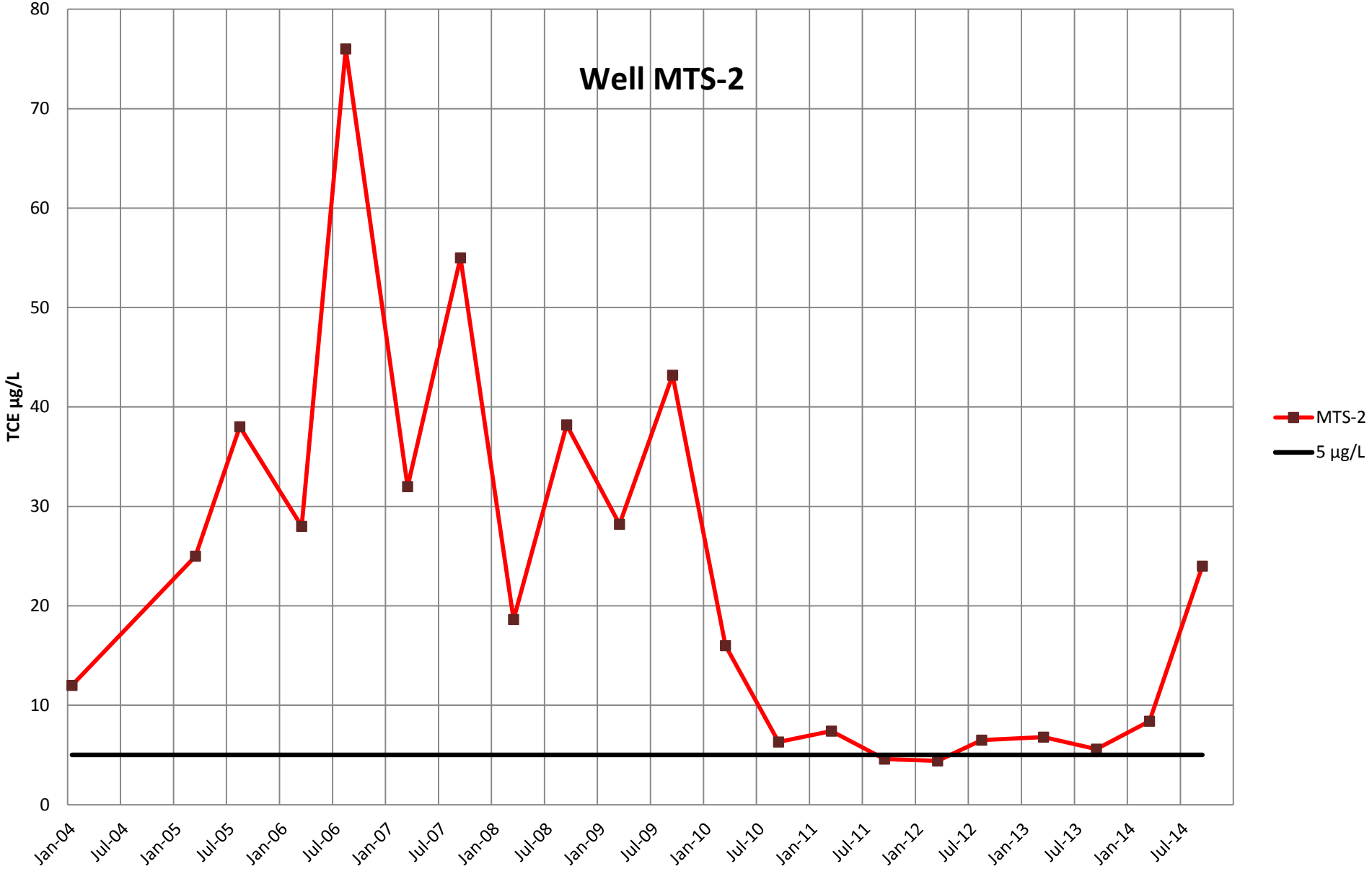
Appendix C: TCE Concentration Linear Graph TVR Old/MATES Well 815-2
Yakima Training Center, Washington



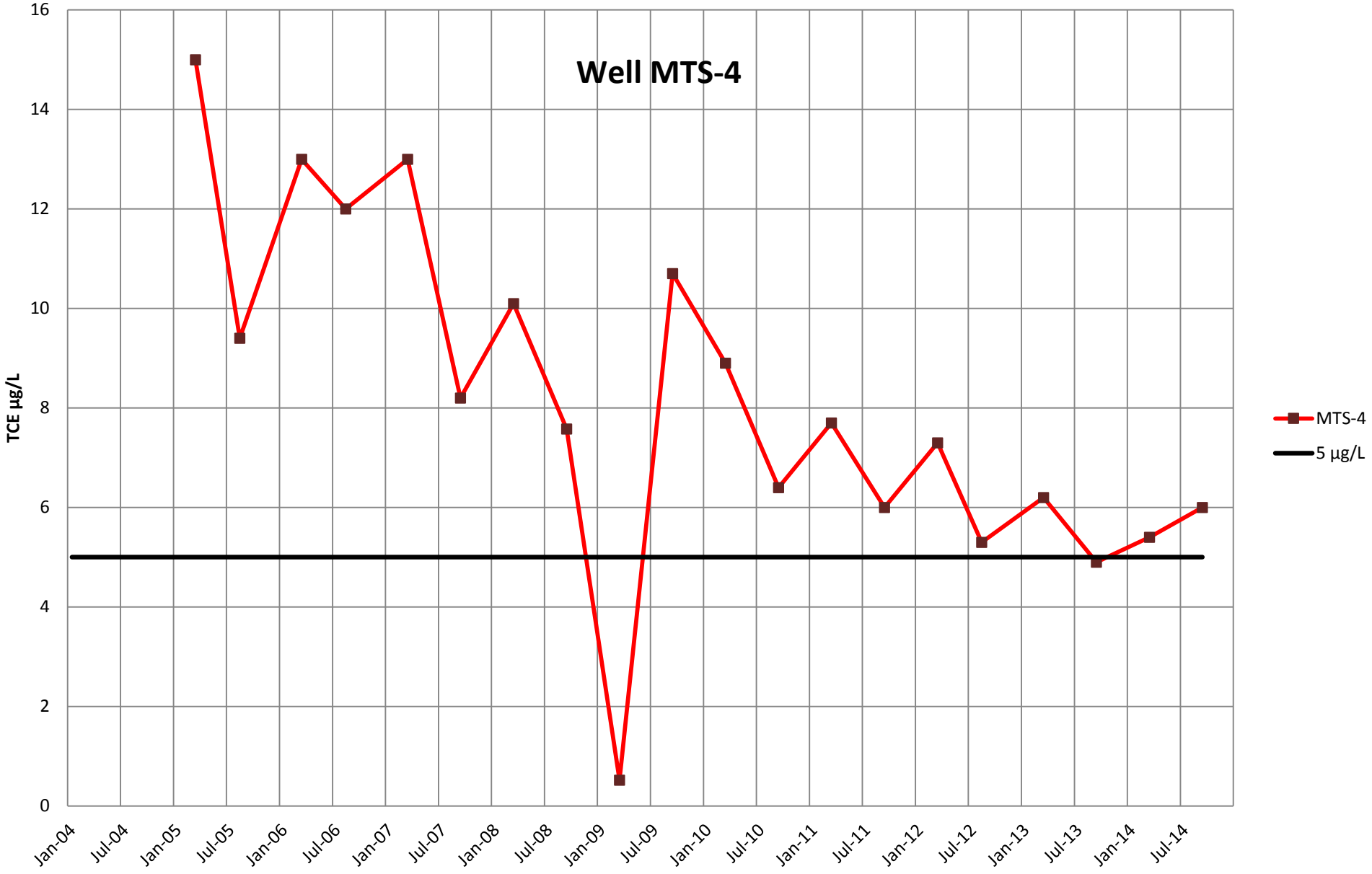
Appendix C: TCE Concentration Linear Graph TVR Old/MATES Well MTS-1
Yakima Training Center, Washington



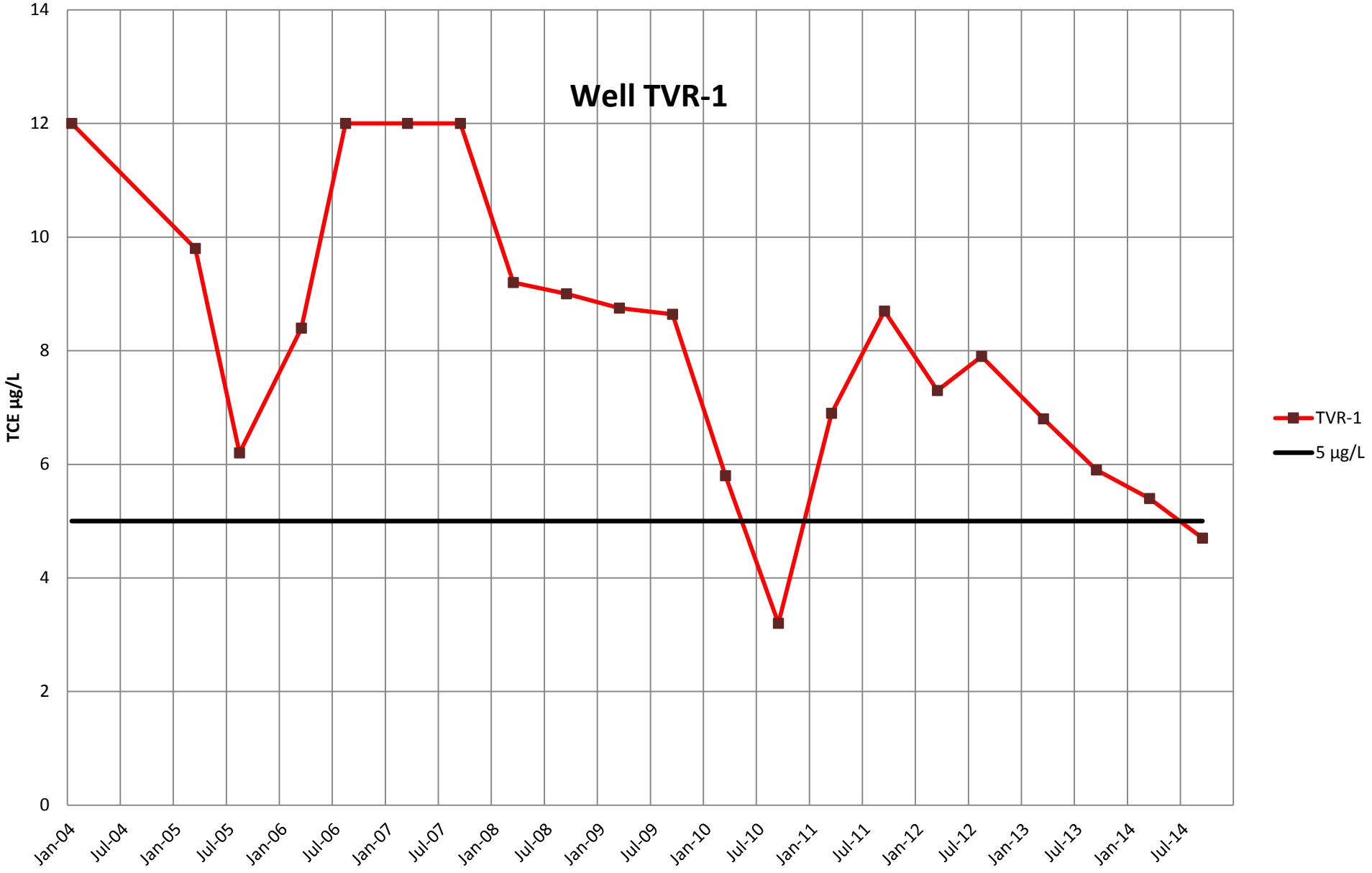
Appendix C: TCE Concentration Linear Graph TVR Old/MATES Well MTS-2
Yakima Training Center, Washington



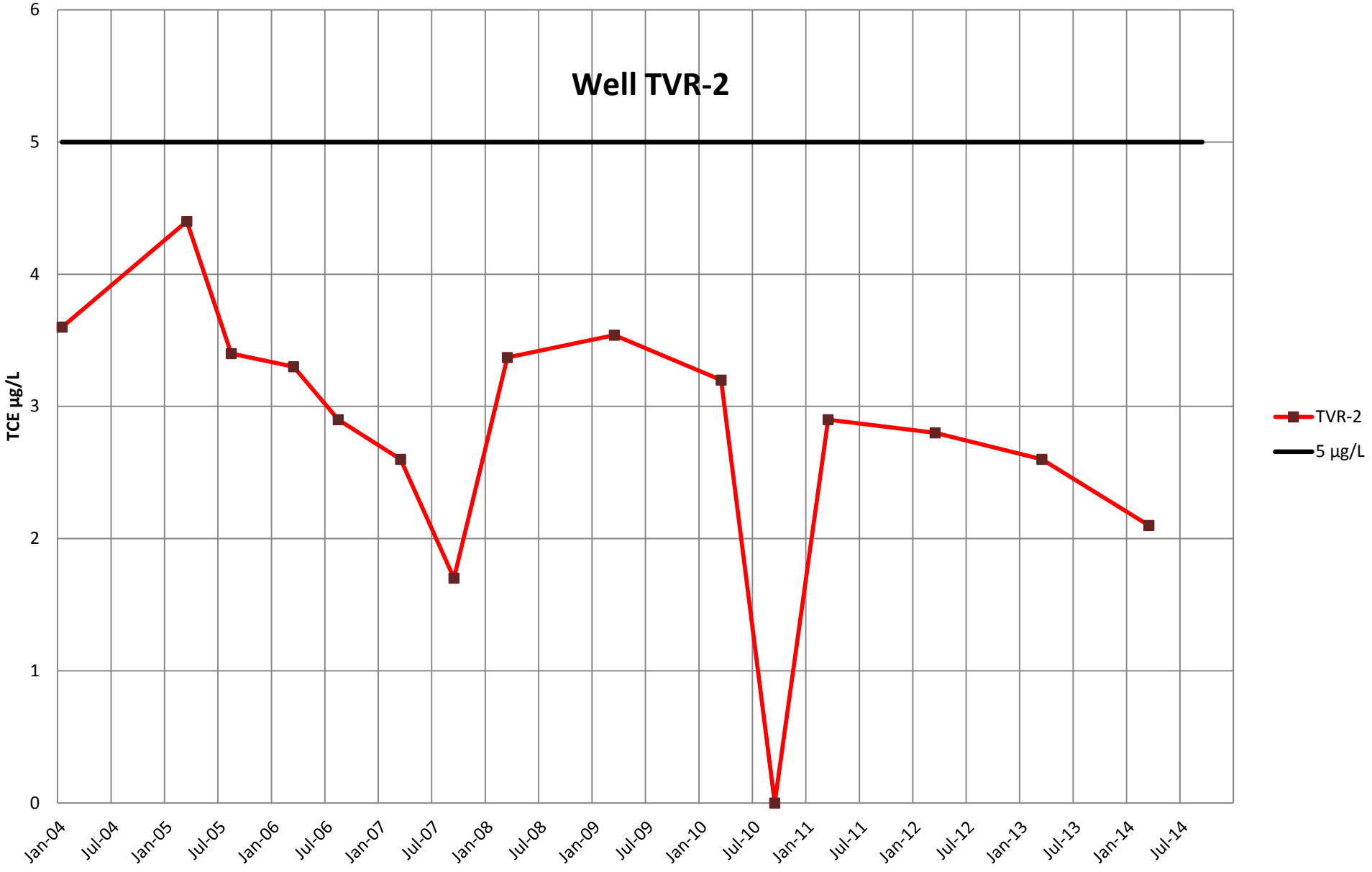
Appendix C: TCE Concentration Linear Graph TVR Old/MATES Well MTS-4
Yakima Training Center, Washington



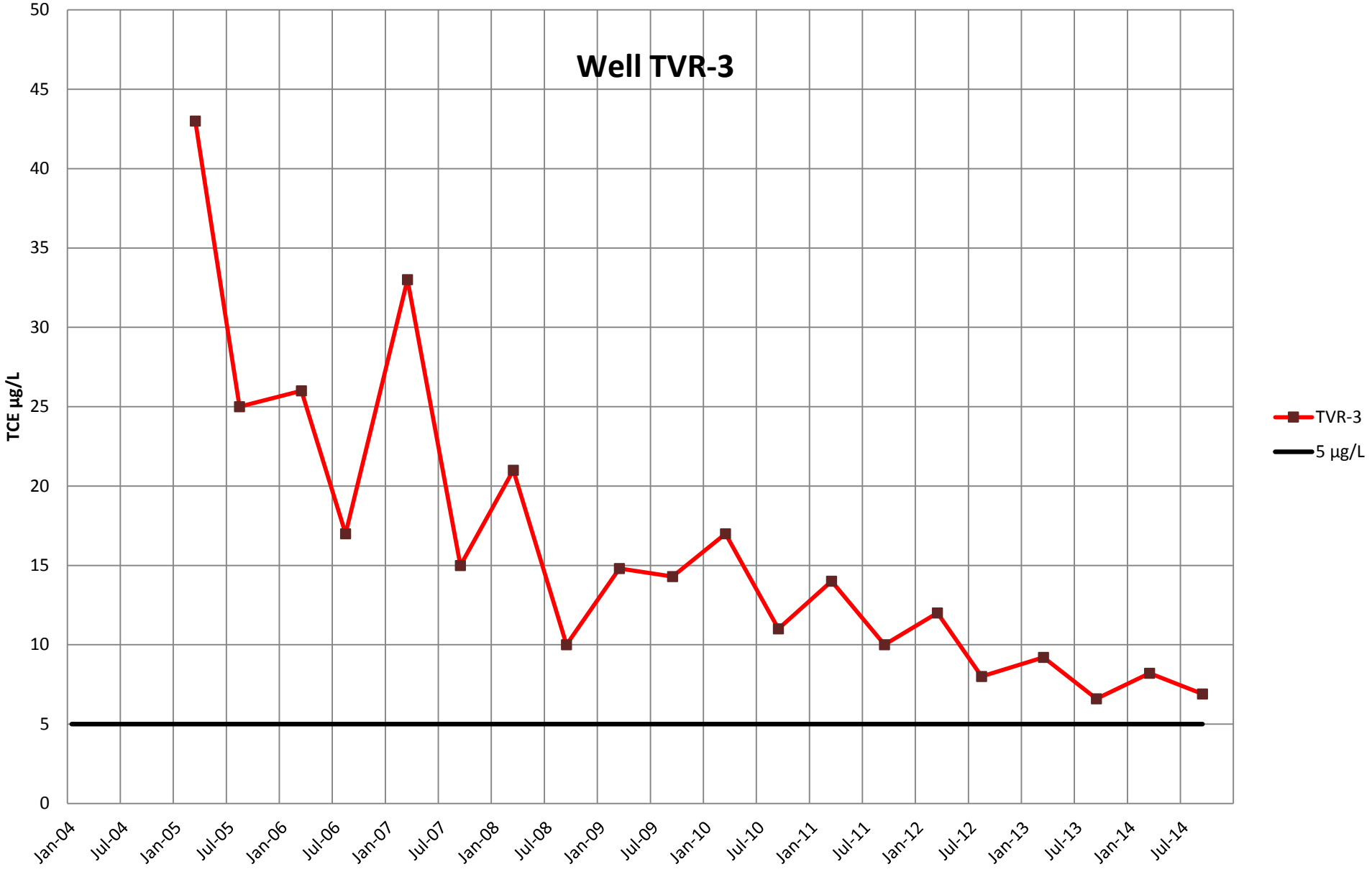
Appendix C: TCE Concentration Linear Graph TVR Old/MATES Well TVR-1
Yakima Training Center, Washington



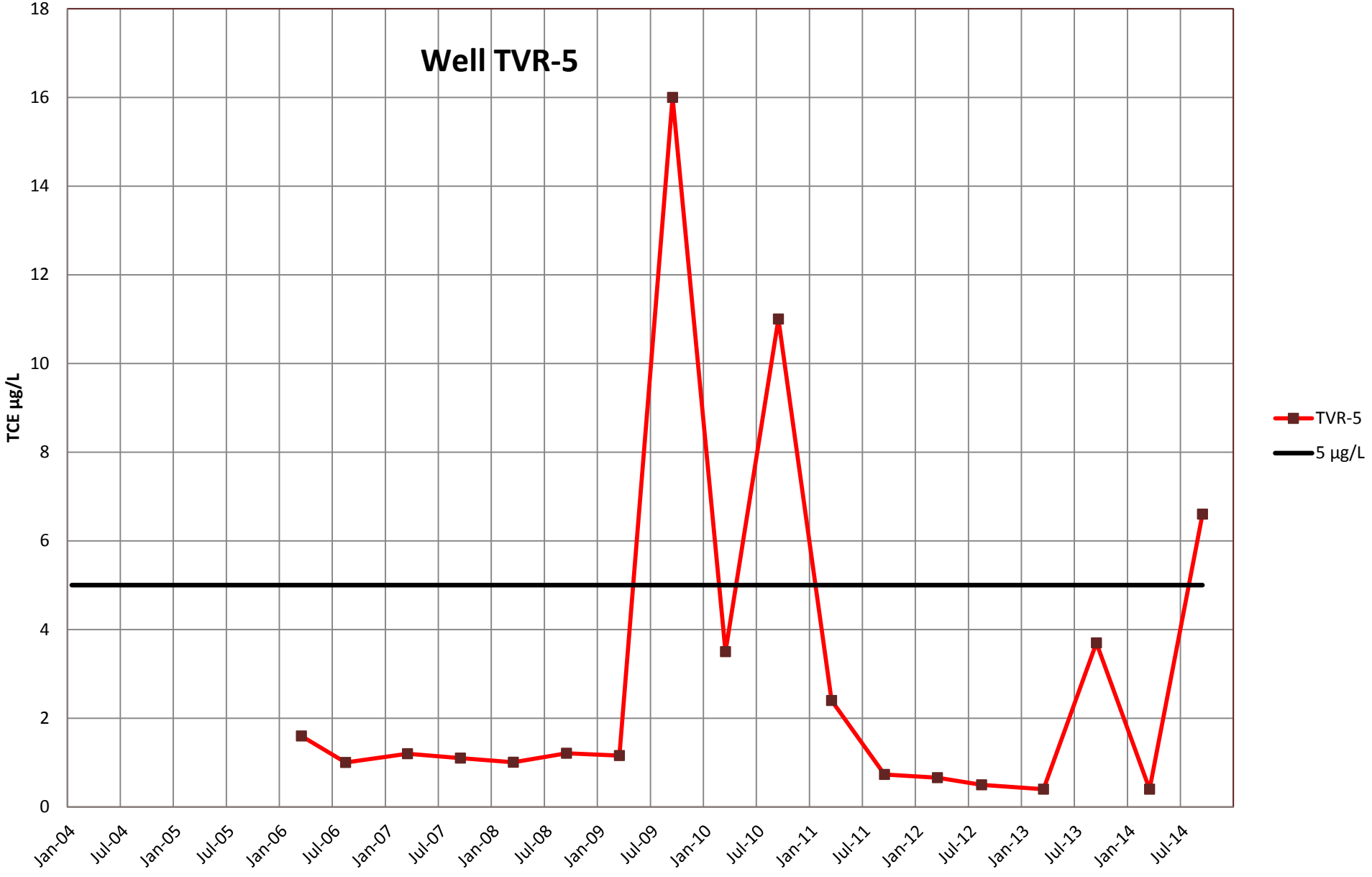
Appendix C: TCE Concentration Linear Graph TVR Old/MATES Well TVR-2
Yakima Training Center, Washington



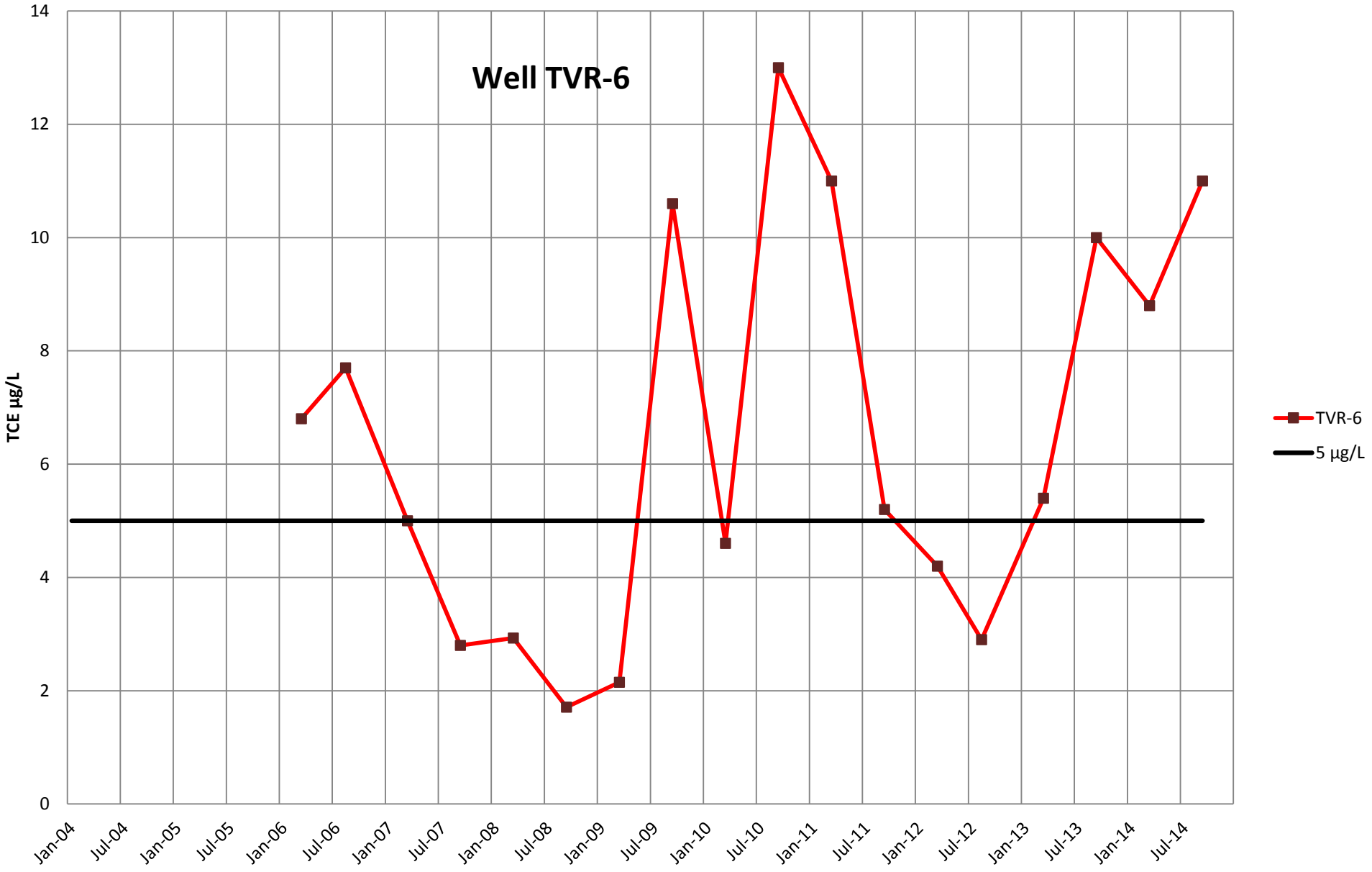
Appendix C: TCE Concentration Linear Graph TVR Old/MATES Well TVR-3
Yakima Training Center, Washington



Appendix C: TCE Concentration Linear Graph TVR Old/MATES Well TVR-5
Yakima Training Center, Washington



Appendix C: TCE Concentration Linear Graph TVR Old/MATES Well TVR-6
Yakima Training Center, Washington



Appendix C: TCE Concentration Linear Graph TVR Old/MATES Well TVR-7
Yakima Training Center, Washington