FINAL

JUNE 2017

2016 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

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GROUNDWATER MONITORING REPORT

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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

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ABBREVIATIONS AND ACRONYMS

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

ABBREVIATIONS AND ACRONYMS (CONTINUED)

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	semivolatile organic compound
SWMU	Solid Waste Management Unit
TCE	trichloroethylene
TCLP	Toxicity Characteristic Leaching Procedure
TEC	toxicity equivalency concentration
TEF	toxicity equivalency factor
TPH-D	total petroleum hydrocarbons – diesel range
TPH-G	total petroleum hydrocarbons – gasoline range
TPH-O	total petroleum hydrocarbons – heavy oil range
TtEC	Tetra Tech EC, Inc.
TVR	tracked vehicle repair
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) 2016 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 2016 Draft Final Groundwater Monitoring Plan, Revision 1 (TtEC 2016), 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 2016.

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

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

1.2.2 TVR/Old MATES

Trichloroethylene (TCE) was detected during a 1993 Site Investigation (SI) conducted by E&E in two monitoring wells installed near the TVR facility (Building 845), two monitoring wells installed near the Old MATES (Building 951), and the Marie well, a domestic drinking water well located southwest of both buildings 845 and 951. TCE had been detected in the Marie well before it was decommissioned in the late 1990s; however, TCE and other volatile organic compounds (VOCs) have not been detected in the Main Motor Pool (MMP) monitoring wells (MMP-1 and MMP-2) located in the vicinity of the former Marie well. Monitoring wells MTS-1, MTS-2, MTS-4, TVR-1 through TVR-7, MMP-1, MMP-2, and the Pomona production well and the Pomona Artesian Irrigation Company (PAIC) production well are located downgradient of the contaminant source (see Section 3.2). TCE and other VOCs have not been detected in either of the currently active water supply wells—the Pomona and PAIC wells located in the vicinity of monitoring wells TVR-6 and TVR-7.

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

1.3 SITE GEOLOGY AND HYDROGEOLOGY

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

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

1.4 INVESTIGATION CHRONOLOGY

1.4.1 Facility-wide Investigations

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

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

Yakima Health District collected groundwater samples from 12 private domestic wells located downgradient of YTC and analyzed those samples for VOCs in 1995 (Yakima Health District 1995). The PAIC Well (located on YTC across the street from YTC's Pomona Well) was one of the twelve wells sampled. No contaminants were detected in any of the wells, with the exception of styrene in a single well at a concentration equal to the detection limit of 0.1 micrograms per liter (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 2016, the Groundwater Monitoring Plan for the former FTP and TVR/Old MATES sites was updated (TtEC 2016).

1.4.2 Fire Training Pit

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

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

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

A RCRA Facility Investigation to further delineate the nature and extent of contamination at the former FTP site was completed in November 2001 by Shannon & Wilson. Monitoring wells FTP-13 through -16 were installed in 1999 in the perched groundwater located at the fractured top of the uppermost basalt flow. Groundwater monitoring events were conducted in July 1999, November 2000, and May 2001. The Shannon & Wilson report claimed that light non-aqueous phase liquid (LNAPL) and dense non-aqueous phase liquid (DNAPL) was present in well FTP-1 during each groundwater monitoring event. However, the thicknesses of LNAPL and DNAPL were not accurately quantified. Review of the field notes and observations from the January 2004 groundwater monitoring event indicted the DNAPL claim was in error (the LNAPL claim might have been in error as well). Nine other soil borings were also advanced during the investigation.

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

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

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

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

1.4.3 TVR/Old MATES

The uppermost materials underlying the site consist of localized fill materials, alluvium comprised primarily of unconsolidated silty sand, and unconsolidated soils of the Ellensburg Formation (Shannon & Wilson 2001). Together, the alluvium and Ellensburg sediments are up to 50 feet thick at the MATES facility. The uppermost bedrock unit underneath the overburden in the TVR/Old MATES area is the Pomona Flow of the Saddle Mountain Basalt Formation (E&E 1993, Shannon & Wilson 2001). In general, this unit was encountered at depths between 10 and 45 feet bgs in the six monitoring wells at TVR, 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. Also, over the past decade additional residential drinking water wells have been installed west of the YTC boundary, approximately 1,500 to 3,000 feet northwest of the TVR/Old MATES TCE plume (Figure 2).

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

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

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

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

1.6 ANALYSIS OF DATA

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

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

1.6.1 Shapiro-Wilk Test for Normality

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

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

1.6.2 Linear Regression and Mann-Kendall Correlation Analyses

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

The Mann-Kendall test for correlation was performed on data that were not normally or log-normally distributed (Table 6). No assumptions need to be made about the distribution of the data in order to perform the Mann-Kendall test (Helsel and Hirsch 2002). The null hypothesis is the same as the linear regression test above in that there is no trend in the data. The alpha level was kept the same at 0.05 although the Mann-Kendall test computes a P value for a two-tailed prediction interval. As such, the alpha levels are actually 0.025 or 0.975. A P value that is smaller than 0.025 or larger than 0.975 suggests a correlation between the change in constituent concentration and time.

1.6.3 Total Toxic Equivalent Concentrations of cPAHs

During YTC's 5-year review conducted by the USACE in 2011, it was noted that the updated 2007 groundwater monitoring plan stated that total carcinogenic polycyclic aromatic hydrocarbons (cPAHs) for the FTP site would be evaluated using the total toxic equivalent concentration (TEC) of the benz(a)pyrene method outlined in WAC 173-340-708(8)(e) (USACE 2012). The cPAHs required for this analyses include benzo(a)anthracene, benzo(b)fluoranthene, benzo(k)fluroanthene, chrysene, dibenz(a,h)anthracene, and indeno(1,2,3-cd)pyrene. The concentration of each of these cPAHs is multiplied by its corresponding toxicity equivalency factor (TEF) listed in Table 708-2 (WAC 173-340-900) to obtain the TEF for that cPAH. The TEFs from each cPAH are then added together to obtain the total TEF for that sample. If the total TEC is equal to or greater than 0.1, then the cPAHs are above the MTCA Method A cleanup level of 0.1 µg/L for cPAHs. During both the spring and fall 2016 sampling events, none of the specified cPAHs were detected in the sample from well FTP-1 and a TEF was not calculated (Table 4).

2. FIELD ACTIVITIES

Two groundwater sampling events were completed at the FTP and TVR/Old MATES sites in 2016 by TtEC on 15 and 16 March (spring), and 21 and 22 September (fall).

2.1 GROUNDWATER MEASUREMENT, SAMPLING, AND ANALYSIS

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

A disposable, Teflon bailer was used to purge water from the FTP monitoring wells prior to sampling. Three well volumes of water were bailed from each former FTP monitoring well scheduled for sampling. No monitoring wells were bailed dry in 2016. Groundwater samples were collected using the disposable bailer once the wells had recharged to at least 80 percent of the initial depth of water. Groundwater samples from the TVR/Old MATES wells scheduled for sampling were collected using disposable PDBs. A dedicated cable and harness was used to position the top of each PDB approximately 3 feet above the bottom of the monitoring well. The PDBs were sampled in March 2016, and were hung in June 2016 for the groundwater sampling event in September 2016. The PDBs will be redeployed in the TVR/Old MATES wells in December 2016 for the March 2017 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 the PAIC Well during the fall sampling event.

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

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

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

2.2 INVESTIGATION-DERIVED WASTE

Investigation-derived waste was disposed of in accordance with the approved Groundwater Monitoring Plan (TtEC 2016) as follows:

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

2.3 LAND USE CONTROL FIELD INSPECTION AND INTERVIEWS

The 2016 land use control (LUC) field inspection and interviews were conducted in December 2016. A copy of the LUC monitoring checklist with the results of both the inspection and the interviews is included in Appendix A. Interviewees included Mr. David Theirl (YTC Public Works GIS), Mr. Pete Nissen (YTC Natural Resources Program Manager), Ms. Margaret Taaffe (YTC Environmental Manager) and Mr. Gary Stedman (JBLM Master Planner). Results of the inspection and interviews indicated no changes in site conditions and no changes to the land use control process in 2016.

3. RESULTS AND CONCLUSIONS

Monitoring well construction details for wells from both sites are shown in Table 1. Copies of field notes, water sampling logs, and laboratory analytical reports for both 2016 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) 2016 monitoring events. No measurable amounts of LNAPL or DNAPL were observed in well FTP-1 during either event; however, a petroleum odor was noted during the September event. Tables 2 and 3 present depth-to-water measurements and summaries of relevant contaminant concentrations relative to MTCA Method A and Standard Method B cleanup levels. FTP-1 is the most impacted well at the site; it is the only well with TPH-G, TPH-D, and TPH-O concentrations above cleanup levels. Historical TPH-G, TPH-D, and TPH-O concentrations in well FTP-1 are presented on Figure 4.

In 2016 TPH-G was detected at 710 µg/L (spring) and at 1,500 µg/L (fall) in samples collected from well FTP-1 (Table 2). The concentrations detected during the fall sampling event exceed the 800 µg/L MTCA Method A cleanup level for TPH-G. Since 2011 the concentration of TPH-G reported in spring has consistently been higher than the concentration reported in the fall of the same year, with the exception of spring 2016 (Table 2). During the 2016 spring event, TPH-G was reported in wells FTP-14 at 31 µg/L, and was reported at 21J µg/L during the fall event. TPH-G was not detected in wells FTP-15 and FTP-16.

TPH-D was detected at 17,000 µg/L (spring) and 30,000 µg/L (fall) in samples collected from FTP-1. These concentrations exceed the 500 µg/L MTCA Method A cleanup level for TPH-D. TPH-D was also detected in samples collected from FTP-14 (230 µg/L in spring and 170 µg/L in fall), FTP-15 (55J µg/L in spring and 150J µg/L in fall), and FTP-16 (200 µg/L in spring and 160 µg/L in fall).

TPH-O was detected at 2,800 µg/L (spring) and 5,500 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 (130J µg/L in spring and 160 µg/L fall), FTP-15 (130 µg/L in spring and 210 µg/L in fall), and FTP-16 (270 in spring and 380 µg/L in fall). The TPH-O concentration in well FTP-16 (540 µg/L) was the only TPH result above its cleanup level that was not associated with well FTP-1 (Table 2).

Other constituents of concern detected in well FTP-1 include benzene at 3.1 µg/L (spring) and 5.1 µg/L (fall), and total PAHs at 124.5 µg/L (spring) and 75.5 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 plots are included in Appendix C. Trend analysis suggests that TPH-G concentrations have been decreasing over time in FTP-1; however, not statistically. The overall trend in TPH-D concentrations in FTP-1 is increasing, however, also not statistically, and since 2012 the TPH-D concentrations have been on a generally decreasing trend.

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

3.2 TVR/OLD MATES SITE

Figure 5 presents estimated contours for the groundwater surface based on measured elevations from the spring and fall 2016 monitoring events for the TVR/Old MATES site. Figures 6 and 7 present TCE concentration contours based on samples collected during the 2016 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 six of the wells (MTS-2, MTS-4, TVR-1, TVR-3, TVR-6, and TVR-7) had TCE concentrations above the 5 µg/L MTCA Method A Cleanup level during one or both the 2016 spring and fall events. TCE was not detected above its cleanup level in any other TVR/Old MATES well. Overall, the TCE concentrations reported in groundwater are not significantly elevated. The highest TCE concentration was reported in well TVR-3 at 17 µg/L (spring). TCE was detected below its cleanup level during both spring and fall events in wells 815-2, MTS-1, and TVR-5. TCE was also reported during one event in well TVR-2 (3.6 µg/L in spring). Cis-1,2-DCE was not detected above its cleanup level in any well sampled during 2016 (see Table 5).

TCE and cis-1,2-DCE were not detected in either of the 2016 spring or fall events in the samples collected from the Pomona and PAIC domestic production wells.

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

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

The TCE concentration in well TVR-6 (located near the PAIC production well with an overall, not statistically significant, upward trend in TCE concentration) has been above 5 µg/L in 13 of 20 samples collected since sampling began in March 2006. The highest concentration of TCE from well TVR-6 was 13 µg/L in 2010. Both the 2016 spring and fall samples from TVR-6 were above 5 µg/L (8 µg/L and 5.9 µg/L, respectively).

The TCE concentration in well TVR-7 (located near the Pomona production well with an overall statistically significant downward trend in TCE concentration) has been above 5 µg/L in 21 of 22 samples collected since sampling began in 2006. The highest concentration of TCE from well TVR-7 was 43 µg/L in August 2006. Both the 2016 spring and fall samples from TVR-7 were above 5 µg/L (10 µg/L and 8.2 µg/L during spring and fall, respectively).

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

3.3 DATA QUALITY REVIEW AND VERIFICATION

A data quality review was completed on the laboratory data from the spring and fall 2016 sampling events. The data quality review documentation is included in Appendix B. The data was reviewed by a party independent from the laboratory for adherence to the project quality control requirements and for usability. The review found that the data quality objectives for both the FTP and TVR/Old MATES sites during the spring and fall events were met. The data are considered acceptable for use and for comparison with other site data.

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TABLES

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Table 1

Monitoring Well Construction Details

Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

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

Abbreviations and Acronyms:
ft – feet
ft AMSL – feet above mean sea level
ft bgs – feet below ground surface
ID – identification
m – meter
Old MATES – Old Mobilization and Training Equipment Site
TOC – top-of-casing
TVR – Tracked Vehicle Repair
UTM – Universal Transverse Mercator

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Table 2

Depth-to-Water Measurements and Chemical of Concern Concentrations

Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/btoc)	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 Chemical of Concern Concentrations

Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/btoc)	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**
	19-Mar-15	14.0	1,453.72	2,000	**17,000**	**2,000**	**4.3**	**0.26J**	**4.9**	**1.38**
	22-Sep-15	13.16	1,454.56	1,300	**13,000**	**2,600**	**6.0**	**0.41J**	**6.0**	**1.51**
	16-Mar-16	14.03	1,453.69	710Y	**17,000**	**2,800**	**3.1**	**0.52**	**3.5**	**0.18J**
	21 Sept-16	11.45	1456.27	1,500Y	**30,000Y**	**5,500L**	5.1	**0.16J**	**5.9**	**0.66J**
Duplicate	16-Mar-16	14.03	1,453.69	680	**14,000**	**2,700**	**2.9**	**0.25J**	**3.4**	**0.18J**
FTP-13	1-Jul-99	16.25	1,456.82	100U	240U	**1**	0.4U	0.4U	0.4U	1.2U
1473.07	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	–	–	–	–	–	–	–

Table 2 (continued)

Depth-to-Water Measurements and Chemical of Concern Concentrations

Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/btoc)	Groundwater Elevation (ft/amsl)	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)
FTP-13	25-Sep-13	13.47	1,459.60	–	–	–	–	–	–	–
	11-Mar-14	16.50	1,456.57	–	–	–	–	–	–	–
	22-Sep-14	–	–	–	–	–	–	–	–	–
	19-Mar-15	14.32	1,458.75	–	–	–	–	–	–	–
	22-Sep-15	–	–	–	–	–	–	–	–	–
	16-Mar-16	11.72	1,461.35	–	–	–	–	–	–	–
	21-Sep-16	11.59	1,461.48	–	–	–	–	–	–	–
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	–	–	–	–

Table 2 (continued)

Depth-to-Water Measurements and Chemical of Concern Concentrations

Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/btoc)	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)
	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**	–	–	–	–
	19-Mar-15	18.76	1,438.72	**83J**	**190**	**120J**	–	–	–	–
	22-Sep-15	18.81	1,438.67	**46J**	**210**	**110**	–	–	–	–
	16-Mar-16	18.62	1,438.86	**31**	**230**	**130**	–	–	–	–
	21-Sep-16	17.89	1,439.59	**21J**	**170**	**160**	–	–	–	–
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	–	–	–	–

Table 2 (continued)

Depth-to-Water Measurements and Chemical of Concern Concentrations

Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/btoc)	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)
Duplicate	20-Mar-13	16.77	1,444.11	250U	**130**	200U	–	–	–	–
	25-Sep-13	16.62	1,444.26	250U	100U	200U	–	–	–	–
	25-Sep-13	16.62	1,444.26	250U	**110**	200U	–	–	–	–
	11-Mar-14	17.80	1,443.08	250U	100U	200U	–	–	–	–
	22-Sep-14	18.30	1,442.58	**14J**	**46J**	**110J**	–	–	–	–
	19-Mar-15	17.91	1,442.97	250U	**55J**	**180J**	–	–	–	–
	22-Sep-15	16.22	1,444.66	250U	**46J**	**80J**	–	–	–	–
	16-Mar-16	17.92	1,442.96	250U	**55J**	**130**	–	–	–	–
	21-Sep-16	–	–	250U	**150**	**210**	–	–	–	–
FTP-16 1444.81	1-Jul-99	26.32	1,418.49	100U	**360J**	**2**	0.4U	0.4U	0.4U	1.2U
	1-Nov-00	26.51	1,418.30	100U	**210J**	0.19U	0.4U	**0.064J**	0.4U	**0.043J**
	1-May-01	26.41	1,418.40	100U	240U	0.188U	0.4U	0.4U	0.4U	1.2U
	30-Jan-04	26.34	1,418.47	100U	100U	0.7U	0.5U	0.5U	0.5U	1U
	22-Mar-05	26.77	1,418.04	100U	100U	1U	0.5U	0.5U	0.5U	1U
	22-Aug-05	26.49	1,418.32	100U	100U	1U	0.5U	0.5U	0.5U	1U
	21-Mar-06	26.05	1,418.76	100U	100U	1U	0.5U	0.5U	0.5U	1U
	8-Aug-06	26.11	1,418.70	100U	**200**	1U	0.5U	0.5U	0.5U	1U
	21-Mar-07	26.15	1,418.66	250U	100U	1.5U	0.5U	0.5U	0.5U	1U
	19-Sep-07	26.12	1,418.69	500U	100U	–	0.5U	0.5U	0.5U	1U
	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**	–	–	–	–

Table 2 (continued)

Depth-to-Water Measurements and Chemical of Concern Concentrations

Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/btoc)	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)
	20-Mar-13	26.29	1,418.52	250U	**130**	200U	–	–	–	–
	25-Sep-13	26.50	1,418.31	250U	**160**	200U	–	–	–	–
	11-Mar-14	26.30	1,418.51	250U	**150**	200U	–	–	–	–
	22-Sep-14	26.35	1,418.46	250U	**290**	**180**	–	–	–	–
	19-Mar-15	26.19	1,418.62	250U	**110J**	**76J**	–	–	–	–
	22-Sep-15	26.09	1,418.72	250U	**300**	**540**	–	–	–	–
	16-Mar-16	26.12	1,418.69	250U	**200**	**272**	–	–	–	–
	21-Sep-16	26.0	1,418.81	250U	**160**	**380**	–	–	–	–
MTCA Method A Cleanup Level				800	500	500	5	1,000	700	1,000
MTCA Method B Cleanup Level				–	–	–	–	–	–	–

Notes:
BOLD – Analyte detected above laboratory reporting limit.
SHADE– Analyte detected above Model Toxics Control Act (MTCA) cleanup level.
– = not applicable, not sampled

Abbreviations and Acronyms:
µg/L – micrograms per liter
btoc – below top of casing
DTW – depth-to-water
ft/amsl – feet above mean sea level
ft/bgs – feet below ground surface
J – estimated concentration
MTCA – Model Toxics Control Act
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 VOC, PAH, and PCB Concentrations

Fire Training Pit and TVR/Old MATES, 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[1] (µg/L)	Total PCBs (µg/L)
FTP-1	1-Mar-93	50U	50U	100U	**110B,J**	270B,J	–	905U	70U
	1-Jul-99	**0.066J**	0.4U	0.4U	0.4U	29J	7,600J	**0.243J**	23.1U
	1-Nov-00	32J	70J	ND	**3.7J**	ND	11,000J	1.774U	ND
	1-May-01	4U	4U	4U	4U	54J	46,000	**5.02J**	0.81U
	30-Jan-04	0.5U	0.5U	0.5U	**1.3**	6.0	48,300	0.362U	–
	22-Mar-05	2.5U	2.5U	2.5U	12.5U	**1.0**	500U	0.905U	–
	22-Aug-05	5U	5U	5U	25U	0.5U	500U	0.905U	–
	21-Mar-06	5U	5U	5U	25U	5U	500U	9.05U	–
	8-Aug-06	1U	1U	1U	5U	**2.4**	500U	0.905U	–
	21-Mar-07	0.5U	0.5U	0.5U	2.5U	**3.6**	10,000U	**0.1**	–
	19-Sep-07	0.5U	0.5U	0.5U	2.5U	**2.7**	500U	0.905U	–
	18-Mar-08	0.5U	0.5U	0.5U	2.5U	10U	1,000U	**118.2**	
	19-Sep-08	0.5U	0.5U	0.5U	2.5U	–	500U	**52.6**	–
	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**	–
	19-Mar-15	**0.12J**	0.2U	0.1U	0.2U	**4.9J**	**8.9J**	**105**	–
	22-Sep-15	**0.17J**	0.2U	0.1U	0.12J	2U	**9.4J**	218	–
	16-Mar-16	**0.13J**	0.2U	0.5U	2U	10U	**6.9J**	**101**	–
	21-Sep-16	**0.18J**	.02U	0.5U	2U	9.9U	**7.9J**	**57**	–

Table 3 (continued)

Selected VOC, PAH, and PCB Concentrations

Fire Training Pit and TVR/Old MATES, 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[1] (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**	0.362U	–
	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 VOC, PAH, and PCB Concentrations

Fire Training Pit and TVR/Old MATES, 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[1] (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 and 2-methyl naphthalene.
[1] Total Naphthalenes is the total of naphthalene, 1-methyl naphthalene, and 2-methyl naphthalene.

Abbreviations and Acronyms:
– = not applicable, not sampled
µg/L – micrograms per liter
cis-DCE – cis 1,2-dichloroetheylene
J – estimated concentration
ND – non-detect
PAH – polynuclear aromatic hydrocarbon
PCBs – polychlorinated biphenyls
TCE – trichloroethylene
U – Analyte not detected above laboratory practical quantitation limit (PQL)
VOC – volatile organic carbon.

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Table 4

Carcinogenic PAH and Total PAH Concentrations

Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

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

Table 4 (continued)

Carcinogenic PAH and Total PAH Concentrations

Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

Well ID	Date	Benz(a) anthracene (µg/L)	Benzo(a) pyrene (µg/L)	Benzo(b) fluoranthene (µg/L)	Benzo(k) fluoranthene (µg/L)	Chrysene (µg/L)	Dibenz(a,h) anthracene (µg/L)	Indeno (1,2,3-cd) pyrene (µg/L)	TEQ Total(1) (µg/L)	Total PAHs(2) (µg/L)
FTP-1	16-Mar-16	10U	10U	10U	10U	10U	10U	10U	124.5	**101**
	21-Sep-16	10U	10U	10U	10U	10U	10U	10U	75.5	**57**
FTP-13	1-Mar-93	–	–	–	–	–	–	–	–	–
	1-Jul-99	–	–	–	–	–	–	–	–	**0.1**
	1-Nov-00	–	–	–	–	–	–	–	–	ND
	1-May-01	–	–	–	–	–	–	–	–	0.096U
	30-Jan-04	–	–	–	–	–	–	–	–	0.2U
	22-Mar-05	–	–	–	–	–	–	–	–	0.5U
	22-Aug-05	–	–	–	–	–	–	–	–	–
	21-Mar-06	–	–	–	–	–	–	–	–	0.5U
	8-Aug-06	–	–	–	–	–	–	–	–	–
	21-Mar-07	–	–	–	–	–	–	–	–	0.5U
FTP-14	1-Mar-93	–	–	–	–	–	–	–	–	
	1-Jul-99	–	–	–	–	–	–	–	–	0.096U
	1-Nov-00	–	–	–	–	–	–	–	–	0.095U
	1-May-01	–	–	–	–	–	–	–	–	0.095U
	30-Jan-04	–	–	–	–	–	–	–	–	0.2U
	22-Mar-05	–	–	–	–	–	–	–	–	0.5U
	22-Aug-05	–	–	–	–	–	–	–	–	0.5U
	21-Mar-06	–	–	–	–	–	–	–	–	0.5U
	8-Aug-06	–	–	–	–	–	–	–	–	–
	21-Mar-07	–	–	–	–	–	–	–	–	0.5U
	19-Sep-07	–	–	–	–	–	–	–	–	0.5U

Table 4 (continued)

Carcinogenic PAH and Total PAH Concentrations

Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

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

Table 4 (continued)

Carcinogenic PAH and Total PAH Concentrations

Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

Notes:
BOLD – analyte detected above laboratory PQL.
SHADE – Analyte detected above MTCA cleanup level.
– = not applicable, not sampled
(1) TEQ = Benzo(a)pyrene x 1 + (benzo(a)anthracene + benzo(b){fluoranthene + benzo(k)fluoranthene + dibenz(ah)anthracene + indeno(123-cd)pyrene) x 0.1 + chrysene x 0.01.
(2) includes naphthalene, 2-methylnaphthalene, acenaphthene. acenaphthylene, phenanthrene, anthracene, fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(b)fluoranthene, benzo(k)fluoranthene, benzo(a)pyrene, indeno(123-cd)pyrene, dibenz(ah)anthracene, benzo(ghi)perylene.

Abbreviations and Acronyms:
µg/L – micrograms per liter
MTCA – Model Toxics Control Act
PAHs – polycyclic aromatic hydrocarbons
PQL – practical quantitation limit
TEF – toxicity equivalency factor (TEF total is sum of all concentrations of cPAHs listed in table multiplied by their TEF values).
TEQ – toxicity equivalency quotient. TEQ values calculated from the TEF in Table 708-2 in WAC 173-340-900.
U – Analyte not detected above laboratory PQL.

Table 5

Depth-to-Water Measurements, and TCE and cis-1,2-DCE Concentrations

Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/btoc)	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
	19-Mar-15	62.89	1,241.39	**0.75**	0.2U
	22-Sep-15	54.42	1,249.86	**1.1**	0.2U
	16-Mar-16	56.91	1,247.37	**0.83**	0.2U
	21-Sep-16	52.42	1,251.86	**0.68**	0.2U
MMP-1	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	–	–

Table 5 (continued)

Depth-to-Water Measurements, and TCE and cis-DCE Concentrations

Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/btoc)	Groundwater Elevation (ft/amsl)	TCE (μg/L)	cis-1,2-DCE (μg/L)
MMP-1	21-Mar-11	59.02	1,242.35	0.5U	0.5U
	21-Sep-11	47.02	1,254.35	–	–
	28-Mar-12	57.83	1,243.54	0.5U	0.5U
	20-Aug-12	47.10	1,254.27	–	–
	19-Mar-13	55.90	1,245.47	0.2U	0.2U
	26-Sep-13	55.06	1,246.31	–	–
	12-Mar-14	59.80	1,241.57	0.2U	0.2U
	23-Sep-14	54.47	1,246.90	–	–
	19-Mar-15	60.04	1,241.33	–	–
	22-Sep-15	54.20	1,247.17	–	–
	16-Mar-16	55.50	1.245.87	–	–
	21-Sep-16	52.64	1,248.73	–	–
MMP-2 1301.31	1-Mar-93	–	1,239.35	5U	5U
	28-Feb-95	–	–	–	–
	1997[1]	–	–	–	–
	1-Aug-99	–	–	–	–
	1-Jan-04	–	1,239.50	0.5U	0.5U
	23-Mar-05	66.25	1,235.06	0.5U	0.5U
	23-Aug-05	59.75	1,241.56	–	–
	21-Mar-06	64.54	1,236.77	0.5U	0.5U
	1-Aug-06	55.69	1,245.62	–	–
	21-Mar-07	62.13	1,239.18	0.5U	0.5U
	19-Sep-07	57.12	1,244.19	–	–
	18-Mar-08	61.27	1,240.04	–	–
	19-Sep-08	56.95	1,244.36	–	–
	23-Mar-09	62.92	1,238.39	–	–
	23-Sep-09	59.23	1,242.08	–	–
	15-Mar-10	63.48	1,237.83	–	–
	28-Sep-10	54.22	1,247.09	–	–
	21-Mar-11	59.17	1,242.14	–	–
	21-Sep-11	50.44	1,250.87	–	–
	28-Mar-12	57.83	1,243.48	–	–
	20-Aug-12	48.51	1,252.80	–	–
	19-Mar-13	55.98	1,245.33	–	–
	26-Sep-13	–	–	–	–
	12-Mar-14	–	–	–	–
	23-Sep-14	55.70	1,245.61	–	–
	19-Mar-15	60.03	1,241.28	−	−
	22-Sep-15	55.90	1,245.41	−	−
	16-Mar-16	56.72	1,244.59	−	−
	21-Sep-16	55.05	1,246.26	−	−

Table 5 (continued)

Depth-to-Water Measurements, and TCE and cis-DCE Concentrations

Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/btoc)	Groundwater Elevation (ft/amsl)	TCE (µg/L)	cis-1,2-DCE (µg/L)
MRC-2 1312.11	1-Mar-93	–	1,236.27	5U	5U
	28-Feb-95	–	–	–	–
	1997[1]	–	–	–	–
	1-Aug-99	–	–	–	–
	1-Jan-04	–	–	–	–
	23-Mar-05	81.82	1,230.29	–	–
	23-Aug-05	76.09	1,236.02	–	–
	21-Mar-06	–	–	–	–
	1-Aug-06	–	–	–	–
	21-Mar-07			0.5U [2]	0.5U [2]
	19-Sep-07	–	–	–	–
	18-Mar-08	74.59	1,237.52	0.5U	0.5U
	19-Sep-08	67.90	1,244.21	–	–
	23-Mar-09	75.90	1,236.21	0.5U	0.5U
	23-Sep-09	–	–	–	–
	16-Mar-10	77.38	1,234.73	1U	1U
	28-Sep-10	67.00	1,245.11	–	–
	21-Mar-11	73.20	1,238.91	0.5U	0.5U
	21-Sep-11	63.07	1,249.04	–	–
	28-Mar-12	72.42	1,239.69	0.5U	0.5U
	20-Aug-12	61.93	1,250.18	–	–
	19-Mar-13	71.36	1,240.75	–	–
	26-Sep-13	–	–	–	–
	12-Mar-14	–	–	–	–
	23-Sep-14	68.05	1,244.06	–	–
	19-Mar-15	75.27	1,236.84	–	–
	22-Sep-15	69.02	1,243.09	–	–
	16-Mar-16	–	–	–	–
	21-Sep-16	68.9	1,243.21	–	–
MTS-1 1361.02	1-Mar-93	–	1,257.88	**7.90**	5U
	28-Feb-95	–	–	–	–
	1997[1]	–	–	–	–
	1-Aug-99	–	–	–	–
	1-Jan-04		1,261.96	**5.60**	0.5U
	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

Table 5 (continued)

Depth-to-Water Measurements, and TCE and cis-DCE Concentrations

Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/btoc)	Groundwater Elevation (ft/amsl)	TCE (µg/L)	cis-1,2-DCE (µg/L)
MTS-1	23-Mar-09	100.72	1,260.30	6.36	0.5U
	23-Sep-09	94.90	1,266.12	6.55	0.5U
	16-Mar-10	99.92	1,261.10	**4.90**	1U
	28-Sep-10	91.30	1,269.72	**4.10**	0.5U
	21-Mar-11	96.35	1,264.67	**4.90**	0.5U
	21-Sep-11	91.44	1,269.58	**4.30**	0.5U
	28-Mar-12	95.98	1,265.04	**4.10**	0.5U
	20-Aug-12	91.38	1,269.64	**4.10**	0.5U
	19-Mar-13	95.43	1,265.59	**3.40**	0.2U
	26-Sep-13	93.85	1,267.17	**2.80**	0.2U
	12-Mar-14	97.35	1,263.67	**2.70**	0.2U
Duplicate	12-Mar-14	97.35	1,263.67	**2.80**	0.2U
	23-Sep-14	92.71	1,268.31	**3.50**	0.5U
	19-Mar-15	97.47	1,263.55	**3.8**	0.2U
	22-Sep-15	92.74	1,268.28	**4.0**	0.2U
	16-Mar-16	94.73	1,266.29	**3.7**	0.2U
	21-Sep-16	92.90	1,268.12	**3.2**	0.2U
MTS-2 1351.88	1-Mar-93	–	1,256.80	7.4	5U
	28-Feb-95	–	–	–	–
	1997[1]	–	–	–	–
	1-Aug-99	–	–	–	–
	1-Jan-04	–	1,260.71	12.0	1U
	23-Mar-05	96.15	1,255.73	25.0	0.5U
	23-Aug-05	87.89	1,263.99	38.0	**0.50**
	21-Mar-06	92.33	1,259.55	28.0	**0.70**
	1-Aug-06	85.85	1,266.03	76.0	**1.90**
	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

Table 5 (continued)

Depth-to-Water Measurements, and TCE and cis-DCE Concentrations

Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/btoc)	Groundwater Elevation (ft/amsl)	TCE (µg/L)	cis-1,2-DCE (µg/L)
MTS-2	23-Sep-14	84.68	1,267.20	**24**	**0.47J**
	19-Mar-15	88.66	1,263.22	8	**0.2J**
	22-Sep-15	89.81	1,262.07	11	**0.22J**
	16-Mar-16	86.13	1,265.75	6.9	**0.18J**
	21-Sep-16	84.79	1,267.09	5.0	**0.15**
MTS-3 1362.36	23-Mar-05	29.14	1,333.22	0.5U	0.5U
	23-Aug-05	27.73	1,334.63	–	–
	21-Mar-06	29.00	1,333.36	0.5U	0.5U
	1-Aug-06	26.86	1,335.50	–	–
	21-Mar-07	28.90	1,333.46	0.5U	0.5U
	19-Sep-07	26.43	1,335.93	–	–
	18-Mar-08	28.67	1,333.69	–	–
	19-Sep-08	26.62	1,335.74	–	–
	23-Mar-09	28.70	1,333.66	–	–
	23-Sep-09	26.65	1,335.71	–	–
	16-Mar-10	28.74	1,333.62	–	–
	28-Sep-10	25.53	1,336.83	–	–
	21-Mar-11	27.58	1,334.78	–	–
	21-Sep-11	25.41	1,336.95	–	–
	28-Mar-12	27.60	1,334.76	–	–
	20-Aug-12	25.64	1,336.72	–	–
	19-Mar-13	27.87	1,334.49	–	–
	26-Sep-13	27.24	1,335.12	–	–
	12-Mar-14	28.50	1,333.86	–	–
	23-Sep-14	26.45	1,335.91	–	–
	19-Mar-15	28.03	1,334.33	–	–
	22-Sep-15	27.76	1,334.60	–	–
	16-Mar-16	27.95	1,334.41	–	–
	21-Sep-16	25.55	1,336.81	–	–
MTS-4 1331.88	23-Mar-05	89.70	1,242.18	**15.0**	0.5U
	23-Aug-05	86.14	1,245.74	**9.4**	0.5U
	21-Mar-06	88.02	1,243.86	**13.0**	0.5U
	1-Aug-06	81.32	1,250.56	**12.0**	0.5U
	21-Mar-07	86.15	1,245.73	**13.0**	0.5U
	19-Sep-07	81.25	1,250.63	**8.2**	0.5U
	18-Mar-08	85.51	1,246.37	**10.1**	0.5U
	19-Sep-08	83.80	1,248.08	**7.6**	0.5U
	23-Mar-09	87.72	1,244.16	**0.52**	0.5U
	23-Sep-09	83.47	1,248.41	**10.7**	0.5U
	16-Mar-10	87.32	1,244.56	**8.9**	1U
	28-Sep-10	75.75	1,256.13	**6.4**	0.5U
	21-Mar-11	82.13	1,249.75	**7.7**	0.5U

Table 5 (continued)

Depth-to-Water Measurements, and TCE and cis-DCE Concentrations

Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/btoc)	Groundwater Elevation (ft/amsl)	TCE (µg/L)	cis-1,2-DCE (µg/L)
MTS-4	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**
	19-Mar-15	83.35	1,248.53	8.0	**0.25J**
	22-Sep-15	78.42	1,253.46	5.6	**0.18J**
	16-Mar-16	79.9	1,251.98	7.3	**0.27J**
	21-Sep-16	76.52	1,255.36	**4.8**	**0.19J**
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
Duplicate	23-Mar-09	76.76	1,243.41	**9.0**	0.5U
	23-Sep-09	73.40	1,246.77	**8.6**	0.5U
	16-Mar-10	76.50	1,243.67	**5.8**	1U
	29-Sep-10	67.05	1,253.12	**3.2**	0.5U
	21-Mar-11	71.58	1,248.59	**6.9**	0.5U
	21-Sep-11	64.61	1,255.56	**8.7**	0.5U
	28-Mar-12	70.63	1,249.54	**7.3**	0.5U
	20-Aug-12	63.45	1,256.72	**7.9**	0.5U
	19-Mar-13	69.00	1,251.17	**6.8**	0.2U
	26-Sep-13	69.35	1,250.82	**5.9**	0.2U
	12-Mar-14	73.10	1,247.07	**5.4**	0.2U
	22-Sep-14	70.45	1,249.72	**4.7**	0.5U
	19-Mar-15	72.60	1,247.57	**4.5**	0.2U
	22-Sep-15	69.70	1,250.47	**3.8**	0.2U
	16-Mar-16	69.9	1,250.27	**5.7**	0.2U
	21-Sep-16	67.12	1,253.05	**6.1**	0.08J

Table 5 (continued)

Depth-to-Water Measurements, and TCE and cis-DCE Concentrations

Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/btoc)	Groundwater Elevation (ft/amsl)	TCE (µg/L)	cis-1,2-DCE (µg/L)
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	–	–
	19-Mar-15	70.34	1,247.22	**2.6**	0.2U
	22-Sep-15	66.53	1,251.03	–	–
	16-Mar-16	66.4	1,251.16	3.6	0.2U
	21-Sep-16	63.96	1,253.60	–	–
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
	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

Table 5 (continued)

Depth-to-Water Measurements, and TCE and cis-DCE Concentrations

Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/btoc)	Groundwater Elevation (ft/amsl)	TCE (µg/L)	cis-1,2-DCE (µg/L)
TVR-3	21-Mar-11	61.80	1,248.80	**14.0**	0.5U
	21-Sep-11	54.07	1,256.53	**10.0**	0.5U
	28-Mar-12	61.20	1,249.40	**12.0**	0.5U
	20-Aug-12	53.12	1,257.48	**8.0**	0.5U
	19-Mar-13	59.52	1,251.08	**9.2**	0.2U
	26-Sep-13	59.65	1,250.95	**6.6**	0.2U
	12-Mar-14	63.50	1,247.10	**8.2**	0.2U
	22-Sep-14	60.90	1,249.70	**6.9**	**0.10J**
	19-Mar-15	63.31	1,247.29	7.7	**0.17J**
	22-Sep-15	59.75	1,250.85	8.4	**0.12J**
	16-Mar-16	59.57	1,251.03	7.5	**0.14J**
	21-Sep-16	57.21	1,253.39	**4.9**	**0.13J**
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
	19-Mar-15	56.51	1,245.53	**0.8**	0.2U
	22-Sep-15	51.05	1,250.99	**4.4**	0.2U
	16-Mar-16	51.58	1,250.46	**0.49J**	0.2U
	21-Sep-16	48.73	1,253.31	**0.92**	0.2U
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

Table 5 (continued)

Depth-to-Water Measurements, and TCE and cis-DCE Concentrations

Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/btoc)	Groundwater Elevation (ft/amsl)	TCE (µg/L)	cis-1,2-DCE (µg/L)
TVR-6	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**
	19-Mar-15	62.61	1,247.45	8	0.2U
	22-Sep-15	59.50	1,250.56	9.9	0.2U
	16-Mar-16	59.49	1,250.57	8.0J	0.2U
	21-Mar-16	57.02	1,253.04	5.9	0.2U
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
	19-Mar-15	63.60	1,247.35	10.0	0.2U
Duplicate	19-Mar-15	63.60	1,247.35	10.0	0.2U
	22-Sep-15	60.45	1,250.50	10.0	0.2U
	16-Mar-16	60.43	1,250.52	10	0.2U

Table 5 (continued)

Depth-to-Water Measurements, and TCE and cis-DCE Concentrations

Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

Well ID TOC	Date	DTW (ft/btoc)	Groundwater Elevation (ft/amsl)	TCE (µg/L)	cis-1,2-DCE (µg/L)
TVR-7	21-Sep-16	57.92	1,253.03	8.2	0.2U
Marie Well	1-Mar-93	–	–	**1.20**	5U
PAIC Well	1-Mar-93	–	–	5U	5U
	28-Feb-95	–	–	0.1U	0.1U
	1997[1]	–	–	0.5U	0.5U
	1-Aug-99	–	–	–	–
	1-Jan-04	–	–	–	–
	23-Mar-05	–	–	–	–
	23-Aug-05	–	–	–	–
	21-Mar-06	–	–	0.5U	0.5U
	1-Aug-06	–	–	–	–
	21-Mar-07	–	–	0.5U	0.5U
	19-Sep-07	–	–	0.5U	0.5U
	18-Mar-08	–	–	0.5U	0.5U
	19-Sep-08	–	–	0.5U	0.5U
	23-Mar-09	–	–	0.5U	0.5U
	23-Sep-09	–	–	0.5U	0.5U
	15-Mar-10	–	–	1U	1U
	29-Sep-10	–	–	0.5U	0.5U
	21-Mar-11	–	–	0.5U	0.5U
	22-Sep-11	–	–	0.5U	0.5U
	28-Mar-12	–	–	0.5U	0.5U
	20-Aug-12	–	–	0.5U	0.5U
	20-Mar-13	–	–	0.2U	0.2U
	25-Sep-13	–	–	0.2U	0.2U
	12-Mar-14	–	–	0.2U	0.2U
	23-Sep-14	–	–	0.5U	0.5U
	19-Mar-15	–	–	0.1U	0.2U
	22-Sep-15	–	–	0.1U	0.2U
	16-Mar-16	–	–	0.1U	0.2U
	21-Sep-16	–	–	0.1U	0.2U
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

Table 5 (continued)

Depth-to-Water Measurements, and TCE and cis-DCE Concentrations

Fire Training Pit and TVR/Old MATES, Yakima Training Center, Washington

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

Notes:
[1] 1997 Sampling Event
BOLD – analyte detected above laboratory practical quantitation limit (PQL).
SHADE– Analyte detected above Model Toxics Control Act (MTCA) cleanup level.
– = not applicable, not sampled

Abbreviations and Acronyms:
µg/L – micrograms per liter
amsl – above mean sea level
bgs – below ground surface
btoc – below top of casing
cis-1,2-DCE – cis-1,2-dichloroethene
DTW – depth-to-water
ft – feet
J – estimated concentration
ND – non-detect
TCE – trichloroethylene
TOC – top-of-casing elevation
U – Analyte not detected above laboratory PQL.

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Table 6
FTP-1 and TVR / Old MATES Statistics
Yakima Training Center, Washington

Site	Fire Training Pit			TVR / Old MATES						
Well ID	FTP-1			815-2	MMP-1	MMP-2	MRC-2	MTS-1	MTS-2	MTS-3
Compound	TPH-G	TPH-D	TPH-O	TCE	TCE	TCE	TCE	TCE	TCE	TCE
	Descriptive Statistics			**Descriptive Statistics**						
First Sample Date	30-Jan-04			21-Mar-06	1-Mar-93	1-Mar-93	1-Mar-93	1-Jan-04	1-Jan-04	23-Mar-05
Last Sample Date	21-Sep-16			21-Sep-16	19-Mar-13	21-Mar-07	19-Mar-13	21-Sep-16	21-Sep-16	22-Sep-14
Number of Samples	25			22	11	5	8	25	25	3
Number of Non-Detects	1	0	7	1	11	5	8	0	0	3
Sample Mean	3,490	26,050	3,008	1.34	-	-	-	4.85	20.61	-
Standard Deviation	4,801	20,794	3,583	0.80	-	-	-	1.42	28.78	-
Minimum Concentration	710	4,350	93	0.45	-	-	-	2.7	4.4	-
Maximum Concentration	25,100	110,000	13,000	3.3	-	-	-	7.6	76	-
Date*	22-Aug-05	20-Mar-13	20-Aug-12	1-Aug-06	-	-	-	23-Mar-05	1-Aug-06	-
	Distribution of Data			**Distribution of Data**						
P Value	<0.0001	<0.0001	0.0002	0.0016	-	-	-	0.2690	0.0006	-
Normally Distributed?	No	No	No	No	-	-	-	Yes	No	-
Log P Value	0.311	0.430	0.005	0.338	-	-	-	-	0.073	-
Log Normally Distributed?	Yes	Yes	No	Yes	-	-	-	-	Yes	-
	Trend Analysis			**Trend Analysis**						
Linear Regression P Value	0.0575	0.3345	-	<0.0001	-	-	-	<0.0001	0.0003	-
Slope	-0.0002	0.0001	-	-0.0003	-	-	-	-0.0002	-0.0004	-
Trend**	Down	Up	-	Down	-	-	-	Down	Down	-
Statistically Significant?	No	No	-	Yes	-	-	-	Yes	Yes	-
Tau Statistic	-	-	0.534	-	-	-	-	-	-	-
Two Tailed P Value	-	-	0.0002	-	-	-	-	-	-	-
Trend	-	-	Up	-	-	-	-	-	-	-
Statistically Significant?	-	-	Yes	-	-	-	-	-	-	-

Notes:
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

Table 6 (Continued)
FTP-1 and TVR / Old MATES Statistics
Yakima Training Center, Washington

Site	TVR / Old MATES								
Well ID	MTS-4	TVR-1	TVR-2	TVR-3	TVR-5	TVR-6	TVR-7	PAIC Well	Pomona Well
Compound	TCE	TCE	TCE	TCE	TCE	TCE	TCE	TCE	TCE
	Descriptive Statistics								
First Sample Date	23-Mar-05	1-Jan-04	1-Jan-04	23-Mar-05	21-Mar-06	21-Mar-06	21-Mar-06	1-Mar-93	1-Mar-91
Last Sample Date	21-Sep-16	21-Sep-16	15-Mar-16	21-Sep-16	21-Sep-16	21-Sep-16	21-Sep-16	21-Sep-16	21-Sep-16
Number of Samples	24	25	15	24	22	22	22	24	26
Number of Non-Detects	0	0	0	0	0	0	0	22	22
Sample Mean	7.89	7.63	3.07	14.60	2.76	6.71	19.40	-	-
Standard Deviation	3.23	2.61	0.67	9.25	3.88	3.31	11.65	-	-
Minimum Concentration	0.52	3.2	1.7	4.9	0.4	1.71	0.38	-	-
Maximum Concentration	15	12	4.4	43	16	13	43	-	-
Date*	23-Mar-05	19-Sep-07	23-Mar-05	23-Mar-05	23-Sep-09	28-Sep-10	1-Aug-06	-	-
	Distribution of Data								
P Value	0.3858	0.2044	0.8347	0.0007	<0.0001	0.3934	0.1832	-	-
Normally Distributed?	Yes	Yes	Yes	No	No	Yes	Yes	-	-
Log P Value	-	-	-	0.540	0.057	-	-	-	-
Log Normally Distributed?	-	-	-	Yes	Yes	-	-	-	-
Linear Regression P Value	0.0005	<0.0001	0.2425	<0.0001	0.6604	0.0990	<0.0001	-	-
Slope	-0.0016	-0.0014	-0.0002	-0.0004	-0.00009	0.0010	-0.0088	-	-
Trend**	Down	Down	Down	Down	Down	Up	Down	-	-
Statistically Significant?	Yes	Yes	No	Yes	No	No	Yes	-	-
Tau Statistic	-	-	-	-	-	-	-	-	-
Two Tailed P Value	-	-	-	-	-	-	-	-	-
Trend	-	-	-	-	-	-	-	-	-
Statistically Significant?	-	-	-	-	-	-	-	-	-

Notes cont:
- = Not applicable
* = Date sample with highest concentration of TCE was collected from monitoring well
** = Trend for entire dataset not taking discontinuities into consideration

FIGURES

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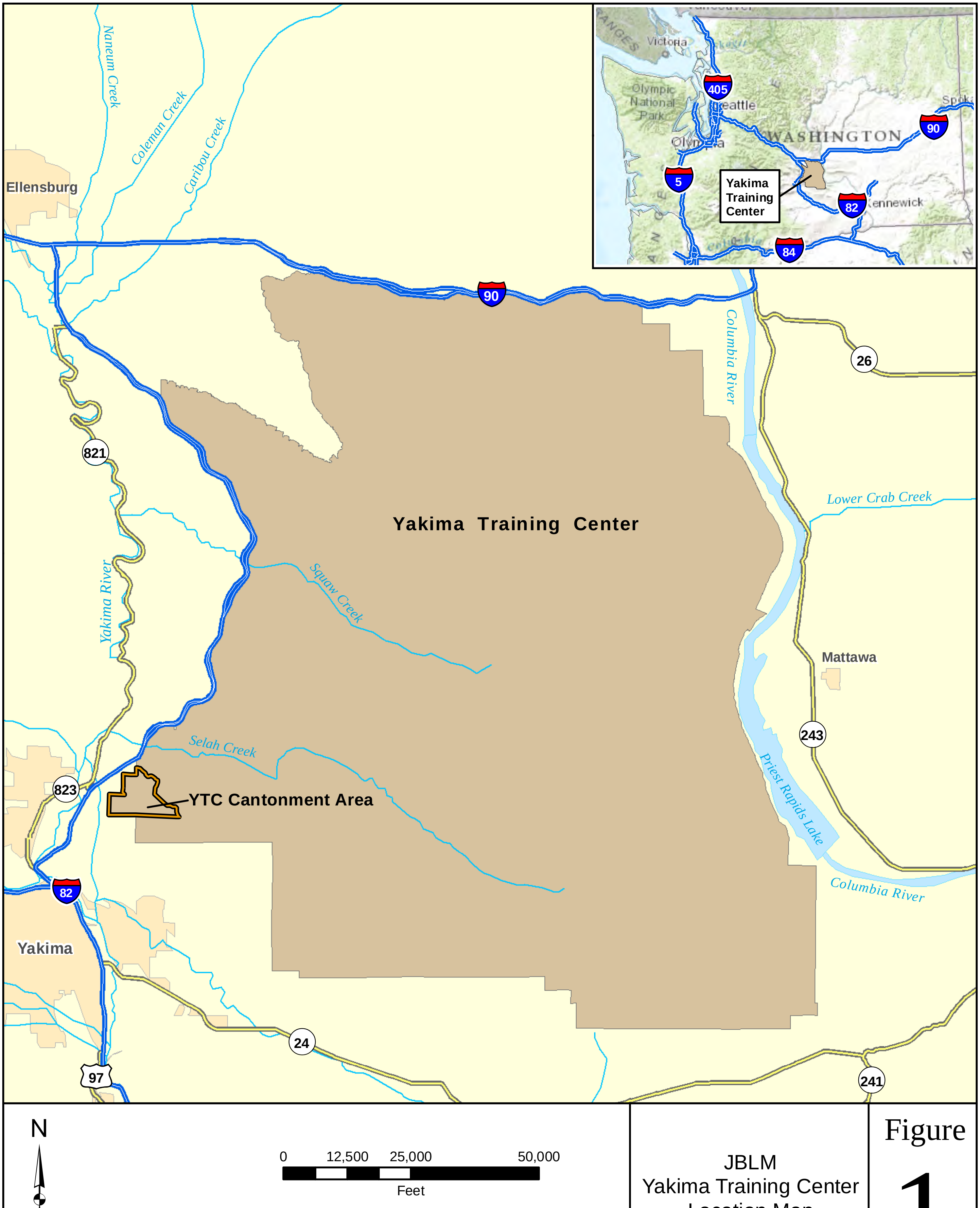
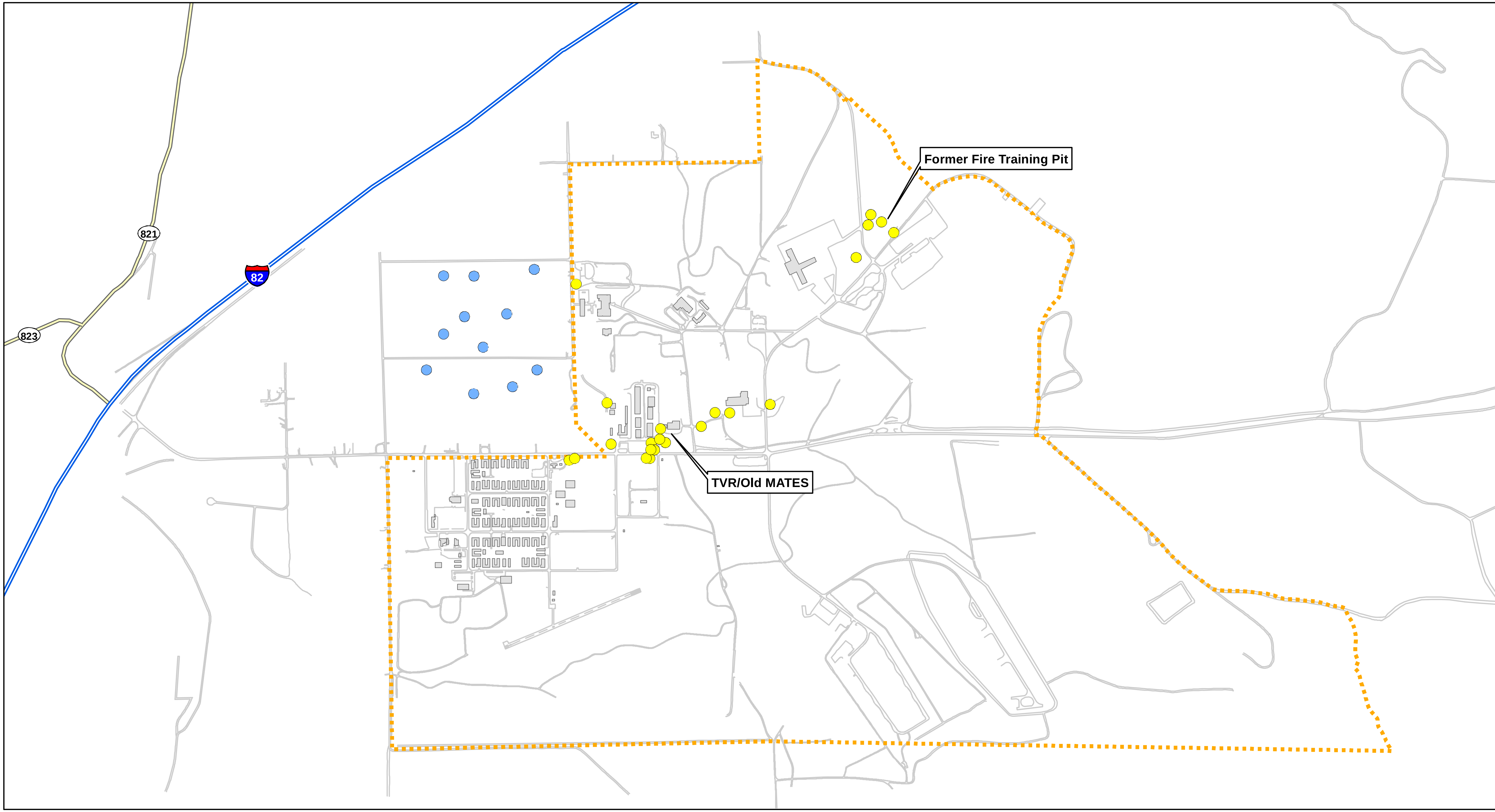


MAP DATA:
COORDINATE SYSTEM: UTM, Zone 10
HORIZONTAL DATUM: WGS 84

JBLM
Yakima Training Center
Location Map

Figure
1

R:\Projects_2014\JBLM\YTC\maps\Figure_1_YTC_Location.mxd



Monitoring Well
Residential Drinking Water Wells
Cantonment Boundary
Building

N

0 1,550 3,100 6,200
Feet

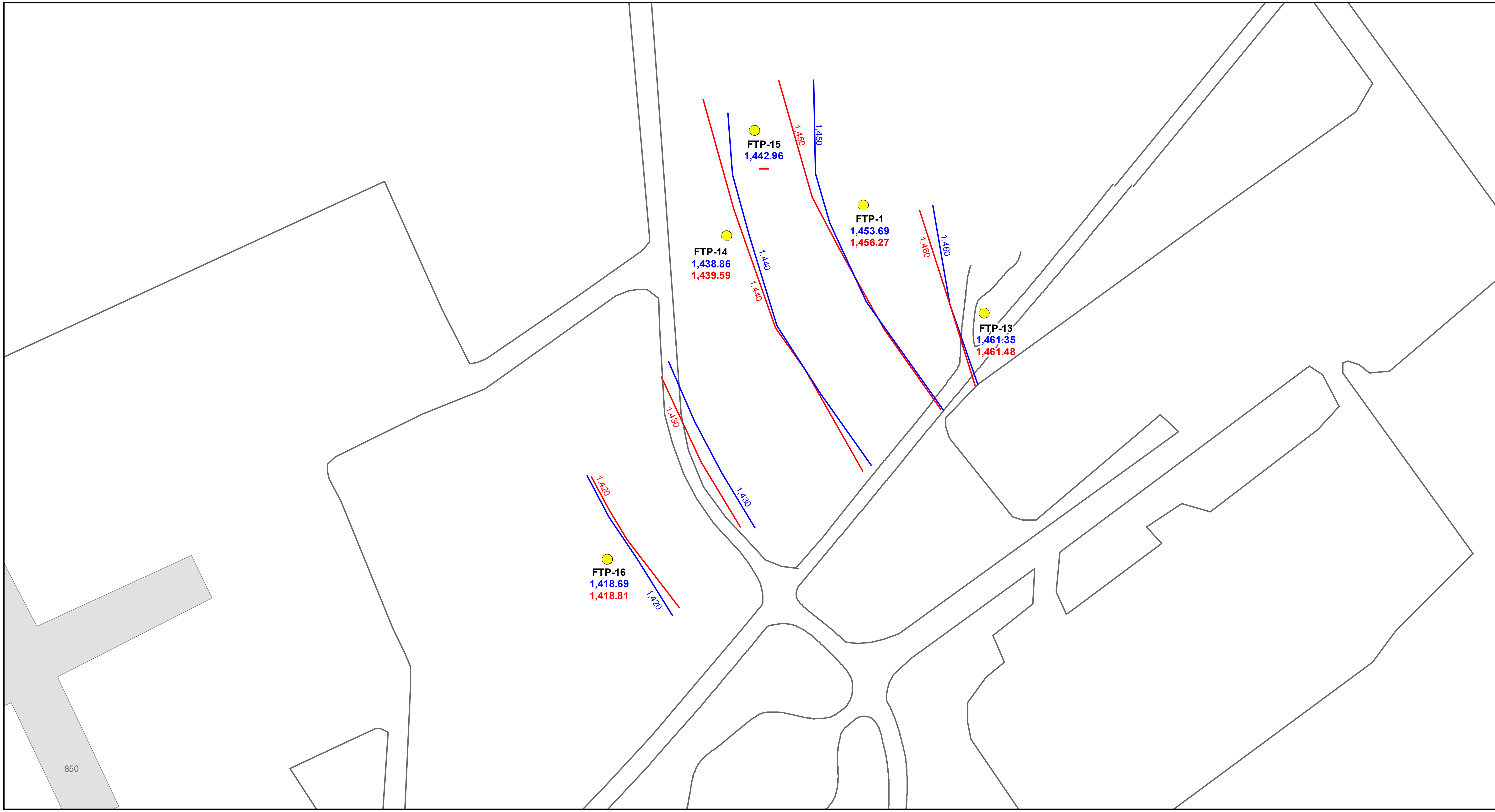
1 inch = 1,250 feet

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

PROJECT LOCATION MAP

Figure
2

R:\Projects_2014\JBLM\YTC\maps\Fig2_Project_Location.mxd



Monitoring Well
Contours - Spring
Contours - Fall
Building

Labels
Well ID: FTP-1
Spring WL (Ft/AMSL): 1,453.69
Fall WL (Ft/AMSL): 1,456.27

N

0 125 250 500
Feet

1 inch = 125 feet

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

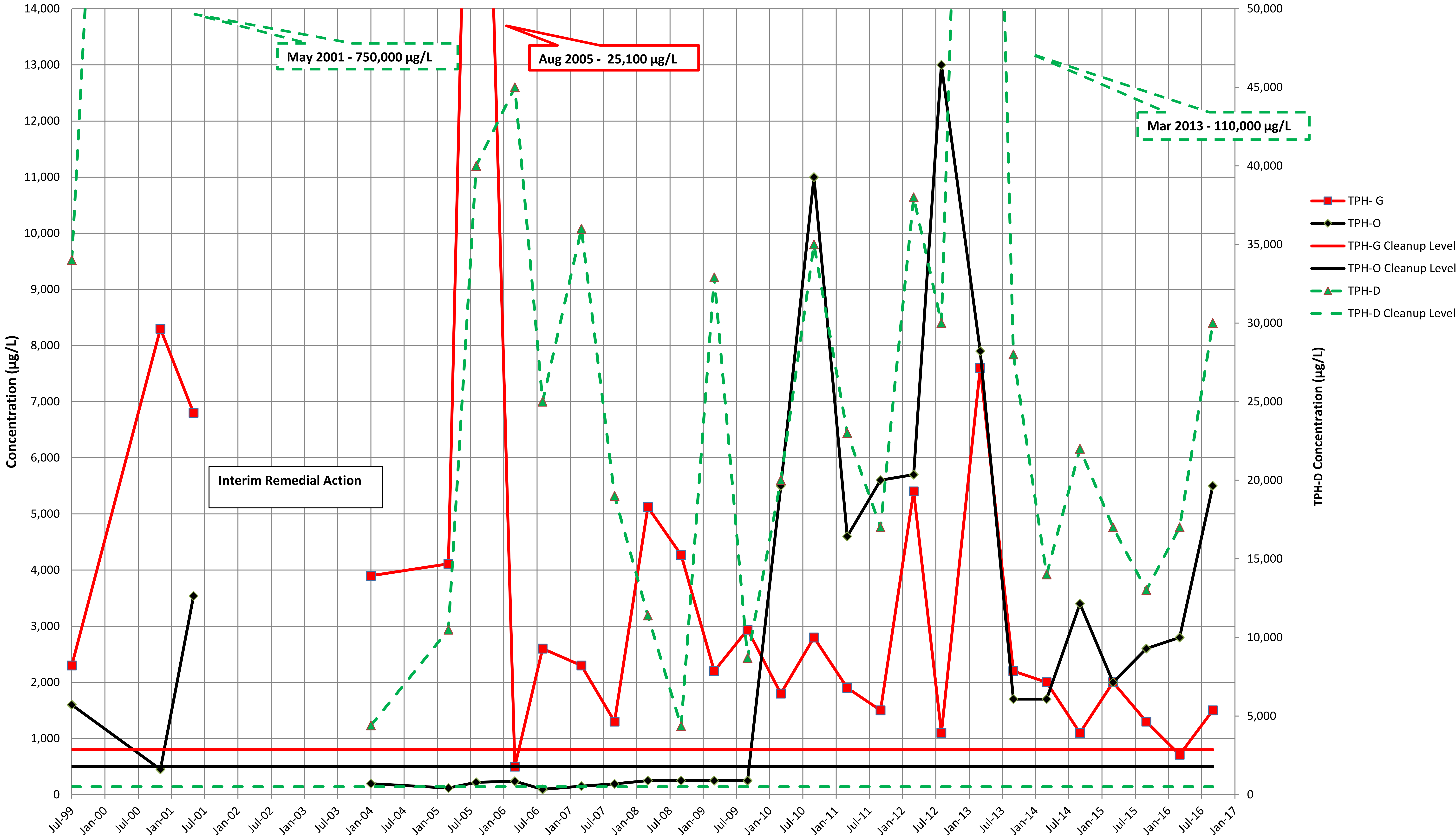
FORMER FIRE TRAINING PIT
SPRING / FALL
WATER TABLE CONTOURS

2016

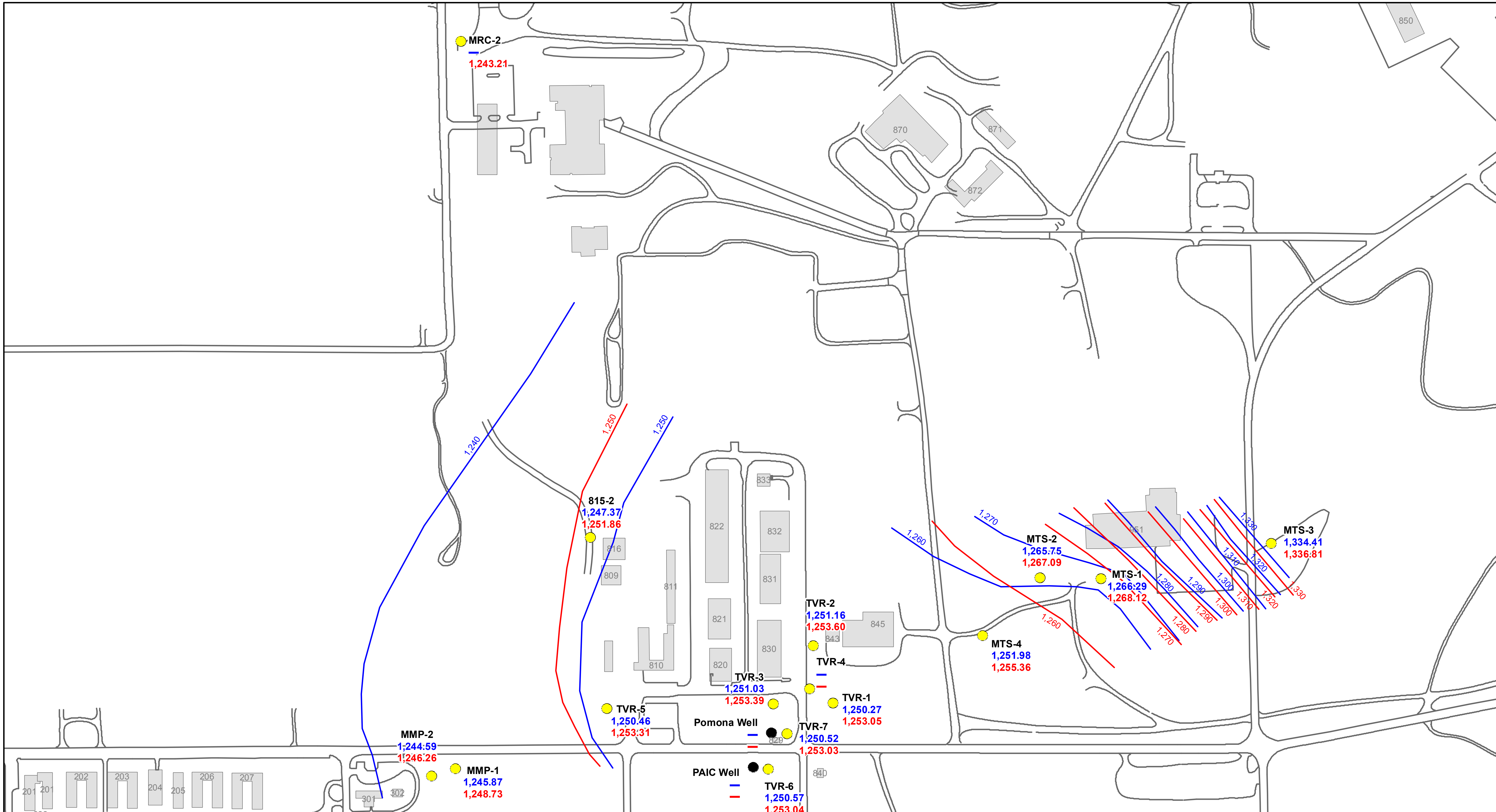
Figure
3

R:\Projects_2014\JBLM\YTC\maps\2016\Fig3_YTC_FTP_Contours.mxd

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): 1,241.39
Fall WL (Ft/AMSL): 1,249.86
Not Measured: — or —

N

0 375 750 1,500
Feet

1 inch = 300 feet

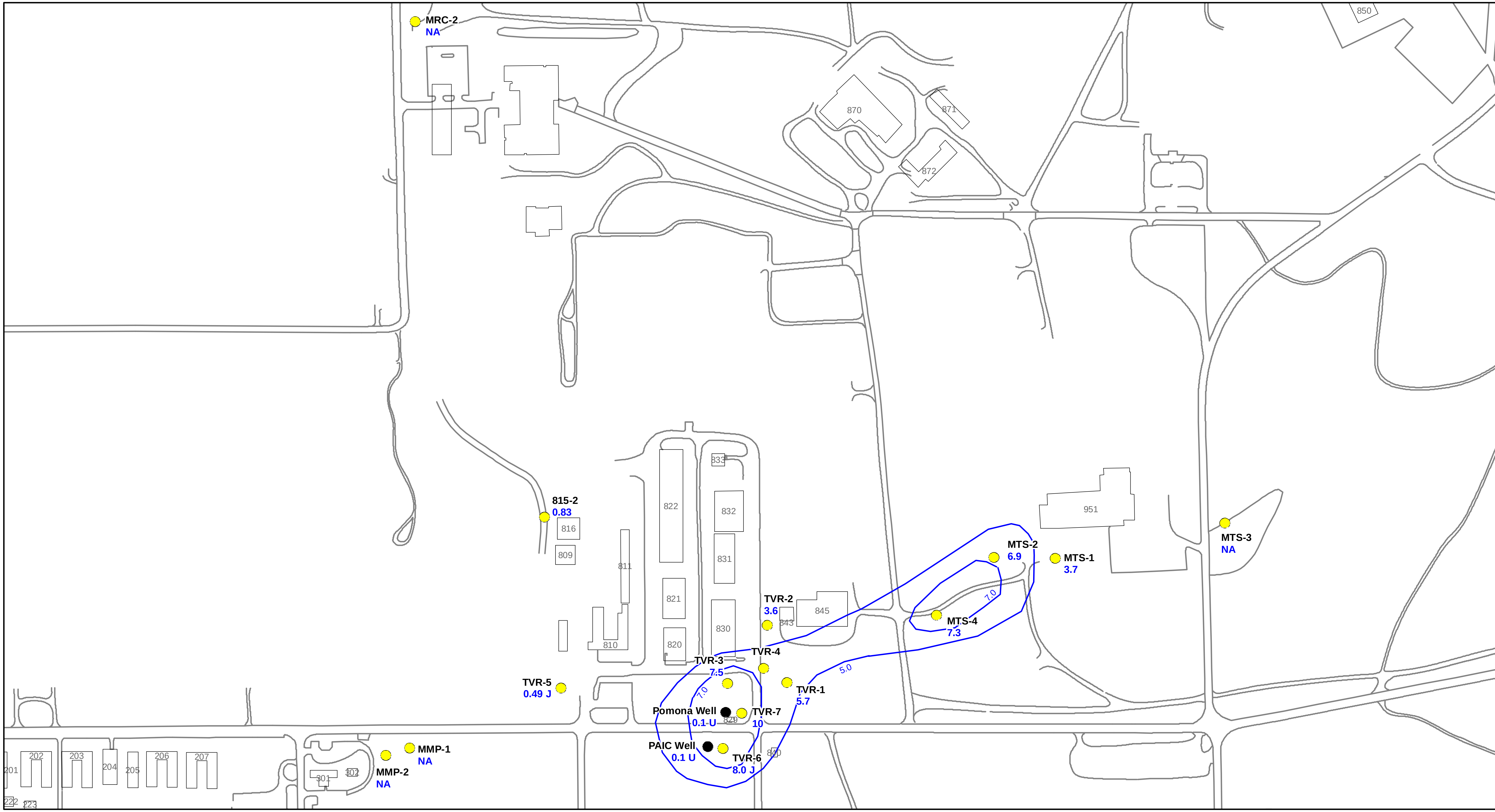
MAP DATA:
COORDINATE SYSTEM: UTM, Zone 10
HORIZONTAL DATUM: WGS 84

TVR/Old MATES AREA
SPRING / FALL
WATER TABLE CONTOURS

2016

Figure
5

R:\Projects_2014\JBLM\YTC\maps\2016\Fig5_YTC_TVR_MATES_Contours.mxd



Monitoring Well
Production Well
Contours - Spring
Building

Labels
Well ID: 815-2
Spring TCE (ug/L): 0.75
Not Analyzed: NA

N

0 375 750 1,500
Feet

1 inch = 300 feet

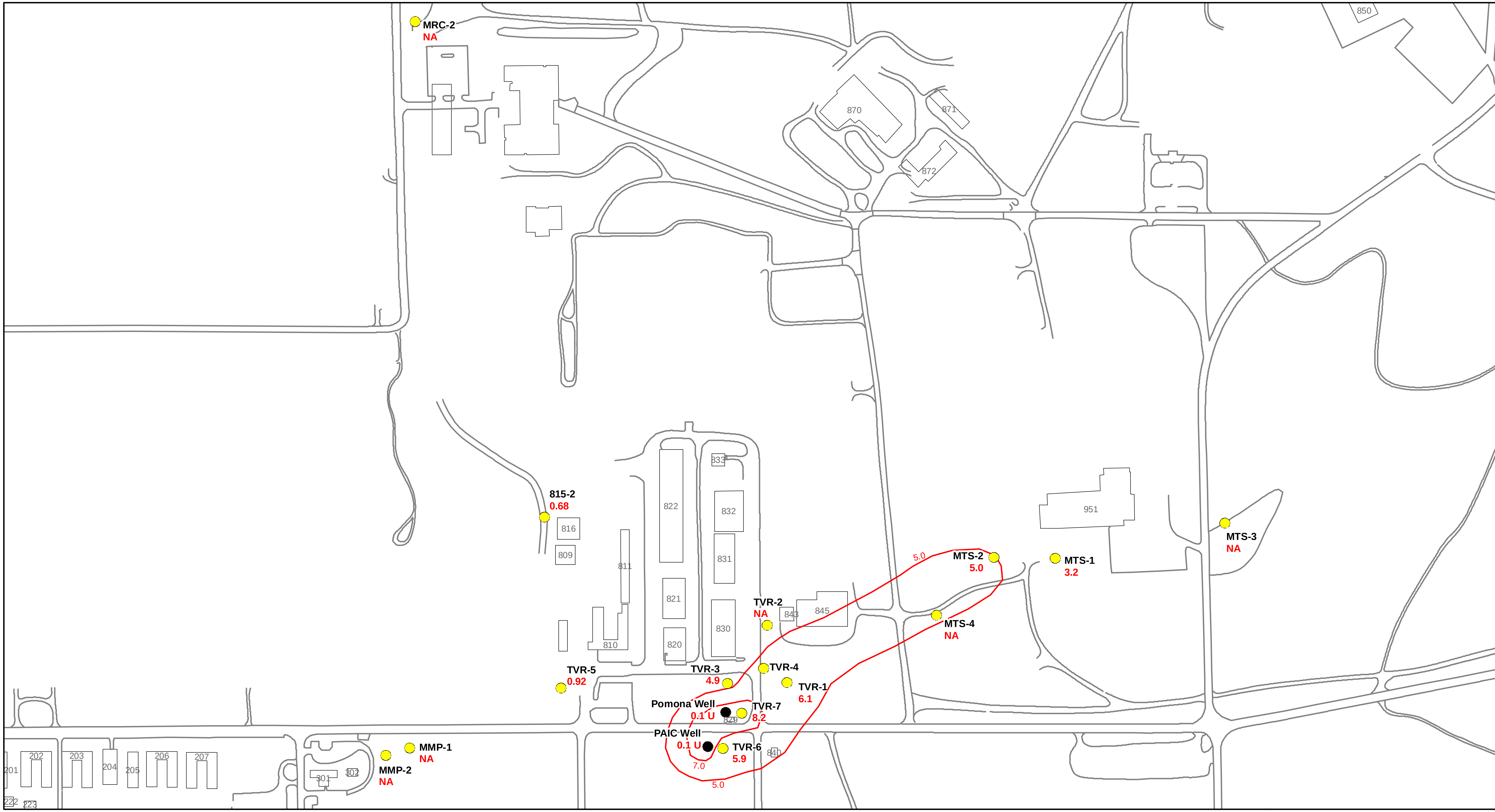
MAP DATA:
COORDINATE SYSTEM: UTM, Zone 10
HORIZONTAL DATUM: WGS 84

TVR/Old MATES AREA
SPRING TCE
CONCENTRATION CONTOURS

2016

Figure
6

R:\Projects_2014\JBLM\YTC\maps\2016\Fig6_YTC_TVR_MATES_TCE_Contours_Spring.mxd



Monitoring Well
Production Well
Contours - Fall
Building

Labels
Well ID: 815-2
FALL TCE (ug/L): 0.68
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

2016

Figure
7

R:\Projects_2014\JBLM\YTC\maps\2016\Fig7_YTC_TVR_MATES_TCE_Contours_Fall.mxd

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?	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: 12-13-17

B. INTERVIEWS

Position	Name	Question	Answer
JBLM PW GIS Lab	Teresa Hansen	17. Are you still storing LUC data layer in GIS?	Yes / No
		18. Is LUC data layer still available to GIS users?	Yes / No
YTC PW GIS	D. Thear1	19. Do you still have LUC data layer in GIS?	Yes / No
JBLM Master Planner	Gary Stedman	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
YTC Staff Engineer	Margaret Taaffe	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
		30. Any plans for property conveyance in YTC Cantonment Area?	Yes / No
YTC Cultural Resources PM	Randy Korgel	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 17-21, 24-27, 27-28, 31-32 OR for any "Yes" answer from Questions 22, 23, 26, 29, 30)? **YES or NO** If yes, describe on back.

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

35. Interview Dates: 12-21-16 to 12-31-16

C. CERTIFICATION

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

[signature], Dana Ranquist   1-20-17

Signature   Print Name   Date

APPENDIX B

COMPLETED FIELD FORMS AND LABORATORY ANALYTICAL REPORTS (on CD)

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Tetra Tech, Inc.
Data Review Report

Project Name:	JBLM/Yakima Training Center
Project Number	K1602714
Collection Date:	03/15/2016 and 03/16/2016
Laboratory:	ALS Environmental, Kelso, WA

DATA REVIEW

- Sixteen water samples, one field duplicate, and one trip blank were collected and received at the laboratory on 03/17/16. Of these, fifteen 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 five were analyzed for diesel range and gasoline range organics by methods NWTPH-Dx and NWTPH-Gx respectively. One trip blank was also collected to assess potential contamination for 8260C and for NWTPH-Gx 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-3
FTP-14	TVR-5
FTP-15	FTP-16
TVR-7	815-2
PAIC Well	FTP-1A
POMONA Well	MTS-1
TB	MTS-2
TVR-1	TVR-6
MTS-4	

Review Summary

1. Holding Time

All holding times were met. The cooler arrived at an acceptable temperature level. There were some chain of custody documentation and sample label inconsistencies. The samples were logged per the container labels and dates.

2. Matrix Spikes

Sample TVR-6 was used as the matrix spike and the matrix spike duplicate for volatile organics 1,1-dichloroethene, 1,1-dichloroethane, 1,1-dichloropropene, benzene, trichloroethene, toluene. Positive results for benzene and trichloroethene are potentially biased high. All other recoveries were within the recommended limits of control.

3. Blanks

The method blanks for gasoline range organics and semi-volatile organics were free of contamination. The trip blank for gasoline range organics had a detection of 19 ug/L. The method blank for diesel range and residual range organics had a reported detections of 12 ug/L and 24 ug/L. The laboratory method blank for volatiles had reported detections of chloroform (0.11 ug/L), and methylene chloride (0.21 ug/L), 1,2,4,-trichlorobenzene (0.11 ug/L), hexachlorobutadiene (0.15 ug/L). The trip blank for these samples had reported detections for carbon disulfide (0.09 ug/L), chloroform (0.090 ug/L), methylene chloride (0.14 ug/L), and toluene (1.1 ug/L).

Sample results for toluene, carbon disulfide, and chloroform are potentially biased high due to blank contamination.

4. Duplicates

Sample FTP-1A was collected as a field duplicate for sample FTP-1 for TPH-Dx, TPH-Gx, VOC's and SVOCs. The relative percent difference was within recommended limits of control.

5. Laboratory Control Samples

All laboratory control sample recoveries and duplicate RPD's were within acceptable limits of control for all methods except for DRO and RRO where the RPDs were out of the control limits.

6. Surrogates

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

7. Comments

For DRO and GRO, the chromatographic fingerprint of the sample resembles a petroleum product eluting in the same range as the calibration standard, but does not exactly match the calibration standard. All data are complete and usable.

Tetra Tech, Inc.
Data Review Report

Project Name:	JBLM/Yakima Training Center
Project Number	K1611368, K1607267
Collection Date:	09/21/16, 09/22/2016 and 06/28/16
Laboratory:	ALS Environmental, Kelso, WA

DATA REVIEW

- Fifteen water samples, one field duplicate, and one trip blank were collected and received at the laboratory on 9/23/16. One sample for a PDB blank was received at the laboratory 6/30/2016. Of these, fourteen 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. One trip blank was also collected to assess potential contamination for 8260C and for NWTPH-Gx 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-3
FTP-14	TVR-5
FTP-15	FTP-16
TVR-7	815-2
PAIC	DUP-1
POMONA	MTS-1
Trip-1	MTS-2
TVR-1	TVR-6
MTS-4	PDB-062816

Review Summary

1. Holding Time

All holding times were met. The cooler arrived at an acceptable temperature level. There were some chain of custody documentation and sample label inconsistencies. The samples were logged per the container labels and dates.

2. Matrix Spikes

Sample FTP-1 was used as the matrix spike and the matrix spike duplicate for volatile organics, semi-volatile organics, and diesel range organics. For SVOC's 3,3-dichlorobenzidine was outside of the recommended limits of control low. There were no historic detections for this compound in the sample and no action was required. For diesel range organics, the concentration in the sample was significantly higher than the spike amount, preventing accurate evaluation of the spike recovery. For VOC's, 2-butanone, 4-methyl-2-pentanone, 2-hexanone, 1,23-trichloropropane, 1,2-dibromo-3-chloropropane, were above the recommended limits of control. The non-detect results in the field samples are not impacted by the potential high bias. All other recoveries were within the recommended limits of control.

3. Blanks

The method blanks for gasoline range organics and semi-volatile organics were free of contamination. The trip blank for gasoline range organics was free of contamination. The method blank for diesel range and residual range organics had a reported detections of 13 ug/L and 72 ug/L. The reported detections of residual range organics in samples FTP-14 and FTP-15 may be considered to be biased high. The laboratory method blank for volatiles had reported detections of carbon disulfide (0.09 ug/L), chloroform (0.13 ug/L), methylene chloride (0.17 ug/L), and naphthalene (0.18 ug/L). The trip blank for these samples had reported detections for acetone (4.5 ug/L).

The PDB blank sample had a detection for Toluene 0.060 ug/L. The laboratory method blank samples had a detection for chloroform (0.12 ug/L) which was non-detect in the PDB blank sample.

Sample results for acetone, carbon disulfide, and chloroform are potentially biased high due to blank contamination. All detected results for naphthalene are significantly higher than detected in the blank samples and not impacted by blank potential contamination. Methylene chloride was not detected in any of the field samples.

4. Duplicates

Sample DUP-1 was collected as a field duplicate for sample PAIC for VOC's. All results were non-detect except for acetone in DUP-1 which is potentially biased high for blank contamination. The relative percent difference was within recommended limits of control.

5. Laboratory Control Samples

All laboratory control sample recoveries and duplicate RPD's were within acceptable limits of control for all methods except for 1,1-dichloroethene which was recovered low in the LCSD sample.

6. Surrogates

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

7. Comments

For DRO and GRO, the chromatographic fingerprint of the sample resembles a petroleum product eluting in the same range as the calibration standard, but does not exactly match the calibration standard. All data are complete and usable.

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: 815-2 Date Well Purged: 3/5/14 Date Well Sampled: 3/5/14

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 56.91 Purge Method: NA

Water Sample Data

Sample Number: 815-2 Time Sample Collected: 1240
Sampling Method: PDB
Sampling Personnel: DZ + MF
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)

PDBs

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: 31514 Date Well Sampled: 31514

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 94.73 Purge Method: NA

Water Sample Data

Sample Number: MTS-1 Time Sample Collected: 1415
Sampling Method: PDB
Sampling Personnel: MZ + MF
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
					PDBs		

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: MTS-2 Date Well Purged: 3/5/14 Date Well Sampled: 3/5/14

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 86.13 Purge Method: NA

Water Sample Data

Sample Number: MTS-2 Time Sample Collected: 1425
Sampling Method: PDB
Sampling Personnel: BL + MP
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

PDBs

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: MTS-4 Date Well Purged: 3/5/14 Date Well Sampled: 3/5/14

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 79.90 Purge Method: NA

Water Sample Data

Sample Number: MTS-4 Time Sample Collected: 1450
Sampling Method: PDB
Sampling Personnel: RL + MF
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

PJ 3/5

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: TVR-1 Date Well Purged: 3 15 16 Date Well Sampled: 3 15 16

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 69.90 Purge Method: NA

Water Sample Data

Sample Number: TVR-1 Time Sample Collected: 1330
Sampling Method: PDB
Sampling Personnel:
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
		PDBs					

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: TNR-2 Date Well Purged: 3516 Date Well Sampled: 3516

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 66.40 Purge Method: NA

Water Sample Data

Sample Number: TNR-2 Time Sample Collected: 1345
Sampling Method: PDB
Sampling Personnel: RL + MF
Remarks:

Checklist

- [x] Well capped and locked (pre-sampling)
- [x] Water level measured
- [x] 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
		PDBS					

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: TVR-3 Date Well Purged: 3/5/16 Date Well Sampled: 3/5/16

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 59.57 Purge Method: NA

Water Sample Data

Sample Number: TVR-3 Time Sample Collected: 1320
Sampling Method: PDBs
Sampling Personnel: RL TMF
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
			PDBs				

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: TVR-5 Date Well Purged: 3/5/16 Date Well Sampled: 3/5/16

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 51.58 Purge Method: NA

Water Sample Data

Sample Number: TVR-5 Time Sample Collected: 1255
Sampling Method: PDB
Sampling Personnel: RL + MF
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
			PDBs				

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center

Well No.: TVR-7 Date Well Purged: 3/15/16 Date Well Sampled: 3/15/16

Well Data

Measuring Point (MP): Top of Casing

Depth to Water Below MP: 60.43 Purge Method: NA

Water Sample Data

Sample Number: TVR-7 Time Sample Collected: 1315

Sampling Method: PDBS

Sampling Personnel: DR + MR

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
			PDBS				

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: PAIC Date Well Purged: — Date Well Sampled: 3/16/16

Well Data

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

Water Sample Data

Sample Number: PAIC Well Time Sample Collected: 900
Sampling Method: direct from tap
Sampling Personnel: BL + MF
Remarks:

Checklist

- [x] Well capped and locked (pre-sampling)
- [ ] Water level measured
- [ ] 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.: Pomona Date Well Purged: — Date Well Sampled: 3/6/16

Well Data

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

Water Sample Data

Sample Number: Pomona Well Time Sample Collected: 1215
Sampling Method: direct from tap
Sampling Personnel: RL + MF
Remarks:

Checklist

- [x] 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)
- [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-1 Date Well Purged: 3/16/16 Date Well Sampled: 3/16/16

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 14.03 Purge Method: bailer

Water Sample Data

Sample Number: FTP-1 Time Sample Collected: 1115
Sampling Method: bailer
Sampling Personnel: DR + MF
Remarks: FTP-1A @ 1130 dup

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
35	1115	7.4	13.1	5.9	1.27	-40	13

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: FTP-14 Date Well Purged: 31616 Date Well Sampled: 31616

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 18.62 Purge Method: bailer

Water Sample Data

Sample Number: FTP-14 Time Sample Collected: 1240
Sampling Method: bailer
Sampling Personnel: DR + MF
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
- [x] NA PDB deployed (if applicable)
- [x] Well capped and locked (post-sampling)

Liters Out	Time	PH	Temp	DO	Spec. Cond.	ORP	Turb
10gal	1240	7.9	13.6	4.34	.722	142	12

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: FTP-15 Date Well Purged: 3/6/16 Date Well Sampled: 3/6/16

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 17.92 Purge Method: bailer

Water Sample Data

Sample Number: FTP-15 Time Sample Collected: 1300
Sampling Method: bailer
Sampling Personnel: DL + MF
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
30L	1300	7.6	13.2	8.16	.652	119	27

WATER SAMPLING LOG

Project: JBLM – Yakima Training Center
Well No.: FTP-16 Date Well Purged: 3/16/16 Date Well Sampled: 3/16/16

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 26.12 Purge Method: bailer

Water Sample Data

Sample Number: FTP-16 Time Sample Collected: 1345
Sampling Method: bailer
Sampling Personnel: BZ + MF
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
	1345	7.6	13.7	8.2	1.3	303	10

WATER SAMPLING LOG

Project: YTC

Well No.: FTP-1 Date Well Purged: 9 21 16 Date Well Sampled: 9 21 16

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 11.59 Purge Method: bailer

Water Sample Data

Sample Number: FTP-1 Time Sample Collected: 1145
Sampling Method: bailer
Sampling Personnel: DR & JP
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
8gal	1145	6.86	17.5	2.65	1701	-33.2	14.5

WATER SAMPLING LOG

Project: YTC
Well No.: FTP14 Date Well Purged: 92114 Date Well Sampled: 92114

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 17.89 Purge Method: bailer

Water Sample Data

Sample Number: FTP-14 Time Sample Collected: 1240
Sampling Method: bailer
Sampling Personnel: BL + JP
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
3.12g	1240	7.5	19.9	2.94	943	75.6	1.3

WATER SAMPLING LOG

Project: UTC

Well No.: FTP-15 Date Well Purged: 92116 Date Well Sampled: 92116

Well Data

Measuring Point (MP): Top of Casing

Depth to Water Below MP: 14.60 Purge Method: bailer

Water Sample Data

Sample Number: FTP-15 Time Sample Collected: 1300

Sampling Method: bailer

Sampling Personnel: DR + JP

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
5 Gal	1300	7.3	16.5	8.7	913	139	33.3

WATER SAMPLING LOG

Project: YTC
Well No.: FTP-16 Date Well Purged: 92116 Date Well Sampled: 92116

Well Data

Measuring Point (MP): Top of Casing
Depth to Water Below MP: 32.39 Purge Method: bailer

Water Sample Data

Sample Number: FTP 16 Time Sample Collected: 1330
Sampling Method: bailer
Sampling Personnel: DR + JP
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
4.5 gal	1330	7.2	14.9	7.0	2127	157	13.9

Rite in the Rain®
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JBLM + YTC
W912DW-11-D-1031

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ALL-WEATHER WRITING PAPER

ALL-WEATHER
ENVIRONMENTAL FIELD BOOK

Name ______________________________

Address ______________________________

Phone ______________________________

Project ______________________________

CONTENTS

PAGE	REFERENCE	DATE

YTC Contacts:
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Jared Murrey 509.577.3424 - LPL clicker
Lyndon Rogers (PAK Well) 509.961.4416
Chris 509.577.3407. cell 509.929.0699
or Shane (Pomona Well)

LAKEWOOD WATER DISTRICT

(SANDY) A.T. RAE
CREWLEADER/INSPECTOR

11900 GRAVELLY LAKE DRIVE S.W.
P.O. BOX 99729 LAKEWOOD, WA 98499-0729
PHONE (253) 588-4423
CELL (253) 365-4065
FAX (253) 588-7150
srae@lakewood-water-dist.org

Location JBLM - SS 34N Date 12 23 15

Project / Client ISCO injection

Rain / Snow 36°F

1115 Sam @ 34N, remove bucket + handles + load to truck to recycling. DR → trash to log center

LM for Bob Thomas re: dumpster location

1145 meet Bob @ Log Ctr LF, dispose trash

1200 CW-66 + CW-65 injecting @ 32 gpm

1230 take buckets to recycling all handles removed

1300 approx 2200 gal injected

1500 total for day 8830 gal hydrant meter final reading: 0143940

1530 return hydrant meter to LWD → Sandy demob + cleanup trash → dumpster

Location JBLM Date 3-7-16

Project / Client

D Rangquist, M Fallon

Rain 50F

0900 on site

Tailgate: slippery surfaces, potential const. vehicles

mob sampling equipment

0915 Trip Blank

0950 AD-16-004 (Effluent)

0955 AD-16-005 (SMP)

~~DA~~ DTW - 6.05

1100 AD-16-001 sampled (DT-1)

1120 AD-16-002 (DX-2) Sampled

1130 DR-05 DTW - 2.82

1200 AD-16-009 (DA-29) DTW 0.6

1230 AD-16-008 (DA-21b) DTW-14.8

1310 DA-9b DTW - 17.45

1330 AD-16-007 sampled

1335 AD-16-012 (dup of DA-9b)

DA-7b DTW - 12.741

1400 AD-16-006 Sampled

DA-30a DTW - 3.57

1420 AD-16-010 Sampled MS/MSD

Location JBLM - Area D Date 3-7-16

Project / Client

Rain, 50F

1430 Water levels
called M Ingersoll to confirm
only 1 sample AD-16-~~00~~1 = DT-1
call Kier, MS/MSD @ Area D +
34N each site
clean up, pack samples
prep for tomorrow

3-7-16 KR

Location JBLM - 34N Date 3-8-16

Project / Client M Farrow, D Rumquist

Pt Sunny 43F

0830 (4) TP. Tailgate:
trudging in springbrook,
equipment security
mob + set up sampling
equipment

CW-62 DTW-8.35
945 R1-16-012 Sampled
950 R1-16-023 dup of (CW-62)

CW-61 DTW-20.77
10 10 R1-16-011 Sampled
CW-55a no sample - pmag
DTW - 21.49
CW-55b DTW - 22.41
CW-71 DTW 21.86 pmag - not Sampled
CW-45 (car parked on well)
CW-70 - DTW 23.28
CW-53 DTW 22.12

1 Sell

Location JBLM- 34N Date 3 8 16

Project / Client

Cloudy 45F

CW-61 DTW - 21.22
casing cut too high, w/ well
cap, lid does not fit
needs monument repaired
or casing cut down
CW-46 DTW-21.53/ pmag- no sample
CW-68 DTW-21.54/ pmag- no sample
CW-67 DTW - 21.46
1200 RI-16-015 sampled.
* caution along rd. irrate drivers
CW-47 DTW - 21.35
~~RI-16-009~~ not sampled -pmag

CW-64 DTW - 24.65
1345 RI-16-013 sampled

CW-65 DTW. 23.29
NOT sampled - p-mag
CW-66 DTW - 22.25
water levels
EPA-W-5 DTW - 5.25
1500 demob equipment + park
[illegible] samples [illegible]

Location JBLM Date 3.9.16

Project / Client D Rawnquist, M Fawcett

Cloudy 50F, light rain

0800 onsite. Tailgate: 360 walkaround,
caution @ 34N, p-mag in
wells, PPE.
mob equipment + prep
samples
0930 check in @ build # 1172
escort available
Thurs 9AM
0945 CW-41 DTW. 20.69
p-mag - Not sampled
IW-~~33~~ - DTW - 30.28 ~~tot csp~~
p mag - not sampled,
inj. cap screwed to TOC
water levels + 34N

1130 Spoke w/ Ingersoll re: base boundary
well locations, + update/status

LT-11 DTW + 9.22
1210 GM-16-003 sampled

Location JBLM Date 3 9 16

Project / Client

Rain 45F

LT-10 located just W of
building + pk lot
DTW - 13.83
GM-16-002 sampled
all samples preserved w/
ice prior to packing for shipping
AZ-06 DTW- 21.73
1510 GM-16-004 sampled

1530 demob, pack samples

DR 3916

Location JBLM Date 3.10.16

Project / Client D Ramquist, M Favian

pt. sunny 50F, WIND

0800 onsite
Tailgate: airfield operations
- follow escort instructions
high wind hazard - trees
mob equipment
0900 meet escort @ #1172

TW-09 DTW - 8.36
0915 GM-16-008 sampled

CR-02 DTW - 4.70
0930 GM-16-007

CW-9 DTW - 20.14
1000 GM-16-005 sampled
1010 GM-16-009 - dup

CW-14b DTW - 27.28
1050 GM-16-006 sampled

3.10.16

Location JBLM Date 31016

Project / Client

Rain, WIND, 50F

1115 waiting for escort @ swing gate access to LT-2. security on way

~~[illegible]~~ LT-2 DTW -

GM-16-001 sampled

DM-06 DTW - 25.87'

UA-02 DTW - 25.66'

all samples kept on ice prior + during

ship/pack; pack samples, prep COCs

call Keir + mark re; TPH site equipment blank

confirm 1 amber ok for Dx to

1600 demob + ship samples Fed Ex

DR 31016

Location JBLM Date 3 11 16

Project / Client

pt. Sunny 40F

0800 Arrive @ TP. Tailgate: lifting, prep coolers + samples, COC + clean up, all kept iced, pack equipment

0800 Water levels - See field form

1600 Fed Ex - Ship samples prep equipment for 4TC

DR 311-16

Location YTC Date 3/5/16

Project / Client D Ramquist, M Fairow

Cloudy 40F

030 onsite: got LF key + Vin @ public works
Tailgate: Slippery surfaces, access roads, vehicle walk around

MW-4 DTW- 67.10
1105 purge @ 227 hz
210 purged dry

20 MW-6 DTW- 39.5
25 purge @ 196 hz
228 purged dry

240 B15-2 sampled - PDB
DTW - 56.91

255 TVR-5 DTW - 51.58

305 TVR-6 DTW- 59.49
315 TVR-7 DTW- 60.43
320 TVR-3 DTW - 59.57
330 TVR-1 DTW - 69.90

Location YTC Date 3/5/16

Project / Client

pt Sunny 45F

1415 MTS-1 DTW - 94.73
1425 MTS-2 DTW - 86.13
1450 MTS-4 DTW - 79.90

Supply run for shipping samples + sample materials

DR 3/5/16

Location YTC Date 3/6/16

Project / Client D Ramquist, M ~~Baran~~

Sunny 35F

0800 onsite: Tailgate, heavy layers

prep sample sets PAK or

0900 Meet Lyndon @ ~~Pomona~~ Well

MW-4 DTW - 86.75

946 MW-4 sampled

950 MW-4A (dup)

1030 MW-6 sampled

FTP-1 DTW - 14.03

purge (all FTP H_2O) → wash rack

1115 FTP-1

1130 FTP-1A

FTP-13 DTW - 11.72

1215 Pomona Well

1240 FTP 14 DTW - 18.62

1300 FTP-15 DTW - 17.92

1345 FTP-16 DTW - 26.12

TVR-4 DTW - DRY 25.02

Location YTC Date 3/6/16

Project / Client

pt Sunny 50F

1430 pack samples to ship
take to Fed Ex

NOTES:

call to M. Ingersoll re: Ecology notification
reported Lyndon Rodgers request
for PAK data

called Greg Caron, made notification
Greg asked for TVR-4 + MMP-2
water levels, gave Lyndon's
contact info

call to Ken re. MS/MSD @
FTP-1 (not enough recharge
for QC volume needed
same @ MW-4
Will do QC samples next round

1430 pack samples for FedEx +
Ship Samples

JBLM 6/2016

NZamquist, MFavreau, Andrew Manes

pt cloudy 70F

1830 on site: prep sample equipment

AM @ pass + ID

0900 Tailgate: heavy lifting, spiders

caution of golfers

935 AD-15-Ø17 (Effluent)

930 AD-15-Ø18 smp

940 AD-15-Ø19 smp dup

1000 DT-1

DTW - 11.55

1030 AD-15-Ø14 sampled

DX-2

1045 AD-15-Ø15 sampled

DO-2 DTW 12.49

DR-05 DTW 9.17

DB-4 DTW - 7.55

DA-11a DTW - 11.76

DA-29 DTW - 84

DO-3 DTW - 20.3

DX-3

1130 AD-15-Ø16 sampled

DR

2PA-W-5 DTW - 954

JBLM 6/2016

Collect Water levels

Well ID	DTW
DA-30a	9.5
DA-30b	10.93
DO-4a	10.41
DZ-13	12.89
DA-13a	13.59
DO-5a	8.64
DO-5b	9.99
DA-28	5.72
DA-30a	9.5
DA 30b	10.93
DA-7b- 18.58 / DA-32	12.63

unload equipment,

samples → fridge

1430 off site

6/2016 DR

Location JBLM Date 6-21-16

Project / Client ~~DR~~ Ramquist M. Favrao
Andrew Manes

Partly Sunny 70F
0830 on site
Tailgate: traffic in spgbrk.
~~load equipment~~
845 Springbrook CW-62.
completely buried in grass/
leave. brush pile →
get shovel to search for
well, shoveled debris
gravel + brush. could not
locate.
call to PM + left msg
950 Set up @ CW-61
DTW - 29.24
1030 RI-15-Ø31 sampled

CW-55a DTW - 28.65
1050 RI-15-Ø31 sampled

CW55D DTW - 28.78
No monument lid

DR 6/21/16

Project / Client

CW-71 DTW - 28.99
~~RI-15-Ø38~~ NOT SAMPLED
P-mag in well

CW-~~45~~ DTW - 29.38
1020 RI-15-Ø27 sampled
1130 RI-15-Ø39 dup

CW-70 DTW - 29.25
CW-53 DTW - 29.30
CW-69 DTW - 28.43
Well unsecured + uncapped
CW-46 DTW - 28.70
call to Kerr re: well unsecured
+ unlocked, tried to reach PM
→ will purge + sample CW-69
1150 ~~RI-15-Ø37~~ sampled
Sample St. pink. not submitted
Spoke w/ PM ~~&~~ Do NOT submit

CW-67 no pump in March

6-21-16 DR

JBLM 6 21 16

Sunny 75 'F

1220 CW-44 purge - Pmag * not Sampled

CW-68 DTW - 28.71

1240 RI-15-036 Sampled

CW-67 DTW - 28.66

1300 RI-15-035 Sampled MS/MSD

CW-47 DTW - 28.55

1320 RI-15-029 Sampled

CW-64 DTW - 31.40

1340 RI-15-033 Sampled

Left dedicated tubing

CW-65 DTW - 29.99

purging dark orange/brown

~~RI-15-034 sampled~~

Pmag - NOT Sampled, left tubing in well

CW-66 DTW - 28.45

CW-49 DTW - 33.65

return to CW 62 to look 4 well, Replace Bolts on CW-61

1500 CW-25 DTW - 30.35

demob equipment

6 21 16 DR

JBLM 6 22 16

DR, M. Favrow, Andrew Manes

Sunny 70F

0730 meet + pick up metal detector @ rental co.

0815 on site. tailgate, mob equipment

0900 CW-62 searching w/ detector

1015 CW for metal sei, 62 spoke w/ Pound. They will be onsite to help shortly

water levels + replace bolts in wells w/ missing bolts

CW-48 - DTW 29.49'

located across from N corner of appartment 12809 / B

N corner ≈ 3' off pavement

* CW-69 Monument has sunk well cap will not fit under lid. added 3 Bolts

Location JBLM Date 62216

Project / Client

overcast 70F

1215 RI-15-040 Equip. Blank
1230 RI-15-041 Trip Blank

1245 B Jones, Ingersoll, Mrzerette + Eklund @ TP
crew packing samples
back to CW-62 to search for well
1310 Ingersoll @ 62 to help locate well
Well located ≈10' off corner of ecology bk, off asphalt

CW-62- DTW-16.5
1330 RI-15-032 sampled

B. Jones on site
1340 Ingersoll + Jones off site
demob
pick samples for shipment
return rental equipment)
1400 ship samples

M 62216

Location JBLM Date 62316

Project / Client DRamsquist, MFarrow, Andrew Manes

cloudy 65F.

0830 meet + travel to site
pass + ID
930 tailgate: pmug, ants, spiders in wells
weekly inspection

water levels
CW-63 / DTW - 12.40
CW-52 / 27.75

See water level check list
demob.

DL 62316

YTC 6-27-16

Sunny 85 F

D Ramquist, M Favrow, A Maney

0900 onsite tailgate:
heat stress, spiders, snakes
prep equipment +
get gate key @ Bureel

1010 MW-4 DTW - 67.41
purge well
1105 Well purged dry

1120 MW-6 DTW - 39.5
1120 purged dry
deploy PDBS + water level

DR 62716

YTC 62716

WELL ID	DTW	NOTES
TVR-7	57.55	PDB deployed
TVR-6	56.80	PDB deployed
TVR-3	56.76	PDB deployed
TVR-1	66.60	PDB deployed
TVR-2	63.42	—
BIS-2	52.25	PDB deployed
TVR-5	48.77	PDB deployed
MTS-4	75.71	PDB deployed
MTS-1	92.27	PDB deployed
MTS-2	84.35	PDB deployed
FTP-14	18.20	—
FTP-15	14.85	—
FTP-1	10.89	—
FTP-13	11.30	—
FTP-16	25.96	—
MTS-3	26.0	—
MMP-1	52.88	—
MMP-2	53.90	—
MRC-2	67.25	—

excavation had been done, trenching
looks like old pipe excavated, new install

DR 62716

Location YTC Date 6 28 16

Project DRannquist, M Favraw, A Maney

85 Sunny

0800 pick up supplies

0900 Tailgate: heat stress traffic

930 MW-4 DTW-85.67

950 MW-4 sampled

MW-6 DTW - 40.62

1030 MW-6 sampled

1045 PDB - 062816
TRIP Blank

MRC 2 macnac Construction
doing excavation. spoke w/ worker who stated they had tested the soil in excavation + backfill material

1230 pack samples + take to FedEx

DR 62816

Location Date

Project / Client

Date 6-28-16

DRannquist, M Favraw, A Maney
85 Sunny

0800 pick up supplies
0900 Tailgate: heat stress traffic

930 MW-4 DTW-85.67
950 MW-4 sampled

MW-6 DTW - 40.62
1030 MW-6 sampled

1045 PDB - 062816
TRIP Blank

MRC 2 Macnac Construction
doing excavation. spoke w/ worker who stated, they had tested the soil in excavation + backfill material

1230 pack samples + take to FedEx

DR 62816

Location JBLM Date 8-9-16 197

Project / Client MNA Sampling

DRannquist, R Wengierz

Cloudy 70F
0730 pick up rental equipment + lab containers
0900 on site, prep sampling equipment, Tailgate, calling
1115 EPA-W-5 DTW - 10.83
1140 AD-16-038 sampled
AD 16-040 Trip Blank @ 1100
DA-30b DTW - 12.81
1230 AD-16-029 sampled

DA-30a DTW - 11.72
1300 AD-16-028 sampled
DB-6 DTW - 9.83
1335 AD-16-032 sampled
DA-29 DTW - 9.08
1400 AD-16-027 sampled
1430 pack samples to ship → Bothell Office
1700 to pick up 1k sample equipment

DR 8916

Location JOLIET   Date 8-10-16

Project/Client MNA Sampling

DRamquist R Weingarz

pt Sunny 70 F

0800 on site.

Tailgate! H_2 sampling;

Snares

Mob sample supplies

try to locate DA-31, not successful

DO-3 DTW - 22.59

955 AD-16-034 Sampled

DO-2 DTW - 14.77

1030 AD-16-033 Sampled

DR-05 - DTW - 11.51

1055 AD-16-035 Sampled

DA-11a DTW - 13.95

1125 AD-16-022

DA-11b - DTW - 14.22

1240 AD-16-023

DT-1 DTW - 13.48

1310 AD-16-036

DL 81016

Location   Date 8-10-16

Project/Client

Sun

DA-28 DTW - 7.52

1350 AD-16-026

TRIP BLANK - AD-16-041 @ 930

pack samples for FedEx

DL 81016

Location JBLM Date 8-11-16
Project / Client D Ramquist. R Wengarz
Sun 70F

0800 onsite
Tailgate: spiders in wells
mob. equipment
0830 attempt to locate 31 in
driving range, active, wait till open
DA-7b DTW 20.84

845 Equip Blank AD-16-039

DA-7D
905 AD-16-020 sampled
915 AD-16-021 dup

DA -32 DTW - 11.66
~~AD-16-031~~ not sampled

930 DA-32 pumped dry
pump covered in oily sludge
(? vegetable oil injection)
call to Ingersoll re: sampling
DA-32. + DA-31 unlocated + w/in
active driving range
945 return to TP to get decon
barrell for pump thats fouled

Location JBLM Date 8-11-16
Project / Client

1000 - 1130 search for DT-2
w/ metal detector, unsucessful
left msg w/ PM
DA - 13a DTW - 15.51
1150 AD-16-024 H2 collected
@ flow rate 400 ml/min + VOCs
1200 confirm w/ Kerr
sample 21b, relayed info re;
DA-32, 31, + DT-2

DA-21b DTW - 22.84
1240 AD-16-025 sampled VOCs + H2
H2 @ 300 ml/min + all others
[800 Trip AD-16-042]

1330 Spoke w/ B Janus re:
unaccess to DA-31, DT-2
ok, proceed w/out locating
H2 collected @ 13a (upgradient)
+ @ 21b in plume so ok
unable to collect H2 @ 32+31
1500 pack samples + take
to Fed Ex 1 cooler → ALS
1 cooler - [illegible]
hold H2 + ship in AM [illegible]

Location JBLM Date 8-17-16
Project / Client D Ramquist M. Ingersoll
clear 70F

0730 onsite, prep equipment
Tailgate. heat stress
prep hand pump
DA-32 DTW - 14.35
845 Set up PVC hand pump to
Surge well + pump

1020 DTW - 21.83

DA-31 DTW - 16.60
1050 AD-16-030 Sampled
10 bottles + H_2 + DHC

DA-31 DTW - 21.83
1140 AD-16-031 10 Bottles + DHC

1200 Search for DT-2
DTW -
1245 AD-16-037 Sampled
VOAs + MNA
17' off cart path @ double tree ~ 12"
DA-13a DTW - 15.5
1315 AD-16-024 VOCs

Location JBLM. Date 8-18-16
Project / Client D Ramquist, M Ingersoll

0800 on site, Tailgate - caution in driving range
0815 mark boring locations w/ Survey Stakes for DO71 @ Area D
0945 Conduct Area D Treatment Plant Shutdown.
mark locations for 34N - DO71 check in
@ Lewis re: dig permit
check in w/ Olenko re: upcoming drilling
1250 depart

DR 8/18/16

Location JRM Date 9/13/16

Project / Client

0930 on site Build 2044 #3
Public Works,
Dig Permit App
253 967 3131 opt #2
Jeff Glass

Location YTC Date 9-21-16

Project / Client D Ramquist Jerrell Patterson
Jim

0700 on site, tailgate
spoke w/ Chris re: DAC Well
left msg. w/ Lyndon Rodgers re: permanent well
MW-4
DTW - 67.82
1015 purged dry

1030 MW-6
DTW - 39.5

FTP-1
DTW - 11.59 TD-23.4
7.5 gal
1145 FTP-1 sampled MS/MSD

FTP-14 DTW-17.89 TD - 22.7
1240 FTP 14 sampled 3.12 gal purged

FTP-15
DTW - 14.60 TD - 22.62
1300 FTP-15 sampled 9l purged

YTC 92116

pt Sunny 75F

FTP-16 DTW - 26.0 TD - 32.39

1330 FTP-16 Sampled & purged

1400 PA1C sampled ★ Gave GW Results Table to MR. Rodgers

1410 Dup-1

1405 TVR-6 PDB sampled

DTW - 57.02

1415 TVR-3 DTW - 57.21

1420 TVR-7 DTW - 57.92

1425 TVR-1 DTW - 67.12

1435 TVR-5 DTW - 48.73

1500 BIS-2 DTW - 52.42

TVR-2 DTW - 63.96

MMP-1 DTW - 52.64

~~MMP-2 DTW-~~

1600 pack samples w/ice

DR 92116

YTC 92216

0745 on site, tailgate

0800 Pomona Well

MW-4 DTW - 73.80

900 MW-4 Sampled MS/MSD

MW-6 DTW - 40.22

945 MW-6 sampled

1015 MTS-4 sampled DTW - 76.52

1055 MTS-1 DTW - 92.90

1100 MTS-2 DTW - 84.79

FTP-13 DTW - 13.94

MTS-3 DTW - ~~85~~.55

pack samples for shipment + take to FedEx

DR 92216

118 Location JBLM Date 92316

Project / Client

on base, permit application
get signatures

Location JBLM Date 92016 119

Project / Client DRonquist, JPalluser
Sunny 60s

0830 onsite tailgate
930 RI-16-066 Trip

910 CW-62 DTW - 19.89
925 RI-16-053

CW-61 DTW - 32.16
945 RI-16-052
CW 55a DTW - 31.12
1055 RI-16-051
CW-55b DTW - 36.5
1100 dup of 55a RI-16-064
CW-71 DTW - 31.92
~~RI-16-059~~ ~~purge~~ not sampled
CW-45 DTW - 31.72
(purge? ~~not sampled~~ Brn/purple?
1130 RI-16-048 sampled st brn color

CW-69 DTW 30.79
1200 RI-61-058 brn while pursing
cleared up

92016

Location: JBLM Date: 9/26/16

Project / Client:

Sunny 75F

CW 46 DTW - 31.09

→ Not sampled - pmag

get permit signatures

CW-68 DTW - 31.21

1330 ~~RI~~-16-057 Sampled

CW-47 DTW - 31.08

1345 RI-16-056 Sampled

CW-47 DTW - 30.90

1400 RI-16-050 Sampled

brownish / turbid

permit signatures

pack samples

~~CW 6~~ DL

DL 9/26/16

Location: JBLM Date: 9/27/16

Project / Client: D Rangquist, Brett Patterson

Cloudy, drizzle, 65F

0815 onsite, load equipment

Tailgate

CW-64 DTW - 33.35

900 RI-16-054 Sampled

CW-65 DTW - 32.09

915 RI-16-055

* check WL + pmag on those wells

decon equipment

1130 RI-16-005 Rinsate

pack samples for shipment

take to FedEx +

return rented equipment

DL 9/27/16

Location CBLM Date 92816

Project / Client D Ranquist J Patterson

Cloudy, 50F

0800 onsite. tailgate
permit office
water levels
dig permit not finalized
Check back next
week

DR 92816

Location Date

Project / Client

ALS Environmental
ALS Group USA, Corp
1317 South 13th Avenue
Kelso, WA 98626
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F : +1 360 636 1068
www.alsglobal.com

April 19, 2016

Analytical Report for Service Request No: K1602714

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

RE: JBLM-YTC / 106-4576003

Dear Keir,

Enclosed are the results of the sample(s) submitted to our laboratory March 17, 2016
For your reference, these analyses have been assigned our service request number **K1602714.**

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

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Gregory Salata, Ph.D.
Senior Project
Manager

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
1317 South 13th Avenue, Kelso, WA 98626
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www.alsglobal.com

ALS ENVIRONMENTAL

Client:	Tetra Tech, Incorporated	**Service Request No.:**	K1602714
Project:	JBLM-YTC/ 106-4576003	**Date Received:**	03/17/16
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

Eighteen water samples were received for analysis at ALS Environmental on 03/17/16. The samples were received in good condition and consistent with the accompanying chain of custody form. 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.

Relative Percent Difference Exceptions:
The Relative Percent Difference (RPD) for Diesel and Residual Range Organics in the replicate Laboratory Control Sample analyses of KWG1602177-1 and KWG1602177-2 was outside control criteria. All spike recoveries in the Laboratory Control Sample (LCS) were within acceptance limits, indicating the analytical batch was in control. No further corrective action was appropriate.

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. The analytes that required manual integrations are identified on each sample report contained in this data package.

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

Approved by____________________________________

Volatile Organic Compounds by EPA Method 8260

Initial Calibration Exceptions:
The ALS minimum relative response factor criterion for Trichloroethene, Bromodichloromethane, and cis-1,3-Dichloropropane was not met in Initial Calibration (ICAL) ID 14586. In accordance with ALS standard operating procedures, a Method Reporting Limit (MRL) check standard containing the analyte of concern was analyzed each day of analysis. The MRL check standard verified instrument sensitivity was adequate to detect the analyte at the MRL on the day of analysis. Because the sensitivity was shown to be adequate to detect the compound in question the data quality was not significantly affected. No further corrective action was appropriate.

Calibration Verification Exceptions:
The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) J:\MS18\0318F004.D: Carbon Disulfide, 2,2-Dichloropropane, trans-1,3-Dichloropropene, 1,2-Dibromo-3-chloropropane, Hexachlorobutadiene, and Napthalene. The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) J:\MS18\0321F003.D: 1,1-Dichloroethene and Acetone The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) J:\MS18\0322F008.D: trans-1,3-Dichloropropene, Bromoform, 1,2-Dibromo-3-chloropropane, and Napthalene. 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 ALS minimum relative response factor criterion for Trichloroethene and Bromodichloromethane was not met in Continuing Calibration Verification (CCV) J:\MS18\0318F004.D and J:\MS18\0321F003.D. The ALS minimum relative response factor criterion for Bromomethane, Trichloroethene and Bromodichloromethane was not met in Continuing Calibration Verification (CCV) J:\MS18\0322F008.D. In accordance with ALS standard operating procedures, a Method Reporting Limit (MRL) check standard containing the analye of concern was analyzed each day of analysis. The MRL check standard verified instrument sensitivity was adequate to detect the analyte at the MRL on the day of analysis. Because the sensitivity was shown to be adequate to detect the compound in question the data quality was not significantly affected. No further corrective action was appropriate.

Matrix Spike Recovery Exceptions:
The matrix spike recovery of several compounds for sample TVR-6 was outside control criteria. Positive detections in the parent sample are flagged, as per the DOD QAPP. No further corrective action was appropriate.

Sample Notes and Discussion:
The Trip Blank analyzed with these samples contained low levels of Toluene above the Method Reporting Limit (MRL). The associated samples did not contain the analyte in question.

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

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

Semivolatile Organic Compounds by EPA Method 8270

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

Approved by________________________________

Chain of Custody

ALS Environmental—Kelso Laboratory
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Phone (360)577-7222 Fax (360)636-1068
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ALS Environmental

CHAIN OF CUSTODY

68419

001

SR# K1602714

COC Set____of____

COC#________

Page 1 of 2

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

Project Name: JBLM - YTC
Project Number: 100-45760003
Project Manager: Mark Ingersoll
Company: TEEC
Address: 19803 NCrPkwy Bothell WA
Phone #: 406.270.6339
email: mark.ingersoll@kirahkencorp
Sampler Signature: [signature]
Sampler Printed Name: Dana Ramquist

CLIENT SAMPLE ID	LABID	SAMPLING Date	SAMPLING Time	Matrix	NUMBER OF CONTAINERS	8270D / PAH SIM (7D)	8270D / SVO (7D)	8330B / NitramAroEsters	8260C / VOC FP (14D)	NWTPH-Dx / NW_TPH	NWTPH-Gx / NW_GAS	1	2	3	4	5	Remarks
1. MTS-1		3/5/16	1415	W	3				X								
2. MTS-2		3/5/16	1425	W	3				X								
3. MTS-4		3/5/16	1450	W	3				X								
4. TVR-1		3/5/16	1330	W	3	~~X~~	~~X~~		X	~~X~~	~~X~~						Vocs only
5. TVR-2		3/5/16	1345	W	3				X								
6. TVR-3		3/5/16	1320	W	3				X								
7. TVR-5		3/5/16	1255	W	3				X								
8. TVR-6		3/5/16	1305	W	3				X								
9. TVR-7		3/5/16	1315	W	3				X								
10. 815-2		3/5/16	1240	W	3				X								

Report Requirements

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

___ II. Report Dup., MS, MSD as required

___ III. CLP Like Summary (no raw data)

X 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	[signature]			[signature]		
Printed Name	Dana Ramquist			SMF		
Firm	TEEC	FedEX		ALS		
Date/Time	3/16/16 / 1530			3/17/16 1215		

ALS Environmental

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68419

001

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SR# K1602744
COC Set_____of_____
COC#__________

Page 2 of 2

Project Name JBLM - YTC	Project Number: 100-45760003
Project Manager Mark Ingersoll	
Company TtEC	
Address 19803 N Cr Pkwy Bothell WA	
Phone # 406.270.6335	email mark.ingersoll@tetratech.com
Sampler Signature [signature]	Sampler Printed Name Dana Ramquist

	CLIENT SAMPLE ID	LABID	SAMPLING Date	Time	Matrix	NUMBER OF CONTAINERS	7D 8270D / PAH SIM	7D 8270D / SVO	8330B / NitramAroEsters	14D 8260C / VOC FP	14D NWTPH-Dx / NW_TPH	NWTPH-Gx / NW_GAS	1	2	3	4	5	Remarks
1.	PAIL Well		3/16/16	1400	W	3				X								
2.	Pomona Well		3/16/16	1215	W	3				X								
3.	TB				W	4				X		X						
4.	FTP-1		3/16/16	1115	W	10	X	X		X	X	X						
5.	FTP-14		3/16/16	1240	W	5					X	X						
6.	FTP-15		3/16/16	1300	W	5					X	X						
7.	FTP-16		3/16/16	1345	W	5					X	X						
8.	FTP-1A		3/16/16	1130	W	10	X	X		X	X	X						
9.																		
10.																		

Report Requirements

- ___ I. Routine Report: Method Blank, Surrogate, as required
- ___ II. Report Dup., MS, MSD as required
- ___ III. CLP Like Summary (no raw data)
- X 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	[signature]			[signature]		
Printed Name	Dana Ramquist			SWOLF		
Firm	TtEC	FedEx		ALS		
Date/Time	3/16/16 / 1530			3/17/16 1215		

ALS

PC Coyle

Cooler Receipt and Preservation Form

Client TE EC Service Request K16 02714

Received: 3/17/16 Opened: 3/17/16 By: LL Unloaded: 3/17/16 By: LL

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
0.3	0.3	5.7	5.7 ①	0	366	68417	7826 1191 8146	
0.7	0.7	6.2	6.2	0	362	68417/68419	7826 1193 7277	
3.4	3.2	4.1	3.9	-0.2	355	68419	7826 1193 0342	
0.5	0.3	5.1	~~5~~ 4.9 LL 3/17/16 ER	-0.2	348	68419	7826 1190 6384	

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: ① Temp blank outside of the sample : ice bags. Second blank found with ice 3.0, Corr. factor 0.0, temp 3.0.

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
Project: JBLM-YTC/106-4576003
Service Request: K1602714

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

Sample Name	Lab Code	Date Collected	Date Received
FTP-1	K1602714-014	03/16/2016	03/17/2016
FTP-14	K1602714-015	03/16/2016	03/17/2016
FTP-15	K1602714-016	03/16/2016	03/17/2016
FTP-16	K1602714-017	03/16/2016	03/17/2016
FTP-1A	K1602714-018	03/16/2016	03/17/2016

Analytical Results

Client:	Tetra Tech, Incorporated		**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003		**Date Collected:**	03/16/2016
Sample Matrix:	Water		**Date Received:**	03/17/2016

Diesel and Residual Range Organics

Sample Name:	FTP-1		**Units:**	ug/L
Lab Code:	K1602714-014		**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)	**17000**	Y	99	20	11	1	03/21/16	03/23/16	KWG1602177	
Residual Range Organics (RRO)	**2800**	L	99	50	19	1	03/21/16	03/23/16	KWG1602177	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	105	50-150	03/23/16	Acceptable
n-Triacontane	108	50-150	03/23/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Diesel and Residual Range Organics

Sample Name:	FTP-14	**Units:**	ug/L
Lab Code:	K1602714-015	**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)	**230**	Y	100	20	11	1	03/21/16	03/23/16	KWG1602177	
Residual Range Organics (RRO)	**130**	L	100	50	19	1	03/21/16	03/23/16	KWG1602177	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	80	50-150	03/23/16	Acceptable
n-Triacontane	78	50-150	03/23/16	Acceptable

Comments:

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Diesel and Residual Range Organics

Sample Name:	FTP-15	**Units:**	ug/L
Lab Code:	K1602714-016	**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)	**55**	J	110	21	12	1	03/21/16	03/23/16	KWG1602177	
Residual Range Organics (RRO)	**130**	O	110	53	20	1	03/21/16	03/23/16	KWG1602177	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	93	50-150	03/23/16	Acceptable
n-Triacontane	90	50-150	03/23/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Diesel and Residual Range Organics

Sample Name:	FTP-16	**Units:**	ug/L
Lab Code:	K1602714-017	**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)	**200**	Y	99	20	11	1	03/21/16	03/23/16	KWG1602177	
Residual Range Organics (RRO)	**270**	O	99	50	19	1	03/21/16	03/23/16	KWG1602177	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	105	50-150	03/23/16	Acceptable
n-Triacontane	106	50-150	03/23/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Diesel and Residual Range Organics

Sample Name:	FTP-1A	**Units:**	ug/L
Lab Code:	K1602714-018	**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)	**14000**	Y	120	23	13	1	03/21/16	03/23/16	KWG1602177	
Residual Range Organics (RRO)	**2700**	L	120	56	22	1	03/21/16	03/23/16	KWG1602177	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	88	50-150	03/23/16	Acceptable
n-Triacontane	91	50-150	03/23/16	Acceptable

Comments:

Gasoline Range Organics

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

Client: Tetra Tech, Incorporated
Project: JBLM-YTC/106-4576003
Service Request: K1602714

Cover Page - Organic Analysis Data Package
Gasoline Range Organics

Sample Name	Lab Code	Date Collected	Date Received
TB	K1602714-013	03/15/2016	03/17/2016
FTP-1	K1602714-014	03/16/2016	03/17/2016
FTP-14	K1602714-015	03/16/2016	03/17/2016
FTP-15	K1602714-016	03/16/2016	03/17/2016
FTP-16	K1602714-017	03/16/2016	03/17/2016
FTP-1A	K1602714-018	03/16/2016	03/17/2016
FTP-1A	KWG1602354-1	03/16/2016	03/17/2016

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Gasoline Range Organics

Sample Name:	TB	**Units:**	ug/L
Lab Code:	K1602714-013	**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	**19**	J	250	25	9.6	1	03/25/16	03/25/16	KWG1602354	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	86	50-150	03/25/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Gasoline Range Organics

Sample Name:	FTP-1	**Units:**	ug/L
Lab Code:	K1602714-014	**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	**710**	Y	250	25	9.6	1	03/25/16	03/25/16	KWG1602354	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	78	50-150	03/25/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Gasoline Range Organics

Sample Name:	FTP-14	**Units:**	ug/L
Lab Code:	K1602714-015	**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	**31**	J	250	25	9.6	1	03/25/16	03/25/16	KWG1602354	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	86	50-150	03/25/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Gasoline Range Organics

Sample Name:	FTP-15	**Units:**	ug/L
Lab Code:	K1602714-016	**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	9.6	1	03/25/16	03/25/16	KWG1602354	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	88	50-150	03/25/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Gasoline Range Organics

Sample Name:	FTP-16	**Units:**	ug/L
Lab Code:	K1602714-017	**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	9.6	1	03/25/16	03/25/16	KWG1602354	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	87	50-150	03/25/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Gasoline Range Organics

Sample Name:	FTP-1A	**Units:**	ug/L
Lab Code:	K1602714-018	**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	**680**	Y	250	25	9.6	1	03/25/16	03/25/16	KWG1602354	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	77	50-150	03/25/16	Acceptable

Comments:

Volatile Organic Compounds

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

Client: Tetra Tech, Incorporated
Project: JBLM-YTC/106-4576003
Service Request: K1602714

Cover Page - Organic Analysis Data Package
Volatile Organic Compounds

Sample Name	Lab Code	Date Collected	Date Received
MTS-1	K1602714-001	03/15/2016	03/17/2016
MTS-2	K1602714-002	03/15/2016	03/17/2016
MTS-4	K1602714-003	03/15/2016	03/17/2016
TVR-1	K1602714-004	03/15/2016	03/17/2016
TVR-2	K1602714-005	03/15/2016	03/17/2016
TVR-3	K1602714-006	03/15/2016	03/17/2016
TVR-5	K1602714-007	03/15/2016	03/17/2016
TVR-6	K1602714-008	03/15/2016	03/17/2016
TVR-7	K1602714-009	03/15/2016	03/17/2016
815-2	K1602714-010	03/15/2016	03/17/2016
PAIC WELL	K1602714-011	03/16/2016	03/17/2016
POMONA WELL	K1602714-012	03/16/2016	03/17/2016
TB	K1602714-013	03/15/2016	03/17/2016
FTP-1	K1602714-014	03/16/2016	03/17/2016
FTP-1A	K1602714-018	03/16/2016	03/17/2016
TVR-6MS	KWG1602203-1	03/15/2016	03/17/2016
TVR-6DMS	KWG1602203-2	03/15/2016	03/17/2016

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	MTS-1	**Units:**	ug/L
Lab Code:	K1602714-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/18/16	03/18/16	KWG1602158	
Chloromethane	ND	U	0.50	0.20	0.068	1	03/18/16	03/18/16	KWG1602158	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/18/16	03/18/16	KWG1602158	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/18/16	03/18/16	KWG1602158	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/18/16	03/18/16	KWG1602158	
Acetone	ND	U	20	10	3.3	1	03/18/16	03/18/16	KWG1602158	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	03/18/16	03/18/16	KWG1602158	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/18/16	03/18/16	KWG1602158	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/18/16	03/18/16	KWG1602158	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/18/16	03/18/16	KWG1602158	*
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	03/18/16	03/18/16	KWG1602158	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/18/16	03/18/16	KWG1602158	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Chloroform	ND	U	0.50	0.20	0.072	1	03/18/16	03/18/16	KWG1602158	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/18/16	03/18/16	KWG1602158	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
Benzene	ND	U	0.50	0.10	0.062	1	03/18/16	03/18/16	KWG1602158	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/18/16	03/18/16	KWG1602158	
Trichloroethene (TCE)	**3.7**		0.50	0.10	0.10	1	03/18/16	03/18/16	KWG1602158	*
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/18/16	03/18/16	KWG1602158	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/18/16	03/18/16	KWG1602158	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/18/16	03/18/16	KWG1602158	*
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/18/16	03/18/16	KWG1602158	*
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/18/16	03/18/16	KWG1602158	
Toluene	**0.14**	J	0.50	0.10	0.054	1	03/18/16	03/18/16	KWG1602158	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/18/16	03/18/16	KWG1602158	*
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/18/16	03/18/16	KWG1602158	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	03/18/16	03/18/16	KWG1602158	
2-Hexanone	ND	U	20	10	2.7	1	03/18/16	03/18/16	KWG1602158	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YTC/106-4576003
Sample Matrix: Water

Service Request: K1602714
Date Collected: 03/15/2016
Date Received: 03/17/2016

Volatile Organic Compounds

Sample Name: MTS-1
Lab Code: K1602714-001
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/18/16	03/18/16	KWG1602158	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/18/16	03/18/16	KWG1602158	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	03/18/16	03/18/16	KWG1602158	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
o-Xylene	ND	U	0.50	0.20	0.074	1	03/18/16	03/18/16	KWG1602158	
Styrene	ND	U	0.50	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
Bromoform	ND	U	0.50	0.50	0.16	1	03/18/16	03/18/16	KWG1602158	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	03/18/16	03/18/16	KWG1602158	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	03/18/16	03/18/16	KWG1602158	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/18/16	03/18/16	KWG1602158	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/18/16	03/18/16	KWG1602158	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	03/18/16	03/18/16	KWG1602158	
1,2,4-Trimethylbenzene	**0.23**	J	2.0	0.20	0.069	1	03/18/16	03/18/16	KWG1602158	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	03/18/16	03/18/16	KWG1602158	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	03/18/16	03/18/16	KWG1602158	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
n-Butylbenzene	**0.060**	J	2.0	0.10	0.054	1	03/18/16	03/18/16	KWG1602158	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/18/16	03/18/16	KWG1602158	*
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/18/16	03/18/16	KWG1602158	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	03/18/16	03/18/16	KWG1602158	*
Naphthalene	**0.87**	J	2.0	0.30	0.088	1	03/18/16	03/18/16	KWG1602158	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/18/16	03/18/16	KWG1602158	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	MTS-1	**Units:**	ug/L
Lab Code:	K1602714-001	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	94	85-115	03/18/16	Acceptable
1,2-Dichloroethane-d4	97	70-120	03/18/16	Acceptable
Toluene-d8	105	85-120	03/18/16	Acceptable
4-Bromofluorobenzene	98	75-120	03/18/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	MTS-2	**Units:**	ug/L
Lab Code:	K1602714-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/18/16	03/18/16	KWG1602158	
Chloromethane	ND	U	0.50	0.20	0.068	1	03/18/16	03/18/16	KWG1602158	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/18/16	03/18/16	KWG1602158	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/18/16	03/18/16	KWG1602158	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/18/16	03/18/16	KWG1602158	
Acetone	ND	U	20	10	3.3	1	03/18/16	03/18/16	KWG1602158	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	03/18/16	03/18/16	KWG1602158	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/18/16	03/18/16	KWG1602158	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/18/16	03/18/16	KWG1602158	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/18/16	03/18/16	KWG1602158	*
cis-1,2-Dichloroethene	**0.18**	J	0.50	0.20	0.067	1	03/18/16	03/18/16	KWG1602158	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/18/16	03/18/16	KWG1602158	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Chloroform	ND	U	0.50	0.20	0.072	1	03/18/16	03/18/16	KWG1602158	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/18/16	03/18/16	KWG1602158	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
Benzene	ND	U	0.50	0.10	0.062	1	03/18/16	03/18/16	KWG1602158	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/18/16	03/18/16	KWG1602158	
Trichloroethene (TCE)	**6.9**		0.50	0.10	0.10	1	03/18/16	03/18/16	KWG1602158	*
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/18/16	03/18/16	KWG1602158	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/18/16	03/18/16	KWG1602158	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/18/16	03/18/16	KWG1602158	*
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/18/16	03/18/16	KWG1602158	*
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/18/16	03/18/16	KWG1602158	
Toluene	**0.060**	J	0.50	0.10	0.054	1	03/18/16	03/18/16	KWG1602158	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/18/16	03/18/16	KWG1602158	*
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/18/16	03/18/16	KWG1602158	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	03/18/16	03/18/16	KWG1602158	
2-Hexanone	ND	U	20	10	2.7	1	03/18/16	03/18/16	KWG1602158	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	MTS-2	**Units:**	ug/L
Lab Code:	K1602714-002	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/18/16	03/18/16	KWG1602158	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/18/16	03/18/16	KWG1602158	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	03/18/16	03/18/16	KWG1602158	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
o-Xylene	ND	U	0.50	0.20	0.074	1	03/18/16	03/18/16	KWG1602158	
Styrene	ND	U	0.50	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
Bromoform	ND	U	0.50	0.50	0.16	1	03/18/16	03/18/16	KWG1602158	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	03/18/16	03/18/16	KWG1602158	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	03/18/16	03/18/16	KWG1602158	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/18/16	03/18/16	KWG1602158	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/18/16	03/18/16	KWG1602158	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	03/18/16	03/18/16	KWG1602158	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	03/18/16	03/18/16	KWG1602158	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	03/18/16	03/18/16	KWG1602158	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	03/18/16	03/18/16	KWG1602158	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	03/18/16	03/18/16	KWG1602158	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/18/16	03/18/16	KWG1602158	*
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/18/16	03/18/16	KWG1602158	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	03/18/16	03/18/16	KWG1602158	*
Naphthalene	**0.15**	J	2.0	0.30	0.088	1	03/18/16	03/18/16	KWG1602158	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/18/16	03/18/16	KWG1602158	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	MTS-2	**Units:**	ug/L
Lab Code:	K1602714-002	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	93	85-115	03/18/16	Acceptable
1,2-Dichloroethane-d4	98	70-120	03/18/16	Acceptable
Toluene-d8	106	85-120	03/18/16	Acceptable
4-Bromofluorobenzene	95	75-120	03/18/16	Acceptable

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YTC/106-4576003
Sample Matrix: Water

Service Request: K1602714
Date Collected: 03/15/2016
Date Received: 03/17/2016

Volatile Organic Compounds

Sample Name: MTS-4
Lab Code: K1602714-003
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/18/16	03/18/16	KWG1602158	
Chloromethane	ND	U	0.50	0.20	0.068	1	03/18/16	03/18/16	KWG1602158	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/18/16	03/18/16	KWG1602158	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/18/16	03/18/16	KWG1602158	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/18/16	03/18/16	KWG1602158	
Acetone	ND	U	20	10	3.3	1	03/18/16	03/18/16	KWG1602158	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	03/18/16	03/18/16	KWG1602158	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/18/16	03/18/16	KWG1602158	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/18/16	03/18/16	KWG1602158	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/18/16	03/18/16	KWG1602158	*
cis-1,2-Dichloroethene	**0.27**	J	0.50	0.20	0.067	1	03/18/16	03/18/16	KWG1602158	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/18/16	03/18/16	KWG1602158	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Chloroform	ND	U	0.50	0.20	0.072	1	03/18/16	03/18/16	KWG1602158	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/18/16	03/18/16	KWG1602158	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
Benzene	ND	U	0.50	0.10	0.062	1	03/18/16	03/18/16	KWG1602158	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/18/16	03/18/16	KWG1602158	
Trichloroethene (TCE)	**7.3**		0.50	0.10	0.10	1	03/18/16	03/18/16	KWG1602158	*
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/18/16	03/18/16	KWG1602158	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/18/16	03/18/16	KWG1602158	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/18/16	03/18/16	KWG1602158	*
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/18/16	03/18/16	KWG1602158	*
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/18/16	03/18/16	KWG1602158	
Toluene	**0.080**	J	0.50	0.10	0.054	1	03/18/16	03/18/16	KWG1602158	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/18/16	03/18/16	KWG1602158	*
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/18/16	03/18/16	KWG1602158	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	03/18/16	03/18/16	KWG1602158	
2-Hexanone	ND	U	20	10	2.7	1	03/18/16	03/18/16	KWG1602158	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	MTS-4	**Units:**	ug/L
Lab Code:	K1602714-003	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/18/16	03/18/16	KWG1602158	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/18/16	03/18/16	KWG1602158	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	03/18/16	03/18/16	KWG1602158	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
o-Xylene	ND	U	0.50	0.20	0.074	1	03/18/16	03/18/16	KWG1602158	
Styrene	ND	U	0.50	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
Bromoform	ND	U	0.50	0.50	0.16	1	03/18/16	03/18/16	KWG1602158	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	03/18/16	03/18/16	KWG1602158	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	03/18/16	03/18/16	KWG1602158	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/18/16	03/18/16	KWG1602158	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/18/16	03/18/16	KWG1602158	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	03/18/16	03/18/16	KWG1602158	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	03/18/16	03/18/16	KWG1602158	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	03/18/16	03/18/16	KWG1602158	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	03/18/16	03/18/16	KWG1602158	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	03/18/16	03/18/16	KWG1602158	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/18/16	03/18/16	KWG1602158	*
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/18/16	03/18/16	KWG1602158	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	03/18/16	03/18/16	KWG1602158	*
Naphthalene	ND	U	2.0	0.30	0.088	1	03/18/16	03/18/16	KWG1602158	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/18/16	03/18/16	KWG1602158	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	MTS-4	**Units:**	ug/L
Lab Code:	K1602714-003	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	85-115	03/18/16	Acceptable
1,2-Dichloroethane-d4	97	70-120	03/18/16	Acceptable
Toluene-d8	104	85-120	03/18/16	Acceptable
4-Bromofluorobenzene	95	75-120	03/18/16	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	TVR-1	**Units:**	ug/L
Lab Code:	K1602714-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/18/16	03/18/16	KWG1602158	
Chloromethane	ND	U	0.50	0.20	0.068	1	03/18/16	03/18/16	KWG1602158	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/18/16	03/18/16	KWG1602158	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/18/16	03/18/16	KWG1602158	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/18/16	03/18/16	KWG1602158	
Acetone	ND	U	20	10	3.3	1	03/18/16	03/18/16	KWG1602158	
Carbon Disulfide	**0.080**	J	0.50	0.20	0.069	1	03/18/16	03/18/16	KWG1602158	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/18/16	03/18/16	KWG1602158	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/18/16	03/18/16	KWG1602158	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/18/16	03/18/16	KWG1602158	*
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	03/18/16	03/18/16	KWG1602158	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/18/16	03/18/16	KWG1602158	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Chloroform	ND	U	0.50	0.20	0.072	1	03/18/16	03/18/16	KWG1602158	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/18/16	03/18/16	KWG1602158	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
Benzene	ND	U	0.50	0.10	0.062	1	03/18/16	03/18/16	KWG1602158	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/18/16	03/18/16	KWG1602158	
Trichloroethene (TCE)	**5.7**		0.50	0.10	0.10	1	03/18/16	03/18/16	KWG1602158	*
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/18/16	03/18/16	KWG1602158	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/18/16	03/18/16	KWG1602158	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/18/16	03/18/16	KWG1602158	*
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/18/16	03/18/16	KWG1602158	*
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/18/16	03/18/16	KWG1602158	
Toluene	**0.13**	J	0.50	0.10	0.054	1	03/18/16	03/18/16	KWG1602158	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/18/16	03/18/16	KWG1602158	*
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/18/16	03/18/16	KWG1602158	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	03/18/16	03/18/16	KWG1602158	
2-Hexanone	ND	U	20	10	2.7	1	03/18/16	03/18/16	KWG1602158	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	TVR-1	**Units:**	ug/L
Lab Code:	K1602714-004	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/18/16	03/18/16	KWG1602158	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/18/16	03/18/16	KWG1602158	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	03/18/16	03/18/16	KWG1602158	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
o-Xylene	ND	U	0.50	0.20	0.074	1	03/18/16	03/18/16	KWG1602158	
Styrene	ND	U	0.50	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
Bromoform	ND	U	0.50	0.50	0.16	1	03/18/16	03/18/16	KWG1602158	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	03/18/16	03/18/16	KWG1602158	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	03/18/16	03/18/16	KWG1602158	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/18/16	03/18/16	KWG1602158	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/18/16	03/18/16	KWG1602158	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	03/18/16	03/18/16	KWG1602158	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	03/18/16	03/18/16	KWG1602158	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	03/18/16	03/18/16	KWG1602158	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	03/18/16	03/18/16	KWG1602158	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	03/18/16	03/18/16	KWG1602158	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/18/16	03/18/16	KWG1602158	*
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/18/16	03/18/16	KWG1602158	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	03/18/16	03/18/16	KWG1602158	*
Naphthalene	ND	U	2.0	0.30	0.088	1	03/18/16	03/18/16	KWG1602158	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/18/16	03/18/16	KWG1602158	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	TVR-1	**Units:**	ug/L
Lab Code:	K1602714-004	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	93	85-115	03/18/16	Acceptable
1,2-Dichloroethane-d4	99	70-120	03/18/16	Acceptable
Toluene-d8	105	85-120	03/18/16	Acceptable
4-Bromofluorobenzene	95	75-120	03/18/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	TVR-2	**Units:**	ug/L
Lab Code:	K1602714-005	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/18/16	03/18/16	KWG1602158	
Chloromethane	ND	U	0.50	0.20	0.068	1	03/18/16	03/18/16	KWG1602158	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/18/16	03/18/16	KWG1602158	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/18/16	03/18/16	KWG1602158	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/18/16	03/18/16	KWG1602158	
Acetone	ND	U	20	10	3.3	1	03/18/16	03/18/16	KWG1602158	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	03/18/16	03/18/16	KWG1602158	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/18/16	03/18/16	KWG1602158	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/18/16	03/18/16	KWG1602158	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/18/16	03/18/16	KWG1602158	*
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	03/18/16	03/18/16	KWG1602158	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/18/16	03/18/16	KWG1602158	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Chloroform	ND	U	0.50	0.20	0.072	1	03/18/16	03/18/16	KWG1602158	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/18/16	03/18/16	KWG1602158	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
Benzene	ND	U	0.50	0.10	0.062	1	03/18/16	03/18/16	KWG1602158	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/18/16	03/18/16	KWG1602158	
Trichloroethene (TCE)	**3.6**		0.50	0.10	0.10	1	03/18/16	03/18/16	KWG1602158	*
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/18/16	03/18/16	KWG1602158	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/18/16	03/18/16	KWG1602158	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/18/16	03/18/16	KWG1602158	*
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/18/16	03/18/16	KWG1602158	*
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/18/16	03/18/16	KWG1602158	
Toluene	**0.070**	J	0.50	0.10	0.054	1	03/18/16	03/18/16	KWG1602158	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/18/16	03/18/16	KWG1602158	*
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/18/16	03/18/16	KWG1602158	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	03/18/16	03/18/16	KWG1602158	
2-Hexanone	ND	U	20	10	2.7	1	03/18/16	03/18/16	KWG1602158	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	TVR-2	**Units:**	ug/L
Lab Code:	K1602714-005	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/18/16	03/18/16	KWG1602158	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/18/16	03/18/16	KWG1602158	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	03/18/16	03/18/16	KWG1602158	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
o-Xylene	ND	U	0.50	0.20	0.074	1	03/18/16	03/18/16	KWG1602158	
Styrene	ND	U	0.50	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
Bromoform	ND	U	0.50	0.50	0.16	1	03/18/16	03/18/16	KWG1602158	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	03/18/16	03/18/16	KWG1602158	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	03/18/16	03/18/16	KWG1602158	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/18/16	03/18/16	KWG1602158	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/18/16	03/18/16	KWG1602158	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	03/18/16	03/18/16	KWG1602158	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	03/18/16	03/18/16	KWG1602158	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	03/18/16	03/18/16	KWG1602158	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	03/18/16	03/18/16	KWG1602158	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	03/18/16	03/18/16	KWG1602158	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/18/16	03/18/16	KWG1602158	*
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/18/16	03/18/16	KWG1602158	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	03/18/16	03/18/16	KWG1602158	*
Naphthalene	ND	U	2.0	0.30	0.088	1	03/18/16	03/18/16	KWG1602158	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/18/16	03/18/16	KWG1602158	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	TVR-2	**Units:**	ug/L
Lab Code:	K1602714-005	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	94	85-115	03/18/16	Acceptable
1,2-Dichloroethane-d4	99	70-120	03/18/16	Acceptable
Toluene-d8	105	85-120	03/18/16	Acceptable
4-Bromofluorobenzene	93	75-120	03/18/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	TVR-3	**Units:**	ug/L
Lab Code:	K1602714-006	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/18/16	03/18/16	KWG1602158	
Chloromethane	ND	U	0.50	0.20	0.068	1	03/18/16	03/18/16	KWG1602158	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/18/16	03/18/16	KWG1602158	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/18/16	03/18/16	KWG1602158	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/18/16	03/18/16	KWG1602158	
Acetone	ND	U	20	10	3.3	1	03/18/16	03/18/16	KWG1602158	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	03/18/16	03/18/16	KWG1602158	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/18/16	03/18/16	KWG1602158	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/18/16	03/18/16	KWG1602158	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/18/16	03/18/16	KWG1602158	*
cis-1,2-Dichloroethene	**0.14**	J	0.50	0.20	0.067	1	03/18/16	03/18/16	KWG1602158	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/18/16	03/18/16	KWG1602158	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Chloroform	ND	U	0.50	0.20	0.072	1	03/18/16	03/18/16	KWG1602158	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/18/16	03/18/16	KWG1602158	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
Benzene	ND	U	0.50	0.10	0.062	1	03/18/16	03/18/16	KWG1602158	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/18/16	03/18/16	KWG1602158	
Trichloroethene (TCE)	**7.5**		0.50	0.10	0.10	1	03/18/16	03/18/16	KWG1602158	*
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/18/16	03/18/16	KWG1602158	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/18/16	03/18/16	KWG1602158	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/18/16	03/18/16	KWG1602158	*
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/18/16	03/18/16	KWG1602158	*
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/18/16	03/18/16	KWG1602158	
Toluene	**0.15**	J	0.50	0.10	0.054	1	03/18/16	03/18/16	KWG1602158	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/18/16	03/18/16	KWG1602158	*
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/18/16	03/18/16	KWG1602158	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	03/18/16	03/18/16	KWG1602158	
2-Hexanone	ND	U	20	10	2.7	1	03/18/16	03/18/16	KWG1602158	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	TVR-3	**Units:**	ug/L
Lab Code:	K1602714-006	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/18/16	03/18/16	KWG1602158	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/18/16	03/18/16	KWG1602158	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	03/18/16	03/18/16	KWG1602158	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
o-Xylene	ND	U	0.50	0.20	0.074	1	03/18/16	03/18/16	KWG1602158	
Styrene	ND	U	0.50	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
Bromoform	ND	U	0.50	0.50	0.16	1	03/18/16	03/18/16	KWG1602158	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	03/18/16	03/18/16	KWG1602158	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	03/18/16	03/18/16	KWG1602158	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/18/16	03/18/16	KWG1602158	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/18/16	03/18/16	KWG1602158	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	03/18/16	03/18/16	KWG1602158	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	03/18/16	03/18/16	KWG1602158	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	03/18/16	03/18/16	KWG1602158	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	03/18/16	03/18/16	KWG1602158	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	03/18/16	03/18/16	KWG1602158	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/18/16	03/18/16	KWG1602158	*
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/18/16	03/18/16	KWG1602158	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	03/18/16	03/18/16	KWG1602158	*
Naphthalene	ND	U	2.0	0.30	0.088	1	03/18/16	03/18/16	KWG1602158	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/18/16	03/18/16	KWG1602158	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	TVR-3	**Units:**	ug/L
Lab Code:	K1602714-006	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	95	85-115	03/18/16	Acceptable
1,2-Dichloroethane-d4	99	70-120	03/18/16	Acceptable
Toluene-d8	106	85-120	03/18/16	Acceptable
4-Bromofluorobenzene	95	75-120	03/18/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	TVR-5	**Units:**	ug/L
Lab Code:	K1602714-007	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/18/16	03/18/16	KWG1602158	
Chloromethane	ND	U	0.50	0.20	0.068	1	03/18/16	03/18/16	KWG1602158	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/18/16	03/18/16	KWG1602158	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/18/16	03/18/16	KWG1602158	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/18/16	03/18/16	KWG1602158	
Acetone	ND	U	20	10	3.3	1	03/18/16	03/18/16	KWG1602158	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	03/18/16	03/18/16	KWG1602158	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/18/16	03/18/16	KWG1602158	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/18/16	03/18/16	KWG1602158	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/18/16	03/18/16	KWG1602158	*
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	03/18/16	03/18/16	KWG1602158	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/18/16	03/18/16	KWG1602158	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Chloroform	ND	U	0.50	0.20	0.072	1	03/18/16	03/18/16	KWG1602158	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/18/16	03/18/16	KWG1602158	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
Benzene	ND	U	0.50	0.10	0.062	1	03/18/16	03/18/16	KWG1602158	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/18/16	03/18/16	KWG1602158	
Trichloroethene (TCE)	**0.49**	J	0.50	0.10	0.10	1	03/18/16	03/18/16	KWG1602158	*
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/18/16	03/18/16	KWG1602158	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/18/16	03/18/16	KWG1602158	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/18/16	03/18/16	KWG1602158	*
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/18/16	03/18/16	KWG1602158	*
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/18/16	03/18/16	KWG1602158	
Toluene	**0.41**	J	0.50	0.10	0.054	1	03/18/16	03/18/16	KWG1602158	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/18/16	03/18/16	KWG1602158	*
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/18/16	03/18/16	KWG1602158	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	03/18/16	03/18/16	KWG1602158	
2-Hexanone	ND	U	20	10	2.7	1	03/18/16	03/18/16	KWG1602158	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	TVR-5	**Units:**	ug/L
Lab Code:	K1602714-007	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/18/16	03/18/16	KWG1602158	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/18/16	03/18/16	KWG1602158	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	03/18/16	03/18/16	KWG1602158	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
o-Xylene	ND	U	0.50	0.20	0.074	1	03/18/16	03/18/16	KWG1602158	
Styrene	ND	U	0.50	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
Bromoform	ND	U	0.50	0.50	0.16	1	03/18/16	03/18/16	KWG1602158	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	03/18/16	03/18/16	KWG1602158	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	03/18/16	03/18/16	KWG1602158	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/18/16	03/18/16	KWG1602158	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/18/16	03/18/16	KWG1602158	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	03/18/16	03/18/16	KWG1602158	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	03/18/16	03/18/16	KWG1602158	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	03/18/16	03/18/16	KWG1602158	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	03/18/16	03/18/16	KWG1602158	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	03/18/16	03/18/16	KWG1602158	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/18/16	03/18/16	KWG1602158	*
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/18/16	03/18/16	KWG1602158	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	03/18/16	03/18/16	KWG1602158	*
Naphthalene	ND	U	2.0	0.30	0.088	1	03/18/16	03/18/16	KWG1602158	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/18/16	03/18/16	KWG1602158	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	TVR-5	**Units:**	ug/L
Lab Code:	K1602714-007	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	95	85-115	03/18/16	Acceptable
1,2-Dichloroethane-d4	98	70-120	03/18/16	Acceptable
Toluene-d8	105	85-120	03/18/16	Acceptable
4-Bromofluorobenzene	93	75-120	03/18/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	TVR-6	**Units:**	ug/L
Lab Code:	K1602714-008	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/21/16	03/21/16	KWG1602203	
Chloromethane	ND	U	0.50	0.20	0.068	1	03/21/16	03/21/16	KWG1602203	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/21/16	03/21/16	KWG1602203	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/21/16	03/21/16	KWG1602203	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/21/16	03/21/16	KWG1602203	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/21/16	03/21/16	KWG1602203	
Acetone	ND	U	20	10	3.3	1	03/21/16	03/21/16	KWG1602203	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	03/21/16	03/21/16	KWG1602203	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/21/16	03/21/16	KWG1602203	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/21/16	03/21/16	KWG1602203	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/21/16	03/21/16	KWG1602203	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/21/16	03/21/16	KWG1602203	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	03/21/16	03/21/16	KWG1602203	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/21/16	03/21/16	KWG1602203	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/21/16	03/21/16	KWG1602203	
Chloroform	**0.080**	J	0.50	0.20	0.072	1	03/21/16	03/21/16	KWG1602203	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/21/16	03/21/16	KWG1602203	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/21/16	03/21/16	KWG1602203	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/21/16	03/21/16	KWG1602203	
Benzene	ND	U	0.50	0.10	0.062	1	03/21/16	03/21/16	KWG1602203	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/21/16	03/21/16	KWG1602203	
Trichloroethene (TCE)	**8.0**	J	0.50	0.10	0.10	1	03/21/16	03/21/16	KWG1602203	*
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/21/16	03/21/16	KWG1602203	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/21/16	03/21/16	KWG1602203	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/21/16	03/21/16	KWG1602203	*
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/21/16	03/21/16	KWG1602203	*
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/21/16	03/21/16	KWG1602203	
Toluene	**0.18**	J	0.50	0.10	0.054	1	03/21/16	03/21/16	KWG1602203	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/21/16	03/21/16	KWG1602203	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/21/16	03/21/16	KWG1602203	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	03/21/16	03/21/16	KWG1602203	
2-Hexanone	ND	U	20	10	2.7	1	03/21/16	03/21/16	KWG1602203	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YTC/106-4576003
Sample Matrix: Water

Service Request: K1602714
Date Collected: 03/15/2016
Date Received: 03/17/2016

Volatile Organic Compounds

Sample Name: TVR-6
Lab Code: K1602714-008

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
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/21/16	03/21/16	KWG1602203	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/21/16	03/21/16	KWG1602203	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/21/16	03/21/16	KWG1602203	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	03/21/16	03/21/16	KWG1602203	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/21/16	03/21/16	KWG1602203	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	03/21/16	03/21/16	KWG1602203	
o-Xylene	ND	U	0.50	0.20	0.074	1	03/21/16	03/21/16	KWG1602203	
Styrene	ND	U	0.50	0.20	0.089	1	03/21/16	03/21/16	KWG1602203	
Bromoform	ND	U	0.50	0.50	0.16	1	03/21/16	03/21/16	KWG1602203	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	03/21/16	03/21/16	KWG1602203	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/21/16	03/21/16	KWG1602203	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	03/21/16	03/21/16	KWG1602203	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/21/16	03/21/16	KWG1602203	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	03/21/16	03/21/16	KWG1602203	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/21/16	03/21/16	KWG1602203	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	03/21/16	03/21/16	KWG1602203	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	03/21/16	03/21/16	KWG1602203	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	03/21/16	03/21/16	KWG1602203	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	03/21/16	03/21/16	KWG1602203	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	03/21/16	03/21/16	KWG1602203	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/21/16	03/21/16	KWG1602203	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/21/16	03/21/16	KWG1602203	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	03/21/16	03/21/16	KWG1602203	
Naphthalene	ND	U	2.0	0.30	0.088	1	03/21/16	03/21/16	KWG1602203	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/21/16	03/21/16	KWG1602203	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	TVR-6	**Units:**	ug/L
Lab Code:	K1602714-008	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	95	85-115	03/21/16	Acceptable
1,2-Dichloroethane-d4	99	70-120	03/21/16	Acceptable
Toluene-d8	106	85-120	03/21/16	Acceptable
4-Bromofluorobenzene	97	75-120	03/21/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	TVR-7	**Units:**	ug/L
Lab Code:	K1602714-009	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/21/16	03/21/16	KWG1602203	
Chloromethane	ND	U	0.50	0.20	0.068	1	03/21/16	03/21/16	KWG1602203	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/21/16	03/21/16	KWG1602203	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/21/16	03/21/16	KWG1602203	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/21/16	03/21/16	KWG1602203	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/21/16	03/21/16	KWG1602203	
Acetone	ND	U	20	10	3.3	1	03/21/16	03/21/16	KWG1602203	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	03/21/16	03/21/16	KWG1602203	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/21/16	03/21/16	KWG1602203	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/21/16	03/21/16	KWG1602203	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/21/16	03/21/16	KWG1602203	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/21/16	03/21/16	KWG1602203	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	03/21/16	03/21/16	KWG1602203	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/21/16	03/21/16	KWG1602203	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/21/16	03/21/16	KWG1602203	
Chloroform	**0.14**	J	0.50	0.20	0.072	1	03/21/16	03/21/16	KWG1602203	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/21/16	03/21/16	KWG1602203	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/21/16	03/21/16	KWG1602203	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/21/16	03/21/16	KWG1602203	
Benzene	ND	U	0.50	0.10	0.062	1	03/21/16	03/21/16	KWG1602203	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/21/16	03/21/16	KWG1602203	
Trichloroethene (TCE)	**10**		0.50	0.10	0.10	1	03/21/16	03/21/16	KWG1602203	*
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/21/16	03/21/16	KWG1602203	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/21/16	03/21/16	KWG1602203	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/21/16	03/21/16	KWG1602203	*
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/21/16	03/21/16	KWG1602203	*
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/21/16	03/21/16	KWG1602203	
Toluene	**0.22**	J	0.50	0.10	0.054	1	03/21/16	03/21/16	KWG1602203	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/21/16	03/21/16	KWG1602203	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/21/16	03/21/16	KWG1602203	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	03/21/16	03/21/16	KWG1602203	
2-Hexanone	ND	U	20	10	2.7	1	03/21/16	03/21/16	KWG1602203	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	TVR-7	**Units:**	ug/L
Lab Code:	K1602714-009	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/21/16	03/21/16	KWG1602203	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/21/16	03/21/16	KWG1602203	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/21/16	03/21/16	KWG1602203	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	03/21/16	03/21/16	KWG1602203	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/21/16	03/21/16	KWG1602203	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	03/21/16	03/21/16	KWG1602203	
o-Xylene	ND	U	0.50	0.20	0.074	1	03/21/16	03/21/16	KWG1602203	
Styrene	ND	U	0.50	0.20	0.089	1	03/21/16	03/21/16	KWG1602203	
Bromoform	ND	U	0.50	0.50	0.16	1	03/21/16	03/21/16	KWG1602203	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	03/21/16	03/21/16	KWG1602203	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/21/16	03/21/16	KWG1602203	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	03/21/16	03/21/16	KWG1602203	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/21/16	03/21/16	KWG1602203	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	03/21/16	03/21/16	KWG1602203	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/21/16	03/21/16	KWG1602203	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	03/21/16	03/21/16	KWG1602203	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	03/21/16	03/21/16	KWG1602203	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	03/21/16	03/21/16	KWG1602203	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	03/21/16	03/21/16	KWG1602203	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	03/21/16	03/21/16	KWG1602203	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/21/16	03/21/16	KWG1602203	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/21/16	03/21/16	KWG1602203	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	03/21/16	03/21/16	KWG1602203	
Naphthalene	ND	U	2.0	0.30	0.088	1	03/21/16	03/21/16	KWG1602203	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/21/16	03/21/16	KWG1602203	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	TVR-7	**Units:**	ug/L
Lab Code:	K1602714-009	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	95	85-115	03/21/16	Acceptable
1,2-Dichloroethane-d4	98	70-120	03/21/16	Acceptable
Toluene-d8	106	85-120	03/21/16	Acceptable
4-Bromofluorobenzene	96	75-120	03/21/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	815-2	**Units:**	ug/L
Lab Code:	K1602714-010	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/21/16	03/21/16	KWG1602203	
Chloromethane	ND	U	0.50	0.20	0.068	1	03/21/16	03/21/16	KWG1602203	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/21/16	03/21/16	KWG1602203	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/21/16	03/21/16	KWG1602203	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/21/16	03/21/16	KWG1602203	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/21/16	03/21/16	KWG1602203	
Acetone	ND	U	20	10	3.3	1	03/21/16	03/21/16	KWG1602203	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	03/21/16	03/21/16	KWG1602203	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/21/16	03/21/16	KWG1602203	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/21/16	03/21/16	KWG1602203	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/21/16	03/21/16	KWG1602203	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/21/16	03/21/16	KWG1602203	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	03/21/16	03/21/16	KWG1602203	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/21/16	03/21/16	KWG1602203	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/21/16	03/21/16	KWG1602203	
Chloroform	ND	U	0.50	0.20	0.072	1	03/21/16	03/21/16	KWG1602203	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/21/16	03/21/16	KWG1602203	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/21/16	03/21/16	KWG1602203	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/21/16	03/21/16	KWG1602203	
Benzene	ND	U	0.50	0.10	0.062	1	03/21/16	03/21/16	KWG1602203	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/21/16	03/21/16	KWG1602203	
Trichloroethene (TCE)	**0.83**		0.50	0.10	0.10	1	03/21/16	03/21/16	KWG1602203	*
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/21/16	03/21/16	KWG1602203	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/21/16	03/21/16	KWG1602203	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/21/16	03/21/16	KWG1602203	*
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/21/16	03/21/16	KWG1602203	*
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/21/16	03/21/16	KWG1602203	
Toluene	**0.28**	J	0.50	0.10	0.054	1	03/21/16	03/21/16	KWG1602203	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/21/16	03/21/16	KWG1602203	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/21/16	03/21/16	KWG1602203	
Tetrachloroethene (PCE)	**0.12**	J	0.50	0.20	0.099	1	03/21/16	03/21/16	KWG1602203	
2-Hexanone	ND	U	20	10	2.7	1	03/21/16	03/21/16	KWG1602203	

Comments:

Client: Tetra Tech, Incorporated
Project: JBLM-YTC/106-4576003
Sample Matrix: Water

Service Request: K1602714
Date Collected: 03/15/2016
Date Received: 03/17/2016

Volatile Organic Compounds

Sample Name: 815-2
Lab Code: K1602714-010
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/21/16	03/21/16	KWG1602203	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/21/16	03/21/16	KWG1602203	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/21/16	03/21/16	KWG1602203	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	03/21/16	03/21/16	KWG1602203	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/21/16	03/21/16	KWG1602203	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	03/21/16	03/21/16	KWG1602203	
o-Xylene	ND	U	0.50	0.20	0.074	1	03/21/16	03/21/16	KWG1602203	
Styrene	ND	U	0.50	0.20	0.089	1	03/21/16	03/21/16	KWG1602203	
Bromoform	ND	U	0.50	0.50	0.16	1	03/21/16	03/21/16	KWG1602203	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	03/21/16	03/21/16	KWG1602203	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/21/16	03/21/16	KWG1602203	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	03/21/16	03/21/16	KWG1602203	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/21/16	03/21/16	KWG1602203	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	03/21/16	03/21/16	KWG1602203	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/21/16	03/21/16	KWG1602203	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	03/21/16	03/21/16	KWG1602203	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	03/21/16	03/21/16	KWG1602203	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	03/21/16	03/21/16	KWG1602203	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	03/21/16	03/21/16	KWG1602203	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	03/21/16	03/21/16	KWG1602203	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/21/16	03/21/16	KWG1602203	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/21/16	03/21/16	KWG1602203	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	03/21/16	03/21/16	KWG1602203	
Naphthalene	ND	U	2.0	0.30	0.088	1	03/21/16	03/21/16	KWG1602203	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/21/16	03/21/16	KWG1602203	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	815-2	**Units:**	ug/L
Lab Code:	K1602714-010	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	85-115	03/21/16	Acceptable
1,2-Dichloroethane-d4	98	70-120	03/21/16	Acceptable
Toluene-d8	107	85-120	03/21/16	Acceptable
4-Bromofluorobenzene	95	75-120	03/21/16	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	PAIC WELL	**Units:**	ug/L
Lab Code:	K1602714-011	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/21/16	03/21/16	KWG1602203	
Chloromethane	ND	U	0.50	0.20	0.068	1	03/21/16	03/21/16	KWG1602203	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/21/16	03/21/16	KWG1602203	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/21/16	03/21/16	KWG1602203	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/21/16	03/21/16	KWG1602203	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/21/16	03/21/16	KWG1602203	
Acetone	ND	U	20	10	3.3	1	03/21/16	03/21/16	KWG1602203	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	03/21/16	03/21/16	KWG1602203	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/21/16	03/21/16	KWG1602203	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/21/16	03/21/16	KWG1602203	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/21/16	03/21/16	KWG1602203	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/21/16	03/21/16	KWG1602203	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	03/21/16	03/21/16	KWG1602203	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/21/16	03/21/16	KWG1602203	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/21/16	03/21/16	KWG1602203	
Chloroform	ND	U	0.50	0.20	0.072	1	03/21/16	03/21/16	KWG1602203	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/21/16	03/21/16	KWG1602203	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/21/16	03/21/16	KWG1602203	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/21/16	03/21/16	KWG1602203	
Benzene	ND	U	0.50	0.10	0.062	1	03/21/16	03/21/16	KWG1602203	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/21/16	03/21/16	KWG1602203	
Trichloroethene (TCE)	ND	U	0.50	0.10	0.10	1	03/21/16	03/21/16	KWG1602203	*
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/21/16	03/21/16	KWG1602203	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/21/16	03/21/16	KWG1602203	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/21/16	03/21/16	KWG1602203	*
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/21/16	03/21/16	KWG1602203	*
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/21/16	03/21/16	KWG1602203	
Toluene	**0.30**	J	0.50	0.10	0.054	1	03/21/16	03/21/16	KWG1602203	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/21/16	03/21/16	KWG1602203	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/21/16	03/21/16	KWG1602203	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	03/21/16	03/21/16	KWG1602203	
2-Hexanone	ND	U	20	10	2.7	1	03/21/16	03/21/16	KWG1602203	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YTC/106-4576003
Sample Matrix: Water

Service Request: K1602714
Date Collected: 03/16/2016
Date Received: 03/17/2016

Volatile Organic Compounds

Sample Name: PAIC WELL
Lab Code: K1602714-011

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
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/21/16	03/21/16	KWG1602203	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/21/16	03/21/16	KWG1602203	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/21/16	03/21/16	KWG1602203	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	03/21/16	03/21/16	KWG1602203	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/21/16	03/21/16	KWG1602203	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	03/21/16	03/21/16	KWG1602203	
o-Xylene	ND	U	0.50	0.20	0.074	1	03/21/16	03/21/16	KWG1602203	
Styrene	ND	U	0.50	0.20	0.089	1	03/21/16	03/21/16	KWG1602203	
Bromoform	ND	U	0.50	0.50	0.16	1	03/21/16	03/21/16	KWG1602203	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	03/21/16	03/21/16	KWG1602203	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/21/16	03/21/16	KWG1602203	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	03/21/16	03/21/16	KWG1602203	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/21/16	03/21/16	KWG1602203	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	03/21/16	03/21/16	KWG1602203	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/21/16	03/21/16	KWG1602203	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	03/21/16	03/21/16	KWG1602203	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	03/21/16	03/21/16	KWG1602203	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	03/21/16	03/21/16	KWG1602203	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	03/21/16	03/21/16	KWG1602203	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	03/21/16	03/21/16	KWG1602203	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/21/16	03/21/16	KWG1602203	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/21/16	03/21/16	KWG1602203	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	03/21/16	03/21/16	KWG1602203	
Naphthalene	ND	U	2.0	0.30	0.088	1	03/21/16	03/21/16	KWG1602203	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/21/16	03/21/16	KWG1602203	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	PAIC WELL	**Units:**	ug/L
Lab Code:	K1602714-011	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	94	85-115	03/21/16	Acceptable
1,2-Dichloroethane-d4	99	70-120	03/21/16	Acceptable
Toluene-d8	105	85-120	03/21/16	Acceptable
4-Bromofluorobenzene	94	75-120	03/21/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	POMONA WELL	**Units:**	ug/L
Lab Code:	K1602714-012	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/21/16	03/21/16	KWG1602203	
Chloromethane	ND	U	0.50	0.20	0.068	1	03/21/16	03/21/16	KWG1602203	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/21/16	03/21/16	KWG1602203	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/21/16	03/21/16	KWG1602203	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/21/16	03/21/16	KWG1602203	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/21/16	03/21/16	KWG1602203	
Acetone	ND	U	20	10	3.3	1	03/21/16	03/21/16	KWG1602203	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	03/21/16	03/21/16	KWG1602203	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/21/16	03/21/16	KWG1602203	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/21/16	03/21/16	KWG1602203	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/21/16	03/21/16	KWG1602203	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/21/16	03/21/16	KWG1602203	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	03/21/16	03/21/16	KWG1602203	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/21/16	03/21/16	KWG1602203	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/21/16	03/21/16	KWG1602203	
Chloroform	ND	U	0.50	0.20	0.072	1	03/21/16	03/21/16	KWG1602203	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/21/16	03/21/16	KWG1602203	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/21/16	03/21/16	KWG1602203	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/21/16	03/21/16	KWG1602203	
Benzene	ND	U	0.50	0.10	0.062	1	03/21/16	03/21/16	KWG1602203	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/21/16	03/21/16	KWG1602203	
Trichloroethene (TCE)	ND	U	0.50	0.10	0.10	1	03/21/16	03/21/16	KWG1602203	*
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/21/16	03/21/16	KWG1602203	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/21/16	03/21/16	KWG1602203	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/21/16	03/21/16	KWG1602203	*
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/21/16	03/21/16	KWG1602203	*
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/21/16	03/21/16	KWG1602203	
Toluene	**0.27**	J	0.50	0.10	0.054	1	03/21/16	03/21/16	KWG1602203	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/21/16	03/21/16	KWG1602203	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/21/16	03/21/16	KWG1602203	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	03/21/16	03/21/16	KWG1602203	
2-Hexanone	ND	U	20	10	2.7	1	03/21/16	03/21/16	KWG1602203	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated		**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003		**Date Collected:**	03/16/2016
Sample Matrix:	Water		**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	POMONA WELL		**Units:**	ug/L
Lab Code:	K1602714-012		**Basis:**	NA
Extraction Method:	EPA 5030B		**Level:**	Low
Analysis Method:	8260C			

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/21/16	03/21/16	KWG1602203	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/21/16	03/21/16	KWG1602203	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/21/16	03/21/16	KWG1602203	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	03/21/16	03/21/16	KWG1602203	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/21/16	03/21/16	KWG1602203	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	03/21/16	03/21/16	KWG1602203	
o-Xylene	ND	U	0.50	0.20	0.074	1	03/21/16	03/21/16	KWG1602203	
Styrene	ND	U	0.50	0.20	0.089	1	03/21/16	03/21/16	KWG1602203	
Bromoform	ND	U	0.50	0.50	0.16	1	03/21/16	03/21/16	KWG1602203	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	03/21/16	03/21/16	KWG1602203	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/21/16	03/21/16	KWG1602203	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	03/21/16	03/21/16	KWG1602203	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/21/16	03/21/16	KWG1602203	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	03/21/16	03/21/16	KWG1602203	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/21/16	03/21/16	KWG1602203	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	03/21/16	03/21/16	KWG1602203	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	03/21/16	03/21/16	KWG1602203	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	03/21/16	03/21/16	KWG1602203	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	03/21/16	03/21/16	KWG1602203	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	03/21/16	03/21/16	KWG1602203	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/21/16	03/21/16	KWG1602203	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/21/16	03/21/16	KWG1602203	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	03/21/16	03/21/16	KWG1602203	
Naphthalene	ND	U	2.0	0.30	0.088	1	03/21/16	03/21/16	KWG1602203	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/21/16	03/21/16	KWG1602203	

* See Case Narrative

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	POMONA WELL	**Units:**	ug/L
Lab Code:	K1602714-012	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	85-115	03/21/16	Acceptable
1,2-Dichloroethane-d4	99	70-120	03/21/16	Acceptable
Toluene-d8	107	85-120	03/21/16	Acceptable
4-Bromofluorobenzene	94	75-120	03/21/16	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	TB	**Units:**	ug/L
Lab Code:	K1602714-013	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/21/16	03/21/16	KWG1602203	
Chloromethane	ND	U	0.50	0.20	0.068	1	03/21/16	03/21/16	KWG1602203	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/21/16	03/21/16	KWG1602203	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/21/16	03/21/16	KWG1602203	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/21/16	03/21/16	KWG1602203	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/21/16	03/21/16	KWG1602203	
Acetone	ND	U	20	10	3.3	1	03/21/16	03/21/16	KWG1602203	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	03/21/16	03/21/16	KWG1602203	
Methylene Chloride	**0.14**	J	2.0	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/21/16	03/21/16	KWG1602203	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/21/16	03/21/16	KWG1602203	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/21/16	03/21/16	KWG1602203	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/21/16	03/21/16	KWG1602203	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	03/21/16	03/21/16	KWG1602203	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/21/16	03/21/16	KWG1602203	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/21/16	03/21/16	KWG1602203	
Chloroform	**0.090**	J	0.50	0.20	0.072	1	03/21/16	03/21/16	KWG1602203	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/21/16	03/21/16	KWG1602203	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/21/16	03/21/16	KWG1602203	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/21/16	03/21/16	KWG1602203	
Benzene	ND	U	0.50	0.10	0.062	1	03/21/16	03/21/16	KWG1602203	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/21/16	03/21/16	KWG1602203	
Trichloroethene (TCE)	ND	U	0.50	0.10	0.10	1	03/21/16	03/21/16	KWG1602203	*
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/21/16	03/21/16	KWG1602203	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/21/16	03/21/16	KWG1602203	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/21/16	03/21/16	KWG1602203	*
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/21/16	03/21/16	KWG1602203	*
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/21/16	03/21/16	KWG1602203	
Toluene	**1.1**		0.50	0.10	0.054	1	03/21/16	03/21/16	KWG1602203	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/21/16	03/21/16	KWG1602203	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/21/16	03/21/16	KWG1602203	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	03/21/16	03/21/16	KWG1602203	
2-Hexanone	ND	U	20	10	2.7	1	03/21/16	03/21/16	KWG1602203	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YTC/106-4576003
Sample Matrix: Water

Service Request: K1602714
Date Collected: 03/15/2016
Date Received: 03/17/2016

Volatile Organic Compounds

Sample Name: TB
Lab Code: K1602714-013

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
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/21/16	03/21/16	KWG1602203	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/21/16	03/21/16	KWG1602203	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/21/16	03/21/16	KWG1602203	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	03/21/16	03/21/16	KWG1602203	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/21/16	03/21/16	KWG1602203	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	03/21/16	03/21/16	KWG1602203	
o-Xylene	ND	U	0.50	0.20	0.074	1	03/21/16	03/21/16	KWG1602203	
Styrene	ND	U	0.50	0.20	0.089	1	03/21/16	03/21/16	KWG1602203	
Bromoform	ND	U	0.50	0.50	0.16	1	03/21/16	03/21/16	KWG1602203	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	03/21/16	03/21/16	KWG1602203	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/21/16	03/21/16	KWG1602203	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	03/21/16	03/21/16	KWG1602203	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/21/16	03/21/16	KWG1602203	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	03/21/16	03/21/16	KWG1602203	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/21/16	03/21/16	KWG1602203	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	03/21/16	03/21/16	KWG1602203	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	03/21/16	03/21/16	KWG1602203	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	03/21/16	03/21/16	KWG1602203	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	03/21/16	03/21/16	KWG1602203	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/21/16	03/21/16	KWG1602203	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	03/21/16	03/21/16	KWG1602203	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	03/21/16	03/21/16	KWG1602203	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/21/16	03/21/16	KWG1602203	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/21/16	03/21/16	KWG1602203	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	03/21/16	03/21/16	KWG1602203	
Naphthalene	ND	U	2.0	0.30	0.088	1	03/21/16	03/21/16	KWG1602203	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/21/16	03/21/16	KWG1602203	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/15/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	TB	**Units:**	ug/L
Lab Code:	K1602714-013	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	96	85-115	03/21/16	Acceptable
1,2-Dichloroethane-d4	99	70-120	03/21/16	Acceptable
Toluene-d8	107	85-120	03/21/16	Acceptable
4-Bromofluorobenzene	95	75-120	03/21/16	Acceptable

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: JBLM-YTC/106-4576003
Sample Matrix: Water

Service Request: K1602714
Date Collected: 03/16/2016
Date Received: 03/17/2016

Volatile Organic Compounds

Sample Name: FTP-1
Lab Code: K1602714-014

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA

Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/23/16	03/23/16	KWG1602255	
Chloromethane	ND	U	0.50	0.20	0.068	1	03/23/16	03/23/16	KWG1602255	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/23/16	03/23/16	KWG1602255	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/23/16	03/23/16	KWG1602255	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/23/16	03/23/16	KWG1602255	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/23/16	03/23/16	KWG1602255	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/23/16	03/23/16	KWG1602255	
Acetone	**6.9**	J	20	10	3.3	1	03/23/16	03/23/16	KWG1602255	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	03/23/16	03/23/16	KWG1602255	
Methylene Chloride	ND	U	2.0	0.20	0.10	1	03/23/16	03/23/16	KWG1602255	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/23/16	03/23/16	KWG1602255	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/23/16	03/23/16	KWG1602255	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/23/16	03/23/16	KWG1602255	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/23/16	03/23/16	KWG1602255	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	03/23/16	03/23/16	KWG1602255	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/23/16	03/23/16	KWG1602255	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/23/16	03/23/16	KWG1602255	
Chloroform	ND	U	0.50	0.20	0.072	1	03/23/16	03/23/16	KWG1602255	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/23/16	03/23/16	KWG1602255	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/23/16	03/23/16	KWG1602255	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/23/16	03/23/16	KWG1602255	
Benzene	**3.1**		0.50	0.10	0.062	1	03/23/16	03/23/16	KWG1602255	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/23/16	03/23/16	KWG1602255	
Trichloroethene (TCE)	**0.13**	J	0.50	0.10	0.10	1	03/23/16	03/23/16	KWG1602255	*
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/23/16	03/23/16	KWG1602255	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/23/16	03/23/16	KWG1602255	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/23/16	03/23/16	KWG1602255	*
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/23/16	03/23/16	KWG1602255	*
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/23/16	03/23/16	KWG1602255	
Toluene	**0.52**		0.50	0.10	0.054	1	03/23/16	03/23/16	KWG1602255	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/23/16	03/23/16	KWG1602255	*
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/23/16	03/23/16	KWG1602255	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	03/23/16	03/23/16	KWG1602255	
2-Hexanone	ND	U	20	10	2.7	1	03/23/16	03/23/16	KWG1602255	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	FTP-1	**Units:**	ug/L
Lab Code:	K1602714-014	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/23/16	03/23/16	KWG1602255	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/23/16	03/23/16	KWG1602255	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/23/16	03/23/16	KWG1602255	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/23/16	03/23/16	KWG1602255	
Ethylbenzene	**3.5**		0.50	0.10	0.050	1	03/23/16	03/23/16	KWG1602255	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/23/16	03/23/16	KWG1602255	
m,p-Xylenes	**0.18**	J	0.50	0.20	0.11	1	03/23/16	03/23/16	KWG1602255	
o-Xylene	**1.1**		0.50	0.20	0.074	1	03/23/16	03/23/16	KWG1602255	
Styrene	ND	U	0.50	0.20	0.089	1	03/23/16	03/23/16	KWG1602255	
Bromoform	ND	U	0.50	0.50	0.16	1	03/23/16	03/23/16	KWG1602255	*
Isopropylbenzene	**3.1**		2.0	0.20	0.051	1	03/23/16	03/23/16	KWG1602255	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/23/16	03/23/16	KWG1602255	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/23/16	03/23/16	KWG1602255	
n-Propylbenzene	**4.0**		2.0	0.20	0.054	1	03/23/16	03/23/16	KWG1602255	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/23/16	03/23/16	KWG1602255	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/23/16	03/23/16	KWG1602255	
1,3,5-Trimethylbenzene	**0.12**	J	2.0	0.20	0.089	1	03/23/16	03/23/16	KWG1602255	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/23/16	03/23/16	KWG1602255	
tert-Butylbenzene	**0.23**	J	2.0	0.20	0.059	1	03/23/16	03/23/16	KWG1602255	
1,2,4-Trimethylbenzene	**52**		2.0	0.20	0.069	1	03/23/16	03/23/16	KWG1602255	
sec-Butylbenzene	**2.1**		2.0	0.10	0.062	1	03/23/16	03/23/16	KWG1602255	
4-Isopropyltoluene	**3.4**		2.0	0.20	0.060	1	03/23/16	03/23/16	KWG1602255	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/23/16	03/23/16	KWG1602255	
1,4-Dichlorobenzene	**0.13**	J	0.50	0.20	0.12	1	03/23/16	03/23/16	KWG1602255	
n-Butylbenzene	**3.0**		2.0	0.10	0.054	1	03/23/16	03/23/16	KWG1602255	
1,2-Dichlorobenzene	**0.69**		0.50	0.20	0.12	1	03/23/16	03/23/16	KWG1602255	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/23/16	03/23/16	KWG1602255	*
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/23/16	03/23/16	KWG1602255	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	03/23/16	03/23/16	KWG1602255	*
Naphthalene	**67**		2.0	0.30	0.088	1	03/23/16	03/23/16	KWG1602255	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/23/16	03/23/16	KWG1602255	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	FTP-1	**Units:**	ug/L
Lab Code:	K1602714-014	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	97	85-115	03/23/16	Acceptable
1,2-Dichloroethane-d4	100	70-120	03/23/16	Acceptable
Toluene-d8	108	85-120	03/23/16	Acceptable
4-Bromofluorobenzene	96	75-120	03/23/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated		**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003		**Date Collected:**	03/16/2016
Sample Matrix:	Water		**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	FTP-1A		**Units:**	ug/L
Lab Code:	K1602714-018		**Basis:**	NA
Extraction Method:	EPA 5030B		**Level:**	Low
Analysis Method:	8260C			

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	03/18/16	03/18/16	KWG1602158	
Chloromethane	ND	U	0.50	0.20	0.068	1	03/18/16	03/18/16	KWG1602158	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	03/18/16	03/18/16	KWG1602158	
Bromomethane	ND	U	0.50	0.30	0.16	1	03/18/16	03/18/16	KWG1602158	
Chloroethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	03/18/16	03/18/16	KWG1602158	
Acetone	**4.4**	J	20	10	3.3	1	03/18/16	03/18/16	KWG1602158	
Carbon Disulfide	**0.080**	J	0.50	0.20	0.069	1	03/18/16	03/18/16	KWG1602158	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	03/18/16	03/18/16	KWG1602158	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	03/18/16	03/18/16	KWG1602158	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	03/18/16	03/18/16	KWG1602158	*
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	03/18/16	03/18/16	KWG1602158	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	03/18/16	03/18/16	KWG1602158	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Chloroform	ND	U	0.50	0.20	0.072	1	03/18/16	03/18/16	KWG1602158	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	03/18/16	03/18/16	KWG1602158	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	03/18/16	03/18/16	KWG1602158	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
Benzene	**2.9**		0.50	0.10	0.062	1	03/18/16	03/18/16	KWG1602158	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	03/18/16	03/18/16	KWG1602158	
Trichloroethene (TCE)	**0.12**	J	0.50	0.10	0.10	1	03/18/16	03/18/16	KWG1602158	*
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	03/18/16	03/18/16	KWG1602158	
Dibromomethane	ND	U	0.50	0.50	0.15	1	03/18/16	03/18/16	KWG1602158	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	03/18/16	03/18/16	KWG1602158	*
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	03/18/16	03/18/16	KWG1602158	*
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	03/18/16	03/18/16	KWG1602158	
Toluene	**0.25**	J	0.50	0.10	0.054	1	03/18/16	03/18/16	KWG1602158	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	03/18/16	03/18/16	KWG1602158	*
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	03/18/16	03/18/16	KWG1602158	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	03/18/16	03/18/16	KWG1602158	
2-Hexanone	ND	U	20	10	2.7	1	03/18/16	03/18/16	KWG1602158	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	FTP-1A	**Units:**	ug/L
Lab Code:	K1602714-018	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	03/18/16	03/18/16	KWG1602158	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	03/18/16	03/18/16	KWG1602158	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
Ethylbenzene	**3.4**		0.50	0.10	0.050	1	03/18/16	03/18/16	KWG1602158	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
m,p-Xylenes	**0.18**	J	0.50	0.20	0.11	1	03/18/16	03/18/16	KWG1602158	
o-Xylene	**1.1**		0.50	0.20	0.074	1	03/18/16	03/18/16	KWG1602158	
Styrene	ND	U	0.50	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
Bromoform	ND	U	0.50	0.50	0.16	1	03/18/16	03/18/16	KWG1602158	
Isopropylbenzene	**3.0**		2.0	0.20	0.051	1	03/18/16	03/18/16	KWG1602158	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	03/18/16	03/18/16	KWG1602158	
Bromobenzene	ND	U	2.0	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
n-Propylbenzene	**3.9**		2.0	0.20	0.054	1	03/18/16	03/18/16	KWG1602158	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	03/18/16	03/18/16	KWG1602158	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
1,3,5-Trimethylbenzene	**0.14**	J	2.0	0.20	0.089	1	03/18/16	03/18/16	KWG1602158	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	03/18/16	03/18/16	KWG1602158	
tert-Butylbenzene	**0.22**	J	2.0	0.20	0.059	1	03/18/16	03/18/16	KWG1602158	
1,2,4-Trimethylbenzene	**52**		2.0	0.20	0.069	1	03/18/16	03/18/16	KWG1602158	
sec-Butylbenzene	**2.0**		2.0	0.10	0.062	1	03/18/16	03/18/16	KWG1602158	
4-Isopropyltoluene	**3.4**		2.0	0.20	0.060	1	03/18/16	03/18/16	KWG1602158	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	03/18/16	03/18/16	KWG1602158	
1,4-Dichlorobenzene	**0.13**	J	0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
n-Butylbenzene	**3.1**		2.0	0.10	0.054	1	03/18/16	03/18/16	KWG1602158	
1,2-Dichlorobenzene	**0.66**		0.50	0.20	0.12	1	03/18/16	03/18/16	KWG1602158	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	03/18/16	03/18/16	KWG1602158	*
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	03/18/16	03/18/16	KWG1602158	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	03/18/16	03/18/16	KWG1602158	*
Naphthalene	**66**		2.0	0.30	0.088	1	03/18/16	03/18/16	KWG1602158	*
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	03/18/16	03/18/16	KWG1602158	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Volatile Organic Compounds

Sample Name:	FTP-1A	**Units:**	ug/L
Lab Code:	K1602714-018	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	97	85-115	03/18/16	Acceptable
1,2-Dichloroethane-d4	99	70-120	03/18/16	Acceptable
Toluene-d8	106	85-120	03/18/16	Acceptable
4-Bromofluorobenzene	96	75-120	03/18/16	Acceptable

Comments:

Semi-Volatile Organic Compounds by GC/MS

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

Client: Tetra Tech, Incorporated
Project: JBLM-YTC/106-4576003
Service Request: K1602714

Cover Page - Organic Analysis Data Package
Semi-Volatile Organic Compounds by GC/MS

Sample Name	Lab Code	Date Collected	Date Received
FTP-1	K1602714-014	03/16/2016	03/17/2016
FTP-1A	K1602714-018	03/16/2016	03/17/2016

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	FTP-1	**Units:**	ug/L
Lab Code:	K1602714-014	**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
N-Nitrosodimethylamine	ND	U	25	5.0	0.48	1	03/22/16	03/26/16	KWG1602214	
Bis(2-chloroethyl) Ether	ND	U	10	0.50	0.33	1	03/22/16	03/26/16	KWG1602214	
Phenol	ND	U	10	0.50	0.32	1	03/22/16	03/26/16	KWG1602214	
2-Chlorophenol	ND	U	10	0.50	0.31	1	03/22/16	03/26/16	KWG1602214	
1,3-Dichlorobenzene	ND	U	10	0.50	0.35	1	03/22/16	03/26/16	KWG1602214	
1,4-Dichlorobenzene	ND	U	10	0.50	0.32	1	03/22/16	03/26/16	KWG1602214	
1,2-Dichlorobenzene	**0.71**	J	10	0.50	0.43	1	03/22/16	03/26/16	KWG1602214	
Benzyl alcohol	ND	U	10	0.50	0.38	1	03/22/16	03/26/16	KWG1602214	
Bis(2-chloroisopropyl) Ether	ND	U	10	0.50	0.31	1	03/22/16	03/26/16	KWG1602214	
2-Methylphenol	ND	U	10	0.50	0.33	1	03/22/16	03/26/16	KWG1602214	
Hexachloroethane	ND	U	10	2.0	0.29	1	03/22/16	03/26/16	KWG1602214	
N-Nitrosodi-n-propylamine	ND	U	10	2.0	0.50	1	03/22/16	03/26/16	KWG1602214	
4-Methylphenol†	ND	U	10	0.50	0.48	1	03/22/16	03/26/16	KWG1602214	
Nitrobenzene	ND	U	10	0.57	0.57	1	03/22/16	03/26/16	KWG1602214	
Isophorone	ND	U	10	1.0	0.25	1	03/22/16	03/26/16	KWG1602214	
2-Nitrophenol	ND	U	10	0.50	0.37	1	03/22/16	03/26/16	KWG1602214	
2,4-Dimethylphenol	ND	U	10	2.0	0.26	1	03/22/16	03/26/16	KWG1602214	
Bis(2-chloroethoxy)methane	ND	U	10	0.50	0.28	1	03/22/16	03/26/16	KWG1602214	
2,4-Dichlorophenol	ND	U	10	0.50	0.30	1	03/22/16	03/26/16	KWG1602214	
Benzoic acid	ND	U	25	25	5.8	1	03/22/16	03/26/16	KWG1602214	
1,2,4-Trichlorobenzene	ND	U	10	0.50	0.36	1	03/22/16	03/26/16	KWG1602214	
Naphthalene	**45**		10	0.50	0.37	1	03/22/16	03/26/16	KWG1602214	
4-Chloroaniline	ND	U	10	2.0	0.38	1	03/22/16	03/26/16	KWG1602214	
Hexachlorobutadiene	ND	U	10	0.50	0.29	1	03/22/16	03/26/16	KWG1602214	
4-Chloro-3-methylphenol	ND	U	10	0.50	0.49	1	03/22/16	03/26/16	KWG1602214	
2-Methylnaphthalene	**66**		10	0.50	0.24	1	03/22/16	03/26/16	KWG1602214	
2,4,6-Trichlorophenol	ND	U	10	1.0	0.20	1	03/22/16	03/26/16	KWG1602214	
2,4,5-Trichlorophenol	ND	U	10	0.50	0.38	1	03/22/16	03/26/16	KWG1602214	
2-Chloronaphthalene	ND	U	10	0.50	0.29	1	03/22/16	03/26/16	KWG1602214	
Acenaphthene	**2.3**	J	10	0.50	0.28	1	03/22/16	03/26/16	KWG1602214	
2-Nitroaniline	ND	U	25	0.50	0.34	1	03/22/16	03/26/16	KWG1602214	
Acenaphthylene	ND	U	10	0.50	0.24	1	03/22/16	03/26/16	KWG1602214	
Dimethyl Phthalate	ND	U	10	2.0	0.25	1	03/22/16	03/26/16	KWG1602214	
2,6-Dinitrotoluene	ND	U	10	0.50	0.35	1	03/22/16	03/26/16	KWG1602214	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	FTP-1	**Units:**	ug/L
Lab Code:	K1602714-014	**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
3-Nitroaniline	ND	U	25	1.0	3.3	1	03/22/16	03/26/16	KWG1602214	
2,4-Dinitrophenol	ND	U	25	25	2.2	1	03/22/16	03/26/16	KWG1602214	
Dibenzofuran	**4.3**	J	10	0.50	0.33	1	03/22/16	03/26/16	KWG1602214	
4-Nitrophenol	ND	U	25	10	1.9	1	03/22/16	03/26/16	KWG1602214	
2,4-Dinitrotoluene	ND	U	10	1.0	0.27	1	03/22/16	03/26/16	KWG1602214	
Fluorene	**6.9**	J	10	0.50	0.32	1	03/22/16	03/26/16	KWG1602214	
4-Chlorophenyl Phenyl Ether	ND	U	10	0.50	0.28	1	03/22/16	03/26/16	KWG1602214	
Diethyl Phthalate	**4.9**	J	10	0.50	0.29	1	03/22/16	03/26/16	KWG1602214	
4-Nitroaniline	ND	U	25	4.0	4.0	1	03/22/16	03/26/16	KWG1602214	
2-Methyl-4,6-dinitrophenol	ND	U	25	10	2.1	1	03/22/16	03/26/16	KWG1602214	
N-Nitrosodiphenylamine	ND	U	10	0.50	0.48	1	03/22/16	03/26/16	KWG1602214	
1,2-Diphenylhydrazine†	ND	U	10	0.50	0.51	1	03/22/16	03/26/16	KWG1602214	
4-Bromophenyl Phenyl Ether	ND	U	10	0.50	0.27	1	03/22/16	03/26/16	KWG1602214	
Hexachlorobenzene	ND	U	10	0.63	0.63	1	03/22/16	03/26/16	KWG1602214	
Pentachlorophenol	ND	U	25	5.0	2.4	1	03/22/16	03/26/16	KWG1602214	
Phenanthrene	**4.3**	J	10	0.50	0.48	1	03/22/16	03/26/16	KWG1602214	
Anthracene	ND	U	10	0.61	0.61	1	03/22/16	03/26/16	KWG1602214	
Carbazole	**4.7**	J	10	0.50	0.36	1	03/22/16	03/26/16	KWG1602214	
Di-n-butyl Phthalate	ND	U	10	0.65	0.65	1	03/22/16	03/26/16	KWG1602214	
Fluoranthene	ND	U	10	0.65	0.65	1	03/22/16	03/26/16	KWG1602214	
Pyrene	ND	U	10	0.73	0.73	1	03/22/16	03/26/16	KWG1602214	
Butyl Benzyl Phthalate	ND	U	10	0.50	0.47	1	03/22/16	03/26/16	KWG1602214	
3,3'-Dichlorobenzidine	ND	U	25	2.0	0.27	1	03/22/16	03/26/16	KWG1602214	
Benz(a)anthracene	ND	U	10	0.59	0.59	1	03/22/16	03/26/16	KWG1602214	
Chrysene	ND	U	10	1.0	0.79	1	03/22/16	03/26/16	KWG1602214	
Bis(2-ethylhexyl) Phthalate	ND	U	10	2.0	1.9	1	03/22/16	03/26/16	KWG1602214	
Di-n-octyl Phthalate	ND	U	10	0.63	0.63	1	03/22/16	03/26/16	KWG1602214	
Benzo(b)fluoranthene	ND	U	10	0.58	0.58	1	03/22/16	03/26/16	KWG1602214	
Benzo(k)fluoranthene	ND	U	10	0.83	0.83	1	03/22/16	03/26/16	KWG1602214	
Benzo(a)pyrene	ND	U	10	1.0	0.65	1	03/22/16	03/26/16	KWG1602214	
Indeno(1,2,3-cd)pyrene	ND	U	10	0.68	0.68	1	03/22/16	03/26/16	KWG1602214	
Dibenz(a,h)anthracene	ND	U	10	1.0	0.75	1	03/22/16	03/26/16	KWG1602214	
Benzo(g,h,i)perylene	ND	U	10	0.81	0.81	1	03/22/16	03/26/16	KWG1602214	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	FTP-1	**Units:**	ug/L
Lab Code:	K1602714-014	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	72	20-110	03/26/16	Acceptable
Phenol-d6	77	10-115	03/26/16	Acceptable
Nitrobenzene-d5	80	40-110	03/26/16	Acceptable
2-Fluorobiphenyl	74	50-110	03/26/16	Acceptable
2,4,6-Tribromophenol	88	40-125	03/26/16	Acceptable
Terphenyl-d14	66	50-135	03/26/16	Acceptable

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.
1,2-Diphenylhydrazine	This compound is quantitated as Azobenzene.

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	FTP-1A	**Units:**	ug/L
Lab Code:	K1602714-018	**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
N-Nitrosodimethylamine	ND	U	27	5.4	0.52	1	03/22/16	03/26/16	KWG1602214	
Bis(2-chloroethyl) Ether	ND	U	11	0.54	0.36	1	03/22/16	03/26/16	KWG1602214	
Phenol	ND	U	11	0.54	0.35	1	03/22/16	03/26/16	KWG1602214	
2-Chlorophenol	ND	U	11	0.54	0.33	1	03/22/16	03/26/16	KWG1602214	
1,3-Dichlorobenzene	ND	U	11	0.54	0.38	1	03/22/16	03/26/16	KWG1602214	
1,4-Dichlorobenzene	ND	U	11	0.54	0.35	1	03/22/16	03/26/16	KWG1602214	
1,2-Dichlorobenzene	**0.59**	J	11	0.54	0.46	1	03/22/16	03/26/16	KWG1602214	
Benzyl alcohol	ND	U	11	0.54	0.41	1	03/22/16	03/26/16	KWG1602214	
Bis(2-chloroisopropyl) Ether	ND	U	11	0.54	0.33	1	03/22/16	03/26/16	KWG1602214	
2-Methylphenol	ND	U	11	0.54	0.36	1	03/22/16	03/26/16	KWG1602214	
Hexachloroethane	ND	U	11	2.2	0.31	1	03/22/16	03/26/16	KWG1602214	
N-Nitrosodi-n-propylamine	ND	U	11	2.2	0.54	1	03/22/16	03/26/16	KWG1602214	
4-Methylphenol†	ND	U	11	0.54	0.52	1	03/22/16	03/26/16	KWG1602214	
Nitrobenzene	ND	U	11	0.61	0.61	1	03/22/16	03/26/16	KWG1602214	
Isophorone	ND	U	11	1.1	0.27	1	03/22/16	03/26/16	KWG1602214	
2-Nitrophenol	ND	U	11	0.54	0.40	1	03/22/16	03/26/16	KWG1602214	
2,4-Dimethylphenol	ND	U	11	2.2	0.28	1	03/22/16	03/26/16	KWG1602214	
Bis(2-chloroethoxy)methane	ND	U	11	0.54	0.30	1	03/22/16	03/26/16	KWG1602214	
2,4-Dichlorophenol	ND	U	11	0.54	0.32	1	03/22/16	03/26/16	KWG1602214	
Benzoic acid	ND	U	27	27	6.2	1	03/22/16	03/26/16	KWG1602214	
1,2,4-Trichlorobenzene	ND	U	11	0.54	0.39	1	03/22/16	03/26/16	KWG1602214	
Naphthalene	**35**		11	0.54	0.40	1	03/22/16	03/26/16	KWG1602214	
4-Chloroaniline	ND	U	11	2.2	0.41	1	03/22/16	03/26/16	KWG1602214	
Hexachlorobutadiene	ND	U	11	0.54	0.31	1	03/22/16	03/26/16	KWG1602214	
4-Chloro-3-methylphenol	ND	U	11	0.54	0.53	1	03/22/16	03/26/16	KWG1602214	
2-Methylnaphthalene	**42**		11	0.54	0.26	1	03/22/16	03/26/16	KWG1602214	
2,4,6-Trichlorophenol	ND	U	11	1.1	0.22	1	03/22/16	03/26/16	KWG1602214	
2,4,5-Trichlorophenol	ND	U	11	0.54	0.41	1	03/22/16	03/26/16	KWG1602214	
2-Chloronaphthalene	ND	U	11	0.54	0.31	1	03/22/16	03/26/16	KWG1602214	
Acenaphthene	**2.0**	J	11	0.54	0.30	1	03/22/16	03/26/16	KWG1602214	
2-Nitroaniline	ND	U	27	0.54	0.37	1	03/22/16	03/26/16	KWG1602214	
Acenaphthylene	**0.63**	J	11	0.54	0.26	1	03/22/16	03/26/16	KWG1602214	
Dimethyl Phthalate	ND	U	11	2.2	0.27	1	03/22/16	03/26/16	KWG1602214	
2,6-Dinitrotoluene	ND	U	11	0.54	0.38	1	03/22/16	03/26/16	KWG1602214	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	FTP-1A	**Units:**	ug/L
Lab Code:	K1602714-018	**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
3-Nitroaniline	ND	U	27	1.1	3.6	1	03/22/16	03/26/16	KWG1602214	
2,4-Dinitrophenol	ND	U	27	27	2.4	1	03/22/16	03/26/16	KWG1602214	
Dibenzofuran	**4.0**	J	11	0.54	0.36	1	03/22/16	03/26/16	KWG1602214	
4-Nitrophenol	ND	U	27	11	2.1	1	03/22/16	03/26/16	KWG1602214	
2,4-Dinitrotoluene	ND	U	11	1.1	0.29	1	03/22/16	03/26/16	KWG1602214	
Fluorene	**6.3**	J	11	0.54	0.35	1	03/22/16	03/26/16	KWG1602214	
4-Chlorophenyl Phenyl Ether	ND	U	11	0.54	0.30	1	03/22/16	03/26/16	KWG1602214	
Diethyl Phthalate	**4.5**	J	11	0.54	0.31	1	03/22/16	03/26/16	KWG1602214	
4-Nitroaniline	ND	U	27	4.3	4.3	1	03/22/16	03/26/16	KWG1602214	
2-Methyl-4,6-dinitrophenol	ND	U	27	11	2.3	1	03/22/16	03/26/16	KWG1602214	
N-Nitrosodiphenylamine	ND	U	11	0.54	0.52	1	03/22/16	03/26/16	KWG1602214	
1,2-Diphenylhydrazine†	ND	U	11	0.54	0.55	1	03/22/16	03/26/16	KWG1602214	
4-Bromophenyl Phenyl Ether	ND	U	11	0.54	0.29	1	03/22/16	03/26/16	KWG1602214	
Hexachlorobenzene	ND	U	11	0.68	0.68	1	03/22/16	03/26/16	KWG1602214	
Pentachlorophenol	ND	U	27	5.4	2.6	1	03/22/16	03/26/16	KWG1602214	
Phenanthrene	**2.9**	J	11	0.54	0.52	1	03/22/16	03/26/16	KWG1602214	
Anthracene	ND	U	11	0.65	0.65	1	03/22/16	03/26/16	KWG1602214	
Carbazole	**3.8**	J	11	0.54	0.39	1	03/22/16	03/26/16	KWG1602214	
Di-n-butyl Phthalate	ND	U	11	0.70	0.70	1	03/22/16	03/26/16	KWG1602214	
Fluoranthene	ND	U	11	0.70	0.70	1	03/22/16	03/26/16	KWG1602214	
Pyrene	ND	U	11	0.78	0.78	1	03/22/16	03/26/16	KWG1602214	
Butyl Benzyl Phthalate	ND	U	11	0.54	0.51	1	03/22/16	03/26/16	KWG1602214	
3,3'-Dichlorobenzidine	ND	U	27	2.2	0.29	1	03/22/16	03/26/16	KWG1602214	
Benz(a)anthracene	ND	U	11	0.63	0.63	1	03/22/16	03/26/16	KWG1602214	
Chrysene	ND	U	11	1.1	0.85	1	03/22/16	03/26/16	KWG1602214	
Bis(2-ethylhexyl) Phthalate	ND	U	11	2.2	2.1	1	03/22/16	03/26/16	KWG1602214	
Di-n-octyl Phthalate	ND	U	11	0.68	0.68	1	03/22/16	03/26/16	KWG1602214	
Benzo(b)fluoranthene	ND	U	11	0.62	0.62	1	03/22/16	03/26/16	KWG1602214	
Benzo(k)fluoranthene	ND	U	11	0.89	0.89	1	03/22/16	03/26/16	KWG1602214	
Benzo(a)pyrene	ND	U	11	1.1	0.70	1	03/22/16	03/26/16	KWG1602214	
Indeno(1,2,3-cd)pyrene	ND	U	11	0.73	0.73	1	03/22/16	03/26/16	KWG1602214	
Dibenz(a,h)anthracene	ND	U	11	1.1	0.80	1	03/22/16	03/26/16	KWG1602214	
Benzo(g,h,i)perylene	ND	U	11	0.87	0.87	1	03/22/16	03/26/16	KWG1602214	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1602714
Project:	JBLM-YTC/106-4576003	**Date Collected:**	03/16/2016
Sample Matrix:	Water	**Date Received:**	03/17/2016

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	FTP-1A	**Units:**	ug/L
Lab Code:	K1602714-018	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	71	20-110	03/26/16	Acceptable
Phenol-d6	77	10-115	03/26/16	Acceptable
Nitrobenzene-d5	78	40-110	03/26/16	Acceptable
2-Fluorobiphenyl	75	50-110	03/26/16	Acceptable
2,4,6-Tribromophenol	89	40-125	03/26/16	Acceptable
Terphenyl-d14	57	50-135	03/26/16	Acceptable

† **Analyte Comments**

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.
1,2-Diphenylhydrazine	This compound is quantitated as Azobenzene.

Comments:

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November 03, 2016

Analytical Report for Service Request No: K1611368

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

RE: YTC

Dear Keir,

Enclosed are the results of the sample(s) submitted to our laboratory September 23, 2016
For your reference, these analyses have been assigned our service request number **K1611368.**

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

Please contact me if you have any questions. My extension is 3376. You may also contact me via email at gregory.salata@alsglobal.com.

Respectfully submitted,

ALS Group USA, Corp. dba ALS Environmental

Gregory Salata, Ph.D.
Senior Project
Manager

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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	-
ISO 17025	http://www.pjlabs.com/	L16-57
Louisiana DEQ	http://www.deq.louisiana.gov/portal/DIVISIONS/PublicParticipationandPermitSupport/LouisianaLaboratoryAccreditationProgram.aspx	03016
Maine DHS	Not available	WA01276
Minnesota DOH	http://www.health.state.mn.us/accreditation	053-999-457
Montana DPHHS	http://www.dphhs.mt.gov/publichealth/	CERT0047
Nevada DEP	http://ndep.nv.gov/bsdw/labservice.htm	WA01276
New Jersey DEP	http://www.nj.gov/dep/oqa/	WA005
North Carolina DWQ	http://www.dwqlab.org/	605
Oklahoma DEQ	http://www.deq.state.ok.us/CSDnew/labcert.htm	9801
Oregon – DEQ (NELAP)	http://public.health.oregon.gov/LaboratoryServices/EnvironmentalLaboratoryAccreditation/Pages/index.aspx	WA100010
South Carolina DHEC	http://www.scdhec.gov/environment/envserv/	61002
Texas CEQ	http://www.tceq.texas.gov/field/qa/env_lab_accreditation.html	T104704427
Washington DOE	http://www.ecy.wa.gov/programs/eap/labs/lab-accreditation.html	C544
Wyoming (EPA Region 8)	http://www.epa.gov/region8/water/dwhome/wyomingdi.html	-
Kelso Laboratory Website	www.alsglobal.com	NA

Analyses were performed according to our laboratory's NELAP-approved quality assurance program. A complete listing of specific NELAP-certified analytes, can be found in the certification section at www.ALSGlobal.com or at the accreditation bodies web site.
Please refer to the certification and/or accreditation body's web site if samples are submitted for compliance purposes. The states highlighted above, require the analysis be listed on the state certification if used for compliance purposes and if the method/anlayte is offered by that state.

Case Narrative

ALS Environmental—Kelso Laboratory
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ALS ENVIRONMENTAL

Client:	Tetra Tech, Incorporated	**Service Request No.:**	K1611368
Project:	YTC	**Date Received:**	09/23/16
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 09/23/16. The samples were received in good condition and consistent with the accompanying chain of custody form. The samples were stored in a refrigerator at 4ºC upon receipt at the laboratory.

Diesel Range Organics by Method NWTPH-Dx

Matrix Spike Recovery Exceptions:
The control criteria for matrix spike recovery of Diesel and Residual Range Organics for sample FTP-1 were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

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

Gasoline Range Organics by Method NWTPH-Gx

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

Volatile Organic Compounds by EPA Method 8260

Calibration Verification Exceptions:
The following analytes were flagged as outside the control criterion for Continuing Calibration Verification (CCV) J:\MS46\0929F005.D: Dichlorodifluoromethane and Carbon Disulfide. 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 control criterion was exceeded for 1,1-Dichloroethene in Duplicate Laboratory Control Sample (DLCS) KWG1608787-4. The results were within the marginal exceedence limits listed in the DOD QAPP. No further corrective action was required.

Approved by ______________________

Matrix Spike Recovery Exceptions:
The matrix spike recovery of several analytes for sample FTP-1 was outside control criteria. Positive detections in the parent sample are flagged, as per the DOD QAPP. No further corrective action was appropriate.

The control criteria for matrix spike recovery of 1,2,4-Trimethylbenzene and Napthalene for sample FTP-1 were not applicable. The analyte concentration in the sample was significantly higher than the added spike concentration, preventing accurate evaluation of the spike recovery.

Relative Percent Difference Exceptions:
The Relative Percent Difference (RPD) criterion for the replicate analysis of Hexachlorobutadiene in sample FTP-1 was outside of control criteria. Positive detections in the parent sample are flagged, as per the DOD QAPP. No further corrective action was necessary.

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

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

Semivolatile Organic Compounds by EPA Method 8270

Matrix Spike Recovery Exceptions:
The replicate Matrix Spikes (MS/DMS) KWG1608692-1 and KWG1608692-2 recoveries of 3,3'-Dichlorobenzidine for sample FTP-1 were outside control criteria. Recoveries in the replicate Laboratory Control Samples (LCS/DLCS) KWG1608692-3 and KWG1608392-4 were acceptable, which indicated the analytical batch was in control. The matrix spike outliers suggested a potential low bias in this matrix. No further corrective action was appropriate.

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

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

Approved by Gregory Salata

Chain of Custody

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SR# K1611368
COC Set 1 of 2
COC#

1317 South 13th Ave, Kelso, WA 98626 Phone (360) 577-7222 / 800-695-7222 / FAX (360) 636-1068
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Project Name: YTC
Project Number:
Project Manager: Mark Ingersoll
Company: HEC
Address: 19803 North Creek Pkwy Bothell
Phone #: 406 2706335
email: mark.ingersoll@hkruken.com
Sampler Signature: Dana Ramquist
Sampler Printed Name: Dana Ramquist

FTP / TVR

CLIENT SAMPLE ID	LABID	SAMPLING Date / Time	Matrix	NUMBER OF CONTAINERS	8270D / PAH SIM (7D)	8270D / SVO (7D)	8330B / NitramAroEsters	8260C / VOC FP	NWTPH-Dx / NW_TPH (14D)	NWTPH-Gx / NW_GAS (14D)	1	2	3	4	5	Remarks
1. FTP-1		92116 / 1145	W	18		X		X	X	X						MS/MSD
2. FTP-14		92116 / 1240	W						X	X						
3. FTP-15		92116 / 1300	W						X	X						
4. FTP-16		92116 / 1330	W						X	X						
5. PAIC		92116 / 1400	W	3				X								
6. TVR-3		92116 / 1415	W	3				X								
7. TVR-7		92116 / 1420	W	3				X								
8. TVR-1		92116 / 1425	W	3				X								
9. TVR-5		92116 / 1435	W	3				X								
10. 815-2		92116 / 1500	W	3				X								

Report Requirements

___ I. Routine Report: Method Blank, Surrogate, as required
___ II. Report Dup., MS, MSD as required
___ III. CLP Like Summary (no raw data)
_X_ 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)

3 coolers

	Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature	Dana Ramquist			C. Snyder		
Printed Name	Dana Ramquist			C. Snyder		
Firm	HEC	Fed Ex		ALS		
Date/Time	92216 / 1500			9-23-16 10:00		

ALS Environmental

CHAIN OF CUSTODY 73443

001

SR# K1611368

COC Set 2 of 2

COC# ________

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

FTP/TVR

Project Name YTC	Project Number:
Project Manager See pg 1	
Company	
Address	
Phone #	email
Sampler Signature	Sampler Printed Name

					7D		14D								
CLIENT SAMPLE ID	LABID	SAMPLING Date Time	Matrix	NUMBER OF CONTAINERS	8270D / PAH SIM	8270D / SVO	8330B / NitramAroEsters	8260C / VOC FP	NWTPH-Dx / NW_TPH	NWTPH-Gx / NW_GAS	1	2	3	4	5	Remarks
1. MTS-1		92216/ 1055	W	3				X								
2. MTS-2		92216/ 1100	W	3				X								
3. DUP-1		92116/ 1410	W	3				X								
4. Pomona		92216/800	W	3				X								
5. TRIP-1		92116/900	W	2				X		X						
6.																
7.																
8.																
9.		DR														
10.																

Report Requirements

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

___ II. Report Dup., MS, MSD as required

___ III. CLP Like Summary (no raw data)

X 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

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

Special Instructions/Comments:

3 coolers

Relinquished By:	Received By:	Relinquished By:	Received By:	Relinquished By:	Received By:
Signature [signature]	Signature [signature]	Signature	Signature	Signature	Signature
Printed Name Dan Ramet	Printed Name C. Snyder	Printed Name	Printed Name	Printed Name	Printed Name
Firm YTEC	Firm ALS	Firm	Firm	Firm	Firm
Date/Time 92216/1520	Date/Time 9-23-16 10:00	Date/Time	Date/Time	Date/Time	Date/Time

ALS

PC Greg

Cooler Receipt and Preservation Form

Client TTEC Service Request K16 11368

Received: 9-23-16 Opened: 9-23-16 By: eg Unloaded: 9-23-16 By: eg

1. Samples were received via? *USPS* *Fed Ex* *UPS* *DHL* *PDX* *Courier* *Hand Delivered*
2. Samples were received in: (circle) *Coolers* *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
0.4	0.4	1.4	1.5	0	308	73442	7841 6027 1991	
-0.3	-0.6	0.6	0.3	-0.3	349	73443	7841 6027 1980	
-1.0	-1.0	-0.3	-0.3	0	352		7841 6027 2005	
-0.5	-0.7	1.9	1.7	-0.2	361		7841 6027 1970	

4. Packing material: *Inserts* *Baggies* *Bubble Wrap* *Gel Packs* *Wet Ice* *Dry Ice* *Sleeves* ______
5. Were custody papers properly filled out (ink, signed, etc.)? NA Y N
6. Were samples received in good condition (temperature, unbroken)? *Indicate in the table below.* NA Y N

   If applicable, tissue samples were received: *Frozen* *Partially Thawed* *Thawed*
7. Were all sample labels complete (i.e analysis, preservation, etc.)? NA Y N
8. Did all sample labels and tags agree with custody papers? *Indicate major discrepancies in the table on page 2.* NA Y N
9. Were appropriate bottles/containers and volumes received for the tests indicated? NA Y N
10. Were the pH-preserved bottles (*see SMO GEN SOP*) received at the appropriate pH? *Indicate in the table below* NA Y N
11. Were VOA vials received without headspace? *Indicate in the table below.* NA Y N
12. Was Cl2/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: ~~Recived Extra Volume for MW-4~~

~~Missing: TVR-7~~

Recived: TVR-6, MTS-4, ~~TVR-7~~ → (3 40ml VOAs Each)

7/25/16

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
Project: YTC
Service Request: K1611368

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

Sample Name	Lab Code	Date Collected	Date Received
FTP-1	K1611368-001	09/21/2016	09/23/2016
FTP-14	K1611368-002	09/21/2016	09/23/2016
FTP-15	K1611368-003	09/21/2016	09/23/2016
FTP-16	K1611368-004	09/21/2016	09/23/2016
FTP-1	KWG1608791-1	09/21/2016	09/23/2016
FTP-1MS	KWG1608791-2	09/21/2016	09/23/2016
FTP-1DMS	KWG1608791-3	09/21/2016	09/23/2016

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Diesel and Residual Range Organics

Sample Name:	FTP-1	**Units:**	ug/L
Lab Code:	K1611368-001	**Basis:**	NA
Extraction Method:	EPA 3510C	**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)	**30000**	Y	99	20	11	1	09/30/16	10/11/16	KWG1608791	
Residual Range Organics (RRO)	**5500**	L	99	50	19	1	09/30/16	10/11/16	KWG1608791	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	107	50-150	10/11/16	Acceptable
n-Triacontane	102	50-150	10/11/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Diesel and Residual Range Organics

Sample Name:	FTP-14	**Units:**	ug/L
Lab Code:	K1611368-002	**Basis:**	NA
Extraction Method:	EPA 3510C	**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)	**170**	Y	100	20	11	1	09/30/16	10/11/16	KWG1608791	
Residual Range Organics (RRO)	**160**	L	100	50	19	1	09/30/16	10/11/16	KWG1608791	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	95	50-150	10/11/16	Acceptable
n-Triacontane	93	50-150	10/11/16	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Diesel and Residual Range Organics

Sample Name:	FTP-15	**Units:**	ug/L
Lab Code:	K1611368-003	**Basis:**	NA
Extraction Method:	EPA 3510C	**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)	**150**	Y	100	20	11	1	09/30/16	10/11/16	KWG1608791	
Residual Range Organics (RRO)	**210**	L	100	50	19	1	09/30/16	10/11/16	KWG1608791	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	86	50-150	10/11/16	Acceptable
n-Triacontane	86	50-150	10/11/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Diesel and Residual Range Organics

Sample Name:	FTP-16	**Units:**	ug/L
Lab Code:	K1611368-004	**Basis:**	NA
Extraction Method:	EPA 3510C	**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)	**160**	Y	100	20	11	1	09/30/16	10/11/16	KWG1608791	
Residual Range Organics (RRO)	**380**	Z	100	50	19	1	09/30/16	10/11/16	KWG1608791	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
o-Terphenyl	85	50-150	10/11/16	Acceptable
n-Triacontane	88	50-150	10/11/16	Acceptable

Comments:

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:**	K1611368
Project:	YTC		

Cover Page - Organic Analysis Data Package
Gasoline Range Organics

Sample Name	Lab Code	Date Collected	Date Received
FTP-1	K1611368-001	09/21/2016	09/23/2016
FTP-14	K1611368-002	09/21/2016	09/23/2016
FTP-15	K1611368-003	09/21/2016	09/23/2016
FTP-16	K1611368-004	09/21/2016	09/23/2016
TRIP-1	K1611368-015	09/21/2016	09/23/2016
FTP-1	KWG1608944-1	09/21/2016	09/23/2016

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Gasoline Range Organics

Sample Name:	FTP-1	**Units:**	ug/L
Lab Code:	K1611368-001	**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	**1500**	Y	250	25	12	1	09/28/16	09/28/16	KWG1608944	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	94	50-150	09/28/16	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Gasoline Range Organics

Sample Name:	FTP-14	**Units:**	ug/L
Lab Code:	K1611368-002	**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	**21**	J	250	25	12	1	09/28/16	09/28/16	KWG1608944	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	93	50-150	09/28/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Gasoline Range Organics

Sample Name:	FTP-15	**Units:**	ug/L
Lab Code:	K1611368-003	**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	ND	U	250	25	12	1	09/28/16	09/28/16	KWG1608944	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	100	50-150	09/28/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Gasoline Range Organics

Sample Name:	FTP-16	**Units:**	ug/L
Lab Code:	K1611368-004	**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	12	1	09/28/16	09/28/16	KWG1608944	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	102	50-150	09/28/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Gasoline Range Organics

Sample Name:	TRIP-1	**Units:**	ug/L
Lab Code:	K1611368-015	**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	12	1	09/28/16	09/28/16	KWG1608944	

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
1,4-Difluorobenzene	98	50-150	09/28/16	Acceptable

Comments:

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:** K1611368
Project: YTC

Cover Page - Organic Analysis Data Package
Volatile Organic Compounds

Sample Name	Lab Code	Date Collected	Date Received
FTP-1	K1611368-001	09/21/2016	09/23/2016
PAIC	K1611368-005	09/21/2016	09/23/2016
TVR-3	K1611368-006	09/21/2016	09/23/2016
TVR-7	K1611368-007	09/21/2016	09/23/2016
TVR-1	K1611368-008	09/21/2016	09/23/2016
TVR-5	K1611368-009	09/21/2016	09/23/2016
815-2	K1611368-010	09/21/2016	09/23/2016
MTS-1	K1611368-011	09/22/2016	09/23/2016
MTS-2	K1611368-012	09/22/2016	09/23/2016
DUP-1	K1611368-013	09/21/2016	09/23/2016
POMONA	K1611368-014	09/22/2016	09/23/2016
TRIP-1	K1611368-015	09/21/2016	09/23/2016
MTS-4	K1611368-016	09/22/2016	09/23/2016
TVR-6	K1611368-017	09/21/2016	09/23/2016
FTP-1MS	KWG1608787-1	09/21/2016	09/23/2016
FTP-1DMS	KWG1608787-2	09/21/2016	09/23/2016

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	FTP-1	**Units:**	ug/L
Lab Code:	K1611368-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/29/16	09/29/16	KWG1608787	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/29/16	09/29/16	KWG1608787	*
Acetone	**10**	J	20	10	3.3	1	09/29/16	09/29/16	KWG1608787	
Carbon Disulfide	**0.14**	J	0.50	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/29/16	09/29/16	KWG1608787	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/29/16	09/29/16	KWG1608787	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/29/16	09/29/16	KWG1608787	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/29/16	09/29/16	KWG1608787	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroform	ND	U	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/29/16	09/29/16	KWG1608787	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Benzene	**5.1**		0.50	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/29/16	09/29/16	KWG1608787	
Trichloroethene (TCE)	**0.18**	J	0.50	0.10	0.10	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/29/16	09/29/16	KWG1608787	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/29/16	09/29/16	KWG1608787	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/29/16	09/29/16	KWG1608787	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/29/16	09/29/16	KWG1608787	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/29/16	09/29/16	KWG1608787	
Toluene	**0.16**	J	0.50	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/29/16	09/29/16	KWG1608787	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/29/16	09/29/16	KWG1608787	
2-Hexanone	ND	U	20	10	2.7	1	09/29/16	09/29/16	KWG1608787	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	FTP-1	**Units:**	ug/L
Lab Code:	K1611368-001	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/29/16	09/29/16	KWG1608787	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
Ethylbenzene	**5.9**		0.50	0.10	0.050	1	09/29/16	09/29/16	KWG1608787	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
m,p-Xylenes	**0.23**	J	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
o-Xylene	**0.43**	J	0.50	0.20	0.074	1	09/29/16	09/29/16	KWG1608787	
Styrene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Bromoform	ND	U	0.50	0.50	0.16	1	09/29/16	09/29/16	KWG1608787	
Isopropylbenzene	**5.8**		2.0	0.20	0.051	1	09/29/16	09/29/16	KWG1608787	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Propylbenzene	**7.9**		2.0	0.20	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/29/16	09/29/16	KWG1608787	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,3,5-Trimethylbenzene	**0.19**	J	2.0	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	
tert-Butylbenzene	**0.26**	J	2.0	0.20	0.059	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trimethylbenzene	**60**	J	2.0	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	
sec-Butylbenzene	**3.1**		2.0	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
4-Isopropyltoluene	**4.0**		2.0	0.20	0.060	1	09/29/16	09/29/16	KWG1608787	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,4-Dichlorobenzene	**0.19**	J	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Butylbenzene	**3.9**		2.0	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichlorobenzene	**0.99**		0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/29/16	09/29/16	KWG1608787	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
Naphthalene	**83**	JD	20	3.0	0.88	10	09/30/16	09/30/16	KWG1608787	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/29/16	09/29/16	KWG1608787	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	FTP-1	**Units:**	ug/L
Lab Code:	K1611368-001	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	108	85-115	09/29/16	Acceptable
1,2-Dichloroethane-d4	117	70-120	09/29/16	Acceptable
Toluene-d8	103	85-120	09/29/16	Acceptable
4-Bromofluorobenzene	100	75-120	09/29/16	Acceptable

Comments:

Client:	Tetra Tech, Incorporated		**Service Request:**	K1611368
Project:	YTC		**Date Collected:**	09/21/2016
Sample Matrix:	Water		**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	PAIC		**Units:**	ug/L
Lab Code:	K1611368-005		**Basis:**	NA
Extraction Method:	EPA 5030B		**Level:**	Low
Analysis Method:	8260C			

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/29/16	09/29/16	KWG1608787	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/29/16	09/29/16	KWG1608787	*
Acetone	ND	U	20	10	3.3	1	09/29/16	09/29/16	KWG1608787	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/29/16	09/29/16	KWG1608787	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/29/16	09/29/16	KWG1608787	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/29/16	09/29/16	KWG1608787	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/29/16	09/29/16	KWG1608787	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroform	ND	U	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/29/16	09/29/16	KWG1608787	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Benzene	ND	U	0.50	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/29/16	09/29/16	KWG1608787	
Trichloroethene (TCE)	ND	U	0.50	0.10	0.10	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/29/16	09/29/16	KWG1608787	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/29/16	09/29/16	KWG1608787	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/29/16	09/29/16	KWG1608787	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/29/16	09/29/16	KWG1608787	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/29/16	09/29/16	KWG1608787	
Toluene	ND	U	0.50	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/29/16	09/29/16	KWG1608787	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/29/16	09/29/16	KWG1608787	
2-Hexanone	ND	U	20	10	2.7	1	09/29/16	09/29/16	KWG1608787	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	PAIC	**Units:**	ug/L
Lab Code:	K1611368-005	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/29/16	09/29/16	KWG1608787	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/29/16	09/29/16	KWG1608787	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/29/16	09/29/16	KWG1608787	
Styrene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Bromoform	ND	U	0.50	0.50	0.16	1	09/29/16	09/29/16	KWG1608787	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/29/16	09/29/16	KWG1608787	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/29/16	09/29/16	KWG1608787	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/29/16	09/29/16	KWG1608787	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/29/16	09/29/16	KWG1608787	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/29/16	09/29/16	KWG1608787	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	PAIC	**Units:**	ug/L
Lab Code:	K1611368-005	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	107	85-115	09/29/16	Acceptable
1,2-Dichloroethane-d4	113	70-120	09/29/16	Acceptable
Toluene-d8	99	85-120	09/29/16	Acceptable
4-Bromofluorobenzene	105	75-120	09/29/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	TVR-3	**Units:**	ug/L
Lab Code:	K1611368-006	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/29/16	09/29/16	KWG1608787	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/29/16	09/29/16	KWG1608787	*
Acetone	**4.2**	J	20	10	3.3	1	09/29/16	09/29/16	KWG1608787	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/29/16	09/29/16	KWG1608787	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/29/16	09/29/16	KWG1608787	
cis-1,2-Dichloroethene	**0.13**	J	0.50	0.20	0.067	1	09/29/16	09/29/16	KWG1608787	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/29/16	09/29/16	KWG1608787	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroform	**0.13**	J	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/29/16	09/29/16	KWG1608787	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Benzene	ND	U	0.50	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/29/16	09/29/16	KWG1608787	
Trichloroethene (TCE)	**4.9**		0.50	0.10	0.10	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/29/16	09/29/16	KWG1608787	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/29/16	09/29/16	KWG1608787	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/29/16	09/29/16	KWG1608787	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/29/16	09/29/16	KWG1608787	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/29/16	09/29/16	KWG1608787	
Toluene	ND	U	0.50	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/29/16	09/29/16	KWG1608787	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/29/16	09/29/16	KWG1608787	
2-Hexanone	ND	U	20	10	2.7	1	09/29/16	09/29/16	KWG1608787	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	TVR-3	**Units:**	ug/L
Lab Code:	K1611368-006	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/29/16	09/29/16	KWG1608787	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/29/16	09/29/16	KWG1608787	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/29/16	09/29/16	KWG1608787	
Styrene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Bromoform	ND	U	0.50	0.50	0.16	1	09/29/16	09/29/16	KWG1608787	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/29/16	09/29/16	KWG1608787	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/29/16	09/29/16	KWG1608787	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/29/16	09/29/16	KWG1608787	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/29/16	09/29/16	KWG1608787	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/29/16	09/29/16	KWG1608787	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	TVR-3	**Units:**	ug/L
Lab Code:	K1611368-006	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	109	85-115	09/29/16	Acceptable
1,2-Dichloroethane-d4	116	70-120	09/29/16	Acceptable
Toluene-d8	102	85-120	09/29/16	Acceptable
4-Bromofluorobenzene	103	75-120	09/29/16	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	TVR-7	**Units:**	ug/L
Lab Code:	K1611368-007	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/29/16	09/29/16	KWG1608787	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/29/16	09/29/16	KWG1608787	*
Acetone	**4.3**	J	20	10	3.3	1	09/29/16	09/29/16	KWG1608787	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/29/16	09/29/16	KWG1608787	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/29/16	09/29/16	KWG1608787	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/29/16	09/29/16	KWG1608787	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/29/16	09/29/16	KWG1608787	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroform	**0.14**	J	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/29/16	09/29/16	KWG1608787	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Benzene	ND	U	0.50	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/29/16	09/29/16	KWG1608787	
Trichloroethene (TCE)	**8.2**		0.50	0.10	0.10	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/29/16	09/29/16	KWG1608787	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/29/16	09/29/16	KWG1608787	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/29/16	09/29/16	KWG1608787	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/29/16	09/29/16	KWG1608787	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/29/16	09/29/16	KWG1608787	
Toluene	ND	U	0.50	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/29/16	09/29/16	KWG1608787	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/29/16	09/29/16	KWG1608787	
2-Hexanone	ND	U	20	10	2.7	1	09/29/16	09/29/16	KWG1608787	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC
Sample Matrix: Water

Service Request: K1611368
Date Collected: 09/21/2016
Date Received: 09/23/2016

Volatile Organic Compounds

Sample Name: TVR-7
Lab Code: K1611368-007
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/29/16	09/29/16	KWG1608787	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/29/16	09/29/16	KWG1608787	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/29/16	09/29/16	KWG1608787	
Styrene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Bromoform	ND	U	0.50	0.50	0.16	1	09/29/16	09/29/16	KWG1608787	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/29/16	09/29/16	KWG1608787	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/29/16	09/29/16	KWG1608787	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/29/16	09/29/16	KWG1608787	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/29/16	09/29/16	KWG1608787	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/29/16	09/29/16	KWG1608787	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	TVR-7	**Units:**	ug/L
Lab Code:	K1611368-007	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	108	85-115	09/29/16	Acceptable
1,2-Dichloroethane-d4	113	70-120	09/29/16	Acceptable
Toluene-d8	101	85-120	09/29/16	Acceptable
4-Bromofluorobenzene	104	75-120	09/29/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	TVR-1	**Units:**	ug/L
Lab Code:	K1611368-008	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/29/16	09/29/16	KWG1608787	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/29/16	09/29/16	KWG1608787	*
Acetone	**4.3**	J	20	10	3.3	1	09/29/16	09/29/16	KWG1608787	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/29/16	09/29/16	KWG1608787	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/29/16	09/29/16	KWG1608787	
cis-1,2-Dichloroethene	**0.080**	J	0.50	0.20	0.067	1	09/29/16	09/29/16	KWG1608787	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/29/16	09/29/16	KWG1608787	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroform	ND	U	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/29/16	09/29/16	KWG1608787	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Benzene	ND	U	0.50	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/29/16	09/29/16	KWG1608787	
Trichloroethene (TCE)	**6.1**		0.50	0.10	0.10	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/29/16	09/29/16	KWG1608787	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/29/16	09/29/16	KWG1608787	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/29/16	09/29/16	KWG1608787	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/29/16	09/29/16	KWG1608787	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/29/16	09/29/16	KWG1608787	
Toluene	ND	U	0.50	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/29/16	09/29/16	KWG1608787	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/29/16	09/29/16	KWG1608787	
2-Hexanone	ND	U	20	10	2.7	1	09/29/16	09/29/16	KWG1608787	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	TVR-1	**Units:**	ug/L
Lab Code:	K1611368-008	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/29/16	09/29/16	KWG1608787	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/29/16	09/29/16	KWG1608787	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/29/16	09/29/16	KWG1608787	
Styrene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Bromoform	ND	U	0.50	0.50	0.16	1	09/29/16	09/29/16	KWG1608787	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/29/16	09/29/16	KWG1608787	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/29/16	09/29/16	KWG1608787	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/29/16	09/29/16	KWG1608787	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/29/16	09/29/16	KWG1608787	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/29/16	09/29/16	KWG1608787	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	TVR-1	**Units:**	ug/L
Lab Code:	K1611368-008	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	111	85-115	09/29/16	Acceptable
1,2-Dichloroethane-d4	116	70-120	09/29/16	Acceptable
Toluene-d8	102	85-120	09/29/16	Acceptable
4-Bromofluorobenzene	103	75-120	09/29/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	TVR-5	**Units:**	ug/L
Lab Code:	K1611368-009	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/29/16	09/29/16	KWG1608787	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/29/16	09/29/16	KWG1608787	*
Acetone	ND	U	20	10	3.3	1	09/29/16	09/29/16	KWG1608787	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/29/16	09/29/16	KWG1608787	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/29/16	09/29/16	KWG1608787	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/29/16	09/29/16	KWG1608787	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/29/16	09/29/16	KWG1608787	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroform	ND	U	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/29/16	09/29/16	KWG1608787	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Benzene	ND	U	0.50	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/29/16	09/29/16	KWG1608787	
Trichloroethene (TCE)	**0.92**		0.50	0.10	0.10	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/29/16	09/29/16	KWG1608787	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/29/16	09/29/16	KWG1608787	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/29/16	09/29/16	KWG1608787	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/29/16	09/29/16	KWG1608787	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/29/16	09/29/16	KWG1608787	
Toluene	ND	U	0.50	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/29/16	09/29/16	KWG1608787	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/29/16	09/29/16	KWG1608787	
2-Hexanone	ND	U	20	10	2.7	1	09/29/16	09/29/16	KWG1608787	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	TVR-5	**Units:**	ug/L
Lab Code:	K1611368-009	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/29/16	09/29/16	KWG1608787	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/29/16	09/29/16	KWG1608787	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/29/16	09/29/16	KWG1608787	
Styrene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Bromoform	ND	U	0.50	0.50	0.16	1	09/29/16	09/29/16	KWG1608787	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/29/16	09/29/16	KWG1608787	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/29/16	09/29/16	KWG1608787	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/29/16	09/29/16	KWG1608787	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/29/16	09/29/16	KWG1608787	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/29/16	09/29/16	KWG1608787	

* See Case Narrative

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	TVR-5	**Units:**	ug/L
Lab Code:	K1611368-009	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	108	85-115	09/29/16	Acceptable
1,2-Dichloroethane-d4	111	70-120	09/29/16	Acceptable
Toluene-d8	101	85-120	09/29/16	Acceptable
4-Bromofluorobenzene	104	75-120	09/29/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	815-2	**Units:**	ug/L
Lab Code:	K1611368-010	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/29/16	09/29/16	KWG1608787	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/29/16	09/29/16	KWG1608787	*
Acetone	**3.7**	J	20	10	3.3	1	09/29/16	09/29/16	KWG1608787	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/29/16	09/29/16	KWG1608787	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/29/16	09/29/16	KWG1608787	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/29/16	09/29/16	KWG1608787	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/29/16	09/29/16	KWG1608787	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroform	ND	U	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/29/16	09/29/16	KWG1608787	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Benzene	ND	U	0.50	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/29/16	09/29/16	KWG1608787	
Trichloroethene (TCE)	**0.68**		0.50	0.10	0.10	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/29/16	09/29/16	KWG1608787	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/29/16	09/29/16	KWG1608787	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/29/16	09/29/16	KWG1608787	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/29/16	09/29/16	KWG1608787	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/29/16	09/29/16	KWG1608787	
Toluene	ND	U	0.50	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/29/16	09/29/16	KWG1608787	
Tetrachloroethene (PCE)	**0.15**	J	0.50	0.20	0.099	1	09/29/16	09/29/16	KWG1608787	
2-Hexanone	ND	U	20	10	2.7	1	09/29/16	09/29/16	KWG1608787	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC
Sample Matrix: Water

Service Request: K1611368
Date Collected: 09/21/2016
Date Received: 09/23/2016

Volatile Organic Compounds

Sample Name: 815-2
Lab Code: K1611368-010
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/29/16	09/29/16	KWG1608787	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/29/16	09/29/16	KWG1608787	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/29/16	09/29/16	KWG1608787	
Styrene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Bromoform	ND	U	0.50	0.50	0.16	1	09/29/16	09/29/16	KWG1608787	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/29/16	09/29/16	KWG1608787	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/29/16	09/29/16	KWG1608787	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/29/16	09/29/16	KWG1608787	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/29/16	09/29/16	KWG1608787	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/29/16	09/29/16	KWG1608787	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	815-2	**Units:**	ug/L
Lab Code:	K1611368-010	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	110	85-115	09/29/16	Acceptable
1,2-Dichloroethane-d4	117	70-120	09/29/16	Acceptable
Toluene-d8	100	85-120	09/29/16	Acceptable
4-Bromofluorobenzene	102	75-120	09/29/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/22/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	MTS-1	**Units:**	ug/L
Lab Code:	K1611368-011	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/29/16	09/29/16	KWG1608787	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/29/16	09/29/16	KWG1608787	*
Acetone	**4.3**	J	20	10	3.3	1	09/29/16	09/29/16	KWG1608787	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/29/16	09/29/16	KWG1608787	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/29/16	09/29/16	KWG1608787	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/29/16	09/29/16	KWG1608787	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/29/16	09/29/16	KWG1608787	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroform	ND	U	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/29/16	09/29/16	KWG1608787	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Benzene	ND	U	0.50	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/29/16	09/29/16	KWG1608787	
Trichloroethene (TCE)	**3.2**		0.50	0.10	0.10	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/29/16	09/29/16	KWG1608787	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/29/16	09/29/16	KWG1608787	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/29/16	09/29/16	KWG1608787	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/29/16	09/29/16	KWG1608787	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/29/16	09/29/16	KWG1608787	
Toluene	ND	U	0.50	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/29/16	09/29/16	KWG1608787	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/29/16	09/29/16	KWG1608787	
2-Hexanone	ND	U	20	10	2.7	1	09/29/16	09/29/16	KWG1608787	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/22/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	MTS-1	**Units:**	ug/L
Lab Code:	K1611368-011	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/29/16	09/29/16	KWG1608787	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/29/16	09/29/16	KWG1608787	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/29/16	09/29/16	KWG1608787	
Styrene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Bromoform	ND	U	0.50	0.50	0.16	1	09/29/16	09/29/16	KWG1608787	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/29/16	09/29/16	KWG1608787	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/29/16	09/29/16	KWG1608787	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/29/16	09/29/16	KWG1608787	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/29/16	09/29/16	KWG1608787	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/29/16	09/29/16	KWG1608787	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/22/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	MTS-1	**Units:**	ug/L
Lab Code:	K1611368-011	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	110	85-115	09/29/16	Acceptable
1,2-Dichloroethane-d4	117	70-120	09/29/16	Acceptable
Toluene-d8	101	85-120	09/29/16	Acceptable
4-Bromofluorobenzene	103	75-120	09/29/16	Acceptable

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/22/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	MTS-2	**Units:**	ug/L
Lab Code:	K1611368-012	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/29/16	09/29/16	KWG1608787	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/29/16	09/29/16	KWG1608787	*
Acetone	ND	U	20	10	3.3	1	09/29/16	09/29/16	KWG1608787	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/29/16	09/29/16	KWG1608787	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/29/16	09/29/16	KWG1608787	
cis-1,2-Dichloroethene	**0.14**	J	0.50	0.20	0.067	1	09/29/16	09/29/16	KWG1608787	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/29/16	09/29/16	KWG1608787	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroform	ND	U	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/29/16	09/29/16	KWG1608787	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Benzene	ND	U	0.50	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/29/16	09/29/16	KWG1608787	
Trichloroethene (TCE)	**5.0**		0.50	0.10	0.10	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/29/16	09/29/16	KWG1608787	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/29/16	09/29/16	KWG1608787	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/29/16	09/29/16	KWG1608787	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/29/16	09/29/16	KWG1608787	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/29/16	09/29/16	KWG1608787	
Toluene	ND	U	0.50	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/29/16	09/29/16	KWG1608787	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/29/16	09/29/16	KWG1608787	
2-Hexanone	ND	U	20	10	2.7	1	09/29/16	09/29/16	KWG1608787	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/22/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	MTS-2	**Units:**	ug/L
Lab Code:	K1611368-012	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/29/16	09/29/16	KWG1608787	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/29/16	09/29/16	KWG1608787	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/29/16	09/29/16	KWG1608787	
Styrene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Bromoform	ND	U	0.50	0.50	0.16	1	09/29/16	09/29/16	KWG1608787	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/29/16	09/29/16	KWG1608787	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/29/16	09/29/16	KWG1608787	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/29/16	09/29/16	KWG1608787	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/29/16	09/29/16	KWG1608787	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/29/16	09/29/16	KWG1608787	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/22/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	MTS-2	**Units:**	ug/L
Lab Code:	K1611368-012	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	108	85-115	09/29/16	Acceptable
1,2-Dichloroethane-d4	115	70-120	09/29/16	Acceptable
Toluene-d8	101	85-120	09/29/16	Acceptable
4-Bromofluorobenzene	103	75-120	09/29/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	DUP-1	**Units:**	ug/L
Lab Code:	K1611368-013	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/29/16	09/29/16	KWG1608787	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/29/16	09/29/16	KWG1608787	*
Acetone	**8.5**	J	20	10	3.3	1	09/29/16	09/29/16	KWG1608787	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/29/16	09/29/16	KWG1608787	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/29/16	09/29/16	KWG1608787	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/29/16	09/29/16	KWG1608787	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/29/16	09/29/16	KWG1608787	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroform	ND	U	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/29/16	09/29/16	KWG1608787	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Benzene	ND	U	0.50	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/29/16	09/29/16	KWG1608787	
Trichloroethene (TCE)	ND	U	0.50	0.10	0.10	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/29/16	09/29/16	KWG1608787	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/29/16	09/29/16	KWG1608787	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/29/16	09/29/16	KWG1608787	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/29/16	09/29/16	KWG1608787	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/29/16	09/29/16	KWG1608787	
Toluene	ND	U	0.50	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/29/16	09/29/16	KWG1608787	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/29/16	09/29/16	KWG1608787	
2-Hexanone	ND	U	20	10	2.7	1	09/29/16	09/29/16	KWG1608787	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC
Sample Matrix: Water

Service Request: K1611368
Date Collected: 09/21/2016
Date Received: 09/23/2016

Volatile Organic Compounds

Sample Name: DUP-1
Lab Code: K1611368-013
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/29/16	09/29/16	KWG1608787	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/29/16	09/29/16	KWG1608787	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/29/16	09/29/16	KWG1608787	
Styrene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Bromoform	ND	U	0.50	0.50	0.16	1	09/29/16	09/29/16	KWG1608787	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/29/16	09/29/16	KWG1608787	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/29/16	09/29/16	KWG1608787	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/29/16	09/29/16	KWG1608787	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/29/16	09/29/16	KWG1608787	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/29/16	09/29/16	KWG1608787	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	DUP-1	**Units:**	ug/L
Lab Code:	K1611368-013	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	109	85-115	09/29/16	Acceptable
1,2-Dichloroethane-d4	116	70-120	09/29/16	Acceptable
Toluene-d8	99	85-120	09/29/16	Acceptable
4-Bromofluorobenzene	107	75-120	09/29/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/22/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	POMONA	**Units:**	ug/L
Lab Code:	K1611368-014	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/29/16	09/29/16	KWG1608787	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/29/16	09/29/16	KWG1608787	*
Acetone	ND	U	20	10	3.3	1	09/29/16	09/29/16	KWG1608787	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/29/16	09/29/16	KWG1608787	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/29/16	09/29/16	KWG1608787	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/29/16	09/29/16	KWG1608787	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/29/16	09/29/16	KWG1608787	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroform	ND	U	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/29/16	09/29/16	KWG1608787	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Benzene	ND	U	0.50	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/29/16	09/29/16	KWG1608787	
Trichloroethene (TCE)	ND	U	0.50	0.10	0.10	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/29/16	09/29/16	KWG1608787	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/29/16	09/29/16	KWG1608787	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/29/16	09/29/16	KWG1608787	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/29/16	09/29/16	KWG1608787	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/29/16	09/29/16	KWG1608787	
Toluene	ND	U	0.50	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/29/16	09/29/16	KWG1608787	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/29/16	09/29/16	KWG1608787	
2-Hexanone	ND	U	20	10	2.7	1	09/29/16	09/29/16	KWG1608787	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/22/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	POMONA	**Units:**	ug/L
Lab Code:	K1611368-014	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/29/16	09/29/16	KWG1608787	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/29/16	09/29/16	KWG1608787	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/29/16	09/29/16	KWG1608787	
Styrene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Bromoform	ND	U	0.50	0.50	0.16	1	09/29/16	09/29/16	KWG1608787	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/29/16	09/29/16	KWG1608787	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/29/16	09/29/16	KWG1608787	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/29/16	09/29/16	KWG1608787	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/29/16	09/29/16	KWG1608787	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/29/16	09/29/16	KWG1608787	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/22/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	POMONA	**Units:**	ug/L
Lab Code:	K1611368-014	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	111	85-115	09/29/16	Acceptable
1,2-Dichloroethane-d4	116	70-120	09/29/16	Acceptable
Toluene-d8	102	85-120	09/29/16	Acceptable
4-Bromofluorobenzene	101	75-120	09/29/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	TRIP-1	**Units:**	ug/L
Lab Code:	K1611368-015	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/29/16	09/29/16	KWG1608787	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/29/16	09/29/16	KWG1608787	*
Acetone	**4.5**	J	20	10	3.3	1	09/29/16	09/29/16	KWG1608787	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/29/16	09/29/16	KWG1608787	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/29/16	09/29/16	KWG1608787	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/29/16	09/29/16	KWG1608787	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/29/16	09/29/16	KWG1608787	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Chloroform	ND	U	0.50	0.20	0.072	1	09/29/16	09/29/16	KWG1608787	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/29/16	09/29/16	KWG1608787	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/29/16	09/29/16	KWG1608787	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Benzene	ND	U	0.50	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/29/16	09/29/16	KWG1608787	
Trichloroethene (TCE)	ND	U	0.50	0.10	0.10	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/29/16	09/29/16	KWG1608787	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/29/16	09/29/16	KWG1608787	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/29/16	09/29/16	KWG1608787	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/29/16	09/29/16	KWG1608787	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/29/16	09/29/16	KWG1608787	
Toluene	ND	U	0.50	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/29/16	09/29/16	KWG1608787	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/29/16	09/29/16	KWG1608787	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/29/16	09/29/16	KWG1608787	
2-Hexanone	ND	U	20	10	2.7	1	09/29/16	09/29/16	KWG1608787	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC
Sample Matrix: Water

Service Request: K1611368
Date Collected: 09/21/2016
Date Received: 09/23/2016

Volatile Organic Compounds

Sample Name: TRIP-1
Lab Code: K1611368-015

Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/29/16	09/29/16	KWG1608787	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/29/16	09/29/16	KWG1608787	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/29/16	09/29/16	KWG1608787	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/29/16	09/29/16	KWG1608787	
Styrene	ND	U	0.50	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
Bromoform	ND	U	0.50	0.50	0.16	1	09/29/16	09/29/16	KWG1608787	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/29/16	09/29/16	KWG1608787	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/29/16	09/29/16	KWG1608787	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/29/16	09/29/16	KWG1608787	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/29/16	09/29/16	KWG1608787	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/29/16	09/29/16	KWG1608787	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/29/16	09/29/16	KWG1608787	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/29/16	09/29/16	KWG1608787	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/29/16	09/29/16	KWG1608787	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/29/16	09/29/16	KWG1608787	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/29/16	09/29/16	KWG1608787	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/29/16	09/29/16	KWG1608787	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/29/16	09/29/16	KWG1608787	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/29/16	09/29/16	KWG1608787	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/29/16	09/29/16	KWG1608787	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/29/16	09/29/16	KWG1608787	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/29/16	09/29/16	KWG1608787	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	TRIP-1	**Units:**	ug/L
Lab Code:	K1611368-015	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	106	85-115	09/29/16	Acceptable
1,2-Dichloroethane-d4	113	70-120	09/29/16	Acceptable
Toluene-d8	100	85-120	09/29/16	Acceptable
4-Bromofluorobenzene	103	75-120	09/29/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/22/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	MTS-4	**Units:**	ug/L
Lab Code:	K1611368-016	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/30/16	09/30/16	KWG1608787	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/30/16	09/30/16	KWG1608787	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/30/16	09/30/16	KWG1608787	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/30/16	09/30/16	KWG1608787	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/30/16	09/30/16	KWG1608787	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/30/16	09/30/16	KWG1608787	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/30/16	09/30/16	KWG1608787	*
Acetone	**4.1**	J	20	10	3.3	1	09/30/16	09/30/16	KWG1608787	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/30/16	09/30/16	KWG1608787	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/30/16	09/30/16	KWG1608787	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/30/16	09/30/16	KWG1608787	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/30/16	09/30/16	KWG1608787	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/30/16	09/30/16	KWG1608787	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/30/16	09/30/16	KWG1608787	
cis-1,2-Dichloroethene	**0.19**	J	0.50	0.20	0.067	1	09/30/16	09/30/16	KWG1608787	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/30/16	09/30/16	KWG1608787	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/30/16	09/30/16	KWG1608787	
Chloroform	ND	U	0.50	0.20	0.072	1	09/30/16	09/30/16	KWG1608787	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/30/16	09/30/16	KWG1608787	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/30/16	09/30/16	KWG1608787	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/30/16	09/30/16	KWG1608787	
Benzene	ND	U	0.50	0.10	0.062	1	09/30/16	09/30/16	KWG1608787	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/30/16	09/30/16	KWG1608787	
Trichloroethene (TCE)	**4.8**		0.50	0.10	0.10	1	09/30/16	09/30/16	KWG1608787	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/30/16	09/30/16	KWG1608787	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/30/16	09/30/16	KWG1608787	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/30/16	09/30/16	KWG1608787	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/30/16	09/30/16	KWG1608787	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/30/16	09/30/16	KWG1608787	
Toluene	ND	U	0.50	0.10	0.054	1	09/30/16	09/30/16	KWG1608787	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/30/16	09/30/16	KWG1608787	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/30/16	09/30/16	KWG1608787	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/30/16	09/30/16	KWG1608787	
2-Hexanone	ND	U	20	10	2.7	1	09/30/16	09/30/16	KWG1608787	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/22/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	MTS-4	**Units:**	ug/L
Lab Code:	K1611368-016	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/30/16	09/30/16	KWG1608787	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/30/16	09/30/16	KWG1608787	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/30/16	09/30/16	KWG1608787	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/30/16	09/30/16	KWG1608787	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/30/16	09/30/16	KWG1608787	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/30/16	09/30/16	KWG1608787	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/30/16	09/30/16	KWG1608787	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/30/16	09/30/16	KWG1608787	
Styrene	ND	U	0.50	0.20	0.089	1	09/30/16	09/30/16	KWG1608787	
Bromoform	ND	U	0.50	0.50	0.16	1	09/30/16	09/30/16	KWG1608787	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/30/16	09/30/16	KWG1608787	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/30/16	09/30/16	KWG1608787	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/30/16	09/30/16	KWG1608787	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/30/16	09/30/16	KWG1608787	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/30/16	09/30/16	KWG1608787	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/30/16	09/30/16	KWG1608787	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/30/16	09/30/16	KWG1608787	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/30/16	09/30/16	KWG1608787	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/30/16	09/30/16	KWG1608787	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/30/16	09/30/16	KWG1608787	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/30/16	09/30/16	KWG1608787	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/30/16	09/30/16	KWG1608787	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/30/16	09/30/16	KWG1608787	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/30/16	09/30/16	KWG1608787	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/30/16	09/30/16	KWG1608787	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/30/16	09/30/16	KWG1608787	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/30/16	09/30/16	KWG1608787	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/30/16	09/30/16	KWG1608787	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/30/16	09/30/16	KWG1608787	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/30/16	09/30/16	KWG1608787	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/30/16	09/30/16	KWG1608787	

* See Case Narrative

Comments:

ALS Group USA, Corp. dba ALS Environmental

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/22/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	MTS-4	**Units:**	ug/L
Lab Code:	K1611368-016	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	109	85-115	09/30/16	Acceptable
1,2-Dichloroethane-d4	116	70-120	09/30/16	Acceptable
Toluene-d8	100	85-120	09/30/16	Acceptable
4-Bromofluorobenzene	102	75-120	09/30/16	Acceptable

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	TVR-6	**Units:**	ug/L
Lab Code:	K1611368-017	**Basis:**	NA
Extraction Method:	EPA 5030B	**Level:**	Low
Analysis Method:	8260C		

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
Dichlorodifluoromethane	ND	U	0.50	0.20	0.13	1	09/30/16	09/30/16	KWG1608787	*
Chloromethane	ND	U	0.50	0.20	0.068	1	09/30/16	09/30/16	KWG1608787	
Vinyl Chloride	ND	U	0.50	0.10	0.075	1	09/30/16	09/30/16	KWG1608787	
Bromomethane	ND	U	0.50	0.30	0.16	1	09/30/16	09/30/16	KWG1608787	
Chloroethane	ND	U	0.50	0.20	0.16	1	09/30/16	09/30/16	KWG1608787	
Trichlorofluoromethane	ND	U	0.50	0.20	0.12	1	09/30/16	09/30/16	KWG1608787	
1,1-Dichloroethene	ND	U	0.50	0.20	0.080	1	09/30/16	09/30/16	KWG1608787	*
Acetone	**6.2**	J	20	10	3.3	1	09/30/16	09/30/16	KWG1608787	
Carbon Disulfide	ND	U	0.50	0.20	0.069	1	09/30/16	09/30/16	KWG1608787	*
Methylene Chloride	ND	U	2.0	0.20	0.10	1	09/30/16	09/30/16	KWG1608787	
Methyl tert-Butyl Ether	ND	U	0.50	0.30	0.11	1	09/30/16	09/30/16	KWG1608787	
trans-1,2-Dichloroethene	ND	U	0.50	0.20	0.072	1	09/30/16	09/30/16	KWG1608787	
1,1-Dichloroethane	ND	U	0.50	0.20	0.077	1	09/30/16	09/30/16	KWG1608787	
2,2-Dichloropropane	ND	U	0.50	0.20	0.065	1	09/30/16	09/30/16	KWG1608787	
cis-1,2-Dichloroethene	ND	U	0.50	0.20	0.067	1	09/30/16	09/30/16	KWG1608787	
2-Butanone (MEK)	ND	U	20	4.0	1.9	1	09/30/16	09/30/16	KWG1608787	
Bromochloromethane	ND	U	0.50	0.20	0.16	1	09/30/16	09/30/16	KWG1608787	
Chloroform	**0.080**	J	0.50	0.20	0.072	1	09/30/16	09/30/16	KWG1608787	
1,1,1-Trichloroethane (TCA)	ND	U	0.50	0.20	0.075	1	09/30/16	09/30/16	KWG1608787	
Carbon Tetrachloride	ND	U	0.50	0.20	0.096	1	09/30/16	09/30/16	KWG1608787	
1,1-Dichloropropene	ND	U	0.50	0.20	0.089	1	09/30/16	09/30/16	KWG1608787	
Benzene	ND	U	0.50	0.10	0.062	1	09/30/16	09/30/16	KWG1608787	
1,2-Dichloroethane (EDC)	ND	U	0.50	0.15	0.080	1	09/30/16	09/30/16	KWG1608787	
Trichloroethene (TCE)	**5.9**		0.50	0.10	0.10	1	09/30/16	09/30/16	KWG1608787	
1,2-Dichloropropane	ND	U	0.50	0.20	0.095	1	09/30/16	09/30/16	KWG1608787	
Dibromomethane	ND	U	0.50	0.50	0.15	1	09/30/16	09/30/16	KWG1608787	
Bromodichloromethane	ND	U	0.50	0.30	0.091	1	09/30/16	09/30/16	KWG1608787	
cis-1,3-Dichloropropene	ND	U	0.50	0.20	0.18	1	09/30/16	09/30/16	KWG1608787	
4-Methyl-2-pentanone (MIBK)	ND	U	20	10	2.6	1	09/30/16	09/30/16	KWG1608787	
Toluene	ND	U	0.50	0.10	0.054	1	09/30/16	09/30/16	KWG1608787	
trans-1,3-Dichloropropene	ND	U	0.50	0.20	0.068	1	09/30/16	09/30/16	KWG1608787	
1,1,2-Trichloroethane	ND	U	0.50	0.40	0.14	1	09/30/16	09/30/16	KWG1608787	
Tetrachloroethene (PCE)	ND	U	0.50	0.20	0.099	1	09/30/16	09/30/16	KWG1608787	
2-Hexanone	ND	U	20	10	2.7	1	09/30/16	09/30/16	KWG1608787	

Comments:

Analytical Results

Client: Tetra Tech, Incorporated
Project: YTC
Sample Matrix: Water

Service Request: K1611368
Date Collected: 09/21/2016
Date Received: 09/23/2016

Volatile Organic Compounds

Sample Name: TVR-6
Lab Code: K1611368-017
Extraction Method: EPA 5030B
Analysis Method: 8260C

Units: ug/L
Basis: NA
Level: Low

Analyte Name	Result	Q	LOQ	LOD	MDL	Dilution Factor	Date Extracted	Date Analyzed	Extraction Lot	Note
1,3-Dichloropropane	ND	U	0.50	0.30	0.14	1	09/30/16	09/30/16	KWG1608787	
Dibromochloromethane	ND	U	0.50	0.50	0.14	1	09/30/16	09/30/16	KWG1608787	
1,2-Dibromoethane (EDB)	ND	U	2.0	0.20	0.10	1	09/30/16	09/30/16	KWG1608787	
Chlorobenzene	ND	U	0.50	0.20	0.11	1	09/30/16	09/30/16	KWG1608787	
Ethylbenzene	ND	U	0.50	0.10	0.050	1	09/30/16	09/30/16	KWG1608787	
1,1,1,2-Tetrachloroethane	ND	U	0.50	0.20	0.11	1	09/30/16	09/30/16	KWG1608787	
m,p-Xylenes	ND	U	0.50	0.20	0.11	1	09/30/16	09/30/16	KWG1608787	
o-Xylene	ND	U	0.50	0.20	0.074	1	09/30/16	09/30/16	KWG1608787	
Styrene	ND	U	0.50	0.20	0.089	1	09/30/16	09/30/16	KWG1608787	
Bromoform	ND	U	0.50	0.50	0.16	1	09/30/16	09/30/16	KWG1608787	
Isopropylbenzene	ND	U	2.0	0.20	0.051	1	09/30/16	09/30/16	KWG1608787	
1,1,2,2-Tetrachloroethane	ND	U	0.50	0.20	0.16	1	09/30/16	09/30/16	KWG1608787	
Bromobenzene	ND	U	2.0	0.20	0.12	1	09/30/16	09/30/16	KWG1608787	
n-Propylbenzene	ND	U	2.0	0.20	0.054	1	09/30/16	09/30/16	KWG1608787	
1,2,3-Trichloropropane	ND	U	0.50	0.50	0.20	1	09/30/16	09/30/16	KWG1608787	
2-Chlorotoluene	ND	U	2.0	0.20	0.10	1	09/30/16	09/30/16	KWG1608787	
1,3,5-Trimethylbenzene	ND	U	2.0	0.20	0.089	1	09/30/16	09/30/16	KWG1608787	
4-Chlorotoluene	ND	U	2.0	0.20	0.13	1	09/30/16	09/30/16	KWG1608787	
tert-Butylbenzene	ND	U	2.0	0.20	0.059	1	09/30/16	09/30/16	KWG1608787	
1,2,4-Trimethylbenzene	ND	U	2.0	0.20	0.069	1	09/30/16	09/30/16	KWG1608787	
sec-Butylbenzene	ND	U	2.0	0.10	0.062	1	09/30/16	09/30/16	KWG1608787	
4-Isopropyltoluene	ND	U	2.0	0.20	0.060	1	09/30/16	09/30/16	KWG1608787	
1,3-Dichlorobenzene	ND	U	0.50	0.20	0.10	1	09/30/16	09/30/16	KWG1608787	
1,4-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/30/16	09/30/16	KWG1608787	
n-Butylbenzene	ND	U	2.0	0.10	0.054	1	09/30/16	09/30/16	KWG1608787	
1,2-Dichlorobenzene	ND	U	0.50	0.20	0.12	1	09/30/16	09/30/16	KWG1608787	
1,2-Dibromo-3-chloropropane	ND	U	2.0	0.80	0.22	1	09/30/16	09/30/16	KWG1608787	
1,2,4-Trichlorobenzene	ND	U	2.0	0.30	0.096	1	09/30/16	09/30/16	KWG1608787	
Hexachlorobutadiene	ND	U	2.0	0.30	0.11	1	09/30/16	09/30/16	KWG1608787	
Naphthalene	ND	U	2.0	0.30	0.088	1	09/30/16	09/30/16	KWG1608787	
1,2,3-Trichlorobenzene	ND	U	2.0	0.40	0.11	1	09/30/16	09/30/16	KWG1608787	

* See Case Narrative

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Volatile Organic Compounds

Sample Name:	TVR-6	**Units:**	ug/L
Lab Code:	K1611368-017	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
Dibromofluoromethane	110	85-115	09/30/16	Acceptable
1,2-Dichloroethane-d4	117	70-120	09/30/16	Acceptable
Toluene-d8	101	85-120	09/30/16	Acceptable
4-Bromofluorobenzene	103	75-120	09/30/16	Acceptable

Comments:

Semi-Volatile Organic Compounds by GC/MS

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

Client: Tetra Tech, Incorporated
Project: YTC
Service Request: K1611368

Cover Page - Organic Analysis Data Package
Semi-Volatile Organic Compounds by GC/MS

Sample Name	Lab Code	Date Collected	Date Received
FTP-1	K1611368-001	09/21/2016	09/23/2016
FTP-1MS	KWG1608692-1	09/21/2016	09/23/2016
FTP-1DMS	KWG1608692-2	09/21/2016	09/23/2016

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	FTP-1	**Units:**	ug/L
Lab Code:	K1611368-001	**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
N-Nitrosodimethylamine	ND	U	25	5.0	0.48	1	09/28/16	10/18/16	KWG1608692	
Bis(2-chloroethyl) Ether	ND	U	9.9	0.50	0.33	1	09/28/16	10/18/16	KWG1608692	
Phenol	**0.69**	J	9.9	0.50	0.32	1	09/28/16	10/18/16	KWG1608692	
2-Chlorophenol	ND	U	9.9	0.50	0.31	1	09/28/16	10/18/16	KWG1608692	
1,3-Dichlorobenzene	ND	U	9.9	0.50	0.35	1	09/28/16	10/18/16	KWG1608692	
1,4-Dichlorobenzene	ND	U	9.9	0.50	0.32	1	09/28/16	10/18/16	KWG1608692	
1,2-Dichlorobenzene	**0.65**	J	9.9	0.50	0.43	1	09/28/16	10/18/16	KWG1608692	
Benzyl alcohol	ND	U	9.9	0.50	0.38	1	09/28/16	10/18/16	KWG1608692	
Bis(2-chloroisopropyl) Ether	ND	U	9.9	0.50	0.31	1	09/28/16	10/18/16	KWG1608692	
2-Methylphenol	ND	U	9.9	0.50	0.33	1	09/28/16	10/18/16	KWG1608692	
Hexachloroethane	ND	U	9.9	2.0	0.29	1	09/28/16	10/18/16	KWG1608692	
N-Nitrosodi-n-propylamine	ND	U	9.9	2.0	0.50	1	09/28/16	10/18/16	KWG1608692	
4-Methylphenol†	**0.76**	J	9.9	0.50	0.48	1	09/28/16	10/18/16	KWG1608692	
Nitrobenzene	ND	U	9.9	0.57	0.57	1	09/28/16	10/18/16	KWG1608692	
Isophorone	ND	U	9.9	1.0	0.25	1	09/28/16	10/18/16	KWG1608692	
2-Nitrophenol	ND	U	9.9	0.50	0.37	1	09/28/16	10/18/16	KWG1608692	
2,4-Dimethylphenol	ND	U	9.9	2.0	0.26	1	09/28/16	10/18/16	KWG1608692	
Bis(2-chloroethoxy)methane	ND	U	9.9	0.50	0.28	1	09/28/16	10/18/16	KWG1608692	
2,4-Dichlorophenol	ND	U	9.9	0.50	0.30	1	09/28/16	10/18/16	KWG1608692	
Benzoic acid	ND	U	25	25	5.8	1	09/28/16	10/18/16	KWG1608692	
1,2,4-Trichlorobenzene	ND	U	9.9	0.50	0.36	1	09/28/16	10/18/16	KWG1608692	
Naphthalene	**26**		9.9	0.50	0.37	1	09/28/16	10/18/16	KWG1608692	
4-Chloroaniline	ND	U	9.9	2.0	0.38	1	09/28/16	10/18/16	KWG1608692	
Hexachlorobutadiene	ND	U	9.9	0.50	0.29	1	09/28/16	10/18/16	KWG1608692	
4-Chloro-3-methylphenol	ND	U	9.9	0.50	0.49	1	09/28/16	10/18/16	KWG1608692	
2-Methylnaphthalene	**31**		9.9	0.50	0.24	1	09/28/16	10/18/16	KWG1608692	
2,4,6-Trichlorophenol	ND	U	9.9	1.0	0.20	1	09/28/16	10/18/16	KWG1608692	
2,4,5-Trichlorophenol	ND	U	9.9	0.50	0.38	1	09/28/16	10/18/16	KWG1608692	
2-Chloronaphthalene	ND	U	9.9	0.50	0.29	1	09/28/16	10/18/16	KWG1608692	
Acenaphthene	**2.7**	J	9.9	0.50	0.28	1	09/28/16	10/18/16	KWG1608692	
2-Nitroaniline	ND	U	25	0.50	0.34	1	09/28/16	10/18/16	KWG1608692	
Acenaphthylene	ND	U	9.9	0.50	0.24	1	09/28/16	10/18/16	KWG1608692	
Dimethyl Phthalate	ND	U	9.9	2.0	0.25	1	09/28/16	10/18/16	KWG1608692	
2,6-Dinitrotoluene	ND	U	9.9	0.50	0.35	1	09/28/16	10/18/16	KWG1608692	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	FTP-1	**Units:**	ug/L
Lab Code:	K1611368-001	**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
3-Nitroaniline	ND	U	25	1.0	3.3	1	09/28/16	10/18/16	KWG1608692	
2,4-Dinitrophenol	ND	U	25	25	2.2	1	09/28/16	10/18/16	KWG1608692	
Dibenzofuran	**4.6**	J	9.9	0.50	0.33	1	09/28/16	10/18/16	KWG1608692	
4-Nitrophenol	ND	U	25	10	1.9	1	09/28/16	10/18/16	KWG1608692	
2,4-Dinitrotoluene	ND	U	9.9	1.0	0.27	1	09/28/16	10/18/16	KWG1608692	
Fluorene	**7.9**	J	9.9	0.50	0.32	1	09/28/16	10/18/16	KWG1608692	
4-Chlorophenyl Phenyl Ether	ND	U	9.9	0.50	0.28	1	09/28/16	10/18/16	KWG1608692	
Diethyl Phthalate	ND	U	9.9	0.50	0.29	1	09/28/16	10/18/16	KWG1608692	
4-Nitroaniline	ND	U	25	4.0	4.0	1	09/28/16	10/18/16	KWG1608692	
2-Methyl-4,6-dinitrophenol	ND	U	25	10	2.1	1	09/28/16	10/18/16	KWG1608692	
N-Nitrosodiphenylamine	**1.8**	J	9.9	0.50	0.48	1	09/28/16	10/18/16	KWG1608692	
1,2-Diphenylhydrazine†	ND	U	9.9	0.50	0.51	1	09/28/16	10/18/16	KWG1608692	
4-Bromophenyl Phenyl Ether	ND	U	9.9	0.50	0.27	1	09/28/16	10/18/16	KWG1608692	
Hexachlorobenzene	ND	U	9.9	0.63	0.63	1	09/28/16	10/18/16	KWG1608692	
Pentachlorophenol	ND	U	25	5.0	2.4	1	09/28/16	10/18/16	KWG1608692	
Phenanthrene	**3.9**	J	9.9	0.50	0.48	1	09/28/16	10/18/16	KWG1608692	
Anthracene	**4.0**	J	9.9	0.61	0.61	1	09/28/16	10/18/16	KWG1608692	
Carbazole	**2.5**	J	9.9	0.50	0.36	1	09/28/16	10/18/16	KWG1608692	
Di-n-butyl Phthalate	ND	U	9.9	0.65	0.65	1	09/28/16	10/18/16	KWG1608692	
Fluoranthene	ND	U	9.9	0.65	0.65	1	09/28/16	10/18/16	KWG1608692	
Pyrene	ND	U	9.9	0.73	0.73	1	09/28/16	10/18/16	KWG1608692	
Butyl Benzyl Phthalate	ND	U	9.9	0.50	0.47	1	09/28/16	10/18/16	KWG1608692	
3,3'-Dichlorobenzidine	ND	U	25	2.0	0.27	1	09/28/16	10/18/16	KWG1608692	
Benz(a)anthracene	ND	U	9.9	0.59	0.59	1	09/28/16	10/18/16	KWG1608692	
Chrysene	ND	U	9.9	1.0	0.79	1	09/28/16	10/18/16	KWG1608692	
Bis(2-ethylhexyl) Phthalate	ND	U	9.9	2.0	1.9	1	09/28/16	10/18/16	KWG1608692	
Di-n-octyl Phthalate	ND	U	9.9	0.63	0.63	1	09/28/16	10/18/16	KWG1608692	
Benzo(b)fluoranthene	ND	U	9.9	0.58	0.58	1	09/28/16	10/18/16	KWG1608692	
Benzo(k)fluoranthene	ND	U	9.9	0.83	0.83	1	09/28/16	10/18/16	KWG1608692	
Benzo(a)pyrene	ND	U	9.9	1.0	0.65	1	09/28/16	10/18/16	KWG1608692	
Indeno(1,2,3-cd)pyrene	ND	U	9.9	0.68	0.68	1	09/28/16	10/18/16	KWG1608692	
Dibenz(a,h)anthracene	ND	U	9.9	1.0	0.75	1	09/28/16	10/18/16	KWG1608692	
Benzo(g,h,i)perylene	ND	U	9.9	0.81	0.81	1	09/28/16	10/18/16	KWG1608692	

Comments:

Analytical Results

Client:	Tetra Tech, Incorporated	**Service Request:**	K1611368
Project:	YTC	**Date Collected:**	09/21/2016
Sample Matrix:	Water	**Date Received:**	09/23/2016

Semi-Volatile Organic Compounds by GC/MS

Sample Name:	FTP-1	**Units:**	ug/L
Lab Code:	K1611368-001	**Basis:**	NA

Surrogate Name	%Rec	Control Limits	Date Analyzed	Note
2-Fluorophenol	78	20-110	10/18/16	Acceptable
Phenol-d6	80	10-115	10/18/16	Acceptable
Nitrobenzene-d5	81	40-110	10/18/16	Acceptable
2-Fluorobiphenyl	80	50-110	10/18/16	Acceptable
2,4,6-Tribromophenol	97	40-125	10/18/16	Acceptable
Terphenyl-d14	60	50-135	10/18/16	Acceptable

† Analyte Comments

4-Methylphenol	This analyte cannot be separated from 3-Methylphenol.
1,2-Diphenylhydrazine	This compound is quantitated as Azobenzene.

Comments:

APPENDIX C

HISTOGRAMS, SCATTER PLOTS WITH FIT AND A MANN–KENDALL CORRELATION SCATTER PLOTS

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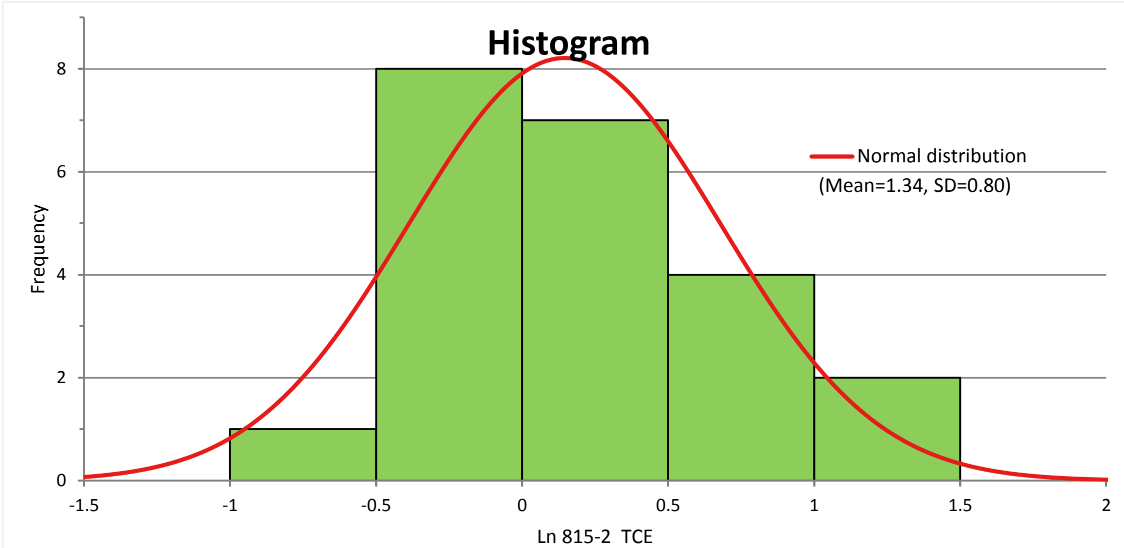
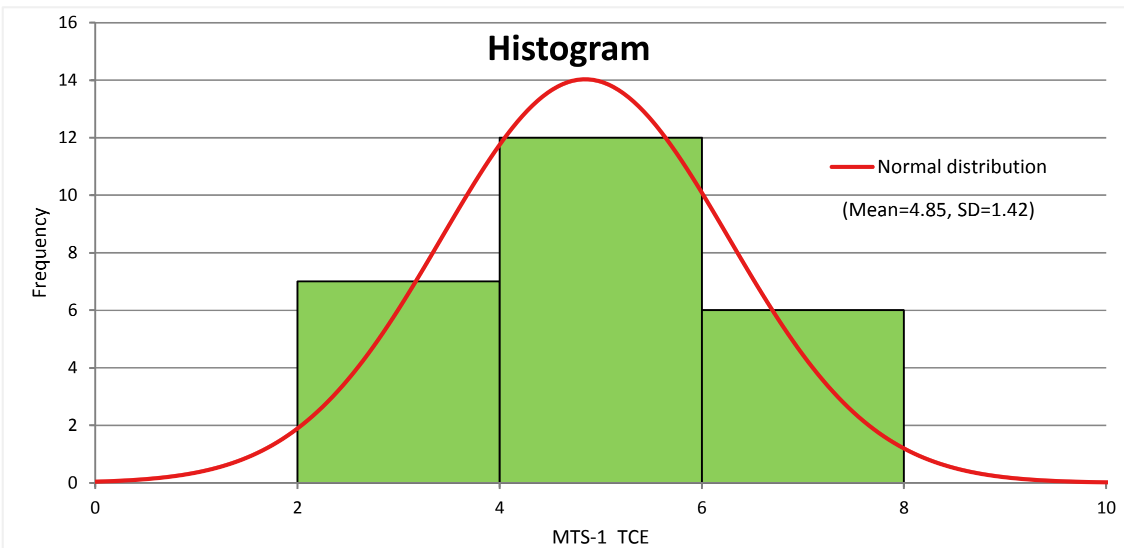

Histogram
Frequency
Normal distribution
(Mean=1.34, SD=0.80)
0
2
4
6
8
-1.5
-1
-0.5
0
0.5
1
1.5
2
Ln 815-2 TCE


Histogram
Frequency
Normal distribution
(Mean=4.85, SD=1.42)
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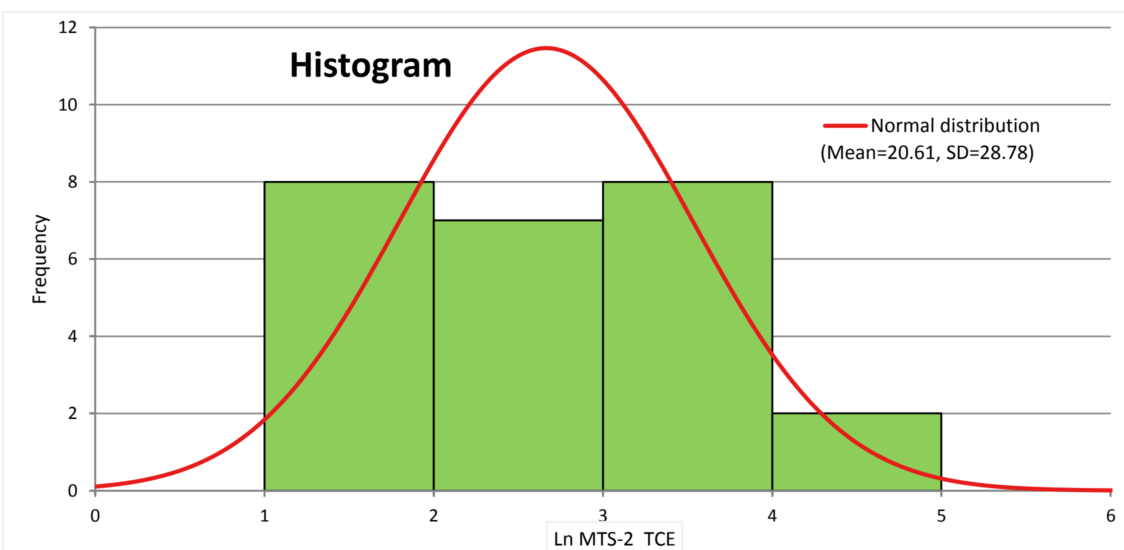
4
6
8
10
12
14
16
0
2
4
6
8
10
MTS-1 TCE


Histogram
Frequency
Normal distribution
(Mean=20.61, SD=28.78)
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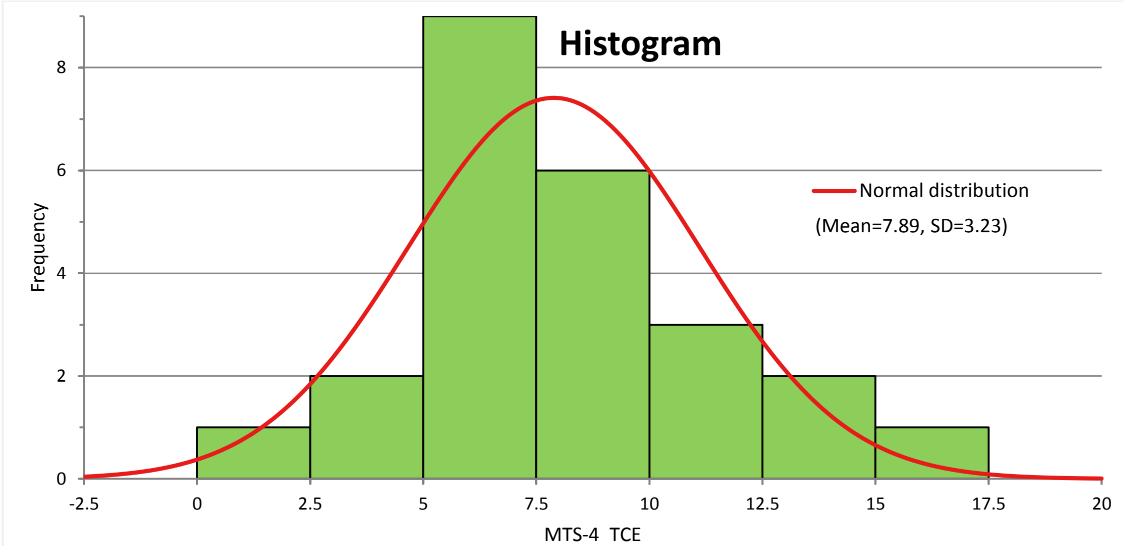
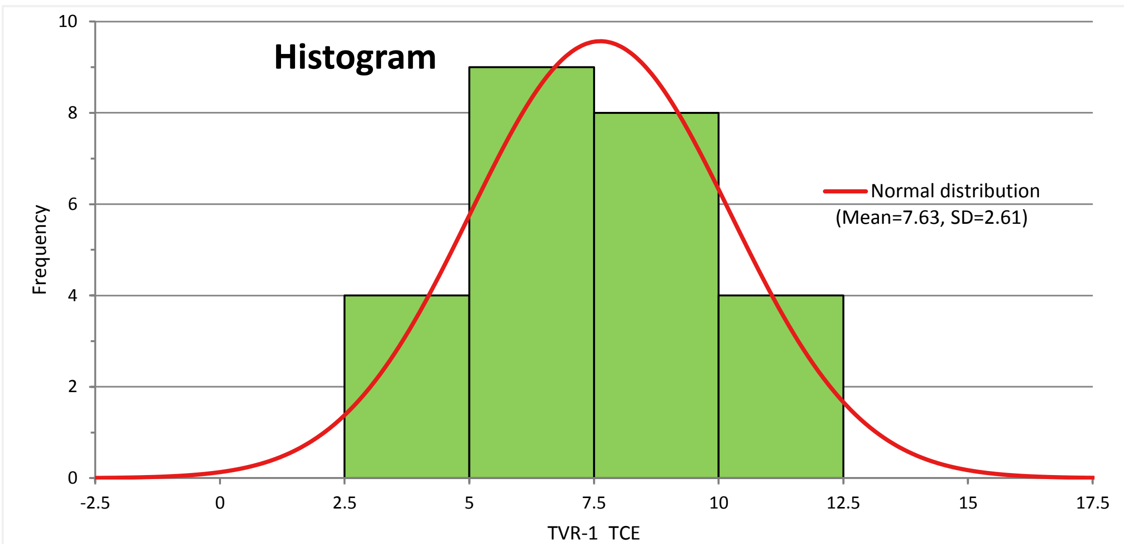
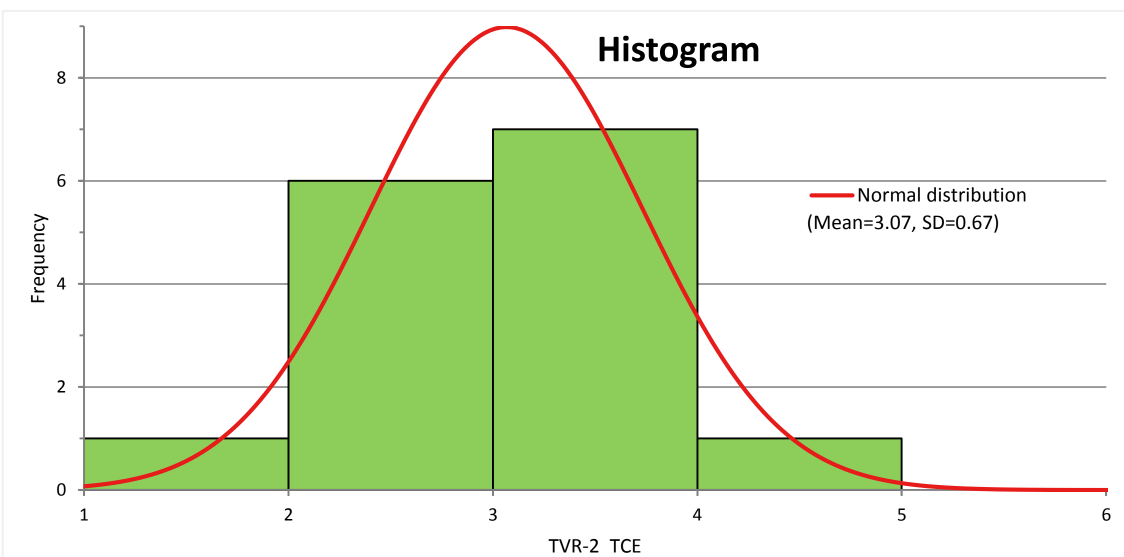
4
6
8
10
12
0
1
2
3
4
5
6
Ln MTS-2 TCE


Histogram
Frequency
0
2
4
6
8
-2.5
0
2.5
5
7.5
10
12.5
15
17.5
20
MTS-4 TCE
Normal distribution
(Mean=7.89, SD=3.23)


Histogram
Frequency
0
2
4
6
8
10
-2.5
0
2.5
5
7.5
10
12.5
15
17.5
TVR-1 TCE
Normal distribution
(Mean=7.63, SD=2.61)


Histogram
Frequency
0
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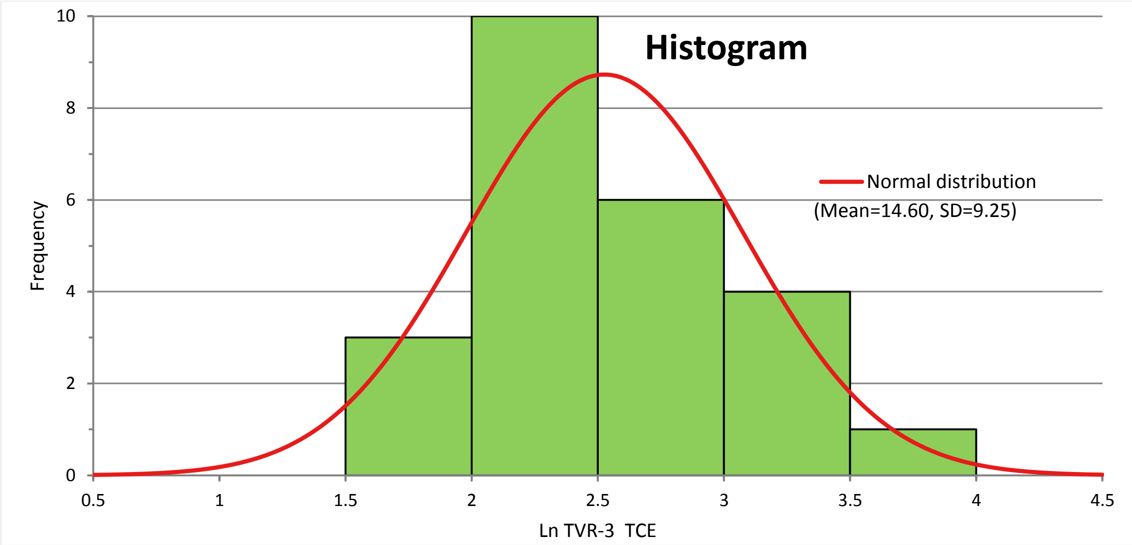
4
6
8
1
2
3
4
5
6
TVR-2 TCE
Normal distribution
(Mean=3.07, SD=0.67)


Histogram
Normal distribution
(Mean=14.60, SD=9.25)
Frequency
Ln TVR-3 TCE
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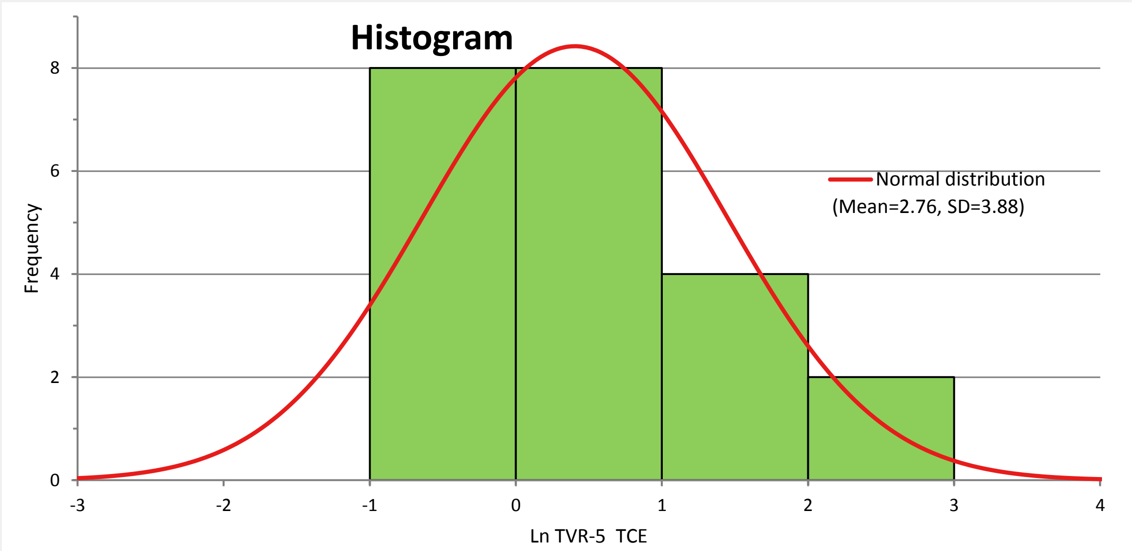
4
6
8
10
0.5
1
1.5
2
2.5
3
3.5
4
4.5


Histogram
Normal distribution
(Mean=2.76, SD=3.88)
Frequency
Ln TVR-5 TCE
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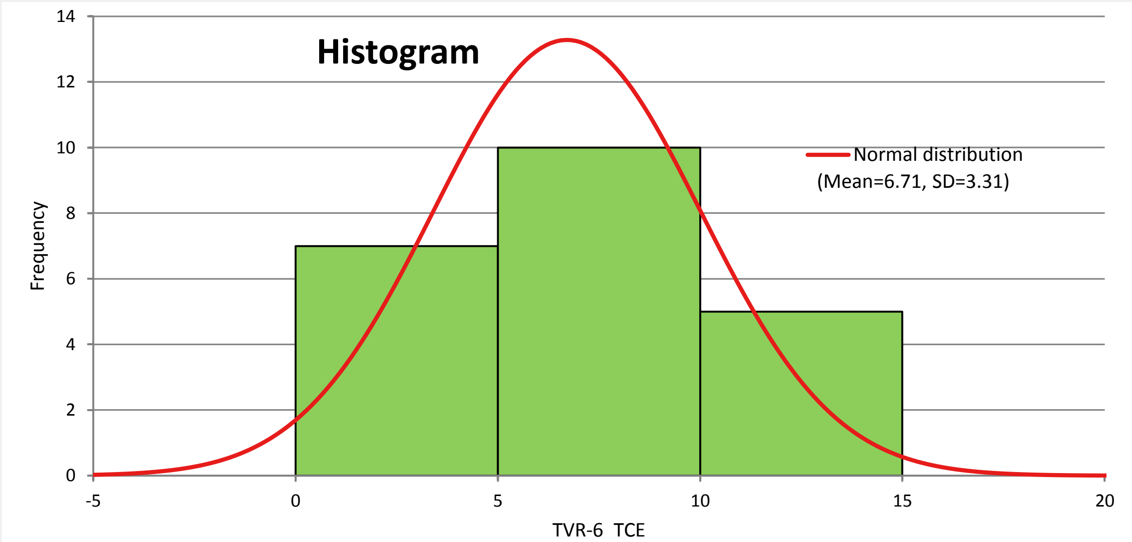
4
6
8
-3
-2
-1
0
1
2
3
4


Histogram
Normal distribution
(Mean=6.71, SD=3.31)
Frequency
TVR-6 TCE
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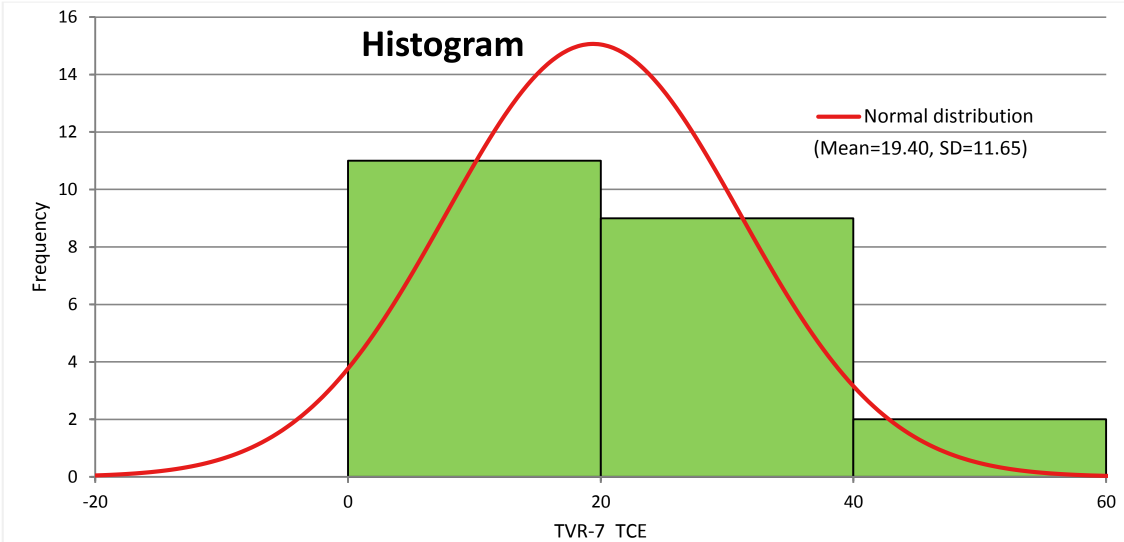
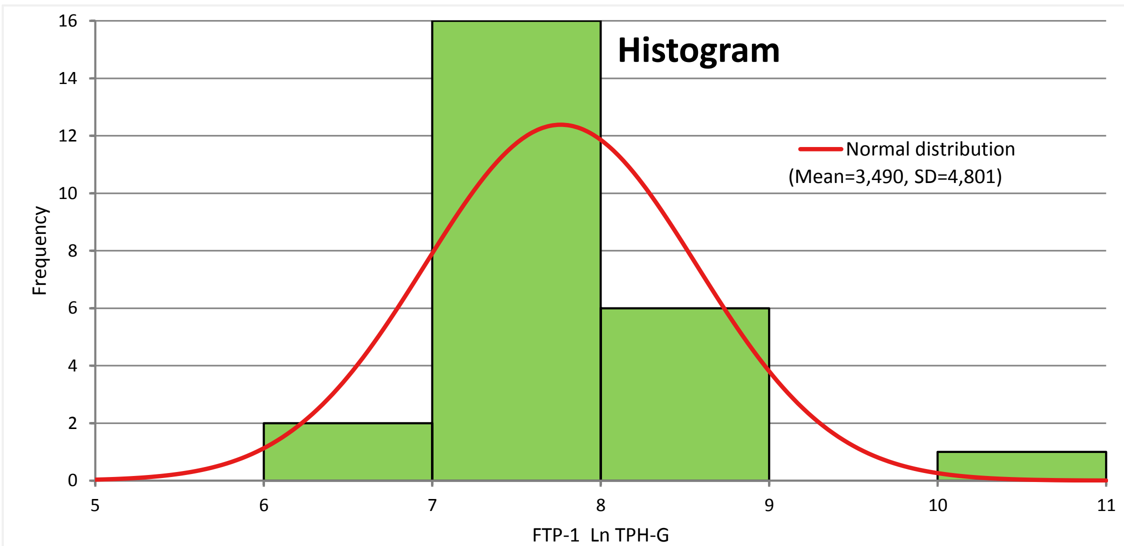
4
6
8
10
12
14
-5
0
5
10
15
20


Histogram
Normal distribution
(Mean=19.40, SD=11.65)
Frequency
16
14
12
10
8
6
4
2
0
-20
0
20
40
60
TVR-7 TCE


Histogram
Normal distribution
(Mean=3,490, SD=4,801)
Frequency
16
14
12
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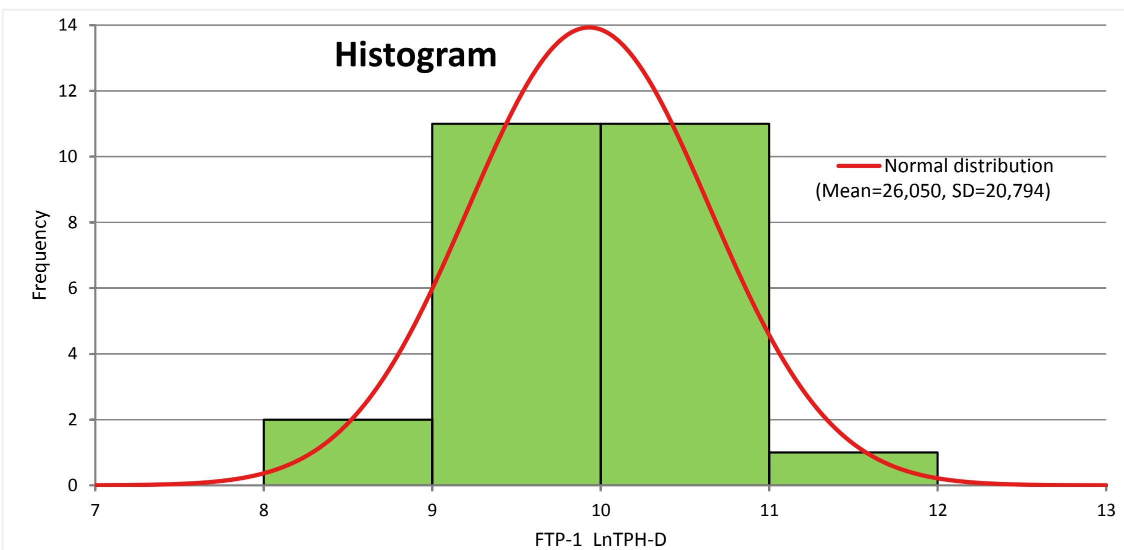
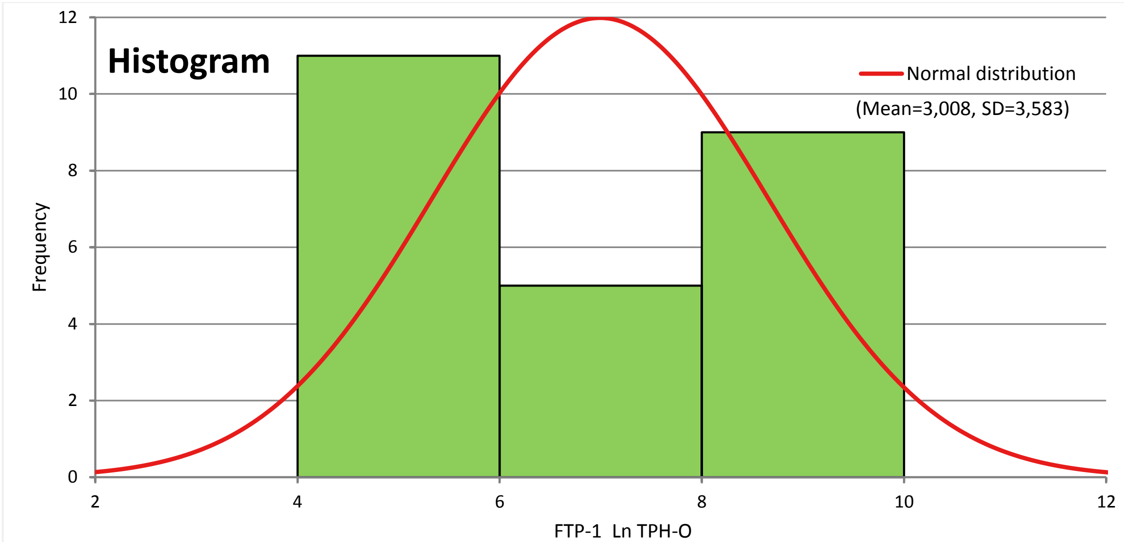
8
6
4
2
0
5
6
7
8
9
10
11
FTP-1 Ln TPH-G


Histogram
Normal distribution
(Mean=26,050, SD=20,794)
Frequency
14
12
10
8
6
4
2
0
7
8
9
10
11
12
13
FTP-1 LnTPH-D


Histogram
Normal distribution
(Mean=3,008, SD=3,583)
Frequency
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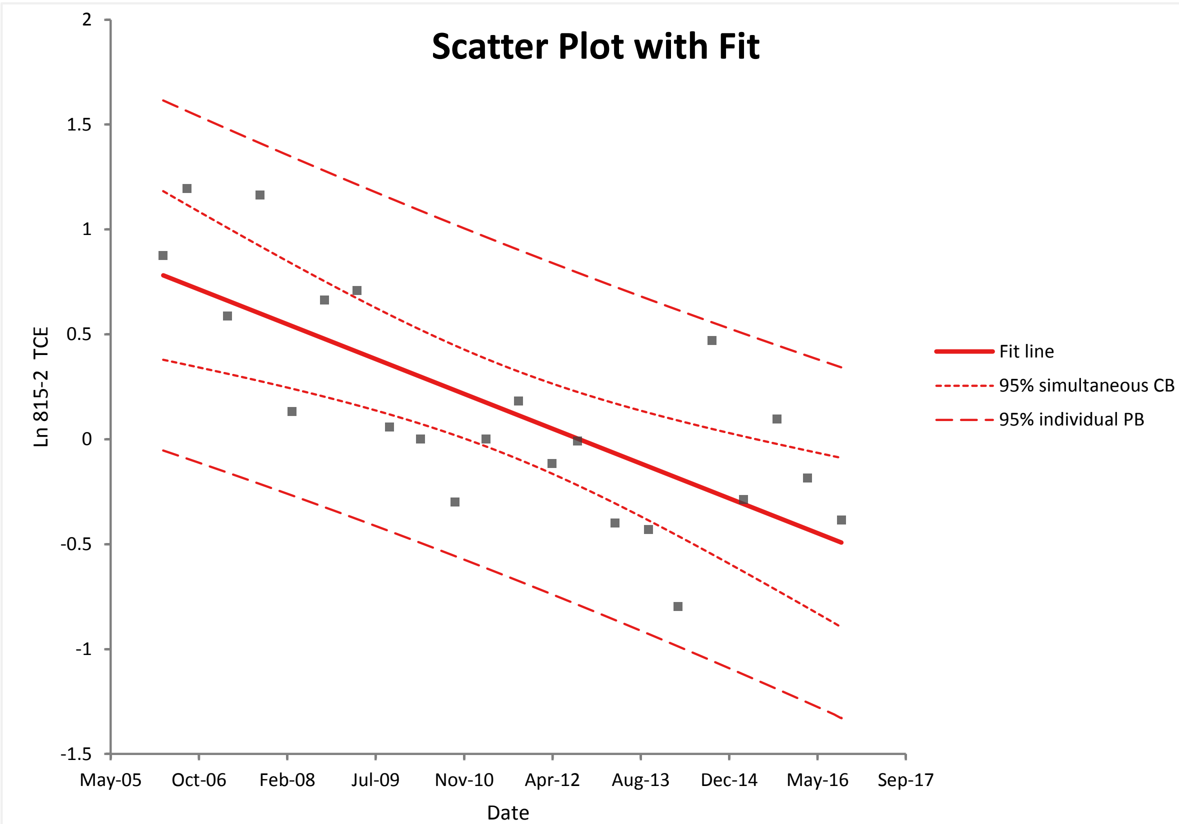
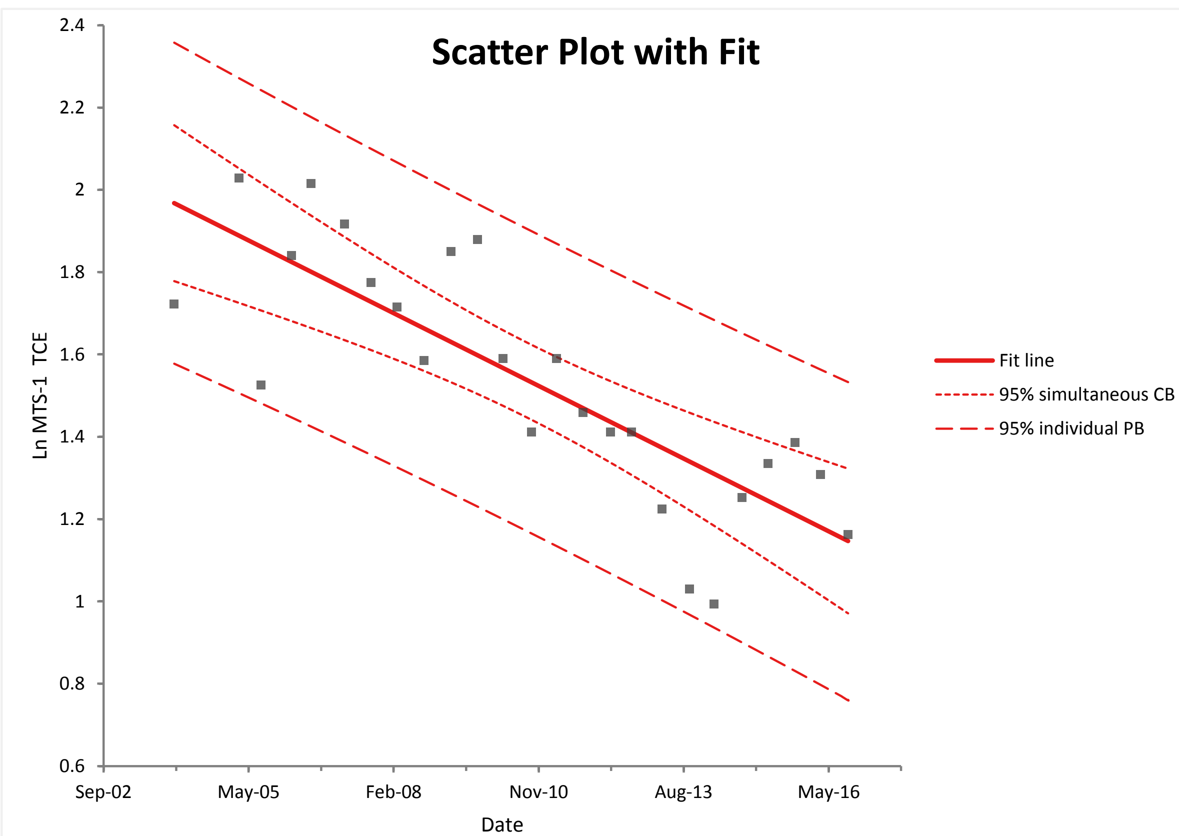
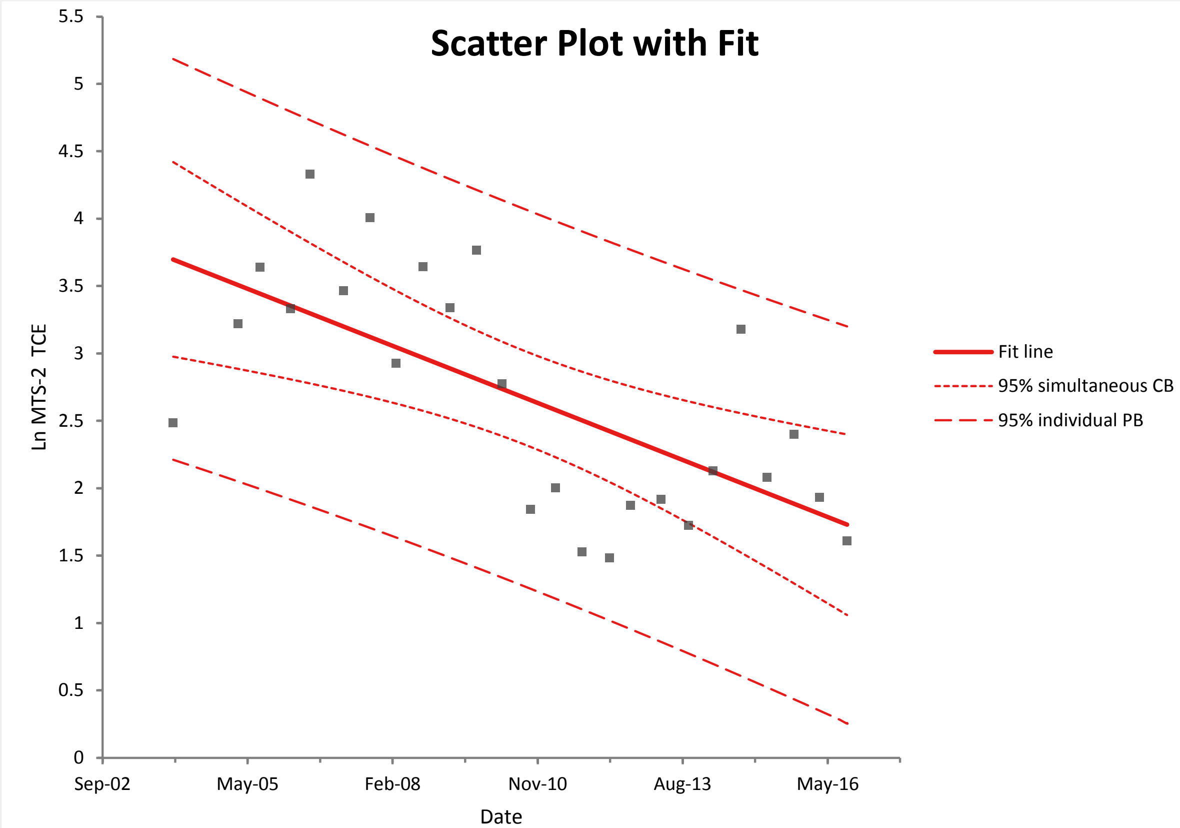
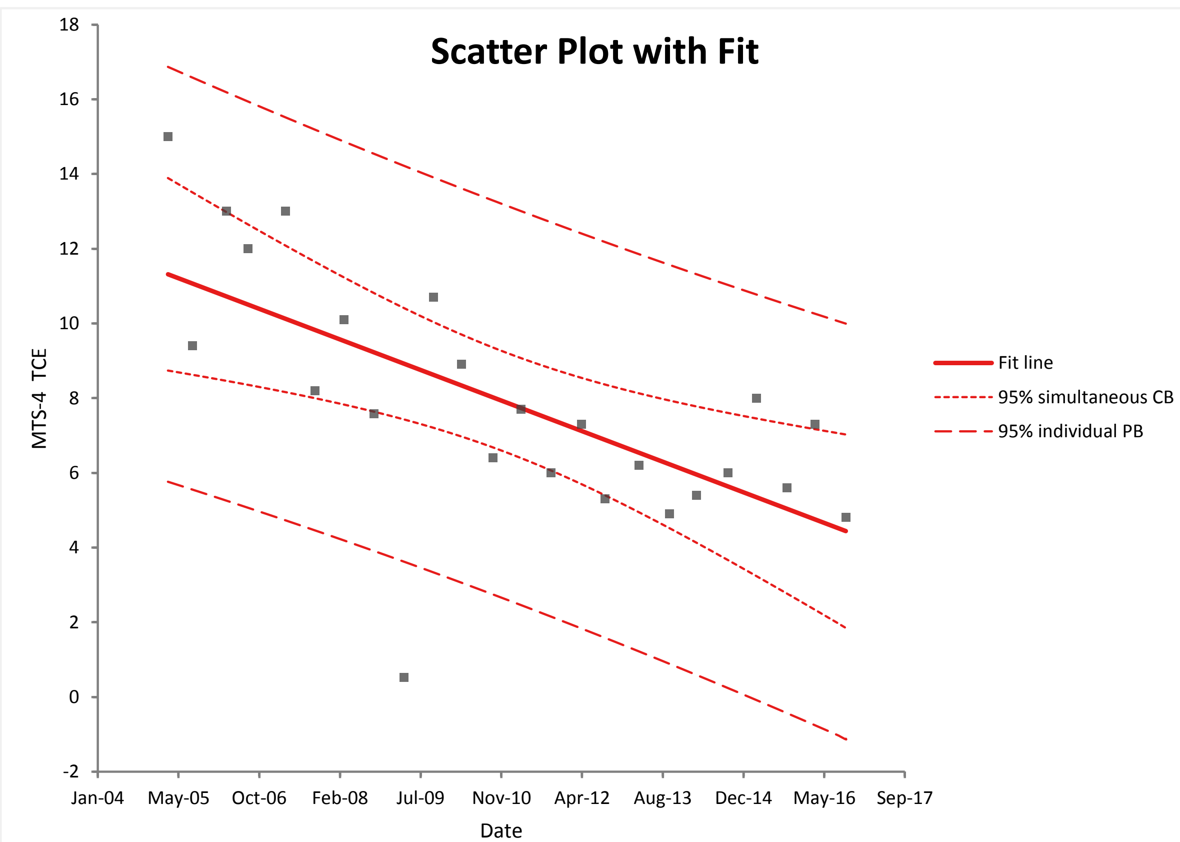
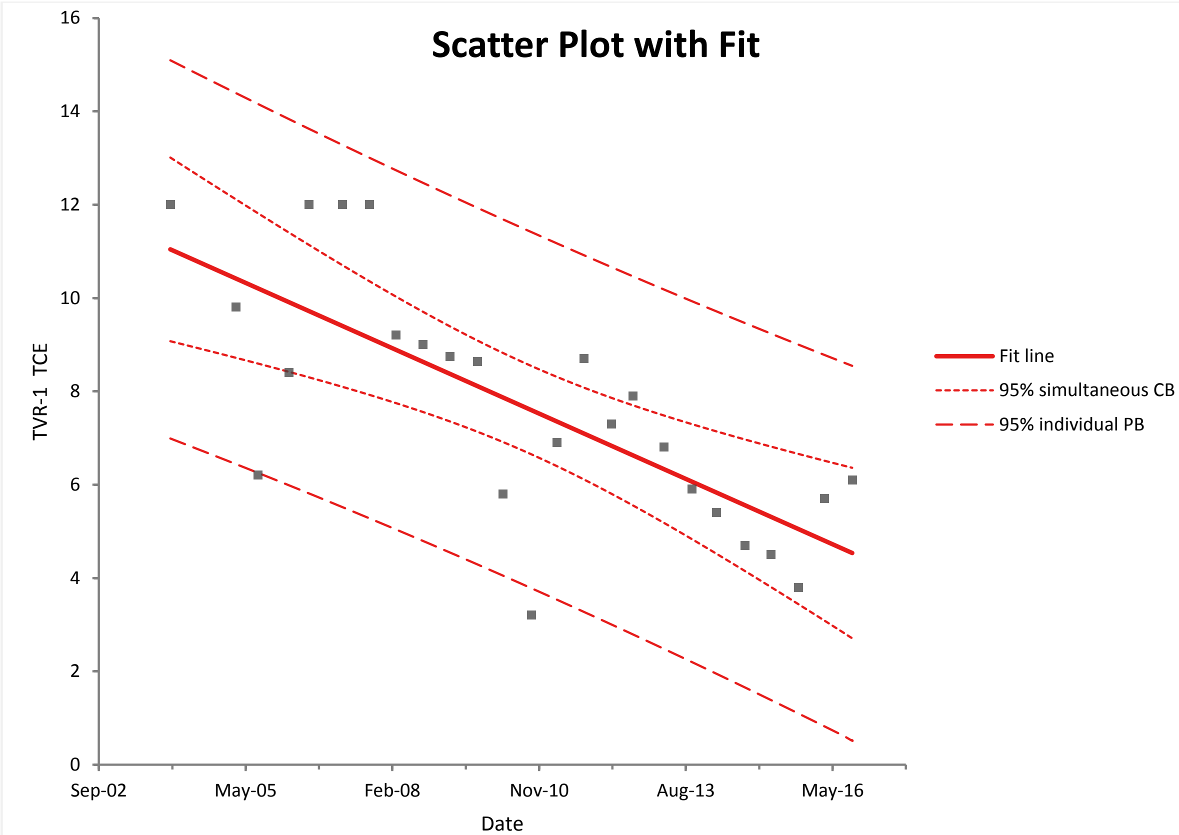
10
8
6
4
2
0
2
4
6
8
10
12
FTP-1 Ln TPH-O

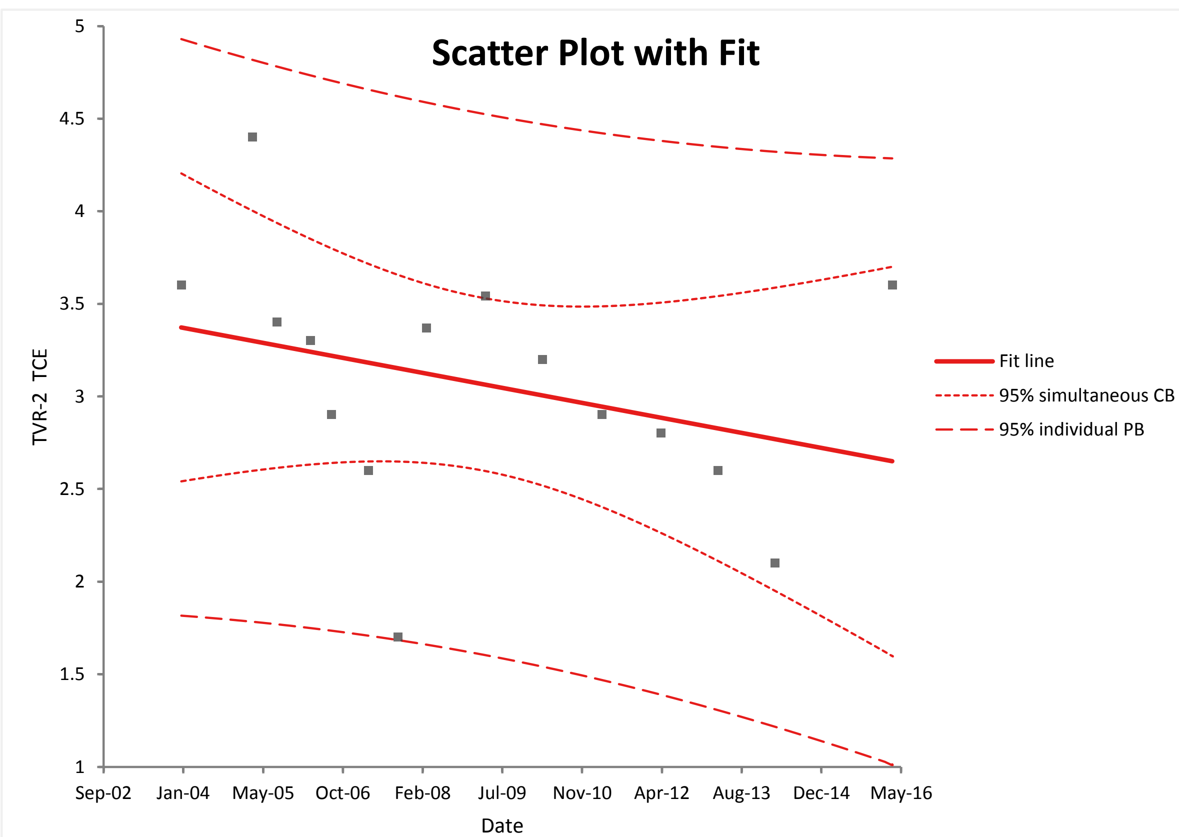

Scatter Plot with Fit
Ln 815-2 TCE
2
1.5
1
0.5
0
-0.5
-1
-1.5
May-05
Oct-06
Feb-08
Jul-09
Nov-10
Apr-12
Aug-13
Dec-14
May-16
Sep-17
Date
Fit line
95% simultaneous CB
95% individual PB

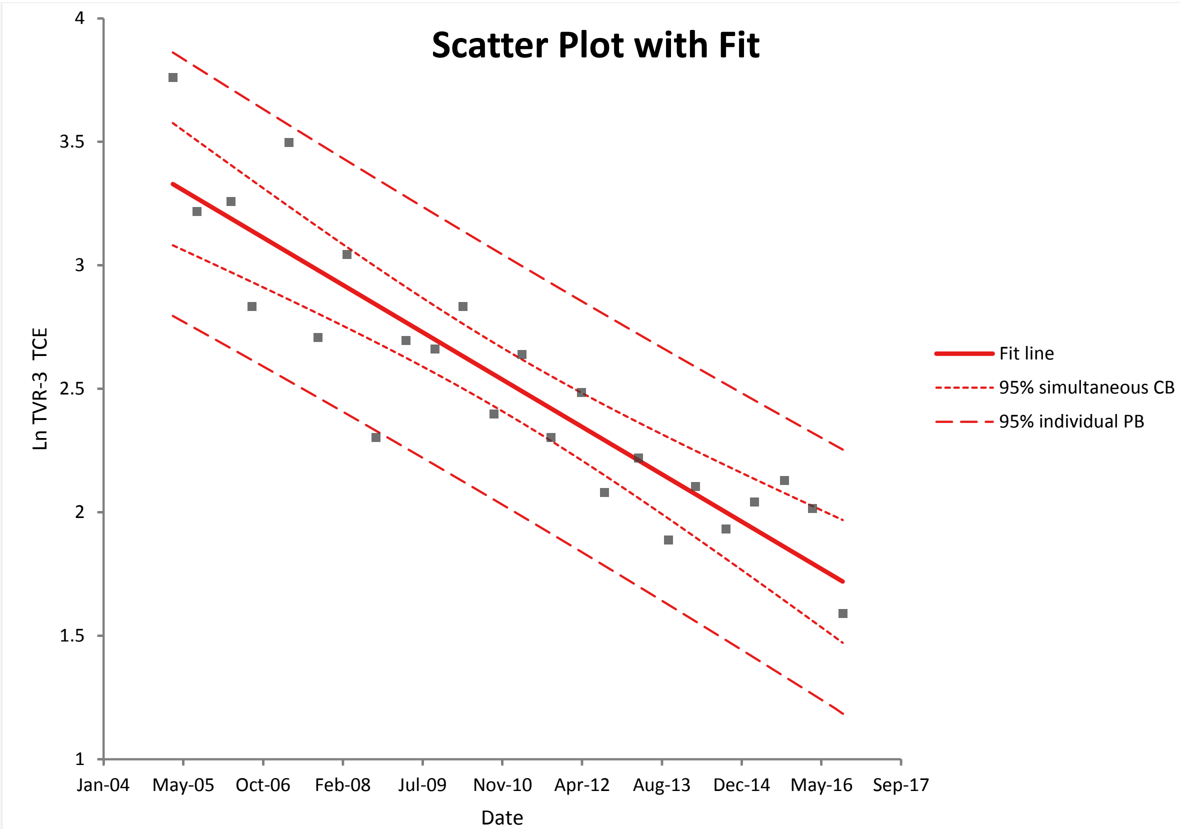

Scatter Plot with Fit
Ln MTS-1 TCE
2.4
2.2
2
1.8
1.6
1.4
1.2
1
0.8
0.6
Sep-02
May-05
Feb-08
Nov-10
Aug-13
May-16
Date
Fit line
95% simultaneous CB
95% individual PB

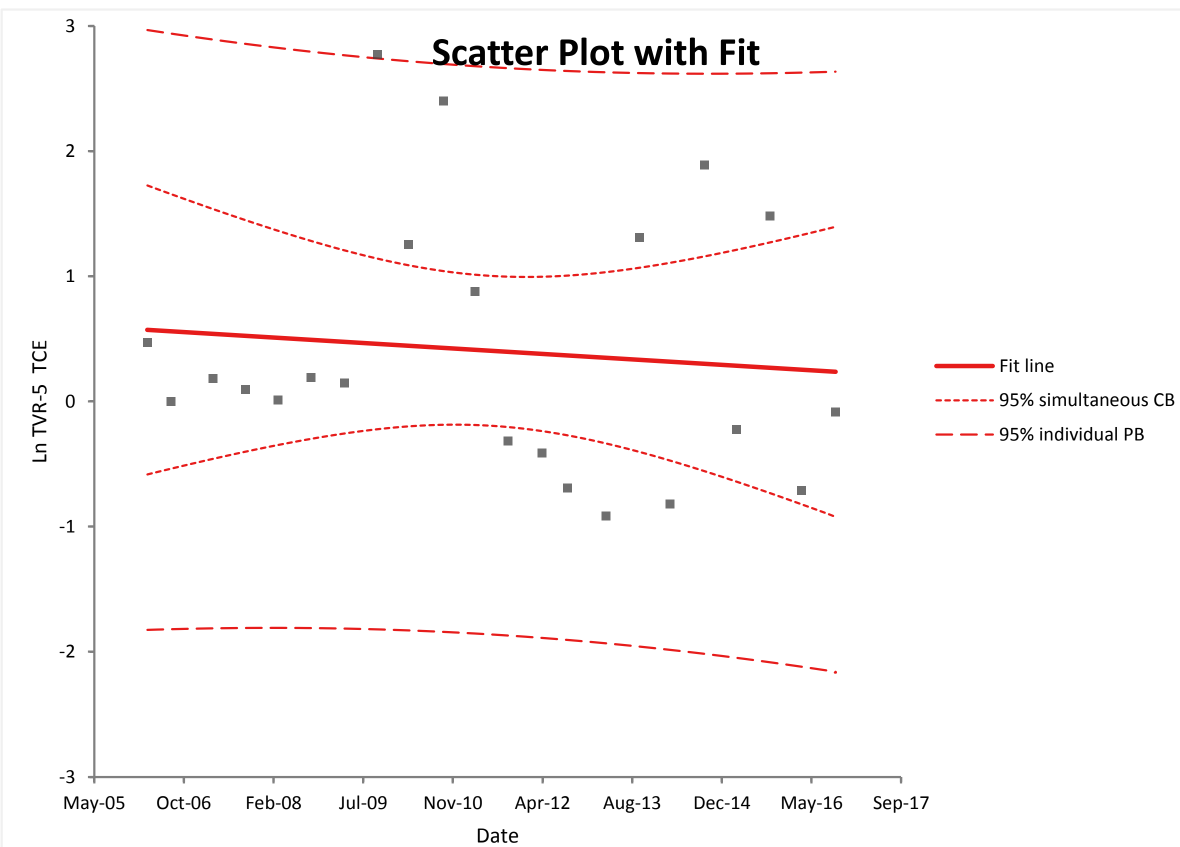

Scatter Plot with Fit
Ln MTS-2 TCE
5.5
5
4.5
4
3.5
3
2.5
2
1.5
1
0.5
0
Sep-02
May-05
Feb-08
Nov-10
Aug-13
May-16
Date
Fit line
95% simultaneous CB
95% individual PB

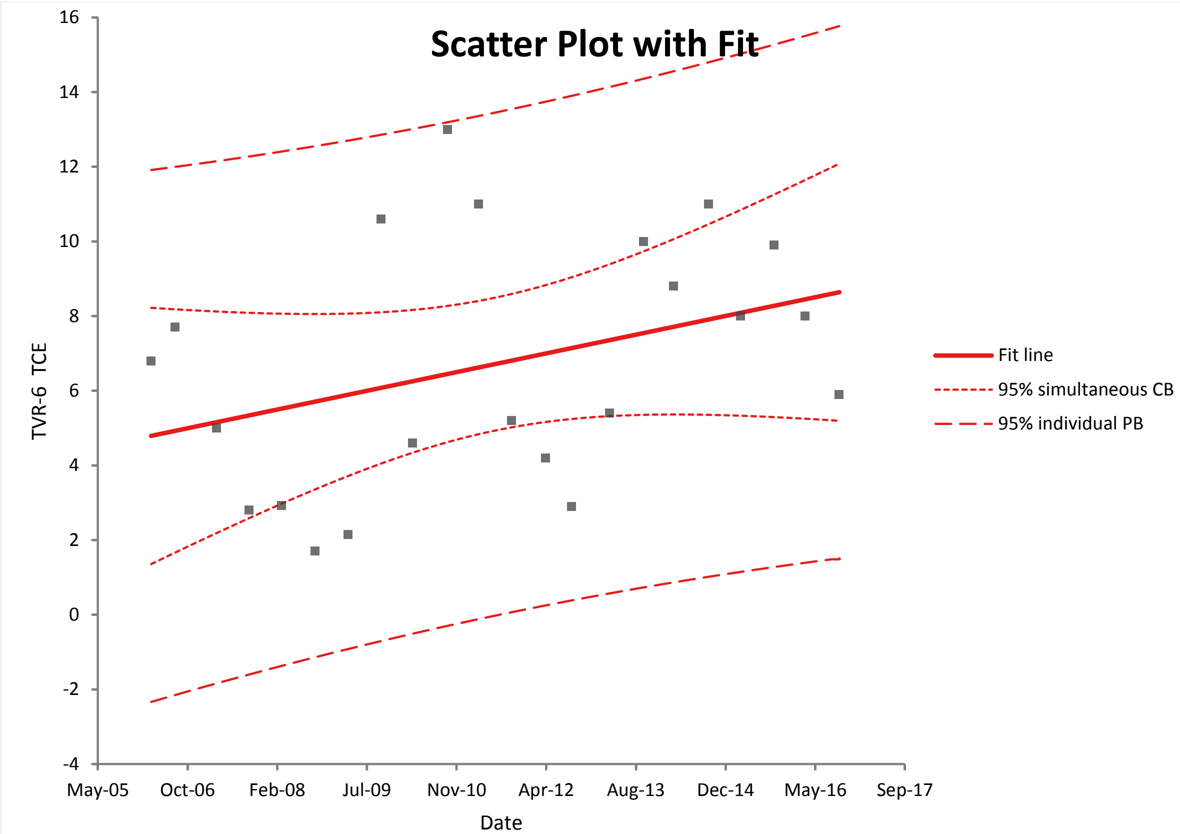

Scatter Plot with Fit
MTS-4 TCE
18
16
14
12
10
8
6
4
2
0
-2
Jan-04
May-05
Oct-06
Feb-08
Jul-09
Nov-10
Apr-12
Aug-13
Dec-14
May-16
Sep-17
Date
Fit line
95% simultaneous CB
95% individual PB

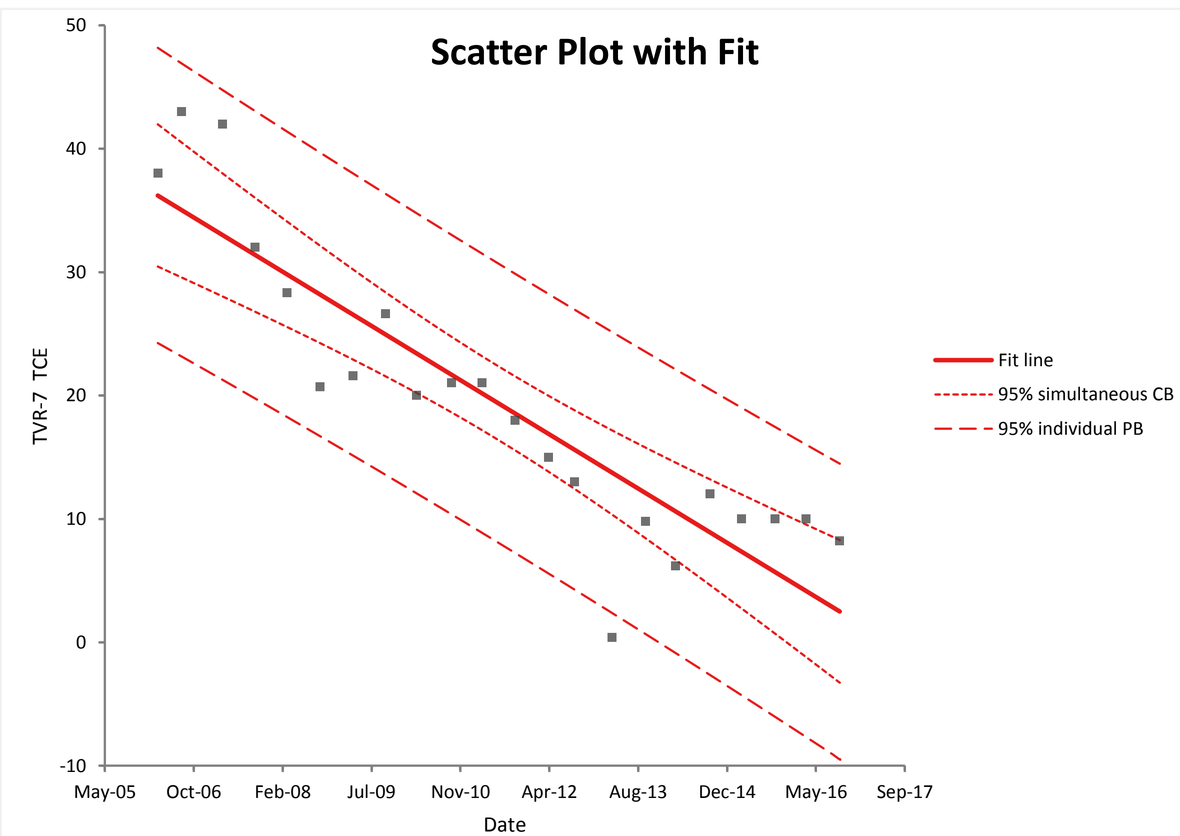

Scatter Plot with Fit
TVR-1 TCE
0
2
4
6
8
10
12
14
16
Sep-02
May-05
Feb-08
Nov-10
Aug-13
May-16
Date
Fit line
95% simultaneous CB
95% individual PB


Scatter Plot with Fit
TVR-2 TCE
1
1.5
2
2.5
3
3.5
4
4.5
5
Sep-02
Jan-04
May-05
Oct-06
Feb-08
Jul-09
Nov-10
Apr-12
Aug-13
Dec-14
May-16
Date
Fit line
95% simultaneous CB
95% individual PB


Scatter Plot with Fit
4
3.5
3
2.5
2
1.5
1
Ln TVR-3 TCE
Jan-04
May-05
Oct-06
Feb-08
Jul-09
Nov-10
Apr-12
Aug-13
Dec-14
May-16
Sep-17
Date
Fit line
95% simultaneous CB
95% individual PB


Scatter Plot with Fit
3
2
1
0
-1
-2
-3
Ln TVR-5 TCE
May-05
Oct-06
Feb-08
Jul-09
Nov-10
Apr-12
Aug-13
Dec-14
May-16
Sep-17
Date
Fit line
95% simultaneous CB
95% individual PB


Scatter Plot with Fit
TVR-6 TCE
16
14
12
10
8
6
4
2
0
-2
-4
May-05
Oct-06
Feb-08
Jul-09
Nov-10
Apr-12
Aug-13
Dec-14
May-16
Sep-17
Date
Fit line
95% simultaneous CB
95% individual PB


Scatter Plot with Fit
TVR-7 TCE
50
40
30
20
10
0
-10
May-05
Oct-06
Feb-08
Jul-09
Nov-10
Apr-12
Aug-13
Dec-14
May-16
Sep-17
Date
Fit line
95% simultaneous CB
95% individual PB

APPENDIX C
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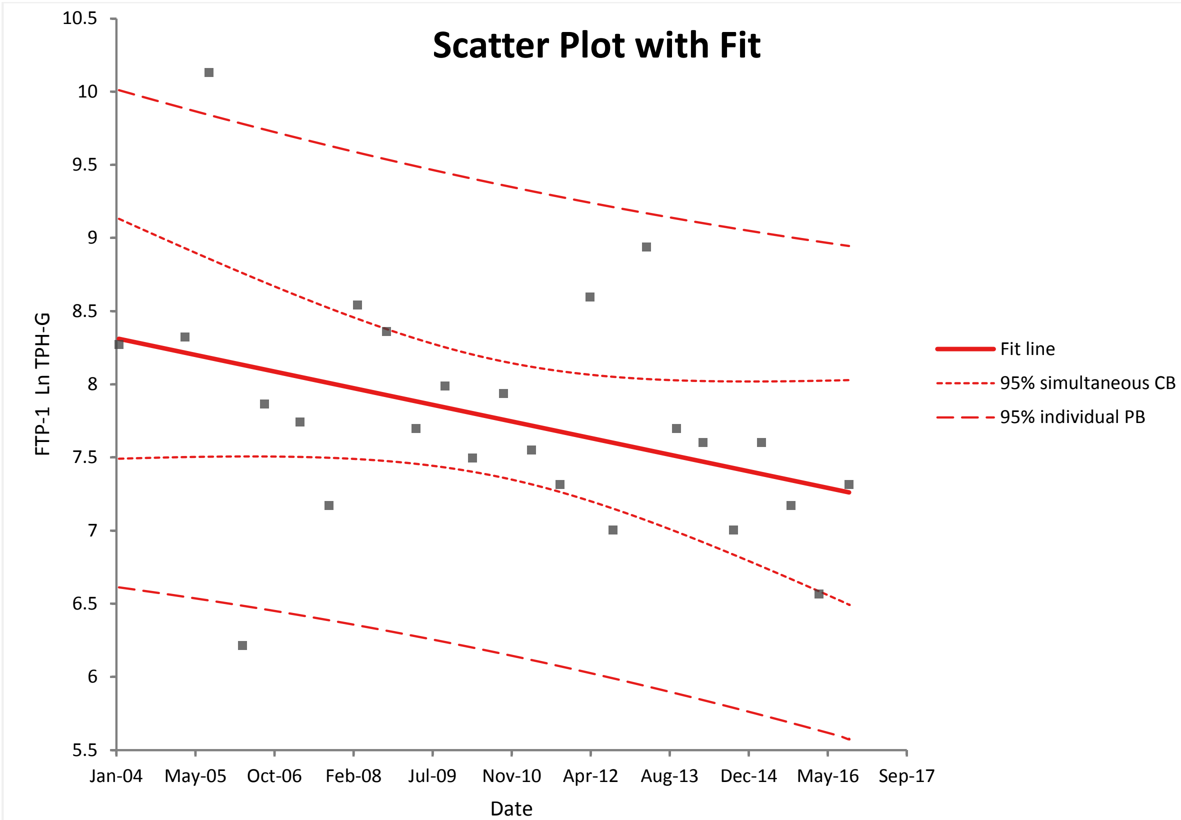

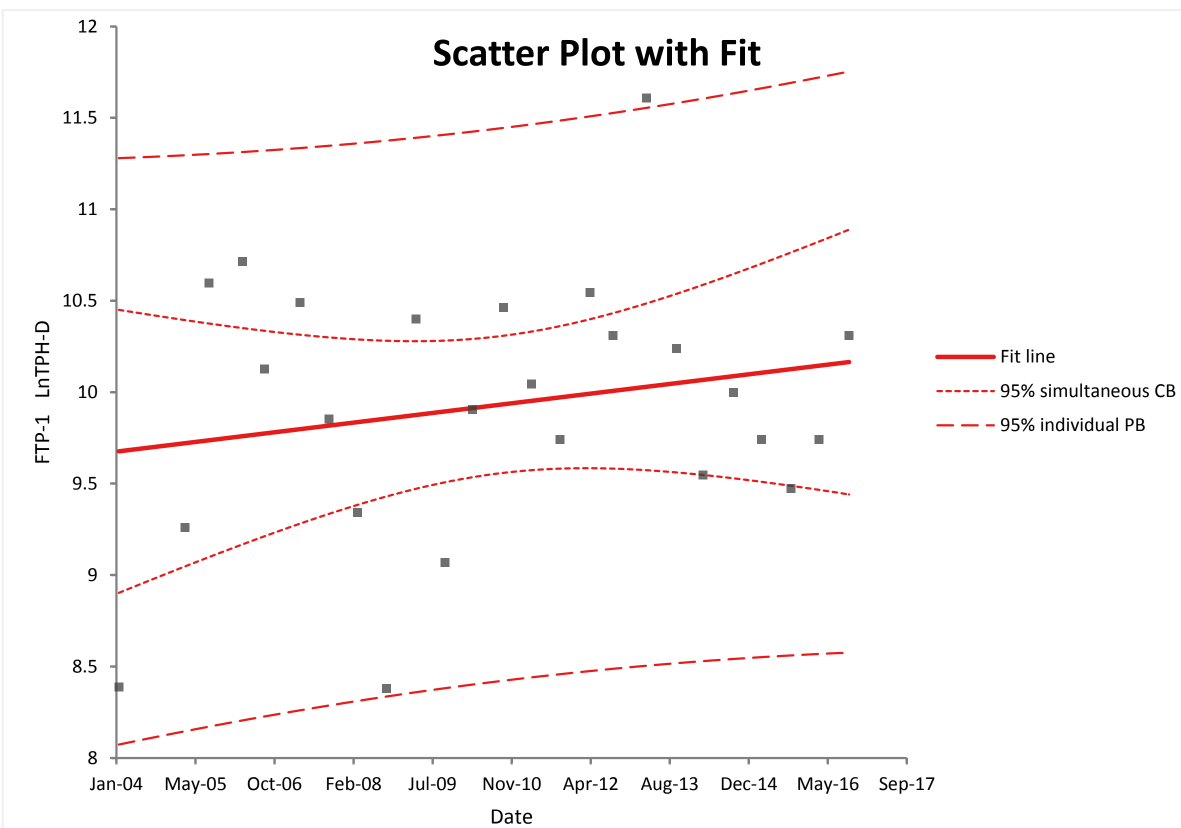

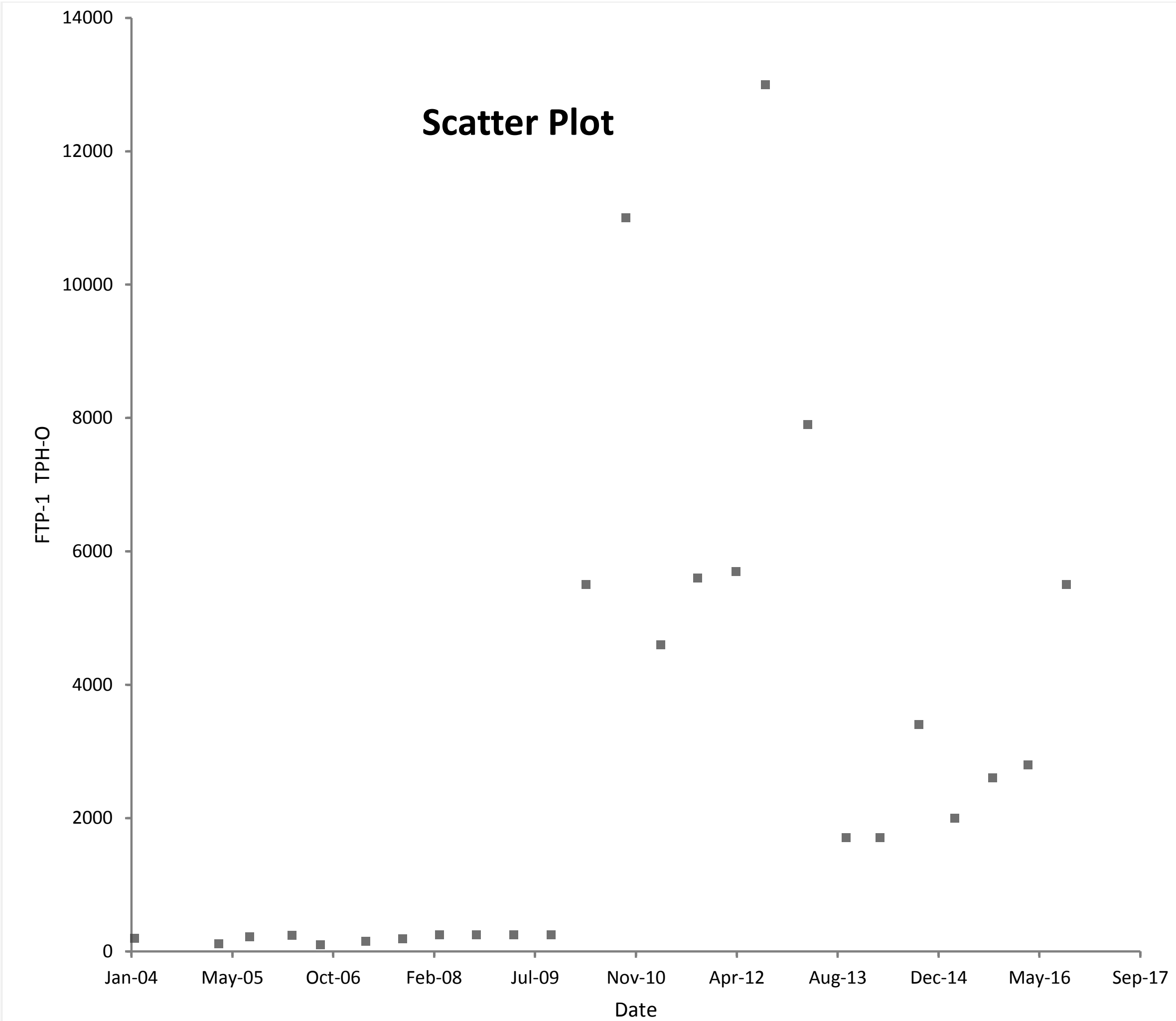
Scatter Plot
FTP-1 TPH-O
0
2000
4000
6000
8000
10000
12000
14000
Jan-04
May-05
Oct-06
Feb-08
Jul-09
Nov-10
Apr-12
Aug-13
Dec-14
May-16
Sep-17
Date

APPENDIX C
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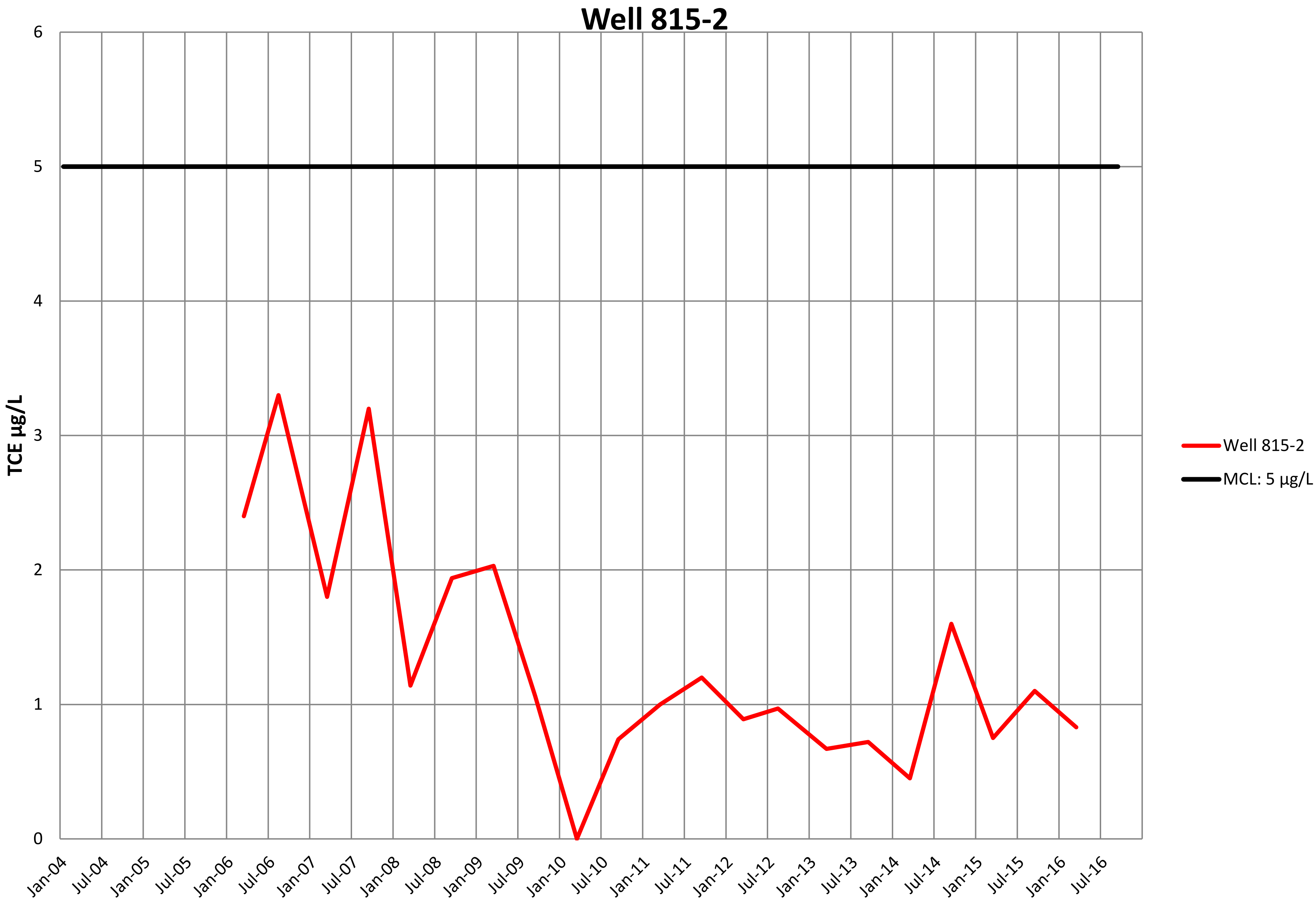
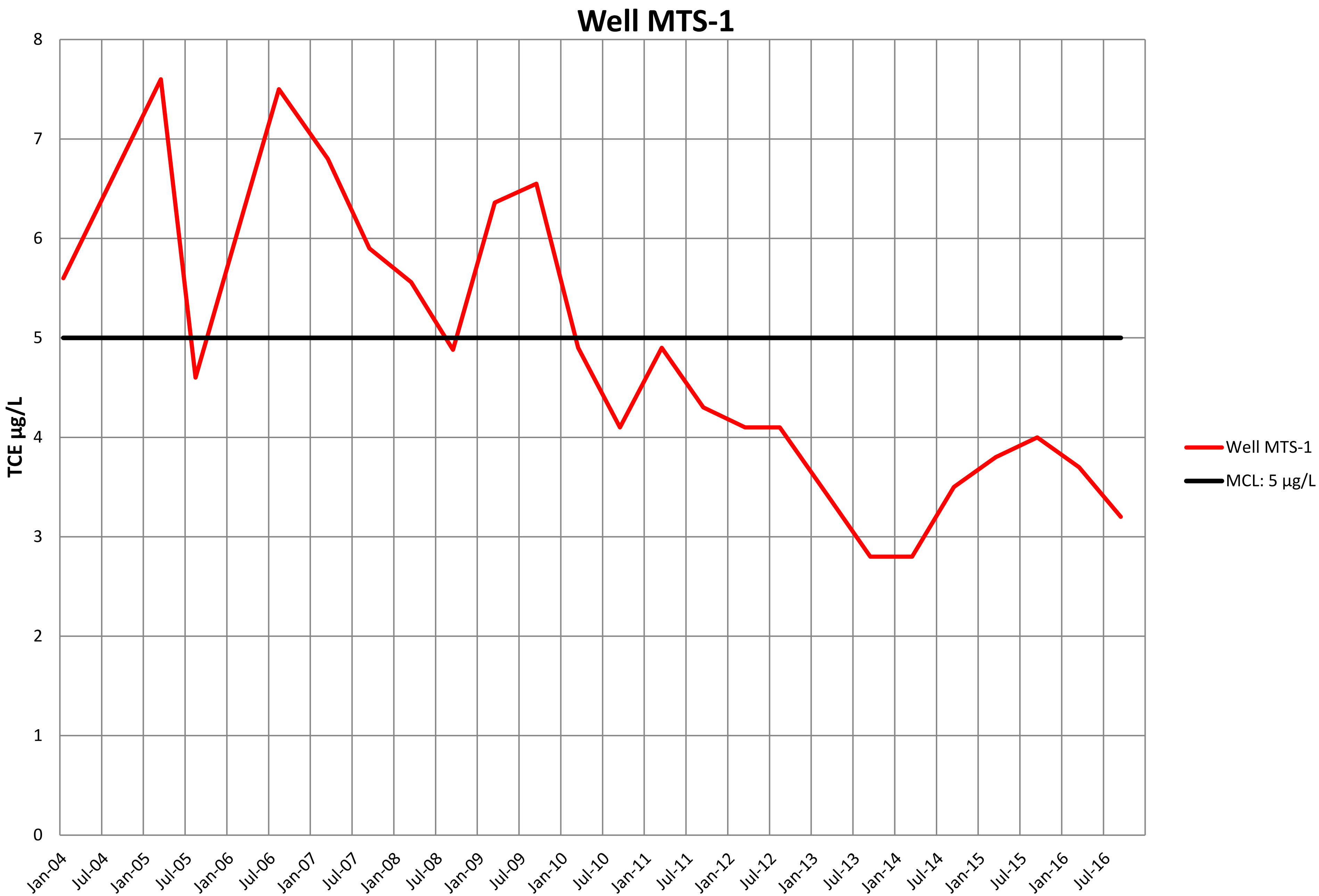
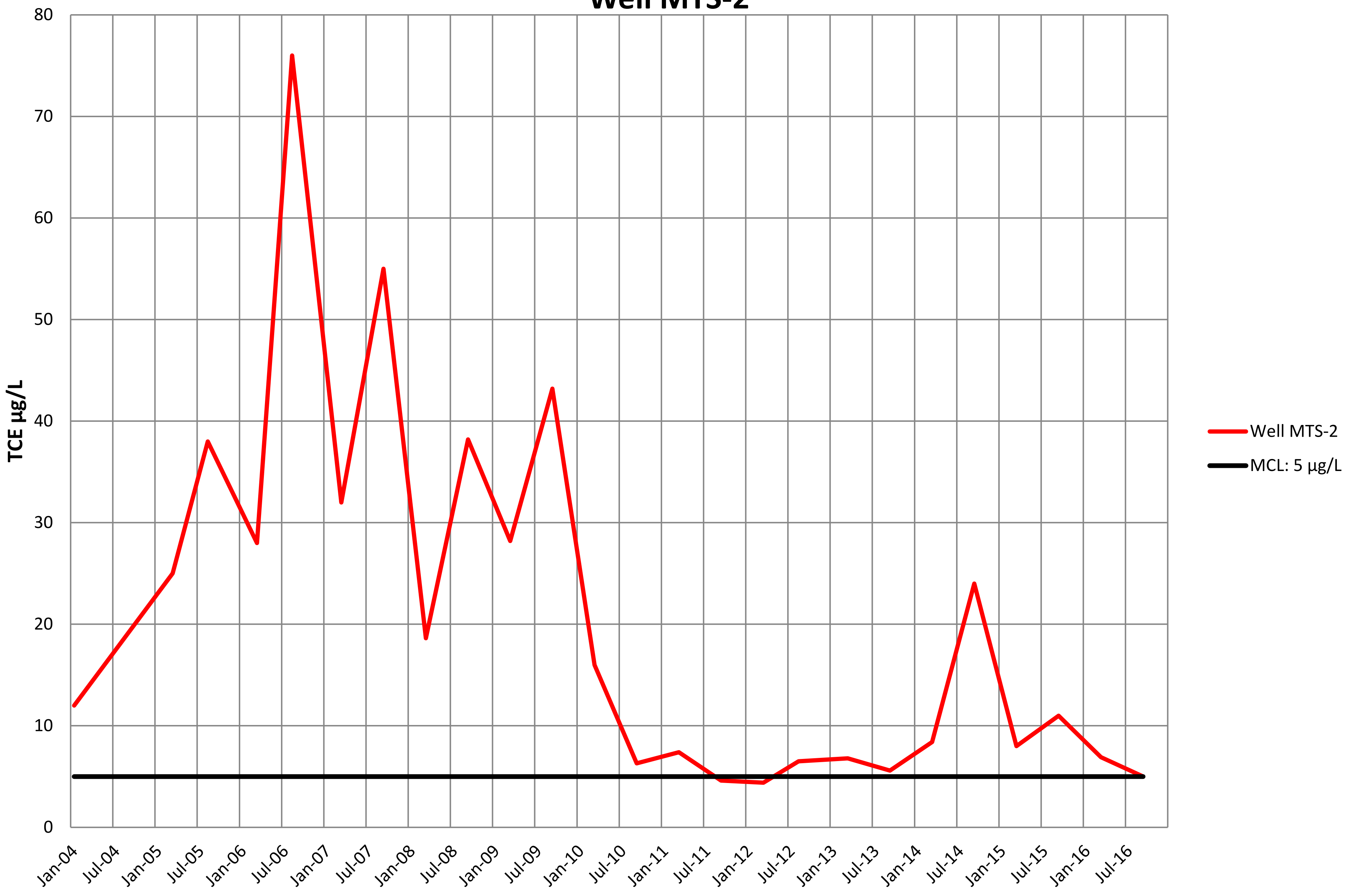



Well MTS-1
TCE µg/L
0
1
2
3
4
5
6
7
8
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10
Jan-11
Jul-11
Jan-12
Jul-12
Jan-13
Jul-13
Jan-14
Jul-14
Jan-15
Jul-15
Jan-16
Jul-16
Well MTS-1
MCL: 5 µg/L

Well MTS-2


TCE µg/L
80
70
60
50
40
30
20
10
0
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10
Jan-11
Jul-11
Jan-12
Jul-12
Jan-13
Jul-13
Jan-14
Jul-14
Jan-15
Jul-15
Jan-16
Jul-16
Well MTS-2
MCL: 5 µg/L

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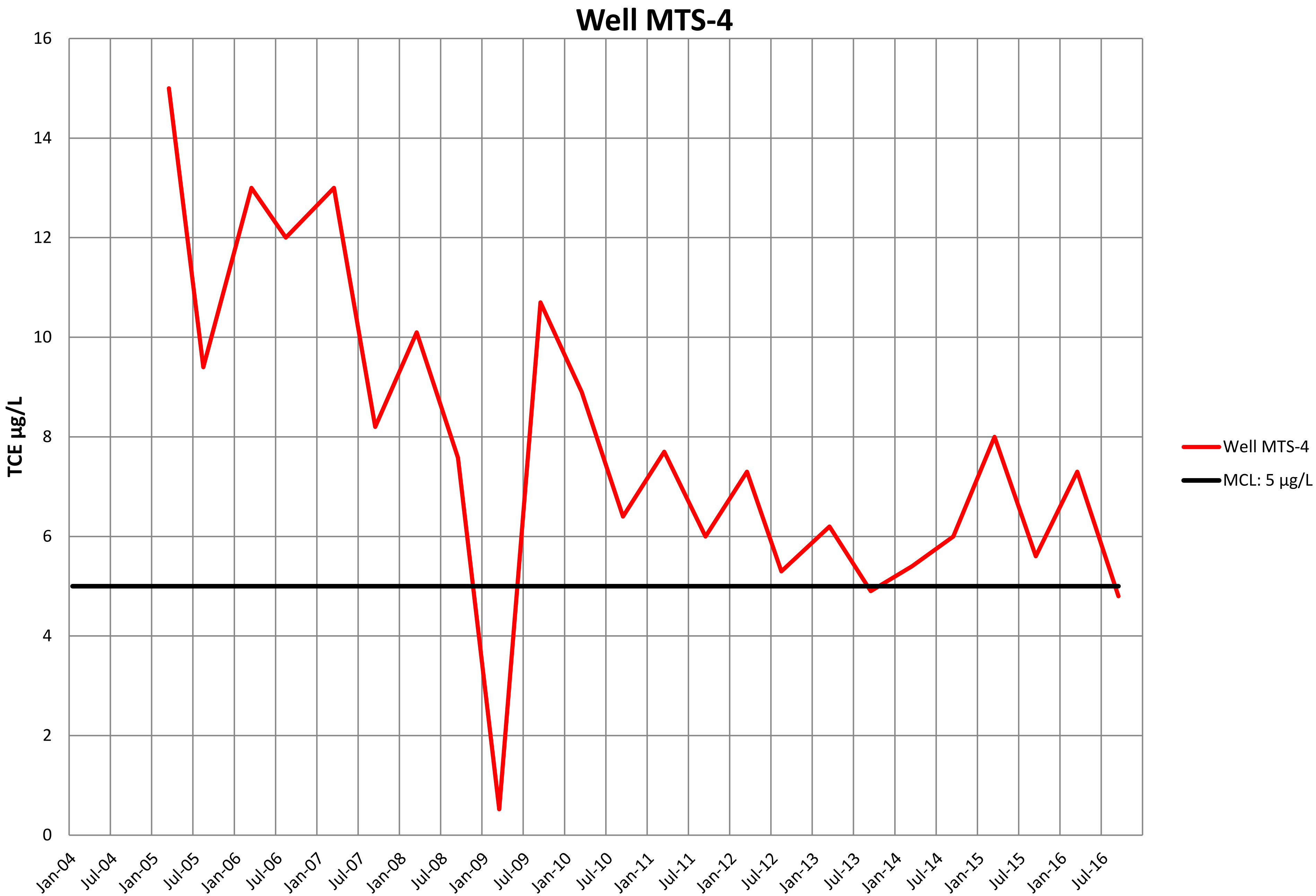
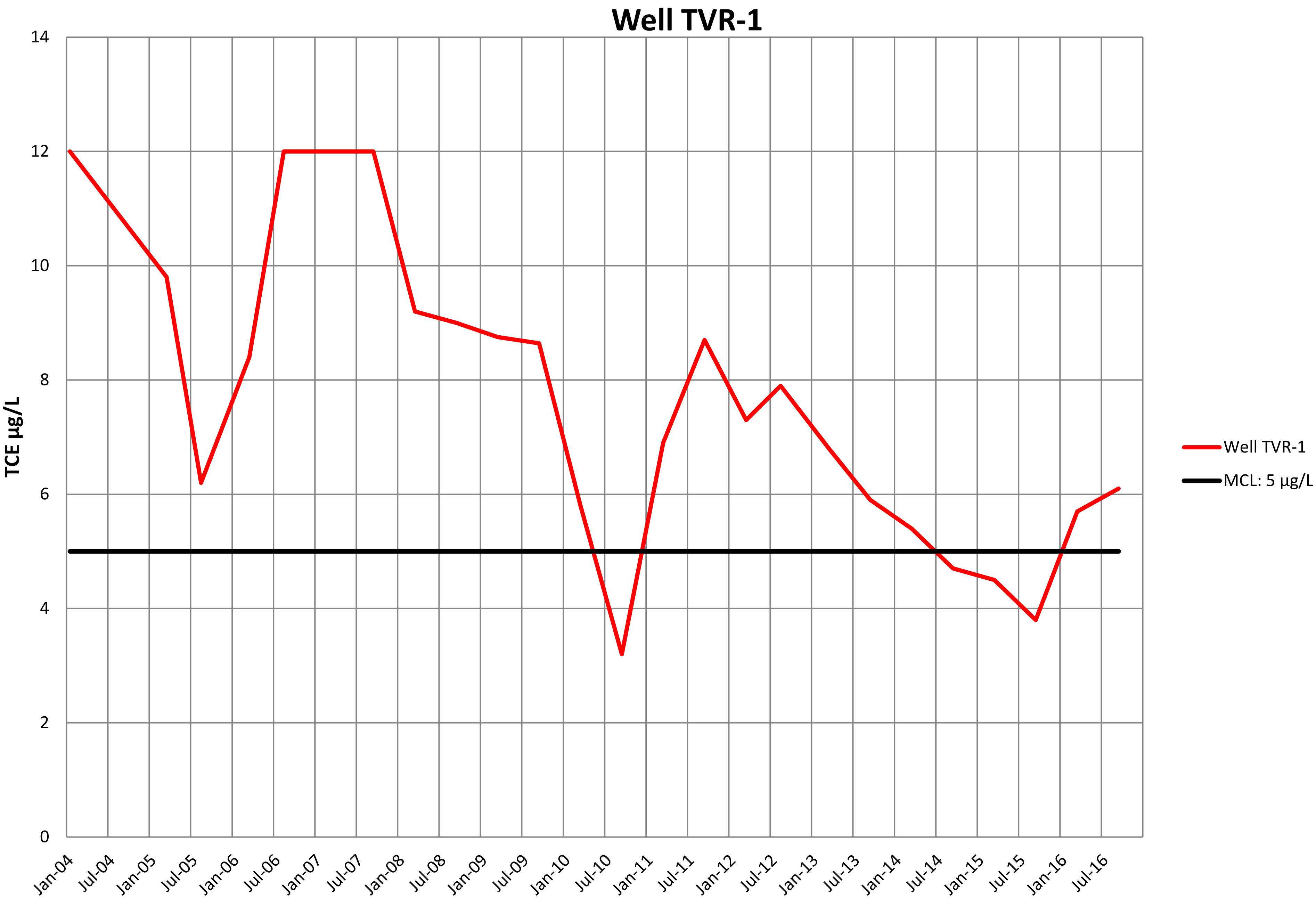
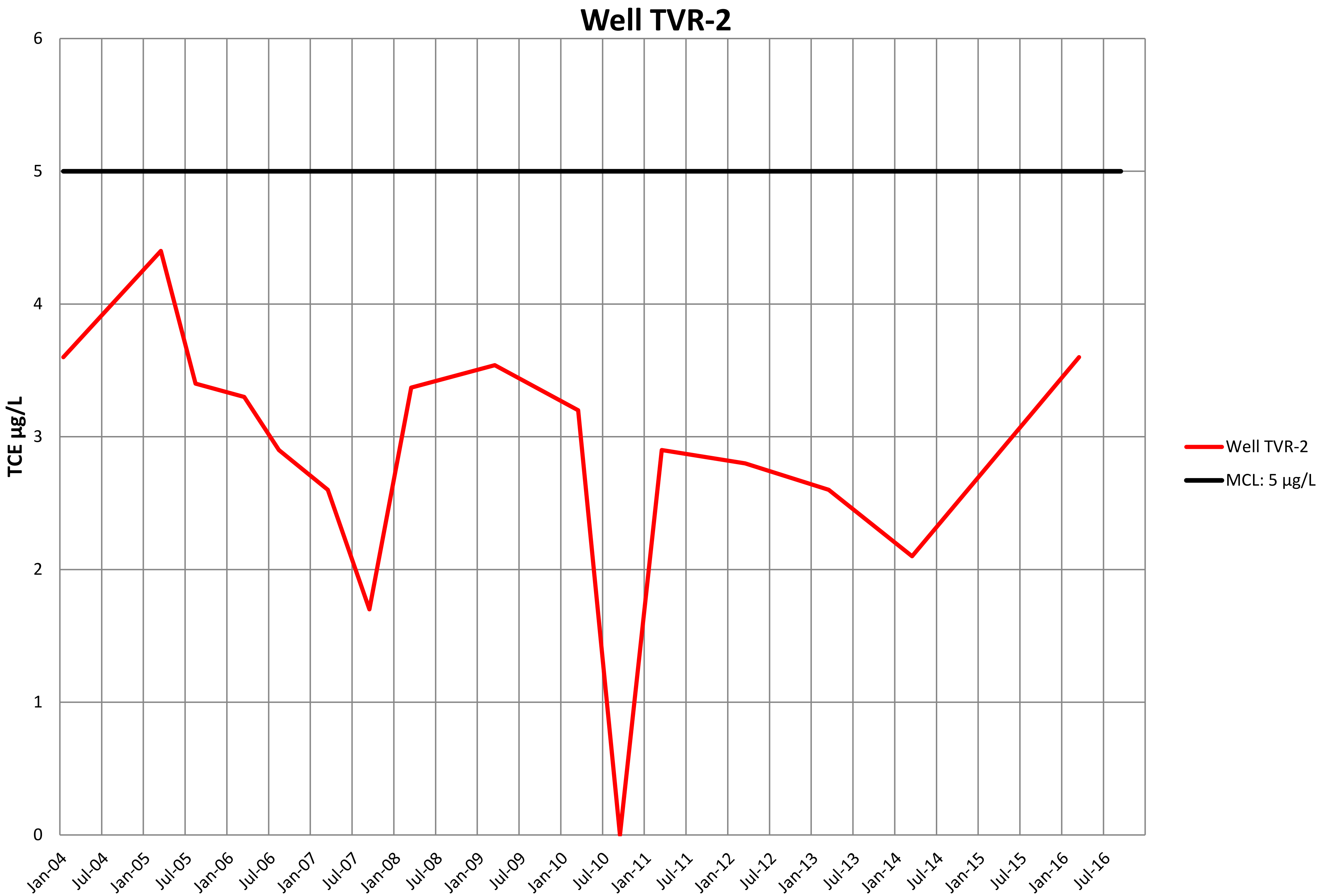
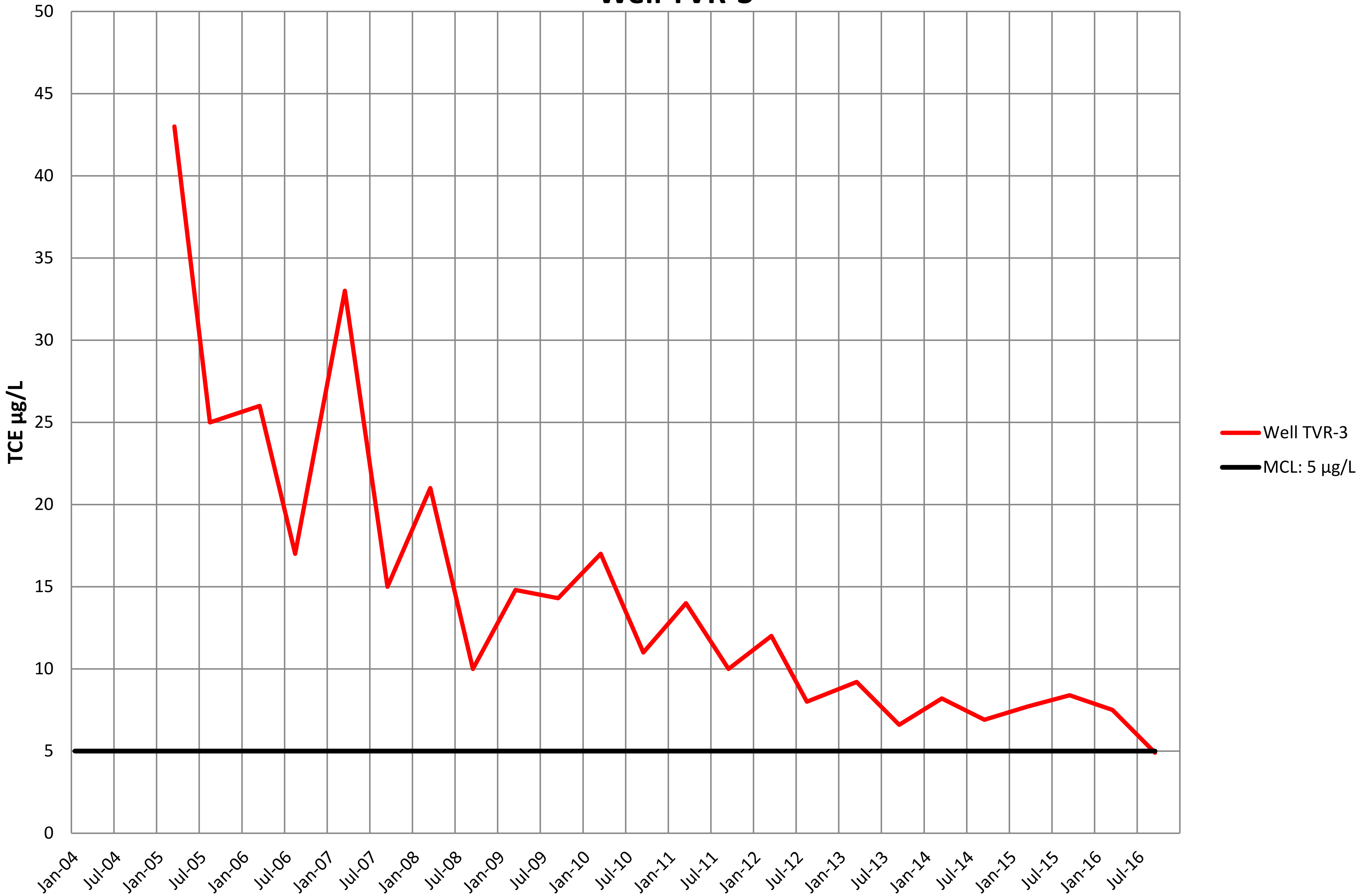


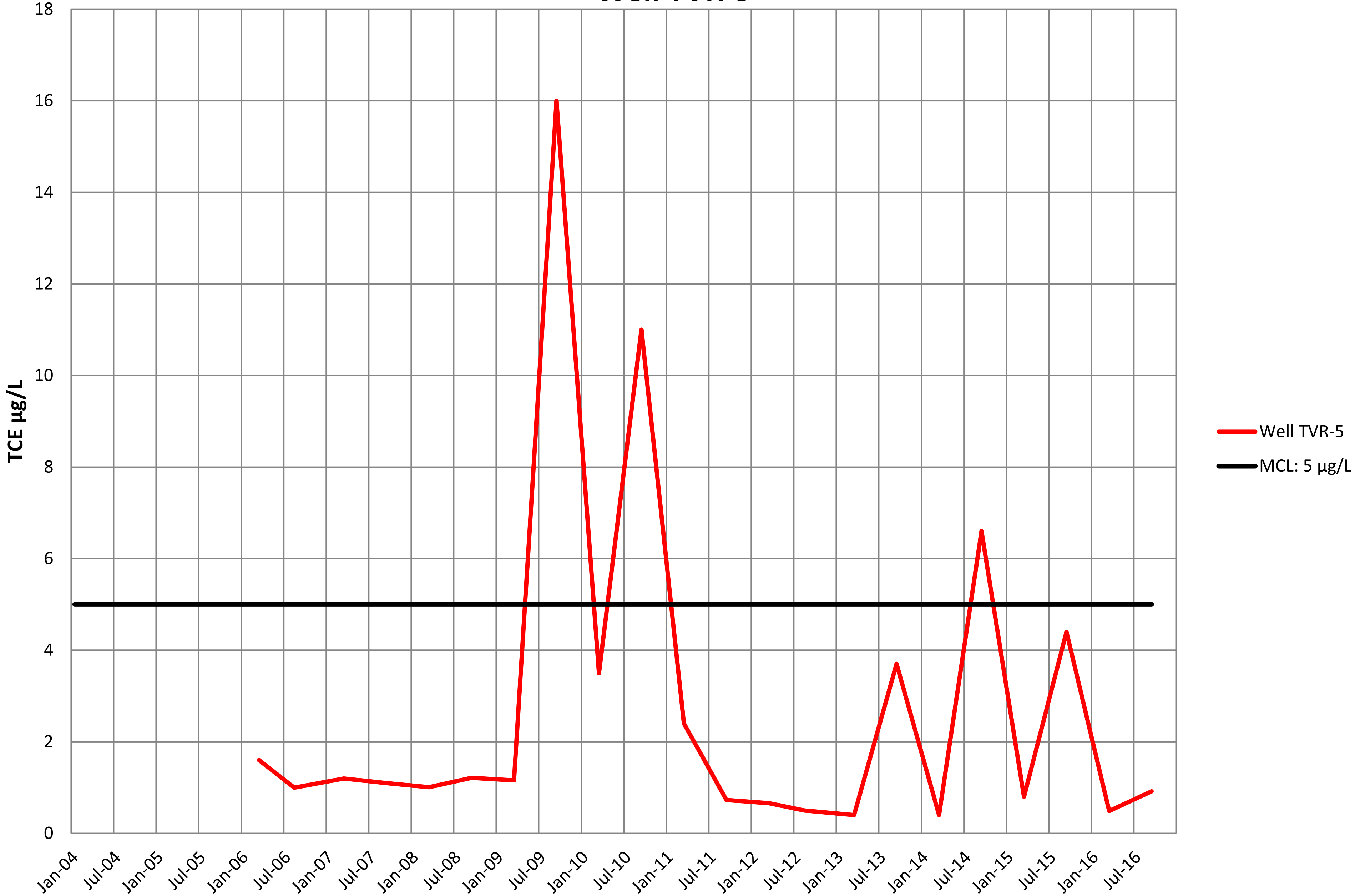

Well TVR-1
TCE µg/L
0
2
4
6
8
10
12
14
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10
Jan-11
Jul-11
Jan-12
Jul-12
Jan-13
Jul-13
Jan-14
Jul-14
Jan-15
Jul-15
Jan-16
Jul-16
Well TVR-1
MCL: 5 µg/L

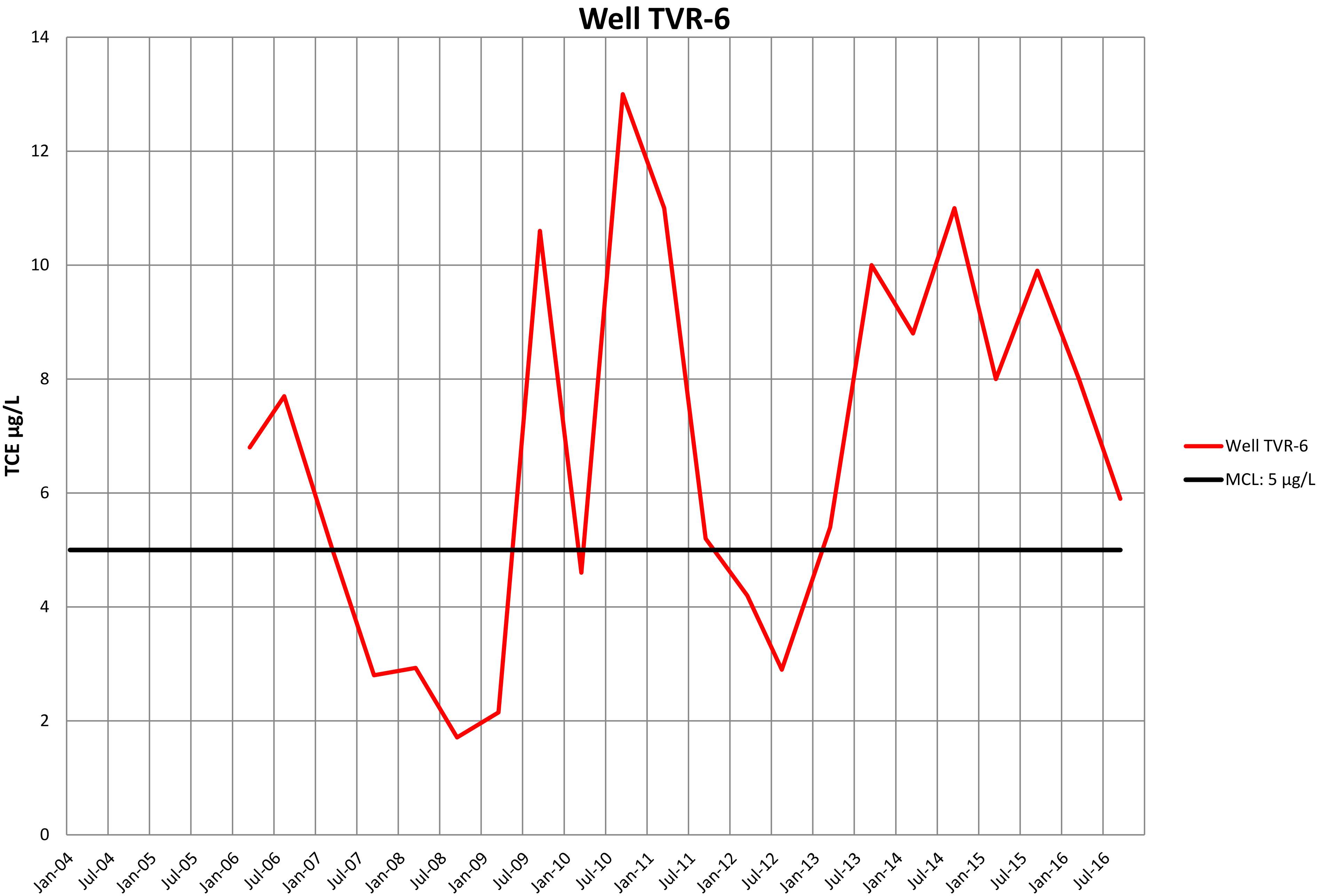

Well TVR-2
TCE µg/L
0
1
2
3
4
5
6
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10
Jan-11
Jul-11
Jan-12
Jul-12
Jan-13
Jul-13
Jan-14
Jul-14
Jan-15
Jul-15
Jan-16
Jul-16
Well TVR-2
MCL: 5 µg/L

Well TVR-3

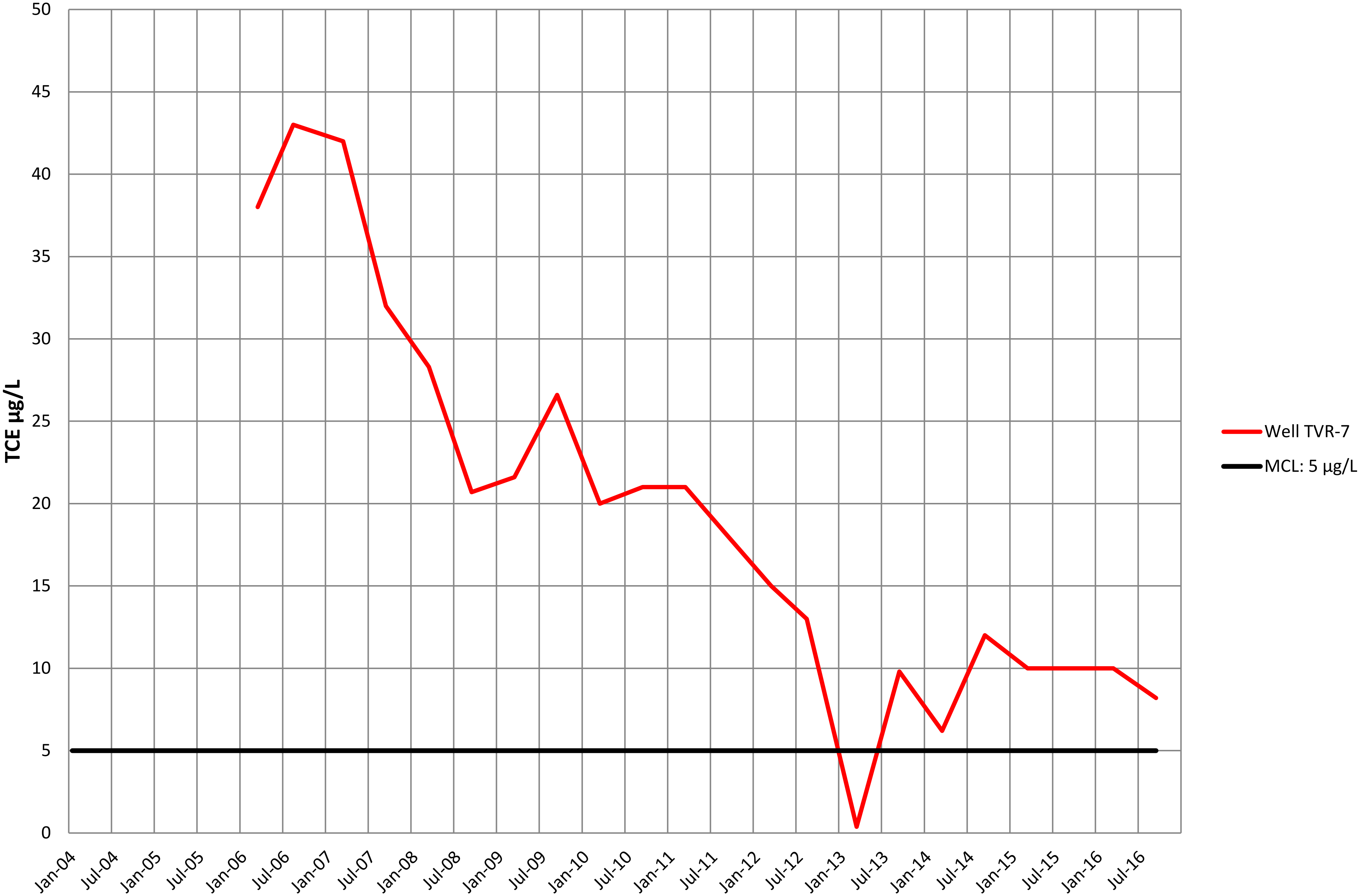

50
45
40
35
30
25
20
15
10
5
0
TCE µg/L
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10
Jan-11
Jul-11
Jan-12
Jul-12
Jan-13
Jul-13
Jan-14
Jul-14
Jan-15
Jul-15
Jan-16
Jul-16
Well TVR-3
MCL: 5 µg/L

Well TVR-5


18
16
14
12
10
8
6
4
2
0
TCE µg/L
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10
Jan-11
Jul-11
Jan-12
Jul-12
Jan-13
Jul-13
Jan-14
Jul-14
Jan-15
Jul-15
Jan-16
Jul-16
Well TVR-5
MCL: 5 µg/L


Well TVR-6
TCE µg/L
0
2
4
6
8
10
12
14
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10
Jan-11
Jul-11
Jan-12
Jul-12
Jan-13
Jul-13
Jan-14
Jul-14
Jan-15
Jul-15
Jan-16
Jul-16
Well TVR-6
MCL: 5 µg/L

Well TVR-7


TCE µg/L
50
45
40
35
30
25
20
15
10
5
0
Jan-04
Jul-04
Jan-05
Jul-05
Jan-06
Jul-06
Jan-07
Jul-07
Jan-08
Jul-08
Jan-09
Jul-09
Jan-10
Jul-10
Jan-11
Jul-11
Jan-12
Jul-12
Jan-13
Jul-13
Jan-14
Jul-14
Jan-15
Jul-15
Jan-16
Jul-16
Well TVR-7
MCL: 5 µg/L

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