FS65F 1.5.3 V1

004536.0001-01TTO

SITE INSPECTION
Freeman Ground Water Contamination
Freeman, Washington

Contract Number: EP-S7-13-07
Technical Direction Document Number: 13-07-0005

July 2014

Prepared for:

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
1200 Sixth Avenue
Seattle, Washington 98101

Prepared by:

ECOLOGY AND ENVIRONMENT, INC.
720 Third Avenue, Suite 1700
Seattle, Washington 98104

©2014 Ecology and Environment, Inc.

USEPA SF
1421775

This page intentionally left blank.

Table of Contents

Section		Page
1	**Introduction**	**1-1**
2	**Site Background**	**2-1**
2.1	Site Location	2-1
2.2	Site Description	2-1
2.3	Ground Water Contamination	2-2
2.4	Carbon Tetrachloride Characteristics	2-3
2.5	Uses of Carbon Tetrachloride	2-3
2.6	Previous Investigations	2-4
2.6.1	Washington State Department of Health, Technical Assessment 2008	2-5
2.6.2	Washington State Department of Ecology, Summary Report 2012	2-5
2.6.3	GeoEngineers, Inc., Feasibility Evaluation, Production Well Evaluation – Carbon Tetrachloride Contamination 2013	2-6
2.6.4	Ecology and Environment, Inc., Preliminary Assessment 2013	2-7
2.7	Freeman School District Sanitary Waste Water Treatment System	2-8
2.8	Underground Storage Tanks	2-9
2.9	EPA Site Visit	2-10
2.10	Summary of SI Investigation Locations	2-13
2.10.1	Potential Sources	2-13
2.10.2	Targets	2-13
3	**Field Activities and Analytical Protocol**	**3-1**
3.1	Sampling Methodology	3-2
3.1.1	Subsurface Soil Sampling	3-2
3.1.2	Well Sampling	3-2
3.2	Analytical Protocol	3-3
3.3	Utility Locate Activities	3-4
3.4	Global Positioning System	3-4
3.5	Investigation-Derived Waste	3-4
4	**Quality Assurance/ Quality Control**	**4-1**
4.1	Satisfaction of Data Quality Objectives	4-1
4.2	QA/QC Samples	4-2
4.3	Project-Specific Data Quality Objectives	4-2

Table of Contents (cont.)

Section **Page**

4.3.1 Precision 4-2
4.3.2 Accuracy 4-2
4.3.3 Completeness 4-2
4.3.4 Representativeness 4-3
4.3.5 Comparability 4-3
4.4 Laboratory QA/QC Parameters 4-3
4.4.1 Holding Times/Temperatures/Sample Containers 4-3
4.4.2 Laboratory Blanks 4-3
4.4.3 Trip Blanks 4-3
4.4.4 Rinsate Blanks 4-3

5 Analytical Results Reporting and Background/Upgradient Samples 5-1
5.1 Analytical Results Evaluation Criteria 5-1
5.2 Background Samples 5-1
5.2.1 Background Soil Samples 5-2
5.2.1.1 Sample Location 5-2
5.2.1.2 Sample Results 5-2
5.2.2 Background Ground Water Sample 5-2
5.2.2.1 Sample Location 5-2
5.2.2.2 Sample Results 5-2
5.2.3 Upgradient Samples 5-2
5.2.3.1 Sample Location 5-3
5.2.1.2 Sample Results 5-3

6 Potential Sources 6-1
6.1 Cenex Harvest States Grain Handling Facility Soils 6-1
6.1.1 Sample Locations 6-1
6.1.2 Sample Results 6-3
6.1.2.1 Field Laboratory 6-3
6.1.2.2 Fixed Laboratory 6-3
6.1.3 Volume of Contaminated Soil 6-4

7 Migration/Exposure Pathways and Targets 7-1
7.1 Ground Water Migration Pathway 7-1
7.1.1 Geologic Setting 7-1
7.1.2 Aquifer System 7-1
7.1.3 Drinking Water Targets 7-3
7.1.4 Sample Locations and Results 7-4
7.1.5 Down-Hole Camera Survey 7-4

Table of Contents (cont.)

Section		Page
8	**Summary and Conclusions**	**8-1**
	8.1 Sources	8-2
	8.2 Targets	8-2
	8.3 Conclusions	8-3
9	**References**	

Appendices

A	**Photographic Documentation**
B	**Sample Plan Alteration Form**
C	**Global Positioning System Coordinates**
D	**Chain-of-Custody Documentation**
E	**Data Validation Memoranda**
F	**Soil Boring Logs**

This page intentionally left blank.

List of Tables

Table

Table 2-1 Freeman School District Drinking Water Well Analytical Results

Table 3-1 Sample Analysis Summary

Table 3-2 Sample Coding

Table 3-3 Investigation-Derived Waste Samples Analytical Results Summary

Table 6-1 Field Laboratory Carbon Tetrachloride Soil Sample Analytical Results

Table 6-2 Fixed Laboratory Soil Sample Analytical Results Summary

Table 6-3 Field vs. Fixed Laboratory Carbon Tetrachloride Soil Sample Results

Table 7-1 Ground Water Drinking Water Population

Table 7-2 Ground Water Analytical Results Summary

This page intentionally left blank.

List of Figures

Figure

Figure 2-1 Site Vicinity Map

Figure 2-2 Site Map

Figure 2-3 Wells Sampled by GeoEngineers, Inc. in January 2013

Figure 3-1 Soil Boring Location Map

Figure 3-2 Well Sample Location Map

Figure 7-1 4-Mile TDL Map

This page intentionally left blank.

List of Abbreviations and Acronyms

%R	Percent Recovery
(r)	Correlation Coefficient
µg/kg	Micrograms per Kilogram
µg/L	Micrograms per Liter
bgs	Below Ground Surface
CERCLA	Comprehensive Environmental Response, Compensation, and Liability Act
CHS/Primeland	CHS Inc. d/b/a Primeland Cooperatives
CLP	Contract Laboratory Program
CRQL	Contract Required Quantitation Limit
DQO	Data Quality Objective
E & E	Ecology and Environment, Inc.
Ecology	Washington State Department of Ecology
EPA	United States Environmental Protection Agency
gpm	Gallons per Minute
GC/MS	Gas Chromatograph/Mass Spectrometric
GPS	Global Positioning System
HDPE	High-Density Polyethylene
IDW	Investigation-Derived Waste
MCL	Maximum Contaminant Level
MS/MSD	Matrix Spike/Matrix Spike Duplicate
NPDES	National Pollutant Discharge Elimination System
PA	Preliminary Assessment
PM	Project Manager
PVC	Polyvinyl Chloride
QA	Quality Assurance
QC	Quality Control
RPD	Relative Percent Difference
SI	Site Inspection
SOW	Statement of Work
SQAP	Sampling and Quality Assurance Plan
START	Superfund Technical Assessment and Response Team
TDL	Target Distance Limit
TM	Task Monitor
UPRR	Union Pacific Railroad
USDA	United States Department of Agriculture
UST	Underground Storage Tank
VOC	Volatile Organic Compound

List of Abbreviations and Acronyms (cont.)

WAC	Washington Administrative Code
WDOH	Washington State Department of Health
yds^3	Cubic Yards

1 Introduction

Ecology and Environment, Inc. (E & E) was tasked by the United States Environmental Protection Agency (EPA) to provide technical support for completion of a Site Inspection (SI) at the Freeman Ground Water Contamination site in Freeman, Washington. E & E completed SI activities under Technical Direction Document Number 13-07-0005, issued under EPA, Region 10, Superfund Technical Assessment and Response Team (START)-IV, Contract Number EP-S7-13-07.

The specific goals for the Freeman Ground Water Contamination SI, identified by the EPA, are to:

- Determine the potential threat to public health or the environment posed by the site;
- Determine the potential for a release of hazardous constituents into the environment; and
- Determine the potential for placement of the site on the National Priorities List.

The SI does not include extensive or complete site characterization, contaminant fate determination, or quantitative risk assessment. Work conducted for this SI included reviewing existing site information, determining regional characteristics, collecting receptor information within the range of site influence, executing a sampling plan, and producing this report. The report is organized as follows:

- Section 1, Introduction – Authority for performance of this work, goals for the project, and summary of the report contents;
- Section 2, Site Background – Site description, site operations and waste characteristics, and a summary of investigation locations;
- Section 3, Field Activities and Analytical Protocol – Summary of the field effort;
- Section 4, Quality Assurance/Quality Control (QA/QC) – Summary of the laboratory data;
- Section 5, Analytical Results Reporting and Background/Upgradient Samples – Discussion of results reporting criteria and background/upgradient sample locations and analytical results;
- Section 6, Potential Sources – Discussion of site sources, sample locations, and analytical results;
- Section 7, Migration/Exposure Pathways and Targets – Discussion of the migration/exposure pathways, sample locations, and analytical results;

- Section 8, Summary and Conclusions – Summary of the investigation and recommendation for the site based on the information gathered during the investigation; and
- Section 9, References – Alphabetical listing of the references cited throughout the text.

2 Site Background

This section describes the background of the site including location, description, ownership history, operations and source characteristics, previous investigations, and a summary of the site investigation locations.

2.1 Site Location

Site Name:	Freeman Ground Water Contamination
CERCLIS ID Number:	WAN001003081
Site Address:	No Street Address Freeman, WA 99015
Latitude:	47° 31' 10.30" (Out-of-Use Freeman School District Well)
Longitude:	-117° 11' 39.47" (Out-of-Use Freeman School District Well)
Legal Description:	Township 23 North, Range 44 East, Section 1
County:	Spokane
Congressional District:	5

2.2 Site Description

The Freeman Ground Water Contamination site is a carbon tetrachloride ground water plume located in Freeman, Washington, a rural town in Spokane County (Figure 2-1). Since January 2001, carbon tetrachloride has been detected in samples collected from the Freeman School District's primary water supply well.

The land surface in the area of the plume is at an approximate elevation of between 2,590 to 2,610 feet above mean sea level. The town of Freeman has few residences and is dominated by the Freeman School District campus (Figure 2-2). The Freeman Store is present on the north end of town. An active Cenex Harvest States grain handling facility with 11 steel grain silos/bins and one steel grain elevator is present between State Highway 27, and an active Union Pacific Railroad (UPRR) railway line that roughly parallels the highway. The Cenex Harvest States grain handling facility is situated on property currently owned by UPRR. A former clay borrow pit known as the Old Freeman Clay Pit is located approximately 0.5 mile northeast of the Cenex Harvest States grain handling facility, and a former brick kiln is present on the southeastern end of town. The Old Freeman Clay Pit is situated on property currently owned by Mutual Materials Company. Beyond these uses, land near Freeman is primarily used for agricultural production.

The Freeman School District campus contains a high school, middle school, elementary school and pre-school on approximately 52 acres of land. North/south trending Jackson Road splits the property. The pre-school, elementary school, middle school, and the primary drinking water well for the campus are on the eastern portion of the parcel; while the high school, sports field, running track, drinking water storage tanks, and sanitary waste water lagoons (Lake Lally) are on the western portion of the parcel (Figure 2-2).

2.3 Ground Water Contamination

In January 2001, carbon tetrachloride was detected at 0.7 micrograms per liter (μg/L) in the primary water supply well operated by the Freeman School District. This well is used as the sole source of potable water to the Freeman School District campus and is used to irrigate the district's campus grounds. In April 2008, continued monitoring of this well revealed the presence of carbon tetrachloride at a concentration of 7.78 μg/L, exceeding the EPA Safe Drinking Water Act Maximum Contaminant Level (MCL) of 5 μg/L. Since that date (April 2008), this MCL has been exceeded on multiple occasions: in March 2012 (5.9 μg/L); in April 2012 (7.2 μg/L); in December 2012 (8.0 μg/L); in January 2013 (7.6 μg/L and 22.0 ug/L); and in April 2013 (9.3 μg/L). All sample results for this well from 1992 to 2013 are provided in Table 2-1. Carbon tetrachloride concentrations tend to be higher at times when irrigation of the district's grounds is not being conducted. (Leinart 2012; WDOH 2013; E & E 2014a; GeoEngineers 2013)

In May 2012, the Freeman School District analyzed water from a former residential well on property that had been acquired by the school district in anticipation of a campus expansion. This out-of-use Freeman School District Well (aka (b) (6) Well) was sampled by the school district to determine whether the well could be used to supplement the campus' water supply. The well is located approximately 0.25 mile north of the primary school district well and is at an elevation that is approximately 25 feet higher than the primary school district well (Figure 2-2). Water from the out-of-use Freeman School District well contained carbon tetrachloride at 48.1 μg/L. The former residence associated with this well and outbuildings on this property have been demolished and this area is now a parking lot. (Leinart 2012)

In November 2012, state and local authorities requested that EPA conduct an investigation of ground water contamination at the Freeman School.

In February 2013, GeoEngineers, Inc. completed a draft feasibility study for the Freeman School District to identify and prioritize alternatives for mitigating observed carbon tetrachloride contamination present in the district's primary drinking water well. The study included sampling of several ground water wells, a discussion of which is included in Section 2.6.3.

2.4 Carbon Tetrachloride Characteristics

Carbon tetrachloride is a manufactured chemical that does not occur naturally. This clear liquid evaporates easily and has a sweet smell that can be detected at low levels (i.e., 10 parts per million in air). It is not known whether people can taste carbon tetrachloride, and if so, at what level. Synonyms for this chemical include carbon chloride, methane tetrachloride, perchloromethane, tetrachloroethane, and benziform (ATSDR 2005).

Upon entering the environment, carbon tetrachloride volatilizes quickly in the air where it can remain for several years before breaking down into its degradation products. Carbon tetrachloride does not easily adhere to soil particles; instead, the chemical either evaporates into the air or enters the soil and/or ground water (Misiorowski and Eagle 2007). Carbon tetrachloride generally does not easily dissolve in water, and at normal temperature and pressure this chemical is denser than water (Misiorowski and Eagle 2007; ATSDR 2005). Carbon tetrachloride is a stable chemical that degrades very slowly; therefore, as a consequence of releases from human activities, a gradual accumulation of carbon tetrachloride has occurred in the environment (ATSDR 2005). When carbon tetrachloride enters the ground water, this chemical will migrate downward until it encounters a geologic barrier that prevents further vertical movement. At this point, the chemical will continue to break down at a slow rate and may persist in various constituent forms for many years, decades, or longer (Misiorowski and Eagle 2007).

2.5 Uses of Carbon Tetrachloride

Carbon tetrachloride is a multi-purpose chemical used as a degreasing solvent for industrial and domestic purposes, a fire suppressant, a cleaning agent for dry cleaning, in making nylon, and, for many years, as a fumigant in grain operations throughout the Midwest (Misiorowski and Eagle 2007). Due to its carcinogenic characteristics, most of these uses were discontinued in the mid-1960s (ATSDR 2005).

In 1911, carbon tetrachloride was recommended as a substitute insecticide for carbon disulfide and, by the end of World War I, better equipment and technology increased its use as an insecticide and pesticide (Misiorowski and Eagle 2007). Carbon tetrachloride became the most widely used liquid fumigant to kill insects in grain until 1986, when its use for this purpose was cancelled by the EPA (ATSDR 2005; DHHS 2011; Storey et al. 1981). Until 1986, the largest source of carbon tetrachloride releases to the environment were from its use as a grain fumigant. It has been estimated that 28 million pounds of carbon tetrachloride were used as a fumigant in 1978 (ATSDR 2005).

A mixture containing a 1:4 ratio of carbon disulfide to carbon tetrachloride, commonly known as 80:20 or 80-20 fumigant, had been used to fumigate grain (Storey et al. 1981). Some formulations of 80-20 fumigant may also have contained a minor amount of ethylene dibromide, also known as 1,2-dibromoethane. A degradation product of carbon tetrachloride is chloroform

(EPA 2010). The 80-20 formulation was developed to reduce the flammability and explosive hazards of straight carbon disulfide. In grain elevator storage, the formulation was generally applied during bin loading with a layering method in which it was pumped or poured over the grain between drafts from 10 to 20 feet deep (Storey et al. 1981).

Carbon tetrachloride has been known to enter the environment due to fumigation or direct application of the 80-20 mixture and by its use in grain elevator boots to control rodents and pests. This chemical also was applied directly on the ground at gopher holes and around building foundations to kill mice, rats, and other pests. Unintended releases of carbon tetrachloride have occurred via spills and leaks from various transporting devices and equipment, such as rail cars, delivery trucks, leaky hoses, and onsite storage tanks, and the improper disposal of excess product by simply pouring it on the ground. (Misiorowski and Eagle 2007)

EPA Region 7, in conjunction with the United States Department of Agriculture (USDA), has conducted studies regarding carbon tetrachloride contamination at grain storage sites in four states (Nebraska, Kansas, Missouri, and Iowa). As of 2007, the USDA had tested 829 facilities, and 130 of those facilities had detections of carbon tetrachloride in the water samples. In fact, 47% of water samples containing carbon tetrachloride had concentrations above the EPA MCL. (Misiorowski and Eagle 2007)

As an example, the Garvey Elevator Superfund Site in Hastings, Nebraska, had releases of carbon tetrachloride to the environment from breaks in distribution lines running between a large-capacity aboveground 80-20 fumigant storage tank and grain silos. The releases at this facility resulted in carbon tetrachloride soil contamination as well as a 3-mile-long ground water plume. At this particular facility, carbon tetrachloride in ground water was detected at concentrations up to 29,943 µg/L in a sample collected from a monitoring well near the grain elevator. Further, carbon tetrachloride was found to be present in soil gas within the unsaturated zone (i.e., above the water table) across approximately one-third of the 22-acre active portion of the site. Carbon tetrachloride was also detected in a City of Hastings municipal well, located approximately 1,500 feet from the Garvey Elevator Superfund Site, at a concentration of 5 µg/L. The ground water surface in the area of this site (i.e., static water level) was approximately 115 feet below ground surface (bgs), demonstrating the depths that carbon tetrachloride had migrated through the soil column (EPA 2010).

Carbon tetrachloride was not only used at commercial grain storage operations. During its height of use, 80-20 was also a primary fumigant for all types and sizes of privately owned farms throughout the country (Misiorowski and Eagle 2007).

2.6 Previous Investigations

Since the discovery of carbon tetrachloride in ground water in the primary Freeman School District well, several investigations have taken place to identify a likely source(s) of this contamination. These investigations did not include

environmental sampling. In addition, one study was conducted to recommend a means of supplying uncontaminated water to the Freeman School District campus. This study included sampling of several ground water wells. Each investigation/study is discussed below.

2.6.1 Washington State Department of Health, Technical Assessment 2008

In May 2008, the Washington State Department of Health (WDOH) completed a Technical Assistance Consultation concerning the potential health hazards posed by the presence of carbon tetrachloride in the Freeman School District drinking water. The consultation was conducted in response to a notification by the Freeman School District to the WDOH that carbon tetrachloride had been detected in their well at a concentration that exceeded the MCL. For the consultation, the WDOH determined that the concentrations of carbon tetrachloride present in this water would not result in any non-cancer adverse health effects, and that the estimated cancer risk ranged from insignificant to very low. Based on these findings, the WDOH concluded that no apparent public health hazard existed for students, teachers, and other employees exposed to carbon tetrachloride present in Freeman School District drinking water. (O'Garro 2008)

2.6.2 Washington State Department of Ecology, Summary Report 2012

In August 2012, the Washington State Department of Ecology (Ecology) completed a report summarizing the history of known carbon tetrachloride ground water contamination in the city of Freeman (Leinart 2012). This report also identified businesses and features that were considered potential sources for this contamination. The report categorized the likelihood of each feature being a source from high to low. These features, and their presumed likelihood of being a source of contamination, were as follows (Leinart 2012):

- **High Likelihood –**
  - Cenex Harvest States, Freeman (formerly known as Rockford Grain Growers).
- **Medium Likelihood –**
  - UPRR main line and rail siding located approximately 300 feet east of the out-of-use Freeman School District well.
  - The abandoned Old Freeman Clay Pit located approximately 0.15 mile northeast of the out-of-use Freeman School District well, which may have been used for illegal dumping or disposal of carbon tetrachloride.
  - Freeman School District facilities that may have historically used carbon tetrachloride in welding/metal fabrication and automotive workshops, the school bus service/maintenance shop, and/or laboratory classrooms.

- **Low Likelihood –**
  - Freeman School District underground storage tanks (USTs).
  - Freeman School District surface water outfall.
  - Freeman Store automotive gasoline service station UST.
  - Former brick kiln.
  - State Route 27.
  - Former shops and outbuildings at the out-of-use Freeman School District former residential property.

Features assigned a high or medium likelihood were those that are known to be associated with the use of carbon tetrachloride, those with a reasonable opportunity for improper waste disposal or storage practices, and/or those of sufficient scale to have possibly caused either a large release of carbon tetrachloride or ongoing small releases. Features assigned a low likelihood were those that were small in scale and that would not ordinarily use, store, or dispose carbon tetrachloride in a manner, or in quantities, that could result in regional aquifer contamination. At the time of this report, no specific data or information had been uncovered by Ecology documenting the use, storage, or disposal of carbon tetrachloride in the Freeman area. (Leinart 2012)

2.6.3 GeoEngineers, Inc., Feasibility Evaluation, Production Well Evaluation – Carbon Tetrachloride Contamination 2013

In February 2013, GeoEngineers, Inc. completed a draft feasibility study for the Freeman School District that evaluated alternatives for addressing carbon tetrachloride contamination present in the district's primary drinking water well (termed a production well in the report). For the study, five wells were sampled (Figure 2-3). These included the school district's primary drinking water supply well, the out-of-use Freeman School District well (well W26), a former domestic well located in the southeast portion of the Freeman School District campus (well W20), a private well located southeast of the campus (well W30), and the Freeman Store well. Two of these wells contained detectable concentrations of volatile organic compounds (VOCs). These were the school district's primary drinking water supply well and well W20. Carbon tetrachloride was present in these wells at 22.0 µg/L (school district's primary drinking water supply well) and 21.2 µg/L (well W20). Additionally, chloroform was present in these two wells at 1.28 and 2.04 µg/L, respectively. No other VOCs were detected. Neither carbon tetrachloride nor chloroform were present in the remaining three wells at concentrations above the method reporting limit of 1 µg/L (including the out-of-use Freeman School District well [well W26], which previously had a detection of carbon tetrachloride above the MCL in May 2012). GeoEngineers, Inc. speculated that the difference in carbon tetrachloride concentrations in the out-of-use Freeman School District well between the May 2012 sampling and the

sampling in January 2013 may have been the result of differences in sampling techniques (such as purging the well before sampling), the depth of the water sampled within the well, the season sampling occurred, or plume migration. (GeoEngineers 2013)

The feasibility study explored three basic alternatives:

1. Providing an alternative water supply source;
2. Altering the design of the current water supply well to isolate the contaminated water zone from deeper uncontaminated water and draw water from that deeper zone; and
3. Treating water from the existing water supply well. (GeoEngineers 2013)

Of these alternatives, installing a new water supply well was recommended due to lower costs as compared to the other alternatives (GeoEngineers 2013).

2.6.4 Ecology and Environment, Inc., Preliminary Assessment 2013

In April 2013, E & E completed a Preliminary Assessment (PA) on behalf of the EPA for the Freeman Ground Water Contamination site to determine whether the site is releasing, or has the potential to release, hazardous substances, pollutants, or contaminants into the environment and whether it requires additional investigation and/or response action that is authorized by the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). (E & E 2013)

The PA summarized the site setting, known contaminants, potential sources, and previous investigations that had been conducted in the area in relation to the carbon tetrachloride ground water plume. The PA stated that a potential source of the carbon tetrachloride ground water contamination was the Cenex Harvest States grain handling facility, though the use of carbon tetrachloride at this location had not yet been confirmed. The PA also stated that other, less likely, potential sources of carbon tetrachloride in the area included private grain handling facilities (if present), the UPRR main line and rail siding, the Old Freeman Clay Pit, potential historic use of this chemical at Freeman School District facilities (e.g., welding/metal fabrication and automotive workshops, the school bus service/maintenance shop, and/or laboratory classrooms), a former brick kiln, State Route 27, and former shops and outbuildings associated with the former residence associated with the out-of-use Freeman School District well. USTs in the Freeman area were confirmed to be associated solely with petroleum products and for this reason were not considered to be a potential source of carbon tetrachloride contamination. (E & E 2013)

The PA recommended further investigation of the Freeman Ground Water Contamination site under CERCLA (E & E 2013).

2.7 Freeman School District Sanitary Waste Water Treatment System

The Freeman School District operates a sanitary waste water treatment system to manage waste water from the school campus under National Pollutant Discharge Elimination System (NPDES) permit number WA004540-3. The treatment facility was built in 1996 and consists of an aerated lagoon, a facultative lagoon, a chlorine disinfection basin, and four subsurface flow-type constructed wetlands. Both lagoons are lined with 60 mil high-density polyethylene (HDPE) liners. Waste water is stored in the lagoons for most of the school year (fall, winter, and spring). After the students leave for summer break, the waste water is manually released via a single surface water outfall to the constructed wetlands located approximately 1,000 feet to the southeast in a manner that keeps the wetland plants alive until the school reopens in the fall. Two wetlands were originally designed (western and eastern) (Figure 2-2), but only the eastern wetland is in use. (Nichols 2012)

The school district has not chlorinated the waste water effluent since the treatment system went online in 1996 because fecal coliform counts at the wetlands have been historically low. Outflow from the constructed wetlands is to a natural drainage channel that flows seasonally and becomes a ditch that runs south along Jackson Road (Figure 2-2). This ditch meets Little Cottonwood Creek and is part of its headwaters. Little Cottonwood Creek discharges into Rock Creek (Figure 2-1) which is a tributary of Hangman Creek. Hangman Creek is a tributary of the Spokane River. (Nichols 2012)

Sediment solids are periodically removed from the sanitary waste water lagoons. These solids are disposed as per the school district's biosolids permit BA004540-3, issued by Ecology. (Nichols 2012)

The NPDES permit has required effluent monitoring for biological oxygen demand, total suspended solids, fecal coliforms, and pH, and a one-time sampling requirement for select metals (cadmium, chromium, copper, lead, mercury, and zinc). Monitoring data indicate that the permit limits for these parameters are generally met, and are only infrequently exceeded. Additional requirements for monitoring waste water treatment system effluent will begin in 2014. These will be for the following parameters: dissolved oxygen, total phosphorus, total Kjeldahl nitrogen, ammonia, nitrate, and temperature. The school district has not been required to monitor effluent for chlorinated compounds since these contaminants, as well as other possible contaminants, are not expected to be present. (Nichols 2012)

In 2008, approximately 20 tears/punctures along the perimeters, or edges, of the waste water lagoons HDPE liners were repaired. The current NPDES permit has a requirement for a comprehensive leak detection survey of the liners in 2017, the last year of the permit. (Nichols 2012)

Storm water on campus is not directed to the sanitary waste water treatment system. Instead, this water either infiltrates the ground or gravity flows to swales (Lally 2013).

Due to the construction parameters of the sanitary waste water treatment system, it appears to be an unlikely source of carbon tetrachloride contamination to ground water.

2.8 Underground Storage Tanks

Current and former USTs documented in the Freeman area include the following:

- **Freeman School District** – A total of five current or former USTs, including:
  - Two 10,000-gallon heating fuel tanks installed in 1964 and removed in 1996 (Tank IDs #9360 and #9784) (Ecology 2013a).
  - One 2,000-gallon leaded gasoline tank installed in 1957 and removed in 1995 (Tank ID #33964) (Ecology 2013a). Approximately 37 tons of petroleum contaminated soil were removed from around the tank and disposed at a municipal landfill. The tank was in good condition when removed. Soil contamination was suspected of being due to a leaking fuel dispenser or from activities associated with fueling vehicles (BRA 1995).
  - One 12,000-gallon diesel tank installed in 1997 and removed in 2007 (Tank ID #5314) (Ecology 2013a). Petroleum-contaminated soil also was associated with this tank. Again, because the tank itself was in good condition, soil contamination was suspected of being due to a leaking fuel dispenser or from activities associated with fueling vehicles (Ecology 2007).
  - One new two compartment tank (Tank ID #619569) with one 12,000-gallon diesel compartment and one 3,000-gallon compartment for other petroleum substances. This tank was installed in 2007 adjacent to the Tank #5314 excavation. This tank is still in use (Ecology 2013a).
- **Freeman Store (a/k/a Freemen Enterprises Northwest, LLC)** – Two former sets and one new set of USTs, as follows:
  - Older removed USTs with no known date of installation or date of removal (Tank IDs not known) (Rob's Demolition 1998).
  - Two 3,000-gallon gasoline tanks (one leaded and one unleaded; Tank IDs not known) that were installed in 1981 and removed in 1998 (Ecology 2013a). The tanks were slightly- to moderately-corroded, but free of holes at the time of removal. Soil around the tank fill sites was stained and had a petroleum odor. Some of this soil was excavated and stockpiled onsite (Rob's Demolition 1998). The final outcome of this soil was not

recorded; however, on August 30, 2011, Ecology issued a No Further Action letter regarding this removal action (Ecology 2011).

- One operational three compartment UST (Tank ID 100547) installed in 1998. The compartments consist of one 6,000-gallon unleaded gasoline compartment, one 10,000-gallon unleaded gasoline compartment, and one 6,000-gallon diesel compartment (Ecology 2013a).

As outlined above, all of the Freeman area USTs are associated with petroleum products. None were found to be associated with fumigant products generally or carbon tetrachloride specifically.

2.9 EPA Site Visit

As part of the SI, the EPA conducted a site visit on November 20, 2013. The site visit included touring the Freeman School District campus and the Cenex Harvest States grain handling facility. Photographs taken during the site visit are provided in Appendix A. Attendees at each tour included the following:

- Freeman School District Grounds –
  - Kirk Lally, Freeman School District, Facilities Manager;
  - Monica Tonel, EPA, Task Monitor (TM); and
  - Linda Ader, E & E, Project Manager (PM).

- Cenex Harvest States Grain Handling Facility –
  - Nick Broemeling, Primeland Cooperatives, a Division of Cenex Harvest States, Safety and Compliance Manager;
  - Tom Herres, Primeland Cooperatives, a Division of Cenex Harvest States, Rockford Manager;
  - Mark Lenvam, Primeland Cooperatives, a Division of Cenex Harvest States, Employee;
  - Monica Tonel, EPA, TM; and
  - Linda Ader, E & E, PM.

Freeman School District Grounds - The out-of-use Freeman School District well was viewed first. Topographically, this well is on land that is approximately 20 feet higher in elevation than the Cenex Harvest States grain handling facility (Site Visit Photo #5). The well has an aboveground monument with a metal cap (Site Visit Photo #4). The cap is not secured and can simply be pulled off the monument by hand (Site Visit Photo #3). The interior 6-inch polyvinyl chloride (PVC) casing is loose in its setting and can easily be moved about within the monument (Site Visit Photos #1 and #2). Mr. Lally explained that when the well was sampled last by GeoEngineers, Inc. (i.e., in January 2013) a bailer was used to collected the water sample. Use of this sampling methodology typically results in significantly greater agitation of the water sampled, which can release VOCs to the air, lowering their concentrations in the sample. Further, bailing typically results in a sample that is collected near the top of the water table, which is less than an ideal interval for sampling compounds such as carbon tetrachloride,

which are denser than water and for this reason would more likely be present near the bottom of the well. Taken together, these factors may explain why the sample collected from this well in January 2013 did not have detectable concentrations of carbon tetrachloride, although samples from this well during earlier sampling rounds exhibited the highest concentrations of the wells sampled (see Section 2.6.3).

Next, the wellhead for the school district's primary water supply well was viewed (Site Visit Photo #6). This well is plumbed directly into the district's drinking water supply system. There are no water sample access portals or faucets at this location.

Well W20 was viewed next (Site Visit Photo #8). This well is no longer tied into a power source. An aboveground faucet is present adjacent to the wellhead (Site Visit Photo #7); however, given the lack of power to the well, the pump is not operational and no water can be retrieved from the faucet.

The school district's wellhouse and new air stripping system were viewed (Site Visit Photos #10 and #14). The air stripping system was one of several treatment technologies proposed by GeoEngineers, Inc. in their 2013 feasibility evaluation to reduce carbon tetrachloride concentrations to levels below MCLs. As explained in the feasibility evaluation, air stripping typically is conducted using packed tower aeration whereby water cascades through a tall tower or a series of trays as air is forced up through the air stripper equipment. This equipment typically consists of several trays (Site Visit Photo #11), each with numerous small holes to allow water to descend, coupled with a blower system that simultaneously forces air to rise. The concept is to strip the VOCs from the water through rigorous aeration and appropriate retention time (GeoEngineers 2013). The school district's air stripping system was placed into operation in late August or early September 2013. The system is tied into backup generators to keep the water supply consistent during power outages. Subsequent to the air stripping process and prior to entering the water distribution system, water is treated with chlorine (Site Visit Photo #12). Two water sampling portals are present in the wellhouse: one prior to air stripping and one following chlorination (Site Visit Photos #11 and #12). Treated water is stored in three 10,000-gallon aboveground tanks near the wellhouse until needed to fill school district water supply demands (Site Visit Photos #13 and #14).

Cenex Harvest States Grain Handling Facility – The Cenex Harvest States grain handling facility is on a 0.27-acre parcel of land leased by CHS Inc. d/b/a Primeland Cooperatives (CHS/Primeland) from UPRR under a 99-year lease agreement. The address of the grain handling facility is 14603 Highway 27, Freeman, Washington. CHS/Primeland purchased the grain handling facility from Rockford Grain Growers in 1993. Rockford Grain Growers, an agricultural co-operative, was the original operator of the facility, which was constructed in 1955 (Spokane County Assessor's Office 2014).

The facility is used seasonally (from approximately mid-August to mid-March) to store and sell grain. There is one grain elevator and 13 grain silos, also commonly referred to as bins. The number and volume of the silos are as follows: eight 14,000-bushel silos, two 60,000-bushel silos, one 114,000-bushel silo, and two 2,600-bushel silos. Grain is received from trucks in a scale house, which is entered from the east and exited from the west (Site Visit Photo #15). The scale house contains a scale for weighing the grain and a subterranean receiving pit into which grain is dumped after being weighed. Grain is moved from the pit to the grain bucket elevator (Site Visit Photo #16) via an encased auger, then from the elevator to the silos, and from the silos to the truck loading areas via an encased auger distribution system (Site Visit Photo #19). Formerly, grain was received by rail car, but train car use yielded to trucks in approximately 2000 or 2001 as trucking became more economical. As previously mentioned, a UPRR rail line is adjacent to the grain handling facility to the north (Site Visit Photo #17). Grain is segregated into silos by type. Grains commonly received include wheat and barley among others.

The scale house is constructed of metal siding with a metal roof and a slab on-grade foundation. The easternmost grain silo is the newest and is constructed of corrugated metal siding on a concrete slab foundation (Site Visit Photos #20 and #21). The remaining silos are constructed of bolted metal sheets resting on a single concrete pad (Site Visit Photos #23 and #24). The road entrance and drives within the property consist of packed gravel and weathered asphalt. A dust collection cyclone and hopper are present near the scale house to control grain dust (Site Visit Photo #25). Collected dust is disposed of as non-hazardous waste.

The auger system is powered by approximately 10 individual electric motors (Site Visit Photo #19). No aboveground fuel tanks, underground storage tanks, or 55-gallon drums are present at this facility. No chemicals, herbicides, or pesticides are stored at this facility.

Storing grain requires controlling insects and pests that feed on the grain. Over time, the manner in which pest control is accomplished at the Cenex Harvest States grain handling facility has changed. Since 2010, diacon has been used by spraying this compound directly onto the grain at timed intervals as the grain makes it way up the grain elevator via a small portal in the elevator at a rate of approximately 1 gallon per 32,000 bushels. This compound does not kill the insects and pests; rather, it prohibits their ability to reproduce. Approximately once per month, stored grain is tested for the presence of insects and pests. If insects or pests were present, the grain would be treated in the silos with a fumigant such as PhosFume® or PhosToxin®, both of which have aluminum sulfide as their active ingredient. Aluminum sulfide reacts with normal atmospheric moisture to liberate phosphine gas, which lethally poisons these pests; however, silo fumigation has not been required at this facility since CHS/Primeland assumed ownership.

Prior to 2010 and the use of diacon, aluminum sulfide-based fumigants were used to control for insects and pests as the grain arrived, by treating the grain as it was conveyed up the grain elevator. When aluminum sulfide-based fumigants were used, silo contents were turned over several times by moving the grain from one silo to another to ensure the fumigants were completely off-gassed. Mechanisms and compounds used to control insects and pests prior to the facility's ownership by CHS/Primeland are not known.

Since insects and pests do not reproduce at ambient temperatures below 50° Fahrenheit, reducing the temperature of the grain in the silos is also used as an aid for controlling pests. This is achieved by creating a cone-shaped depression in the stored grain by discharging some of the grain from the base of a silo to allow for maximum exposure of the grain to cool nightly temperatures.

2.10 Summary of SI Investigation Locations

Sampling under the Freeman Ground Water Contamination SI was conducted at possible sources of CERCLA–regulated substances and at areas (i.e., targets) that may have been contaminated through the migration of hazardous substances from site sources. The features identified for inspection under the SI were determined based on a site visit, interviews with workers, interviews with regulatory agencies, and a review of background information. These features are discussed below.

2.10.1 Potential Sources

Cenex Harvest States Grain Handling Facility – The use of carbon tetrachloride at the Cenex Harvest States grain handling facility has not been confirmed; however, methods used to control pests and insects prior to Cenex Harvest States' assuming ownership of the business are not known. Given the widespread use of carbon tetrachloride for these purposes beginning in 1911 and continuing until 1986 coupled with the age of the facility, which began operations in 1955, it is conceivable that carbon tetrachloride was used at this location.

2.10.2 Targets

Drinking Water – Ground water in the Freeman area is contaminated with carbon tetrachloride, which has affected the primary drinking water source for the Freeman School District. The source(s) and mechanism(s) for contaminant transport from the source to the drinking water aquifer are not known at this time. The well exhibiting the greatest measured contamination level(s) is the out-of-use Freeman School District well, located approximately 130 feet southwest and hydrologically downgradient of the Cenex Harvest States grain handling facility. This well is 140 feet deep. Yellow clay is present at this well location from 2 to 30 feet bgs, followed by broken basalt to 44 feet bgs, then hard basalt to the depth of the well. The well casing was observed to be loose during the site visit and, given this situation, it could be broken. If contamination is present at the Cenex Harvest States grain handling facility, it is possible it is migrating southwest to the out-of-use Freeman School District well, then entering the well either via

breaches in the casing, or by flowing along the casing to the drinking water aquifer.

3 Field Activities and Analytical Protocol

A sampling and quality assurance plan (SQAP) for the Freeman Ground Water Contamination SI was developed by the START prior to field sampling (E & E 2014b). The SQAP describes the sampling strategy, sampling methodology, and analytical program used to investigate potential hazardous substance sources and potential targets. With few exceptions, the SI field activities were conducted in accordance with the approved SQAP. Deviations from the SQAP are described, when applicable, in this section and in the sampling location discussions in Section 6 (source areas) and Section 7 (target areas). All deviations to this SQAP were pre-approved by the EPA TM during the field sampling event and were recorded on a Sample Plan Alteration Form (Appendix B).

The SI field sampling event was conducted from April 21, 2014 through April 25, 2014. During the field event, a total of 51 subsurface soil samples were collected and analyzed in the field. Of these, 37 samples were submitted to a fixed laboratory for analysis. In addition, 13 water samples were collected, including eight QA samples (four rinsate and four trip blank samples). Sample types and methods of collection are described below. A list of all samples collected for laboratory analysis under this SI are described in Table 3-1. Photographic documentation of SI field activities is included as Appendix A.

Alphanumeric identification numbers applied by the START to each sample location (e.g., SB01SB05) are used in the report as the sample location identifiers. Sample locations are provided on Figures 3-1 and 3-2. Table 3-2 summarizes the sample coding system used for formulating sample numbers. For example, the sample number SB01SB05 indicates the following:

- SB for the source code (in this case, for a soil boring),
- 01 for the sequential number of samples from a given source by location (in this case, the first soil boring),
- SB for the sample matrix (in this case, subsurface soil), and
- 05 for the depth of the sample (in this case, 5 feet bgs).

This section describes sampling methodology, analytical protocol, global positions system (GPS), and investigation-derived waste (IDW).

3.1 Sampling Methodology

Immediately following collection, samples were stored on ice in coolers continuously maintained under the custody of START personnel. Sampling methods used for each sample matrix are described below.

3.1.1 Subsurface Soil Sampling

Subsurface soil samples were collected using a Geoprobe ™ hydraulic direct-push sampling system. Continuous soil cores were extracted into dedicated PVC-lined sleeves and logged. VOC aliquots were removed from the Geoprobe ™ sleeve using 5-gram EnCore ™ samplers. At each sample location, aliquots of soil for both the field Gas Chromatograph/Mass Spectrometric (GC/MS) laboratory analysis and the fixed laboratory VOC analysis were collected from the sample sleeve. All VOC soil sample aliquots for fixed laboratory analysis were immediately frozen (-7°C to -15°C) after collection in the EnCore type device in order to extend the technical holding time to 14 days. These aliquots were held in the field pending field GC/MS results. Those aliquots selected for fixed laboratory analysis were shipped to the project fixed laboratory.

3.1.2 Well Sampling

Water sample vials were filled to capacity with no headspace or air bubbles, preserved to a pH ≤ 2 with hydrochloric acid, and cooled to 4°C (±2°C). Water samples were not frozen. Specific sampling techniques for the types of wells sampled were as follows:

- **Out-of-Use Freeman School District Well** - A centrifugal submersible pump was used for purging and sampling. The pump was placed within 1 foot of the bottom of the well since this was the most likely depth for encountering the contaminants of concern. Low-flow purging and sample collection techniques were utilized to minimize aquifer disturbance and limit the volume of IDW generated. The purging pump rate was set at 0.5 liters per minute, with a goal of limiting the sustained drawdown to a maximum of 4 inches. Water level and water quality measurements were collected every five minutes to monitor water levels and water quality conditions. During purging, no drawdown of the water level was observed. Low-flow sampling commenced once water quality parameters had stabilized to the tolerances outlined below over three consecutive readings spaced at 5-minute intervals:
    - ± 0.1 standard unit for pH;
    - ± 3% for temperature and specific conductance;
    - ± 10% for dissolved oxygen; and
    - ± 10% for turbidity or less than 10 nephelometric turbidity units.

  Samples were collected directly into sample containers.
- **Primary Freeman School District Well** – The portal positioned up-line of the water treatment system was used for sample collection. Since the water system is in continuous operation during school hours, purging was

not required. One set of water quality parameter readings (i.e., pH, temperature, specific conductance, dissolved oxygen, and turbidity) were recorded prior to collecting the sample to document water conditions during sampling. The discharge rate from the portal was reduced to 0.4 liters per minute for sample collection. Samples were collected directly into sample containers.

- **Domestic Well** – The water sample was collected from the closest faucet to the wellhead which was an outdoor faucet located near the wellhead. There is no holding tank or water treatment system up-line of this location. Prior to sampling, the faucet was allowed to discharge at a steady rate for approximately 20 minutes. During this time, water quality parameters were monitored, and sampling commenced once water quality conditions had stabilized to the tolerances outlined below over three consecutive readings spaced at 5-minute intervals:
    - ± 0.1 standard unit for pH;
    - ± 3% for temperature and specific conductance;
    - ± 10% for dissolved oxygen; and
    - ± 10% for turbidity or less than 10 nephelometric turbidity units.

  Samples were collected directly into sample containers.

3.2 Analytical Protocol

Analytical protocols applied to the SI samples included on-site field laboratory analysis for carbon tetrachloride and off-site fixed laboratory analysis for VOCs. Analyses applied to the samples are presented in Table 3-1.

All of the soil samples were submitted for field carbon tetrachloride analysis using modified EPA Method 8260. These results were used to inform the subsurface soil sampling strategy including placement of additional borings and the selection of sample depths. Approximately 73% of the collected soil samples were submitted to a fixed laboratory for VOCs analysis using EPA Contract Laboratory Program (CLP) Statement of Work (SOW) SOM01.2. The SQAP had a target of 50% of samples with high carbon tetrachloride detections, 25% of samples with low detections, and 25% of samples without detections (i.e., non-detect results) for further analysis by a fixed laboratory; however, only 33% of the collected samples had positive detections for carbon tetrachloride. For this reason, all samples with field laboratory detections were submitted to the fixed laboratory. Additionally, 40% of non-detect samples also were submitted to the fixed laboratory for analysis. Additionally, one soil sample was submitted to a fixed laboratory for chlorinated pesticides analysis using EPA CLP SOW SOM01.2.

All ground water and QA/QC samples were submitted to the fixed laboratory for VOCs analysis using EPA CLP SOW SOM01.2.

The following samples were submitted for analysis:

- **Carbon Tetrachloride:** A total of 51 soil samples were submitted to the field laboratory operated by START personnel.
- **VOCs:** A total of 37 soil samples and 13 water samples, including QA/QC samples, were submitted to ALS Laboratory Group of Salt Lake City, Utah, an EPA CLP laboratory.
- **Chlorinated Pesticides:** One soil sample was submitted to ALS Laboratory Group of Salt Lake City, Utah, an EPA CLP laboratory.

3.3 Utility Locate Activities

Prior to initiating drilling activities, all proposed boring locations were cleared by a START subcontractor for the presence of subsurface utilities. None were present on the Cenex Harvest State grain handling facility property. A suspected buried electrical power line was determined to be present along the southern edge of property owned by Mutual Materials, Inc., running parallel to the railroad tracks. This property contains the Old Freeman Clay Pit and was the location where upgradient soil borings were advanced relative to the Cenex Harvest States grain handling facility.

3.4 Global Positioning System

GPS coordinates of SI sample locations were collected utilizing a Trimble ProXR™ with a TDC1 data logger. Recorded GPS coordinates by sample point are listed in Appendix C.

3.5 Investigation-Derived Waste

IDW generated during the SI sampling effort included disposable personal protective clothing, dedicated sampling equipment, well purge water, and equipment decontamination water. Disposable personal protective equipment and dedicated sampling equipment IDW generated during field activities were bagged in plastic garbage bags and disposed at the local municipal landfill.

Two 55-gallon drums of IDW well purge water/equipment decontamination water were generated. Both drums were labeled with EPA contact information, site name, drum contents, and date. The drums were placed inside a garage bay in a Freeman School District maintenance building to await off-site disposal. One IDW sample was collected from each drum (ID01WT and ID02WT). Sample results are provided in Table 3-3.

4 Quality Assurance/ Quality Control

QA/QC data are necessary to determine precision and accuracy and to demonstrate the absence of interferences and/or contamination of sampling equipment, glassware and reagents. Specific QC requirements for laboratory analyses are incorporated in the *Contract Laboratory Program Statement of Work for Organic Analyses* (EPA 2007). These QC requirements or equivalent requirements found in the analytical methods were followed for analytical work on the project. This section describes the QA/QC measures taken for the project and provides an evaluation of the usability of data presented in this report.

Data from the START field laboratory were reviewed and validated by a START chemist. Data from the CLP laboratory were reviewed by EPA chemists. Data qualifiers and labels were applied as necessary according to the following guidance:

- EPA (2008) *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review.*
- EPA (2009) *Guidance for Labeling Externally Validated Laboratory Data for Superfund Use.*
- EPA (2014) *Region 10 EMP Field Analytical Standard Operation Procedure 303a.*

In the absence of other QC guidance, method- and/or Standard Operating Procedures-specific QC limits were also utilized to apply qualifiers to the data.

4.1 Satisfaction of Data Quality Objectives

The following EPA (EPA 2000) guidance document was used to establish data quality objectives (DQOs) for this project:

- Guidance for the Data Quality Objectives Process (EPA QA/G-4), EPA/600/R-96/055.

The EPA TM determined that definitive data without error and bias determination would be used for the sampling and analyses conducted during the field activities. The data quality achieved during the fieldwork produced sufficient data that met

the DQOs stated in the SQAP (E & E 2014b). A detailed discussion of accomplished project objectives is presented in the following sections.

4.2 QA/QC Samples

Rinsate blank QA samples were collected at a rate of at least one per 20 samples collected using non-dedicated sampling equipment. Trip blank QA samples were collected for each sample cooler that contained samples to be analyzed for VOCs at the CLP laboratory. QC samples included matrix spike/matrix spike duplicate (MS/MSD) and/or blank spike (BS) samples at a rate of one MS/MSD and/or BS per 20 samples per matrix for CLP samples.

4.3 Project-Specific Data Quality Objectives

The laboratory data were reviewed to ensure that DQOs for the project were met. The following describes the laboratories' abilities to meet project DQOs for precision, accuracy, and completeness and the field team's ability to meet project DQOs for representativeness and comparability. The laboratories and the field team were able to meet DQOs for the project.

4.3.1 Precision

Precision measures the reproducibility of the sampling and analytical methodology. Laboratory and field precision is defined as the relative percent difference (RPD) between duplicate sample analyses. The laboratory duplicate samples or MS/MSD samples measure the precision of the analytical method. The RPD values were reviewed for all commercial laboratory samples. All duplicate results were within QC limits; therefore, the project DQO for precision of 90% was met.

4.3.2 Accuracy

Accuracy indicates the conformity of the measurements to fact. Laboratory accuracy is defined as the surrogate spike percent recovery (%R) or the MS/MSD/BS %Rs for all laboratory analyses. The surrogate %R values were reviewed for all appropriate sample analyses. One samples result (approximately 0.1 % of the data) were qualified as estimated quantities based on surrogate outliers.

The %R values were reviewed for all MS/MSD/BS analyses. All MS/MSD/BS results were within QC limits; therefore, the project DQO for accuracy of 90% was met.

4.3.3 Completeness

Data completeness is defined as the percentage of usable data (usable data divided by the total possible data). All laboratory data were reviewed for data validation and usability. A total of 44 sample results (approximately 2.5 % of the data) were rejected; therefore, the project DQO for completeness of 90% was met.

4.3.4 Representativeness

Data representativeness expresses the degree to which sample data accurately and precisely represent a characteristic of a population, parameter variations at a sampling point or environmental condition. The number and selection of samples were determined in the field to account accurately for site variations and sample matrices. The DQO for representativeness was met.

4.3.5 Comparability

Comparability is a qualitative parameter expressing the confidence with which one data set can be compared to another. Data produced for this site followed applicable field sampling techniques and specific analytical methodology. The DQO for comparability was met.

4.4 Laboratory QA/QC Parameters

The laboratory data also were reviewed for holding times/temperatures/sample containers, laboratory blank samples, trip blanks, and rinsate blanks. These QA/QC parameters are summarized below.

4.4.1 Holding Times/Temperatures/Sample Containers

All holding times, sample temperatures, and containers were acceptable.

4.4.2 Laboratory Blanks

All laboratory blanks met the frequency criteria. Acetone was the only potential contaminant of concern that was detected in the laboratory blanks that affected sample results. See the data validation memoranda for sample results that were qualified based on blank contamination.

4.4.3 Trip Blanks

Trip blank analyses were performed at a frequency of one per cooler containing samples to be analyzed for VOCs at the CLP laboratory. There were no detections in the trip blank analyses that affected sample results.

4.4.4 Rinsate Blanks

Rinsate blank analyses were performed at a frequency of at least one per 20 samples collected with non-dedicated equipment. Carbon disulfide was detected at 0.15 μg/L in one rinsate blank sample, but there were no positive carbon disulfide field sample results; therefore, no qualifications were applied based on rinsate blank contamination.

This page intentionally left blank.

5 Analytical Results Reporting and Background/Upgradient Samples

This section describes the reporting and methods applied to fixed analytical results presented in Section 6 (sources) and Section 7 (targets) of this report. This section also discusses background locations and upgradient locations, and their corresponding sample results. Table 3-1 lists all samples collected for laboratory analysis.

5.1 Analytical Results Evaluation Criteria

Fixed laboratory analytical results presented in the summary tables of Sections 6 and 7 show all analytes detected above laboratory detection limits in bold type. Analytical results indicating significant/elevated concentrations of contaminants in source samples (Section 6) and target samples (Section 7) with respect to background concentrations are shown underlined and in bold type. For the purposes of this investigation, significant/elevated concentrations include those concentrations that are:

- Equal to or greater than the sample's Contract Required Quantitation Limit (CRQL); and
- Equal to or greater than the background sample's CRQL; or
- At least three times greater than the background concentration when the background concentration equals or exceeds the CRQL.

The fixed laboratory analytical summary tables present all detected compounds, but only those detected analytes at potential sources and targets meeting the significant/elevated concentration criteria are discussed in the report text. All detected concentrations (if any) are also discussed for the background/upgradient samples. When samples were diluted for re-analysis at a laboratory, the dilution results were considered for evaluation and are provided in the tables, as appropriate.

5.2 Background Samples

Background samples were collected for each of the naturally occurring media from which SI samples were collected. These media are subsurface soil and ground water. Results for the appropriate background samples are shown in the first column(s) of the analytical results summary tables in Sections 6 and 7 for comparison against source or target results.

5.2.1 Background Soil Samples

5.2.1.1 Sample Location

All subsurface background samples were collected from one boring (BK01) placed on the southeastern portion of the Cenex Harvest States grain handling facility property (Figure 3-1). This location was an area expected to have lithology similar to potential source areas and to be unaffected by site activities. Three background subsurface soil samples (BK01SB03, BK01SB04, and BK01SB12) were collected from 3 feet bgs, 4 feet bgs, and 12 feet bgs, respectively. Sample depths included one sample immediately above the clay layer, one approximately 1 foot into the clay layer, and one below the clay layer.

5.2.1.2 Sample Results

All background soil samples were analyzed for VOCs. Sample results are provided as the first columns of Table 6-1. No VOCs were detected above CRQLs in these samples.

5.2.2 Background Ground Water Sample

5.2.2.1 Sample Location

One background ground water sample (BK01GW) was collected from a domestic drinking water well (Figure 3-2). The well selected for these purposes is hydrologically cross-gradient to the Cenex Harvest States grain handling facility, has been demonstrated during past sampling events to be uncontaminated, and has construction details that are similar to the two sampled Freeman School District wells (i.e., it is cased through the clay layer, does not have a screen, and has a similar total depth of 180 feet bgs).

5.2.2.2 Sample Results

The background ground water sample was analyzed for VOCs. Sample results are provided as the first column of Table 7-2. No VOCs were detected above CRQLs in this sample.

5.2.3 Upgradient Samples

Mutual Materials, Inc. owns the property to the north of the Cenex Harvest States grain handling facility which includes the location of the abandoned Old Freeman Clay Pit. During their earlier investigation, Ecology speculated that this area may have been used for illegal dumping or disposal of carbon tetrachloride. An area of ponded water is present at the property near the former clay pit operation. Subsurface soil samples were collected from borings placed on this property (HA01, HA02, and HA03) between the area of ponded water and the Cenex Harvest States grain handling facility in order to determine whether potential source(s) on that site may be contributing to carbon tetrachloride ground water contamination in the area.

Results for these upgradient samples are shown in the first columns of the analytical results summary table in Section 6 for comparison against soil sample results from Cenex Harvest States grain handling facility.

5.2.3.1 Sample Location

Three upgradient subsurface soil samples (HA01SB13.5, HA02SB2.5, and HA03SB09) were collected from 13.5 feet bgs, 2.5 feet bgs, and 9 feet bgs, respectively. These samples were collected from three borings (HA01, HA02, and HA03) placed between the area of ponded water and the Cenex Harvest States grain handling facility (Figure 3-1). Drilling refusal was met in boring HA02 at 4 feet bgs. The location was offset approximately 1 foot to the south, but refusal again was met at 4 feet bgs. Since the presence of an electrical power supply line running adjacent to the railroad track prevented moving the location further south, a sample was collected at 2.5 feet bgs and further attempts to collect a deeper sample at this location were abandoned. Instead, boring HA03 was drilled northeast of the HA02 location in an area north of a berm of mounded earth, and between this berm/mound and the area of ponded water.

5.2.1.2 Sample Results

All upgradient soil samples were analyzed for VOCs. Sample results are provided in Table 6-1. No VOCs were detected above CRQLs in these samples.

This page intentionally left blank.

6 Potential Sources

This section describes sample locations and analytical results of SI samples obtained from potential sources. Chain-of-custody forms are provided in Appendix D. Fixed laboratory data validation memoranda and laboratory data sheets are provided in Appendix E. Soil boring logs documenting subsurface conditions are provided as Appendix F.

6.1 Cenex Harvest States Grain Handling Facility Soils

The use of carbon tetrachloride at the Cenex Harvest States grain handling facility was not confirmed during interviews with operators of the facility or during a background review. Since carbon tetrachloride was widely used for these purposes beginning in 1911 and continuing until 1986 and the facility began operations in 1955, it is conceivable that carbon tetrachloride was used at this location.

6.1.1 Sample Locations

A total of 14 borings were drilled near the Cenex Harvest States grain handling facility for the purpose of determining whether carbon tetrachloride is present in subsurface soils near this operation (Figure 3-1). Drilling activities were initiated near the grain elevator and scale house since these features appeared to be the most likely locations for historic pesticide application to grain, and are often associated with the presence of carbon tetrachloride contamination at facilities where this compound was used.

Drilling began with borings SB01 through SB06, which were placed along the perimeter of the scale house. Stiff, dense silt was encountered immediately beneath the surficial gravel fill material in these borings. In borings SB03 through SB06, clay mixed with silt was encountered at approximately 4 to 5 feet bgs. Next, drilling was initiated further from the scale house at locations SB07 and SB08. Two subsurface soil samples were collected from borings SB01 through SB08; one sample was collected between the gravel layer and the deeper, denser silt, or silt mixed with clay, layer. A second sample was collected in the denser silt, or silt mixed with clay, layer.

Borings SB01 through SB05 were advanced to 8 feet bgs. Borings SB06, SB07, and SB08 were advanced to 12 feet bgs to ascertain the thickness of the dense silt/clay material for the purpose of determining the likelihood that contamination could penetrate this layer. In these borings, the clay content became more dominant with depth.

Next, boring SB09 was drilled approximately 30 feet from the southeast side of the scale house. Boring SB09 was drilled to 25 feet bgs to observe deeper lithology. At this boring, a variety of thin lenses of changing material were encountered beneath the clay layer. Some of these lenses consisted of far less dense material than the silts and clay present above them, including layers of gravel with silt and sand with silt. Five subsurface soil samples were collected from this boring. Two of these samples were collected from soil horizons similar to those collected from borings SB01 through SB08. The remaining three samples were collected from moist layers in looser material at depths of 15, 19.5, and 25 feet bgs in an effort to determine whether contamination may have migrated to or through them.

A similar strategy was applied to boring SB10, which was drilled approximately 15 feet south of the center of the southern scale house wall, except only the deeper samples were collected. This boring was drilled to 28 feet bgs. Three subsurface soil samples were collected from it at 15.5, 18.5, and 20.5 feet bgs.

Field laboratory results indicated that carbon tetrachloride was present in samples collected from SB09 at 19.5 and 25 feet bgs. It was not detected in the shallower samples from this boring. Likewise, field laboratory results indicated the presence of carbon tetrachloride in samples collected from SB10 at 18.5 and 20.5 feet bgs.

Since carbon tetrachloride contamination was significantly deeper than originally expected, a decision was made to drill additional borings close to the grain elevator and scale house and to advance them deeper than those originally placed in this area. For this purpose, borings SB11, SB12, and SB13 were drilled around the perimeter of the scale house. These borings were advanced to the limits of the Geoprobe's capability (i.e., until soil conditions would not allow further advancement of the boring), with boring SB11 drilled to 32 feet bgs, boring SB12 drilled to 32 feet bgs, and boring SB13 drilled to 30 feet bgs.

Multiple soil horizons were sampled in each boring. In boring SB11, seven subsurface soil samples were collected from soil horizons between 17 and 32 feet bgs. Unusual, strikingly greenish-brown clay was encountered in two thin lenses in this boring between 16.5 and 18.7 feet bgs. One subsurface soil sample was collected from each of these lenses. In boring SB12, three subsurface soil samples were collected from 20, 21.5, and 28.5 feet bgs; in boring SB13, six subsurface soil samples were collected from soil horizons between 14 and 30 feet bgs.

Lastly, boring SB14 was drilled approximately 20 feet south of boring SB09 which had positive field laboratory results for carbon tetrachloride in order to help determine the extent of contamination south and downgradient of this boring. Boring SB14 was advanced to 28 feet bgs and four subsurface soil samples were collected from it at depths between 18 and 28 feet bgs.

6.1.2 Sample Results

Field analytical results are provided in Table 6-1 while fixed laboratory results are provided in Table 6-2. A summary of field versus fixed laboratory carbon tetrachloride sample results is provided in Table 6-3. A correlation analysis between field laboratory results and fixed laboratory results was performed. For the purposes of the correlation analysis, non-detect sample results (i.e., those with a "U" data qualifier) were divided by 2. This technique split the difference between using the sample quantitation limit value (which may potentially introduce a high bias) and using zero (which may potentially introduce a low bias).

The correlation between the two data sets (r) was determined to be 0.889 (see Table 6-3), just below the (r) limit of >0.900 required for the field data to be considered "definitive," but well above (r) limit of >0.700 required for the field data to be considered as "screening data with definitive confirmation." "Definitive" data is analytical data of sufficient quality for final decision-making and is suitable for determining the extent of contamination or cleanup confirmation. "Screening level data with definitive confirmation" is analytical data that may be used to support preliminary or intermediate decision-making until confirmed by definitive data; however, even after confirmation, this data is often not as precise as definitive data. (EPA 2006)

Based on the correlation value achieved [i.e., (r) of 0.889] for field data generated under the Freeman Ground Water Contamination SI, this field data was confirmed by the fixed laboratory data and can be used for final decision-making purposes.

6.1.2.1 Field Laboratory

Field laboratory analytical results detected the presence of carbon tetrachloride in subsurface soil samples collected from borings SB09 through SB14. In borings SB09 through SB13, the samples collected from soil horizons above 14 feet bgs did not have carbon tetrachloride detections. In boring SB14, no samples were collected between the ground surface and 14 feet bgs. Generally, carbon tetrachloride was present in borings SB09, SB10, and SB11 at depths between 18.5 and up to 32 feet bgs (the maximum depth sampled). Concentrations in these samples ranged from 3.21 to 5.21 micrograms per kilogram (µg/kg). Carbon tetrachloride concentrations in borings SB13 and SB14 ranged from 5.92 to 14.98 µg/kg. The deepest sample collected from boring SB14 was from a clay layer. Carbon tetrachloride was not detected in this sample. Carbon tetrachloride was not detected in the samples collected of the greenish-brown clay in boring SB11.

6.1.2.2 Fixed Laboratory

The fixed laboratory sample-specific CRQLs (i.e., typically greater than 7 µg/kg) were generally higher than those achieved for field laboratory analysis (i.e., typically lower than 5 µg/kg). Carbon tetrachloride was detected at significant concentrations (with respect to background concentrations) above the CRQLs in the fixed laboratory samples collected from SB13 at 21.2 feet bgs (9.7 µg/kg) and

30 feet bgs (15 µg/kg), and in the sample collected from boring SB14 at 21.5 feet bgs (9.3 µg/kg). Additionally, chloroform (a degradation product of carbon tetrachloride) was detected at significant concentrations (with respect to background concentrations) in boring SB09 at 19.5 feet bgs (7.6 µg/kg), and in boring SB14 at 18 feet bgs (8.5 µg/kg), 21.5 feet bgs (11 µg/kg), and 23.5 feet bgs (12 µg/kg). No other VOCs were detected in subsurface soil samples.

Fixed laboratory results also indicted the possible presence of carbon tetrachloride in 21 additional samples (i.e., those sample results with JQ data qualifiers) and the possible presence of chloroform in 16 additional samples.

The sample collected from the layer of greenish-brown clay in boring SB11 at 18.6 feet bgs was additionally submitted for fixed laboratory analysis of chlorinated pesticides to determine whether the coloration of this material could be from pesticide contamination. No pesticides were detected in this sample.

6.1.3 Volume of Contaminated Soil

An estimated volume of the known extent of carbon tetrachloride/chloroform contamination on site was determined using both field and fixed laboratory data. A total of six boring locations had contaminated samples. These were borings SB09 through SB14. The interval of contamination in each boring is as follows:

- **SB09** – 19 to 25 feet bgs
- **SB10** – 18 to 20.5 feet bgs
- **SB11** – 19 to 32 feet bgs
- **SB12** – 28 to 28.5 feet bgs
- **SB13** – 19 to 30 feet bgs
- **SB14** – 17.5 to 23.5 feet bgs

In borings SB09 to SB13, the deepest sample collected was contaminated indicating that the depth of contamination at these locations was not determined. For this reason, it is considered likely that additional contamination is present at these locations in deeper soils. In boring SB14, the depth of contamination may have been identified since the deepest sample in this boring did not have detections of carbon tetrachloride or chloroform.

It appears the lateral extent of contamination was not determined and can be expected to extend beyond the footprint of the area where drilling occurred. Samples from borings SB07 and SB08, located to the southwest of the scale house, did not have contamination, however, the deepest sample collected from these borings was far shallower then the contaminated soil interval demonstrated to be present in borings that were drilled deeper. Hence, the extent of contamination in this direction is not known.

It should be noted that the relatively thin layer of contamination indicated above for borings SB10 and SB12 is likely an artifact of the sampling conditions, which

prevented successful drilling, and therefore sampling, beyond these depths in those borings. In those two borings, only the deepest sample was contaminated. As indicated above, if deeper samples could have been collected it is probable that additional contamination would have been encountered.

Geographic Information System software was used to develop an estimate of the volume of contaminated soil by connecting the contaminated layers. Use of this approach derives an estimated volume of subsurface soil contamination of 36,320 cubic feet, or 1,345 cubic yards (yds^3). It is expected that this contamination likely extends both deeper and more broadly given the placement of borings and corresponding sample results.

This page intentionally left blank.

7 Migration/Exposure Pathways and Targets

The following sections describe the ground water migration pathway and potential targets within the site's range of influence (Figure 7-1). The surface water migration pathway, soil exposure pathway, and air migration pathway were not included in this investigation, since, at present, the site consists of a ground water plume.

7.1 Ground Water Migration Pathway

The target distance limit (TDL) for the groundwater migration pathway is a 4-mile radius that extends from the sources at the site. Figure 7-1 depicts the ground water 4-TDL.

7.1.1 Geologic Setting

The town of Freeman is in the Columbia Plateaus physiographic province. The Columbia Plateau is underlain by nearly horizontal lava sheets of Columbia River Basalt of Tertiary age. Locally, the basalt flows are interbedded with sedimentary material of the Latah Formation. Both the basalt and the Latah Formation are overlain by the Palouse Formation of Quaternary age. Aeolian silts and clays of the Palouse Formation in the Freeman area range in thickness from 10 to 50 feet. The Latah Formation is sedimentary material interbedded with basalt flows, and primarily consists of clay and shale and some beds of sand and gravel. (USGS 1969)

7.1.2 Aquifer System

General ground water conditions have been described across the entirety of the Columbia Plateau. The Columbia Plateau aquifer system includes, from youngest to oldest: (1) the overburden, a collective term used in this study for all materials overlying the Columbia River Basalt Group; (2) a minor amount of sediment interlayered with the basalt; and (3) a large thickness of basalt belonging to the Columbia River Basalt Group, which is the most extensive and hydrologically important geologic unit in the aquifer system. (USGS 1999)

The Columbia Plateau aquifer system has been divided into three confining units and four aquifer units. The three confining units are the Saddle Mountains-Wanapum interbed, the Wanapum-Grande Ronde interbed, and the prebasalt rocks. The four aquifer units are the overburden aquifer, the Saddle Mountains unit, the Wanapum unit, and the Grande Ronde unit (USGS 1999). Two of these formations, the Grande Ronde and Wanapum, have been identified within the

Freeman area. The Grande Ronde Basalt Formation is widespread throughout the area (USGS 1994a).

The overburden materials consist of fluvial consolidated to unconsolidated deposits of lacustrine, volcanic, and eolian origin whose lithology ranges from clay to gravels and shale to conglomerate. Most of these deposits generally have a much larger hydraulic conductivity than the basalts and, where saturated, make up a water table aquifer called the overburden aquifer. (USGS 1999)

Water level data from the Columbia Plateau indicate that the vertical flow component is downward over most of the plateau except in discharge areas. These discharge areas are generally in topographic lows. Recharge to the overburden aquifer is mainly from precipitation and from infiltration of applied irrigation water, with discharge to rivers, lakes, drains and waterways, wells, and the underlying basalt unit. (USGS 1994b)

The primary Freeman School District drinking water well was installed in 1980. According to its well log, the well is 215 feet deep and taps a water bearing zone in quartzite gravel and decomposed granite that is overlain by approximately 145 feet of basalt. Above the basalt is a 46-foot layer of clay. Neither the static water level nor screened interval for the well is indicated on the well log. The out-of-use Freeman School District well was installed in 1988 to a depth of 140 feet. According to its well log, this well taps water in "black hard basalt." The static water level was 78 feet bgs at the time the well was drilled. A screen was not installed. The well log describes the material penetrated as top soil from 0 to 2 feet bgs, yellow clay from 2 to 30 feet bgs, broken basalt from 30 to 44 feet bgs, and basalt from 44 feet bgs to the depth of the well. (WDOH 2013)

A review of 13 well logs believed to be within 1 mile of Freemen School District campus indicate a general geologic pattern of clay from near the ground surface to up to 65 feet bgs, followed by material described as either granite or basalt from the bottom of the clay unit to the depth of the well, although variations from this general pattern occur. Well depths ranged from 100 to 220 feet bgs, though three wells were deeper (i.e., 260, 375, and 560 feet bgs). Only seven of these well logs indicated the depth that water was first encountered. That depth ranged from 49 to 206 feet bgs. Static water levels were reported for all but one well and indicated a range from 29 to 130 feet bgs (WDOH 2013; Ecology 2013b).

GeoEngineers, Inc. conducted a detailed review of well logs within 1 mile of the Freeman School District campus. In total, 34 well logs were examined. GeoEngineers, Inc. determined that wells were generally constructed by placing a steel well casing from the ground surface to roughly 50 to 200 feet bgs to seal off the unconsolidated surficial units. Below the casing, either a liner was present or the well was open to its total depth. Pumping rates ranged from 5 to 120 gallons per minute (gpm), with typical rates between 10 and 30 gpm; however, wells drilled into the basement rock had lower pumping rates, typically less than 10 gpm (GeoEngineers 2013).

The direction of ground water flow in the Freeman, Washington, area has recently been modeled by GeoEngineers, Inc. This modeling indicated a general flow direction from the northeast to the southwest with a hydraulic gradient in the upper aquifer of approximately 1×10^{-2} feet per foot near the Freeman School District campus (GeoEngineers 2013). No wellhead protection areas occur within the 4-mile TDL (SCDBP 2009).

7.1.3 Drinking Water Targets

Approximately 2,369 people use ground water for drinking water purposes within the 4-mile TDL. Drinking water populations by distance ring are provided in Table 7-1. Ground water within the 4-mile TDL is used for both municipal and domestic drinking water purposes. The WDOH maintains records of all active public water systems. Public water systems, regardless of group designation, indicate the total number of wells in the system, number of connections, and total population served. A search of the WDOH Sentry Internet database revealed the presence of three Group A community water systems serving a total population of 1,195 people and seven Group B community water systems serving a total population of 39 people within the 4-mile TDL (WDOH 2013).

The Washington Administrative Code (WAC) defines the Group A and B designations for community water systems as follows:

- **Group A:** (WAC 246-290) Group A water systems are those with 15 or more service connections, regardless of the number of people on the system, or systems serving an average of 25 or more people per day for 60 or more days within a calendar year, regardless of the number of service connections. Group A water systems do not include systems serving fewer than 15 single-family residences, regardless of the number of people on the system.
- **Group B:** (WAC 246-291) Group B water systems serve less than 15 residential connections and less than 25 people per day, or 25 or more people per day fewer than 60 days per year. Group B water systems are those public water systems that do not meet the definition of a Group A water system.

One of the Group A water systems is the Freeman School District system that serves 900 students, teachers, and staff members during the school year, which runs from September to June (Leinart 2012). The primary Freeman School District well serves the elementary, middle, and high schools of the district, which are situated in three separate buildings on one campus. The primary Freeman School District well is the sole source of drinking water to the campus, and it is also used for fire protection and irrigation (Leinart 2012).

Based on well logs, it is estimated that a total of 469 domestic wells are present within the 4-mile TDL (Ecology 2013b). It is calculated that these wells serve approximately 1,135 people based on the average number of persons per household for Spokane County, Washington, of 2.42 people (i.e., 469 wells x 2.42 people per household) (USCB 2007 to 2011).

Ground water in the area is also used for irrigation of 5 acres or more of commercial food crops.

7.1.4 Sample Locations and Results

Two ground water samples were collected from wells on the Freeman School District campus. Sample DW01GW was collected from the district's out-of-use well and sample DW02GW was collected from the district's primary water supply well at a spigot up-line of the water treatment system (Figure 3-2).

Ground water sample results are provided in Table 7-2. Both wells contained elevated concentrations of carbon tetrachloride and chloroform (a degradation product of carbon tetrachloride) with respect to background concentrations. The concentrations of carbon tetrachloride in both samples exceeded the EPA MCL of 5 μg/L with carbon tetrachloride present in DW01GW at 23 μg/L and in DW02GW at 8.8 μg/L. Chloroform concentrations were 1.9 μg/L in DW01GW and 0.52 μg/L in DW02GW. The EPA has not established an MCL for chloroform.

7.1.5 Down-Hole Camera Survey

A down-hole camera survey was conducted on the out-of-use Freeman School District well to determine the well casing's condition. Based on observations of the condition of the well during the START SI site visit, it was suspected that the casing for this well was broken since it was loose and could readily be moved about by hand. The survey revealed that as opposed to the well's drilling log, which indicates the well's casing extends only to 44 feet bgs, the camera survey revealed that this casing extends to the bottom of the well. The casing consists of 20-foot sections of 6-inch diameter PVC pipe. The casing joint seals appear to have failed throughout most of the length of the casing as evidenced by corrosion and staining at these joints. No cracks were observed in the casing. As indicated in the well's drilling log, the well does not have a screen.

Based on the casing joint seal failures, it is possible that the casing that may be providing a contaminant migration pathway from impacted shallow subsurface soils to the interior of the well and, consequently, the drinking water aquifer. A dye test, or similar investigatory procedure, would be required to confirm this speculation.

8 Summary and Conclusions

The Freeman Ground Water Contamination site is a carbon tetrachloride ground water plume that was identified during routine sampling of a Freeman School District primary well in 2001. Prior to this SI, a source for this contamination had not been identified.

The town of Freeman has few residences and is dominated by the Freeman School District campus. The Freeman Store is present on the north end of town. A Cenex Harvest States grain handling facility with grain silos and grain elevator is present between State Route 27 and a UPRR line that roughly parallels the highway. The Old Freeman Clay Pit, a former clay borrow pit, is located approximately 0.5 mile northeast of the Cenex Harvest States grain handling facility, and a former brick kiln is present on the southern end of town. Beyond these uses, land near Freeman is primarily used for agricultural production.

Carbon tetrachloride has been detected in the primary Freeman School District water supply well at concentrations that exceeded the EPA MCL of 5 µg/L on multiple occasions: April 2008 (7.78 ug/L), March 2012 (5.9 ug/L), April 2012 (7.2 ug/L), December 2012 (8.0 ug/L), January 2013 (7.6 ug/L and 22.0 ug/L), and in April 2013 (9.3 ug/L). This well is used as the sole source of potable water to the Freeman School Campus which contains a pre-school, elementary, middle, and high school. This well serves approximately 900 students, teachers, and workers. It is also used to irrigate the district's campus grounds. In May 2012, carbon tetrachloride was also identified as being present above the MCL in the newly acquired School District well, referred to in this report as the out-of-use Freeman School District well. Carbon tetrachloride was detected in the out-of-use Freeman School District well at a concentration of 48.1 ug/L. In addition, in January 2013, carbon tetrachloride was detected above the MCL in a former residential well located in the southeast portion of the Freeman School District campus (well W20) at a concentration of 21.2 ug/L. During the January 2013 sampling, chloroform was also found to be present in the wells with detectable concentrations of carbon tetrachloride. As previously mentioned, chloroform is a degradation product of carbon tetrachloride.

In November 2012, state and local authorities requested the EPA conduct an investigation of ground water contamination at the Freeman School.

Carbon tetrachloride is a manufactured chemical that does not occur naturally. Carbon tetrachloride is a multi-purpose chemical that was used as a degreasing solvent for industrial and domestic purposes, as a fire suppressant, as a cleaning

agent for dry cleaning, in making nylon, and for many years as a fumigant in grain operations throughout the Midwest. Due to its toxicity, most of these uses were discontinued. Until 1986, the largest source of releases of carbon tetrachloride to the environment was from its use as a grain fumigant. Carbon tetrachloride became the most widely used liquid fumigant to kill insects in grain until 1986, when its use for this purpose was cancelled by the EPA (ATSDR 2005; DHHS 2011; Storey et al. 1981).

8.1 Sources

Although the historic use of carbon tetrachloride at the Cenex Harvest States grain handling facility was not confirmed during the review of site-related documents or during interviews with operators of this facility, the presence of carbon tetrachloride, and its degradation product chloroform, was confirmed via SI subsurface soil sampling and analysis. Six borings (SB09 through SB14) were confirmed to contain soil contamination at depths ranging from 17.5 to 32 feet bgs. The concentrations of carbon tetrachloride detected in the soil samples ranged from 3.21 to 15 µg/kg. Fixed laboratory results also indicated the presence of chloroform in two borings (SB09 and SB14); the field laboratory did not analyze samples for chloroform.

The vertical and lateral extent of contamination associated with the Cenex Harvest States grain handling facility was not determined though it is expected that this contamination likely extends both deeper and more broadly given the placement of borings and corresponding sample results.

Neither carbon tetrachloride nor chloroform was detected in soil samples collected from the location of the Old Freeman Clay Pit.

8.2 Targets

A total of 10 community water systems, including the Freeman School District water system, are present within a 4-mile radius of Freeman, Washington, as well as approximately 469 private domestic wells. In total, these wells serve approximately 2,369 people for drinking water purposes. Ground water in the Freeman area is known to occur at depths ranging from 49 to 206 feet bgs based on well logs. The direction of ground water flow is to the southwest.

The direction of ground water flow puts the Cenex Harvest States grain handling facility hydrogeologically upgradient of the contaminated out-of-use Freeman School District well and the contaminated primary Freeman School District well.

SI ground water samples indicated the presence of carbon tetrachloride at significant concentrations with respect to background concentrations in the out-of-use Freeman School District well at 23 µg/L and in the primary Freeman School District well (pre-treatment) at 8.8 µg/L. Chloroform was detected at significant concentrations with respect to background concentrations in the out-

of-use Freeman School District well at 1.9 μg/L and in the primary Freeman School District well (pre-treatment) at 0.52 μg/L.

8.3 Conclusions

The SI confirmed the presence of a source of carbon tetrachloride and chloroform contamination in subsurface soils on the Cenex Harvest States grain handling facility property. Similar contamination was not confirmed on the hydrogeologically upgradient Old Freeman Clay Pit property.

The out-of-use Freeman School District well and the primary Freeman School District well are both downgradient of the identified source of subsurface soil contamination. The Freeman School District's primary water supply well has been fitted with a water treatment system to remove carbon tetrachloride and chloroform contamination prior to distribution. This system serves approximately 900 people on a regular basis throughout the school year.

This page intentionally left blank.

9 References

ATSDR (Agency for Toxic Substances and Disease Registry), August 2005, *Toxicological Profile for Carbon Tetrachloride.*

BRA (Blue Ridge Associates, Inc.), August 27, 1995, *Underground Storage Tank Site Assessment/Site Characterization, Removal of Petroleum Contaminated Soil (PSC) & Drilling of One Monitoring Well, Freeman High School, Freeman, Washington.*

DHHS (United States Department of Health and Human Services), 2011, *Report on Carcinogens*, Twelfth Edition.

E & E (Ecology and Environment, Inc.), March 2014a, Freeman Ground Water Contamination project, Site Manager's field logbook.

_____, March 2014b, *Freeman Ground Water Contamination Site Sampling and Quality Assurance Plan*, TDD 13-07-0005.

_____, April 2013, *Freeman Ground Water Contamination, Freeman, Washington, Preliminary Assessment*, prepared for the United States Environmental Protection Agency, Contract Number EP-S7-06-02.

Ecology (Washington State Department of Ecology), 2013a, Integrated Site Information System, webpage https://fortress.wa.gov/ecy/tcpwebreporting/reports.aspx, accessed on March 29, 2013.

_____, 2013b, Well logs database, webpage http://apps.ecy.wa.gov/welllog/textsearch.asp, accessed on January 9, 2013.

_____, August 2011, Initial Investigation/File Review, Freeman Store, UST Site Number 100547.

_____, October 2007, LUST Initial Investigation Report, Freeman School District #358, UST Site ID Number 5314.

EPA (United States Environmental Protection Agency), April 2014, *EPA Region 10 EMP Field Analytical Standard Operation Procedure 303a.*

_____, June 2010, *Interim Record of Decision, Garvey Elevator Superfund Site, Operable Unit 1, Hastings, Nebraska.*

_____, January 2009, EPA *Guidance for Labeling Externally Validated Laboratory Data for Superfund Use, EPA 540-R-08-005, OSWER No. 9200.1-85.*

_____, June 2008, EPA *USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review, EPA 540-R-08-01.*

_____, June 2007, EPA *USEPA Contract Laboratory Program Statement of Work for Organics Analysis, Multi-Media, Multi-Concentration, SOM01.2.*

_____, July 2006, EPA *Applicability of Superfund Data Categories to the Removal Program, EPA 540-F-05-005.*

_____, 2000, EPA *Guidance on Systematic Planning Using the Data Quality Objectives Process* (EPA QA/G-4), EPA/240/B-06/001.

GeoEngineers (GeoEngineers, Inc.), February 15, 2013, *Draft Feasibility Study, Production Well Evaluation – Carbon Tetrachloride Contamination, Freeman School District, Freeman, Washington.*

Lally, Kirk, February 5, 2013, Freeman School District Facilities Manager, telephone conversation with Linda Ader, Ecology and Environment, Inc. regarding sanitary waste water treatment system and stormwater management.

Leinart, Phil, August 16, 2012, Washington State Department of Ecology, Toxics Cleanup Program, Eastern Regional Office, *Freeman School Wells, Contaminated Ground Water Status Report.*

Misiorowski, Mark R., and Joel D. Eagle, November 30, 2007, *A Well of a Problem: The Legacy of Carbon Tetrachloride in U.S. Groundwater,* Bloomberg BNA Environment Reporter, 38 ER 2582.

Nichols, D., December 3, 2012, Washington State Department of Ecology, Final Fact Sheet, NPDES Permit WA004540-3, Freeman School District No. 358.

O'Garro, Lendford, May 2008, Washington State Department of Health, Environmental Health Division, Office of Environmental Health Assessments, Site Assessment Section, *Technical Assistance Consultation, Freeman School District TA.*

Rob's Demolition, July 1998, *Site Assessment Results and Independent Cleanup Action Report, Freeman Store.*

SCDBP (Spokane County Department of Building and Planning), February 2009, Aquifer Susceptibility Map, Spokane County.

Spokane County Assessor's Office, 2014, Parcel Information Search, Parcel Number 43012.9008.

Storey, C.L., C.R. Martin, and D.R. Sukkestad, 1981, *Concentrations of 80:20 Grain Fumigant (CCL_4-CS_2) in Handling Equipment During Transfers of Fumigated Wheat.*

USCB (United States Census Bureau), 2007 to 2011, State and County QuickFacts, Spokane County, Washington.

USGS (United States Geological Survey), 1999, *Summary of the Columbia Plateau Regional Aquifer-System Analysis, Washington, Oregon, and Idaho,* U.S. Geological Survey Professional Paper 1413-A.

_____, 1994a, *The Hydrogeologic Framework and Geochemistry of the Columbia Plateau Aquifer System, Washington, Oregon, and Idaho*, U.S. Geological Survey Professional Paper 1413-B.

_____, 1994b, *Ground-Water Flow Simulation of the Columbia Plateau Regional Aquifer System, Washington, Oregon, and Idaho,* Water-Resources Investigations Report 91-4187.

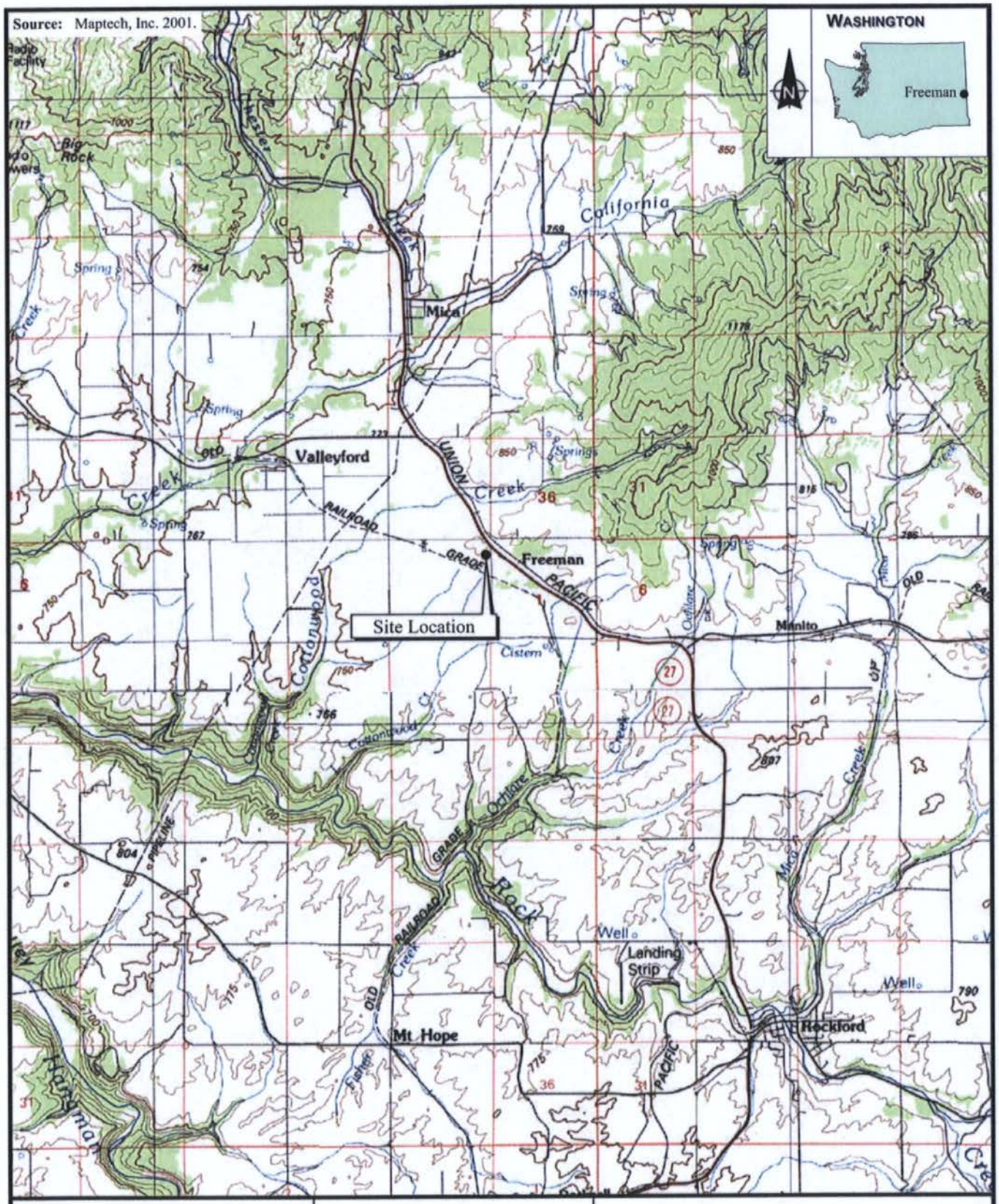
_____, 1969, *Clay Deposits of Spokane County, Washington, A geological, mineralogical, and chemical study*, Geological Survey Bulletin 1270.

WDOH (Washington State Department of Health), 2013, Division of Environmental Health, Office of Drinking Water, Sentry Internet database, webpage https://fortress.wa.gov/doh/eh/portal/odw/si/FindWaterSystem.aspx, accessed on January 10, 2013.

This page intentionally left blank.

Figures

This page intentionally left blank.



ecology and environment, inc.
Global Environmental Specialists
Seattle, Washington

FREEMAN GROUND WATER CONTAMINATION
Freeman, Washington

Figure 2-1

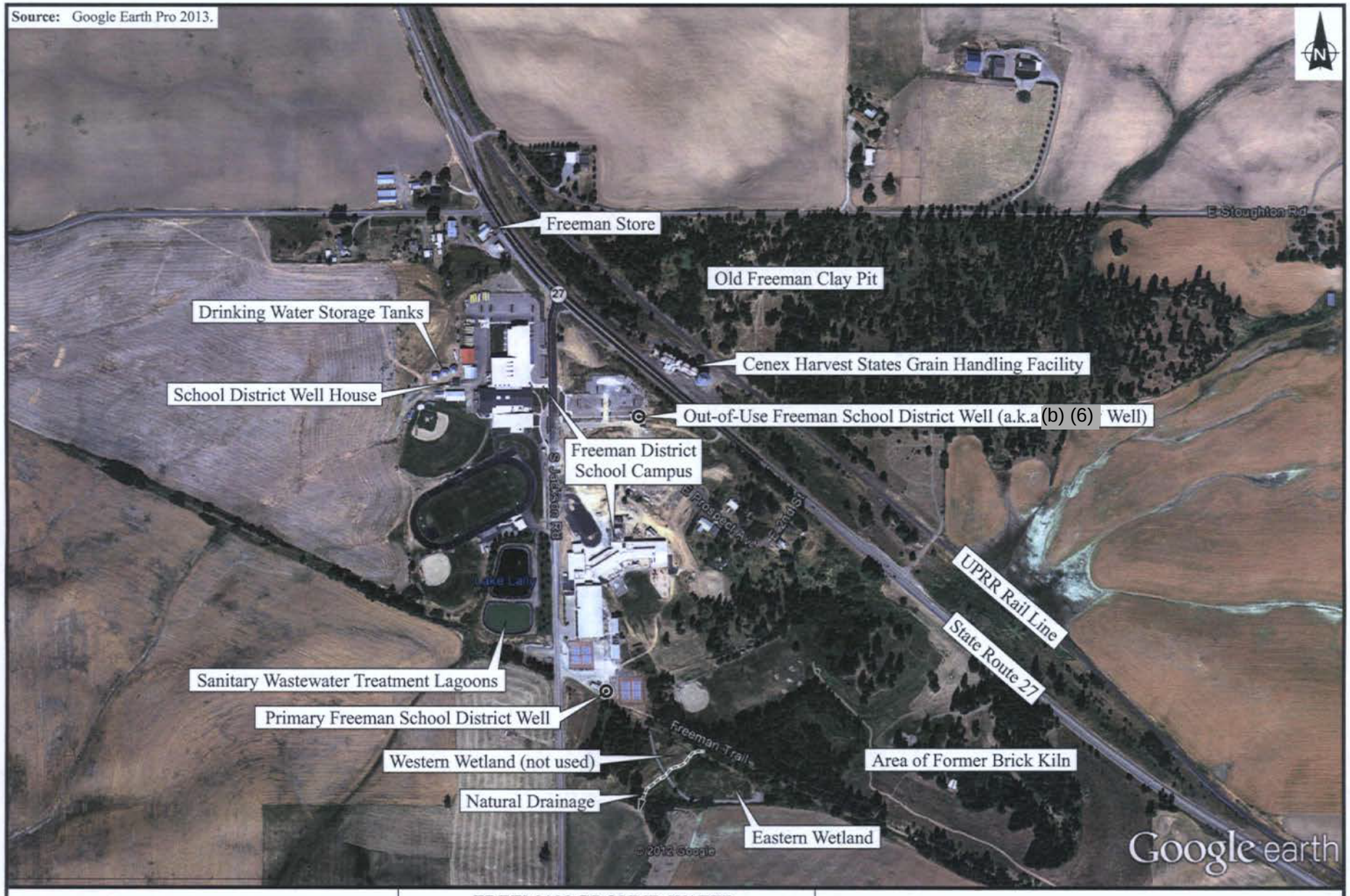
SITE VICINITY MAP

0 .5 1
Approximate Scale in Miles

Date: 7-3-14

Drawn by: AES

10:START IV\13070005\fig 2-1



ecology and environment, inc.
Global Environmental Specialists
Seattle, Washington

FREEMAN GROUND WATER CONTAMINATION
Freeman, Washington

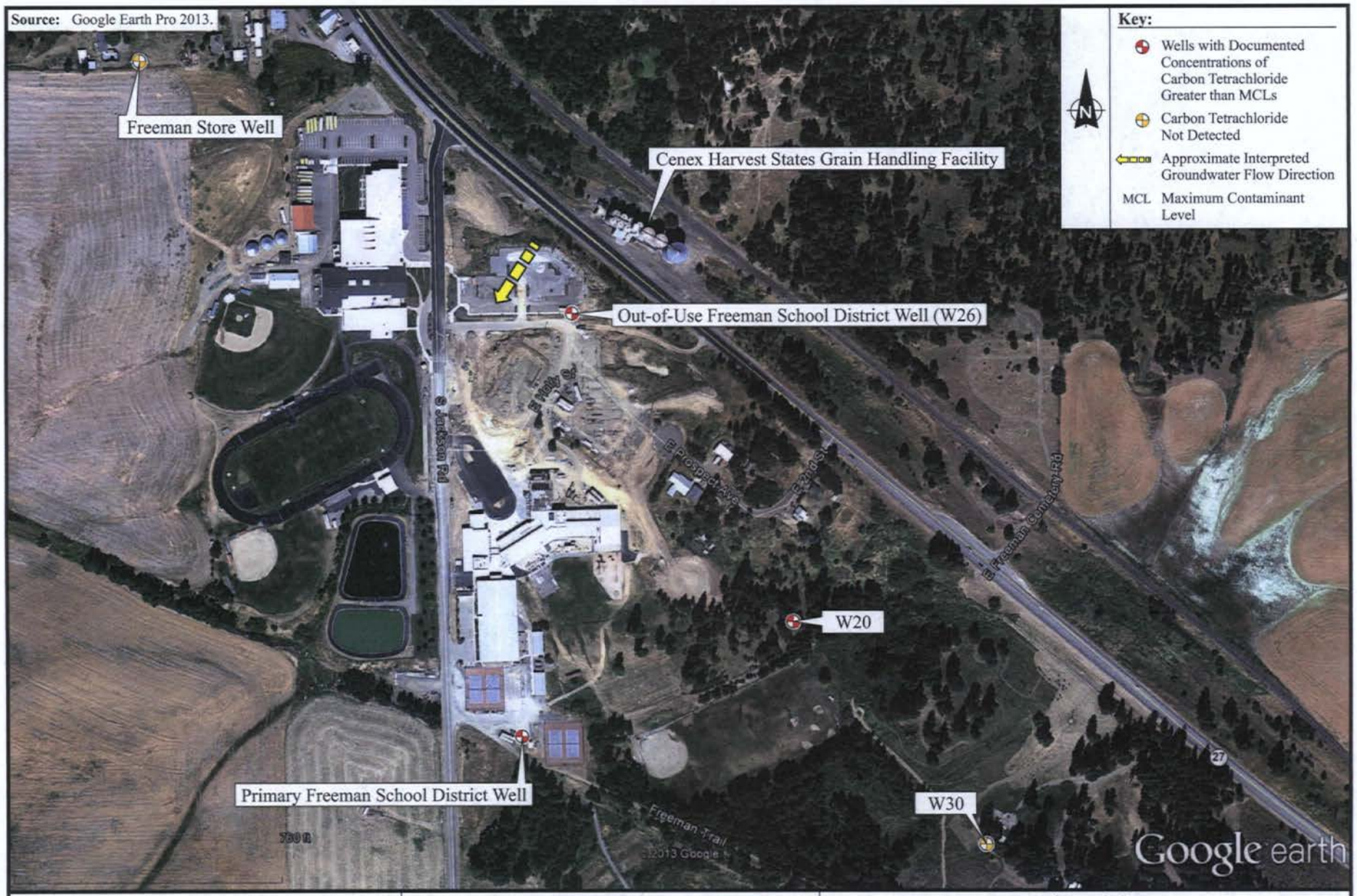
0 300 600
Approximate Scale in Feet

Figure 2-2
SITE MAP

Date: 3/5/13

Drawn by: AES

10:START IV\13070005\fig 2-2



ecology and environment, inc.
Global Environmental Specialists
Seattle, Washington

FREEMAN GROUND WATER CONTAMINATION
Freeman, Washington

0 190 380
Approximate Scale in Feet

Figure 2-3
WELLS SAMPLED BY GEOENGINEERS, INC. IN JANUARY 2013

Date:	Drawn by:	
3/5/13	AES	10:START IV\13070005\fig 2-3

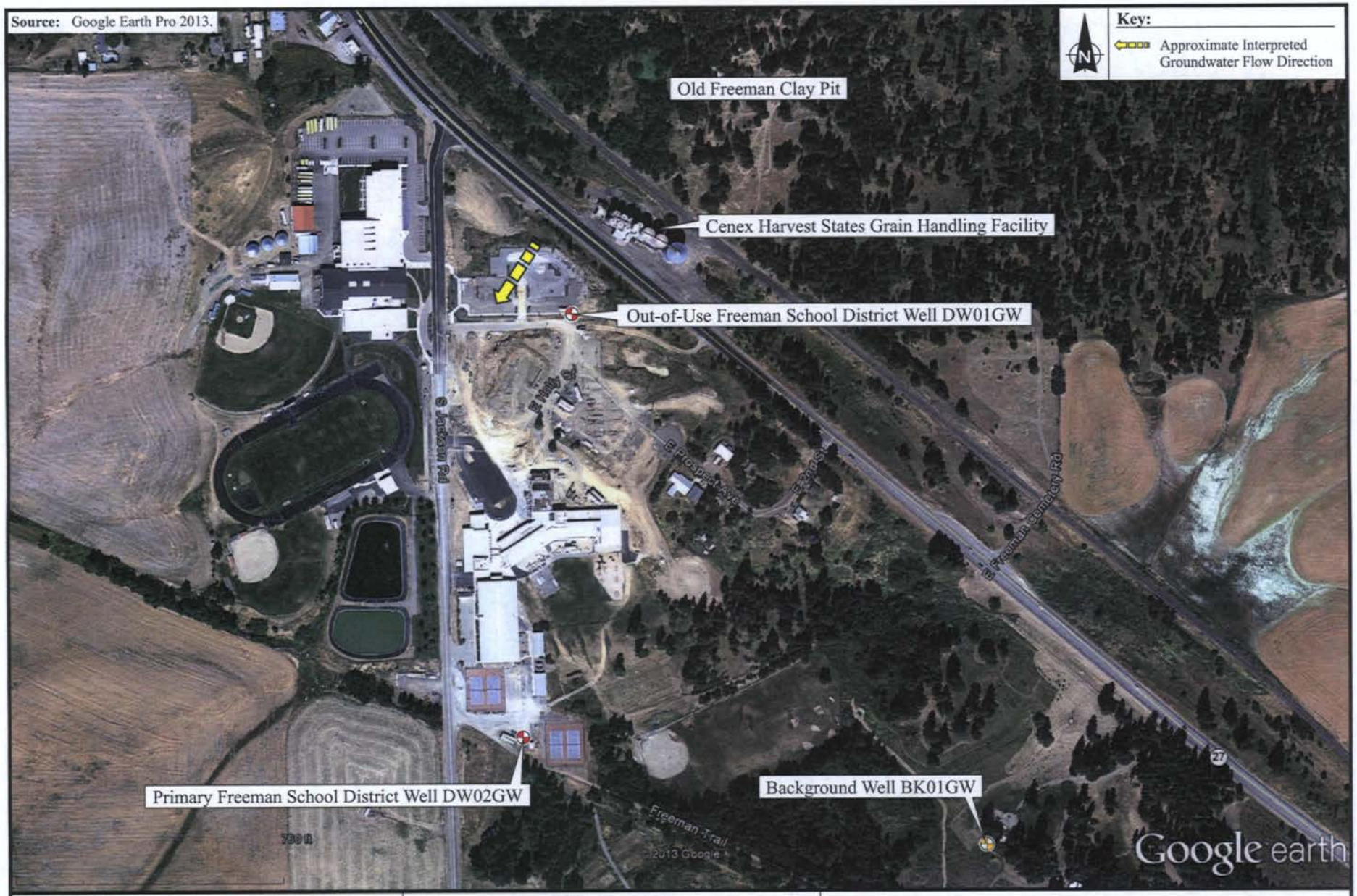
Sources: 2013 Microsoft

Well
Soil Boring
Pond
UPRR - Union Pacific Railroad

FIGURE 3-1
SOIL BORING LOCATION MAP
FREEMAN GROUND WATER CONTAMINATION
Freeman, Washington

0 10 20 40 Feet

ecology and environment, inc.
Global Environmental Specialists



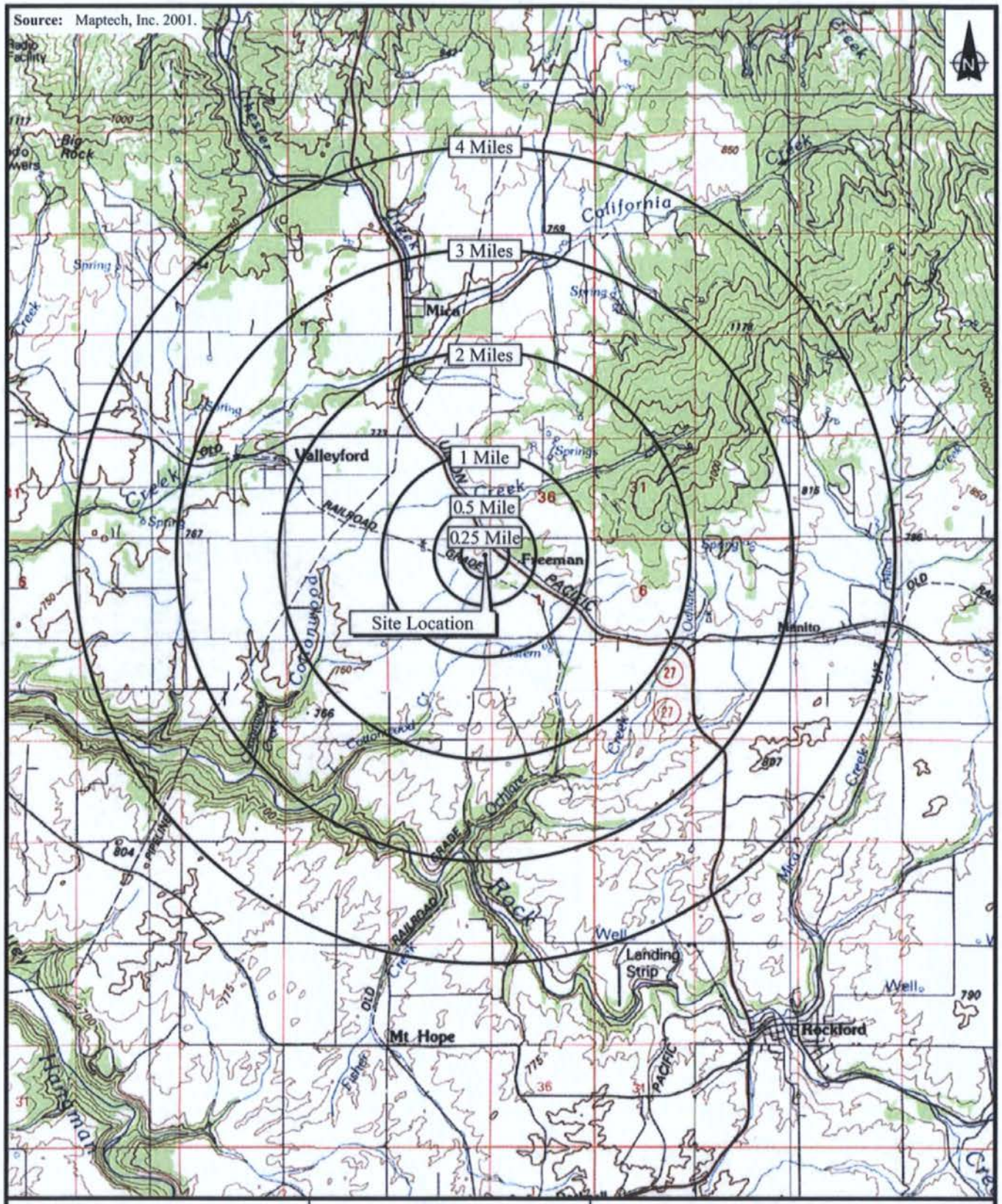
ecology and environment, inc.
Global Environmental Specialists
Seattle, Washington

FREEMAN GROUND WATER CONTAMINATION
Freeman, Washington

0 190 380
Approximate Scale in Feet

Figure 3-2
WELL SAMPLE LOCATION MAP

Date:	Drawn by:	
3/5/13	AES	10:START IV\13070005\fig 3-2



ecology and environment, inc.
Global Environmental Specialists
Seattle, Washington

FREEMAN GROUND WATER CONTAMINATION
Freeman, Washington

Figure 7-1

4-MILE TDL MAP

0 .5 1
Approximate Scale in Miles

Date: 7-3-14

Drawn by: AES

10:START IV\13070005\fig 7-1

Tables

This page intentionally left blank.

Table 2-1 Freeman School District Drinking Water Well Analytical Results

Sample Date	Analyte	Result (µg/L)
9/18/2013	Carbon Tetrachloride	**3.8 EQ**
7/2/2013	Carbon Tetrachloride	**3.3 EQ**
4/10/2013	Carbon Tetrachloride	**9.3 EQ**
1/25/2013	Carbon Tetrachloride	**22**
1/24/2013	Carbon Tetrachloride	**7.6 EQ**
12/12/2012	Carbon Tetrachloride	**8.0 EQ**
9/5/2012	Carbon Tetrachloride	**3.1 EQ**
6/14/2012	Carbon Tetrachloride	**2.1 EQ**
4/19/2012	Carbon Tetrachloride	**7.2 EQ**
3/21/2012	Carbon Tetrachloride	**5.9 EQ**
12/7/2011	Carbon Tetrachloride	0.5 LT
9/21/2011	Carbon Tetrachloride	0.5 LT
6/22/2011	Carbon Tetrachloride	0.5 LT
3/31/2011	Carbon Tetrachloride	**3.9 EQ**
10/27/2010	Carbon Tetrachloride	**3.13 EQ**
8/18/2010	Carbon Tetrachloride	**2.22 EQ**
4/28/2010	Carbon Tetrachloride	**4.29 EQ**
11/4/2009	Carbon Tetrachloride	**3.28 EQ**
6/25/2009	Carbon Tetrachloride	**1.8 EQ**
2/26/2009	Carbon Tetrachloride	**1.66 EQ**
11/13/2008	Carbon Tetrachloride	**3.72 EQ**
9/12/2008	Carbon Tetrachloride	**2.14 EQ**
5/20/2008	Carbon Tetrachloride	**2.34 EQ**
4/3/2008	Carbon Tetrachloride	**7.78 EQ**
4/30/2007	Carbon Tetrachloride	**2.31 EQ**
5/31/2006	Carbon Tetrachloride	0.5 LT
11/16/2004	Carbon Tetrachloride	**1.64 EQ**
8/12/2003	Carbon Tetrachloride	0.5 LT
6/20/2002	Carbon Tetrachloride	**1.4 EQ**
7/11/2001	Carbon Tetrachloride	0.5 LT
3/22/2001	Carbon Tetrachloride	**0.7 EQ**
	Chloroform	**0.7 EQ**
1/30/2001	Carbon Tetrachloride	**0.7 EQ**
11/13/1992	Carbon Tetrachloride	0.5 LT
5/27/1992	Carbon Tetrachloride	0.5 LT

Source: WDOH 2013, E & E 2014a, GeoEngineers 2013

Notes:

Bold concentrations indicate the analyte was detected.

Shaded concentrations indicate the value exceeds the EPA Safe Drinking Water Act Maximum Contaminant Level of 5 µg/L.

Key:

EQ	=	Equal to.
LT	=	Less than.
µg/L	=	Micrograms per liter.

Table 3-1 Sample Analysis Summary

EPA Sample ID	Sample Location ID	CLP Sample ID	Matrix	Date	Sample Time	Depth (feet bgs)	Sampler	Sample Analyses			Location/Description
								Pesticides (Fixed Lab)	Carbon Tetrachloride (Field Lab)	VOCs (Fixed Lab)	
Background Samples											
14164026	BK01GW	JGFJ5	Drinking Water	4/24/2014	9:40	-	L. Ader			X	Collected from residential well. Background sample. MS/MSD.
14164022	BK01SB03	JGFJ1	Soil	4/22/2014	11:27	2.5 - 3	L. Ader		X	X	Collected from boring BK01. Background sample. MS/MSD.
14164023	BK01SB04	JGFJ2	Soil	4/22/2014	11:30	3.5 - 4	J. Fetters		X	X	Collected from boring BK01. Background sample. MS/MSD.
14164024	BK01SB12	JGFJ3	Soil	4/22/2014	11:43	11.5 - 12	L. Ader		X	X	Collected from boring BK01. Background sample.
Upgradient Subsurface Soil Samples											
14164019	HA01SB13.5	JGFH8	Soil	4/23/2014	9:30	13 - 13.5	J. Fetters		X	X	Collected from boring HA01 on property north and upgradient of the site.
14164020	HA02SB2.5	JGFH9	Soil	4/23/2014	11:35	2 - 2.5	J. Fetters		X	X	Collected from boring HA02 on property north and upgradient of the site.
14164021	HA03SB09	JGFJ0	Soil	4/23/2014	11:35	8.5 - 9	J. Fetters		X	X	Collected from boring HA03 on property north and upgradient of the site.
Cenex Harvest States Grain Handling Facility Subsurface Soil Samples											
14164006	SB01SB01.5	JGFG5	Soil	4/21/2014	9:34	1 - 1.5	J. Fetters		X	X	Collected from boring SB01. See soil boring log for sample description.
14164007	SB01SB05	JGFG6	Soil	4/21/2014	10:21	4.5 - 5	J. Fetters		X	X	Collected from boring SB01. See soil boring log for sample description.
NA	SB02SB01	NA	Soil	4/21/2014	11:06	0.5 - 1	J. Fetters		X		Collected from boring SB02. See soil boring log for sample description.
NA	SB02SB05	NA	Soil	4/21/2014	10:56	4.5 - 5	J. Fetters		X		Collected from boring SB02. See soil boring log for sample description.
NA	SB03SB05	NA	Soil	4/21/2014	11:45	4.5 - 5	J. Fetters		X		Collected from boring SB03. See soil boring log for sample description.
NA	SB03SB1.5	NA	Soil	4/21/2014	11:36	1 - 1.5	J. Fetters		X		Collected from boring SB03. See soil boring log for sample description.
14164008	SB04SB04	JGFG7	Soil	4/21/2014	1:37	3.5 - 4	J. Fetters		X	X	Collected from boring SB04. See soil boring log for sample description.
14164009	SB04SB05	JGFG8	Soil	4/21/2014	1:45	4.5 - 5	J. Fetters		X	X	Collected from boring SB04. See soil boring log for sample description.
NA	SB05SB03	NA	Soil	4/21/2014	14:09	2.5 - 3	L. Ader		X		Collected from boring SB05. See soil boring log for sample description.

Table 3-1 Sample Analysis Summary

EPA Sample ID	Sample Location ID	CLP Sample ID	Matrix	Date	Sample Time	Depth (feet bgs)	Sampler	Sample Analyses			Location/Description
								Pesticides (Fixed Lab)	Carbon Tetrachloride (Field Lab)	VOCs (Fixed Lab)	
NA	SB05SB04	NA	Soil	4/21/2014	14:15	3.5 - 4	J. Fetters		X		Collected from boring SB05. See soil boring log for sample description.
14164010	SB06SB4.5	JGFG9	Soil	4/21/2014	3:16	4 - 4.5	J. Fetters		X	X	Collected from boring SB06. See soil boring log for sample description.
14164011	SB06SB6.5	JGFH0	Soil	4/21/2014	3:30	6 - 6.5	J. Fetters		X	X	Collected from boring SB06. See soil boring log for sample description.
14164012	SB06SB12	JGFH1	Soil	4/21/2014	3:40	11.5 - 12	J. Fetters		X	X	Collected from boring SB06. See soil boring log for sample description.
NA	SB07SB03	NA	Soil	4/21/2014	16:09	3 - 3.5	J. Fetters		X		Collected from boring SB07. See soil boring log for sample description.
NA	SB07SB04	NA	Soil	4/21/2014	16:15	4 - 4.5	J. Fetters		X		Collected from boring SB07. See soil boring log for sample description.
NA	SB08SB4.5	NA	Soil	4/22/2014	14:23	4 - 4.5	L. Ader		X		Collected from boring SB08. See soil boring log for sample description.
NA	SB08SB5.5	NA	Soil	4/22/2014	14:28	5 - 5.5	J. Fetters		X		Collected from boring SB08. See soil boring log for sample description.
NA	SB09SB04	NA	Soil	4/22/2014	15:15	3.5 - 4	J. Fetters		X		Collected from boring SB09. See soil boring log for sample description.
NA	SB09SB05	NA	Soil	4/22/2014	15:30	4.5 - 5	J. Fetters		X		Collected from boring SB09. See soil boring log for sample description.
14164013	SB09SB15	JGFH2	Soil	4/22/2014	4:25	14.5 - 15	J. Fetters		X	X	Collected from boring SB09. See soil boring log for sample description.
14164014	SB09SB19.5	JGFH3	Soil	4/22/2014	4:10	19 - 19.5	J. Fetters		X	X	Collected from boring SB09. See soil boring log for sample description.
14164015	SB09SB25	JGFH4	Soil	4/22/2014	4:10	24.5 - 25	L. Ader		X	X	Collected from boring SB10. See soil boring log for sample description.
14164016	SB10SB15.5	JGFH5	Soil	4/22/2014	6:06	15 - 15.5	J. Fetters		X	X	Collected from boring SB10. See soil boring log for sample description.
14164017	SB10SB18.5	JGFH6	Soil	4/22/2014	5:45	18 - 18.5	J. Fetters		X	X	Collected from boring SB10. See soil boring log for sample description.
14164018	SB10SB20.5	JGFH7	Soil	4/22/2014	6:14	20 - 20.5	J. Fetters		X	X	Collected from boring SB10. See soil boring log for sample description.
NA	SB11SB17	NA	Soil	4/23/2014	14:45	16.5 - 17	L. Ader		X		Collected from boring SB11. See soil boring log for sample description.
NA	SB11SB18	NA	Soil	4/23/2014	15:23	17.5 - 18	J. Fetters		X		Collected from boring SB11. See soil boring log for sample description.

Table 3-1 Sample Analysis Summary

EPA Sample ID	Sample Location ID	CLP Sample ID	Matrix	Date	Sample Time	Depth (feet bgs)	Sampler	Sample Analyses			Location/Description
								Pesticides (Fixed Lab)	Carbon Tetrachloride (Field Lab)	VOCs (Fixed Lab)	
14164030	SB11SB18.6	JGFJ9	Soil	4/23/2014	3:21	18.2 - 18.6	J. Fetters	X	X	X	Collected from boring SB11. See soil boring log for sample description.
14164031	SB11SB20	JGFK0	Soil	4/23/2014	3:07	19 - 20	J. Fetters		X	X	Collected from boring SB11. See soil boring log for sample description.
14164032	SB11SB21.5	JGFK1	Soil	4/23/2014	3:50	21 - 21.5	L. Ader		X	X	Collected from boring SB11. See soil boring log for sample description.
14164033	SB11SB28	JGFK2	Soil	4/23/2014	3:59	27.5 - 28	L. Ader		X	X	Collected from boring SB11. See soil boring log for sample description.
14164034	SB11SB32	JGFK3	Soil	4/23/2014	4:27	31.5 - 32	J. Fetters		X	X	Collected from boring SB11. See soil boring log for sample description.
14164035	SB12SB20	JGFK4	Soil	4/24/2014	10:41	19.5 - 20	A. Jensen		X	X	Collected from boring SB12. See soil boring log for sample description.
14164036	SB12SB21.5	JGFK5	Soil	4/24/2014	10:43	21 - 21.5	J. Fetters		X	X	Collected from boring SB12. See soil boring log for sample description.
14164037	SB12SB28.5	JGFK6	Soil	4/24/2014	11:14	28 - 28.5	J. Fetters		X	X	Collected from boring SB12. See soil boring log for sample description.
14164038	SB13SB14	JGFK7	Soil	4/24/2014	2:15	13.5 - 14	J. Fetters		X	X	Collected from boring SB13. See soil boring log for sample description.
14164039	SB13SB20	JGFK8	Soil	4/24/2014	2:33	19 - 20	J. Fetters		X	X	Collected from boring SB13. See soil boring log for sample description.
14164041	SB13SB21.2	JGFL0	Soil	4/24/2014	3:13	20.8 - 21.2	J. Fetters		X	X	Collected from boring SB13. See soil boring log for sample description.
14164042	SB13SB23	JGFL1	Soil	4/24/2014	3:15	22 - 23	J. Fetters		X	X	Collected from boring SB13. See soil boring log for sample description.
14164040	SB13SB27.5	JGFK9	Soil	4/24/2014	2:44	26.5 - 27.5	J. Fetters		X	X	Collected from boring SB13. See soil boring log for sample description.
14164043	SB13SB30	JGFL2	Soil	4/24/2014	3:43	29.5 - 30	J. Fetters		X	X	Collected from boring SB13. See soil boring log for sample description.
14164046	SB14SB18	JGFL5	Soil	4/24/2014	5:10	17.5 - 18	J. Fetters		X	X	Collected from boring SB14. See soil boring log for sample description.
14164047	SB14SB21.5	JGFL6	Soil	4/24/2014	5:30	21 - 21.5	L. Ader		X	X	Collected from boring SB14. See soil boring log for sample description.
14164048	SB14SB23.5	JGFL7	Soil	4/24/2014	5:19	23 - 23.5	L. Ader		X	X	Collected from boring SB14. See soil boring log for sample description.
14164049	SB14SB28	JGFL8	Soil	4/24/2014	5:41	27.5 - 28	J. Fetters		X	X	Collected from boring SB14. See soil boring log for sample description.

Table 3-1 Sample Analysis Summary

EPA Sample ID	Sample Location ID	CLP Sample ID	Matrix	Date	Sample Time	Depth (feet bgs)	Sampler	Sample Analyses			Location/Description
								Pesticides (Fixed Lab)	Carbon Tetrachloride (Field Lab)	VOCs (Fixed Lab)	
Ground Water Samples											
14164003	DW01GW	JGFG2	Drinking Water	4/22/2014	9:40	-	L. Ader			X	Out-of-use Freeman School District well.
14164005	DW02GW	JGFG4	Drinking Water	4/22/2014	11:00	-	L. Ader			X	Primary Freeman School District well.
Investigation-Derived Waste Samples											
14164025	ID01WT	JGFJ4	Water	4/23/2014	6:30	-	J. Fetters			X	Decontamination/purge water.
14164044	ID02WT	JGFL3	Water	4/25/2014	8:50	-	J. Fetters			X	Decontamination/purge water.
Quality Control Samples											
14164004	RI01WT	JGFG3	Water	4/22/2014	9:55	-	L. Ader			X	Ground water pump rinsate.
14164027	RI02WT	JGFJ6	Water	4/24/2014	8:25	-	J. Fetters			X	Geoprobe cutting shoe rinsate.
14164028	RI03WT	JGFJ7	Water	4/24/2014	8:30	-	J. Fetters			X	Hand auger rinsate.
14164029	RI04WT	JGFJ8	Water	4/24/2014	8:35	-	J. Fetters			X	Geoprobe cutting shoe rinsate.
14164000	TB01WT	JGFF9	Water	4/21/2014	11:25	-	L. Ader			X	Trip Blank
14164001	TB02WT	JGFG0	Water	4/21/2014	11:28	-	L. Ader			X	Trip Blank
14164002	TB03WT	JGFG1	Water	4/21/2014	11:34	-	L. Ader			X	Trip Blank
14164045	TB04WT	JGFL4	Water	4/25/2014	9:05	-	C. Whitehead			X	Trip Blank

Key:

- = Not applicable.
bgs = Below ground surface.
Cenex = Cenex Harvest States.
CLP = Contract Laboratory Program.
EPA = U.S. Environmental Protection Agency.
ID = Identification.
NA = Not applicable.
MS/MSD = Matrix spike/matrix spike duplicate.
UPRR = Union Pacific Railroad.
VOCs = Volatile organic compounds.
X = The sample was analyzed for the given parameter.

Table 3-2 Sample Coding

Digits	Description	Code	Example
1,2	Source Code	DW	Drinking Water
		ID	Investigation-Derived Waste
		RS	Rinsate
		SB	Soil Boring
		TB	Trip Blank
3,4	Consecutive Number	01	First number of source code
5,6	Matrix Code	GW	Ground Water
		SB	Subsurface Soil
		WT	Water
7,8	Depth of Sample	04	4 feet below ground surface

Table 3-3 Investigation-Derived Waste Samples Analytical Results Summary

EPA Sample ID CLP Sample ID Station Location Description	14164025 JGFJ4 ID01WT Decontamination/Purge Water	14164044 JGFL3 ID02WT Decontamination/Purge Water
Volatile Organic Compounds (µg/L)		
2-Butanone	4.7 JQ	**7.9 JK**
Acetone	**6.8 JK**	12 U
Carbon tetrachloride	**0.64**	0.5 U
Chloroethane	0.44 JQ	**3.6**
Chloromethane	0.5 U	**4**
Toluene	**0.89**	**0.55**

Note: Bold type indicates the sample result is above the contract-required quantitation limit.

Key:

µg/L = Micrograms per liter.

CLP = Contract Laboratory Program.

EPA = United States Environmental Protection Agency.

ID = Identification.

J = The analyte was positively identified. The associated numerical result is an estimate.

K = The direction of bias is not known.

Q = The result is estimated because the concentration is below the Contract Required Quantitation Limit.

U = The analyte was not detected above the reported result.

Table 6-1 Field Laboratory Carbon Tetrachloride Soil Sample Analytical Results

Sample Number	Depth (feet bgs)	Field Laboratory Result (µg/kg)
BK01SB03	2.5 - 3	2.10 U
BK01SB04	3.5 - 4	2.15 U
BK01SB12	11.5 - 12	1.87 U
HA01SB13.5	13 - 13.5	2.49 U
HA02SB2.5	2 - 2.5	2.14 U
HA03SB09	8.5 - 9	2.37 U
SB01SB1.5	1 - 1.5	2.12 U
SB01SB05	4.5 - 5	2.38 U
SB04SB04	3.5 - 4	2.51 U
SB04SB05	4.5 - 5	2.33 U
SB06SB4.5	4 - 4.5	2.48 U
SB06SB6.5	6 - 6.5	2.36 U
SB06SB12	11.5 - 12	2.85 U
SB09SB15	14.5 - 15	5.14 U
SB09SB19.5	19 - 19.5	**4.88**
SB09SB25	24.5 - 25	**3.83**
SB10SB15.5	15 - 15.5	3.15 U
SB10SB18.5	18 - 18.5	**5.21**
SB10SB20.5	20 - 20.5	**5.06**
SB11SB18.6	18.2 - 18.6	2.96 U
SB11SB20	19 - 20	**3.21**
SB11SB21.5	21 - 21.5	**4.37**
SB11SB28	27.5 - 28	**4.42**
SB11SB32	31.5 - 32	**3.67**
SB12SB20	19.5 - 20	3.46 U
SB12SB21.5	21 - 21.5	3.18 U
SB12SB28.5	28 - 28.5	**2.85**
SB13SB14	13.5 - 14	2.53 U
SB13SB20	19 - 20	**7.98**
SB13SB21.2	20.8 - 21.2	**8.42**
SB13SB23	22 - 23	**5.92**
SB13SB27.5	26.5 - 27.5	**6.42**
SB13SB30	29.5 - 30	**14.98**
SB14SB18	17.5 - 18	**5.86**
SB14SB21.5	21 - 21.5	**9.30**
SB14SB23.5	23 - 23.5	**10.67**
SB14SB28	27.5 - 28	2.66 U

Note: Bold type indicates the sample result is above the sample detection limit.

Key:

µg/kg = micrograms per kilogram.

bgs = below ground surface.

U = The analyte was not detected above the reported result.

Table 6-2 Fixed Laboratory Soil Samples Analytical Results Summary

EPA Sample ID	14164022	14164023	14164024	14164019	14164020	14164021	14164006	14164007	14164008	14164009	14164010	14164011	14164012	14164013	14164014
CLP Sample ID	JGFJ1	JGFJ2	JGFJ3	JGFH8	JGFH9	JGFJ0	JGFG5	JGFG6	JGFG7	JGFG8	JGFG9	JGFH0	JGFH1	JGFH2	JGFH3
Station Location	BK01SB03	BK01SB04	BK01SB12	HA01SB13.5	HA02SB2.5	HA03SB09	SB01SB01.5	SB01SB05	SB04SB04	SB04SB05	SB06SB4.5	SB06SB6.5	SB06SB12	SB09SB15	SB09SB19.5
Boring Number	BK01	BK01	BK01	HA01	HA02	HA03	SB01	SB01	SB04	SB04	SB06	SB06	SB06	SB09	SB09
Description	Background	Background	Background	Mutual Materials	Mutual Materials	Mutual Materials	Cenex	Cenex	Cenex	Cenex	Cenex	Cenex	Cenex	Cenex	Cenex
Depth (feet bgs)	2.5 - 3	3.5 - 4	11.5 - 12	13 - 13.5	2 - 2.5	8.5 - 9	1 - 1.5	4 - 5.5	3 - 5.4	4.5 - 5	4 - 4.5	6 - 6.5	11.5 - 12	14.5 - 15	19 - 19.5
Volatile Organic Compounds (µg/Kg)															
Carbon tetrachloride	4.7 U	4.9 U	4.7 U	6.2 U	5.5 U	4.7 U	4.3 U	5.1 U	6 U	0.21 JQ	5.1 U	4.5 U	6 U	3.2 JQ	3.8 JQ
Chloroform	4.7 U	4.9 U	4.7 U	6.2 U	5.5 U	4.7 U	4.3 U	5.1 U	6 U	4.8 U	5.1 U	4.5 U	6 U	6.8 JQ	7.6

EPA Sample ID	14164015	14164016	14164017	14164018	14164030	14164031	14164032	14164033	14164034	14164035	14164036	14164037	14164038	14164039	14164041
CLP Sample ID	JGFH4	JGFH5	JGFH6	JGFH7	JGFJ9	JGFK0	JGFK1	JGFK2	JGFK3	JGFK4	JGFK5	JGFK6	JGFK7	JGFK8	JGFL0
Station Location	SB09SB25	SB10SB15.5	SB10SB18.5	SB10SB20.5	SB11SB18.6	SB11SB20	SB11SB21.5	SB11SB28	SB11SB32	SB12SB20	SB12SB21.5	SB12SB28.5	SB13SB14	SB13SB20	SB13SB21.2
Boring Number	SB09	SB10	SB10	SB10	SB11	SB11	SB11	SB11	SB11	SB12	SB12	SB12	SB13	SB13	SB13
Description	Cenex	Cenex	Cenex	Cenex	Cenex	Cenex	Cenex	Cenex	Cenex	Cenex	Cenex	Cenex	Cenex	Cenex	Cenex
Depth (feet bgs)	24.5 - 25	15 - 15.5	18 - 18.5	20 - 20.5	18.2 - 18.6	19 - 20	21 - 21.5	27.5 - 28	31.5 - 32	19.5 - 20	21 - 21.5	28 - 28.5	13.5 - 14	19 - 20	20.8 - 21.2
Volatile Organic Compounds (µg/Kg)															
Carbon tetrachloride	3.2 JQ	0.88 JQ	6.5 JQ	4.4 JQ	1.4 JQ	1.9 JQ	1.7 JQ	0.71 JQ	7.5 U	2.3 JQ	1.9 JQ	0.19 JQ	1.2 JQ	4.1 JQ	9.7
Chloroform	4.1 JQ	7.3 U	3.5 JQ	4.5 JQ	1.4 JQ	0.94 JQ	0.88 JQ	0.59 JQ	7.5 U	1.6 JQ	1.4 JQ	7 U	7 U	2.2 JQ	4.4 JQ

EPA Sample ID	14164042	14164040	14164043	14164046	14164047	14164048	14164049
CLP Sample ID	JGFL1	JGFK9	JGFL2	JGFL5	JGFL6	JGFL7	JGFL8
Station Location	SB132B23	SB13SB27.5	SB13SB30	SB14SB18	SB14SB21.5	SB14SB23.5	SB14SB28
Boring Number	SB13	SB13	SB13	SB14	SB14	SB14	SB14
Description	Cenex	Cenex	Cenex	Cenex	Cenex	Cenex	Cenex
Depth (feet bgs)	22 - 23	26.5 - 27.5	29.5 - 30	17.5 - 18	21 - 21.5	23 - 23.5	27.5 - 28
Volatile Organic Compounds (µg/Kg)							
Carbon tetrachloride	7.1 JQ	4.9 JQ	**15**	6.8 JQ	9.3	9.8 JQ	0.27 JQ
Chloroform	3.7 JQ	3 JQ	6.6 JQ	8.5	11	12	0.5 JQ

Note: Bold type indicates the sample result is above the CLP Contract-Required Quantitation Limit.

Underline type indicates the sample result is elevated as defined in Section 5.

Key:

µg/Kg = micrograms per kilogram.

bgs = below ground surface.

CLP = Contract Laboratory Program.

EPA = United States Environmental Protection Agency.

ID = Identification.

J = The analyte was positively identified. The associated numerical result is an estimate.

Q = The result is estimated because the concentration is below the CLP Contract Required Quantitation Limit.

U = The analyte was not detected above the reported result.

This page intentionally left blank.

Table 6-3 Field vs. Fixed Laboratory Carbon Tetrachloride Soil Sample Results

Carbon Tetrachloride		Field Results (µg/kg)		Laboratory Results (µg/kg)	
Sample Number	Sample Depth (feet bgs)	Original Result	Correlation Value	Original Result	Correlation Value
BK01SB03	2.5 - 3	2.10 U	1.05	4.7 U	2.35
BK01SB04	3.5 - 4	2.15 U	1.08	4.9 U	2.45
BK01SB12	11.5 - 12	1.87 U	0.94	4.7 U	2.35
HA01SB13.5	13 - 13.5	2.49 U	1.24	6.2 U	3.10
HA02SB2.5	2 - 2.5	2.14 U	1.07	5.5 U	2.75
HA03SB09	8.5 - 9	2.37 U	1.19	4.7 U	2.35
SB01SB1.5	1 - 1.5	2.12 U	1.06	4.3 U	2.15
SB01SB05	4.5 - 5	2.38 U	1.19	5.1 U	2.55
SB04SB04	3.5 - 4	2.51 U	1.26	6 U	3.00
SB04SB05	4.5 - 5	2.33 U	1.16	0.21 JQ	0.21
SB06SB4.5	4 - 4.5	2.48 U	1.24	5.1 U	2.55
SB06SB6.5	6 - 6.5	2.36 U	1.18	4.5 U	2.25
SB06SB12	11.5 - 12	2.85 U	1.42	6 U	3.00
SB09SB15	14.5 - 15	5.14 U	2.57	3.2 JQ	3.2
SB09SB19.5	19 - 19.5	**4.88**	4.88	3.8 JQ	3.8
SB09SB25	24.5 - 25	**3.83**	3.83	3.2 JQ	3.2
SB10SB15.5	15 - 15.5	3.15 U	1.57	0.88 JQ	0.88
SB10SB18.5	18 - 18.5	**5.21**	5.21	6.5 JQ	6.5
SB10SB20.5	20 - 20.5	**5.06**	5.06	4.4 JQ	4.4
SB11SB18.6	18.2 - 18.6	2.96 U	1.48	1.4 JQ	1.4
SB11SB20	19 - 20	**3.21**	3.21	1.9 JQ	1.9
SB11SB21.5	21 - 21.5	**4.37**	4.37	1.7 JQ	1.7
SB11SB28	27.5 - 28	**4.42**	4.42	0.71 JQ	0.71
SB11SB32	31.5 - 32	**3.67**	3.67	7.5 U	3.75
SB12SB20	19.5 - 20	3.46 U	1.73	2.3 JQ	2.3
SB12SB21.5	21 - 21.5	3.18 U	1.59	1.9 JQ	1.9
SB12SB28.5	28 - 28.5	**2.85**	2.85	0.19 JQ	0.19
SB13SB14	13.5 - 14	2.53 U	1.27	1.2 JQ	1.2
SB13SB20	19 - 20	**7.98**	7.98	4.1 JQ	4.1
SB13SB21.2	20.8 - 21.2	**8.42**	8.42	**9.7**	9.7
SB13SB23	22 - 23	**5.92**	5.92	7.1 JQ	7.1
SB13SB27.5	26.5 - 27.5	**6.42**	6.42	4.9 JQ	4.9
SB13SB30	29.5 - 30	**14.98**	14.98	**15**	15
SB14SB18	17.5 - 18	**5.86**	5.86	6.8 JQ	6.8
SB14SB21.5	21 - 21.5	**9.3**	9.3	**9.3**	9.3
SB14SB23.5	23 - 23.5	**10.67**	10.67	9.8 JQ	9.8
SB14SB28	27.5 - 28	2.66 U	1.33	0.27 JQ	0.27

Note: Bold values are greater than the sample quantitation limit.

Key

µg/kg = micrograms per kilogram.
bgs = below ground surface.
JQ = The result is estimated because the concentration is below the Contract Required Quantitation Limits.
U = The associated sample result is less than the listed quantitation limit.

Correlation Coefficient (r) = 0.889

Table 7-1 Ground Water Drinking Water Population

Distance Ring (miles)	Number of Wells	Well Population	Total Population per Distance Ring
0 - ¼	Domestic - 3	7.26	910.26
	Group A (School District) – 1	900	
	Group B – 1	3	
¼ - ½	Domestic – 6	14.52	14.52
½ - 1	Domestic - 25	60.50	60.50
1 – 2	Domestic – 84	203.28	208.28
	Group B – 1	5	
2 – 3	Domestic - 185	447.70	762.70
	Group A – 2	295	
	Group B – 4	20	
3 – 4	Domestic - 166	401.72	412.72
	Group B – 1	11	
TOTAL			**2,368.98**

Sources: USCB 2007 to 2011; Ecology 2013b; WDOH 2013.

Note: Well population was estimated based on the average number of per persons per household for the county in which the well is located. The average population per household for Spokane County, Washington, is 2.42.

Table 7-2 Ground Water Samples Analytical Results Summary

EPA Sample ID	14164026	14164003	14164005
CLP Sample ID	JGJF5	JGFG2	JGFG4
Station Location	BK01GW	DW01GW	DW02GW
Description	Background	Out-of-Service School District Well	Primary School District Well
Volatile Organic Compounds (µg/L)			
Carbon tetrachloride	0.5 U	**23**	**8.8**
Chloroform	0.5 U	**1.9**	**0.52**

Note: Bold type indicates the sample result is above the Contract Required Quantitation Limit.

Underline type indicates the sample result is elevated as defined in Section 5.

Key:

µg/L = Micrograms per liter.

CLP = Contract Laboratory Program.

EPA = United States Environmental Protection Agency.

ID = Identification.

U = The analyte was not detected above the reported result.

This page intentionally left blank.

A Photographic Documentation

This page intentionally left blank.

FREEMAN GROUND WATER CONTAMINATION
Freeman, Washington

TDD Number: 13-07-0005
Photographed by: Linda Ader

Photo 1 Opening of former (b) (6) Well.

Direction: East *Date: 11/20/13* *Time: 12:18*

Photo 2 Opening of former (b) (6) Well.

Direction: Down *Date: 11/20/13* *Time: 12:18*

Photo 3 (b) (6) well with Cenex Harvest States grain silo station in background.

Direction: East *Date: 11/20/13* *Time: 12:23*

Photo 4 (b) (b well with monument cap on and Cenex Harvest States grain silo station in view.

Direction: East *Date: 11/20/13* *Time: 12:23*

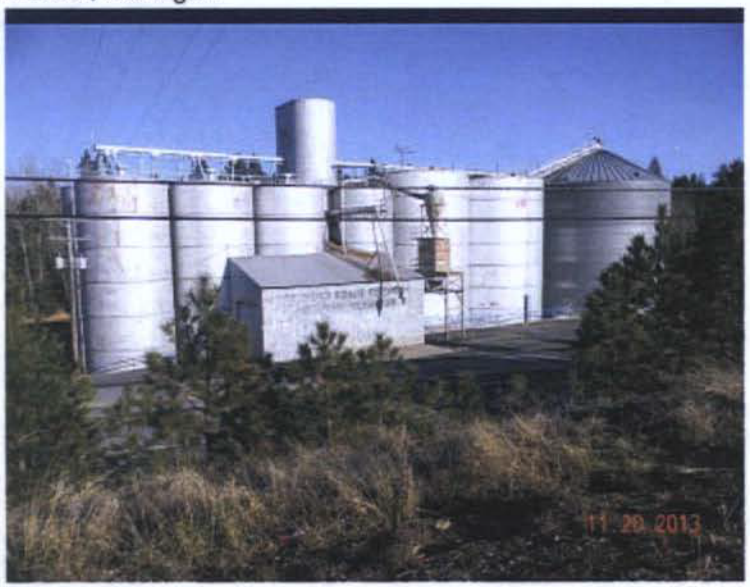


Photo 5 Cenex Harvest States from Freeman School parking lot.

Direction: East *Date: 11/20/13* *Time: 12:28*

Photo 6 Primary school district wellhead.

Direction: Southeast *Date: 11/20/13* *Time: 12:37*

Photo 7 (b) ((b) (6) well. Hand pump does not function.

Direction: South *Date: 11/20/13* *Time: 12:46*

Photo 8 Monument cap on (b) (6) well.

Direction: Southeast *Date: 11/20/13* *Time: 12:46*

Photo 9 Reed house from near (b) (6) well.

Direction: South *Date: 11/20/13* *Time: 12:50*

Photo 10 New school district air stripping system for water supply.

Direction: Southwest *Date: 11/20/13* *Time: 13:00*

Photo 11 Pre-treatment sampling portal.

Direction: Southwest *Date: 11/20/13* *Time: 13:00*

Photo 12 Chlorination system and post-treatment sampling portal.

Direction: Southwest *Date: 11/20/13* *Time: 13:00*

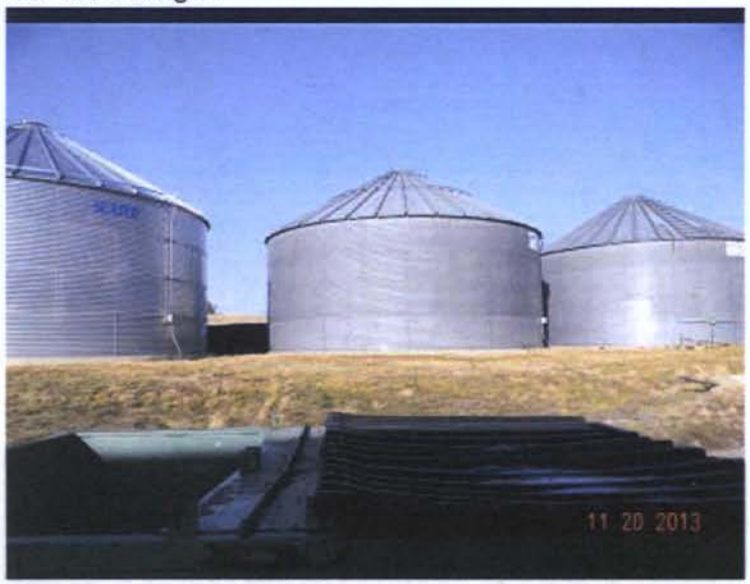


Photo 13 Three 10,000-gallon water storage tanks at Freeman High School.

Direction: North *Date: 11/20/13* *Time: 13:05*

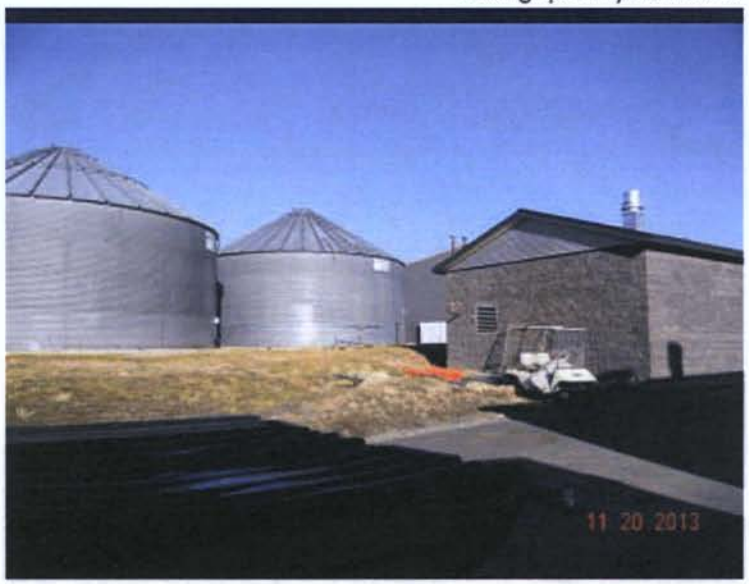


Photo 14 Water storage tanks and wellhouse at Freeman High School.

Direction: North *Date: 11/20/13* *Time: 13:15*

Photo 15 Cenex Harvest States receiving facility.

Direction: North *Date: 11/20/13* *Time: 14:27*

Photo 16 Bucket elevator (leg) used to move grain to distribution system on of silos (bins).

Direction: East *Date: 11/20/13* *Time: 14:29*

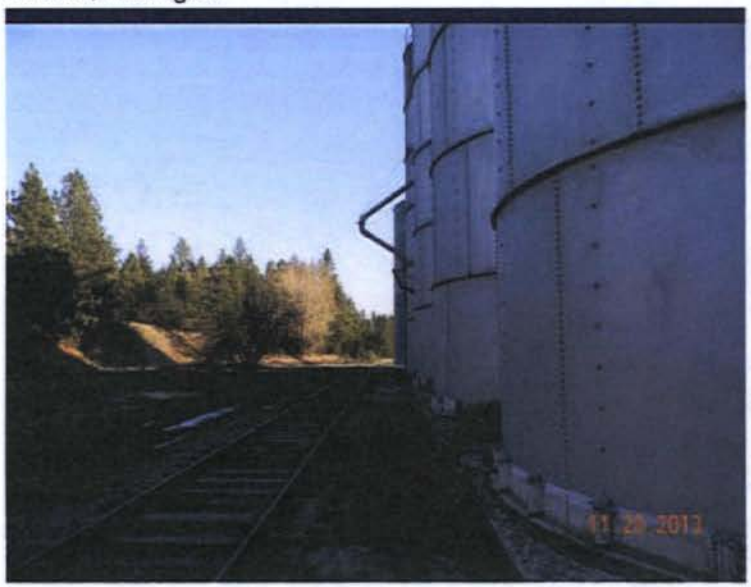


Photo 17 Grain silos along rail line.

Direction: South *Date: 11/20/13* *Time: 14:40*

Photo 18 Former loading platform for loading clay onto rail cars. This feature is not part of grain silo operations.

Direction: Northeast *Date: 11/20/13* *Time: 14:41*

Photo 19 Auger motor. One of ~10 at the grain silo facility.

Direction: West *Date: 11/20/13* *Time: 14:47*

Photo 20 Old hydraulic motor lines used to power augers in southernmost silo.

Direction: Northeast *Date: 11/20/13* *Time: 14:49*

Photo 21 Portals in southernmost silo that once were used to operate augers in silo.

Direction: East *Date: 11/20/13* *Time: 14:51*

Photo 22 View of Cenex Harvest States from south end.

Direction: North *Date: 11/20/13* *Time: 14:53*

Photo 23 Concrete around silos.

Direction: North *Date: 11/20/13* *Time: 14:55*

Photo 24 Concrete around silos.

Direction: East *Date: 11/20/13* *Time: 14:55*

FREEMAN GROUND WATER CONTAMINATION
Freeman, Washington

TDD Number: 13-07-0005
Photographed by: Linda Ader

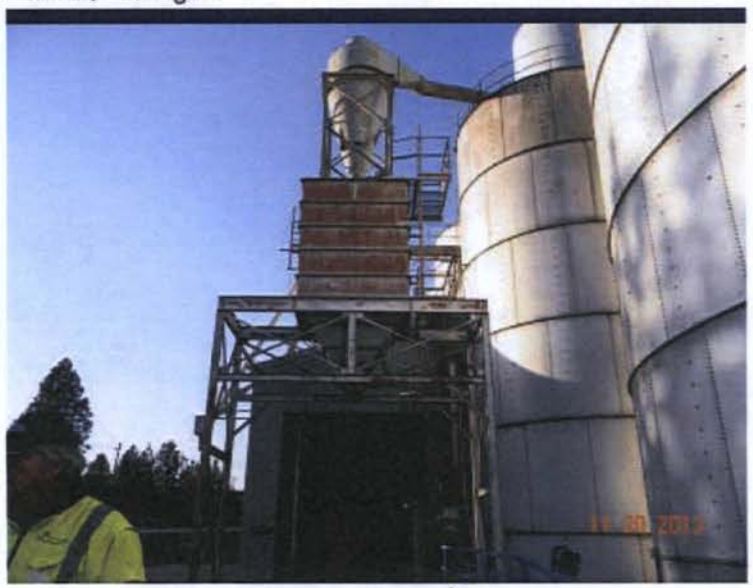


Photo 25 Dust cyclone and dust collection hopper.

Direction: North	*Date: 11/20/13*	*Time: 14:59*

FREEMAN GROUND WATER CONTAMINATION
Freeman, Washington

TDD Number: 13-07-0005
Photographed by: Linda Ader, Jeff Fetters, David Burford

Photo 1 SB01 0 to 4 feet bgs.

Direction: Down	Date: 4/21/14	Time: 10:07

Photo 2 SB01 4 to 8 feet bgs.

Direction: Down	Date: 4/21/14	Time: 10:11

Photo 3 Sample SB01SB1.5.

Direction: Down	Date: 4/21/14	Time: 10:18

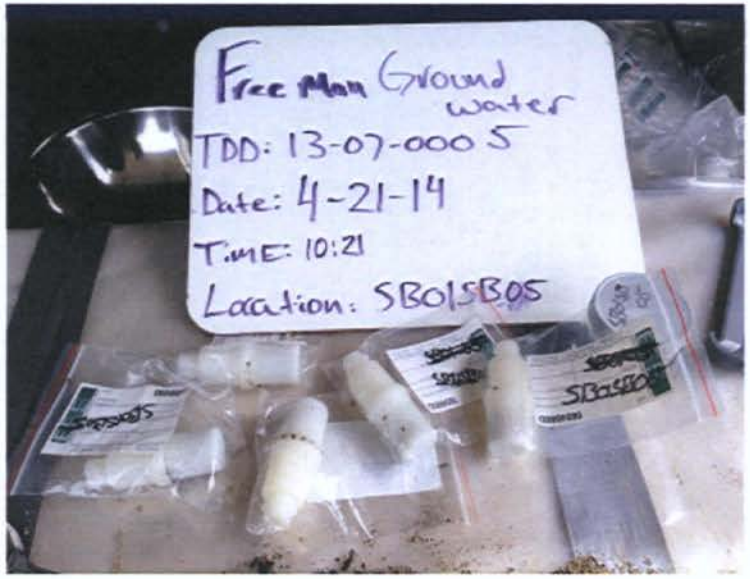


Photo 4 Sample SB01SB05.

Direction: Down	Date: 4/21/14	Time: 10:26

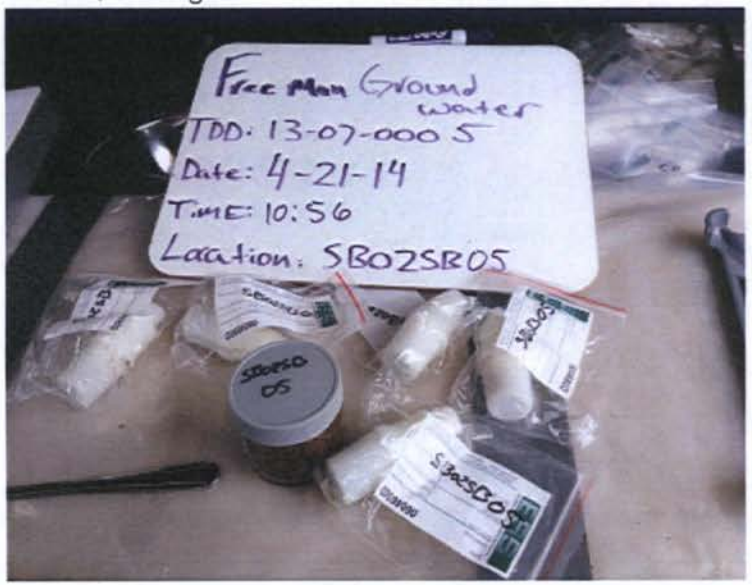


Photo 5 Sample SB02SB05.

Direction: Down	Date: 4/21/14	Time: 10:57

Photo 6 SB02 4 to 8 feet bgs.

Direction: Down	Date: 4/21/14	Time: 10:58

Photo 7 Sample SB02SB01.

Direction: Down	Date: 4/21/14	Time: 11:07

Photo 8 SB03 0 to 4 feet bgs.

Direction: Down	Date: 4/21/14	Time: 11:33

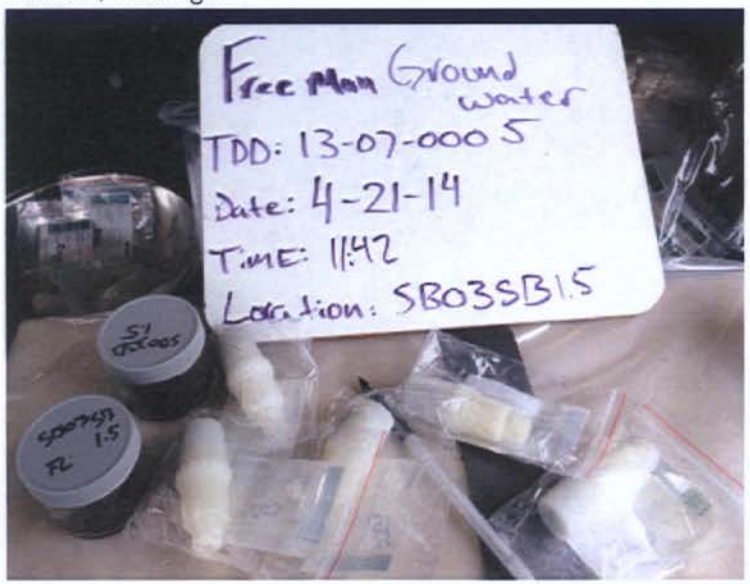


Photo 9 Sample SB03SB1.5.

Direction: Down *Date: 4/21/14* *Time: 11:45*

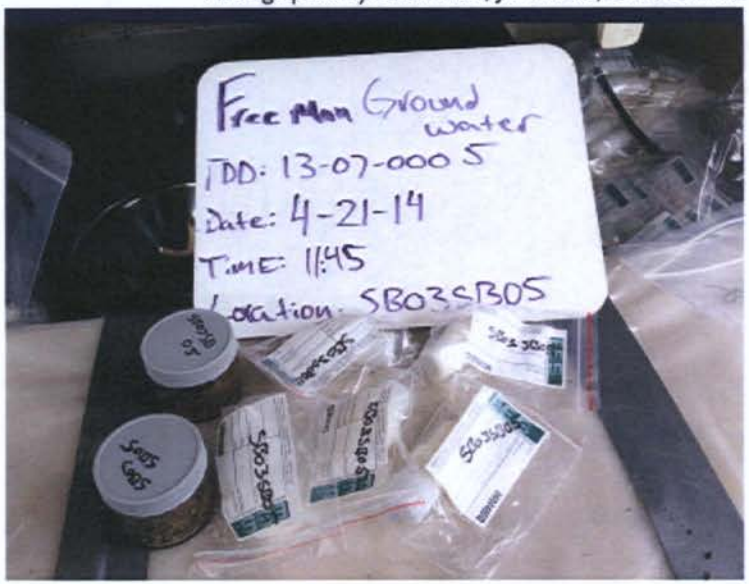


Photo 10 Sample SB03SB05.

Direction: Down *Date: 4/21/14* *Time: 11:56*

Photo 11 Drilling through concrete slab at SB04.

Direction: East *Date: 4/21/14* *Time: 13:17*

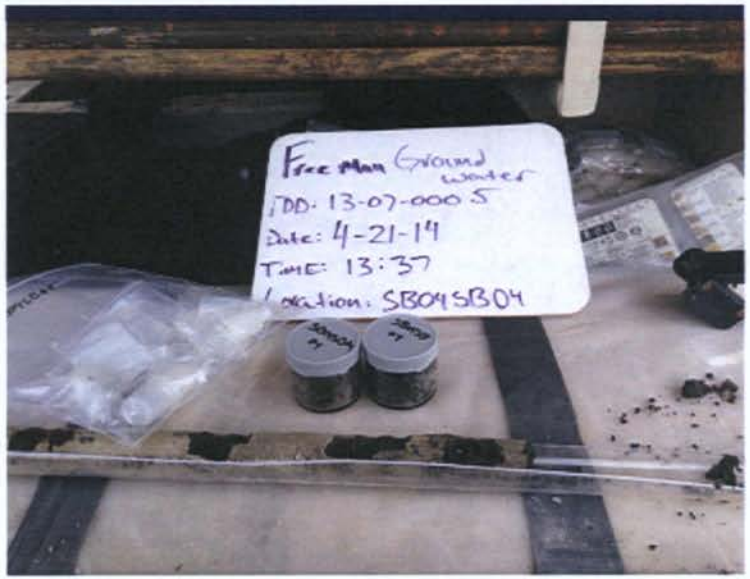


Photo 12 Sample SB04SB04.

Direction: Down *Date: 4/21/14* *Time: 13:45*

Photo 13 Sample SB04SB05.

Direction: Down	Date: 4/21/14	Time: 13:48

Photo 14 SB04 0 to 4 bgs on right, 4 to 8 feet bgs on left.

Direction: Down	Date: 4/21/14	Time: 13:49

Photo 15 Sample SB05SB03.

Direction: Down	Date: 4/21/14	Time: 14:21

Photo 16 Sample SB05SB04.

Direction: Down	Date: 4/21/14	Time: 14:21

Photo 17 SB06 0 to 4 feet bgs.

Direction: Down	Date: 4/21/14	Time: 14:49

Photo 18 SB06 4 to 8 feet bgs on left.

Direction: Down	Date: 4/21/14	Time: 14:53

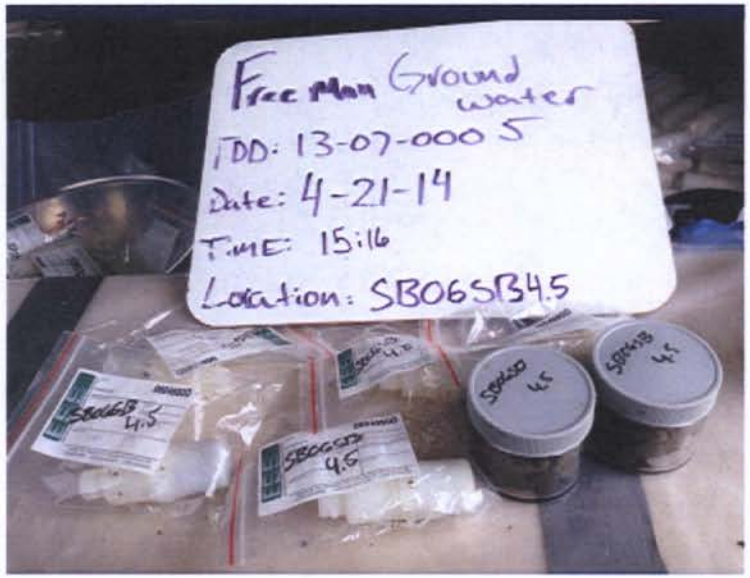


Photo 19 Sample SB06SB4.5.

Direction: Down	Date: 4/21/14	Time: 15:17

Photo 20 Sample SB06SB6.5.

Direction: Down	Date: 4/21/14	Time: 15:40

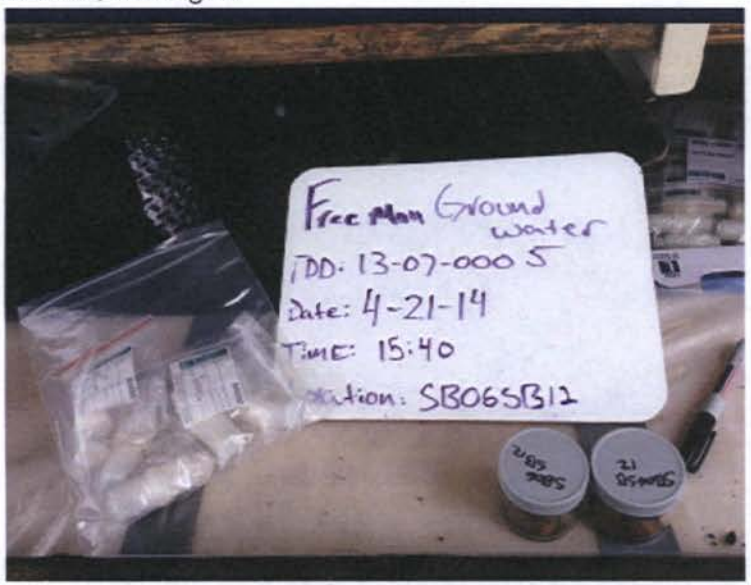


Photo 21 Sample SB06SB12.

Direction: Down	Date: 4/21/14	Time: 15:42

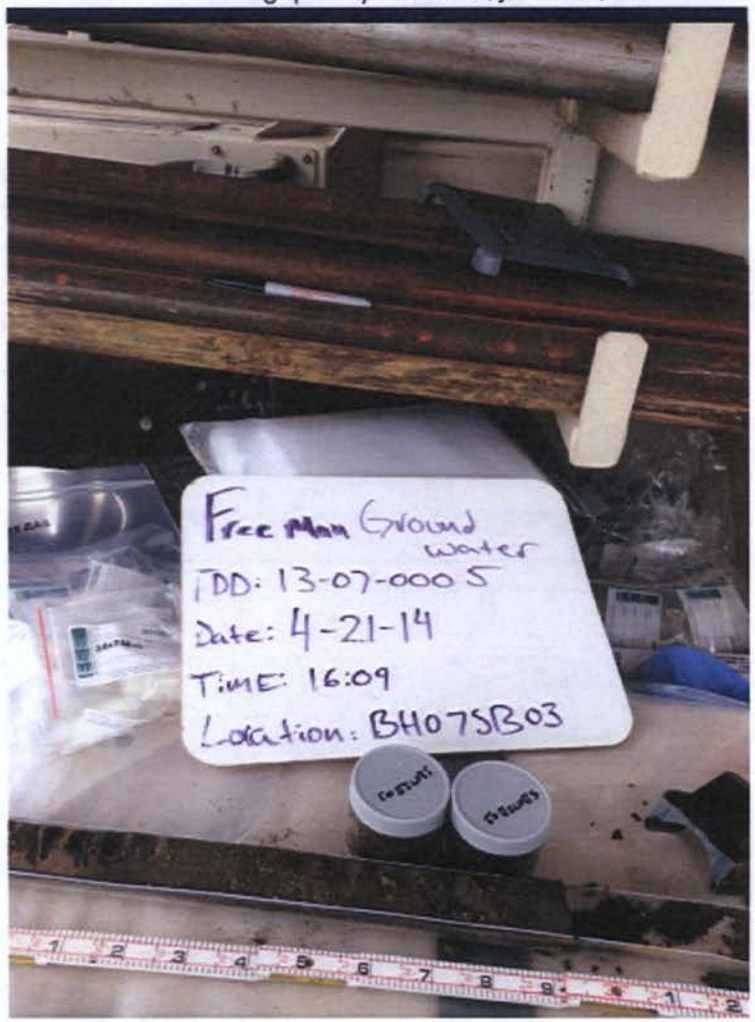


Photo 22 Sample SB07SB03.

Direction: Down	Date: 4/21/14	Time: 16:15

Photo 23 Sample SB07SB04.

Direction: Down *Date: 4/21/14* *Time: 16:17*

Photo 24 Ground water sampling at out-of-use Freemen School District well.

Direction: North *Date: 4/22/14* *Time: 09:30*

Photo 25 Ground water sampling at out-of-use Freemen School District well.

Direction: North *Date: 4/22/14* *Time: 09:31*

Photo 26 BK01 0 to 4 feet bgs on right to 12 to 16 feet bgs on left.

Direction: Down	Date: 4/22/14	Time: 11:05

Photo 27 Sample BK01SB03.

Direction: Down	Date: 4/22/14	Time: 11:29

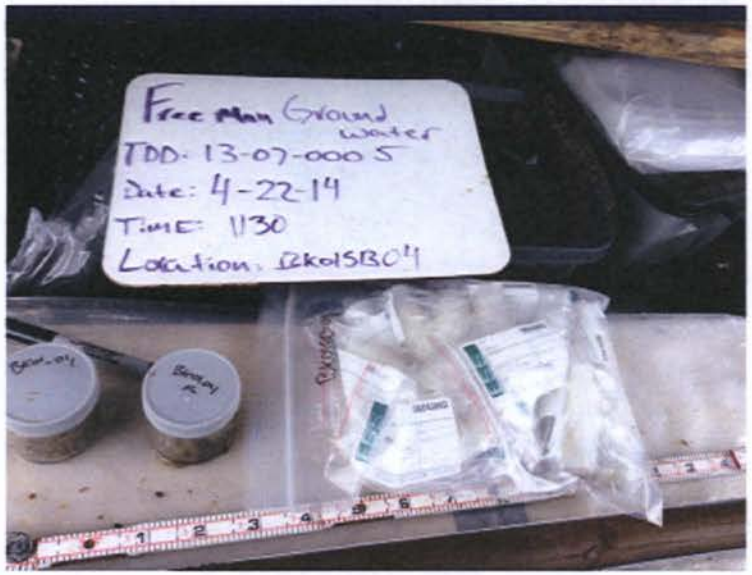


Photo 28 Sample BK01SB04.

Direction: Down	Date: 4/22/14	Time: 11:31

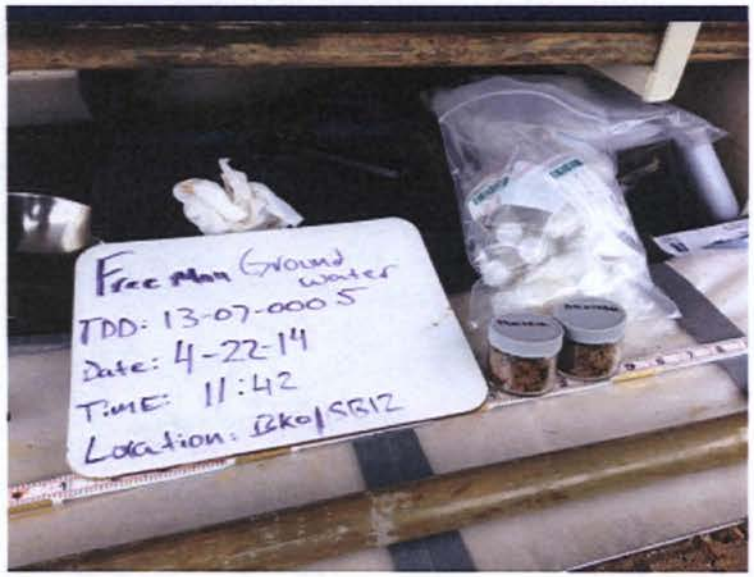


Photo 29 Sample BK01SB12.

Direction: Down	Date: 4/22/14	Time: 11:43

Photo 30 BK01 12 to 16 feet bgs on top 20 to 24 feet bgs on bottom.

Direction: Down *Date: 4/22/14* *Time: 12:06*

Photo 31 BK01 20 to 24 feet bgs on bottom to 12 to 16 feet bgs on top.

Direction: Down *Date: 4/22/14* *Time: 12:07*

Photo 32 Sample SB08SB4.5.

Direction: Down	Date: 4/22/14	Time: 14:30

Photo 33 Sample SB08SB5.5.

Direction: Down	Date: 4/22/14	Time: 14:32

Photo 34 SB08 0 to 4 feet bgs on right to 8 to 12 feet bgs on left.

Direction: Down *Date: 4/22/14* *Time: 14:33*

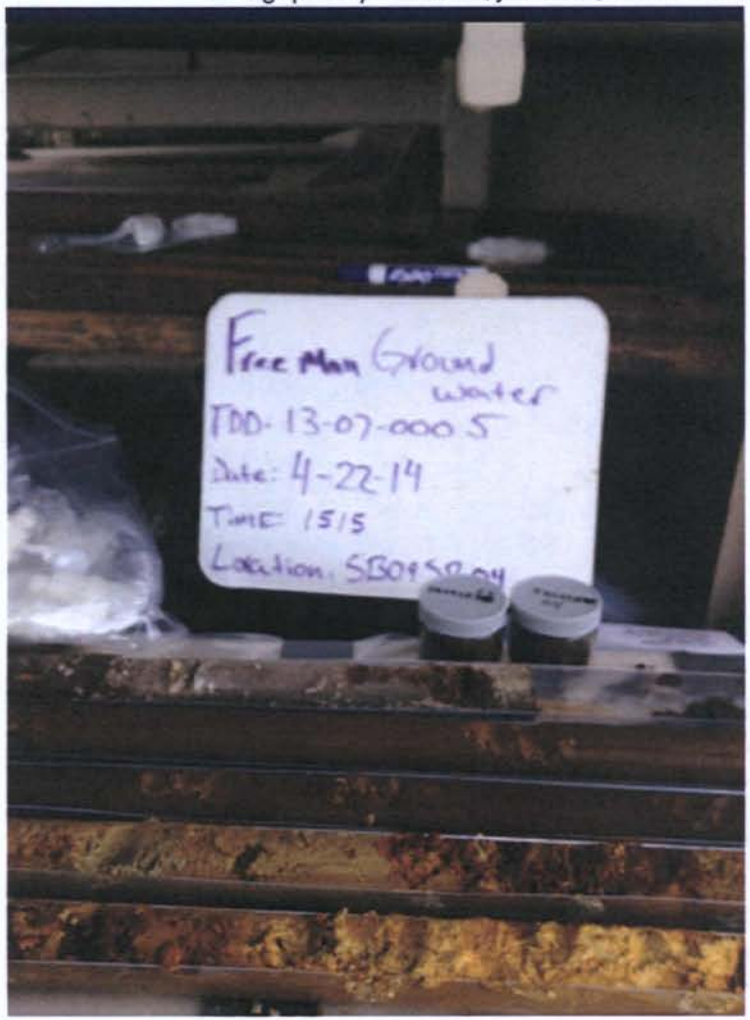


Photo 35 Sample SB09SB04.

Direction: Down *Date: 4/22/14* *Time: 15:38*

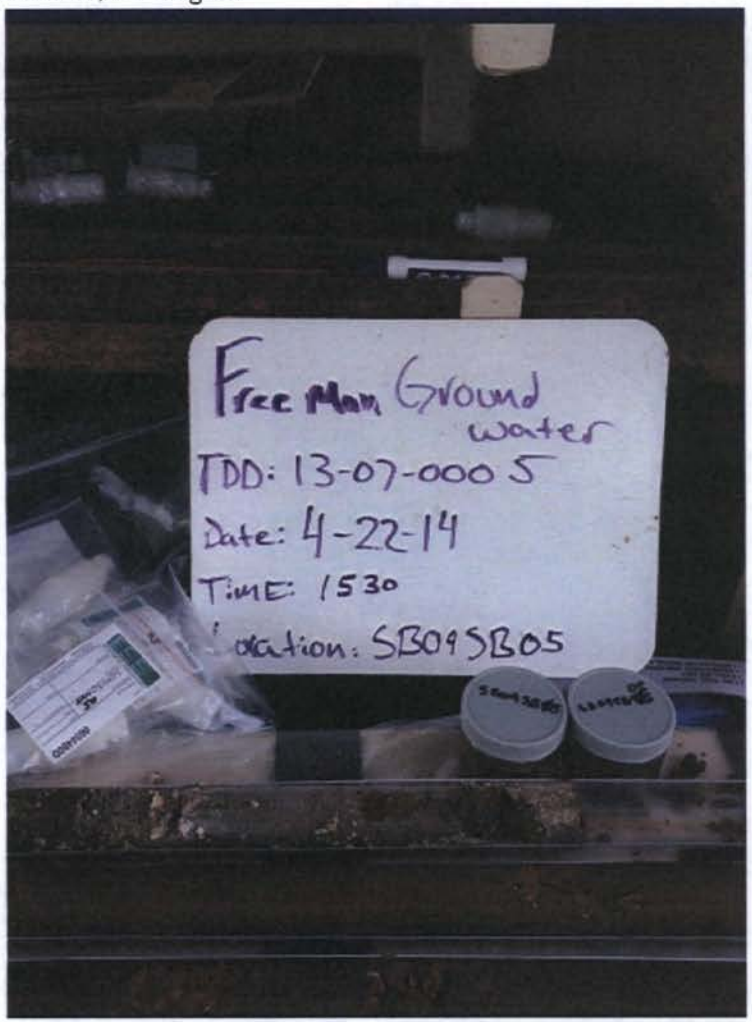


Photo 36 Sample SB09SB05.

Direction: Down	Date: 4/22/14	Time: 15:45

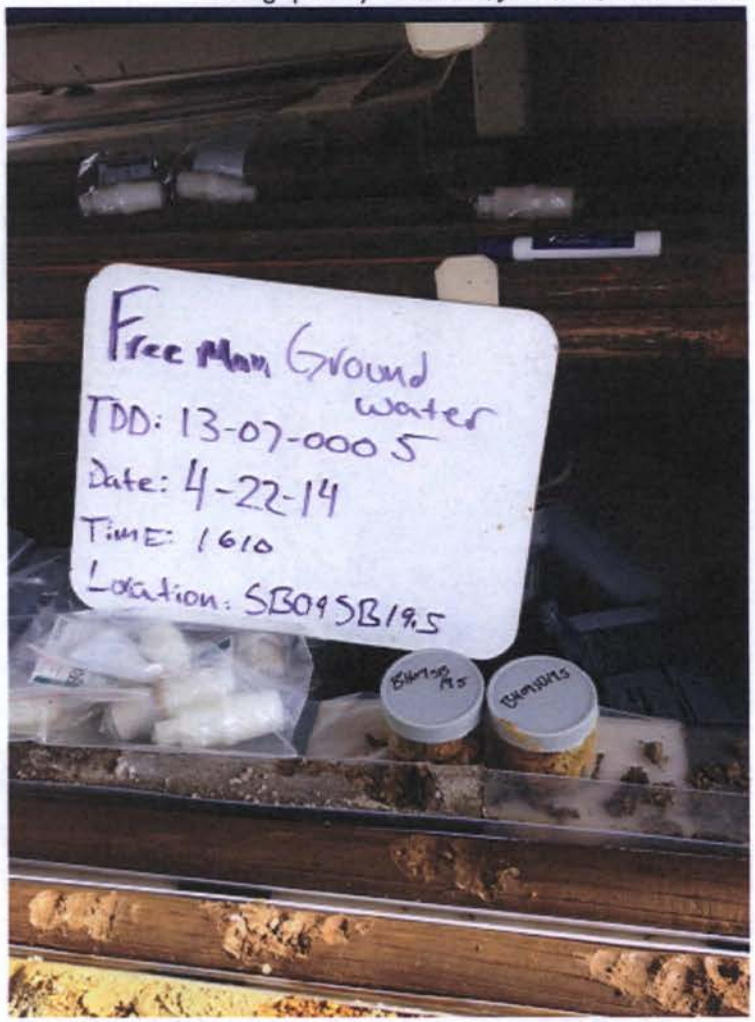


Photo 37 Sample SB09SB19.5.

Direction: Down	Date: 4/22/14	Time: 16:11

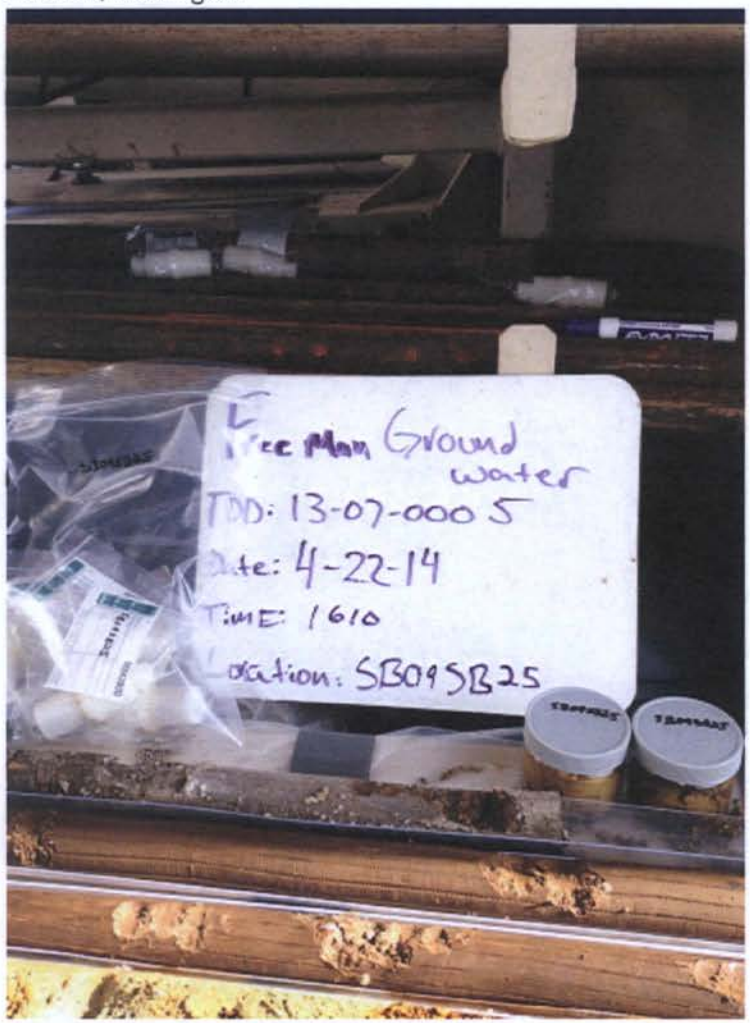


Photo 38 Sample SB09SB25.

Direction: Down	Date: 4/22/14	Time: 16:14

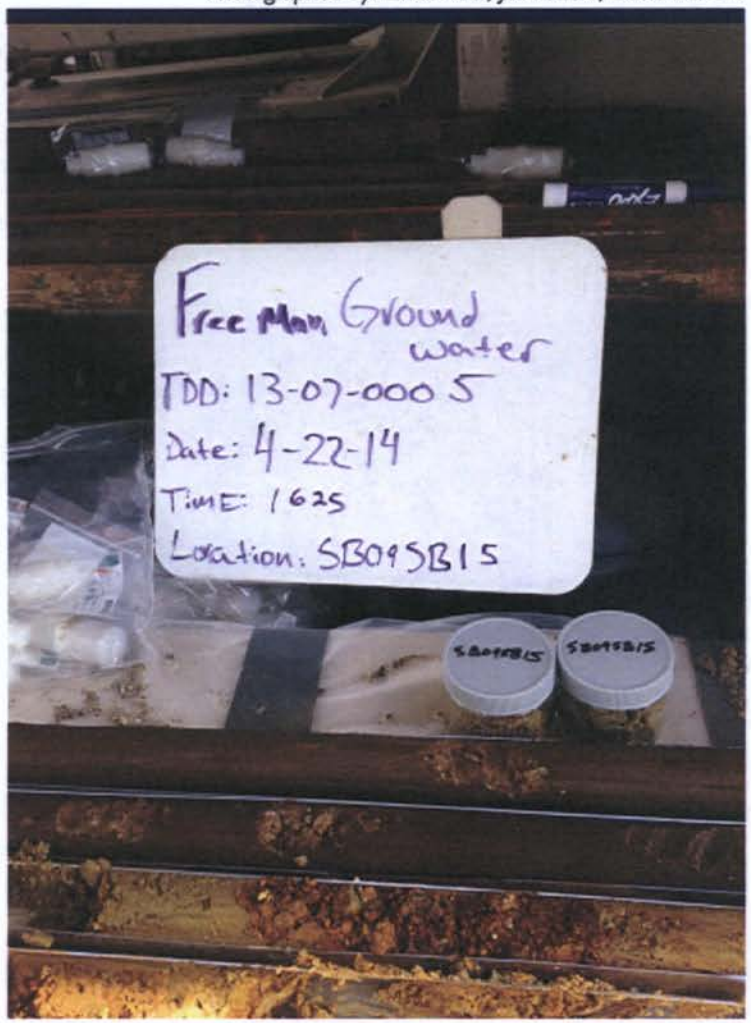


Photo 39 Sample SB09SB15.

Direction: Down	Date: 4/22/14	Time: 16:24

Photo 40 SB09 0 to 4 fee bgs on right to 20 to 24 feet bgs on left.

Direction: Down	Date: 4/22/14	Time: 16:28

Photo 41 SB10 0 to 4 feet bgs on right to 4 to 8 feet bgs on left.

Direction: Down	Date: 4/22/14	Time: 16:54

Photo 42 SB10 12 to 16 fee bgs on left.

Direction: Down *Date: 4/22/14* *Time: 17:16*

Photo 43 SB10 16 to 20 feet bgs on left.

Direction: Down *Date: 4/22/14* *Time: 17:24*

Photo 44 SB10 saturated from 17.5 to 18.5 feet bgs (bottom core).

Direction: Down *Date: 4/22/14* *Time: 17:25*

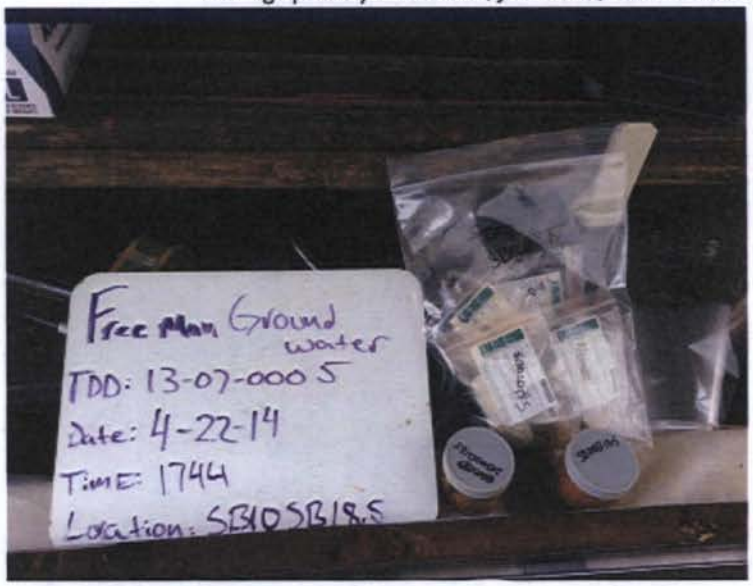


Photo 45 Sample SB10SB18.5.

Direction: Down *Date: 4/22/14* *Time: 17:46*

Photo 46 Sample SB10SB15.5.

Direction: Down *Date: 4/22/14* *Time: 18:09*

Photo 47 SB10 20 to 24 feet bgs on bottom.

Direction: Down *Date: 4/22/14* *Time: 18:11*

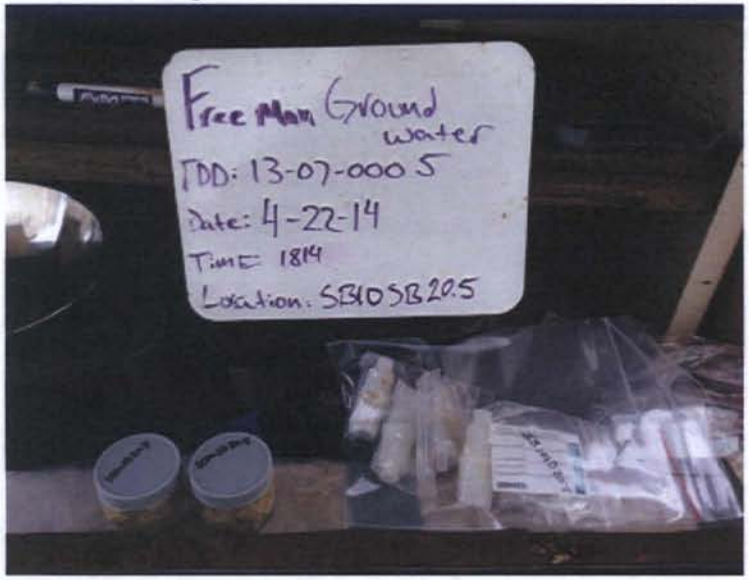


Photo 48 Sample SB10SB20.5.

Direction: Down	Date: 4/22/14	Time: 18:16

Photo 49 Sample HA01SB13.5.

Direction: Down	Date: 4/22/14	Time: 10:59

Photo 50 Location of HA01SB13.5 near pond on Mutual Materials property.

Direction: North *Date: 4/23/14* *Time: 11:02*

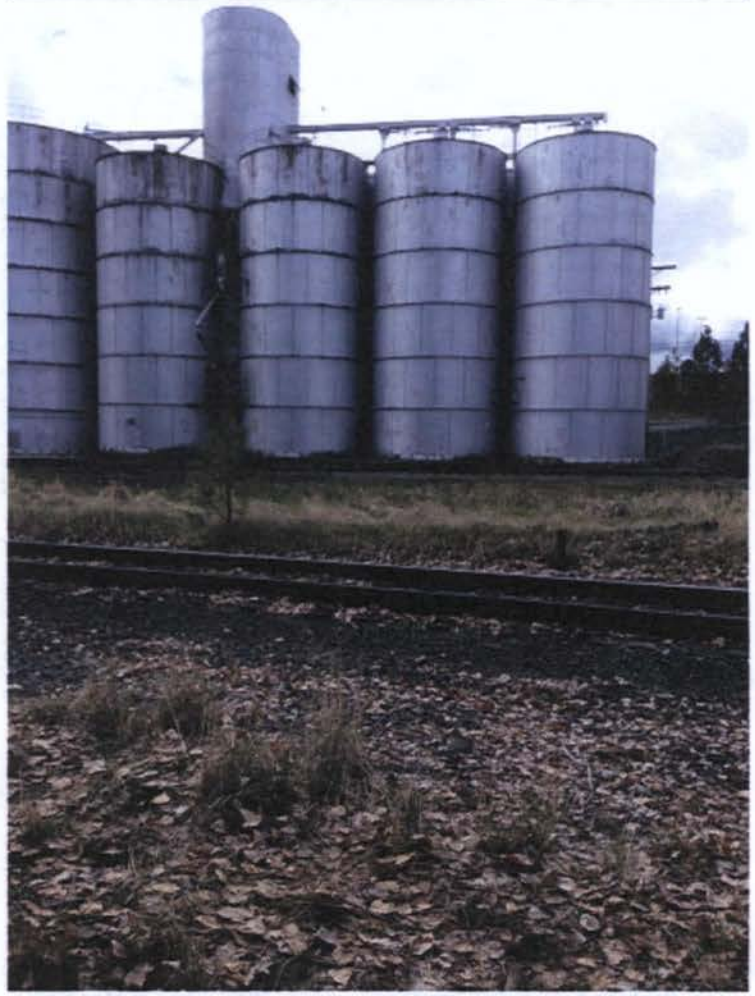


Photo 51 View of Cenex grain handling facility from HA01SB13.5.

Direction: Southwest *Date: 4/23/14* *Time: 11:04*

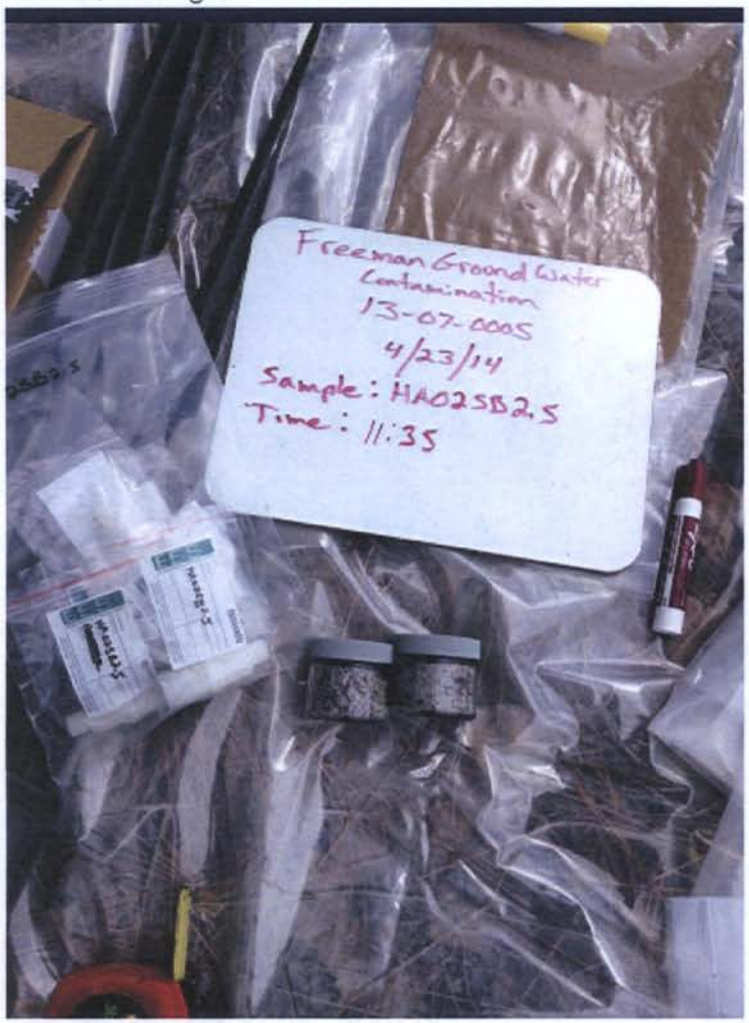


Photo 52 Sample HA02SB2.5.

Direction: Down	Date: 4/23/14	Time: 11:40

Photo 53 Location of HA02 with pond in background.

Direction: North	Date: 4/23/14	Time: 11:43

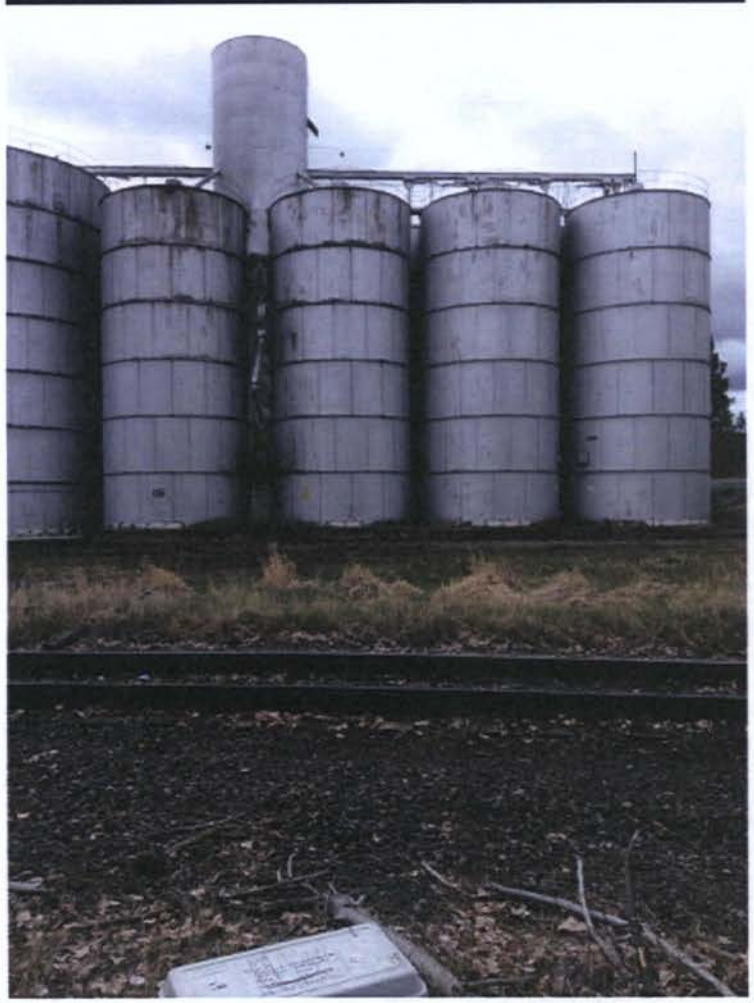


Photo 54 View of grain silos from HA02.

Direction: Southwest *Date: 4/23/14* *Time: 11:44*

Photo 55 Sample HA03SB09.

Direction: Down *Date: 4/23/14* *Time: 12:58*

Photo 56 Location of HA03 near pond.

Direction: Northwest	Date: 4/23/14	Time: 12:59

Photo 57 SB11 8 to 12 feet bgs.

Direction: Down	Date: 4/23/14	Time: 14:37

Photo 58 Grain silo delivery system.

Direction: Northeast *Date: 4/23/14* *Time: 14:42*

Photo 59 Grain silo delivery system.

Direction: Northeast *Date: 4/23/14* *Time: 14:43*

Photo 60 Grain silo delivery system, north end.

Direction: East *Date: 4/23/14* *Time: 14:44*

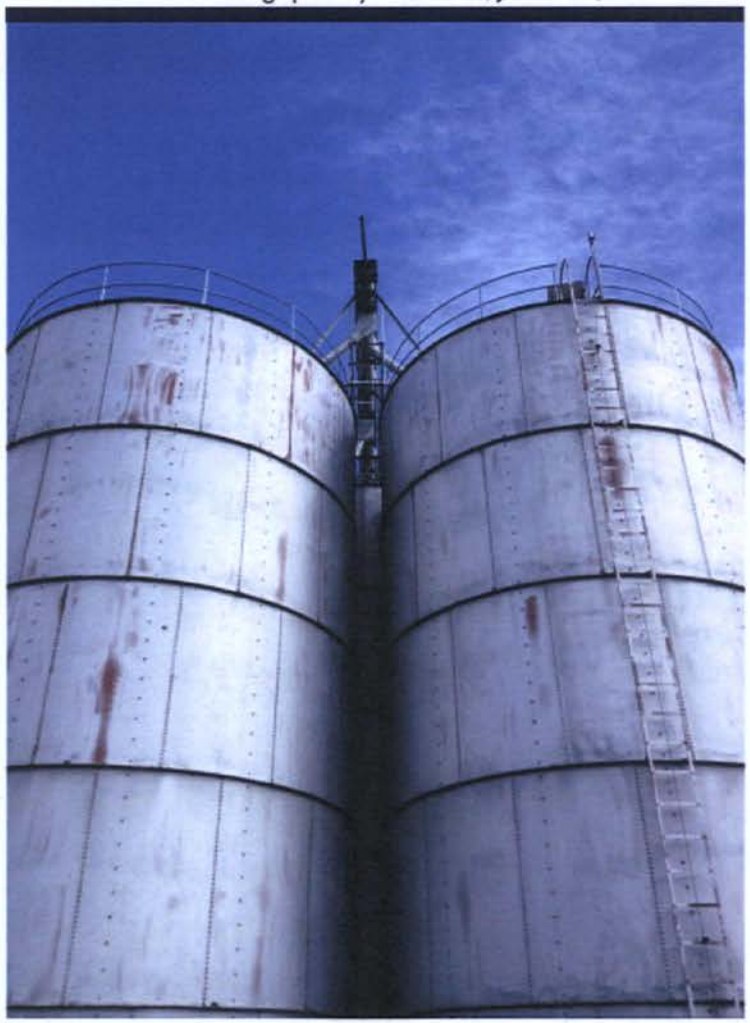


Photo 61 North end of silos.

Direction: Up *Date: 4/23/14* *Time: 14:47*

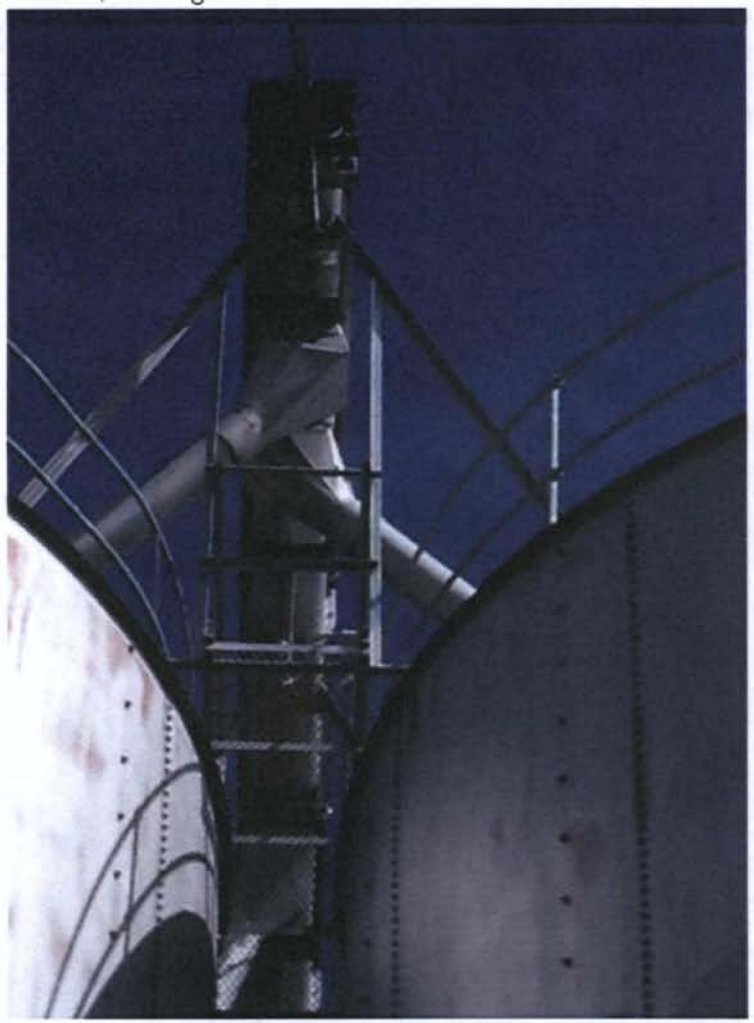


Photo 62 North end of silos, grain delivery system close up.

Direction: Up *Date: 4/23/14* *Time: 14:48*

Photo 63 SB11 16 to 20 feet bgs, note two intervals with green soil.

Direction: Down *Date: 4/23/14* *Time: 15:00*

Photo 64 First green interval in SB11.

Direction: Down	Date: 4/23/14	Time: 15:03

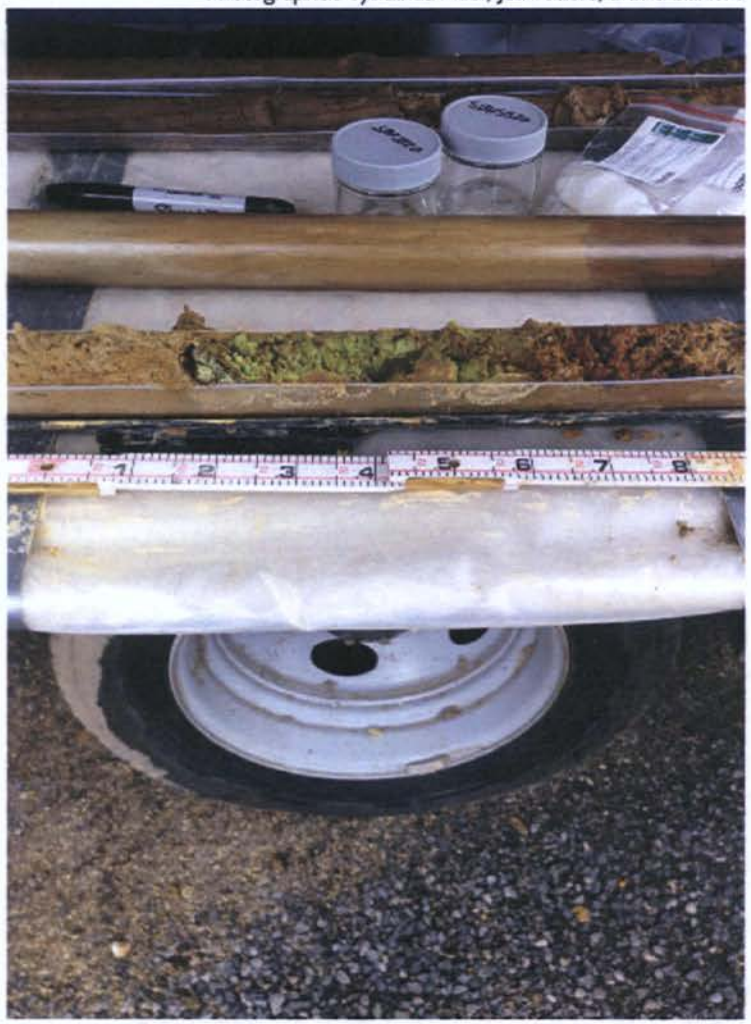


Photo 65 Second green interval in SB11.

Direction: Down	Date: 4/23/14	Time: 15:03

Photo 66 Sample SB11SB20.

Direction: Down	Date: 4/23/14	Time: 15:09

Photo 67 Sample SB11SB17.

Direction: Down	Date: 4/23/14	Time: 15:11

Photo 68 Sample SB11SB18.

Direction: Down	Date: 4/23/14	Time: 15:23

Photo 69 SB11 20 to 24 feet bgs.

Direction: Down *Date: 4/23/14* *Time: 15:39*

Photo 70 SB11 from 20 to 24 feet bgs.

Direction: Down *Date: 4/23/14* *Time: 15:40*

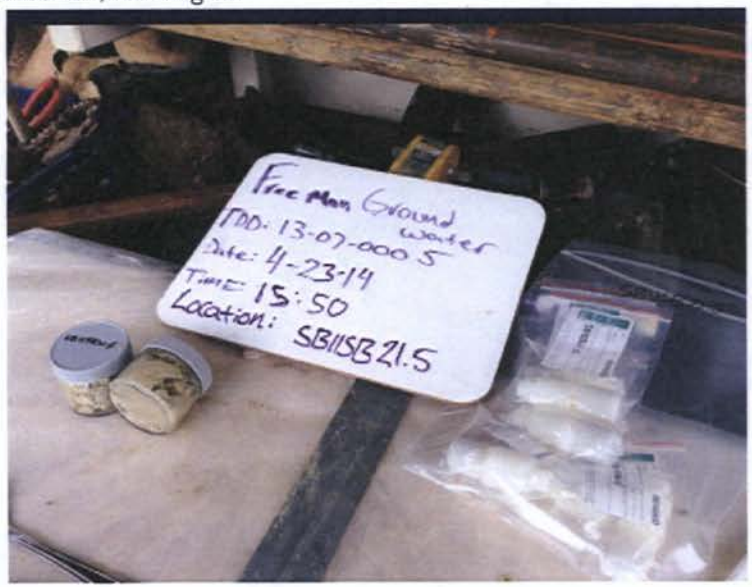


Photo 71 Sample SB11SB21.5.

Direction: Down	Date: 4/23/14	Time: 15:50

Photo 72 SB11 24 to 28 feet bgs.

Direction: Down	Date: 4/23/14	Time: 15:57

Photo 73 SB11 24 to 28 feet bgs.

Direction: Down	Date: 4/23/14	Time: 15:59

Photo 74 Sample SB11SB28.

Direction: Down	Date: 4/23/14	Time: 16:07

Photo 75 SB11 28 to 32 feet bgs.

Direction: Down	Date: 4/23/14	Time: 16:27

Photo 76 Sample SB11SB32.

Direction: Down	Date: 4/23/14	Time: 16:33

Photo 77 SB12 0 to 4 feet bgs.

Direction: Down	Date: 4/24/14	Time: 09:39

Photo 78 SB12SB 0 to 4 feet bgs on right to 8 to 12 feet bgs on left.

Direction: Down *Date: 4/24/14* *Time: 09:44*

Photo 79 SB12 12 to 16 feet bgs on left.

Direction: Down *Date: 4/24/14* *Time: 09:48*

Photo 80 SB12 16 to 20 feet bgs on left.

Direction: Down	Date: 4/24/14	Time: 10:13

Photo 81 SB12 20 to 24 feet bgs on left .

Direction: Down	Date: 4/24/14	Time: 10:22

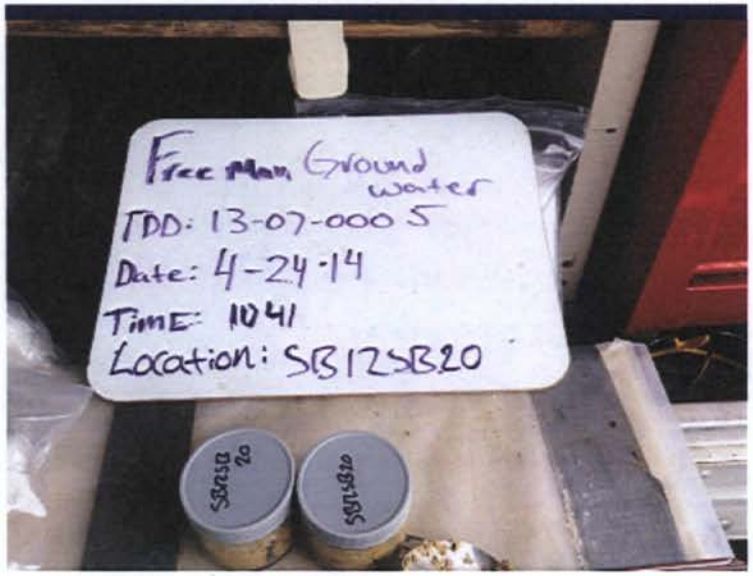


Photo 82 Sample SB12SB20.

Direction: Down	Date: 4/24/14	Time: 10:43

Photo 83 Sample SB12SB21.5.

Direction: Down	Date: 4/24/14	Time: 10:45

Photo 84 Sample SB12SB28.5.

Direction: Down	Date: 4/24/14	Time: 11:16

Photo 85 SB12 24 to 28 feet bgs.

Direction: Down	Date: 4/24/14	Time: 11:17

Photo 86 SB13 4 to 8 feet bgs.

Direction: Down	Date: 4/24/14	Time: 14:01

Photo 87 SB13 8 to 12 feet bgs on left.

Direction: Down *Date: 4/24/14* *Time: 14:05*

Photo 88 SB13 12 to 16 feet bgs on right.

Direction: Down *Date: 4/24/14* *Time: 14:16*

Photo 89 SB13 16 to 20 feet bgs on right.

Direction: Down *Date: 4/24/14* *Time: 14:29*

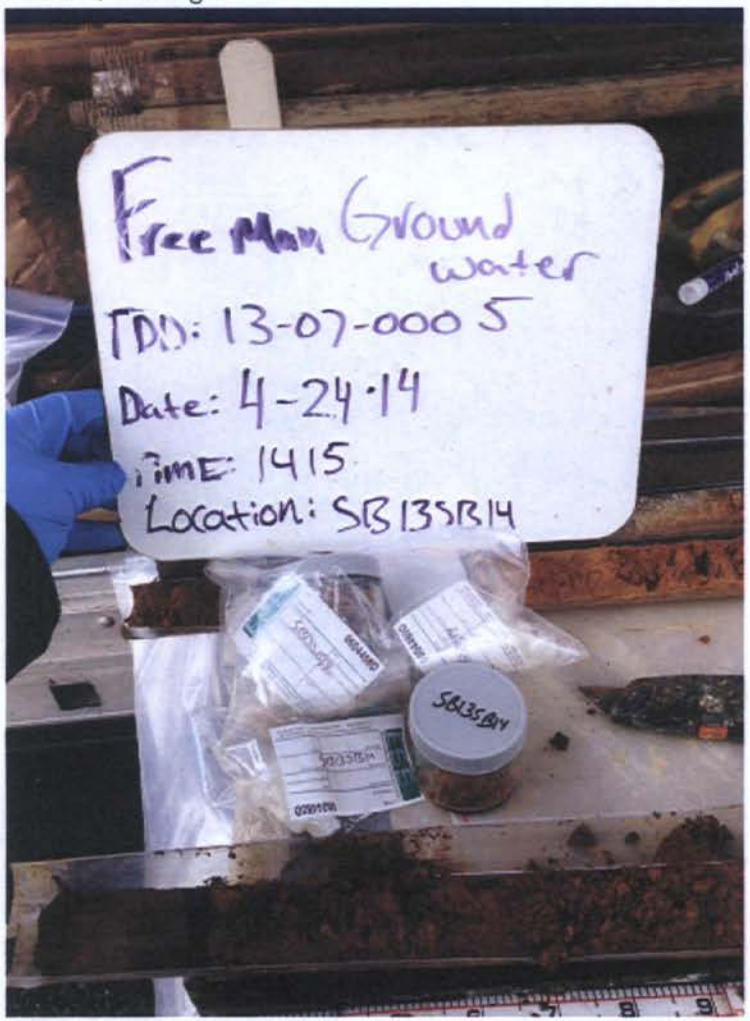


Photo 90 Sample SB13SB14.

Direction: Down	Date: 4/24/14	Time: 14:44

Photo 91 Sample SB13SB20.

Direction: Down	Date: 4/24/14	Time: 14:46

Photo 92 SB13 24 to 28 feet bgs next to sharpie.

Direction: Down *Date: 4/24/14* *Time: 14:49*

Photo 93 SB13 20 to 24 feet bgs.

Direction: Down *Date: 4/24/14* *Time: 14:50*

Photo 94 Sample SB13SB27.5.

Direction: Down	Date: 4/24/14	Time: 14:58

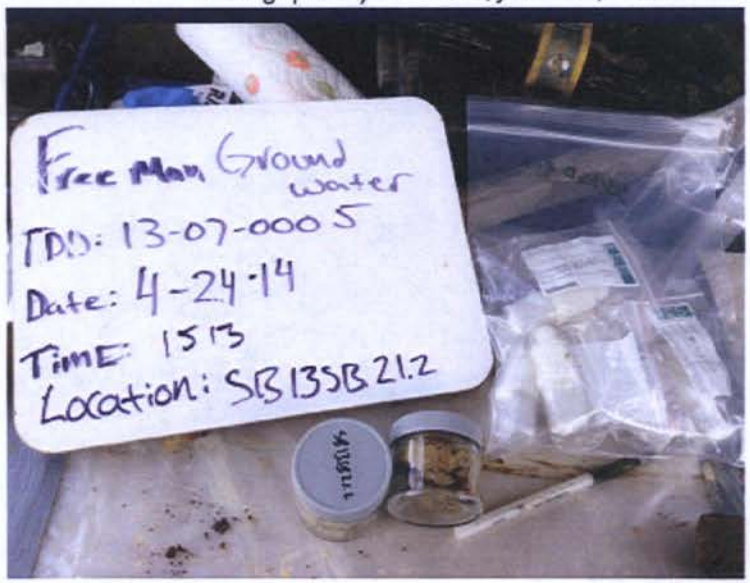


Photo 95 Sample SB13SB21.2.

Direction: Down	Date: 4/24/14	Time: 15:14

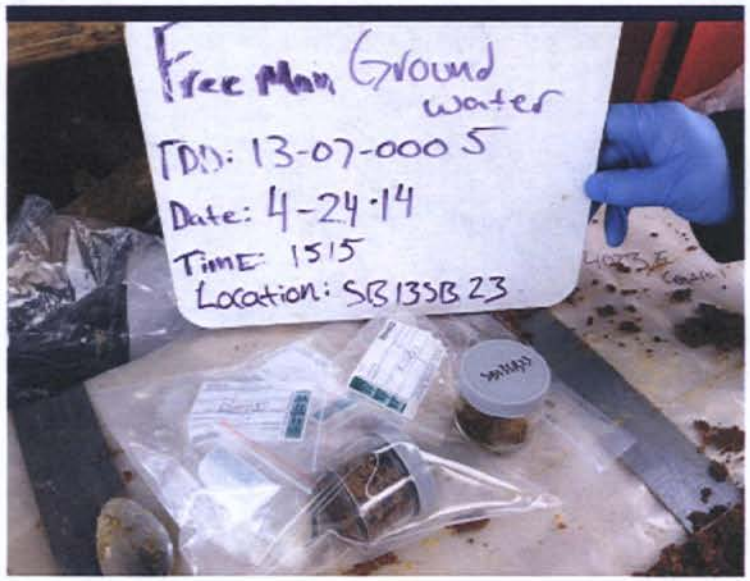


Photo 96 Sample SB13SB23.

Direction: Down	Date: 4/24/14	Time: 15:15

Photo 97 Sample SB13SB30.

Direction: Down	Date: 4/24/14	Time: 15:44

Photo 98 SB14 0 to 4 feet bgs (bottom).

Direction: Down	Date: 4/24/14	Time: 16:43

Photo 99 SB14 4 to 8 feet bgs (bottom).

Direction: Down	Date: 4/24/14	Time: 16:47

Photo 100 SB14 8 to 12 feet bgs (bottom).

Direction: Down	Date: 4/24/14	Time: 16:54

Photo 101 SB14 12 to 16 feet bgs (bottom).

Direction: Down	Date: 4/24/14	Time: 16:58

Photo 103 Sample SB14SB18.

Direction: Down	Date: 4/24/14	Time: 17:19

Photo 102 SB14 16 to 20 feet bgs right to 20 to 24 feet bgs on left (bottom).

Direction: Down	Date: 4/24/14	Time: 17:17

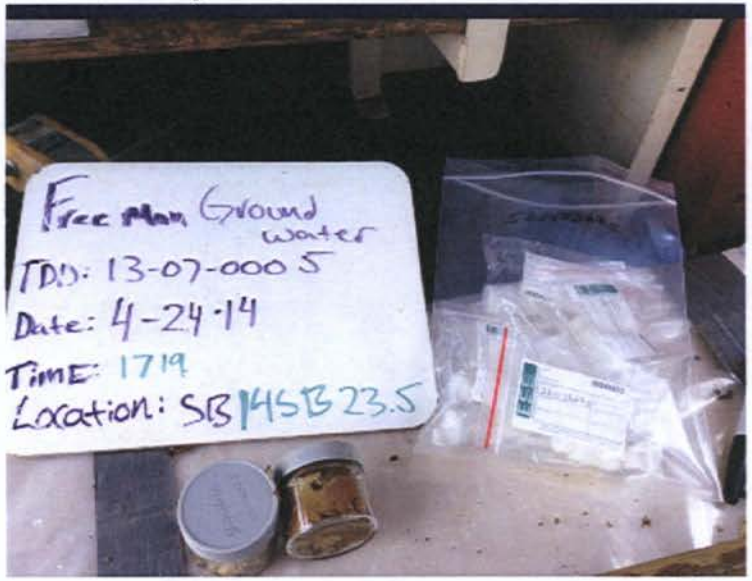


Photo 104 Sample SB14SB23.5.

Direction: Down	Date: 4/24/14	Time: 17:30

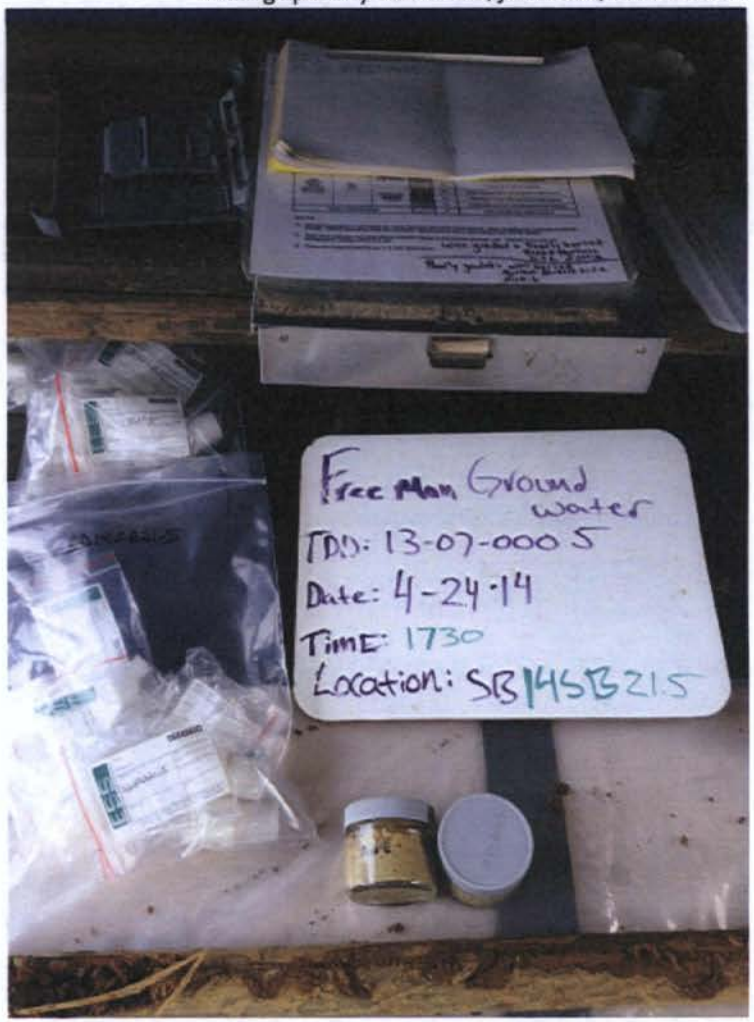


Photo 105 Sample SB14SB21.5.

Direction: Down	Date: 4/24/14	Time: 17:43

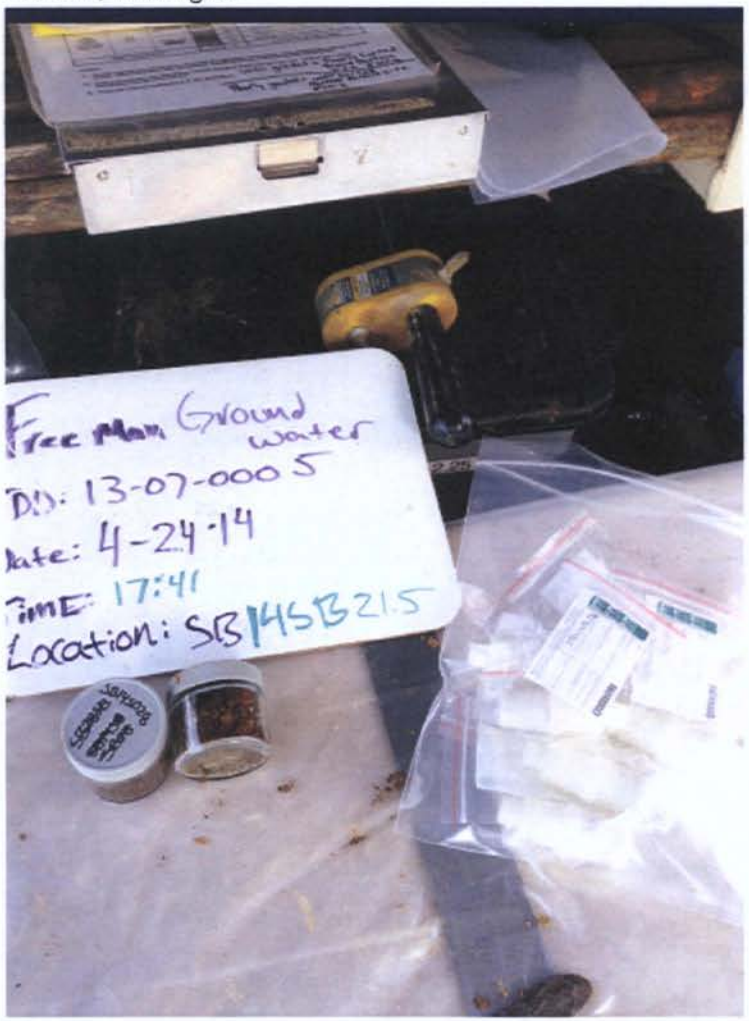


Photo 106 Sample SB14SB28. (note: sample number on white board of SB14SB21.5 is incorrect)

Direction: Down *Date: 4/24/14* *Time: 17:49*

Photo 107 Silos from auger sample locations.

Direction: Southeast *Date: 4/25/14* *Time: 09:04*

Photo 108 Rail line looking toward Spokane.

Direction: Northwest *Date: 4/25/14* *Time: 09:04*

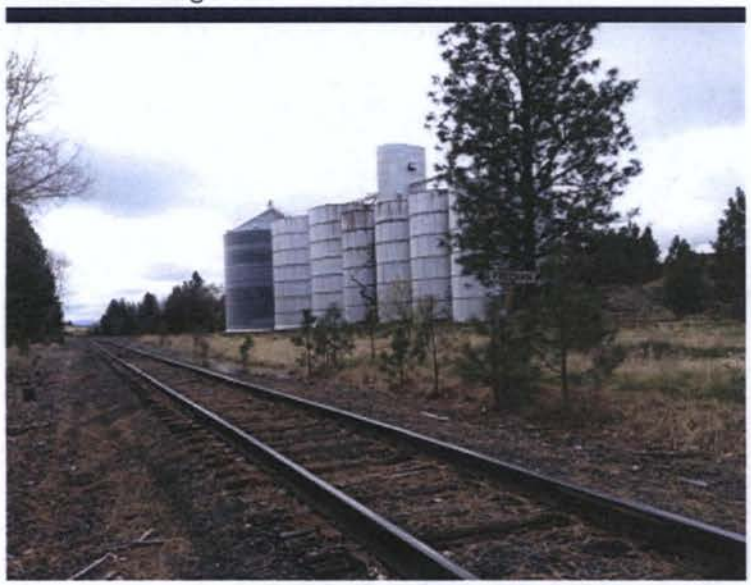


Photo 109 Rail line and silos looking southeast.

Direction: Southeast *Date: 4/25/14* *Time: 09:12*

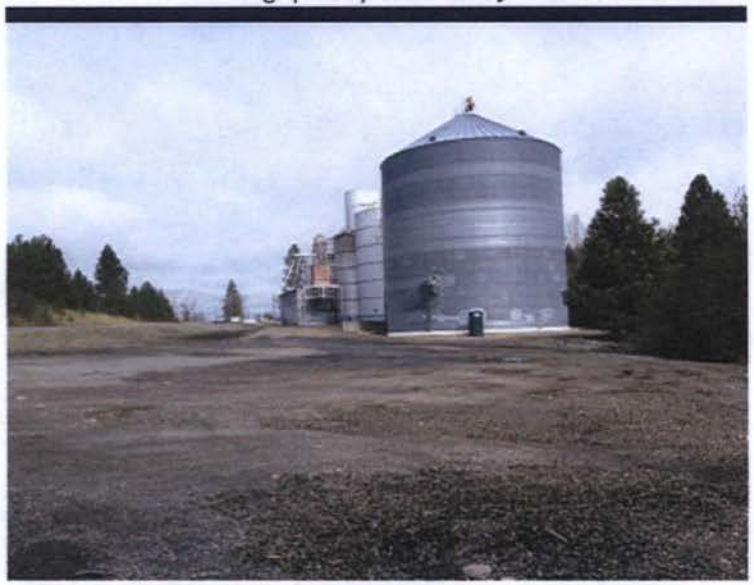


Photo 110 View of site from southeast. Ground surface sloping to the southeast.

Direction: Northwest *Date: 4/25/14* *Time: 09:17*

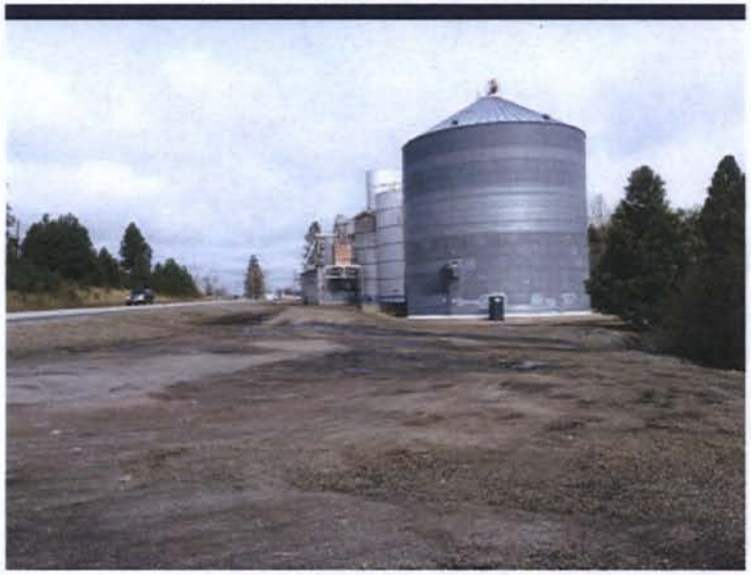


Photo 111 View of site from southeast. Ground surface sloping to the southeast.

Direction: Northwest *Date: 4/25/14* *Time: 09:17*

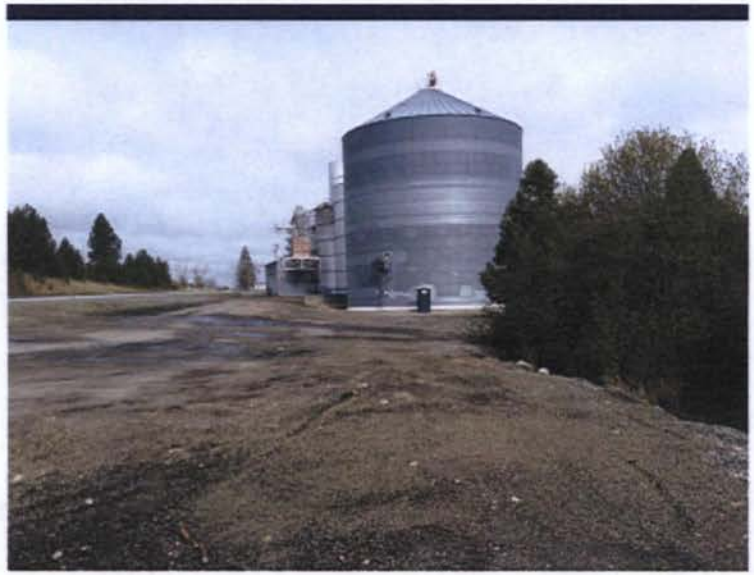


Photo 112 View of site from southeast. Ground surface sloping to the southeast.

Direction: Northwest *Date: 4/25/14* *Time: 09:17*

Photo 113 View of site from southeast near borehole location BK01.

Direction: Northwest *Date: 4/25/14* *Time: 09:18*

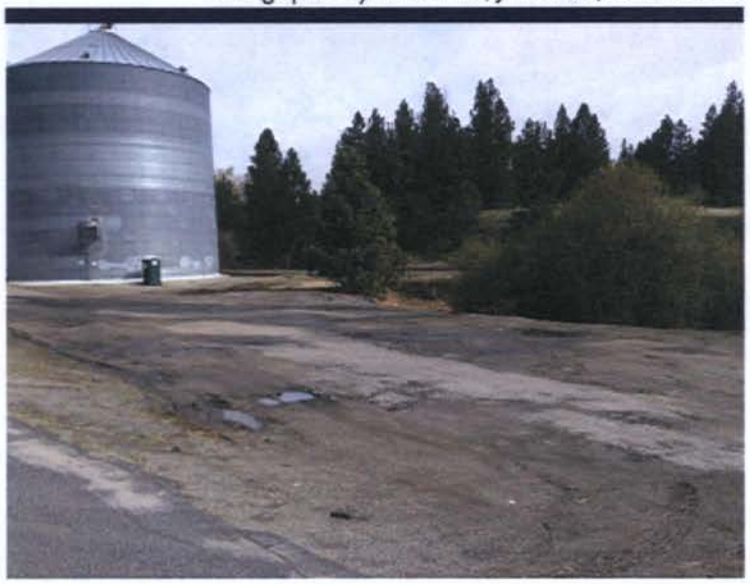


Photo 114 Looking northwest from sample location BK01.

Direction: Northwest *Date: 4/25/14* *Time: 09:18*

Photo 115 Looking north from sample location BK01.

Direction: North *Date: 4/25/14* *Time: 09:18*

Photo 116 Looking northwest.

Direction: Northwest *Date: 4/25/14* *Time: 09:18*

Photo 117 Looking east, ground surface sloping east north east.

Direction: East *Date: 4/25/14* *Time: 09:19*

Photo 118 Looking southwest from behind southern most silo.

Direction: Southeast *Date: 4/25/14* *Time: 09:19*

Photo 119 Potential valve and drain pipe on northwest side of silo, note fresh gravel appears to have been spread.

Direction: Down *Date: 4/25/14* *Time: 09:20*

Photo 120 Close up of valve and pipe.

Direction: Down *Date: 4/25/14* *Time: 09:20*

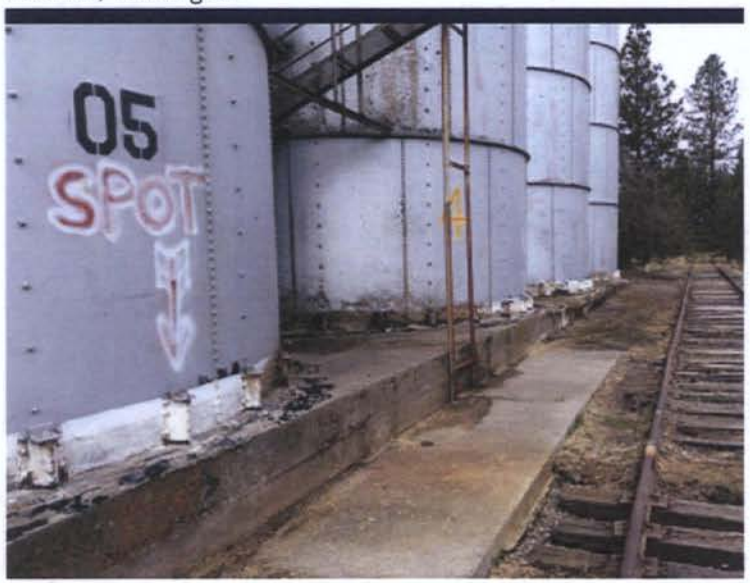


Photo 121 Northwest side of grain silos. Potential drain pipe visible in center of photo.

Direction: Northwest *Date: 4/25/14* *Time: 09:20*

Photo 122 Close up potential drain pipe.

Direction: Down *Date: 4/25/14* *Time: 09:21*

Photo 123 View of scale house.

Direction: Southeast *Date: 4/25/14* *Time: 09:22*

Photo 124 View from HWY 27 looking southeast.

Direction: Southeast *Date: 4/25/14* *Time: 09:23*

Photo 125 View from HWY 27 looking southeast.

Direction: Southeast	Date: 4/25/14	Time: 09:23

Photo 126 Area southeast of silos.

Direction: Southeast	Date: 4/25/14	Time: 09:23

Photo 127 Area southeast of silos.

Direction: Southeast	Date: 4/25/14	Time: 09:24

Photo 128 Looking northwest towards the scale house.

Direction: Northwest	Date: 4/25/14	Time: 09:24

Photo 129 Looking northwest towards the scale house.

Direction: Northwest *Date: 4/25/14* *Time: 09:24*

Photo 130 Southern most grain silo, piping visible in center of photo.

Direction: Northwest *Date: 4/25/14* *Time: 09:24*

Photo 131 Close up of piping.

Direction: Down *Date: 4/25/14* *Time: 09:24*

Photo 132 Close up of piping.

Direction: Down *Date: 4/25/14* *Time: 09:25*

Photo 133 Looking northwest towards the scale house.

Direction: Northwest *Date: 4/25/14* *Time: 09:25*

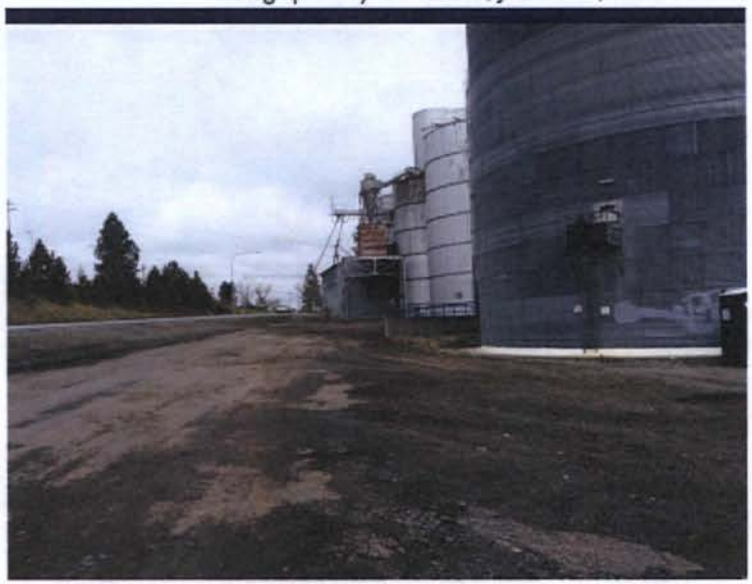


Photo 134 Looking northwest towards the scale house.

Direction: Northwest *Date: 4/25/14* *Time: 09:25*

This page intentionally left blank.

B Sample Plan Alteration Form

This page intentionally left blank.

SAMPLE PLAN ALTERATION FORM

Project Name and Number: Freeman Ground Water Contamination; TDD: 13-07-0005

Material to be sampled:

Subsurface soil and ground water from five boreholes on an upgradient property.

Measurement Parameters:

Analysis of subsurface soil and ground water for volatile organic compounds (VOCs).

Standard Procedure for Field Collection and Laboratory Analysis (cite references):

Geoprobe drilling to install soil borings using *Standard Operating Procedure, Borehole Installation and Subsurface Soil Sampling Methods, SOP Number: GEO 4.7*, created by Ecology and Environment, Inc.; and EPA Method 8260 for VOCs laboratory analysis.

Reason for Change in Field Procedure or Analytical Variation:

Due to terrain impediments, the Geoprobe could not be used to access desired locations.

Variation from Field or Analytical Procedure:

A decontaminated stainless steel hand auger was used to drill borings. The auger was decontaminated between boring locations by scrubbing with an Alconox solution followed by rinsing with de-ionized water. Also, due to time constraints, a decision was made in consultation with the EPA Task Monitor to drill only three of the five proposed borings.

Special Equipment, Materials, or Personnel Required:

Stainless steel hand augers were used to drill upgradient borings. No special materials or personnel were required.

CONTACT	APPROVED SIGNATURE	DATE
Initiator: Linda Ader	Linda E Ader	5/7/2014
START PL: Linda Ader	Linda E Ader	5/7/2014
EPA TM: Monica Tonel	Monica Tonel	5/8/2014
EPA QA Manager: Ginna Grepo-Grove	[illegible]	05/09/2014

This page intentionally left blank.

C Global Positioning System Coordinates

This page intentionally left blank.

Global Positioning System Soil Boring Coordinates

Boring Number	Latitude	Longitude
BK01	47.519398	-117.1928
HA01	47.520438	-117.193402
HA02	47.520392	-117.193272
HA03	47.520425	-117.193224
SB01	47.519887	-117.193488
SB02	47.51987	-117.193509
SB03	47.519851	-117.19354
SB04	47.519886	-117.193637
SB05	47.519919	-117.193716
SB06	47.51995	-117.193713
SB07	47.519921	-117.193801
SB08	47.519969	-117.193883
SB09	47.519808	-117.193434
SB10	47.519858	-117.193661
SB11	47.519887	-117.193488
SB12	47.519955	-117.193739
SB13	47.519882	-117.193683
SB14	47.51976	-117.193475

This page intentionally left blank.

D Chain-of-Custody Documentation

This page intentionally left blank.

 W 1411548

USEPA CLP COC (LAB COPY)

DateShipped: 4/24/2014
CarrierName: FedEx
AirbillNo: 862302348806

CHAIN OF CUSTODY RECORD

SDG. JGFF9

Case #: 44315
Cooler #: 1

No: 10-042414-104635-0001

Lab: ALS Laboratory Group - Salt Lake City
Lab Contact: Roxy Olson
Lab Phone: 801-266-7700

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
14164000	JGFF9	Water/ L. Ader	Grab	CLP TVOA(21)	1000 (HCl) (3)	TB01WT	04/21/2014 11:25	
14164003	JGFG2	Drinking Water/ L. Ader	Grab	CLP TVOA(21)	1004 (HCl) (3)	DW01GW	04/22/2014 09:40	
14164004	JGFG3	Water/ L. Ader	Grab	CLP TVOA(21)	1005 (HCl) (3)	RI01WT	04/22/2014 09:55	
14164005	JGFG4	Drinking Water/ L. Ader	Grab	CLP TVOA(21)	1006 (HCl) (3)	DW02GW	04/22/2014 11:00	
14164006	JGFG5	Soil/ J. Fetters	Grab	% Mois(21)	1008 (1)	SB01SB01.5	04/21/2014 09:34	
14164007	JGFG6	Soil/ J. Fetters	Grab	% Mois(21)	1010 (1)	SB01SB05	04/21/2014 10:21	
14164008	JGFG7	Soil/ J. Fetters	Grab	% Mois(21)	1012 (1)	SB04SB04	04/21/2014 13:37	
14164009	JGFG8	Soil/ J. Fetters	Grab	% Mois(21)	1014 (1)	SB04SB05	04/21/2014 13:45	
14164010	JGFG9	Soil/ J. Fetters	Grab	% Mois(21)	1016 (1)	SB06SB4.5	04/21/2014 15:16	
14164011	JGFH0	Soil/ J. Fetters	Grab	% Mois(21)	1018 (1)	SB06SB6.5	04/21/2014 15:30	
14164012	JGFH1	Soil/ J. Fetters	Grab	% Mois(21)	1020 (1)	SB06SB12	04/21/2014 15:40	
14164013	JGFH2	Soil/ J. Fetters	Grab	% Mois(21)	1022 (1)	SB09SB15	04/22/2014 16:25	
14164014	JGFH3	Soil/ J. Fetters	Grab	% Mois(21)	1024 (1)	SB09SB19.5	04/22/2014 16:10	
14164015	JGFH4	Soil/ L. Ader	Grab	% Mois(21)	1026 (1)	SB09SB25	04/22/2014 16:10	
14164016	JGFH5	Soil/ J. Fetters	Grab	% Mois(21)	1028 (1)	SB10SB15.5	04/22/2014 18:06	
14164017	JGFH6	Soil/ J. Fetters	Grab	% Mois(21)	A (1)	SB10SB18.8	04/22/2014 17:45	
14164018	JGFH7	Soil/ J. Fetters	Grab	% Mois(21)	A (1)	SB10SB20.5	04/22/2014 18:14	

Aa 04/25/14

Special Instructions:	Shipment for Case Complete? N
	Samples Transferred From Chain of Custody #

Analysis Key: CLP TVOA=CLP TCL Trace Volatiles, % Mois=Moisture Content

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[signature]	4/24/14 1200	[signature] / DATAC	04/25/14 0942	Intact

00005

USEPA CLP COC (LAB COPY)

DateShipped: 4/24/2014
CarrierName: FedEx
AirbillNo: 862302348806

CHAIN OF CUSTODY RECORD

SDG JGFF9

Case #: 44315
Cooler #: 1

No: 10-042414-104635-0001

Lab: ALS Laboratory Group - Salt Lake City
Lab Contact: Roxy Olson
Lab Phone: 801-266-7700

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
14164019	JGFH8	Soil/ J. Fetters	Grab	% Mois(21)	A (1)	HA01SB13.5	04/23/2014 09:30	
14164020	JGFH9	Soil/ J. Fetters	Grab	% Mois(21)	A (1)	HA02SB2.5	04/23/2014 11:35	
14164021	JGFJ0	Soil/ J. Fetters	Grab	% Mois(21)	A (1)	HA03SB09	04/23/2014 11:35	
14164022	JGFJ1	Soil/ L. Ader	Grab	% Mois(21)	A (1)	BK01SB03	04/22/2014 11:27	
14164025	JGFJ4	Water/ J. Fetters	Grab	CLP TVOA(21)	1037 (HCl) (3)	ID01WT	04/23/2014 18:30	
14164026	JGFJ5	Drinking Water/ L. Ader	Grab	CLP TVOA(21)	1038 (HCl) (9)	BK01GW	04/24/2014 09:40	
14164027	JGFJ6	Water/ J. Fetters	Grab	CLP TVOA(21)	1039 (HCl) (3)	RI02WT	04/24/2014 08:25	
14164028	JGFJ7	Water/ J. Fetters	Grab	CLP TVOA(21)	1040 (HCl) (3)	RI03WT	04/24/2014 08:30	
14164029	JGFJ8	Water/ J. Fetters	Grab	CLP TVOA(21)	1041 (HCl) (3)	RI04WT	04/24/2014 08:35	

aa 04/25/14

Sample(s) to be used for Lab QC: 14164022 Tag A, 14164026 Tag 1038	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key: CLP TVOA=CLP TCL Trace Volatiles, % Mois=Moisture Content	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[signature]	4/24/14 1200	[signature] / DATAC	04/25/14 0942	Intact

00005

USEPA CLP COC (LAB COPY)

DateShipped: 4/24/2014
CarrierName: FedEx
AirbillNo: 862302348817

CHAIN OF CUSTODY RECORD SDG. JGFF9

Case #: 44315
Cooler #: 1

No: 10-042414-113938-0002

Lab: ALS Laboratory Group - Salt Lake City
Lab Contact: Roxy Olson
Lab Phone: 801-266-7700

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
14164001	JGFG0	Water/ L. Ader	Grab	CLP TVOA(21)	1002 (HCl) (3)	TB02WT	04/21/2014 11:28	
14164006	JGFG5	Soil/ J. Fetters	Grab	CLP VOA(21)	1007 (Freeze in field) (3)	SB01SB01.5	04/21/2014 09:34	
14164007	JGFG6	Soil/ J. Fetters	Grab	CLP VOA(21)	1009 (Freeze in field) (3)	SB01SB05	04/21/2014 10:21	
14164008	JGFG7	Soil/ J. Fetters	Grab	CLP VOA(21)	1011 (Freeze in field) (3)	SB04SB04	04/21/2014 13:37	
14164009	JGFG8	Soil/ J. Fetters	Grab	CLP VOA(21)	1013 (Freeze in field) (3)	SB04SB05	04/21/2014 13:45	
14164010	JGFG9	Soil/ J. Fetters	Grab	CLP VOA(21)	1015 (Freeze in field) (3)	SB06SB4.5	04/21/2014 15:16	
14164011	JGFH0	Soil/ J. Fetters	Grab	CLP VOA(21)	1017 (Freeze in field) (3)	SB06SB6.5	04/21/2014 15:30	
14164012	JGFH1	Soil/ J. Fetters	Grab	CLP VOA(21)	1019 (Freeze in field) (3)	SB06SB12	04/21/2014 15:40	
14164013	JGFH2	Soil/ J. Fetters	Grab	CLP VOA(21)	1021 (Freeze in field) (3)	SB09SB15	04/22/2014 16:25	

Qa 04/25/14

Special Instructions:	Shipment for Case Complete? N
	Samples Transferred From Chain of Custody #

Analysis Key: CLP TVOA=CLP TCL Trace Volatiles, CLP VOA=CLP TCL Volatiles

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[signature]	4/25/14 12:00	[signature] / DATAL	04/25/14 0942	Intact

00007

1411647

USEPA CLP COC (LAB COPY)

DateShipped: 4/25/2014

CarrierName: FedEx

AirbillNo: 862302348828

Copy original in SOH JGFJ2

CHAIN OF CUSTODY RECORD JGFF9

Case #: 44315

Cooler #: 1

No: 10-042514-100420-0003

Lab: ALS Laboratory Group - Salt Lake City

Lab Contact: Roxy Olson

Lab Phone: 801-266-7700

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
14164002	JGFG1	Water/ L. Ader	Grab	CLP TVOA(21)	1003 (HCl) (3)	TB03WT	04/21/2014 11:34	
14164023	JGFJ2	Soil/ J. Fetters	Grab	% Mois(21)	A (1)	BK01SB04	04/22/2014 11:30	
14164024	JGFJ3	Soil/ L. Ader	Grab	% Mois(21)	A (1)	BK01SB12	04/22/2014 11:43	
14164030	JGFJ9	Soil/ J. Fetters	Grab	% Mois(21)	B (2)	SB11SB18.6	04/23/2014 15:21	
14164031	JGFK0	Soil/ J. Fetters	Grab	% Mois(21)	C (1)	SB11SB20	04/23/2014 15:07	
14164032	JGFK1	Soil/ L. Ader	Grab	% Mois(21)	D (1)	SB11SB21.5	04/23/2014 15:50	
14164033	JGFK2	Soil/ L. Ader	Grab	% Mois(21)	E (1)	SB11SB28	04/23/2014 15:59	
14164034	JGFK3	Soil/ J. Fetters	Grab	% Mois(21)	F (1)	SB11SB32	04/23/2014 16:27	
14164035	JGFK4	Soil/ A. Jensen	Grab	% Mois(21)	G (1)	SB12SB20	04/24/2014 10:41	
14164036	JGFK5	Soil/ J. Fetters	Grab	% Mois(21)	H (1)	SB12SB21.5	04/24/2014 10:43	
14164037	JGFK6	Soil/ J. Fetters	Grab	% Mois(21)	I (1)	SB12SB28.5	04/24/2014 11:14	
14164038	JGFK7	Soil/ J. Fetters	Grab	% Mois(21)	J (1)	SB13SB14	04/24/2014 14:15	
14164039	JGFK8	Soil/ J. Fetters	Grab	% Mois(21)	K (1)	SB13SB20	04/24/2014 14:33	
14164040	JGFK9	Soil/ J. Fetters	Grab	% Mois(21)	L (1)	SB13SB27.5	04/24/2014 14:44	
14164041	JGFL0	Soil/ J. Fetters	Grab	% Mois(21)	M (1)	SB13SB21.2	04/24/2014 15:13	
14164042	JGFL1	Soil/ J. Fetters	Grab	% Mois(21)	N (1)	SB13SB23	04/24/2014 15:15	
14164043	JGFL2	Soil/ J. Fetters	Grab	% Mois(21)	O (1)	SB13SB30	04/24/2014 15:43	
14164044	JGFL3	Water/ J. Fetters	Grab	CLP TVOA(21)	1056 (HCl) (3)	ID02WT	04/25/2014 08:50	

Sample(s) to be used for Lab QC: 14164023 Tag A

Shipment for Case Complete? Y

Samples Transferred From Chain of Custody #

Analysis Key: CLP TVOA=CLP TCL Trace Volatiles, % Mois=Moisture Content

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	Linda E Ader	4/25/14 12:00	Meredith Island DATAC	4/28/14 9:07	good

00008

USEPA CLP COC (LAB COPY)

DateShipped: 4/25/2014
CarrierName: FedEx
AirbillNo: 862302348839

CHAIN OF CUSTODY RECORD JGFF9

Case #: 44315
Cooler #: 1

No: 10-042514-101555-0004

Lab: ALS Laboratory Group - Salt Lake City
Lab Contact: Roxy Olson
Lab Phone: 801-266-7700

Copy original in SDG JGFJ2

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
14164037	JGFK6	Soil/ J. Fetters	Grab	CLP VOA(21)	1049 (Freeze in field) (3)	SB12SB28.5	04/24/2014 11:14	
14164038	JGFK7	Soil/ J. Fetters	Grab	CLP VOA(21)	1050 (Freeze in field) (3)	SB13SB14	04/24/2014 14:15	
14164039	JGFK8	Soil/ J. Fetters	Grab	CLP VOA(21)	1051 (Freeze in field) (3)	SB13SB20	04/24/2014 14:33	
14164040	JGFK9	Soil/ J. Fetters	Grab	CLP VOA(21)	1052 (Freeze in field) (3)	SB13SB27.5	04/24/2014 14:44	
14164041	JGFL0	Soil/ J. Fetters	Grab	CLP VOA(21)	1053 (Freeze in field) (3)	SB13SB21.2	04/24/2014 15:13	
14164042	JGFL1	Soil/ J. Fetters	Grab	CLP VOA(21)	1054 (Freeze in field) (3)	SB13SB23	04/24/2014 15:15	
14164043	JGFL2	Soil/ J. Fetters	Grab	CLP VOA(21)	1055 (Freeze in field) (3)	SB13SB30	04/24/2014 15:43	
14164045	JGFL4	Water/ C. Whitehead	Grab	CLP TVOA(21)	1057 (HCl) (3)	TB04WT	04/25/2014 09:05	FINAL SDG SAMPLE
14164046	JGFL5	Soil/ J. Fetters	Grab	CLP VOA(21)	1058 (Freeze in field) (3)	SB14SB18	04/24/2014 17:10	

Special Instructions:	Shipment for Case Complete? Y
	Samples Transferred From Chain of Custody #

Analysis Key: CLP VOA=CLP TCL Volatiles, CLP TVOA=CLP TCL Trace Volatiles

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[signature]	4/25/14 12:	[signature] DATAC	4/26/14 9:07	good

60000

1411549

USEPA CLP COC (LAB COPY)

DateShipped: 4/24/2014

CarrierName: FedEx

AirbillNo: 862302348806

CHAIN OF CUSTODY RECORD

SDG. JGFG5

Case #: 44315

Cooler #: 1

No: 10-042414-104635-0001

Lab: ALS Laboratory Group - Salt Lake City

Lab Contact: Roxy Olson

Lab Phone: 801-266-7700

Copy original in SDG. JGFF9

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
14164000	JGFF9	Water/ L. Ader	Grab	CLP TVOA(21)	1000 (HCl) (3)	TB01WT	04/21/2014 11:25	
14164003	JGFG2	Drinking Water/ L. Ader	Grab	CLP TVOA(21)	1004 (HCl) (3)	DW01GW	04/22/2014 09:40	
14164004	JGFG3	Water/ L. Ader	Grab	CLP TVOA(21)	1005 (HCl) (3)	RI01WT	04/22/2014 09:55	
14164005	JGFG4	Drinking Water/ L. Ader	Grab	CLP TVOA(21)	1006 (HCl) (3)	DW02GW	04/22/2014 11:00	
14164006	JGFG5	Soil/ J. Fetters	Grab	% Mois(21)	1008 (1)	SB01SB01.5	04/21/2014 09:34	
14164007	JGFG6	Soil/ J. Fetters	Grab	% Mois(21)	1010 (1)	SB01SB05	04/21/2014 10:21	
14164008	JGFG7	Soil/ J. Fetters	Grab	% Mois(21)	1012 (1)	SB04SB04	04/21/2014 13:37	
14164009	JGFG8	Soil/ J. Fetters	Grab	% Mois(21)	1014 (1)	SB04SB05	04/21/2014 13:45	
14164010	JGFG9	Soil/ J. Fetters	Grab	% Mois(21)	1016 (1)	SB06SB4.5	04/21/2014 15:16	
14164011	JGFH0	Soil/ J. Fetters	Grab	% Mois(21)	1018 (1)	SB06SB6.5	04/21/2014 15:30	
14164012	JGFH1	Soil/ J. Fetters	Grab	% Mois(21)	1020 (1)	SB06SB12	04/21/2014 15:40	
14164013	JGFH2	Soil/ J. Fetters	Grab	% Mois(21)	1022 (1)	SB09SB15	04/22/2014 16:25	
14164014	JGFH3	Soil/ J. Fetters	Grab	% Mois(21)	1024 (1)	SB09SB19.5	04/22/2014 16:10	
14164015	JGFH4	Soil/ L. Ader	Grab	% Mois(21)	1026 (1)	SB09SB25	04/22/2014 16:10	
14164016	JGFH5	Soil/ J. Fetters	Grab	% Mois(21)	1028 (1)	SB10SB15.5	04/22/2014 18:06	
14164017	JGFH6	Soil/ J. Fetters	Grab	% Mois(21)	A (1)	SB10SB18.8	04/22/2014 17:45	
14164018	JGFH7	Soil/ J. Fetters	Grab	% Mois(21)	A (1)	SB10SB20.5	04/22/2014 18:14	

aa 04/25/14

Special Instructions:

Shipment for Case Complete? N

Samples Transferred From Chain of Custody #

Analysis Key: CLP TVOA=CLP TCL Trace Volatiles, % Mois=Moisture Content

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[signature]	4/24/14 1200	[signature] / DATAC	04/25/14 0942	Intact

00005

USEPA CLP COC (LAB COPY)

DateShipped: 4/24/2014
CarrierName: FedEx
AirbillNo: 862302348806

CHAIN OF CUSTODY RECORD

Case #: 44315
Cooler #: 1

SDG JGFG5

No: 10-042414-104635-0001

Lab: ALS Laboratory Group - Salt Lake City
Lab Contact: Roxy Olson
Lab Phone: 801-266-7700

Copy original in SDG. JGFFG

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
14164019	JGFH8	Soil/ J. Fetters	Grab	% Mois(21)	A (1)	HA01SB13.5	04/23/2014 09:30	
14164020	JGFH9	Soil/ J. Fetters	Grab	% Mois(21)	A (1)	HA02SB2.5	04/23/2014 11:35	
14164021	JGFJ0	Soil/ J. Fetters	Grab	% Mois(21)	A (1)	HA03SB09	04/23/2014 11:35	
14164022	JGFJ1	Soil/ L. Ader	Grab	% Mois(21)	A (1)	BK01SB03	04/22/2014 11:27	
14164025	JGFJ4	Water/ J. Fetters	Grab	CLP TVOA(21)	1037 (HCl) (3)	ID01WT	04/23/2014 18:30	
14164026	JGFJ5	Drinking Water/ L. Ader	Grab	CLP TVOA(21)	1038 (HCl) (9)	BK01GW	04/24/2014 09:40	
14164027	JGFJ6	Water/ J. Fetters	Grab	CLP TVOA(21)	1039 (HCl) (3)	RI02WT	04/24/2014 08:25	
14164028	JGFJ7	Water/ J. Fetters	Grab	CLP TVOA(21)	1040 (HCl) (3)	RI03WT	04/24/2014 08:30	
14164029	JGFJ8	Water/ J. Fetters	Grab	CLP TVOA(21)	1041 (HCl) (3)	RI04WT	04/24/2014 08:35	

aa 04/25/14

Sample(s) to be used for Lab QC: 14164022 Tag A, 14164026 Tag 1038	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key: CLP TVOA=CLP TCL Trace Volatiles, % Mois=Moisture Content	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[signature]	4/24/14 1200	[signature] / DATAC	04/25/14 0942	Intact

00006

USEPA CLP COC (LAB COPY)

DateShipped: 4/24/2014
CarrierName: FedEx
AirbillNo: 862302348817

Copy original in SDG. JGFF9

CHAIN OF CUSTODY RECORD

Case #: 44315
Cooler #: 1

SDG. JGFG5

No: 10-042414-113938-0002

Lab: ALS Laboratory Group - Salt Lake City
Lab Contact: Roxy Olson
Lab Phone: 801-266-7700

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
14164001	JGFG0	Water/ L. Ader	Grab	CLP TVOA(21)	1002 (HCl) (3)	TB02WT	04/21/2014 11:28	
14164006	JGFG5	Soil/ J. Fetters	Grab	CLP VOA(21)	1007 (Freeze in field) (3)	SB01SB01.5	04/21/2014 09:34	
14164007	JGFG6	Soil/ J. Fetters	Grab	CLP VOA(21)	1009 (Freeze in field) (3)	SB01SB05	04/21/2014 10:21	
14164008	JGFG7	Soil/ J. Fetters	Grab	CLP VOA(21)	1011 (Freeze in field) (3)	SB04SB04	04/21/2014 13:37	
14164009	JGFG8	Soil/ J. Fetters	Grab	CLP VOA(21)	1013 (Freeze in field) (3)	SB04SB05	04/21/2014 13:45	
14164010	JGFG9	Soil/ J. Fetters	Grab	CLP VOA(21)	1015 (Freeze in field) (3)	SB06SB4.5	04/21/2014 15:16	
14164011	JGFH0	Soil/ J. Fetters	Grab	CLP VOA(21)	1017 (Freeze in field) (3)	SB06SB6.5	04/21/2014 15:30	
14164012	JGFH1	Soil/ J. Fetters	Grab	CLP VOA(21)	1019 (Freeze in field) (3)	SB06SB12	04/21/2014 15:40	
14164013	JGFH2	Soil/ J. Fetters	Grab	CLP VOA(21)	1021 (Freeze in field) (3)	SB09SB15	04/22/2014 16:25	

AR 04/25/14

Special Instructions:	Shipment for Case Complete? N
	Samples Transferred From Chain of Custody #

Analysis Key: CLP TVOA=CLP TCL Trace Volatiles, CLP VOA=CLP TCL Volatiles

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[signature]	4/25/14 12:00	[signature] / DATAC	04/25/14 0942	Intact

USEPA CLP COC (LAB COPY)

DateShipped: 4/24/2014
CarrierName: FedEx
AirbillNo: 862302348817

CHAIN OF CUSTODY RECORD

SDG. JGFG5

Case #: 44315
Cooler #: 1

No: 10-042414-113938-0002

Lab: ALS Laboratory Group - Salt Lake City
Lab Contact: Roxy Olson
Lab Phone: 801-266-7700

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
14164014	JGFH3	Soil/ J. Fetters	Grab	CLP VOA(21)	1023 (Freeze in field) (3)	SB09SB19.5	04/22/2014 16:10	
14164015	JGFH4	Soil/ L. Ader	Grab	CLP VOA(21)	1025 (Freeze in field) (3)	SB09SB25	04/22/2014 16:10	
14164016	JGFH5	Soil/ J. Fetters	Grab	CLP VOA(21)	1027 (Freeze in field) (3)	SB10SB15.5	04/22/2014 18:06	
14164017	JGFH6	Soil/ J. Fetters	Grab	CLP VOA(21)	1029 (Freeze in field) (3)	SB10SB18.5	04/22/2014 17:45	
14164018	JGFH7	Soil/ J. Fetters	Grab	CLP VOA(21)	1030 (Freeze in field) (3)	SB10SB20.5	04/22/2014 18:14	
14164019	JGFH8	Soil/ J. Fetters	Grab	CLP VOA(21)	1031 (Freeze in field) (3)	HA01SB13.5	04/23/2014 09:30	
14164020	JGFH9	Soil/ J. Fetters	Grab	CLP VOA(21)	1032 (Freeze in field) (3)	HA02SB2.5	04/23/2014 11:35	
14164021	JGFJ0	Soil/ J. Fetters	Grab	CLP VOA(21)	1033 (Freeze in field) (3)	HA03SB09	04/23/2014 11:35	
14164022	JGFJ1	Soil/ L. Ader	Grab	CLP VOA(21)	1034 (Freeze in field) (9)	BK01SB03	04/22/2014 11:27	FINAL SDG. SAMPLE

QA 04/25/14

Sample(s) to be used for Lab QC: 14164022 Tag 1034	**Shipment for Case Complete? N**
	Samples Transferred From Chain of Custody #
Analysis Key: CLP TVOA=CLP TCL Trace Volatiles, CLP VOA=CLP TCL Volatiles	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[signature]	4/24/14 1200	[signature] DATAC	04/25/14 0942	Intact

00008

1411646

USEPA CLP COC (LAB COPY)

DateShipped: 4/25/2014
CarrierName: FedEx
AirbillNo: 862302348839

CHAIN OF CUSTODY RECORD

JGFJ2

Case #: 44315
Cooler #: 1

No: 10-042514-101555-0004

Lab: ALS Laboratory Group - Salt Lake City
Lab Contact: Roxy Olson
Lab Phone: 801-266-7700

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
14164023	JGFJ2	Soil/ J. Fetters	Grab	CLP VOA(21)	1035 (Freeze in field) (9)	BK01SB04	04/22/2014 11:30	
14164024	JGFJ3	Soil/ L. Ader	Grab	CLP VOA(21)	1036 (Freeze in field) (3)	BK01SB12	04/22/2014 11:43	
14164030	JGFJ9	Soil/ J. Fetters	Grab	CLP VOA(21)	1042 (Freeze in field) (3)	SB11SB18.6	04/23/2014 15:21	
14164031	JGFK0	Soil/ J. Fetters	Grab	CLP VOA(21)	1043 (Freeze in field) (3)	SB11SB20	04/23/2014 15:07	
14164032	JGFK1	Soil/ L. Ader	Grab	CLP VOA(21)	1044 (Freeze in field) (3)	SB11SB21.5	04/23/2014 15:50	
14164033	JGFK2	Soil/ L. Ader	Grab	CLP VOA(21)	1045 (Freeze in field) (3)	SB11SB28	04/23/2014 15:59	
14164034	JGFK3	Soil/ J. Fetters	Grab	CLP VOA(21)	1046 (Freeze in field) (3)	SB11SB32	04/23/2014 16:27	
14164035	JGFK4	Soil/ A. Jensen	Grab	CLP VOA(21)	1047 (Freeze in field) (3)	SB12SB20	04/24/2014 10:41	
14164036	JGFK5	Soil/ J. Fetters	Grab	CLP VOA(21)	1048 (Freeze in field) (3)	SB12SB21.5	04/24/2014 10:43	

Sample(s) to be used for Lab QC: 14164023 Tag 1035	**Shipment for Case Complete? Y**
	Samples Transferred From Chain of Custody #
Analysis Key: CLP VOA=CLP TCL Volatiles	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[signature]	4/25/14 12:00	[signature] DATAC	4/26/14 1015	good

000017

USEPA CLP COC (LAB COPY)

DateShipped: 4/25/2014
CarrierName: FedEx
AirbillNo: 862302348839

CHAIN OF CUSTODY RECORD

JGF 02

Case #: 44315
Cooler #: 1

No: 10-042514-101555-0004

Lab: ALS Laboratory Group - Salt Lake City
Lab Contact: Roxy Olson
Lab Phone: 801-266-7700

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
14164037	JGFK6	Soil/ J. Fetters	Grab	CLP VOA(21)	1049 (Freeze in field) (3)	SB12SB28.5	04/24/2014 11:14	
14164038	JGFK7	Soil/ J. Fetters	Grab	CLP VOA(21)	1050 (Freeze in field) (3)	SB13SB14	04/24/2014 14:15	
14164039	JGFK8	Soil/ J. Fetters	Grab	CLP VOA(21)	1051 (Freeze in field) (3)	SB13SB20	04/24/2014 14:33	
14164040	JGFK9	Soil/ J. Fetters	Grab	CLP VOA(21)	1052 (Freeze in field) (3)	SB13SB27.5	04/24/2014 14:44	
14164041	JGFL0	Soil/ J. Fetters	Grab	CLP VOA(21)	1053 (Freeze in field) (3)	SB13SB21.2	04/24/2014 15:13	
14164042	JGFL1	Soil/ J. Fetters	Grab	CLP VOA(21)	1054 (Freeze in field) (3)	SB13SB23	04/24/2014 15:15	
14164043	JGFL2	Soil/ J. Fetters	Grab	CLP VOA(21)	1055 (Freeze in field) (3)	SB13SB30	04/24/2014 15:43	
14164045	JGFL4	Water/ C. Whitehead	Grab	CLP TVOA(21)	1057 (HCl) (3)	TB04WT	04/25/2014 09:05	
14164046	JGFL5	Soil/ J. Fetters	Grab	CLP VOA(21)	1058 (Freeze in field) (3)	SB14SB18	04/24/2014 17:10	

Special Instructions:	**Shipment for Case Complete? Y**
	Samples Transferred From Chain of Custody #

Analysis Key: CLP VOA=CLP TCL Volatiles, CLP TVOA=CLP TCL Trace Volatiles

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[illegible]	4/25/14 12:00	Meredith Edward DATAC	4/26/14 9:07	good

000018

USEPA CLP COC (LAB COPY)

DateShipped: 4/25/2014
CarrierName: FedEx
AirbillNo: 862302348839

CHAIN OF CUSTODY RECORD

JGF J2

Case #: 44315
Cooler #: 1

No: 10-042514-101555-0004

Lab: ALS Laboratory Group - Salt Lake City
Lab Contact: Roxy Olson
Lab Phone: 801-266-7700

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
14164047	JGFL6	Soil/ L. Ader	Grab	CLP VOA(21)	1061 (Freeze in field) (3)	SB14SB21.5	04/24/2014 17:30	
14164048	JGFL7	Soil/ L. Ader	Grab	CLP VOA(21)	1063 (Freeze in field) (3)	SB14SB23.5	04/24/2014 17:19	
14164049	JGFL8	Soil/ J. Fetters	Grab	CLP VOA(21)	1065 (Freeze in field) (3)	SB14SB28	04/24/2014 17:41	

Special Instructions:	Shipment for Case Complete? Y
	Samples Transferred From Chain of Custody #

Analysis Key: CLP VOA=CLP TCL Volatiles, CLP TVOA=CLP TCL Trace Volatiles

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[signature]	4/25/14 1210	Meredith Edward DATAU	4/25/14 1907	good

000019

USEPA CLP COC (LAB COPY)

DateShipped: 4/25/2014
CarrierName: FedEx
AirbillNo: 862302348828

CHAIN OF CUSTODY RECORD JGFJ2

Case #: 44315
Cooler #: 1

No: 10-042514-100420-0003

Lab: ALS Laboratory Group - Salt Lake City
Lab Contact: Roxy Olson
Lab Phone: 801-266-7700

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
14164002	JGFG1	Water/ L. Ader	Grab	CLP TVOA(21)	1003 (HCl) (3)	TB03WT	04/21/2014 11:34	
14164023	JGFJ2	Soil/ J. Fetters	Grab	% Mois(21)	A (1)	BK01SB04	04/22/2014 11:30	
14164024	JGFJ3	Soil/ L. Ader	Grab	% Mois(21)	A (1)	BK01SB12	04/22/2014 11:43	
14164030	JGFJ9	Soil/ J. Fetters	Grab	% Mois(21)	B (2)	SB11SB18.6	04/23/2014 15:21	
14164031	JGFK0	Soil/ J. Fetters	Grab	% Mois(21)	C (1)	SB11SB20	04/23/2014 15:07	
14164032	JGFK1	Soil/ L. Ader	Grab	% Mois(21)	D (1)	SB11SB21.5	04/23/2014 15:50	
14164033	JGFK2	Soil/ L. Ader	Grab	% Mois(21)	E (1)	SB11SB28	04/23/2014 15:59	
14164034	JGFK3	Soil/ J. Fetters	Grab	% Mois(21)	F (1)	SB11SB32	04/23/2014 16:27	
14164035	JGFK4	Soil/ A. Jensen	Grab	% Mois(21)	G (1)	SB12SB20	04/24/2014 10:41	
14164036	JGFK5	Soil/ J. Fetters	Grab	% Mois(21)	H (1)	SB12SB21.5	04/24/2014 10:43	
14164037	JGFK6	Soil/ J. Fetters	Grab	% Mois(21)	I (1)	SB12SB28.5	04/24/2014 11:14	
14164038	JGFK7	Soil/ J. Fetters	Grab	% Mois(21)	J (1)	SB13SB14	04/24/2014 14:15	
14164039	JGFK8	Soil/ J. Fetters	Grab	% Mois(21)	K (1)	SB13SB20	04/24/2014 14:33	
14164040	JGFK9	Soil/ J. Fetters	Grab	% Mois(21)	L (1)	SB13SB27.5	04/24/2014 14:44	
14164041	JGFL0	Soil/ J. Fetters	Grab	% Mois(21)	M (1)	SB13SB21.2	04/24/2014 15:13	
14164042	JGFL1	Soil/ J. Fetters	Grab	% Mois(21)	N (1)	SB13SB23	04/24/2014 15:15	
14164043	JGFL2	Soil/ J. Fetters	Grab	% Mois(21)	O (1)	SB13SB30	04/24/2014 15:43	
14164044	JGFL3	Water/ J. Fetters	Grab	CLP TVOA(21)	1056 (HCl) (3)	ID02WT	04/25/2014 08:50	

Sample(s) to be used for Lab QC: 14164023 Tag A	**Shipment for Case Complete? Y**
	Samples Transferred From Chain of Custody #
Analysis Key: CLP TVOA=CLP TCL Trace Volatiles, % Mois=Moisture Content	

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[signature]	4/25/14 12:00	[signature] DATAC	4/26/14 9:07	good

00026

USEPA CLP COC (LAB COPY)

DateShipped: 4/25/2014
CarrierName: FedEx
AirbillNo: 862302348828

CHAIN OF CUSTODY RECORD JGF J2

Case #: 44315
Cooler #: 1

No: 10-042514-100420-0003

Lab: ALS Laboratory Group - Salt Lake City
Lab Contact: Roxy Olson
Lab Phone: 801-266-7700

Sample Identifier	CLP Sample No.	Matrix/Sampler	Coll. Method	Analysis/Turnaround (Days)	Tag/Preservative/Bottles	Location	Collection Date/Time	For Lab Use Only
14164046	JGFL5	Soil/ J. Fetters	Grab	% Mois(21)	1060 (1)	SB14SB18	04/24/2014 17:10	
14164047	JGFL6	Soil/ L. Ader	Grab	% Mois(21)	1062 (1)	SB14SB21.5	04/24/2014 17:30	
14164048	JGFL7	Soil/ L. Ader	Grab	% Mois(21)	1064 (1)	SB14SB23.5	04/24/2014 17:19	
14164049	JGFL8	Soil/ J. Fetters	Grab	% Mois(21)	1066 (1)	SB14SB28	04/24/2014 17:41	FINAL SDG SAMPLE

Special Instructions:	Shipment for Case Complete? Y
	Samples Transferred From Chain of Custody #

Analysis Key: CLP TVOA=CLP TCL Trace Volatiles, % Mois=Moisture Content

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
	[signature]	4/25/14 12:00	[signature] DATAL	4/28/14 9:07	good

00021

E Data Validation Memoranda

This page intentionally left blank.

ecology and environment, inc.
Global Environmental Specialists
720 Third Avenue, Suite 1700, Seattle, WA 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: April 30, 2014

TO: Linda Ader, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-4 Chemist, E & E, Seattle, Washington MW

SUBJ: **Field Laboratory Data Quality Assurance Review, Freeman Ground Water Contamination Site, Freeman, Washington**

REF: TDD: 13-07-0005 PAN: EE-004536-0001-01TTO

The data quality assurance review of 51 soil samples collected from the Freeman Ground Water Contamination site in Freeman, Washington, has been completed. Carbon Tetrachloride analysis (EPA Region 10 EMP Field Analytical SOP 303a) was performed by Ecology and Environment, Inc., (E & E) Superfund Technical Assessment and Response Team (START) personnel at the site. All sample analyses were evaluated following EPA's Stage 2B Data Validation Manual Process (S2BVM). The sample locations were labeled:

FA001	FA002	FA003	FA004	FA005	FA006	FA007
FA008	FA009	FA010	FA011	FA012	FA013	FA014
FA015	FA016	FA017	FA018	FA019	FA020	FA021
FA022	FA023	FA024	FA025	FA027	FA028	FA029
FA030	FA031	FA032	FA033	FA034	FA035	FA036
FA037	FA038	FA039	FA040	FA041	FA042	FA043
FA044	FA045	FA046	FA047	FA048	FA049	FA050
FA051	FA052					

Data Qualifications:

1. **Sample Holding Times: Acceptable.**

The samples were maintained and received within the QC limits of < 6°C. The samples were analyzed on the same day as collection, meeting QC criteria of "immediate" analysis after collection.

2. **Tuning: Acceptable.**

Tuning was performed at the beginning of each 12-hour analysis sequence. All results were within QC limits.

3. **Initial Calibration: Acceptable.**

All average Relative Response Factors (RRFs) were within the QC limits. All Relative Standard Deviations (RSDs) were within the QC limits.

4. **Continuing Calibration: Acceptable.**

All RRFs were within the QC limits. All % differences were within the QC limits of ± 20%.

recycled paper

5. **Blanks: Acceptable.**

A method blank was analyzed daily. There were no detections in any method blank that affected sample results.

6. **Internal Standards: Satisfactory.**

All internal standards were within ± 0.333 minutes of the continuing calibration internal standard retention times. All area counts were within the QC limits of 50% to 200% of the continuing calibration area except the method blank on April 24, 2014 (no action was taken as the area count was high and carbon tetrachloride was not detected in the blank) and the final continuing calibration on April 21, 2014 (no action was taken as the carbon tetrachloride result was within QC limits).

7. **Precision and Bias Determination: Not Performed.**

Samples necessary to determine precision and bias were not provided to the laboratory. All results were flagged "PND" (Precision Not Determined) and "RND" (Recovery Not Determined), although the flags do not appear on the data sheets.

8. **Performance Evaluation Sample Analysis: Not Provided.**

Performance evaluation samples were not provided to the laboratory.

9. **Matrix Spike (MS)/MS Duplicate (MSD) Sample Analysis: Acceptable.**

MS/MSD recoveries were within QC limits of 70% to 130%. Spike duplicate results were within QC limits of < 35% RPD.

10. **Second Source Standard Analysis: Acceptable.**

Second source standard results were within QC limits.

11. **Overall Assessment of Data for Use**

The reviewer used professional judgment to apply a single bias qualifier when more than one bias qualifier was applicable to an individual estimated sample result.

The overall usefulness of the data is based on the criteria outlined in the Site-Specific Sampling Plan and/or Sampling and Quality Assurance Plan, the OSWER Guidance Document "Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures" (EPA/540/G-90/004), the analytical method, and, when applicable, the Office of Emergency and Remedial Response Publication "USEPA Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review". Based upon the information provided, the data are acceptable for use with the above stated data qualifications.

Data Qualifiers and Definitions

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

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

JH - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with a high bias.

JL - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with a low bias.

JK - The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with an unknown direction of bias.

JQ – The analyte was positively identified; the associated numerical value is the approximate concentration of the analyte in the sample with an unknown direction of bias and falls between the MDL and the Minimum (or Practical) Quantitation Limit (MQL, PQL).

N - The analysis indicates the present of an analyte for which there is presumptive evidence to make a "tentative identification".

NJ - The analysis indicates the presence of an analyte that has been "tentatively identified" and the associated numerical value represents its approximate concentration.

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

R - The sample results are rejected due to serious deficiencies in the ability to analyze the sample and meet quality control criteria. The presence or absence of the analyte cannot be verified.

Sample Number	Analysis	Analyte	Field Identificatio	CAS Number	Result	Result Units	Result Qualifier	Sample Weight	Percent Solids
FA001	8260Mod	Carbon Tetrachloride	SB01SB1.5	56-23-5	2.12	ug/kg	U	10.0024	94.19%
FA002	8260Mod	Carbon Tetrachloride	SB01SB05	56-23-5	2.38	ug/kg	U	10.4112	80.62%
FA003	8260Mod	Carbon Tetrachloride	SB02SB01	56-23-5	2.05	ug/kg	U	10.5891	92.17%
FA004	8260Mod	Carbon Tetrachloride	SB02SB05	56-23-5	2.27	ug/kg	U	10.6703	82.68%
FA015	8260Mod	Carbon Tetrachloride	SB07SB04	56-23-5	2.40	ug/kg	U	10.1132	82.32%
FA013	8260Mod	Carbon Tetrachloride	SB06SB12	56-23-5	2.85	ug/kg	U	10.0672	69.77%
FA014	8260Mod	Carbon Tetrachloride	SB07SB03	56-23-5	2.46	ug/kg	U	10.3154	78.84%
FA005	8260Mod	Carbon Tetrachloride	SB03SB1.5	56-23-5	2.40	ug/kg	U	10.0540	82.94%
FA006	8260Mod	Carbon Tetrachloride	SB03SB05	56-23-5	2.38	ug/kg	U	10.2135	82.20%
FA007	8260Mod	Carbon Tetrachloride	SB04SB04	56-23-5	2.51	ug/kg	U	10.1290	78.64%
FA008	8260Mod	Carbon Tetrachloride	SB04SB05	56-23-5	2.33	ug/kg	U	10.4704	81.98%
FA009	8260Mod	Carbon Tetrachloride	SB05SB03	56-23-5	2.32	ug/kg	U	10.4335	82.72%
FA010	8260Mod	Carbon Tetrachloride	SB05SB04	56-23-5	2.29	ug/kg	U	10.4673	83.43%
FA011	8260Mod	Carbon Tetrachloride	SB06SB4.5	56-23-5	2.48	ug/kg	U	10.0915	80.07%
FA012	8260Mod	Carbon Tetrachloride	SB06SB6.5	56-23-5	2.36	ug/kg	U	10.2643	82.54%
FA016	8260Mod	Carbon Tetrachloride	BK01SB03	56-23-5	2.10	ug/kg	U	12.0070	79.47%
FA029	8260Mod	Carbon Tetrachloride	SB10SB20.5	56-23-5	5.06	ug/kg		12.2608	61.52%
FA028	8260Mod	Carbon Tetrachloride	SB10SB18.5	56-23-5	5.21	ug/kg		10.5456	62.56%
FA021	8260Mod	Carbon Tetrachloride	SB09SB04	56-23-5	2.00	ug/kg	U	12.201	81.96%
FA019	8260Mod	Carbon Tetrachloride	SB08SB4.5	56-23-5	3.96	ug/kg	U	6.1824	81.73%
FA020	8260Mod	Carbon Tetrachloride	SB08SB5.5	56-23-5	3.95	ug/kg	U	6.0304	84.01%
FA022	8260Mod	Carbon Tetrachloride	SB09SB05	56-23-5	1.87	ug/kg	U	12.7827	83.85%
FA024	8260Mod	Carbon Tetrachloride	SB09SB25	56-23-5	3.83	ug/kg		8.7452	67.81%
FA025	8260Mod	Carbon Tetrachloride	SB09SB19.5	56-23-5	4.88	ug/kg		9.4099	66.32%
FA027	8260Mod	Carbon Tetrachloride	SB10SB15.5	56-23-5	3.15	ug/kg	U	10.2717	61.86%
FA017	8260Mod	Carbon Tetrachloride	BK01SB04	56-23-5	2.15	ug/kg	U	11.2413	82.75%
FA023	8260Mod	Carbon Tetrachloride	SB09SB15	56-23-5	5.14	ug/kg	U	5.9775	65.15%
FA031	8260Mod	Carbon Tetrachloride	HA02SB2.5	56-23-5	2.14	ug/kg	U	10.4172	89.73%
FA030	8260Mod	Carbon Tetrachloride	HA01SB13.5	56-23-5	2.49	ug/kg	U	10.4446	76.96%
FA032	8260Mod	Carbon Tetrachloride	HA03SB09	56-23-5	2.37	ug/kg	U	10.4503	80.70%
FA033	8260Mod	Carbon Tetrachloride	SB11SB17	56-23-5	3.43	ug/kg	U	8.8316	66.05%
FA034	8260Mod	Carbon Tetrachloride	SB11SB18	56-23-5	4.18	ug/kg	U	7.8212	61.20%
FA035	8260Mod	Carbon Tetrachloride	SB11SB18.6	56-23-5	2.96	ug/kg	U	10.9632	61.57%
FA036	8260Mod	Carbon Tetrachloride	SB11SB20	56-23-5	3.21	ug/kg		10.6371	63.16%
FA037	8260Mod	Carbon Tetrachloride	SB11SB21.5	56-23-5	4.37	ug/kg		9.7354	62.51%
FA038	8260Mod	Carbon Tetrachloride	SB11SB28	56-23-5	4.42	ug/kg		10.2614	63.13%
FA039	8260Mod	Carbon Tetrachloride	SB11SB32	56-23-5	3.67	ug/kg		9.9699	67.13%
FA018	8260Mod	Carbon Tetrachloride	BK01SB12	56-23-5	1.87	ug/kg	U	12.5787	84.90%
FA040	8260Mod	Carbon Tetrachloride	SB12SB20	56-23-5	3.46	ug/kg	U	9.4851	61.01%
FA041	8260Mod	Carbon Tetrachloride	SB12SB21.5	56-23-5	3.18	ug/kg	U	10.1081	62.14%
FA042	8260Mod	Carbon Tetrachloride	SB12SB28.5	56-23-5	2.85	ug/kg		10.6363	68.52%
FA043	8260Mod	Carbon Tetrachloride	SB13SB14	56-23-5	2.53	ug/kg	U	11.1038	71.13%
FA044	8260Mod	Carbon Tetrachloride	SB13SB20	56-23-5	7.98	ug/kg		10.2169	63.18%
FA045	8260Mod	Carbon Tetrachloride	SB13SB21.2	56-23-5	8.42	ug/kg		11.3940	61.78%
FA046	8260Mod	Carbon Tetrachloride	SB13SB23	56-23-5	5.92	ug/kg		10.2651	68.27%
FA047	8260Mod	Carbon Tetrachloride	SB13SB27.5	56-23-5	6.42	ug/kg		11.1326	67.51%
FA048	8260Mod	Carbon Tetrachloride	SB13SB30	56-23-5	14.98	ug/kg		10.8391	66.23%
FA049	8260Mod	Carbon Tetrachloride	SB14SB18	56-23-5	5.86	ug/kg		10.2718	65.01%
FA050	8260Mod	Carbon Tetrachloride	SB14SB21.5	56-23-5	9.30	ug/kg		9.8291	60.31%
FA051	8260Mod	Carbon Tetrachloride	SB14SB23.5	56-23-5	10.67	ug/kg		8.7470	57.64%
FA052	8260Mod	Carbon Tetrachloride	SB14SB28	56-23-5	2.66	ug/kg	U	10.5242	71.32%

MW 4-30-14

ecology and environment, inc.
Global Environmental Specialists
720 Third Avenue, Suite 1700
Seattle, Washington 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: May 22, 2014

TO: Linda Ader, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-4 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Summary Check, Freeman Ground Water Contamination Site, Freeman, Washington**

REF: TDD: 13-07-0005 PAN: EE-004536-0001-01TTO

The data summary check of 5 water, 4 rinsate, and 4 trip blank samples collected from the Freeman Ground Water Contamination site in Freeman, Washington, has been completed. Volatile Organic Compound (VOC) analysis (EPA Method 8260) was performed by ALS Environmental, Salt Lake City, Utah. All sample analyses were evaluated following EPA's Stage 4 Data Validation Electronic and/or Manual Process (S4VEM).

The samples were numbered:

JGFF9	JGFG0	JGFG1	JGFG2	JGFG3
JGFG4	JGFJ4	JGFJ5	JGFJ6	JGFJ7
JGFJ8	JGFL3	JGFL4		

No discrepancies were noted.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

May 21, 2014

MEMORANDUM

Subject: Data Validation Report for the Trace Volatile Analysis of the Water Samples Collected for the Freeman Ground Water Contamination Site - Case Number 44315, SDG JGFF9

From: Donald M. Brown, QA Chemist DMB
USEPA Region 10, Office of Environmental Assessment, Environmental Services Unit

To: Monica Tonel, Site Assessment Manager
USEPA Region 10, Office of Environmental Cleanup

CC: Renee Nordeen, Ecology & Environment, Inc.

The quality assurance (QA) review of the analytical data generated from the analysis of five (5) water samples, four (4) trip blanks, and four (4) rinsate blanks collected from the above-referenced site has been completed. These samples were analyzed for Trace Volatile Organic Compounds (TVOCs) by ALS Environmental (DATAC) located in Salt Lake City, Utah. When multiple analytical runs were performed (i.e., dilution, reanalysis, SIM), the run with reportable results has been indicated by the reviewer.

All sample analyses were evaluated following EPA's Stage 4 Data Validation Electronic/Manual Process (S4VEM). The validation was conducted and appropriate qualifiers were applied according to the Quality Control Specifications outlined in the following:

- Sampling and Quality Assurance Plan for Freeman Ground Water Contamination (March 2014);
- USEPA Contract Laboratory Program (CLP) Statement of Work (SOW) for Multi-Media, Multi-Concentration Organics Analysis (SOM01.2);
- USEPA CLP National Functional Guidelines for Superfund Organic Methods Data Review (USEPA-540-R-08-01); and
- Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use (EPA-540-R-08-005).

Some data may be qualified using the reviewer's professional judgment. The conclusions presented herein are based on the information provided for the review. A summary of samples evaluated in this validation report and the pertinent dates for sample collection, laboratory sample receipt, extraction, and analyses is attached along with the validated data.

Sample JGFG2 was reanalyzed at a two-fold (2X) dilution to bring the concentration of carbon tetrachloride within the linear range of the instrument. The result for this compound in this sample is reported from the diluted analysis and the reporting limit is elevated.

Printed on Recycled Paper

Sample JGFL3 was reanalyzed at a four-fold (4X) dilution to bring the concentration of chloroethane within the linear range of the instrument. The result for this compound in this sample is reported from the diluted analysis and the reporting limit is elevated.

I. QUALITY CONTROL RESULTS SUMMARY

Trace Volatile Organic Analysis		
Quality Control Test	**Outliers?**	**Evaluation Criteria**
Blanks	Y*	Non-detect or < 5X Blank†
Initial Calibration	Y*	RRF > 0.05 and ≤ 30% RSD
Continuing Calibration Verification	N	RRF > 0.05 and Open: ≤ 25% D, Close: ≤ 50% D
Deuterated Monitoring Compounds	N	Varies by Compound
Internal Standards	N	60 – 140% of 12-hour standard

* See the Data Qualifications section below for outliers and qualification of affected data.
†10X Blank for ketones or solvents.
(Note: RRF = Relative Response Factor, RSD = Relative Standard Deviation, D = Difference)

II. DATA QUALIFICATIONS

Summary of Validation Qualifiers Applied:

Data qualifications applied after the manual and electronic data review can be found in the attached "Manual/Electronic Data Review Results" section of this report.

Data Qualifiers

The following is a list of validation qualifiers applied to the sample result(s) either electronically or manually when needed to indicate associated out-of-control QA/QC results.

Data Qualifiers	
U	The analyte was analyzed for but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
J	The analyte was positively identified and the associated numerical value is an estimated quantity.
UJ	The analyte was analyzed for but was not detected above the level of the associated value. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable for all purposes. The analyte may or may not be present in the sample.
JN	There is evidence that the analyte is present. The associated numerical result is an estimate.

For site assessment and investigations, the following bias qualifiers are applied to the sample result(s) manually in addition to the above data qualifiers to allow for data analysis and interpretation using PREscore software for the National Priorities Listing Hazard Ranking System (NPL-HRS).

Bias Qualifiers	
L	Low bias.
H	High bias.
K	Unknown bias.
Q	The result is estimated because the concentration is below the Contract Required Quantitation Limits (CRQLs).

Attachments:
Manual/Electronic Data Review Results
Sample Summary Report
Analytical Sample Listing (Report #6)

Manual/Electronic Data Review Results

TRACE VOLATILE ORGANIC ANALYSIS
Blank Qualification Summary
The following samples have analyte concentrations reported less than five times (<5X) [less than ten times (<10X) for ketones or solvents] the associated storage and/or method blank concentrations. Detected compounds are qualified U and are reported at the CRQL or at the level of detection. Non-detected compounds are not qualified.
Acetone – JGFL3
Initial Calibration Qualification Summary
The following samples are associated with an initial calibration with a Relative Response Factor (RRF) outside criteria (i.e., <0.05). Detected compounds are qualified JK. Non-detected compounds are qualified R.
Acetone – All Samples except JGFL3 2-Butanone – All Samples except JGFJ4
Detection Limit Qualification Summary
The following samples have analyte concentrations below the quantitation limit (CRQL). Detected compounds are qualified JQ. Non-detected compounds are not qualified.
Chloroethane – JGFJ4 Carbon disulfide – JGFJ4, JGFJ7 2-Butanone – JGFJ4 Chloroform – JGFJ4 Tetrachloroethene – JGFJ4 2-Hexanone – JGFL3 Dibromochloromethane – JGFJ4, JGFL3 m,p-Xylene – JGFJ4 Bromoform – JGFJ4

Sample Summary Report

Case No:	44315	Contract:	EPW11037	SDG No:	JGFF9	Lab Code:	DATAC
Sample Number:	JGFF9	Method:	VOA_Trace	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	TB01WT	pH:	1.0	Sample Date:	04/21/2014	Sample Time:	11:25:00
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Vinyl chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromomethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Acetone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Carbon disulfide	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Butanone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Bromochloromet hane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroform	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Benzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	0.50	ug/L	1.0	U	U	Yes	S4VEM

Sample Summary Report

Case No:	44315	Contract:	EPW11037	SDG No:	JGFF9	Lab Code:	DATAC
Sample Number:	JGFF9	Method:	VOA_Trace	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	TB01WT	pH:	1.0	Sample Date:	04/21/2014	Sample Time:	11:25:00
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Vinyl chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromomethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Acetone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Carbon disulfide	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Butanone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Bromochloromet hane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroform	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Benzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	0.50	ug/L	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromodichloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Toluene	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Tetrachloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Hexanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Dibromochloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
o-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
m,p-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Styrene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromoform	0.50	ug/L	1.0	U	U	Yes	S4VEM
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFF9	Lab Code: DATAC

Sample Number:	JGFG0	Method:	VOA_Trace	Matrix:	Water	MA Number:	DEFAULT
Sample Location:	TB02WT	pH:	1.0	Sample Date:	04/21/2014	Sample Time:	11:28:00
% Moisture :				% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Vinyl chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromomethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Acetone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Carbon disulfide	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Butanone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Bromochloromet hane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroform	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Benzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromodichlorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Toluene	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Tetrachloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Hexanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Dibromochloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
o-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
m,p-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Styrene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromoform	0.50	ug/L	1.0	U	U	Yes	S4VEM
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFF9	Lab Code: DATAC
Sample Number: JGFG1	Method: VOA_Trace	Matrix: Water	MA Number: DEFAULT
Sample Location: TB03WT	pH: 1.0	Sample Date: 04/21/2014	Sample Time: 11:34:00
% Moisture :		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Vinyl chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromomethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Acetone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Carbon disulfide	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Butanone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Bromochloromet hane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroform	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Benzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromodichlorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Toluene	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Tetrachloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Hexanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Dibromochloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
o-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
m,p-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Styrene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromoform	0.50	ug/L	1.0	U	U	Yes	S4VEM
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFF9	Lab Code: DATAC
Sample Number: JGFG2	Method: VOA_Trace	Matrix: Water	MA Number: DEFAULT
Sample Location: DW01GW	pH: 1.0	Sample Date: 04/22/2014	Sample Time: 09:40:00
% Moisture :		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Vinyl chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromomethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Acetone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Carbon disulfide	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Butanone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Bromochloromet hane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroform	1.9	ug/L	1.0			Yes	S4VEM
1,1,1-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	32	ug/L	1.0	E	R	No	S4VEM
Benzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromodichlorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Toluene	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Tetrachloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Hexanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Dibromochloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
o-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
m,p-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Styrene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromoform	0.50	ug/L	1.0	U	U	Yes	S4VEM
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFF9	Lab Code: DATAC
Sample Number: JGFG2DL	Method: VOA_Trace	Matrix: Water	MA Number: DEFAULT
Sample Location: DW01GW	pH: 1.0	Sample Date: 04/22/2014	Sample Time: 09:40:00
% Moisture :		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	1.0	ug/L	2.0	U	R	No	S4VEM
Chloromethane	1.0	ug/L	2.0	U	R	No	S4VEM
Vinyl chloride	1.0	ug/L	2.0	U	R	No	S4VEM
Bromomethane	1.0	ug/L	2.0	U	R	No	S4VEM
Chloroethane	1.0	ug/L	2.0	U	R	No	S4VEM
Trichlorofluorom ethane	1.0	ug/L	2.0	U	R	No	S4VEM
1,1-Dichloroethene	1.0	ug/L	2.0	U	R	No	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	1.0	ug/L	2.0	U	R	No	S4VEM
Acetone	10	ug/L	2.0	U	R	No	S4VEM
Carbon disulfide	1.0	ug/L	2.0	U	R	No	S4VEM
Methyl acetate	1.0	ug/L	2.0	U	R	No	S4VEM
Methylene chloride	1.0	ug/L	2.0	U	R	No	S4VEM
trans-1,2-Dichloroethene	1.0	ug/L	2.0	U	R	No	S4VEM
Methyl tert-butyl ether	1.0	ug/L	2.0	U	R	No	S4VEM
1,1-Dichloroethane	1.0	ug/L	2.0	U	R	No	S4VEM
cis-1,2-Dichloroethene	1.0	ug/L	2.0	U	R	No	S4VEM
2-Butanone	10	ug/L	2.0	U	R	No	S4VEM
Bromochloromet hane	1.0	ug/L	2.0	U	R	No	S4VEM
Chloroform	1.7	ug/L	2.0	D	R	No	S4VEM
1,1,1-Trichloroethane	1.0	ug/L	2.0	U	R	No	S4VEM
Cyclohexane	1.0	ug/L	2.0	U	R	No	S4VEM
Carbon tetrachloride	23	ug/L	2.0	D		Yes	S4VEM
Benzene	1.0	ug/L	2.0	U	R	No	S4VEM
1,2-Dichloroethane	1.0	ug/L	2.0	U	R	No	S4VEM
Trichloroethene	1.0	ug/L	2.0	U	R	No	S4VEM
Methylcyclohexa ne	1.0	ug/L	2.0	U	R	No	S4VEM
1,2-Dichloropropane	1.0	ug/L	2.0	U	R	No	S4VEM
Bromodichlorom ethane	1.0	ug/L	2.0	U	R	No	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
cis-1,3-Dichloropropene	1.0	ug/L	2.0	U	R	No	S4VEM
4-Methyl-2-Pentanone	10	ug/L	2.0	U	R	No	S4VEM
Toluene	1.0	ug/L	2.0	U	R	No	S4VEM
trans-1,3-Dichloropropene	1.0	ug/L	2.0	U	R	No	S4VEM
1,1,2-Trichloroethane	1.0	ug/L	2.0	U	R	No	S4VEM
Tetrachloroethene	1.0	ug/L	2.0	U	R	No	S4VEM
2-Hexanone	10	ug/L	2.0	U	R	No	S4VEM
Dibromochloromethane	1.0	ug/L	2.0	U	R	No	S4VEM
1,2-Dibromoethane	1.0	ug/L	2.0	U	R	No	S4VEM
Chlorobenzene	1.0	ug/L	2.0	U	R	No	S4VEM
Ethylbenzene	1.0	ug/L	2.0	U	R	No	S4VEM
o-Xylene	1.0	ug/L	2.0	U	R	No	S4VEM
m,p-Xylene	1.0	ug/L	2.0	U	R	No	S4VEM
Styrene	1.0	ug/L	2.0	U	R	No	S4VEM
Bromoform	1.0	ug/L	2.0	U	R	No	S4VEM
Isopropylbenzene	1.0	ug/L	2.0	U	R	No	S4VEM
1,1,2,2-Tetrachloroethane	1.0	ug/L	2.0	U	R	No	S4VEM
1,3-Dichlorobenzene	1.0	ug/L	2.0	U	R	No	S4VEM
1,4-Dichlorobenzene	1.0	ug/L	2.0	U	R	No	S4VEM
1,2-Dichlorobenzene	1.0	ug/L	2.0	U	R	No	S4VEM
1,2-Dibromo-3-chloropropane	1.0	ug/L	2.0	U	R	No	S4VEM
1,2,4-Trichlorobenzene	1.0	ug/L	2.0	U	R	No	S4VEM
1,2,3-Trichlorobenzene	1.0	ug/L	2.0	U	R	No	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFF9	Lab Code: DATAC
Sample Number: JGFG3	Method: VOA_Trace	Matrix: Water	MA Number: DEFAULT
Sample Location: R101WT	pH: 1.0	Sample Date: 04/22/2014	Sample Time: 09:55:00
% Moisture :		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Vinyl chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromomethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Acetone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Carbon disulfide	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Butanone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Bromochloromet hane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroform	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Benzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromodichlorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Toluene	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Tetrachloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Hexanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Dibromochloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
o-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
m,p-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Styrene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromoform	0.50	ug/L	1.0	U	U	Yes	S4VEM
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFF9	Lab Code: DATAC
Sample Number: JGFG4	Method: VOA_Trace	Matrix: Water	MA Number: DEFAULT
Sample Location: DW02GW	pH: 1.0	Sample Date: 04/22/2014	Sample Time: 11:00:00
% Moisture :		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Vinyl chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromomethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Acetone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Carbon disulfide	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Butanone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Bromochloromet hane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroform	0.52	ug/L	1.0			Yes	S4VEM
1,1,1-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	8.8	ug/L	1.0			Yes	S4VEM
Benzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromodichlorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Toluene	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Tetrachloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Hexanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Dibromochloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
o-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
m,p-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Styrene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromoform	0.50	ug/L	1.0	U	U	Yes	S4VEM
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFF9	Lab Code: DATAC
Sample Number: JGFJ4	Method: VOA_Trace	Matrix: Water	MA Number: DEFAULT
Sample Location: JD01WT	pH: 1.0	Sample Date: 04/23/2014	Sample Time: 18:30:00
% Moisture :		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Vinyl chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromomethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroethane	0.44	ug/L	1.0	J	JQ	Yes	S4VEM
Trichlorofluorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Acetone	6.8	ug/L	1.0		JK	Yes	S4VEM
Carbon disulfide	0.20	ug/L	1.0	J	JQ	Yes	S4VEM
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Butanone	4.7	ug/L	1.0	J	JQ	Yes	S4VEM
Bromochloromet hane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroform	0.42	ug/L	1.0	J	JQ	Yes	S4VEM
1,1,1-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	0.64	ug/L	1.0			Yes	S4VEM
Benzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromodichlorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Toluene	0.89	ug/L	1.0			Yes	S4VEM
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Tetrachloroethene	0.20	ug/L	1.0	J	JQ	Yes	S4VEM
2-Hexanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Dibromochloromethane	0.13	ug/L	1.0	J	JQ	Yes	S4VEM
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
o-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
m,p-Xylene	0.14	ug/L	1.0	J	JQ	Yes	S4VEM
Styrene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromoform	0.26	ug/L	1.0	J	JQ	Yes	S4VEM
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Octanal	12	ug/L	1.0	JN	JN	Yes	S4VEM
Nonanal	16	ug/L	1.0	JN	JN	Yes	S4VEM
1-Nonanol	1.7	ug/L	1.0	JN	JN	Yes	S4VEM
Decanal	4.4	ug/L	1.0	JN	JN	Yes	S4VEM
1-Octanol	2.5	ug/L	1.0	JN	JN	Yes	S4VEM
Hexanal	5.4	ug/L	1.0	JN	JN	Yes	S4VEM
Butanal	2.1	ug/L	1.0	JN	JN	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFF9	Lab Code: DATAC
Sample Number: JGFJ5	Method: VOA_Trace	Matrix: Water	MA Number: DEFAULT
Sample Location: BK01GW	pH: 1.0	Sample Date: 04/24/2014	Sample Time: 09:40:00
% Moisture :		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Vinyl chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromomethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Acetone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Carbon disulfide	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Butanone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Bromochloromet hane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroform	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Benzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromodichlorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Toluene	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Tetrachloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Hexanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Dibromochloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
o-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
m,p-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Styrene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromoform	0.50	ug/L	1.0	U	U	Yes	S4VEM
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1-Nonanol	0.82	ug/L	1.0	JN	JN	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFF9	Lab Code: DATAC
Sample Number: JGFJ5MS	Method: VOA_Trace	Matrix: Water	MA Number: DEFAULT
Sample Location:	pH: 1.0	Sample Date: 04/24/2014	Sample Time: 09:40:00
% Moisture :		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	3.9	ug/L	1.0		J	Yes	S4VEM
Benzene	4.8	ug/L	1.0		J	Yes	S4VEM
Chloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichloroethene	5.0	ug/L	1.0		J	Yes	S4VEM
Vinyl chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Toluene	4.5	ug/L	1.0			Yes	S4VEM
Bromomethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chlorobenzene	4.4	ug/L	1.0			Yes	S4VEM
Trichlorofluorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Acetone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Carbon disulfide	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Butanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Bromochloromet hane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroform	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Bromodichloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Tetrachloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Hexanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Dibromochloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
o-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
m,p-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Styrene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromoform	0.50	ug/L	1.0	U	U	Yes	S4VEM
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFF9	Lab Code: DATAC
Sample Number: JGFJ5MSD	Method: VOA_Trace	Matrix: Water	MA Number: DEFAULT
Sample Location:	pH: 1.0	Sample Date: 04/24/2014	Sample Time: 09:40:00
% Moisture :		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
1,1-Dichloroethene	4.9	ug/L	1.0		J	Yes	S4VEM
Dichlorodifluoromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Benzene	4.1	ug/L	1.0		J	Yes	S4VEM
Chloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichloroethene	4.3	ug/L	1.0		J	Yes	S4VEM
Vinyl chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Toluene	4.2	ug/L	1.0			Yes	S4VEM
Bromomethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chlorobenzene	4.3	ug/L	1.0			Yes	S4VEM
Trichlorofluoromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Acetone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Carbon disulfide	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Butanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Bromochloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroform	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylcyclohexane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Bromodichloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Tetrachloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Hexanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Dibromochloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
o-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
m,p-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Styrene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromoform	0.50	ug/L	1.0	U	U	Yes	S4VEM
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFF9	Lab Code: DATAC
Sample Number: JGFJ6	Method: VOA_Trace	Matrix: Water	MA Number: DEFAULT
Sample Location: RI02WT	pH: 1.0	Sample Date: 04/24/2014	Sample Time: 08:25:00
% Moisture :		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Vinyl chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromómethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Acetone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Carbon disulfide	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Butanone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Bromochloromet hane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroform	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Benzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromodichlorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Toluene	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Tetrachloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Hexanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Dibromochloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
o-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
m,p-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Styrene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromoform	0.50	ug/L	1.0	U	U	Yes	S4VEM
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFF9	Lab Code: DATAC
Sample Number: JGFJ7	Method: VOA_Trace	Matrix: Water	MA Number: DEFAULT
Sample Location: RI03WT	pH: 1.0	Sample Date: 04/24/2014	Sample Time: 08:30:00
% Moisture :		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Vinyl chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromomethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Acetone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Carbon disulfide	0.15	ug/L	1.0	J	JQ	Yes	S4VEM
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Butanone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Bromochloromet hane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroform	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Benzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromodichlorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Toluene	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Tetrachloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Hexanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Dibromochloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
o-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
m,p-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Styrene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromoform	0.50	ug/L	1.0	U	U	Yes	S4VEM
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFF9	Lab Code: DATAC
Sample Number: JGFJ8	Method: VOA_Trace	Matrix: Water	MA Number: DEFAULT
Sample Location: RI04WT	pH: 1.0	Sample Date: 04/24/2014	Sample Time: 08:35:00
% Moisture :		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Vinyl chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromomethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Acetone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Carbon disulfide	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Butanone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Bromochloromet hane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroform	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Benzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromodichlorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Toluene	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Tetrachloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Hexanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Dibromochloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
o-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
m,p-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Styrene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromoform	0.50	ug/L	1.0	U	U	Yes	S4VEM
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFF9	Lab Code: DATAC
Sample Number: JGFL3	Method: VOA_Trace	Matrix: Water	MA Number: DEFAULT
Sample Location: ID02WT	pH: 1.0	Sample Date: 04/25/2014	Sample Time: 08:50:00
% Moisture :		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloromethane	4.0	ug/L	1.0			Yes	S4VEM
Vinyl chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromomethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroethane	24	ug/L	1.0	E	R	No	S4VEM
Trichlorofluorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Acetone	12	ug/L	1.0	B	U	Yes	S4VEM
Carbon disulfide	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Butanone	7.9	ug/L	1.0		JK	Yes	S4VEM
Bromochloromet hane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroform	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Benzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromodichlorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Toluene	0.55	ug/L	1.0			Yes	S4VEM
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Tetrachloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Hexanone	2.6	ug/L	1.0	J	JQ	Yes	S4VEM
Dibromochloromethane	0.19	ug/L	1.0	J	JQ	Yes	S4VEM
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
o-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
m,p-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Styrene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromoform	0.50	ug/L	1.0	U	U	Yes	S4VEM
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Octanal	19	ug/L	1.0	JN	JN	Yes	S4VEM
Nonanal	33	ug/L	1.0	JN	JN	Yes	S4VEM
2-Undecanone	1.4	ug/L	1.0	JN	JN	Yes	S4VEM
Butanal	2.8	ug/L	1.0	JN	JN	Yes	S4VEM
Heptane, 1-chloro-	20	ug/L	1.0	JN	JN	Yes	S4VEM
Octane, 1-chloro-			1.0	JN		Yes	S4VEM
Propane, 1-iodo-	1.0	ug/L	1.0	JN	JN	Yes	S4VEM
Chloroacetic acid, nonyl ester	7.5	ug/L	1.0	JN	JN	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
n-Propyl chloride	9.2	ug/L	1.0	JN	JN	Yes	S4VEM
Octane, 1-chloro-	32	ug/L	1.0	JN	JN	Yes	S4VEM
Heptanal	1.4	ug/L	1.0	JN	JN	Yes	S4VEM
Nonane, 1-iodo-	1.5	ug/L	1.0	JN	JN	Yes	S4VEM
Octane, 1-iodo-	1.9	ug/L	1.0	JN	JN	Yes	S4VEM
2-Decanone	2.0	ug/L	1.0	JN	JN	Yes	S4VEM
Hexanal	0.74	ug/L	1.0	JN	JN	Yes	S4VEM
Undecanal	1.1	ug/L	1.0	JN	JN	Yes	S4VEM
Butane, 1-chloro-	18	ug/L	1.0	JN	JN	Yes	S4VEM
Decane, 1-chloro-	2.6	ug/L	1.0	JN	JN	Yes	S4VEM
Decanal	15	ug/L	1.0	JN	JN	Yes	S4VEM
1-Heptanol	1.9	ug/L	1.0	JN	JN	Yes	S4VEM
Propane, 1-bromo-	0.56	ug/L	1.0	JN	JN	Yes	S4VEM
1-Octanol	7.1	ug/L	1.0	JN	JN	Yes	S4VEM
2-Nonanone	0.66	ug/L	1.0	JN	JN	Yes	S4VEM
Total Alkanes	31	ug/L	1.0	J	JN	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFF9	Lab Code: DATAC
Sample Number: JGFL3DL	Method: VOA_Trace	Matrix: Water	MA Number: DEFAULT
Sample Location: ID02WT	pH: 1.0	Sample Date: 04/25/2014	Sample Time: 08:50:00
% Moisture :		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	2.0	ug/L	4.0	U	R	No	S4VEM
Chloromethane	2.0	ug/L	4.0	U	R	No	S4VEM
Vinyl chloride	2.0	ug/L	4.0	U	R	No	S4VEM
Bromomethane	2.0	ug/L	4.0	U	R	No	S4VEM
Chloroethane	3.6	ug/L	4.0	D		Yes	S4VEM
Trichlorofluorom ethane	2.0	ug/L	4.0	U	R	No	S4VEM
1,1-Dichloroethene	2.0	ug/L	4.0	U	R	No	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	2.0	ug/L	4.0	U	R	No	S4VEM
Acetone	20	ug/L	4.0	JDB	R	No	S4VEM
Carbon disulfide	2.0	ug/L	4.0	U	R	No	S4VEM
Methyl acetate	2.0	ug/L	4.0	U	R	No	S4VEM
Methylene chloride	0.47	ug/L	4.0	JD	R	No	S4VEM
trans-1,2-Dichloroethene	2.0	ug/L	4.0	U	R	No	S4VEM
Methyl tert-butyl ether	2.0	ug/L	4.0	U	R	No	S4VEM
1,1-Dichloroethane	2.0	ug/L	4.0	U	R	No	S4VEM
cis-1,2-Dichloroethene	2.0	ug/L	4.0	U	R	No	S4VEM
2-Butanone	15	ug/L	4.0	JD	R	No	S4VEM
Bromochloromet hane	2.0	ug/L	4.0	U	R	No	S4VEM
Chloroform	2.0	ug/L	4.0	U	R	No	S4VEM
1,1,1-Trichloroethane	2.0	ug/L	4.0	U	R	No	S4VEM
Cyclohexane	2.0	ug/L	4.0	U	R	No	S4VEM
Carbon tetrachloride	2.0	ug/L	4.0	U	R	No	S4VEM
Benzene	2.0	ug/L	4.0	U	R	No	S4VEM
1,2-Dichloroethane	2.0	ug/L	4.0	U	R	No	S4VEM
Trichloroethene	2.0	ug/L	4.0	U	R	No	S4VEM
Methylcyclohexa ne	2.0	ug/L	4.0	U	R	No	S4VEM
1,2-Dichloropropane	2.0	ug/L	4.0	U	R	No	S4VEM
Bromodichlorom ethane	2.0	ug/L	4.0	U	R	No	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
cis-1,3-Dichloropropene	2.0	ug/L	4.0	U	R	No	S4VEM
4-Methyl-2-Pentanone	20	ug/L	4.0	U	R	No	S4VEM
Toluene	2.0	ug/L	4.0	U	R	No	S4VEM
trans-1,3-Dichloropropene	2.0	ug/L	4.0	U	R	No	S4VEM
1,1,2-Trichloroethane	2.0	ug/L	4.0	U	R	No	S4VEM
Tetrachloroethene	2.0	ug/L	4.0	U	R	No	S4VEM
2-Hexanone	2.4	ug/L	4.0	JD	R	No	S4VEM
Dibromochloromethane	2.0	ug/L	4.0	U	R	No	S4VEM
1,2-Dibromoethane	2.0	ug/L	4.0	U	R	No	S4VEM
Chlorobenzene	2.0	ug/L	4.0	U	R	No	S4VEM
Ethylbenzene	2.0	ug/L	4.0	U	R	No	S4VEM
o-Xylene	2.0	ug/L	4.0	U	R	No	S4VEM
m,p-Xylene	2.0	ug/L	4.0	U	R	No	S4VEM
Styrene	2.0	ug/L	4.0	U	R	No	S4VEM
Bromoform	2.0	ug/L	4.0	U	R	No	S4VEM
Isopropylbenzene	2.0	ug/L	4.0	U	R	No	S4VEM
1,1,2,2-Tetrachloroethane	2.0	ug/L	4.0	U	R	No	S4VEM
1,3-Dichlorobenzene	2.0	ug/L	4.0	U	R	No	S4VEM
1,4-Dichlorobenzene	2.0	ug/L	4.0	U	R	No	S4VEM
1,2-Dichlorobenzene	2.0	ug/L	4.0	U	R	No	S4VEM
1,2-Dibromo-3-chloropropane	2.0	ug/L	4.0	U	R	No	S4VEM
1,2,4-Trichlorobenzene	2.0	ug/L	4.0	U	R	No	S4VEM
1,2,3-Trichlorobenzene	2.0	ug/L	4.0	U	R	No	S4VEM
Nonane, 1-chloro-	5.3	ug/L	4.0	JND	R	No	S4VEM
Heptanal	3.4	ug/L	4.0	JND	R	No	S4VEM
Decanal	11	ug/L	4.0	JND	R	No	S4VEM
Hexanal	2.2	ug/L	4.0	JND	R	No	S4VEM
Heptane, 1-chloro-	4.2	ug/L	4.0	JND	R	No	S4VEM
Octanal	12	ug/L	4.0	JND	R	No	S4VEM
Nonanal	25	ug/L	4.0	JND	R	No	S4VEM
Total Alkanes	12	ug/L	4.0	JD	R	No	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Formic acid, octyl ester	3.3	ug/L	4.0	JND	R	No	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFF9	Lab Code: DATAC
Sample Number: JGFL4	Method: VOA_Trace	Matrix: Water	MA Number: DEFAULT
Sample Location: TB04WT	pH: 1.0	Sample Date: 04/25/2014	Sample Time: 09:05:00
% Moisture :		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Vinyl chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromomethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Acetone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Carbon disulfide	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Butanone	5.0	ug/L	1.0	U	R	Yes	S4VEM
Bromochloromet hane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroform	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Benzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromodichlorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Toluene	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Tetrachloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Hexanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Dibromochloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
o-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
m,p-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Styrene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromoform	0.50	ug/L	1.0	U	U	Yes	S4VEM
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFF9	Lab Code: DATAC
Sample Number: VBLKT1	Method: VOA_Trace	Matrix: Water	MA Number: DEFAULT
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Vinyl chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromomethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Acetone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Carbon disulfide	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Butanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Bromochloromet hane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroform	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Benzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromodichlorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Toluene	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Tetrachloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Hexanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Dibromochloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
o-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
m,p-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Styrene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromoform	0.50	ug/L	1.0	U	U	Yes	S4VEM
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	0.11	ug/L	1.0	J	J	Yes	S4VEM
1,2,3-Trichlorobenzene	0.16	ug/L	1.0	J	J	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFF9	Lab Code: DATAC
Sample Number: VBLKT2	Method: VOA_Trace	Matrix: Water	MA Number: DEFAULT
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Vinyl chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromomethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Acetone	1.7	ug/L	1.0	J	J	Yes	S4VEM
Carbon disulfide	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Butanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Bromochloromet hane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroform	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Benzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromodichlorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Toluene	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Tetrachloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Hexanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Dibromochloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
o-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
m,p-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Styrene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromoform	0.50	ug/L	1.0	U	U	Yes	S4VEM
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	0.17	ug/L	1.0	J	J	Yes	S4VEM
1,2,3-Trichlorobenzene	0.26	ug/L	1.0	J	J	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFF9	Lab Code: DATAC
Sample Number: VHBLKT1	Method: VOA_Trace	Matrix: Water	MA Number: DEFAULT
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture :		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Vinyl chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromomethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Acetone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Carbon disulfide	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl acetate	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylene chloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Butanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Bromochloromet hane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chloroform	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Cyclohexane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	0.50	ug/L	1.0	U	U	Yes	S4VEM
Benzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Trichloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromodichlorom ethane	0.50	ug/L	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
cis-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Toluene	0.50	ug/L	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Tetrachloroethene	0.50	ug/L	1.0	U	U	Yes	S4VEM
2-Hexanone	5.0	ug/L	1.0	U	U	Yes	S4VEM
Dibromochloromethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
Chlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Ethylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
o-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
m,p-Xylene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Styrene	0.50	ug/L	1.0	U	U	Yes	S4VEM
Bromoform	0.50	ug/L	1.0	U	U	Yes	S4VEM
Isopropylbenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	0.50	ug/L	1.0	U	U	Yes	S4VEM

National Functional Guidelines Report #06

Lab DATAC(ALS Environmental) **SDG** JGFF9 **Case** 44315 **Contract** EPW11037 **Region** 10 **DDTID** 195390 **SOW** SOM01.2

Analytical Sample Listing

VOA_Trace

						Extraction		Analysis		
Sample Number	**Sample Type**	**Matrix**	**Level**	**Sampling Date**	**Date Received**	**Type**	**Date/Time**	**Date/Time**	**GC Column**	**Instrument**
JGFF9	Field_Blank	Water	Trace	04212014 11:25:00	04252014 09:42:00			05012014 20:51:00	DB624	5972-P
JGFG0	Field_Blank	Water	Trace	04212014 11:28:00	04252014 09:42:00			05012014 21:23:00	DB624	5972-P
JGFG1	Field_Blank	Water	Trace	04212014 11:34:00	04262014 09:07:00			05022014 22:06:00	DB624	5972-P
JGFG2	Field_Sample	Water	Trace	04222014 09:40:00	04252014 09:42:00			05022014 01:39:00	DB624	5972-P
JGFG2DL	Field_Sample	Water	Trace	04222014 09:40:00	04252014 09:42:00			05012014 21:55:00	DB624	5972-P
JGFG3	Field_Sample	Water	Trace	04222014 09:55:00	04252014 09:42:00			05012014 22:27:00	DB624	5972-P
JGFG4	Field_Sample	Water	Trace	04222014 11:00:00	04252014 09:42:00			05012014 22:59:00	DB624	5972-P
JGFJ4	Field_Sample	Water	Trace	04232014 18:30:00	04252014 09:42:00			05012014 23:30:00	DB624	5972-P
JGFJ5	Field_Sample	Water	Trace	04242014 09:40:00	04252014 09:42:00			05022014 00:01:00	DB624	5972-P
JGFJ5MS	Matrix_Spike	Water	Trace	04242014 09:40:00	04252014 09:42:00			05022014 00:36:00	DB624	5972-P
JGFJ5MSD	Matrix_Spike_Duplicate	Water	Trace	04242014 09:40:00	04252014 09:42:00			05022014 01:07:00	DB624	5972-P
JGFJ6	Field_Sample	Water	Trace	04242014 08:25:00	04252014 09:42:00			05022014 18:25:00	DB624	5972-P
JGFJ7	Field_Sample	Water	Trace	04242014 08:30:00	04252014 09:42:00			05022014 18:57:00	DB624	5972-P
JGFJ8	Field_Sample	Water	Trace	04242014 08:35:00	04252014 09:42:00			05032014 00:43:00	DB624	5972-P
JGFL3	Field_Sample	Water	Trace	04252014 08:50:00	04262014 09:07:00			05022014 19:28:00	DB624	5972-P
JGFL3DL	Field_Sample	Water	Trace	04252014 08:50:00	04262014 09:07:00			05022014 23:09:00	DB624	5972-P
JGFL4	Field_Blank	Water	Trace	04252014 09:05:00	04262014 09:07:00			05032014 01:14:00	DB624	5972-P

Edit History Report

Case No: 44315 Contract: EPW11037 SDG No: JGFF9 Lab Code: DATAC

Method: VOA_Trace

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFF9	Water		Validation Level		S4VEM	Donald Brown	5/19/14 11:55 AM	Y
JGFF9	Water	2-Butanone	Validation Flag	U	R	Donald Brown	5/20/14 5:49 PM	
JGFF9	Water	Acetone	Validation Flag	U	R	Donald Brown	5/20/14 5:49 PM	
JGFG0	Water		Validation Level		S4VEM	Donald Brown	5/19/14 11:55 AM	Y
JGFG0	Water	2-Butanone	Validation Flag	U	R	Donald Brown	5/20/14 5:51 PM	
JGFG0	Water	Acetone	Validation Flag	U	R	Donald Brown	5/20/14 5:51 PM	
JGFG1	Water		Validation Level		S4VEM	Donald Brown	5/19/14 11:55 AM	Y
JGFG1	Water	2-Butanone	Validation Flag	U	R	Donald Brown	5/20/14 5:52 PM	
JGFG1	Water	Acetone	Validation Flag	U	R	Donald Brown	5/20/14 5:52 PM	
JGFG2	Water		Validation Level		S4VEM	Donald Brown	5/19/14 11:55 AM	Y
JGFG2	Water	2-Butanone	Validation Flag	U	R	Donald Brown	5/20/14 5:53 PM	
JGFG2	Water	Acetone	Validation Flag	U	R	Donald Brown	5/20/14 5:53 PM	
JGFG2	Water	Carbon tetrachloride	Reportable	Y	N	Donald Brown	5/20/14 5:53 PM	
JGFG2	Water	Carbon tetrachloride	Validation Flag		R	Donald Brown	5/20/14 5:53 PM	
JGFG2DL	Water		Validation Level		S4VEM	Donald Brown	5/19/14 11:55 AM	Y
JGFG2DL	Water	1,1,1-Trichloroethane	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,1,1-Trichloroethane	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,1,2,2-Tetrachloroethane	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,1,2,2-Tetrachloroethane	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,1,2-Trichloro-1,2,2-trifluoroethane	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,1,2-Trichloro-1,2,2-trifluoroethane	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,1,2-Trichloroethane	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,1,2-Trichloroethane	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,1-Dichloroethane	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,1-Dichloroethane	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,1-Dichloroethene	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,1-Dichloroethene	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,2,3-Trichlorobenzene	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,2,3-Trichlorobenzene	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,2,4-Trichlorobenzene	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,2,4-Trichlorobenzene	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,2-Dibromo-3-chloropropane	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,2-Dibromo-3-chloropropane	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,2-Dibromoethane	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,2-Dibromoethane	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,2-Dichlorobenzene	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFG2DL	Water	1,2-Dichlorobenzene	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,2-Dichloroethane	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,2-Dichloroethane	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,2-Dichloropropane	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,2-Dichloropropane	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,3-Dichlorobenzene	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,3-Dichlorobenzene	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,4-Dichlorobenzene	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	1,4-Dichlorobenzene	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	2-Butanone	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	2-Butanone	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	2-Hexanone	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	2-Hexanone	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	4-Methyl-2-Pentanone	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	4-Methyl-2-Pentanone	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Acetone	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Acetone	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Benzene	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Benzene	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Bromochloromethane	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Bromochloromethane	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Bromodichloromethane	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Bromodichloromethane	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Bromoform	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Bromoform	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Bromomethane	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Bromomethane	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Carbon disulfide	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Carbon disulfide	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Chlorobenzene	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Chlorobenzene	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Chloroethane	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Chloroethane	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Chloroform	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Chloroform	Validation Flag		R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Chloromethane	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Chloromethane	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Cyclohexane	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Cyclohexane	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Dibromochloromethane	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Dibromochloromethane	Validation	U	R	Donald	5/20/14 6:21 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFG2DL	Water	Dibromochloromethane	Flag	U	R	Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Dichlorodifluoromethane	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Dichlorodifluoromethane	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Ethylbenzene	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Ethylbenzene	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Isopropylbenzene	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Isopropylbenzene	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Methyl acetate	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Methyl acetate	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Methyl tert-butyl ether	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Methyl tert-butyl ether	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Methylcyclohexane	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Methylcyclohexane	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Methylene chloride	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Methylene chloride	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Styrene	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Styrene	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Tetrachloroethene	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Tetrachloroethene	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Toluene	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Toluene	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Trichloroethene	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Trichloroethene	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Trichlorofluoromethane	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Trichlorofluoromethane	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Vinyl chloride	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	Vinyl chloride	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	cis-1,2-Dichloroethene	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	cis-1,2-Dichloroethene	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	cis-1,3-Dichloropropene	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	cis-1,3-Dichloropropene	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	m,p-Xylene	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	m,p-Xylene	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	o-Xylene	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	o-Xylene	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	trans-1,2-Dichloroethene	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	trans-1,2-Dichloroethene	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	trans-1,3-Dichloropropene	Reportable	Y	N	Donald Brown	5/20/14 6:21 PM	
JGFG2DL	Water	trans-1,3-Dichloropropene	Validation Flag	U	R	Donald Brown	5/20/14 6:21 PM	
JGFG3	Water		Validation Level		S4VEM	Donald Brown	5/19/14 11:55 AM	Y
JGFG3	Water	2-Butanone	Validation	U	R	Donald	5/20/14 5:56 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFG3	Water	2-Butanone	Flag	U	R	Brown	5/20/14 5:56 PM	
JGFG3	Water	Acetone	Validation Flag	U	R	Donald Brown	5/20/14 5:56 PM	
JGFG4	Water		Validation Level		S4VEM	Donald Brown	5/19/14 11:55 AM	Y
JGFG4	Water	2-Butanone	Validation Flag	U	R	Donald Brown	5/20/14 5:58 PM	
JGFG4	Water	Acetone	Validation Flag	U	R	Donald Brown	5/20/14 5:58 PM	
JGFJ4	Water		Validation Level		S4VEM	Donald Brown	5/19/14 11:55 AM	Y
JGFJ4	Water	2-Butanone	Validation Flag	J	JQ	Donald Brown	5/20/14 6:00 PM	
JGFJ4	Water	Acetone	Validation Flag		JK	Donald Brown	5/20/14 6:00 PM	
JGFJ4	Water	Bromoform	Validation Flag	J	JQ	Donald Brown	5/20/14 6:00 PM	
JGFJ4	Water	Carbon disulfide	Validation Flag	J	JQ	Donald Brown	5/20/14 6:00 PM	
JGFJ4	Water	Chloroethane	Validation Flag	J	JQ	Donald Brown	5/20/14 6:00 PM	
JGFJ4	Water	Chloroform	Validation Flag	J	JQ	Donald Brown	5/20/14 6:00 PM	
JGFJ4	Water	Dibromochloromethane	Validation Flag	J	JQ	Donald Brown	5/20/14 6:00 PM	
JGFJ4	Water	Tetrachloroethene	Validation Flag	J	JQ	Donald Brown	5/20/14 6:00 PM	
JGFJ4	Water	m,p-Xylene	Validation Flag	J	JQ	Donald Brown	5/20/14 6:00 PM	
JGFJ5	Water		Validation Level		S4VEM	Donald Brown	5/19/14 11:55 AM	Y
JGFJ5	Water	2-Butanone	Validation Flag	U	R	Donald Brown	5/20/14 6:03 PM	
JGFJ5	Water	Acetone	Validation Flag	U	R	Donald Brown	5/20/14 6:03 PM	
JGFJ5MS	Water		Validation Level		S4VEM	Donald Brown	5/19/14 11:55 AM	Y
JGFJ5MSD	Water		Validation Level		S4VEM	Donald Brown	5/19/14 11:55 AM	Y
JGFJ6	Water		Validation Level		S4VEM	Donald Brown	5/19/14 11:55 AM	Y
JGFJ6	Water	2-Butanone	Validation Flag	U	R	Donald Brown	5/20/14 6:04 PM	
JGFJ6	Water	Acetone	Validation Flag	U	R	Donald Brown	5/20/14 6:04 PM	
JGFJ7	Water		Validation Level		S4VEM	Donald Brown	5/19/14 11:55 AM	Y
JGFJ7	Water	2-Butanone	Validation Flag	U	R	Donald Brown	5/20/14 6:05 PM	
JGFJ7	Water	Acetone	Validation Flag	U	R	Donald Brown	5/20/14 6:05 PM	
JGFJ7	Water	Carbon disulfide	Validation Flag	J	JQ	Donald Brown	5/20/14 6:05 PM	
JGFJ8	Water		Validation Level		S4VEM	Donald Brown	5/19/14 11:55 AM	Y
JGFJ8	Water	2-Butanone	Validation Flag	U	R	Donald Brown	5/20/14 6:15 PM	
JGFJ8	Water	Acetone	Validation Flag	U	R	Donald Brown	5/20/14 6:15 PM	
JGFL3	Water		Validation Level		S4VEM	Donald Brown	5/19/14 11:55 AM	Y
JGFL3	Water	2-Butanone	Validation Flag		JK	Donald Brown	5/20/14 6:18 PM	
JGFL3	Water	2-Hexanone	Validation Flag	J	JQ	Donald Brown	5/20/14 6:18 PM	
JGFL3	Water	Acetone	Validation Flag		U	Donald Brown	5/20/14 6:18 PM	
JGFL3	Water	Chloroethane	Reportable	Y	N	Donald Brown	5/20/14 6:18 PM	
JGFL3	Water	Chloroethane	Validation Flag		R	Donald Brown	5/20/14 6:18 PM	
JGFL3	Water	Dibromochloromethane	Validation Flag	J	JQ	Donald Brown	5/20/14 6:18 PM	
JGFL3	Water	Total Alkanes	Validation Flag	J	JN	Donald Brown	5/20/14 6:18 PM	
JGFL3DL	Water		Validation Level		S4VEM	Donald Brown	5/19/14 11:55 AM	Y
JGFL3DL	Water	1,1,1-Trichloroethane	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,1,1-Trichloroethane	Validation	U	R	Donald	5/20/14 6:20 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFL3DL	Water	1,1,1-Trichloroethane	Flag	U	R	Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,1,2,2-Tetrachloroethane	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,1,2,2-Tetrachloroethane	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,1,2-Trichloro-1,2,2-trifluoroethane	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,1,2-Trichloro-1,2,2-trifluoroethane	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,1,2-Trichloroethane	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,1,2-Trichloroethane	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,1-Dichloroethane	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,1-Dichloroethane	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,1-Dichloroethene	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,1-Dichloroethene	Validation Flag	UJ	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,2,3-Trichlorobenzene	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,2,3-Trichlorobenzene	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,2,4-Trichlorobenzene	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,2,4-Trichlorobenzene	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,2-Dibromo-3-chloropropane	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,2-Dibromo-3-chloropropane	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,2-Dibromoethane	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,2-Dibromoethane	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,2-Dichlorobenzene	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,2-Dichlorobenzene	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,2-Dichloroethane	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,2-Dichloroethane	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,2-Dichloropropane	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,2-Dichloropropane	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,3-Dichlorobenzene	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,3-Dichlorobenzene	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,4-Dichlorobenzene	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	1,4-Dichlorobenzene	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	2-Butanone	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	2-Butanone	Validation Flag	J	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	2-Hexanone	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	2-Hexanone	Validation Flag	J	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	4-Methyl-2-Pentanone	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	4-Methyl-2-Pentanone	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Acetone	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Acetone	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Benzene	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Benzene	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Bromochloromethane	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Bromochloromethane	Validation	U	R	Donald	5/20/14 6:20 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFL3DL	Water	Bromochloromethane	Flag	U	R	Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Bromodichloromethane	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Bromodichloromethane	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Bromoform	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Bromoform	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Bromomethane	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Bromomethane	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Carbon disulfide	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Carbon disulfide	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Carbon tetrachloride	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Carbon tetrachloride	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Chlorobenzene	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Chlorobenzene	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Chloroform	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Chloroform	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Chloromethane	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Chloromethane	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Cyclohexane	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Cyclohexane	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Decanal	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Decanal	Validation Flag	JND	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Dibromochloromethane	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Dibromochloromethane	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Dichlorodifluoromethane	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Dichlorodifluoromethane	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Ethylbenzene	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Ethylbenzene	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Formic acid, octyl ester	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Formic acid, octyl ester	Validation Flag	JND	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Heptanal	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Heptanal	Validation Flag	JND	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Heptane, 1-chloro-	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Heptane, 1-chloro-	Validation Flag	JND	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Hexanal	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Hexanal	Validation Flag	JND	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Isopropylbenzene	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Isopropylbenzene	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Methyl acetate	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Methyl acetate	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Methyl tert-butyl ether	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Methyl tert-butyl ether	Validation	U	R	Donald	5/20/14 6:20 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFL3DL	Water	Methyl tert-butyl ether	Flag	U	R	Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Methylcyclohexane	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Methylcyclohexane	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Methylene chloride	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Methylene chloride	Validation Flag	J	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Nonanal	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Nonanal	Validation Flag	JND	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Nonane, 1-chloro-	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Nonane, 1-chloro-	Validation Flag	JND	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Octanal	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Octanal	Validation Flag	JND	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Styrene	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Styrene	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Tetrachloroethene	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Tetrachloroethene	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Toluene	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Toluene	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Total Alkanes	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Total Alkanes	Validation Flag	JD	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Trichloroethene	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Trichloroethene	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Trichlorofluoromethane	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Trichlorofluoromethane	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Vinyl chloride	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	Vinyl chloride	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	cis-1,2-Dichloroethene	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	cis-1,2-Dichloroethene	Validation Flag	UJ	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	cis-1,3-Dichloropropene	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	cis-1,3-Dichloropropene	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	m,p-Xylene	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	m,p-Xylene	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	o-Xylene	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	o-Xylene	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	trans-1,2-Dichloroethene	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	trans-1,2-Dichloroethene	Validation Flag	UJ	R	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	trans-1,3-Dichloropropene	Reportable	Y	N	Donald Brown	5/20/14 6:20 PM	
JGFL3DL	Water	trans-1,3-Dichloropropene	Validation Flag	U	R	Donald Brown	5/20/14 6:20 PM	
JGFL4	Water		Validation Level		S4VEM	Donald Brown	5/19/14 11:55 AM	Y
JGFL4	Water	2-Butanone	Validation Flag	U	R	Donald Brown	5/20/14 6:24 PM	
JGFL4	Water	Acetone	Validation Flag	U	R	Donald Brown	5/20/14 6:24 PM	
VBLKT1	Water		Validation		S4VEM	Donald	5/19/14 11:55 AM	Y

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
VBLKT1	Water		Level		S4VEM	Brown	5/19/14 11:55 AM	Y
VBLKT2	Water		Validation Level		S4VEM	Donald Brown	5/19/14 11:55 AM	Y
VHBLKT1	Water		Validation Level		S4VEM	Donald Brown	5/19/14 11:55 AM	Y

ecology and environment, inc.
Global Environmental Specialists
720 Third Avenue, Suite 1700
Seattle, Washington 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: May 22, 2014

TO: Linda Ader, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-4 Chemist, E & E, Seattle, Washington MW

SUBJ: **Organic Data Summary Check, Freeman Ground Water Contamination Site, Freeman, Washington**

REF: TDD: 13-07-0005 PAN: EE-004536-0001-01TTO

The data summary check of 17 soil samples collected from the Freeman Ground Water Contamination site in Freeman, Washington, has been completed. Volatile Organic Compound (VOC) analysis (EPA Method 8260) was performed by ALS Environmental, Salt Lake City, Utah. All sample analyses were evaluated following EPA's Stage 4 Data Validation Electronic and/or Manual Process (S4VEM).

The samples were numbered:

JGFG5	JGFG6	JGFG7	JGFG8	JGFG9
JGFH0	JGFH1	JGFH2	JGFH3	JGFH4
JGFH5	JGFH6	JGFH7	JGFH8	JGFH9
JGFJ0	JGFJ1			

No discrepancies were noted.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

May 22, 2014

MEMORANDUM

Subject: Data Validation Report for the Volatile Analysis of the Soil Samples Collected for the Freeman Ground Water Contamination Site - Case Number 44315, SDG JGFG5

From: Donald M. Brown, QA Chemist DMB
USEPA Region 10, Office of Environmental Assessment, Environmental Services Unit

To: Monica Tonel, Site Assessment Manager
USEPA Region 10, Office of Environmental Cleanup

CC: Renee Nordeen, Ecology & Environment, Inc.

The quality assurance (QA) review of the analytical data generated from the analysis of seventeen (17) soil samples collected from the above-referenced site has been completed. These samples were analyzed for Volatile Organic Compounds (VOCs) by ALS Environmental (DATAC) located in Salt Lake City, Utah.

All sample analyses were evaluated following EPA's Stage 4 Data Validation Electronic/Manual Process (S4VEM). The validation was conducted and appropriate qualifiers were applied according to the Quality Control Specifications outlined in the following:

- Sampling and Quality Assurance Plan for Freeman Ground Water Contamination (March 2014);
- USEPA Contract Laboratory Program (CLP) Statement of Work (SOW) for Multi-Media, Multi-Concentration Organics Analysis (SOM01.2);
- USEPA CLP National Functional Guidelines for Superfund Organic Methods Data Review (USEPA-540-R-08-01); and
- Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use (EPA-540-R-08-005).

Some data may be qualified using the reviewer's professional judgment. The conclusions presented herein are based on the information provided for the review. A summary of samples evaluated in this validation report and the pertinent dates for sample collection, laboratory sample receipt, extraction, and analyses is attached along with the validated data.

Printed on Recycled Paper

I. QUALITY CONTROL RESULTS SUMMARY

Volatile Organic Analysis		
Quality Control Test	**Outliers?**	**Evaluation Criteria**
Blanks	Y*	Non-detect or < 5X Blank†
Initial Calibration	Y*	RRF > 0.05 and ≤ 30% RSD
Continuing Calibration Verification	N	RRF > 0.05 and Open: ≤ 25% D, Close: ≤ 50% D
Deuterated Monitoring Compounds	N	Varies by Compound
Internal Standards	N	50 – 200% of 12-hour standard

* See the Data Qualifications section below for outliers and qualification of affected data.
†10X Blank for ketones or solvents.
(Note: RRF = Relative Response Factor, RSD = Relative Standard Deviation, D = Difference)

II. DATA QUALIFICATIONS

Summary of Validation Qualifiers Applied:

Data qualifications applied after the manual and electronic data review can be found in the attached "Manual/Electronic Data Review Results" section of this report.

Data Qualifiers

The following is a list of validation qualifiers applied to the sample result(s) either electronically or manually when needed to indicate associated out-of-control QA/QC results.

Data Qualifiers	
U	The analyte was analyzed for but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
J	The analyte was positively identified and the associated numerical value is an estimated quantity.
UJ	The analyte was analyzed for but was not detected above the level of the associated value. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable for all purposes. The analyte may or may not be present in the sample.
JN	There is evidence that the analyte is present. The associated numerical result is an estimate.

For site assessment and investigations, the following bias qualifiers are applied to the sample result(s) manually in addition to the above data qualifiers to allow for data analysis and interpretation using PREscore software for the National Priorities Listing Hazard Ranking System (NPL-HRS).

Bias Qualifiers	
L	Low bias.
H	High bias.
K	Unknown bias.
Q	The result is estimated because the concentration is below the Contract Required Quantitation Limits (CRQLs).

Attachments:
Manual/Electronic Data Review Results
Sample Summary Report
Analytical Sample Listing (Report #6)

Manual/Electronic Data Review Results

VOLATILE ORGANIC ANALYSIS
Blank Qualification Summary
The following samples have analyte concentrations reported less than five times (<5X) [less than ten times (<10X) for ketones or solvents] the associated storage and/or method blank concentrations. Detected compounds are qualified U and are reported at the CRQL or at the level of detection. Non-detected compounds are not qualified.
Acetone – All Samples Methylene chloride – JGFG5, JGFG6, JGFG7, JGFH1, JGFH4, JGFH5, JGFH6, JGFH9, JGFJ0, JGFJ1
Initial Calibration Qualification Summary
The following samples are associated with an initial calibration with a Relative Response Factor (RRF) outside criteria (i.e., <0.05). Detected compounds are qualified JK. Non-detected compounds are qualified R.
1,4-Dioxane – All Samples
Detection Limit Qualification Summary
The following samples have analyte concentrations below the quantitation limit (CRQL). Detected compounds are qualified JQ. Non-detected compounds are not qualified.
2-Butanone – JGFG7, JGFG9, JGFH0 Chloroform – JGFH2, JGFH4, JGFH6, JGFH7 Carbon tetrachloride – JGFG8, JGFH2, JGFH3, JGFH4, JGFH5, JGFH6, JGFH7 Toluene – JGFG6, JGFH8

Sample Summary Report

Case No:	44315	Contract:	EPW11037	SDG No:	JGFG5	Lab Code:	DATAC
Sample Number:	JGFG5	Method:	VOA_Low_Med	Matrix:	Soil	MA Number:	DEFAULT
Sample Location:	SB01SB01.5	pH:		Sample Date:	04/21/2014	Sample Time:	09:34:00
% Moisture :	10.111			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	4.3	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	4.3	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	4.3	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	4.3	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	4.3	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	4.3	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	4.3	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	4.3	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	8.7	ug/kg	1.0	J	U	Yes	S4VEM
Carbon disulfide	4.3	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	4.3	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	4.3	ug/kg	1.0	J	U	Yes	S4VEM
trans-1,2-Dichloroethene	4.3	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	4.3	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	4.3	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	4.3	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	4.3	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	4.3	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	4.3	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	4.3	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	4.3	ug/kg	1.0	U	U	Yes	S4VEM
Benzene	4.3	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	4.3	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	87	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	4.3	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Methylcyclohexane	4.3	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	4.3	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichloromethane	4.3	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	4.3	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	4.3	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	4.3	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	4.3	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	4.3	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	4.3	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	4.3	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	4.3	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	4.3	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	4.3	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	4.3	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	4.3	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	4.3	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	4.3	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	4.3	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	4.3	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	4.3	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	4.3	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	4.3	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	4.3	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	4.3	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFG5	Lab Code: DATAC
Sample Number: JGFG6	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB01SB05	pH:	Sample Date: 04/21/2014	Sample Time: 10:21:00
% Moisture : 16.613		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	10	ug/kg	1.0	J	U	Yes	S4VEM
Carbon disulfide	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	5.1	ug/kg	1.0	J	U	Yes	S4VEM
trans-1,2-Dichloroethene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Benzene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	100	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	5.1	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	0.16	ug/kg	1.0	J	JQ	Yes	S4VEM
trans-1,3-Dichloropropene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	5.1	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFG5	Lab Code: DATAC
Sample Number: JGFG7	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB04SB04	pH:	Sample Date: 04/21/2014	Sample Time: 13:37:00
% Moisture : 14.218		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	19	ug/kg	1.0		U	Yes	S4VEM
Carbon disulfide	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	6.0	ug/kg	1.0	J	U	Yes	S4VEM
trans-1,2-Dichloroethene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	9.7	ug/kg	1.0	J	JQ	Yes	S4VEM
Bromochloromet hane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Benzene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	120	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	6.0	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	12	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	12	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	6.0	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFG5	Lab Code: DATAC
Sample Number: JGFG8	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB04SB05	pH:	Sample Date: 04/21/2014	Sample Time: 13:45:00
% Moisture : 18.644		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	4.8	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	4.8	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	4.8	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	4.8	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	4.8	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	4.8	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	4.8	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	4.8	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	9.7	ug/kg	1.0	J	U	Yes	S4VEM
Carbon disulfide	4.8	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	4.8	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	4.8	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	4.8	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	4.8	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	4.8	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	4.8	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	9.7	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	4.8	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	4.8	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	4.8	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	4.8	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	0.21	ug/kg	1.0	J	JQ	Yes	S4VEM
Benzene	4.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	4.8	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	97	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	4.8	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	4.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	4.8	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	4.8	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	4.8	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	4.8	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	9.7	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	4.8	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	4.8	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	4.8	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	4.8	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	9.7	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	4.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	4.8	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	4.8	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	4.8	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	4.8	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	4.8	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	4.8	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	4.8	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	4.8	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	4.8	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	4.8	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	4.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	4.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	4.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	4.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	4.8	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFG5	Lab Code: DATAC
Sample Number: JGFG9	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB06SB4.5	pH:	Sample Date: 04/21/2014	Sample Time: 15:16:00
% Moisture : 19.544		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	10	ug/kg	1.0	J	U	Yes	S4VEM
Carbon disulfide	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	5.1	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	3.8	ug/kg	1.0	J	JQ	Yes	S4VEM
Bromochloromet hane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Benzene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	100	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	5.1	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	5.1	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	5.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	5.1	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFG5	Lab Code: DATAC
Sample Number: JGFH0	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB06SB6.5	pH:	Sample Date: 04/21/2014	Sample Time: 15:30:00
% Moisture : 19.794		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	4.5	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	4.5	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	4.5	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	4.5	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	4.5	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	4.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	4.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	4.5	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	9.1	ug/kg	1.0		U	Yes	S4VEM
Carbon disulfide	4.5	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	4.5	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	4.5	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	4.5	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	4.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	4.5	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	4.5	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	2.8	ug/kg	1.0	J	JQ	Yes	S4VEM
Bromochloromet hane	4.5	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	4.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	4.5	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	4.5	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	4.5	ug/kg	1.0	U	U	Yes	S4VEM
Benzene	4.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	4.5	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	90	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	4.5	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	4.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	4.5	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	4.5	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	4.5	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	4.5	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	9.0	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	4.5	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	4.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	4.5	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	4.5	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	9.0	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	4.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	4.5	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	4.5	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	4.5	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	4.5	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	4.5	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	4.5	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	4.5	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	4.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	4.5	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	4.5	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	4.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	4.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	4.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	4.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	4.5	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFG5	Lab Code: DATAC
Sample Number: JGFH1	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB06SB12	pH:	Sample Date: 04/21/2014	Sample Time: 15:40:00
% Moisture : 26.173		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	12	ug/kg	1.0	J	U	Yes	S4VEM
Carbon disulfide	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	6.0	ug/kg	1.0	J	U	Yes	S4VEM
trans-1,2-Dichloroethene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	12	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Benzene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	120	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	6.0	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	12	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	12	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	6.0	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	6.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	6.0	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFG5	Lab Code: DATAC
Sample Number: JGFH2	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB09SB15	pH:	Sample Date: 04/22/2014	Sample Time: 16:25:00
% Moisture : 37.179		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	14	ug/kg	1.0	J	U	Yes	S4VEM
Carbon disulfide	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	7.1	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	14	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	6.8	ug/kg	1.0	J	JQ	Yes	S4VEM
1,1,1-Trichloroethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	3.2	ug/kg	1.0	J	JQ	Yes	S4VEM
Benzene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	140	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	7.1	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	14	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	14	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	7.1	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFG5	Lab Code: DATAC
Sample Number: JGFH3	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB09SB19.5	pH:	Sample Date: 04/22/2014	Sample Time: 16:10:00
% Moisture : 34.769		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	7.2	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	7.2	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	7.2	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	7.2	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	7.2	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	7.2	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	7.2	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	7.2	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	14	ug/kg	1.0	J	U	Yes	S4VEM
Carbon disulfide	7.2	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	7.2	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	7.2	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	7.2	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	7.2	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	7.2	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	7.2	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	14	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	7.2	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	7.6	ug/kg	1.0			Yes	S4VEM
1,1,1-Trichloroethane	7.2	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	7.2	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	3.8	ug/kg	1.0	J	JQ	Yes	S4VEM
Benzene	7.2	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	7.2	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	140	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	7.2	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	7.2	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	7.2	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	7.2	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	7.2	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	7.2	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	14	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	7.2	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	7.2	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	7.2	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	7.2	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	14	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	7.2	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	7.2	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	7.2	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	7.2	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	7.2	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	7.2	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	7.2	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	7.2	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	7.2	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	7.2	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	7.2	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	7.2	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	7.2	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	7.2	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	7.2	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	7.2	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFG5	Lab Code: DATAC
Sample Number: JGFH4	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB09SB25	pH:	Sample Date: 04/22/2014	Sample Time: 16:10:00
% Moisture : 31.655		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	6.9	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	6.9	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	6.9	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	6.9	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	6.9	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	6.9	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	6.9	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	6.9	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	14	ug/kg	1.0	J	U	Yes	S4VEM
Carbon disulfide	6.9	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	6.9	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	6.9	ug/kg	1.0	J	U	Yes	S4VEM
trans-1,2-Dichloroethene	6.9	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	6.9	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	6.9	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	6.9	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	14	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	6.9	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	4.1	ug/kg	1.0	J	JQ	Yes	S4VEM
1,1,1-Trichloroethane	6.9	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	6.9	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	3.2	ug/kg	1.0	J	JQ	Yes	S4VEM
Benzene	6.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	6.9	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	140	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	6.9	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	6.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	6.9	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	6.9	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	6.9	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	6.9	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	14	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	6.9	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	6.9	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	6.9	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	6.9	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	14	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	6.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	6.9	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	6.9	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	6.9	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	6.9	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	6.9	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	6.9	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	6.9	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	6.9	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	6.9	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	6.9	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	6.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	6.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	6.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	6.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	6.9	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFG5	Lab Code: DATAC
Sample Number: JGFH5	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB10SB15.5	pH:	Sample Date: 04/22/2014	Sample Time: 18:06:00
% Moisture : 38.773		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	15	ug/kg	1.0	J	U	Yes	S4VEM
Carbon disulfide	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	7.3	ug/kg	1.0	J	U	Yes	S4VEM
trans-1,2-Dichloroethene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	15	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	0.88	ug/kg	1.0	J	JQ	Yes	S4VEM
Benzene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	150	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	7.3	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	15	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	15	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	7.3	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFG5	Lab Code: DATAC
Sample Number: JGFH6	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB10SB18.5	pH:	Sample Date: 04/22/2014	Sample Time: 17:45:00
% Moisture : 34.078		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	16	ug/kg	1.0	J	U	Yes	S4VEM
Carbon disulfide	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	7.8	ug/kg	1.0	J	U	Yes	S4VEM
trans-1,2-Dichloroethene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	16	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	3.5	ug/kg	1.0	J	JQ	Yes	S4VEM
1,1,1-Trichloroethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	6.5	ug/kg	1.0	J	JQ	Yes	S4VEM
Benzene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	160	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	7.8	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	16	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	16	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	7.8	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFG5	Lab Code: DATAC
Sample Number: JGFH7	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB10SB20.5	pH:	Sample Date: 04/22/2014	Sample Time: 18:14:00
% Moisture : 37.784		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	8.5	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	8.5	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	8.5	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	8.5	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	8.5	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	8.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	8.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	8.5	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	17	ug/kg	1.0	J	U	Yes	S4VEM
Carbon disulfide	8.5	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	8.5	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	8.5	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	8.5	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	8.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	8.5	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	8.5	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	17	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	8.5	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	4.5	ug/kg	1.0	J	JQ	Yes	S4VEM
1,1,1-Trichloroethane	8.5	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	8.5	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	4.4	ug/kg	1.0	J	JQ	Yes	S4VEM
Benzene	8.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	8.5	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	170	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	8.5	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	8.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	8.5	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	8.5	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	8.5	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	8.5	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	17	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	8.5	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	8.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	8.5	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	8.5	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	17	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	8.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	8.5	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	8.5	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	8.5	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	8.5	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	8.5	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	8.5	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	8.5	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	8.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	8.5	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	8.5	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	8.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	8.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	8.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	8.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	8.5	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFG5	Lab Code: DATAC
Sample Number: JGFH8	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: HA01SB13.5	pH:	Sample Date: 04/23/2014	Sample Time: 09:30:00
% Moisture : 27.982		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	6.2	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	6.2	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	6.2	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	6.2	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	6.2	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	6.2	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	6.2	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	6.2	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	12	ug/kg	1.0	J	U	Yes	S4VEM
Carbon disulfide	6.2	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	6.2	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	6.2	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	6.2	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	6.2	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	6.2	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	6.2	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	12	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	6.2	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	6.2	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	6.2	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	6.2	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	6.2	ug/kg	1.0	U	U	Yes	S4VEM
Benzene	6.2	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	6.2	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	120	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	6.2	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	6.2	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	6.2	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	6.2	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	6.2	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	6.2	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	12	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	0.13	ug/kg	1.0	J	JQ	Yes	S4VEM
trans-1,3-Dichloropropene	6.2	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	6.2	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	6.2	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	12	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	6.2	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	6.2	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	6.2	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	6.2	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	6.2	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	6.2	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	6.2	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	6.2	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	6.2	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	6.2	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	6.2	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	6.2	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	6.2	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	6.2	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	6.2	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	6.2	ug/kg	1.0	U	U	Yes	S4VEM
(1R)-2,6,6-Trimethylbicyclo[3.1.1]hept-2-ene	28	ug/kg	1.0	JN	JN	Yes	S4VEM
.beta.-Pinene	35	ug/kg	1.0	JN	JN	Yes	S4VEM
D-Limonene	9.7	ug/kg	1.0	JN	JN	Yes	S4VEM
(+)-3-Carene	180	ug/kg	1.0	JN	JN	Yes	S4VEM
(+)-4-Carene	9.0	ug/kg	1.0	JN	JN	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFG5	Lab Code: DATAC
Sample Number: JGFH9	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: HA02SB2.5	pH:	Sample Date: 04/23/2014	Sample Time: 11:35:00
% Moisture : 10.479		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.5	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	5.5	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	5.5	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	5.5	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	5.5	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	5.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	5.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	5.5	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	11	ug/kg	1.0	J	U	Yes	S4VEM
Carbon disulfide	5.5	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	5.5	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	5.5	ug/kg	1.0	J	U	Yes	S4VEM
trans-1,2-Dichloroethene	5.5	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	5.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	5.5	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	5.5	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	11	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	5.5	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	5.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	5.5	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	5.5	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	5.5	ug/kg	1.0	U	U	Yes	S4VEM
Benzene	5.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	5.5	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	110	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	5.5	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	5.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	5.5	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	5.5	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.5	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	5.5	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	11	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	5.5	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	5.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	5.5	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	5.5	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	11	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	5.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	5.5	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	5.5	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	5.5	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	5.5	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	5.5	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	5.5	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	5.5	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	5.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	5.5	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	5.5	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	5.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	5.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	5.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	5.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	5.5	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFG5	Lab Code: DATAC
Sample Number: JGFJ0	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: HA03SB09	pH:	Sample Date: 04/23/2014	Sample Time: 11:35:00
% Moisture: 16.561		% Solids:	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	9.4	ug/kg	1.0	J	U	Yes	S4VEM
Carbon disulfide	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	4.7	ug/kg	1.0	J	U	Yes	S4VEM
trans-1,2-Dichloroethene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	9.4	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Benzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	94	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	4.7	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	9.4	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	9.4	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
(+)-3-Carene	8.7	ug/kg	1.0	JN	JN	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFG5	Lab Code: DATAC
Sample Number: JGFJ1	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: BK01SB03	pH:	Sample Date: 04/22/2014	Sample Time: 11:27:00
% Moisture : 16.385		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	9.5	ug/kg	1.0	JB	U	Yes	S4VEM
Carbon disulfide	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	4.7	ug/kg	1.0	J	U	Yes	S4VEM
trans-1,2-Dichloroethene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	9.5	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Benzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	95	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	4.7	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	9.5	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	9.5	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFG5	Lab Code: DATAC
Sample Number: JGFJ1MS	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location:	pH:	Sample Date: 04/22/2014	Sample Time: 11:27:00
% Moisture : 16.385		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
1,1-Dichloroethene	38	ug/kg	1.0		J	Yes	S4VEM
Dichlorodifluoromethane	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
Benzene	39	ug/kg	1.0		J	Yes	S4VEM
Chloromethane	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
Trichloroethene	39	ug/kg	1.0		J	Yes	S4VEM
Vinyl chloride	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
Bromomethane	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
Toluene	39	ug/kg	1.0		J	Yes	S4VEM
Chloroethane	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
Chlorobenzene	42	ug/kg	1.0		J	Yes	S4VEM
Trichlorofluoromethane	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
Acetone	10	ug/kg	1.0	JB	UJ	Yes	S4VEM
Carbon disulfide	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
Methyl acetate	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
Methylene chloride	5.1	ug/kg	1.0	J	UJ	Yes	S4VEM
trans-1,2-Dichloroethene	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
Methyl tert-butyl ether	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
1,1-Dichloroethane	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
cis-1,2-Dichloroethene	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
2-Butanone	10	ug/kg	1.0	U	UJ	Yes	S4VEM
Bromochloromethane	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
Chloroform	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
1,1,1-Trichloroethane	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
Cyclohexane	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
Carbon tetrachloride	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2-Dichloroethane	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
1,4-Dioxane	100	ug/kg	1.0	U	R	Yes	S4VEM
Methylcyclohexane	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
1,2-Dichloropropane	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
Bromodichloromethane	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
cis-1,3-Dichloropropene	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
4-Methyl-2-Pentanone	10	ug/kg	1.0	U	UJ	Yes	S4VEM
trans-1,3-Dichloropropene	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
1,1,2-Trichloroethane	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
Tetrachloroethene	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
2-Hexanone	10	ug/kg	1.0	U	UJ	Yes	S4VEM
Dibromochloromethane	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2-Dibromoethane	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
Ethylbenzene	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
o-Xylene	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
m,p-Xylene	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
Styrene	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
Bromoform	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
Isopropylbenzene	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
1,1,2,2-Tetrachloroethane	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
1,3-Dichlorobenzene	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
1,4-Dichlorobenzene	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2-Dichlorobenzene	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2-Dibromo-3-chloropropane	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2,4-Trichlorobenzene	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2,3-Trichlorobenzene	5.1	ug/kg	1.0	U	UJ	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFG5	Lab Code: DATAC
Sample Number: JGFJ1MSD	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location:	pH:	Sample Date: 04/22/2014	Sample Time: 11:27:00
% Moisture : 16.385		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
1,1-Dichloroethene	45	ug/kg	1.0		J	Yes	S4VEM
Dichlorodifluoromethane	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
Benzene	48	ug/kg	1.0		J	Yes	S4VEM
Chloromethane	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
Vinyl chloride	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
Trichloroethene	48	ug/kg	1.0		J	Yes	S4VEM
Bromomethane	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
Toluene	46	ug/kg	1.0		J	Yes	S4VEM
Chlorobenzene	50	ug/kg	1.0		J	Yes	S4VEM
Chloroethane	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
Trichlorofluoromethane	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
Acetone	11	ug/kg	1.0	JB	UJ	Yes	S4VEM
Carbon disulfide	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
Methyl acetate	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
Methylene chloride	5.7	ug/kg	1.0	J	UJ	Yes	S4VEM
trans-1,2-Dichloroethene	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
Methyl tert-butyl ether	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
1,1-Dichloroethane	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
cis-1,2-Dichloroethene	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
2-Butanone	11	ug/kg	1.0	U	UJ	Yes	S4VEM
Bromochloromethane	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
Chloroform	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
1,1,1-Trichloroethane	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
Cyclohexane	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
Carbon tetrachloride	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2-Dichloroethane	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
1,4-Dioxane	110	ug/kg	1.0	U	R	Yes	S4VEM
Methylcyclohexane	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
1,2-Dichloropropane	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
Bromodichloromethane	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
cis-1,3-Dichloropropene	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
4-Methyl-2-Pentanone	11	ug/kg	1.0	U	UJ	Yes	S4VEM
trans-1,3-Dichloropropene	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
1,1,2-Trichloroethane	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
Tetrachloroethene	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
2-Hexanone	11	ug/kg	1.0	U	UJ	Yes	S4VEM
Dibromochloromethane	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2-Dibromoethane	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
Ethylbenzene	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
o-Xylene	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
m,p-Xylene	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
Styrene	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
Bromoform	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
Isopropylbenzene	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
1,1,2,2-Tetrachloroethane	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
1,3-Dichlorobenzene	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
1,4-Dichlorobenzene	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2-Dichlorobenzene	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2-Dibromo-3-chloropropane	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2,4-Trichlorobenzene	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2,3-Trichlorobenzene	5.7	ug/kg	1.0	U	UJ	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFG5	Lab Code: DATAC
Sample Number: VBLKS1	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture : 0.0		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	10	ug/kg	1.0	U	U	Yes	S4VEM
Carbon disulfide	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	5.0	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Benzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	100	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	5.0	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	0.28	ug/kg	1.0	J	J	Yes	S4VEM
Bromoform	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	0.28	ug/kg	1.0	J	J	Yes	S4VEM
1,4-Dichlorobenzene	0.33	ug/kg	1.0	J	J	Yes	S4VEM
1,2-Dichlorobenzene	0.33	ug/kg	1.0	J	J	Yes	S4VEM
1,2-Dibromo-3-chloropropane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	0.39	ug/kg	1.0	J	J	Yes	S4VEM
1,2,3-Trichlorobenzene	0.57	ug/kg	1.0	J	J	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFG5	Lab Code: DATAC
Sample Number: VBLKS2	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture : 0.0		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	5.3	ug/kg	1.0	J	J	Yes	S4VEM
Carbon disulfide	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	5.0	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Benzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	100	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	5.0	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	0.31	ug/kg	1.0	J	J	Yes	S4VEM
Bromoform	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	0.33	ug/kg	1.0	J	J	Yes	S4VEM
1,4-Dichlorobenzene	0.41	ug/kg	1.0	J	J	Yes	S4VEM
1,2-Dichlorobenzene	0.36	ug/kg	1.0	J	J	Yes	S4VEM
1,2-Dibromo-3-chloropropane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	0.50	ug/kg	1.0	J	J	Yes	S4VEM
1,2,3-Trichlorobenzene	0.71	ug/kg	1.0	J	J	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFG5	Lab Code: DATAC
Sample Number: VHBLKS1	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture : 0.0		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	4.1	ug/kg	1.0	JB	J	Yes	S4VEM
Carbon disulfide	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	0.14	ug/kg	1.0	J	J	Yes	S4VEM
trans-1,2-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Benzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	100	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	5.0	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM

National Functional Guidelines Report #06

Lab DATAC(ALS Environmental) **SDG** JGFG5 **Case** 44315 **Contract** EPW11037 **Region** 10 **DDTID** 195204 **SOW** SOM01.2

Analytical Sample Listing

VOA_Low_Med

						Extraction		Analysis		
Sample Number	**Sample Type**	**Matrix**	**Level**	**Sampling Date**	**Date Received**	**Type**	**Date/Time**	**Date/Time**	**GC Column**	**Instrument**
JGFG5	Field_Sample	Soil	Low	04212014 09:34:00	04252014 09:42:00			04292014 17:54:00	DB624	5972-S
JGFG6	Field_Sample	Soil	Low	04212014 10:21:00	04252014 09:42:00			04292014 18:24:00	DB624	5972-S
JGFG7	Field_Sample	Soil	Low	04212014 13:37:00	04252014 09:42:00			04292014 18:55:00	DB624	5972-S
JGFG8	Field_Sample	Soil	Low	04212014 13:45:00	04252014 09:42:00			04292014 19:26:00	DB624	5972-S
JGFG9	Field_Sample	Soil	Low	04212014 15:16:00	04252014 09:42:00			04292014 19:56:00	DB624	5972-S
JGFH0	Field_Sample	Soil	Low	04212014 15:30:00	04252014 09:42:00			04292014 20:27:00	DB624	5972-S
JGFH1	Field_Sample	Soil	Low	04212014 15:40:00	04252014 09:42:00			04292014 20:58:00	DB624	5972-S
JGFH2	Field_Sample	Soil	Low	04222014 16:25:00	04252014 09:42:00			04292014 21:29:00	DB624	5972-S
JGFH3	Field_Sample	Soil	Low	04222014 16:10:00	04252014 09:42:00			04292014 21:59:00	DB624	5972-S
JGFH4	Field_Sample	Soil	Low	04222014 16:10:00	04252014 09:42:00			04292014 22:30:00	DB624	5972-S
JGFH5	Field_Sample	Soil	Low	04222014 18:06:00	04252014 09:42:00			04292014 23:00:00	DB624	5972-S
JGFH6	Field_Sample	Soil	Low	04222014 17:45:00	04252014 09:42:00			04292014 23:30:00	DB624	5972-S
JGFH7	Field_Sample	Soil	Low	04222014 18:14:00	04252014 09:42:00			04302014 00:01:00	DB624	5972-S
JGFH8	Field_Sample	Soil	Low	04232014 09:30:00	04252014 09:42:00			04302014 00:31:00	DB624	5972-S
JGFH9	Field_Sample	Soil	Low	04232014 11:35:00	04252014 09:42:00			04302014 01:02:00	DB624	5972-S
JGFJ0	Field_Sample	Soil	Low	04232014 11:35:00	04252014 09:42:00			04302014 01:32:00	DB624	5972-S
JGFJ1	Field_Sample	Soil	Low	04222014 11:27:00	04252014 09:42:00			04302014 17:40:00	DB624	5972-S
JGFJ1MS	Matrix_Spike	Soil	Low	04222014 11:27:00	04252014 09:42:00			04302014 18:10:00	DB624	5972-S
JGFJ1MSD	Matrix_Spike_Duplicate	Soil	Low	04222014 11:27:00	04252014 09:42:00			04302014 18:41:00	DB624	5972-S

ecology and environment, inc.
Global Environmental Specialists
720 Third Avenue, Suite 1700
Seattle, Washington 98104
Tel: (206) 624-9537, Fax: (206) 621-9832

MEMORANDUM

DATE: May 28, 2014

TO: Linda Ader, Project Manager, E & E, Seattle, Washington

FROM: Mark Woodke, START-4 Chemist, E & E, Seattle, Washington

SUBJ: **Organic Data Summary Check, Freeman Ground Water Contamination Site, Freeman, Washington**

REF: TDD: 13-07-0005 PAN: EE-004536-0001-01TTO

The data summary check of 20 soil samples collected from the Freeman Ground Water Contamination site in Freeman, Washington, has been completed. Volatile Organic Compound (VOC; EPA CLP SOW SOM01.2) and chlorinated pesticide (EPA CLP SOM01.2) analyses were performed by ALS Environmental, Salt Lake City, Utah. All sample analyses were evaluated following EPA's Stage 4 Data Validation Electronic and/or Manual Process (S4VEM).

The samples were numbered:

JGFJ2	JGFJ3	JGFJ9	JGFK0	JGFK1
JGFK2	JGFK3	JGFK4	JGFK5	JGFK6
JGFK7	JGFK8	JGFK9	JGFL0	JGFL1
JGFL2	JGFL5	JGFL6	JGFL7	JGFL8

No discrepancies were noted.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 10
1200 Sixth Avenue
Seattle, Washington 98101

May 28, 2014

MEMORANDUM

Subject: Data Validation Report for the Organic Analyses of the Soil Samples Collected for the Freeman Ground Water Contamination Site - Case Number 44315, SDG JGFJ2

From: Donald M. Brown, QA Chemist DMB
USEPA Region 10, Office of Environmental Assessment, Environmental Services Unit

To: Monica Tonel, Site Assessment Manager
USEPA Region 10, Office of Environmental Cleanup

CC: Renee Nordeen, Ecology & Environment, Inc.

The quality assurance (QA) review of the analytical data generated from the analysis of twenty (20) soil samples collected from the above-referenced site has been completed. All samples were analyzed for Volatile Organic Compounds (VOCs) and one (1) sample (JGFJ9) was analyzed for Pesticides. All samples were analyzed by ALS Environmental (DATAC) located in Salt Lake City, Utah.

All sample analyses were evaluated following EPA's Stage 4 Data Validation Electronic/Manual Process (S4VEM). The validation was conducted and appropriate qualifiers were applied according to the Quality Control Specifications outlined in the following:

- Sampling and Quality Assurance Plan for Freeman Ground Water Contamination (March 2014);
- USEPA Contract Laboratory Program (CLP) Statement of Work (SOW) for Multi-Media, Multi-Concentration Organics Analysis (SOM01.2);
- USEPA CLP National Functional Guidelines for Superfund Organic Methods Data Review (USEPA-540-R-08-01); and
- Guidance for Labeling Externally Validated Laboratory Analytical Data for Superfund Use (EPA-540-R-08-005).

Some data may be qualified using the reviewer's professional judgment. The conclusions presented herein are based on the information provided for the review. A summary of samples evaluated in this validation report and the pertinent dates for sample collection, laboratory sample receipt, extraction, and analyses is attached along with the validated data.

Printed on Recycled Paper

I. QUALITY CONTROL RESULTS SUMMARY

Volatile Organic Analysis		
Quality Control Test	**Outliers?**	**Evaluation Criteria**
Blanks	Y*	Non-detect or < 5X Blank†
Initial Calibration	Y*	RRF > 0.05 and ≤ 30% RSD
Continuing Calibration Verification	N	RRF > 0.05 and Open: ≤ 25% D, Close: ≤ 50% D
Deuterated Monitoring Compounds	Y*	Varies by Compound
Internal Standards	N	50 – 200% of 12-hour standard
Pesticide Organic Analysis		
Quality Control Test	**Outliers?**	**Evaluation Criteria**
Blanks	N	Non-detect or < 10X Blank
Initial Calibration	N	≤ 20% RSD single component analyte ≤ 25% RSD alpha-BHC & delta-BHC ≤ 30% RSD toxaphene & surrogates
Continuing Calibration Verification	N	≤ 25% D
Surrogate Spikes	N	30 – 150%
Laboratory Control Samples	N	Varies by Compound
Target Compound Identification	N	≤ 30% D

* See the Data Qualifications section below for outliers and qualification of affected data.
†10X Blank for ketones or solvents.
(Note: RRF = Relative Response Factor, RSD = Relative Standard Deviation, D = Difference)

II. DATA QUALIFICATIONS

Summary of Validation Qualifiers Applied:

Data qualifications applied after the manual and electronic data review can be found in the attached "Manual/Electronic Data Review Results" section of this report.

Data Qualifiers

The following is a list of validation qualifiers applied to the sample result(s) either electronically or manually when needed to indicate associated out-of-control QA/QC results.

Data Qualifiers	
U	The analyte was analyzed for but was not detected above the level of the associated value. The associated value is either the sample quantitation limit or the sample detection limit.
J	The analyte was positively identified and the associated numerical value is an estimated quantity.
UJ	The analyte was analyzed for but was not detected above the level of the associated value. The associated value is an estimate and may be inaccurate or imprecise.
R	The data are unusable for all purposes. The analyte may or may not be present in the sample.
JN	There is evidence that the analyte is present. The associated numerical result is an estimate.

For site assessment and investigations, the following bias qualifiers are applied to the sample result(s) manually in addition to the above data qualifiers to allow for data analysis and interpretation using PREscore software for the National Priorities Listing Hazard Ranking System (NPL-HRS).

Bias Qualifiers	
L	Low bias.
H	High bias.
K	Unknown bias.
Q	The result is estimated because the concentration is below the Contract Required Quantitation Limits (CRQLs).

Attachments:
Manual/Electronic Data Review Results
Sample Summary Report
Analytical Sample Listing (Report #6)

Manual/Electronic Data Review Results

VOLATILE ORGANIC ANALYSIS
Blank Qualification Summary
The following samples have analyte concentrations reported less than five times (<5X) [less than ten times (<10X) for ketones or solvents] the associated storage and/or method blank concentrations. Detected compounds are qualified U and are reported at the CRQL or at the level of detection. Non-detected compounds are not qualified.
Acetone – All Samples
Initial Calibration Qualification Summary
The following samples are associated with an initial calibration with a Relative Response Factor (RRF) outside criteria (i.e., <0.05). Detected compounds are qualified JK. Non-detected compounds are qualified R.
1,4-Dioxane – All Samples
Deuterated Monitoring Compound Qualification Summary
The following samples have DMC recoveries below the lower limit of the criteria window. Detected compounds associated with the DMC are qualified JK. Non-detected compounds associated with the DMC are qualified UJK.
Vinyl chloride-d_3 – JGFK3
Detection Limit Qualification Summary
The following samples have analyte concentrations below the quantitation limit (CRQL). Detected compounds are qualified JQ. Non-detected compounds are not qualified.
Methylene chloride – All Samples except JGFL0, JGFL2, JGFL6 Chloroform – JGFJ9, JGFK0, JGFK1, JGFK2, JGFK4, JGFK5, JGFK8, JGFK9, JGFL0, JGFL1, JGFL2, JGFL8 Carbon tetrachloride – JGFJ9, JGFK0, JGFK1, JGFK2, JGFK4, JGFK5, JGFK6, JGFK7, JGFK8, JGFK9, JGFL1, JGFL5, JGFL7, JGFL8 Toluene – JGFJ3, JGFK4, JGFK8

Manual/Electronic Data Review Results

PESTICIDE ORGANIC ANALYSIS
Sample Qualification Summary
No qualification was applied.

Sample Summary Report

Case No:	44315	Contract:	EPW11037	SDG No:	JGFJ2	Lab Code:	DATAC
Sample Number:	JGFJ2	Method:	VOA_Low_Med	Matrix:	Soil	MA Number:	DEFAULT
Sample Location:	BK01SB04	pH:		Sample Date:	04/22/2014	Sample Time:	11:30:00
% Moisture :	18.524			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	4.9	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	4.9	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	4.9	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	4.9	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	4.9	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	4.9	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	4.9	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	4.9	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	9.9	ug/kg	1.0	JB	U	Yes	S4VEM
Carbon disulfide	4.9	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	4.9	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	0.13	ug/kg	1.0	J	JQ	Yes	S4VEM
trans-1,2-Dichloroethene	4.9	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	4.9	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	4.9	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	4.9	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	9.9	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	4.9	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	4.9	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	4.9	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	4.9	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	4.9	ug/kg	1.0	U	U	Yes	S4VEM
Benzene	4.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	4.9	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	99	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	4.9	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Methylcyclohexane	4.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	4.9	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichloromethane	4.9	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	4.9	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	9.9	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	4.9	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	4.9	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	4.9	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	4.9	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	9.9	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	4.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	4.9	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	4.9	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	4.9	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	4.9	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	4.9	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	4.9	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	4.9	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	4.9	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	4.9	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	4.9	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	4.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	4.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	4.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	4.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	4.9	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: JGFJ2MS	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location:	pH:	Sample Date: 04/22/2014	Sample Time: 11:30:00
% Moisture : 18.524		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
1,1-Dichloroethene	47	ug/kg	1.0		J	Yes	S4VEM
Dichlorodifluoro methane	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
Benzene	51	ug/kg	1.0		J	Yes	S4VEM
Chloromethane	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
Vinyl chloride	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
Trichloroethene	50	ug/kg	1.0		J	Yes	S4VEM
Bromomethane	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
Toluene	49	ug/kg	1.0		J	Yes	S4VEM
Chloroethane	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
Chlorobenzene	52	ug/kg	1.0		J	Yes	S4VEM
Trichlorofluorom ethane	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
Acetone	11	ug/kg	1.0	B	UJ	Yes	S4VEM
Carbon disulfide	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
Methyl acetate	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
Methylene chloride	0.26	ug/kg	1.0	J	J	Yes	S4VEM
trans-1,2-Dichloroethene	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
Methyl tert-butyl ether	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
1,1-Dichloroethane	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
cis-1,2-Dichloroethene	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
2-Butanone	11	ug/kg	1.0	U	UJ	Yes	S4VEM
Bromochloromet hane	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
Chloroform	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
1,1,1-Trichloroethane	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
Cyclohexane	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
Carbon tetrachloride	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2-Dichloroethane	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
1,4-Dioxane	110	ug/kg	1.0	U	R	Yes	S4VEM
Methylcyclohexa ne	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
1,2-Dichloropropane	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
Bromodichloromethane	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
cis-1,3-Dichloropropene	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
4-Methyl-2-Pentanone	11	ug/kg	1.0	U	UJ	Yes	S4VEM
trans-1,3-Dichloropropene	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
1,1,2-Trichloroethane	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
Tetrachloroethene	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
2-Hexanone	11	ug/kg	1.0	U	UJ	Yes	S4VEM
Dibromochloromethane	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2-Dibromoethane	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
Ethylbenzene	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
o-Xylene	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
m,p-Xylene	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
Styrene	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
Bromoform	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
Isopropylbenzene	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
1,1,2,2-Tetrachloroethane	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
1,3-Dichlorobenzene	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
1,4-Dichlorobenzene	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2-Dichlorobenzene	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2-Dibromo-3-chloropropane	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2,4-Trichlorobenzene	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2,3-Trichlorobenzene	5.5	ug/kg	1.0	U	UJ	Yes	S4VEM

Case No:	44315	Contract:	EPW11037	SDG No:	JGFJ2	Lab Code:	DATAC
Sample Number:	JGFJ2MSD	Method:	VOA_Low_Med	Matrix:	Soil	MA Number:	DEFAULT
Sample Location:		pH:		Sample Date:	04/22/2014	Sample Time:	11:30:00
% Moisture :	18.524			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
1,1-Dichloroethene	46	ug/kg	1.0		J	Yes	S4VEM
Dichlorodifluoromethane	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
Benzene	49	ug/kg	1.0		J	Yes	S4VEM
Chloromethane	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
Vinyl chloride	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
Trichloroethene	48	ug/kg	1.0		J	Yes	S4VEM
Bromomethane	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
Toluene	47	ug/kg	1.0		J	Yes	S4VEM
Chloroethane	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
Chlorobenzene	51	ug/kg	1.0		J	Yes	S4VEM
Trichlorofluoromethane	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
Acetone	11	ug/kg	1.0	B	UJ	Yes	S4VEM
Carbon disulfide	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
Methyl acetate	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
Methylene chloride	0.24	ug/kg	1.0	J	J	Yes	S4VEM
trans-1,2-Dichloroethene	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
Methyl tert-butyl ether	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
1,1-Dichloroethane	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
cis-1,2-Dichloroethene	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
2-Butanone	11	ug/kg	1.0	U	UJ	Yes	S4VEM
Bromochloromethane	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
Chloroform	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
1,1,1-Trichloroethane	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
Cyclohexane	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
Carbon tetrachloride	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2-Dichloroethane	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
1,4-Dioxane	110	ug/kg	1.0	U	R	Yes	S4VEM
Methylcyclohexane	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
1,2-Dichloropropane	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
Bromodichloromethane	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
cis-1,3-Dichloropropene	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
4-Methyl-2-Pentanone	11	ug/kg	1.0	U	UJ	Yes	S4VEM
trans-1,3-Dichloropropene	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
1,1,2-Trichloroethane	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
Tetrachloroethene	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
2-Hexanone	11	ug/kg	1.0	U	UJ	Yes	S4VEM
Dibromochloromethane	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2-Dibromoethane	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
Ethylbenzene	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
o-Xylene	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
m,p-Xylene	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
Styrene	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
Bromoform	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
Isopropylbenzene	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
1,1,2,2-Tetrachloroethane	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
1,3-Dichlorobenzene	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
1,4-Dichlorobenzene	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2-Dichlorobenzene	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2-Dibromo-3-chloropropane	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2,4-Trichlorobenzene	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM
1,2,3-Trichlorobenzene	5.3	ug/kg	1.0	U	UJ	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: JGFJ3	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: BK01SB12	pH:	Sample Date: 04/22/2014	Sample Time: 11:43:00
% Moisture : 15.924		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	9.4	ug/kg	1.0	JB	U	Yes	S4VEM
Carbon disulfide	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	0.34	ug/kg	1.0	J	JQ	Yes	S4VEM
trans-1,2-Dichloroethene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	9.4	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Benzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	94	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	4.7	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	9.4	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	0.12	ug/kg	1.0	J	JQ	Yes	S4VEM
trans-1,3-Dichloropropene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	9.4	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	4.7	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	4.7	ug/kg	1.0	U	U	Yes	S4VEM

Case No:	44315	Contract:	EPW11037	SDG No:	JGFJ2	Lab Code:	DATAC
Sample Number:	JGFJ9	Method:	Pest	Matrix:	Soil	MA Number:	DEFAULT
Sample Location:	SB11SB18.6	pH:	7.3	Sample Date:	04/23/2014	Sample Time:	15:21:00
% Moisture :	37.077			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
alpha-BHC	3.0	ug/kg	1.0	U	U	Yes	S4VEM
beta-BHC	3.0	ug/kg	1.0	U	U	Yes	S4VEM
delta-BHC	3.0	ug/kg	1.0	U	U	Yes	S4VEM
gamma-BHC (Lindane)	3.0	ug/kg	1.0	U	U	Yes	S4VEM
Heptachlor	3.0	ug/kg	1.0	U	U	Yes	S4VEM
Aldrin	3.0	ug/kg	1.0	U	U	Yes	S4VEM
Heptachlor epoxide	3.0	ug/kg	1.0	U	U	Yes	S4VEM
Endosulfan I	3.0	ug/kg	1.0	U	U	Yes	S4VEM
Dieldrin	5.8	ug/kg	1.0	U	U	Yes	S4VEM
4,4'-DDE	5.8	ug/kg	1.0	U	U	Yes	S4VEM
Endrin	5.8	ug/kg	1.0	U	U	Yes	S4VEM
Endosulfan II	5.8	ug/kg	1.0	U	U	Yes	S4VEM
4,4'-DDD	5.8	ug/kg	1.0	U	U	Yes	S4VEM
Endosulfan sulfate	5.8	ug/kg	1.0	U	U	Yes	S4VEM
4,4'-DDT	5.8	ug/kg	1.0	U	U	Yes	S4VEM
Methoxychlor	30	ug/kg	1.0	U	U	Yes	S4VEM
Endrin ketone	5.8	ug/kg	1.0	U	U	Yes	S4VEM
Endrin aldehyde	5.8	ug/kg	1.0	U	U	Yes	S4VEM
alpha-Chlordane	3.0	ug/kg	1.0	U	U	Yes	S4VEM
gamma-Chlordane	3.0	ug/kg	1.0	U	U	Yes	S4VEM
Toxaphene	300	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: JGFJ9	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB11SB18.6	pH:	Sample Date: 04/23/2014	Sample Time: 15:21:00
% Moisture : 37.077		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	8.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	8.0	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	8.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	8.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	8.0	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	8.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	8.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	8.0	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	16	ug/kg	1.0	JB	U	Yes	S4VEM
Carbon disulfide	8.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	8.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	0.44	ug/kg	1.0	J	JQ	Yes	S4VEM
trans-1,2-Dichloroethene	8.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	8.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	8.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	8.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	16	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	8.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	1.4	ug/kg	1.0	J	JQ	Yes	S4VEM
1,1,1-Trichloroethane	8.0	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	8.0	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	1.4	ug/kg	1.0	J	JQ	Yes	S4VEM
Benzene	8.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	8.0	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	160	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	8.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	8.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	8.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	8.0	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	8.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	8.0	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	16	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	8.0	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	8.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	8.0	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	8.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	16	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	8.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	8.0	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	8.0	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	8.0	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	8.0	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	8.0	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	8.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	8.0	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	8.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	8.0	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	8.0	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	8.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	8.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	8.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	8.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	8.0	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: JGFK0	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB11SB20	pH:	Sample Date: 04/23/2014	Sample Time: 15:07:00
% Moisture : 37.409		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	7.7	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	7.7	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	7.7	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	7.7	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	7.7	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	7.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	7.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	7.7	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	15	ug/kg	1.0	JB	U	Yes	S4VEM
Carbon disulfide	7.7	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	7.7	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	0.28	ug/kg	1.0	J	JQ	Yes	S4VEM
trans-1,2-Dichloroethene	7.7	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	7.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	7.7	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	7.7	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	15	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	7.7	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	0.94	ug/kg	1.0	J	JQ	Yes	S4VEM
1,1,1-Trichloroethane	7.7	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	7.7	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	1.9	ug/kg	1.0	J	JQ	Yes	S4VEM
Benzene	7.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	7.7	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	150	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	7.7	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	7.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	7.7	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	7.7	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	7.7	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	7.7	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	15	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	7.7	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	7.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	7.7	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	7.7	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	15	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	7.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	7.7	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	7.7	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	7.7	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	7.7	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	7.7	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	7.7	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	7.7	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	7.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	7.7	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	7.7	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	7.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	7.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	7.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	7.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	7.7	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: JGFK1	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB11SB21.5	pH:	Sample Date: 04/23/2014	Sample Time: 15:50:00
% Moisture : 36.1		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	17	ug/kg	1.0	JB	U	Yes	S4VEM
Carbon disulfide	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	0.48	ug/kg	1.0	J	JQ	Yes	S4VEM
trans-1,2-Dichloroethene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	17	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	0.88	ug/kg	1.0	J	JQ	Yes	S4VEM
1,1,1-Trichloroethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	1.7	ug/kg	1.0	J	JQ	Yes	S4VEM
Benzene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	170	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	8.4	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	17	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	17	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	8.4	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: JGFK2	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB11SB28	pH:	Sample Date: 04/23/2014	Sample Time: 15:59:00
% Moisture : 35.986		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	17	ug/kg	1.0	JB	U	Yes	S4VEM
Carbon disulfide	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	0.51	ug/kg	1.0	J	JQ	Yes	S4VEM
trans-1,2-Dichloroethene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	17	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	0.59	ug/kg	1.0	J	JQ	Yes	S4VEM
1,1,1-Trichloroethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	0.71	ug/kg	1.0	J	JQ	Yes	S4VEM
Benzene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	170	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	8.4	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	17	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	17	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	8.4	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	8.4	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	8.4	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: JGFK3	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB11SB32	pH:	Sample Date: 04/23/2014	Sample Time: 16:27:00
% Moisture : 33.066		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	7.5	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	7.5	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	7.5	ug/kg	1.0	U	UJK	Yes	S4VEM
Bromomethane	7.5	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	7.5	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	7.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	7.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	7.5	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	15	ug/kg	1.0	JB	U	Yes	S4VEM
Carbon disulfide	7.5	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	7.5	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	0.60	ug/kg	1.0	J	JQ	Yes	S4VEM
trans-1,2-Dichloroethene	7.5	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	7.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	7.5	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	7.5	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	15	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	7.5	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	7.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	7.5	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	7.5	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	7.5	ug/kg	1.0	U	U	Yes	S4VEM
Benzene	7.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	7.5	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	150	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	7.5	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	7.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	7.5	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	7.5	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	7.5	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	7.5	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	15	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	7.5	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	7.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	7.5	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	7.5	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	15	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	7.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	7.5	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	7.5	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	7.5	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	7.5	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	7.5	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	7.5	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	7.5	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	7.5	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	7.5	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	7.5	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	7.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	7.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	7.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	7.5	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	7.5	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: JGFK4	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB12SB20	pH:	Sample Date: 04/24/2014	Sample Time: 10:41:00
% Moisture : 38.919		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	8.9	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	8.9	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	8.9	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	8.9	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	8.9	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	8.9	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	8.9	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	8.9	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	18	ug/kg	1.0	JB	U	Yes	S4VEM
Carbon disulfide	8.9	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	8.9	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	0.45	ug/kg	1.0	J	JQ	Yes	S4VEM
trans-1,2-Dichloroethene	8.9	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	8.9	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	8.9	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	8.9	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	18	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	8.9	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	1.6	ug/kg	1.0	J	JQ	Yes	S4VEM
1,1,1-Trichloroethane	8.9	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	8.9	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	2.3	ug/kg	1.0	J	JQ	Yes	S4VEM
Benzene	8.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	8.9	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	180	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	8.9	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	8.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	8.9	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	8.9	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	8.9	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	8.9	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	18	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	0.19	ug/kg	1.0	J	JQ	Yes	S4VEM
trans-1,3-Dichloropropene	8.9	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	8.9	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	8.9	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	18	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	8.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	8.9	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	8.9	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	8.9	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	8.9	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	8.9	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	8.9	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	8.9	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	8.9	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	8.9	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	8.9	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	8.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	8.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	8.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	8.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	8.9	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: JGFK5	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB12SB21.5	pH:	Sample Date: 04/24/2014	Sample Time: 10:43:00
% Moisture : 38.436		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	8.8	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	8.8	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	8.8	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	8.8	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	8.8	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	8.8	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	8.8	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	8.8	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	18	ug/kg	1.0	JB	U	Yes	S4VEM
Carbon disulfide	8.8	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	8.8	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	0.41	ug/kg	1.0	J	JQ	Yes	S4VEM
trans-1,2-Dichloroethene	8.8	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	8.8	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	8.8	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	8.8	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	18	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	8.8	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	1.4	ug/kg	1.0	J	JQ	Yes	S4VEM
1,1,1-Trichloroethane	8.8	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	8.8	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	1.9	ug/kg	1.0	J	JQ	Yes	S4VEM
Benzene	8.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	8.8	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	180	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	8.8	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	8.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	8.8	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	8.8	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	8.8	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	8.8	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	18	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	8.8	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	8.8	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	8.8	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	8.8	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	18	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	8.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	8.8	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	8.8	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	8.8	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	8.8	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	8.8	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	8.8	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	8.8	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	8.8	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	8.8	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	8.8	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	8.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	8.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	8.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	8.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	8.8	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: JGFK6	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB12SB28.5	pH:	Sample Date: 04/24/2014	Sample Time: 11:14:00
% Moisture : 32.321		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	14	ug/kg	1.0	JB	U	Yes	S4VEM
Carbon disulfide	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	0.63	ug/kg	1.0	J	JQ	Yes	S4VEM
trans-1,2-Dichloroethene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	14	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	0.19	ug/kg	1.0	J	JQ	Yes	S4VEM
Benzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	140	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	7.0	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	14	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	14	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: JGFK7	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB13SB14	pH:	Sample Date: 04/24/2014	Sample Time: 14:15:00
% Moisture : 30.722		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	14	ug/kg	1.0	JB	U	Yes	S4VEM
Carbon disulfide	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	0.40	ug/kg	1.0	J	JQ	Yes	S4VEM
trans-1,2-Dichloroethene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	14	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	1.2	ug/kg	1.0	J	JQ	Yes	S4VEM
Benzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	140	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	7.0	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	14	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	14	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: JGFK8	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB13SB20	pH:	Sample Date: 04/24/2014	Sample Time: 14:33:00
% Moisture : 37.264		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	8.2	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	8.2	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	8.2	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	8.2	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	8.2	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	8.2	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	8.2	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	8.2	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	16	ug/kg	1.0	JB	U	Yes	S4VEM
Carbon disulfide	8.2	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	8.2	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	0.45	ug/kg	1.0	J	JQ	Yes	S4VEM
trans-1,2-Dichloroethene	8.2	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	8.2	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	8.2	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	8.2	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	16	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	8.2	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	2.2	ug/kg	1.0	J	JQ	Yes	S4VEM
1,1,1-Trichloroethane	8.2	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	8.2	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	4.1	ug/kg	1.0	J	JQ	Yes	S4VEM
Benzene	8.2	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	8.2	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	160	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	8.2	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	8.2	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	8.2	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	8.2	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	8.2	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	8.2	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	16	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	0.17	ug/kg	1.0	J	JQ	Yes	S4VEM
trans-1,3-Dichloropropene	8.2	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	8.2	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	8.2	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	16	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	8.2	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	8.2	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	8.2	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	8.2	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	8.2	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	8.2	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	8.2	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	8.2	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	8.2	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	8.2	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	8.2	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	8.2	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	8.2	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	8.2	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	8.2	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	8.2	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: JGFK9	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB13SB27.5	pH:	Sample Date: 04/24/2014	Sample Time: 14:44:00
% Moisture : 33.705		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	14	ug/kg	1.0	JB	U	Yes	S4VEM
Carbon disulfide	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	0.43	ug/kg	1.0	J	JQ	Yes	S4VEM
trans-1,2-Dichloroethene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	14	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	3.0	ug/kg	1.0	J	JQ	Yes	S4VEM
1,1,1-Trichloroethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	4.9	ug/kg	1.0	J	JQ	Yes	S4VEM
Benzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	140	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	7.0	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	14	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	14	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	7.0	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	7.0	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: JGFL0	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB13SB21.2	pH:	Sample Date: 04/24/2014	Sample Time: 15:13:00
% Moisture: 37.169		% Solids:	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	7.9	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	7.9	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	7.9	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	7.9	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	7.9	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	7.9	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	7.9	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	7.9	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	16	ug/kg	1.0	JB	U	Yes	S4VEM
Carbon disulfide	7.9	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	7.9	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	7.9	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	7.9	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	7.9	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	7.9	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	7.9	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	16	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	7.9	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	4.4	ug/kg	1.0	J	JQ	Yes	S4VEM
1,1,1-Trichloroethane	7.9	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	7.9	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	9.7	ug/kg	1.0			Yes	S4VEM
Benzene	7.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	7.9	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	160	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	7.9	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	7.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	7.9	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	7.9	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	7.9	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	7.9	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	16	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	7.9	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	7.9	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	7.9	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	7.9	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	16	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	7.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	7.9	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	7.9	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	7.9	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	7.9	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	7.9	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	7.9	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	7.9	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	7.9	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	7.9	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	7.9	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	7.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	7.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	7.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	7.9	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	7.9	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: JGFL1	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB13SB23	pH:	Sample Date: 04/24/2014	Sample Time: 15:15:00
% Moisture : 32.568		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	14	ug/kg	1.0	JB	U	Yes	S4VEM
Carbon disulfide	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	0.23	ug/kg	1.0	J	JQ	Yes	S4VEM
trans-1,2-Dichloroethene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	14	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	3.7	ug/kg	1.0	J	JQ	Yes	S4VEM
1,1,1-Trichloroethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	7.1	ug/kg	1.0	J	JQ	Yes	S4VEM
Benzene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	140	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	7.1	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	14	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	14	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	7.1	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	7.1	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	7.1	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: JGFL2	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB13SB30	pH:	Sample Date: 04/24/2014	Sample Time: 15:43:00
% Moisture : 34.346		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	15	ug/kg	1.0	JB	U	Yes	S4VEM
Carbon disulfide	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	7.3	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	15	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	6.6	ug/kg	1.0	J	JQ	Yes	S4VEM
1,1,1-Trichloroethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	15	ug/kg	1.0			Yes	S4VEM
Benzene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	150	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	7.3	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	15	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	15	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	7.3	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	7.3	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	7.3	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: JGFL5	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB14SB18	pH:	Sample Date: 04/24/2014	Sample Time: 17:10:00
% Moisture : 33.525		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	16	ug/kg	1.0	JB	U	Yes	S4VEM
Carbon disulfide	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	0.26	ug/kg	1.0	J	JQ	Yes	S4VEM
trans-1,2-Dichloroethene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	16	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	8.5	ug/kg	1.0			Yes	S4VEM
1,1,1-Trichloroethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	6.8	ug/kg	1.0	J	JQ	Yes	S4VEM
Benzene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	160	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	7.8	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	16	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	16	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	7.8	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	7.8	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	7.8	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: JGFL6	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB14SB21.5	pH:	Sample Date: 04/24/2014	Sample Time: 17:30:00
% Moisture : 36.914		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	8.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	8.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	17	ug/kg	1.0	JB	U	Yes	S4VEM
Carbon disulfide	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	8.7	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	8.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	8.7	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	8.7	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	17	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	11	ug/kg	1.0			Yes	S4VEM
1,1,1-Trichloroethane	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	9.3	ug/kg	1.0			Yes	S4VEM
Benzene	8.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	8.7	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	170	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	8.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	8.7	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	8.7	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	8.7	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	17	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	8.7	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	8.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	8.7	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	17	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	8.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	8.7	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	8.7	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	8.7	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	8.7	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	8.7	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	8.7	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	8.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	8.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	8.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	8.7	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	8.7	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: JGFL7	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB14SB23.5	pH:	Sample Date: 04/24/2014	Sample Time: 17:19:00
% Moisture: 41.054		% Solids:	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	11	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	11	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	11	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	11	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	11	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	11	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	11	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	11	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	24	ug/kg	1.0	B	U	Yes	S4VEM
Carbon disulfide	11	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	11	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	0.31	ug/kg	1.0	J	JQ	Yes	S4VEM
trans-1,2-Dichloroethene	11	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	11	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	11	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	11	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	22	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	11	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	12	ug/kg	1.0			Yes	S4VEM
1,1,1-Trichloroethane	11	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	11	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	9.8	ug/kg	1.0	J	JQ	Yes	S4VEM
Benzene	11	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	11	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	220	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	11	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	11	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	11	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	11	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	11	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	11	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	22	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	11	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	11	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	11	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	11	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	22	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	11	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	11	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	11	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	11	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	11	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	11	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	11	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	11	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	11	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	11	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	11	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	11	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	11	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	11	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	11	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	11	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: JGFL8	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location: SB14SB28	pH:	Sample Date: 04/24/2014	Sample Time: 17:41:00
% Moisture : 23.341		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.6	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	5.6	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	5.6	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	5.6	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	5.6	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	5.6	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	5.6	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	5.6	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	13	ug/kg	1.0	B	U	Yes	S4VEM
Carbon disulfide	5.6	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	5.6	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	0.49	ug/kg	1.0	J	JQ	Yes	S4VEM
trans-1,2-Dichloroethene	5.6	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	5.6	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	5.6	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	5.6	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	11	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	5.6	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	0.50	ug/kg	1.0	J	JQ	Yes	S4VEM
1,1,1-Trichloroethane	5.6	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	5.6	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	0.27	ug/kg	1.0	J	JQ	Yes	S4VEM
Benzene	5.6	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	5.6	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	110	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	5.6	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	5.6	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	5.6	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	5.6	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.6	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	5.6	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	11	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	5.6	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	5.6	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	5.6	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	5.6	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	11	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	5.6	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	5.6	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	5.6	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	5.6	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	5.6	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	5.6	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	5.6	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	5.6	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	5.6	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	5.6	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	5.6	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	5.6	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	5.6	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	5.6	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	5.6	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	5.6	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: PBLKS1	Method: Pest	Matrix: Soil	MA Number: DEFAULT
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture : 0.0		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
alpha-BHC	1.7	ug/kg	1.0	U	U	Yes	S4VEM
beta-BHC	1.7	ug/kg	1.0	U	U	Yes	S4VEM
delta-BHC	1.7	ug/kg	1.0	U	U	Yes	S4VEM
gamma-BHC (Lindane)	1.7	ug/kg	1.0	U	U	Yes	S4VEM
Heptachlor	1.7	ug/kg	1.0	U	U	Yes	S4VEM
Aldrin	1.7	ug/kg	1.0	U	U	Yes	S4VEM
Heptachlor epoxide	1.7	ug/kg	1.0	U	U	Yes	S4VEM
Endosulfan I	1.7	ug/kg	1.0	U	U	Yes	S4VEM
Dieldrin	3.3	ug/kg	1.0	U	U	Yes	S4VEM
4,4'-DDE	3.3	ug/kg	1.0	U	U	Yes	S4VEM
Endrin	3.3	ug/kg	1.0	U	U	Yes	S4VEM
Endosulfan II	3.3	ug/kg	1.0	U	U	Yes	S4VEM
4,4'-DDD	3.3	ug/kg	1.0	U	U	Yes	S4VEM
Endosulfan sulfate	3.3	ug/kg	1.0	U	U	Yes	S4VEM
4,4'-DDT	3.3	ug/kg	1.0	U	U	Yes	S4VEM
Methoxychlor	17	ug/kg	1.0	U	U	Yes	S4VEM
Endrin ketone	3.3	ug/kg	1.0	U	U	Yes	S4VEM
Endrin aldehyde	3.3	ug/kg	1.0	U	U	Yes	S4VEM
alpha-Chlordane	1.7	ug/kg	1.0	U	U	Yes	S4VEM
gamma-Chlordane	1.7	ug/kg	1.0	U	U	Yes	S4VEM
Toxaphene	170	ug/kg	1.0	U	U	Yes	S4VEM

Case No:	44315	Contract:	EPW11037	SDG No:	JGFJ2	Lab Code:	DATAC
Sample Number:	PLCSS1	Method:	Pest	Matrix:	Soil	MA Number:	DEFAULT
Sample Location:		pH:		Sample Date:		Sample Time:	
% Moisture :	0.0			% Solids :			

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
gamma-BHC (Lindane)	1.2	ug/kg	1.0	J	J	Yes	S4VEM
alpha-BHC	1.7	ug/kg	1.0	U	U	Yes	S4VEM
beta-BHC	1.7	ug/kg	1.0	U	U	Yes	S4VEM
delta-BHC	1.7	ug/kg	1.0	U	U	Yes	S4VEM
Dieldrin	2.3	ug/kg	1.0	JP	J	Yes	S4VEM
Heptachlor	1.7	ug/kg	1.0	U	U	Yes	S4VEM
Endrin	2.1	ug/kg	1.0	J	J	Yes	S4VEM
Aldrin	1.7	ug/kg	1.0	U	U	Yes	S4VEM
Heptachlor epoxide	1.2	ug/kg	1.0	J	J	Yes	S4VEM
4,4'-DDE	2.5	ug/kg	1.0	JP	J	Yes	S4VEM
Endosulfan I	1.7	ug/kg	1.0	U	U	Yes	S4VEM
Endosulfan sulfate	2.1	ug/kg	1.0	J	J	Yes	S4VEM
gamma-Chlordane	1.3	ug/kg	1.0	J	J	Yes	S4VEM
Endosulfan II	3.3	ug/kg	1.0	U	U	Yes	S4VEM
4,4'-DDD	3.3	ug/kg	1.0	U	U	Yes	S4VEM
4,4'-DDT	3.3	ug/kg	1.0	U	U	Yes	S4VEM
Methoxychlor	17	ug/kg	1.0	U	U	Yes	S4VEM
Endrin ketone	3.3	ug/kg	1.0	U	U	Yes	S4VEM
Endrin aldehyde	3.3	ug/kg	1.0	U	U	Yes	S4VEM
alpha-Chlordane	1.7	ug/kg	1.0	U	U	Yes	S4VEM
Toxaphene	170	ug/kg	1.0	U	U	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: VBLKS1	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture : 0.0		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	5.3	ug/kg	1.0	J	J	Yes	S4VEM
Carbon disulfide	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	5.0	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Benzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	100	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	5.0	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	0.43	ug/kg	1.0	J	J	Yes	S4VEM
Bromoform	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	0.36	ug/kg	1.0	J	J	Yes	S4VEM
1,4-Dichlorobenzene	0.45	ug/kg	1.0	J	J	Yes	S4VEM
1,2-Dichlorobenzene	0.38	ug/kg	1.0	J	J	Yes	S4VEM
1,2-Dibromo-3-chloropropane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	0.48	ug/kg	1.0	J	J	Yes	S4VEM
1,2,3-Trichlorobenzene	0.72	ug/kg	1.0	J	J	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: VBLKS2	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture : 0.0		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	5.3	ug/kg	1.0	J	J	Yes	S4VEM
Carbon disulfide	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	5.0	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Benzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	100	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	5.0	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	0.31	ug/kg	1.0	J	J	Yes	S4VEM
Bromoform	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	0.33	ug/kg	1.0	J	J	Yes	S4VEM
1,4-Dichlorobenzene	0.41	ug/kg	1.0	J	J	Yes	S4VEM
1,2-Dichlorobenzene	0.36	ug/kg	1.0	J	J	Yes	S4VEM
1,2-Dibromo-3-chloropropane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	0.50	ug/kg	1.0	J	J	Yes	S4VEM
1,2,3-Trichlorobenzene	0.71	ug/kg	1.0	J	J	Yes	S4VEM

Case No: 44315	Contract: EPW11037	SDG No: JGFJ2	Lab Code: DATAC
Sample Number: VHBLKS1	Method: VOA_Low_Med	Matrix: Soil	MA Number: DEFAULT
Sample Location:	pH:	Sample Date:	Sample Time:
% Moisture : 0.0		% Solids :	

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
Dichlorodifluoro methane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloromethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Vinyl chloride	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromomethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Trichlorofluorom ethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloro-1,2,2-trifluoroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Acetone	9.1	ug/kg	1.0	JB	J	Yes	S4VEM
Carbon disulfide	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl acetate	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylene chloride	5.0	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,2-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methyl tert-butyl ether	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1-Dichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,2-Dichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Butanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Bromochloromet hane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chloroform	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,1-Trichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Cyclohexane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Carbon tetrachloride	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Benzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dioxane	100	ug/kg	1.0	U	R	Yes	S4VEM
Trichloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Methylcyclohexa ne	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichloropropane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromodichlorom	5.0	ug/kg	1.0	U	U	Yes	S4VEM

Analyte Name	Result	Units	Dilution Factor	Lab Flag	Validation	Reportable	Validation Level
ethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
cis-1,3-Dichloropropene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
4-Methyl-2-Pentanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Toluene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
trans-1,3-Dichloropropene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2-Trichloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Tetrachloroethene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
2-Hexanone	10	ug/kg	1.0	U	U	Yes	S4VEM
Dibromochloromethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromoethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Chlorobenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Ethylbenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
o-Xylene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
m,p-Xylene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Styrene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Bromoform	5.0	ug/kg	1.0	U	U	Yes	S4VEM
Isopropylbenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,1,2,2-Tetrachloroethane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,3-Dichlorobenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,4-Dichlorobenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dichlorobenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2-Dibromo-3-chloropropane	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2,4-Trichlorobenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM
1,2,3-Trichlorobenzene	5.0	ug/kg	1.0	U	U	Yes	S4VEM

National Functional Guidelines Report #06

Lab DATAC(ALS Environmental) **SDG** JGFJ2 **Case** 44315 **Contract** EPW11037 **Region** 10 **DDTID** 195531 **SOW** SOM01.2

Analytical Sample Listing

VOA_Low_Med

						Extraction		Analysis		
Sample Number	**Sample Type**	**Matrix**	**Level**	**Sampling Date**	**Date Received**	**Type**	**Date/Time**	**Date/Time**	**GC Column**	**Instrument**
JGFJ2	Field_Sample	Soil	Low	04222014 11:30:00	04262014 09:07:00			04302014 19:42:00	DB624	5972-S
JGFJ2MS	Matrix_Spike	Soil	Low	04222014 11:30:00	04262014 09:07:00			04302014 20:12:00	DB624	5972-S
JGFJ2MSD	Matrix_Spike_Duplicate	Soil	Low	04222014 11:30:00	04262014 09:07:00			04302014 20:43:00	DB624	5972-S
JGFJ3	Field_Sample	Soil	Low	04222014 11:43:00	04262014 09:07:00			04302014 21:14:00	DB624	5972-S
JGFJ9	Field_Sample	Soil	Low	04232014 15:21:00	04262014 09:07:00			04302014 21:44:00	DB624	5972-S
JGFK0	Field_Sample	Soil	Low	04232014 15:07:00	04262014 09:07:00			04302014 22:15:00	DB624	5972-S
JGFK1	Field_Sample	Soil	Low	04232014 15:50:00	04262014 09:07:00			04302014 22:45:00	DB624	5972-S
JGFK2	Field_Sample	Soil	Low	04232014 15:59:00	04262014 09:07:00			04302014 23:16:00	DB624	5972-S
JGFK3	Field_Sample	Soil	Low	04232014 16:27:00	04262014 09:07:00			05012014 00:08:00	DB624	5972-S
JGFK4	Field_Sample	Soil	Low	04242014 10:41:00	04262014 09:07:00			05012014 00:39:00	DB624	5972-S
JGFK5	Field_Sample	Soil	Low	04242014 10:43:00	04262014 09:07:00			05012014 17:50:00	DB624	5972-S
JGFK6	Field_Sample	Soil	Low	04242014 11:14:00	04262014 09:07:00			05012014 18:21:00	DB624	5972-S
JGFK7	Field_Sample	Soil	Low	04242014 14:15:00	04262014 09:07:00			05012014 18:52:00	DB624	5972-S
JGFK8	Field_Sample	Soil	Low	04242014 14:33:00	04262014 09:07:00			05012014 19:23:00	DB624	5972-S
JGFK9	Field_Sample	Soil	Low	04242014 14:44:00	04262014 09:07:00			05012014 19:53:00	DB624	5972-S
JGFL0	Field_Sample	Soil	Low	04242014 15:13:00	04262014 09:07:00			05012014 20:23:00	DB624	5972-S
JGFL1	Field_Sample	Soil	Low	04242014 15:15:00	04262014 09:07:00			05012014 20:54:00	DB624	5972-S
JGFL2	Field_Sample	Soil	Low	04242014 15:43:00	04262014 09:07:00			05012014 21:25:00	DB624	5972-S
JGFL5	Field_Sample	Soil	Low	04242014 17:10:00	04262014 09:07:00			05012014 21:55:00	DB624	5972-S
JGFL6	Field_Sample	Soil	Low	04242014 17:30:00	04262014 09:07:00			05012014 22:26:00	DB624	5972-S
JGFL7	Field_Sample	Soil	Low	04242014 17:19:00	04262014 09:07:00			05012014 22:57:00	DB624	5972-S
JGFL8	Field_Sample	Soil	Low	04242014 17:41:00	04262014 09:07:00			05012014 23:27:00	DB624	5972-S

National Functional Guidelines Report #06

Lab DATAC(ALS Environmental) **SDG** JGFJ2 **Case** 44315 **Contract** EPW11037 **Region** 10 **DDTID** 195531 **SOW** SOM01.2

Analytical Sample Listing

Pest

						Extraction		Analysis		
Sample Number	**Sample Type**	**Matrix**	**Level**	**Sampling Date**	**Date Received**	**Type**	**Date/Time**	**Date/Time**	**GC Column**	**Instrument**
JGFJ9	Field_Sample	Soil		04232014 15:21:00	04262014 09:07:00	Sonication	05052014 14:30:00	05122014 19:23:00	RTXCLP	GCE21
JGFJ9	Field_Sample	Soil		04232014 15:21:00	04262014 09:07:00	Sonication	05052014 14:30:00	05122014 19:56:00	RTXCLP2	GCE21

Edit History Report

Case No: 44315 Contract: EPW11037 SDG No: JGFJ2 Lab Code: DATAC

Method: VOA_Low_Med

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFJ2	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
JGFJ2	Soil	1,1,1-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	1,1,2,2-Tetrachloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	1,1,2-Trichloro-1,2,2-trifluoroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	1,1,2-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	1,1-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	1,1-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	1,2,3-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	1,2,4-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	1,2-Dibromo-3-chloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	1,2-Dibromoethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	1,2-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	1,2-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	1,2-Dichloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	1,3-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	1,4-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	2-Butanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	2-Hexanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	4-Methyl-2-Pentanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Acetone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Benzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Bromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Bromodichloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Bromoform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Bromomethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Carbon disulfide	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Carbon tetrachloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Chlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Chloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Chloroform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Chloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Cyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Dibromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Dichlorodifluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Ethylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Isopropylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFJ2	Soil	Methyl acetate	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Methyl tert-butyl ether	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Methylcyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Methylene chloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Styrene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Tetrachloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Toluene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Trichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Trichlorofluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	Vinyl chloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	cis-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	cis-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	m,p-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	o-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	trans-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2	Soil	trans-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:05 PM	
JGFJ2MS	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
JGFJ2MSD	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
JGFJ3	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
JGFJ3	Soil	1,1,1-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	1,1,2,2-Tetrachloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	1,1,2-Trichloro-1,2,2-trifluoroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	1,1,2-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	1,1-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	1,1-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	1,2,3-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	1,2,4-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	1,2-Dibromo-3-chloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	1,2-Dibromoethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	1,2-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	1,2-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	1,2-Dichloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	1,3-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	1,4-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	2-Butanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	2-Hexanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	4-Methyl-2-Pentanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Acetone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Benzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Bromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Bromodichloromethane	Validation	UJ	U	Donald	5/27/14 6:08 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFJ3	Soil	Bromodichloromethane	Flag	UJ	U	Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Bromoform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Bromomethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Carbon disulfide	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Carbon tetrachloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Chlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Chloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Chloroform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Chloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Cyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Dibromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Dichlorodifluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Ethylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Isopropylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Methyl acetate	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Methyl tert-butyl ether	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Methylcyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Methylene chloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Styrene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Tetrachloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Toluene	Validation Flag	J	JQ	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Trichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Trichlorofluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	Vinyl chloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	cis-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	cis-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	m,p-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	o-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	trans-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ3	Soil	trans-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:08 PM	
JGFJ9	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
JGFJ9	Soil	1,1,1-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	1,1,2,2-Tetrachloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	1,1,2-Trichloro-1,2,2-trifluoroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	1,1,2-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	1,1-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	1,1-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	1,2,3-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	1,2,4-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	1,2-Dibromo-3-chloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	1,2-Dibromoethane	Validation	UJ	U	Donald	5/27/14 6:11 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFJ9	Soil	1,2-Dibromoethane	Flag	UJ	U	Brown	5/27/14 6:11 PM	
JGFJ9	Soil	1,2-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	1,2-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	1,2-Dichloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	1,3-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	1,4-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	2-Butanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	2-Hexanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	4-Methyl-2-Pentanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Acetone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Benzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Bromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Bromodichloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Bromoform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Bromomethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Carbon disulfide	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Carbon tetrachloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Chlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Chloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Chloroform	Validation Flag	J	JQ	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Chloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Cyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Dibromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Dichlorodifluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Ethylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Isopropylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Methyl acetate	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Methyl tert-butyl ether	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Methylcyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Methylene chloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Styrene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Tetrachloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Toluene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Trichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Trichlorofluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	Vinyl chloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	cis-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	cis-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	m,p-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	o-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFJ9	Soil	trans-1,2-Dichloroethene	Validation	UJ	U	Donald	5/27/14 6:11 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFJ9	Soil	trans-1,2-Dichloroethene	Flag	UJ	U	Brown	5/27/14 6:11 PM	
JGFJ9	Soil	trans-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:11 PM	
JGFK0	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
JGFK0	Soil	1,1,1-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	1,1,2,2-Tetrachloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	1,1,2-Trichloro-1,2,2-trifluoroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	1,1,2-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	1,1-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	1,1-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	1,2,3-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	1,2,4-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	1,2-Dibromo-3-chloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	1,2-Dibromoethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	1,2-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	1,2-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	1,2-Dichloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	1,3-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	1,4-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	2-Butanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	2-Hexanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	4-Methyl-2-Pentanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Acetone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Benzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Bromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Bromodichloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Bromoform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Bromomethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Carbon disulfide	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Carbon tetrachloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Chlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Chloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Chloroform	Validation Flag	J	JQ	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Chloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Cyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Dibromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Dichlorodifluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Ethylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Isopropylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Methyl acetate	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Methyl tert-butyl ether	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Methylcyclohexane	Validation	UJ	U	Donald	5/27/14 6:12 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFK0	Soil	Methylcyclohexane	Flag	UJ	U	Brown	5/27/14 6:12 PM	
JGFK0	Soil	Methylene chloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Styrene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Tetrachloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Toluene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Trichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Trichlorofluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	Vinyl chloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	cis-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	cis-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	m,p-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	o-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	trans-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK0	Soil	trans-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:12 PM	
JGFK1	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
JGFK1	Soil	1,1,1-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	1,1,2,2-Tetrachloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	1,1,2-Trichloro-1,2,2-trifluoroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	1,1,2-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	1,1-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	1,1-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	1,2,3-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	1,2,4-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	1,2-Dibromo-3-chloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	1,2-Dibromoethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	1,2-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	1,2-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	1,2-Dichloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	1,3-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	1,4-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	2-Butanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	2-Hexanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	4-Methyl-2-Pentanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Acetone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Benzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Bromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Bromodichloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Bromoform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Bromomethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Carbon disulfide	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Carbon tetrachloride	Validation	J	JQ	Donald	5/27/14 6:15 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFK1	Soil	Carbon tetrachloride	Flag	J	JQ	Brown	5/27/14 6:15 PM	
JGFK1	Soil	Chlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Chloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Chloroform	Validation Flag	J	JQ	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Chloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Cyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Dibromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Dichlorodifluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Ethylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Isopropylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Methyl acetate	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Methyl tert-butyl ether	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Methylcyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Methylene chloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Styrene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Tetrachloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Toluene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Trichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Trichlorofluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	Vinyl chloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	cis-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	cis-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	m,p-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	o-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	trans-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK1	Soil	trans-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:15 PM	
JGFK2	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
JGFK2	Soil	1,1,1-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	1,1,2,2-Tetrachloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	1,1,2-Trichloro-1,2,2-trifluoroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	1,1,2-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	1,1-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	1,1-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	1,2,3-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	1,2,4-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	1,2-Dibromo-3-chloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	1,2-Dibromoethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	1,2-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	1,2-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	1,2-Dichloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	1,3-Dichlorobenzene	Validation	UJ	U	Donald	5/27/14 6:16 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFK2	Soil	1,3-Dichlorobenzene	Flag	UJ	U	Brown	5/27/14 6:16 PM	
JGFK2	Soil	1,4-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	2-Butanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	2-Hexanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	4-Methyl-2-Pentanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Acetone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:17 PM	
JGFK2	Soil	Benzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Bromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Bromodichloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Bromoform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Bromomethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Carbon disulfide	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Carbon tetrachloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Chlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Chloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Chloroform	Validation Flag	J	JQ	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Chloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Cyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Dibromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Dichlorodifluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Ethylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Isopropylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Methyl acetate	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Methyl tert-butyl ether	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Methylcyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Methylene chloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Styrene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Tetrachloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Toluene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Trichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Trichlorofluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	Vinyl chloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	cis-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	cis-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	m,p-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	o-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	trans-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK2	Soil	trans-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:16 PM	
JGFK3	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
JGFK3	Soil	1,1,1-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	1,1,2,2-Tetrachloroethane	Validation	UJ	U	Donald	5/27/14 6:22 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFK3	Soil	1,1,2,2-Tetrachloroethane	Flag	UJ	U	Brown	5/27/14 6:22 PM	
JGFK3	Soil	1,1,2-Trichloro-1,2,2-trifluoroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	1,1,2-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	1,1-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	1,1-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	1,2,3-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	1,2,4-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	1,2-Dibromo-3-chloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	1,2-Dibromoethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	1,2-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	1,2-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	1,2-Dichloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	1,3-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	1,4-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	2-Butanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	2-Hexanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	4-Methyl-2-Pentanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Acetone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Benzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Bromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Bromodichloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Bromoform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Bromomethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Carbon disulfide	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Carbon tetrachloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Chlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Chloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Chloroform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Chloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Cyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Dibromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Dichlorodifluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Ethylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Isopropylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Methyl acetate	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Methyl tert-butyl ether	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Methylcyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Methylene chloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Styrene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Tetrachloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Toluene	Validation	UJ	U	Donald	5/27/14 6:22 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFK3	Soil	Toluene	Flag	UJ	U	Brown	5/27/14 6:22 PM	
JGFK3	Soil	Trichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Trichlorofluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	Vinyl chloride	Validation Flag	UJ	UJK	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	cis-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	cis-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	m,p-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	o-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	trans-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK3	Soil	trans-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:22 PM	
JGFK4	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
JGFK4	Soil	1,1,1-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	1,1,2,2-Tetrachloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	1,1,2-Trichloro-1,2,2-trifluoroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	1,1,2-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	1,1-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	1,1-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	1,2,3-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	1,2,4-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	1,2-Dibromo-3-chloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	1,2-Dibromoethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	1,2-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	1,2-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	1,2-Dichloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	1,3-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	1,4-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	2-Butanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	2-Hexanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	4-Methyl-2-Pentanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Acetone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Benzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Bromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Bromodichloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Bromoform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Bromomethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Carbon disulfide	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Carbon tetrachloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Chlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Chloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Chloroform	Validation Flag	J	JQ	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Chloromethane	Validation	UJ	U	Donald	5/27/14 6:24 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFK4	Soil	Chloromethane	Flag	UJ	U	Brown	5/27/14 6:24 PM	
JGFK4	Soil	Cyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Dibromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Dichlorodifluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Ethylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Isopropylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Methyl acetate	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Methyl tert-butyl ether	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Methylcyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Methylene chloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Styrene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Tetrachloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Toluene	Validation Flag	J	JQ	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Trichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Trichlorofluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	Vinyl chloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	cis-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	cis-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	m,p-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	o-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	trans-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK4	Soil	trans-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:24 PM	
JGFK5	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
JGFK5	Soil	1,1,1-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	1,1,2,2-Tetrachloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	1,1,2-Trichloro-1,2,2-trifluoroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	1,1,2-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	1,1-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	1,1-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	1,2,3-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	1,2,4-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	1,2-Dibromo-3-chloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	1,2-Dibromoethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	1,2-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	1,2-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	1,2-Dichloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	1,3-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	1,4-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	2-Butanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	2-Hexanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	4-Methyl-2-Pentanone	Validation	UJ	U	Donald	5/27/14 6:26 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFK5	Soil	4-Methyl-2-Pentanone	Flag	UJ	U	Brown	5/27/14 6:26 PM	
JGFK5	Soil	Acetone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Benzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Bromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Bromodichloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Bromoform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Bromomethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Carbon disulfide	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Carbon tetrachloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Chlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Chloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Chloroform	Validation Flag	J	JQ	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Chloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Cyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Dibromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Dichlorodifluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Ethylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Isopropylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Methyl acetate	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Methyl tert-butyl ether	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Methylcyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Methylene chloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Styrene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Tetrachloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Toluene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Trichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Trichlorofluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	Vinyl chloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	cis-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	cis-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	m,p-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	o-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	trans-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK5	Soil	trans-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:26 PM	
JGFK6	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
JGFK6	Soil	1,1,1-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	1,1,2,2-Tetrachloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	1,1,2-Trichloro-1,2,2-trifluoroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	1,1,2-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	1,1-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	1,1-Dichloroethene	Validation	UJ	U	Donald	5/27/14 6:28 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFK6	Soil	1,1-Dichloroethene	Flag	UJ	U	Brown	5/27/14 6:28 PM	
JGFK6	Soil	1,2,3-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	1,2,4-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	1,2-Dibromo-3-chloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	1,2-Dibromoethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	1,2-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	1,2-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	1,2-Dichloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	1,3-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	1,4-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	2-Butanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	2-Hexanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	4-Methyl-2-Pentanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Acetone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Benzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Bromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Bromodichloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Bromoform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Bromomethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Carbon disulfide	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Carbon tetrachloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Chlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Chloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Chloroform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Chloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Cyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Dibromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Dichlorodifluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Ethylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Isopropylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Methyl acetate	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Methyl tert-butyl ether	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Methylcyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Methylene chloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Styrene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Tetrachloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Toluene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Trichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Trichlorofluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	Vinyl chloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	cis-1,2-Dichloroethene	Validation	UJ	U	Donald	5/27/14 6:28 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFK6	Soil	cis-1,2-Dichloroethene	Flag	UJ	U	Brown	5/27/14 6:28 PM	
JGFK6	Soil	cis-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	m,p-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	o-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	trans-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK6	Soil	trans-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:28 PM	
JGFK7	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
JGFK7	Soil	1,1,1-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	1,1,2,2-Tetrachloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	1,1,2-Trichloro-1,2,2-trifluoroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	1,1,2-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	1,1-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	1,1-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	1,2,3-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	1,2,4-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	1,2-Dibromo-3-chloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	1,2-Dibromoethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	1,2-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	1,2-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	1,2-Dichloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	1,3-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	1,4-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	2-Butanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	2-Hexanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	4-Methyl-2-Pentanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Acetone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Benzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Bromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Bromodichloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Bromoform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Bromomethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Carbon disulfide	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Carbon tetrachloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Chlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Chloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Chloroform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Chloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Cyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Dibromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Dichlorodifluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Ethylbenzene	Validation	UJ	U	Donald	5/27/14 6:29 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFK7	Soil	Ethylbenzene	Flag	UJ	U	Brown	5/27/14 6:29 PM	
JGFK7	Soil	Isopropylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Methyl acetate	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Methyl tert-butyl ether	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Methylcyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Methylene chloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Styrene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Tetrachloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Toluene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Trichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Trichlorofluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	Vinyl chloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	cis-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	cis-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	m,p-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	o-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	trans-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK7	Soil	trans-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:29 PM	
JGFK8	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
JGFK8	Soil	1,1,1-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	1,1,2,2-Tetrachloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	1,1,2-Trichloro-1,2,2-trifluoroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	1,1,2-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	1,1-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	1,1-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	1,2,3-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	1,2,4-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	1,2-Dibromo-3-chloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	1,2-Dibromoethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	1,2-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	1,2-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	1,2-Dichloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	1,3-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	1,4-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	2-Butanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	2-Hexanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	4-Methyl-2-Pentanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Acetone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Benzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Bromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Bromodichloromethane	Validation	UJ	U	Donald	5/27/14 6:31 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFK8	Soil	Bromodichloromethane	Flag	UJ	U	Brown	5/27/14 6:31 PM	
JGFK8	Soil	Bromoform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Bromomethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Carbon disulfide	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Carbon tetrachloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Chlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Chloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Chloroform	Validation Flag	J	JQ	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Chloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Cyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Dibromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Dichlorodifluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Ethylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Isopropylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Methyl acetate	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Methyl tert-butyl ether	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Methylcyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Methylene chloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Styrene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Tetrachloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Toluene	Validation Flag	J	JQ	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Trichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Trichlorofluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	Vinyl chloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	cis-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	cis-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	m,p-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	o-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	trans-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK8	Soil	trans-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:31 PM	
JGFK9	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
JGFK9	Soil	1,1,1-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	1,1,2,2-Tetrachloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	1,1,2-Trichloro-1,2,2-trifluoroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	1,1,2-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	1,1-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	1,1-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	1,2,3-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	1,2,4-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	1,2-Dibromo-3-chloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	1,2-Dibromoethane	Validation	UJ	U	Donald	5/27/14 6:33 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFK9	Soil	1,2-Dibromoethane	Flag	UJ	U	Brown	5/27/14 6:33 PM	
JGFK9	Soil	1,2-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	1,2-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	1,2-Dichloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	1,3-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	1,4-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	2-Butanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	2-Hexanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	4-Methyl-2-Pentanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Acetone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Benzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Bromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Bromodichloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Bromoform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Bromomethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Carbon disulfide	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Carbon tetrachloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Chlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Chloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Chloroform	Validation Flag	J	JQ	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Chloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Cyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Dibromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Dichlorodifluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Ethylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Isopropylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Methyl acetate	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Methyl tert-butyl ether	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Methylcyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Methylene chloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Styrene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Tetrachloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Toluene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Trichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Trichlorofluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	Vinyl chloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	cis-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	cis-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	m,p-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	o-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFK9	Soil	trans-1,2-Dichloroethene	Validation	UJ	U	Donald	5/27/14 6:33 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFK9	Soil	trans-1,2-Dichloroethene	Flag	UJ	U	Brown	5/27/14 6:33 PM	
JGFK9	Soil	trans-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:33 PM	
JGFL0	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
JGFL0	Soil	1,1,1-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	1,1,2,2-Tetrachloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	1,1,2-Trichloro-1,2,2-trifluoroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	1,1,2-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	1,1-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	1,1-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	1,2,3-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	1,2,4-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	1,2-Dibromo-3-chloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	1,2-Dibromoethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	1,2-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	1,2-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	1,2-Dichloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	1,3-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	1,4-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	2-Butanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	2-Hexanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	4-Methyl-2-Pentanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Acetone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Benzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Bromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Bromodichloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Bromoform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Bromomethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Carbon disulfide	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Carbon tetrachloride	Validation Flag	J		Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Chlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Chloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Chloroform	Validation Flag	J	JQ	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Chloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Cyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Dibromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Dichlorodifluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Ethylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Isopropylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Methyl acetate	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Methyl tert-butyl ether	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Methylcyclohexane	Validation	UJ	U	Donald	5/27/14 6:35 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFL0	Soil	Methylcyclohexane	Flag	UJ	U	Brown	5/27/14 6:35 PM	
JGFL0	Soil	Methylene chloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Styrene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Tetrachloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Toluene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Trichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Trichlorofluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	Vinyl chloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	cis-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	cis-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	m,p-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	o-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	trans-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL0	Soil	trans-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:35 PM	
JGFL1	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
JGFL1	Soil	1,1,1-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	1,1,2,2-Tetrachloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	1,1,2-Trichloro-1,2,2-trifluoroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	1,1,2-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	1,1-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	1,1-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	1,2,3-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	1,2,4-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	1,2-Dibromo-3-chloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	1,2-Dibromoethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	1,2-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	1,2-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	1,2-Dichloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	1,3-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	1,4-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	2-Butanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	2-Hexanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	4-Methyl-2-Pentanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Acetone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Benzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Bromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Bromodichloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Bromoform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Bromomethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Carbon disulfide	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Carbon tetrachloride	Validation	J	JQ	Donald	5/27/14 6:36 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFL1	Soil	Carbon tetrachloride	Flag	J	JQ	Brown	5/27/14 6:36 PM	
JGFL1	Soil	Chlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Chloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Chloroform	Validation Flag	J	JQ	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Chloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Cyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Dibromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Dichlorodifluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Ethylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Isopropylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Methyl acetate	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Methyl tert-butyl ether	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Methylcyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Methylene chloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Styrene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Tetrachloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Toluene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Trichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Trichlorofluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	Vinyl chloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	cis-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	cis-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	m,p-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	o-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	trans-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL1	Soil	trans-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:36 PM	
JGFL2	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
JGFL2	Soil	1,1,1-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	1,1,2,2-Tetrachloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	1,1,2-Trichloro-1,2,2-trifluoroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	1,1,2-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	1,1-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	1,1-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	1,2,3-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	1,2,4-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	1,2-Dibromo-3-chloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	1,2-Dibromoethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	1,2-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	1,2-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	1,2-Dichloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	1,3-Dichlorobenzene	Validation	UJ	U	Donald	5/27/14 6:38 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFL2	Soil	1,3-Dichlorobenzene	Flag	UJ	U	Brown	5/27/14 6:38 PM	
JGFL2	Soil	1,4-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	2-Butanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	2-Hexanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	4-Methyl-2-Pentanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Acetone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Benzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Bromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Bromodichloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Bromoform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Bromomethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Carbon disulfide	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Carbon tetrachloride	Validation Flag	J		Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Chlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Chloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Chloroform	Validation Flag	J	JQ	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Chloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Cyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Dibromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Dichlorodifluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Ethylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Isopropylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Methyl acetate	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Methyl tert-butyl ether	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Methylcyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Methylene chloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Styrene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Tetrachloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Toluene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Trichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Trichlorofluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	Vinyl chloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	cis-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	cis-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	m,p-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	o-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	trans-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL2	Soil	trans-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:38 PM	
JGFL5	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
JGFL5	Soil	1,1,1-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	1,1,2,2-Tetrachloroethane	Validation	UJ	U	Donald	5/27/14 6:41 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFL5	Soil	1,1,2,2-Tetrachloroethane	Flag	UJ	U	Brown	5/27/14 6:41 PM	
JGFL5	Soil	1,1,2-Trichloro-1,2,2-trifluoroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	1,1,2-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	1,1-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	1,1-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	1,2,3-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	1,2,4-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	1,2-Dibromo-3-chloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	1,2-Dibromoethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	1,2-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	1,2-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	1,2-Dichloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	1,3-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	1,4-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	2-Butanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	2-Hexanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	4-Methyl-2-Pentanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Acetone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Benzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Bromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Bromodichloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Bromoform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Bromomethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Carbon disulfide	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Carbon tetrachloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Chlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Chloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Chloroform	Validation Flag	J		Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Chloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Cyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Dibromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Dichlorodifluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Ethylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Isopropylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Methyl acetate	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Methyl tert-butyl ether	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Methylcyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Methylene chloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Styrene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Tetrachloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Toluene	Validation	UJ	U	Donald	5/27/14 6:41 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFL5	Soil	Toluene	Flag	UJ	U	Brown	5/27/14 6:41 PM	
JGFL5	Soil	Trichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Trichlorofluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	Vinyl chloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	cis-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	cis-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	m,p-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	o-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	trans-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL5	Soil	trans-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:41 PM	
JGFL6	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
JGFL6	Soil	1,1,1-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	1,1,2,2-Tetrachloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	1,1,2-Trichloro-1,2,2-trifluoroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	1,1,2-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	1,1-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	1,1-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	1,2,3-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	1,2,4-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	1,2-Dibromo-3-chloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	1,2-Dibromoethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	1,2-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	1,2-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	1,2-Dichloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	1,3-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	1,4-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	2-Butanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	2-Hexanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	4-Methyl-2-Pentanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Acetone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Benzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Bromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Bromodichloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Bromoform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Bromomethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Carbon disulfide	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Carbon tetrachloride	Validation Flag	J		Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Chlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Chloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Chloroform	Validation Flag	J		Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Chloromethane	Validation	UJ	U	Donald	5/27/14 6:42 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFL6	Soil	Chloromethane	Flag	UJ	U	Brown	5/27/14 6:42 PM	
JGFL6	Soil	Cyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Dibromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Dichlorodifluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Ethylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Isopropylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Methyl acetate	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Methyl tert-butyl ether	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Methylcyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Methylene chloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Styrene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Tetrachloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Toluene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Trichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Trichlorofluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	Vinyl chloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	cis-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	cis-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	m,p-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	o-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	trans-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL6	Soil	trans-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:42 PM	
JGFL7	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
JGFL7	Soil	1,1,1-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	1,1,2,2-Tetrachloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	1,1,2-Trichloro-1,2,2-trifluoroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	1,1,2-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	1,1-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	1,1-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	1,2,3-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	1,2,4-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	1,2-Dibromo-3-chloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	1,2-Dibromoethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	1,2-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	1,2-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	1,2-Dichloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	1,3-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	1,4-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	2-Butanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	2-Hexanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	4-Methyl-2-Pentanone	Validation	UJ	U	Donald	5/27/14 6:45 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFL7	Soil	4-Methyl-2-Pentanone	Flag	UJ	U	Brown	5/27/14 6:45 PM	
JGFL7	Soil	Acetone	Validated Result	22	24	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Acetone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Benzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Bromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Bromodichloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Bromoform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Bromomethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Carbon disulfide	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Carbon tetrachloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Chlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Chloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Chloroform	Validation Flag	J		Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Chloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Cyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Dibromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Dichlorodifluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Ethylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Isopropylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Methyl acetate	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Methyl tert-butyl ether	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Methylcyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Methylene chloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Styrene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Tetrachloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Toluene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Trichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Trichlorofluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	Vinyl chloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	cis-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	cis-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	m,p-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	o-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	trans-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL7	Soil	trans-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:45 PM	
JGFL8	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
JGFL8	Soil	1,1,1-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	1,1,2,2-Tetrachloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	1,1,2-Trichloro-1,2,2-trifluoroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	1,1,2-Trichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	1,1-Dichloroethane	Validation	UJ	U	Donald	5/27/14 6:48 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFL8	Soil	1,1-Dichloroethane	Flag	UJ	U	Brown	5/27/14 6:48 PM	
JGFL8	Soil	1,1-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	1,2,3-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	1,2,4-Trichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	1,2-Dibromo-3-chloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	1,2-Dibromoethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	1,2-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	1,2-Dichloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	1,2-Dichloropropane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	1,3-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	1,4-Dichlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	2-Butanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	2-Hexanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	4-Methyl-2-Pentanone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Acetone	Validated Result	11	13	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Acetone	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Benzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Bromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Bromodichloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Bromoform	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Bromomethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Carbon disulfide	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Carbon tetrachloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Chlorobenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Chloroethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Chloroform	Validation Flag	J	JQ	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Chloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Cyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Dibromochloromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Dichlorodifluoromethane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Ethylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Isopropylbenzene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Methyl acetate	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Methyl tert-butyl ether	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Methylcyclohexane	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Methylene chloride	Validation Flag	J	JQ	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Styrene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Tetrachloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Toluene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Trichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	Trichlorofluoromethane	Validation	UJ	U	Donald	5/27/14 6:48 PM	

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFL8	Soil	Trichlorofluoromethane	Flag	UJ	U	Brown	5/27/14 6:48 PM	
JGFL8	Soil	Vinyl chloride	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	cis-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	cis-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	m,p-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	o-Xylene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	trans-1,2-Dichloroethene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
JGFL8	Soil	trans-1,3-Dichloropropene	Validation Flag	UJ	U	Donald Brown	5/27/14 6:48 PM	
VBLKS1	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
VBLKS2	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
VHBLKS1	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y

Method: Pest

Sample	Matrix	Analyte Name	Data Field	Old Value	New Value	User	Edit Date Time	Global
JGFJ9	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
PBLKS1	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y
PLCSS1	Soil		Validation Level		S4VEM	Donald Brown	5/22/14 11:53 AM	Y

F Soil Boring Logs

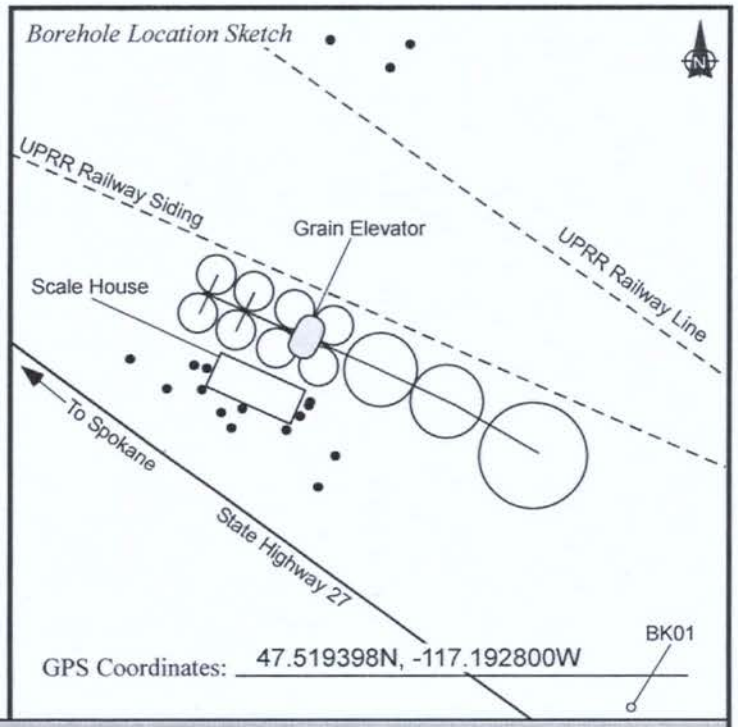
This page intentionally left blank.

ecology and environment, inc.
International Specialists in the Environment

Drilling Log for BK01

Project Name: Freeman Ground Water
Site Location: Freeman, Washington
Date Started/Finished: 4/22/14
Driller's Name: Alan Jensen
Geologist's Name: Jeff Fetters
Geologist's Signature:
Rig Type(s): GeoProbe
Depth to Water: NA
Total Depth of Borehole: 24-feet bgs

Borehole Location Sketch



GPS Coordinates: 47.519398N, -117.192800W

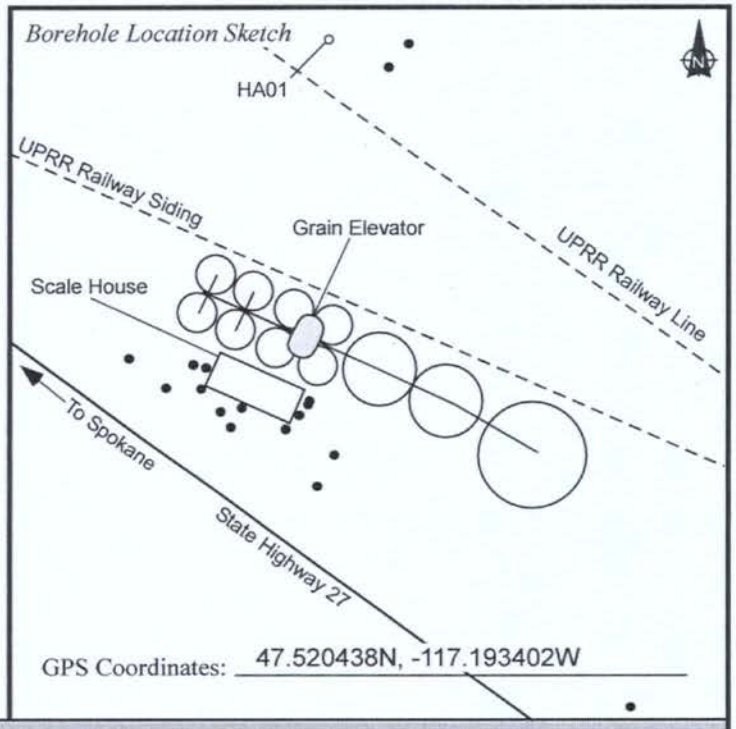
Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
1 2 3 4	BK01SB03	1127	95%		0-1' - GRAVEL with SILT (GW-GM) - Gravel: angular to sub-angular, 2 mm to 3 cm; Silt: brownish gray, moist (fill) 1-3.7' - SILT (ML) - brown to light brown, moist, stiff to 2.9', soft from 2.9 to 3.7' bgs 3.7-4' - SILT with CLAY (ML-CL) - brown, moist, very stiff, high mica content
5 6 7 8	BK01SB04	1130	95%		4-6.7' - SILT with CLAY (ML-CL) - brown, moist, very stiff, high mica content 6.7-8' - CLAY (CL) - brown, moist, still, grey mottling present
9 10 11 12	BK01SB12	1142	100%		8-8.5' - CLAY (CL) - brown, moist, still, grey mottling present 8.5-12' - SILT with CLAY (ML-CL) - brown, moist, still, black mottling present, trace coarse sand

Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
12	NA	NA	100%		12-12.4' - SILT (ML) - rust red, moist, stiff 12.4-16' - SILTY GRAVEL with CLAY (GW-GM) - Gravel: rounded, 2 mm to 3 cm; Silt: rust red, moist, stiff
13					
14					
15					
16	NA	NA	100%		16-20' - CLAY (CL) - light yellowish brown, gray clay nodules present
17					
18					
19					
20	NA	NA	100%		20-22' - CLAY (CL) - bluish gray, with rust red/tan mottling, moist, stiff
21					
22					22-23.5' - CLAY (CL) - rust red, stiff, trace sand
23					23.5-24' - SILT with CLAY (ML-CL) - brown, moist, soft, trace sand
24					
25					
26					
27					Total depth = 24-feet bgs Borehole abandoned with Bentonite Chips from Total Depth to surface.
28					
29					
30					
31					
32					

ecology and environment, inc.
International Specialists in the Environment

Drilling Log for HA01

Project Name: Freeman Ground Water
Site Location: Freeman, Washington
Date Started/Finished: 4/23/14
Driller's Name: NA
Geologist's Name: Jeff Fetters
Geologist's Signature:
Rig Type(s): Hand Auger
Depth to Water: NA
Total Depth of Borehole: 13.5-feet bgs



GPS Coordinates: 47.520438N, -117.193402W

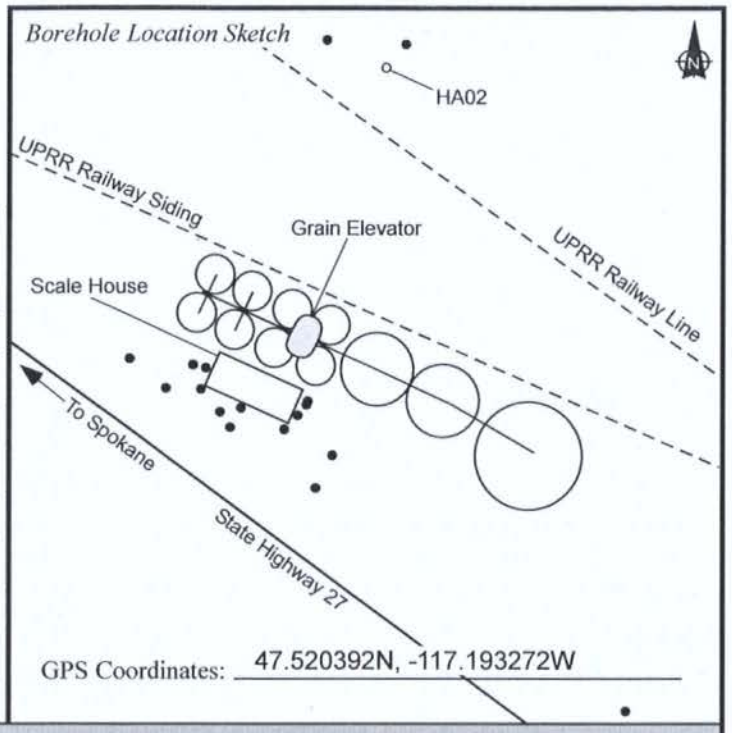
Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
1 2 3	NA	NA	NA		0-6" - Duff 6"-3' - SANDY GRAVEL with CLAY (GW-GC) - Gravel: rounded to sub-rounded, >3 cm; Sand: medium to fine, angular to sub-angular; Silt: tan, slightly moist, trace light tan clay, high mica content 3-10' - CLAY (CL) - bluish gray, moist, stiff, trace fine sand
4 5 6 7	NA	NA	NA		
8 9 10 11	NA	NA	NA		10-10.5' - CLAY with SILT with (CL-ML) - dark yellowish brown, moist, soft 10.5-13' - CLAY (CL) - bluish gray, moist, stiff, trace fine sand
12					

Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
12	HA01SB13.5	0930	NA		13-13.5' - CLAY with SILT with (CL-ML) - dark yellowish brown, moist, soft
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					Total depth = 13.5-feet bgs Borehole abandoned with Bentonite Chips from Total Depth to surface.
32					

ecology and environment, inc.
International Specialists in the Environment

Drilling Log for HA02

Project Name: Freeman Ground Water
Site Location: Freeman, Washington
Date Started/Finished: 4/23/14
Driller's Name: NA
Geologist's Name: Jeff Fetters
Geologist's Signature:
Rig Type(s): Hand Auger
Depth to Water: NA
Total Depth of Borehole: 4-feet bgs



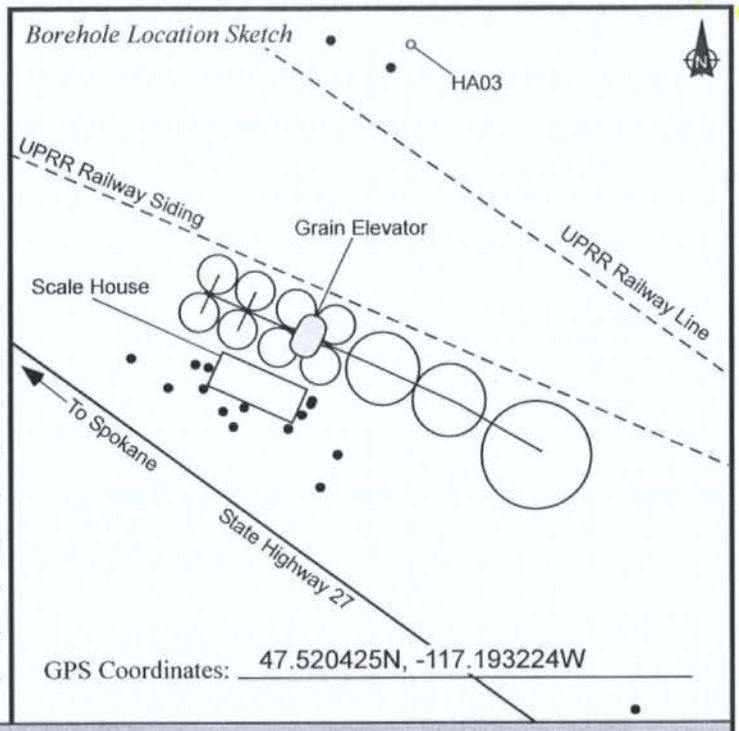
GPS Coordinates: 47.520392N, -117.193272W

Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
1 2 3 4	HA02SB2.5	1135	NA		0-6" - Duff 6"-1.5' - SANDY GRAVEL with CLAY (GW-GC) - Gravel: rounded to sub-rounded, >3 cm; Sand: medium to fine, angular to sub-angular Silt: tan, slightly moist, trace light tan clay, high mica content 1.5-2.5' - SAND with SILT (SW-SM) - medium to fine, angular to sub-angular; Silt: light gray, moist 2.5-4' - SANDY GRAVEL with CLAY (GW-GC) - Gravel: rounded to sub-rounded, >3 cm; Sand: medium to fine, angular to sub-angular; Silt: tan, slightly moist, trace light tan clay, high mica content 4' - Refusal
5 6 7 8					
9 10 11 12					Total depth = 4-feet bgs Borehole abandoned with cuttings Total Depth to surface.

ecology and environment, inc.
International Specialists in the Environment

Drilling Log for HA03

Project Name: Freeman Ground Water
Site Location: Freeman, Washington
Date Started/Finished: 4/23/14
Driller's Name: NA
Geologist's Name: Jeff Fetters
Geologist's Signature:
Rig Type(s): Hand Auger
Depth to Water: NA
Total Depth of Borehole: 9-feet bgs



GPS Coordinates: 47.520425N, -117.193224W

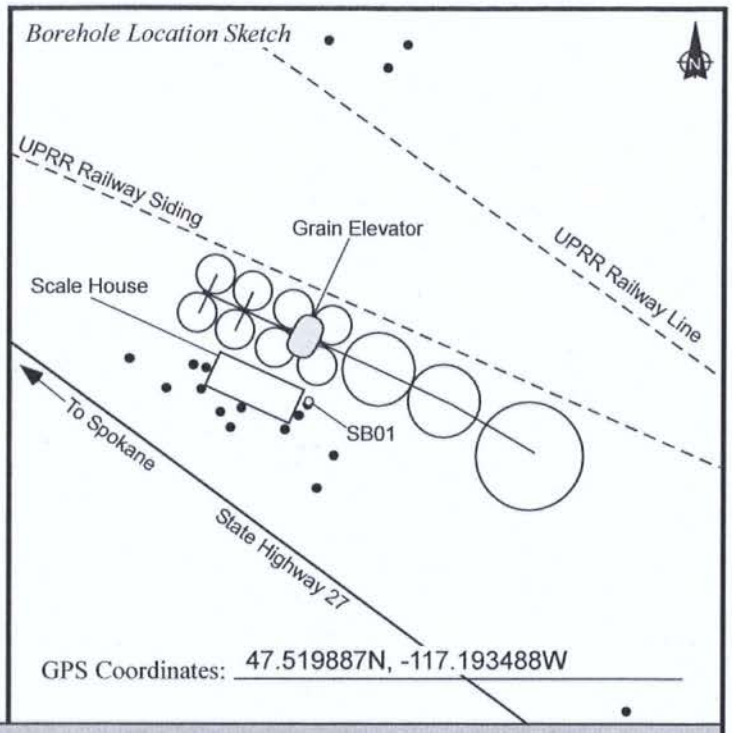
Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
1 2 3	NA	NA	NA		0-4" - Duff 4"-2' - SANDY GRAVEL with CLAY (GW-GC) - Gravel: rounded to sub-rounded, >3 cm; Sand: medium to fine, angular to sub-angular; Silt: tan, slightly moist, trace light tan clay, high mica content 2-2.5' - CLAY with SILT (CL-ML) - light gray, moist, soft, trace fine sand 2.5-8' - CLAY (CL) - bluish gray, moist, stiff, trace fine sand
4 5 6 7	NA	NA	NA		
8 9 10 11	HA03SB09	1135	NA		8-9' - SAND with SILT (SW-SM) - medium to fine, angular to sub-angular; Silt: dark yellowish brown, moist, trace clay, high mica content
12					Total depth = 9-feet bgs Borehole abandoned with cuttings from Total Depth to surface.

ecology and environment, inc.
International Specialists in the Environment

Drilling Log for SB01

Project Name: Freeman Ground Water
Site Location: Freeman, Washington
Date Started/Finished: 4/21/14
Driller's Name: Alan Jensen
Geologist's Name: Jeff Fetters
Geologist's Signature:
Rig Type(s): GeoProbe
Depth to Water: NA
Total Depth of Borehole: 8-feet bgs

Borehole Location Sketch



GPS Coordinates: 47.519887N, -117.193488W

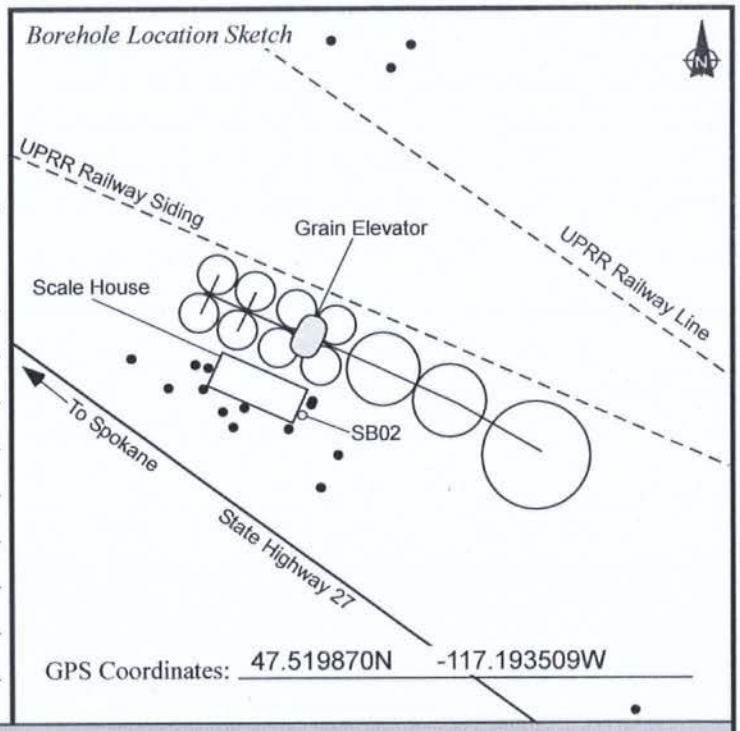
Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
1, 2, 3, 4	SB01SB1.5	1017	40%		0-1' - GRAVEL with SILT (GW-GM) - Gravel: angular to sub-angular, 2 mm to 3 cm; Silt: brownish gray, moist (fill) 1-4' - SILT (ML) - brown, moist, stiff
5, 6, 7, 8	SB01SB05	1021	75%		4-8' - SILT (ML) - brown, moist, stiff, high mica content
9, 10, 11, 12					Total depth = 8-feet bgs Borehole abandoned with Bentonite Chips from Total Depth to surface.

ecology and environment, inc.
International Specialists in the Environment

Drilling Log for SB02

Project Name: Freeman Ground Water
Site Location: Freeman, Washington
Date Started/Finished: 4/21/14
Driller's Name: Alan Jensen
Geologist's Name: Jeff Fetters
Geologist's Signature:
Rig Type(s): GeoProbe
Depth to Water: NA
Total Depth of Borehole: 8-feet bgs

Borehole Location Sketch



GPS Coordinates: 47.519870N -117.193509W

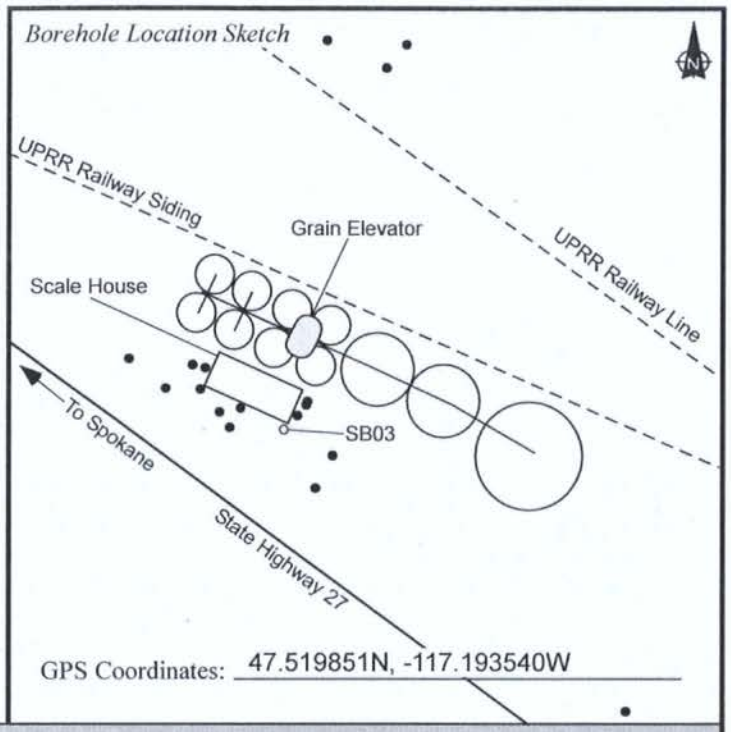
Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
1, 2, 3, 4	SB02SB1.5	1106	25%		0-1' - GRAVEL with SILT (GW-GM) - Gravel: angular to sub-angular, 2 mm to 3 cm; Silt: brownish gray, moist (fill) 1-4' - SILT (ML) - brown, moist, stiff (assumed same lithology as SB01)
5, 6, 7, 8	SB02SB05	1056	75%		4-8' - SILT (ML) - brown, moist, stiff, high mica content
9, 10, 11, 12					Total depth = 8-feet bgs Borehole abandoned with Bentonite Chips from Total Depth to surface.

ecology and environment, inc.
International Specialists in the Environment

Drilling Log for SB03

Project Name: Freeman Ground Water
Site Location: Freeman, Washington
Date Started/Finished: 4/21/14
Driller's Name: Alan Jensen
Geologist's Name: Jeff Fetters
Geologist's Signature:
Rig Type(s): GeoProbe
Depth to Water: NA
Total Depth of Borehole: 8-feet bgs

Borehole Location Sketch



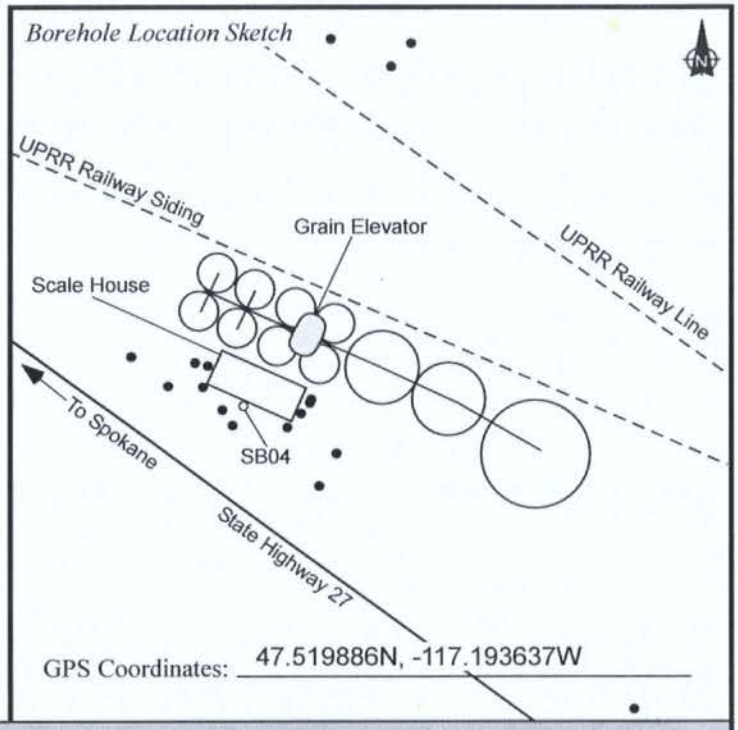
GPS Coordinates: 47.519851N, -117.193540W

Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
1, 2, 3, 4	SB03SB1.5	1136	50%		0-1' - GRAVEL with SILT (GW-GM) - Gravel: angular to sub-angular, 2 mm to 3 cm; Silt: brownish gray, moist (fill) 1-1.5' - SILT (ML) - dark grey, moist, stiff
5, 6, 7, 8	SB03SB05	1145	75%		4-8' - SILT with CLAY (ML-CL) - brown, moist, stiff, high mica content
9, 10, 11, 12					Total depth = 8-feet bgs Borehole abandoned with Bentonite Chips from Total Depth to surface.

ecology and environment, inc.
International Specialists in the Environment

Drilling Log for SB04

Project Name: Freeman Ground Water
Site Location: Freeman, Washington
Date Started/Finished: 4/21/14
Driller's Name: Alan Jensen
Geologist's Name: Jeff Fetters
Geologist's Signature:
Rig Type(s): GeoProbe
Depth to Water: NA
Total Depth of Borehole: 8-feet bgs



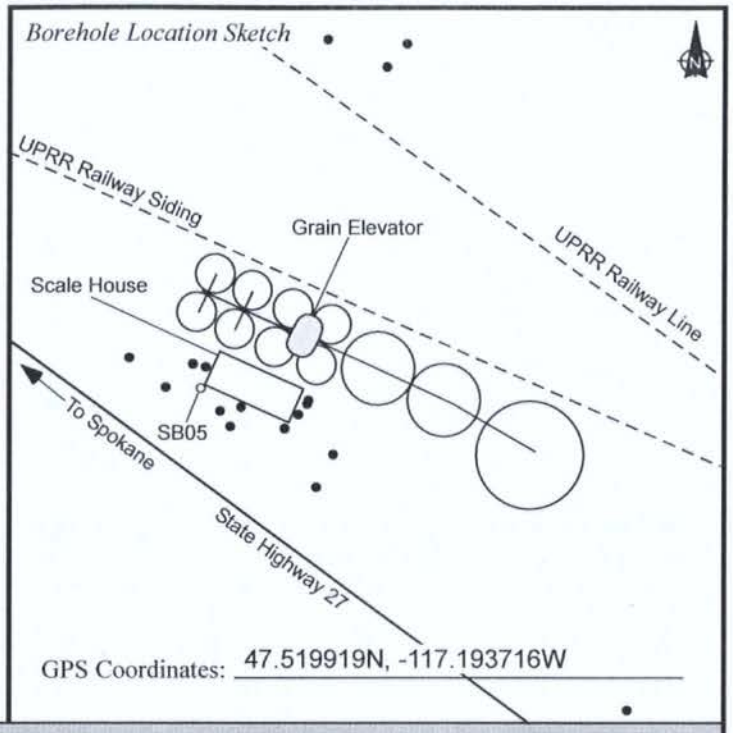
GPS Coordinates: 47.519886N, -117.193637W

Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
1	SB04SB04	1337	75%		0-6" - Concrete 6"-4' - SILT (ML) - dark grayish brown, moist, very stiff to 3' bgs, very soft 3' to 4'
2					
3					
4	SB04SB05	1345	75%		4-5' - SILT (ML) - dark grayish brown, moist, very soft 5-8' - SILT with Clay (ML-CL) - brown, moist, very stiff, high mica content
5					
6					
7					
8					
9					
10					
11					Total depth = 8-feet bgs Borehole abandoned with Bentonite Chips from Total Depth to surface.
12					

ecology and environment, inc.
International Specialists in the Environment

Drilling Log for SB05

Project Name: Freeman Ground Water
Site Location: Freeman, Washington
Date Started/Finished: 4/21/14
Driller's Name: Alan Jensen
Geologist's Name: Jeff Fetters
Geologist's Signature:
Rig Type(s): GeoProbe
Depth to Water: NA
Total Depth of Borehole: 8-feet bgs



GPS Coordinates: 47.519919N, -117.193716W

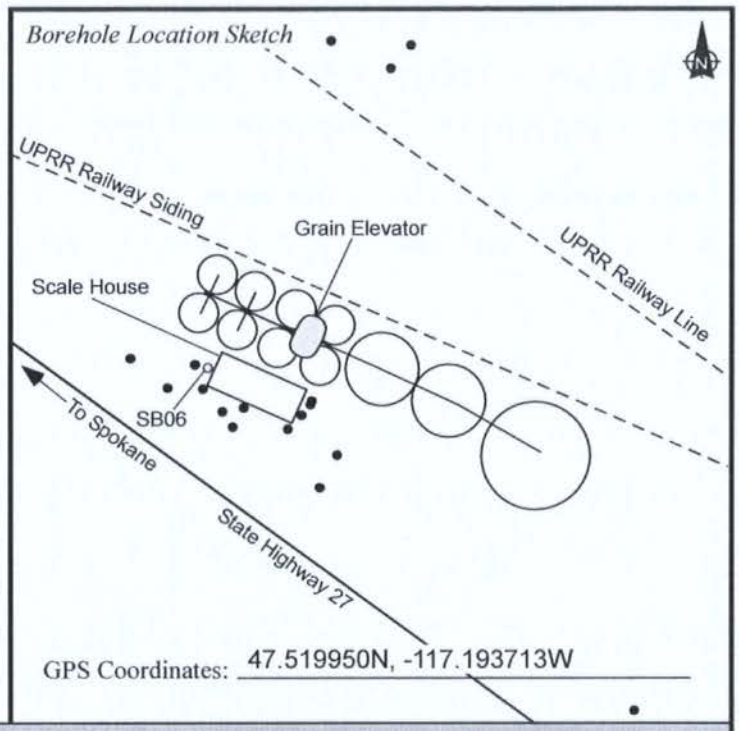
Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
1 2 3	SB05SB03	1409	50%		0-1.5' - GRAVEL with SILT (GW-GM) - Gravel: angular to sub-angular, 2 mm to 3 cm; Silt: brownish gray, moist (fill) 1.5-4' - SILT (ML) - dark grayish brown, moist, stiff, trace coarse sand
4 5 6 7	SB05SB04	1415	75%		4-4.3' - SILT (ML) - dark grayish brown, moist, stiff, trace coarse sand 4.3-8' - SILT with Clay (ML-CL) - brown, moist, very stiff, high mica content
8 9 10 11 12					Total depth = 8-feet bgs Borehole abandoned with Bentonite Chips from Total Depth to surface.

ecology and environment, inc.
International Specialists in the Environment

Drilling Log for SB06

Project Name: Freeman Ground Water
Site Location: Freeman, Washington
Date Started/Finished: 4/21/14
Driller's Name: Alan Jensen
Geologist's Name: Jeff Fetters
Geologist's Signature:
Rig Type(s): GeoProbe
Depth to Water: NA
Total Depth of Borehole: 12-feet bgs

Borehole Location Sketch



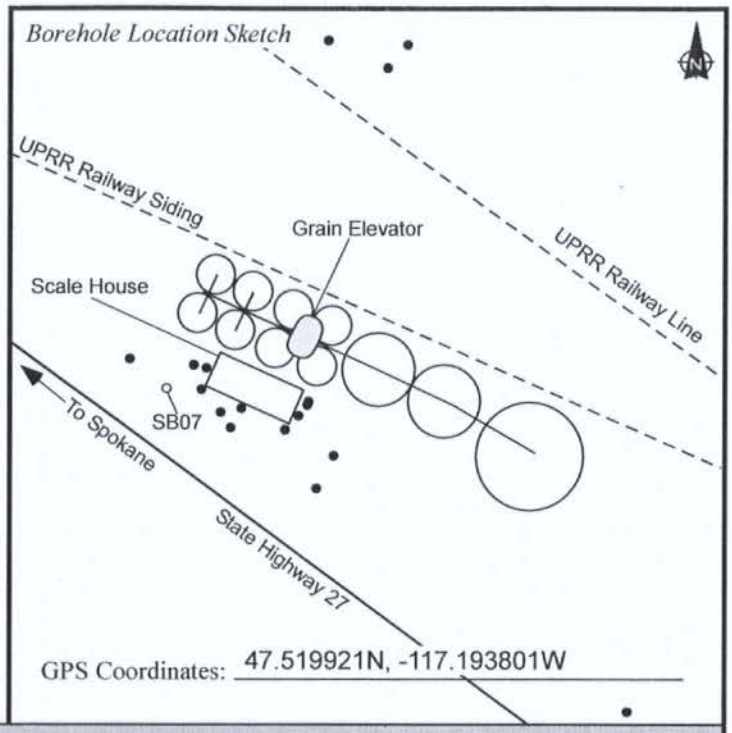
GPS Coordinates: 47.519950N, -117.193713W

Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
1 2 3 4	NA	NA	75%		0-6" - GRAVEL with SILT (GW-GM) - Gravel: angular to sub-angular, 2 mm to 3 cm; Silt: brownish gray, moist (fill) 6"-4' - SILT with CLAY (ML-CL) - dark grayish brown, moist, stiff, trace gravel to 1.5 cm , charred material present, increased moisture 3.1 to 3.5' bgs
5 6 7 8	SB06SB4.5 SB06SB6.5	1516 1530	75%		4'-4.5'- SILT with CLAY (ML-CL) - dark grayish brown, moist, stiff, trace gravel to 1.5 cm , charred material present 4.5-6.5' - SILT with CLAY (ML-CL) - gray, moist, very soft 6.5-8' - SILT (ML) - brown, moist, stiff
9 10 11 12	SB06SB12	1540			8-11.5' - SILT (ML) - brown, moist, stiff 11.5-12' - CLAY with SAND (CL-SW) - Clay: orange, moist; Sand: coarse to medium angular to subangular Total depth = 12-feet bgs Borehole abandoned with Bentonite Chips from Total Depth to surface.

ecology and environment, inc.
International Specialists in the Environment

Drilling Log for SB07

Project Name: Freeman Ground Water
Site Location: Freeman, Washington
Date Started/Finished: 4/21/14
Driller's Name: Alan Jensen
Geologist's Name: Jeff Fetters
Geologist's Signature:
Rig Type(s): GeoProbe
Depth to Water: NA
Total Depth of Borehole: 12-feet bgs



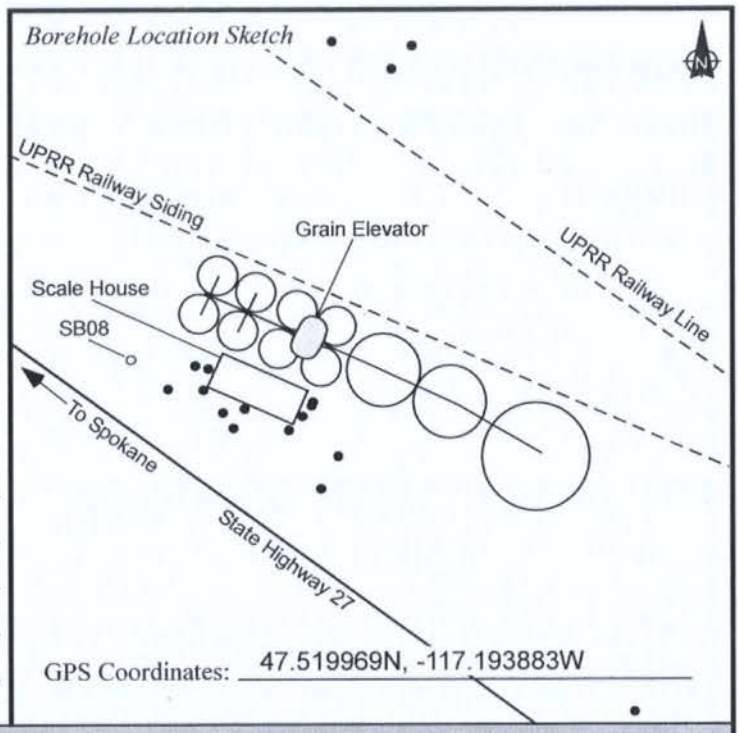
GPS Coordinates: 47.519921N, -117.193801W

Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
1 2 3	SB07SB03	1609	75%		0-6" - GRAVEL with SILT (GW-GM) - Gravel: angular to sub-angular, 2 mm to 3 cm; Silt: brownish gray, moist (fill) 6"-1.5' - SILT (ML) - grayish brown, moist, stiff 1.5-4'- SILT (ML) - dark grayish brown, moist, stiff, color to brown and decreased moisture at 2 to 3.5' bgs
4 5 6 7	SB07SB04	1615	75%		4-8'- SILT (ML) - brown, moist, stiff
8 9 10 11 12	NA	NA	80%		8-8.5' - SILT (ML) - brown, moist, stiff 8.5-10' - CLAY (CL) - brown, moist, still, black mottling present 10-12' - CLAY with SAND (CL-SW) - Clay: brown, moist; Sand: coarse to medium angular to sub-angular, trace gravel to 1 cm, rounded Total depth = 12-feet bgs Borehole abandoned with Bentonite Chips from Total Depth to surface.

ecology and environment, inc.
International Specialists in the Environment

Drilling Log for SB08

Project Name: Freeman Ground Water
Site Location: Freeman, Washington
Date Started/Finished: 4/22/14
Driller's Name: Alan Jensen
Geologist's Name: Jeff Fetters
Geologist's Signature:
Rig Type(s): GeoProbe
Depth to Water: NA
Total Depth of Borehole: 12-feet bgs



GPS Coordinates: 47.519969N, -117.193883W

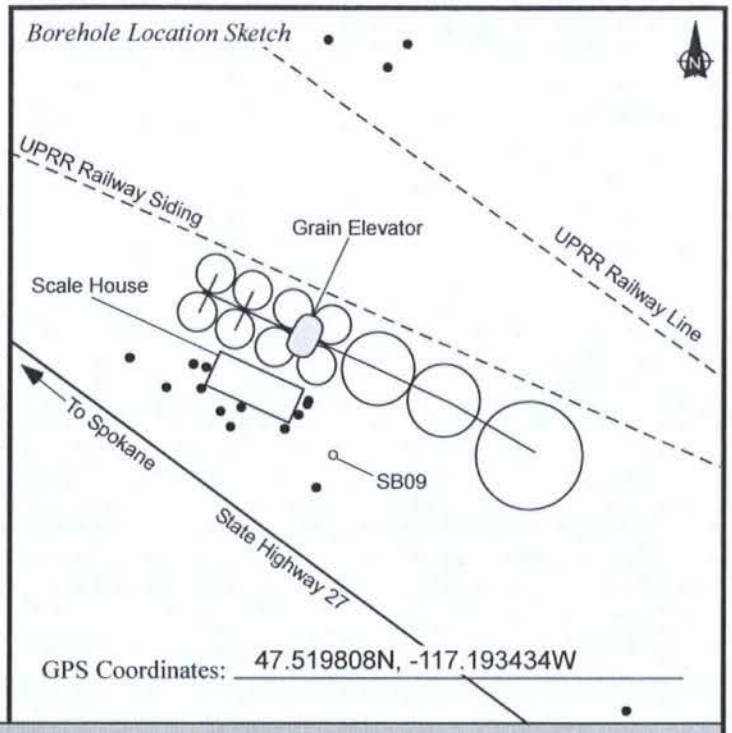
Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
1, 2, 3, 4	SB08SB4.5	1423	60%		0-2.5' - GRAVEL with SILT (GW-GM) - Gravel: angular to sub-angular, 2 mm to 3 cm; Silt: brownish gray, moist (fill) 2.5-3' - SAND with SILT (SW-SM) - Sand: coarse to medium, angular to sub angular; Silt: light brown, moist 3-4' - SILT (ML) - dark brown, moist, very stiff, high mica content, color to light tan from 3.6 to 3.8' bgs
4, 5, 6, 7	SB08SB5.5	1428	100%		4-5.2' - SILT (ML) - dark gray, moist, very soft, high mica content 5.2-8' - SILT with CLAY (ML-CL) - brown, moist, stiff, high mica content
8, 9, 10, 11, 12	NA	NA	100%		8-9.2' - SILT with CLAY (ML-CL) - brown, moist, stiff, high mica content 9.2-9.8' - CLAY with SILT (CL-ML) - brown, moist, stiff 9.8-10.7' - CLAY with SILT (CL-ML) - brown, moist, stiff, trace coarse sand 10.7-12' - CLAY (CL) - brown, moist, stiff Total depth = 12-feet bgs
					Borehole abandoned with Bentonite Chips from Total Depth to surface.

ecology and environment, inc.
International Specialists in the Environment

Drilling Log for SB09

Project Name: Freeman Ground Water
Site Location: Freeman, Washington
Date Started/Finished: 4/22/14
Driller's Name: Alan Jensen
Geologist's Name: Jeff Fetters
Geologist's Signature:
Rig Type(s): GeoProbe
Depth to Water: NA
Total Depth of Borehole: 28-feet bgs

Borehole Location Sketch



GPS Coordinates: 47.519808N, -117.193434W

Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
1, 2, 3, 4	SB09SB04	1515	60%		0-1' - GRAVEL with SILT (GW-GM) - Gravel: angular to sub-angular, 2 mm to 3 cm; Silt: brownish gray, moist (fill) 1-4' - SILT (ML) - brown, moist, soft, high mica content
4, 5, 6, 7, 8	SB09SB05	1530	100%		4-8' - SILT (ML) - brown, moist, stiff, high mica content
8, 9, 10, 11, 12			100%		8-12' - SILT (ML) - brown, moist, stiff, high mica content

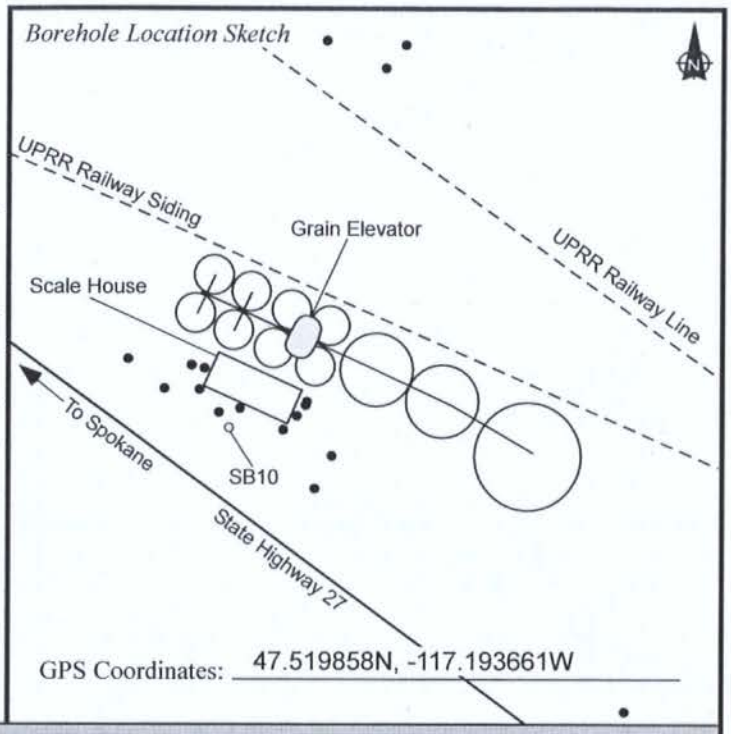
Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
12	SB09SB15	1625	100%		12-12.7' - SILT (ML) - brown, moist, stiff, high mica content 12.7-14.4' - Clay (CL) - yellowish brown, moist, medium stiff 14.4-15.3' - SAND with SILT (SW-SM) - Sand: medium to fine, angular to sub-angular; Silt: soft, brown, moist, trace light tan clay 15.3-15.8' - GRAVEL with SILT (GW-GM) - Gravel: rounded to sub-rounded, >3cm; Silt: rust red, slightly moist, trace light tan clay
13					
14					
15					
16	SB09SB19.5	1610	100%		15.8-17.7' - SAND with SILT (SW-SM) - Sand: medium to fine, angular to sub-angular; Silt: soft, brown, moist, trace light tan clay 17.7-17.9' - SILT (ML) - dark rust red, moist, stiff, high mica content 17.9-18.5' - SAND with SILT (SW-SM) - Sand: medium to fine, angular to sub-angular; Silt: soft, brown, moist, trace light tan clay 18.5-18.7' - SILT (ML) - dark rust red, moist, stiff, high mica content 18.7-19.7' - SAND with SILT (SW-SM) - Sand: angular to sub-angular, medium to fine; Silt: light yellowish tan, moist 19.7-20' - SILT (ML) - dark rust red, moist, stiff, high mica content
17					
18					
19					
20			100%		20-20.4' - SILT (ML) - dark rust red, moist, stiff, high mica content 20.4-21.5' - SAND with SILT (SW-SM) - Sand: angular to sub-angular, medium to fine; Silt: light yellowish tan, moist 21.5-21.8' - SILT (ML) - dark rust red, moist, stiff, high mica content 21.8-23' - SAND with SILT (SW-SM) - Sand: angular to sub-angular, medium to fine; Silt: orange, moist 23-23.2' - SILT (ML) - dark rust red, moist, stiff, high mica content 23.2-24' - SAND with SILT (SW-SM) - Sand: angular to sub-angular, medium to fine; Silt: orange, moist
21					
22					
23					
24	SB09SB25	1610			24-26' - SAND with SILT (SW-SM) - Sand: angular to sub-angular, medium to fine; Silt: orange, moist 26-28' - Sample liner stuck in drill rod, no recovery
25					
26					
27					
28					
29					
30					
31					Total depth = 28-feet bgs Borehole abandoned with Bentonite Chips from Total Depth to surface.
32					

ecology and environment, inc.
International Specialists in the Environment

Drilling Log for SB10

Project Name: Freeman Ground Water
Site Location: Freeman, Washington
Date Started/Finished: 4/22/14
Driller's Name: Alan Jensen
Geologist's Name: Jeff Fetters
Geologist's Signature:
Rig Type(s): GeoProbe
Depth to Water: NA
Total Depth of Borehole: 24-feet bgs

Borehole Location Sketch



GPS Coordinates: 47.519858N, -117.193661W

Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
1 2 3 4	NA	NA	90%		0-6" - GRAVEL with SILT (GW-GM) - Gravel: angular to sub-angular, 2 mm to 3 cm; Silt: brownish gray, moist (fill) 6"-4' - SILT (ML) - brown, moist, soft, high mica content
5 6 7 8	NA	NA	100%		4-8' - SILT (ML) - brown, moist, stiff, high mica content
9 10 11 12	NA	NA	100%		8-11' - SILT (ML) - brown, moist, stiff, high mica content 11-11.5' - SILT with CLAY (ML-CL) - brown, moist, soft 11.5-12' - SILT with CLAY (ML-CL) - brown, moist, very stiff, trace gravel to 3cm

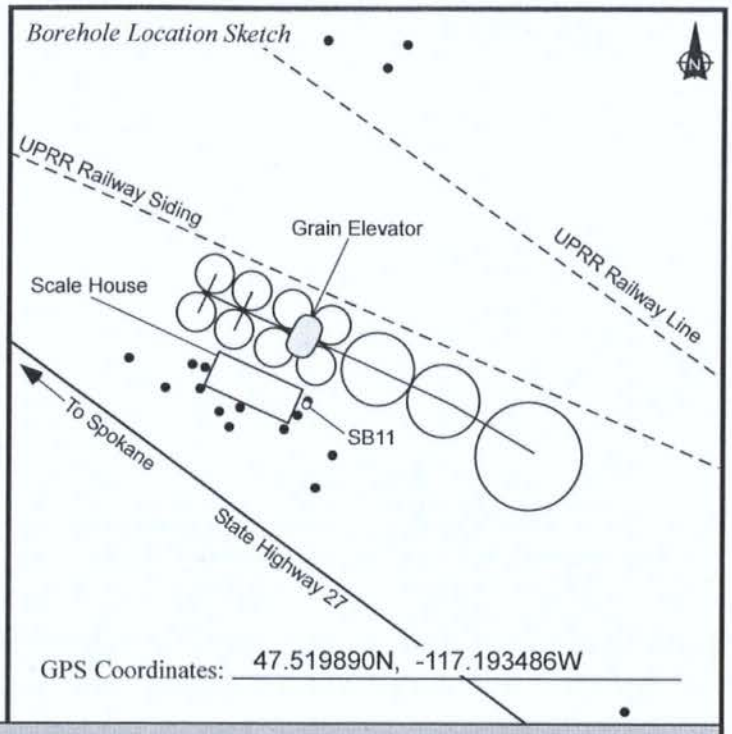
Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
12	SB10SB15.5	1806	100%		12-12.5' - SILT with CLAY (ML-CL) - brown, moist, very stiff, trace gravel to 3cm 12.5-14 - GRAVEL with CLAY (GW-GC) - Gravel: rounded to sub-rounded, >3cm; Silt: rust red, slightly moist, trace light tan clay 14-16' - SAND with SILT (SW-SM) - Sand: medium to fine, angular to sub-angular; Silt: soft, orange-ish brown, moist, trace light tan clay
13					
14					
15					
16	SB10SB18.5	1745	100%		16-18.5' - SAND with SILT (SW-SM) - Sand: medium to fine, angular to sub-angular; Silt: soft, orangeish brown, moist, trace light tan clay, saturated 17.5-18.5 18.5-19.1' - CLAY (CL) - greenish brown, moist, stiff 19.1-20' - SAND with SILT (SW-SM) - Sand: medium to fine, angular to sub-angular; Silt: soft, reddish brown, moist, color to light tan from 19.6 to 20' bgs
17					
18					
19					
20	SB10SB20.5	1814	100%		20-20.2' - CLAY (CL) - green, hard, moist 20.2-21' - SAND with SILT (SW-SM) - Sand: angular to sub-angular, medium to fine; Silt: light yellowish tan, moist 21-21.3' - CLAY (CL) - green, hard, moist 21.3-24' - SAND with SILT (SW-MS) - Sand: angular to sub-angular, medium to fine; Silt: light yellowish tan, moist, color grading to dark rust red at 23.5' bgs
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					Total depth = 24-feet bgs Borehole abandoned with Bentonite Chips from Total Depth to surface.
32					

ecology and environment, inc.
International Specialists in the Environment

Drilling Log for SB11

Project Name: Freeman Ground Water
Site Location: Freeman, Washington
Date Started/Finished: 4/23/14
Driller's Name: Alan Jensen
Geologist's Name: Jeff Fetters
Geologist's Signature:
Rig Type(s): GeoProbe
Depth to Water: NA
Total Depth of Borehole: 32-feet bgs

Borehole Location Sketch



GPS Coordinates: 47.519890N, -117.193486W

Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
1, 2, 3, 4	NA	NA	NA		0-1' - GRAVEL with SILT (GW-GM) - Gravel: angular to sub-angular, 2 mm to 3 cm; Silt: brownish gray, moist (fill) 0-4' - SILT (ML) - brown, moist, stiff
5, 6, 7, 8	NA	NA	NA		4-8' - SILT (ML) - brown, moist, stiff, high mica content
9, 10, 11, 12	NA	NA	100%		8-12' - SILT with CLAY (ML-CL) - brown, moist, stiff

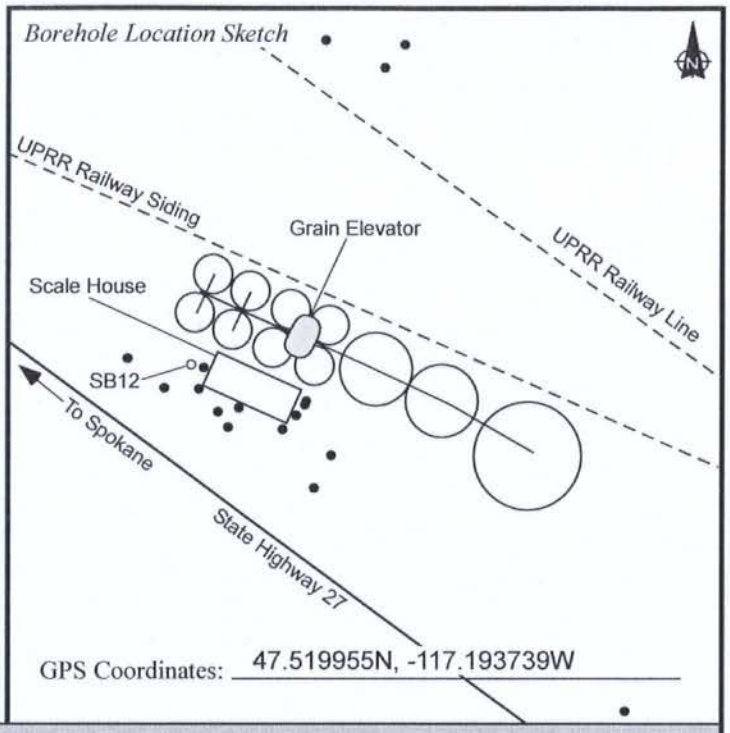
Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
12					12-15.5' - SILT with CLAY (ML-CL) - brown, moist, stiff, decreacing clay content at 15' bgs
13					
14	NA	NA	100%		15.5-16.5' - SILT with CLAY (ML-CL) - Sand: medium to fine, angular to sub-angular; Silt: soft, yellowish brown, moist
15					
16	SB11SB17	1445			16.5-17.1' - CLAY (CL) - greenish brown with red mottling, moist, stiff
17	SB11SB18				17.1-18.2' - SAND with SILT (SW-SM) - Sand: fine, angular to sub-angular; Silt: soft, tannish gray, moist
18	SB11SB18.6	1523	100%		18.2-18.7' - CLAY (CL) - greenish brown, moist, stiff
19		1521			18.7-20' - SAND with SILT (SW-SM) - Sand: fine, angular to sub-angular; Silt: soft, tannish gray, moist
20	SB11SB20	1507			20-21.6' - SAND with SILT (SW-SM) - Sand: angular to sub-angular, fine; Silt: light tan to gray, moist
21	SB11SB21.5				21.6-21.8' - CLAY (CL) - dark red, hard, moist
22		1550	100%		21.8-22.9' - CLAY (CL) - light tan to gray, moist, medium stiff
23					22.9-24' - SILT with CLAY (ML-CL) - dark dust red, moist, medium stiff
24					24-27.1' - SILT with CLAY (ML-CL) - dark dust red, moist, medium stiff, trace sand, slightly moist
25					
26			100%		
27	SB11SB28	1559			27.1-28' - SAND with SILT (SW-SM) - Sand: angular to sub-angular, fine; Silt: dark dust red, moist
28					28-32' - SAND with SILT (SW-SM) - Sand: angular to sub-angular, fine; Silt: dark dust red, moist
29					
30			100%		
31	SB11SB32	1627			Total depth = 32-feet bgs Borehole abandoned with Bentonite Chips from Total Depth to surface.
32					

ecology and environment, inc.
International Specialists in the Environment

Drilling Log for SB12

Project Name: Freeman Ground Water
Site Location: Freeman, Washington
Date Started/Finished: 4/24/14
Driller's Name: Alan Jensen
Geologist's Name: Jeff Fetters
Geologist's Signature:
Rig Type(s): GeoProbe
Depth to Water: NA
Total Depth of Borehole: 32-feet bgs

Borehole Location Sketch



GPS Coordinates: 47.519955N, -117.193739W

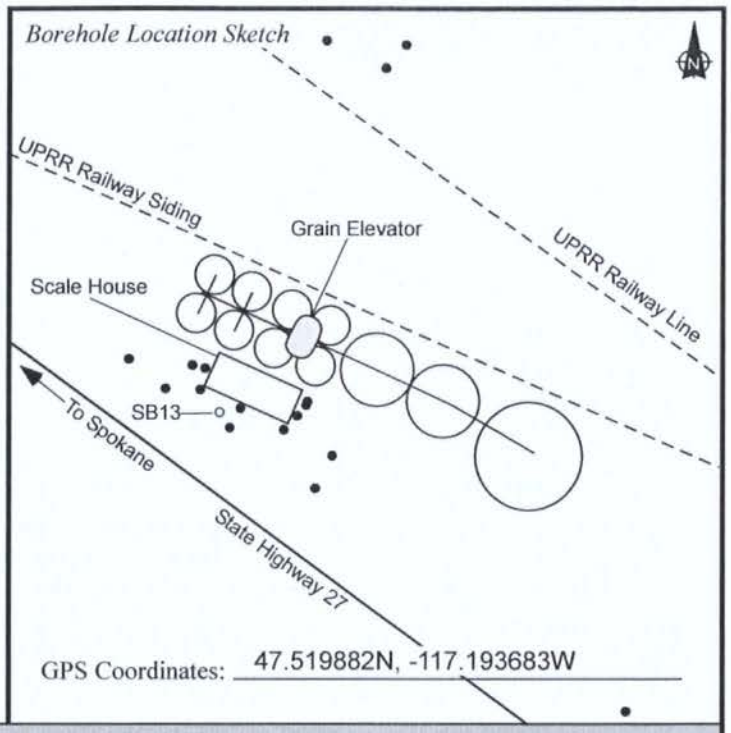
Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
1 2 3 4	NA	NA	100%		0-6" - GRAVEL with SILT (GW-GM) - Gravel: angular to sub-angular, 2 mm to 3 cm; Silt: brownish gray, moist (fill) 6"-4' - SILT with Clay (ML-CL) - dark grayish brown, moist, stiff, trace gravel to 1.5cm , charred material present, increased moisture 3.1 to 3.5' bgs 4-4.3' - SILT (ML) - dark grayish brown, moist, stiff, trace coarse sand
5 6 7 8	NA	NA	100%		4'-4.5'- SILT with Clay (ML-CL) - dark grayish brown, moist, stiff, trace rounded gravel to 1.5 cm , charred material present 4.5-6.5' - SILT with Clay (ML-CL) - gray, moist, very soft 6.5-8' - SILT (ML) - brown, moist, stiff
9 10 11 12	NA	NA	100%		6.5-8' - SILT (ML) - brown, moist, stiff

Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
12	NA	NA	100%		12-12.3' - SILT (ML) - brown, moist, stiff 12.3-14.1' - SILT with CLAY (ML-CL) - orangeish brown, moist, color to light brown 13.5 to 14.1' bgs
13					
14					14.1-16' - SAND with SILT (SW-SM) - Sand: fine, angular to sub-angular; Silt: soft, tannish gray, moist, trace clay, trace gravel
15					
16	NA	NA	100%		16-16.4' - CLAY (CL) - greenish brown, moist, stiff 16.4-18.5' - SAND with SILT (SW-SM) - Sand: fine, angular to sub-angular; Silt: soft, tannish gray to orange moist,
17					
18					18.5-18.8' - CLAY (CL) - greenish brown, moist, stiff
19					18.8-20' - SAND with SILT (SW-SM) - Sand: fine, angular to sub-angular; Silt: soft, tannish gray, moist,
20	SB12SB20 SB12SB21.5	1041 1043	100%		20-21.6' - SAND with SILT (SW-SM) - Sand: angular to sub-angular, fine; Silt: light tan to gray, moist
21					21.6-21.8' - CLAY (CL) - brown, hard, moist
22					21.8-24' - SAND with SILT (SW-SM) - Sand: angular to sub-angular, fine; Silt: reddish orange, moist, medium stiff
23					22.9-24' - SILT with CLAY (ML-CL) - dark dust red, moist, medium stiff
24			100%		24-28' - SAND with SILT (SW-SM) - Sand: angular to sub-angular, fine; Silt: rust red, moist, medium stiff
25					
26					
27					
28	SB12SB28.5	1114			28-29.5' - SAND with SILT (SW-SM) - Sand: angular to sub-angular, fine; Silt: rust red, moist, medium stiff
29					29.5-32' - Liner stuck in drill rod, no recovery
30					
31					Total depth = 32-feet bgs Borehole abandoned with Bentonite Chips from Total Depth to surface.
32					

ecology and environment, inc.
International Specialists in the Environment

Drilling Log for SB13

Project Name: Freeman Ground Water
Site Location: Freeman, Washington
Date Started/Finished: 4/24/14
Driller's Name: Alan Jensen
Geologist's Name: Jeff Fetters
Geologist's Signature:
Rig Type(s): GeoProbe
Depth to Water: NA
Total Depth of Borehole: 30-feet bgs



GPS Coordinates: 47.519882N, -117.193683W

Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
1, 2, 3, 4	NA	NA	15%		0-6" - GRAVEL with SILT (GW-GM) - Gravel: angular to sub-angular, 2 mm to 3 cm; Silt: brownish gray, moist (fill)
5, 6, 7, 8	NA	NA	100%		4-8' - SILT (ML) - brown, moist, stiff
9, 10, 11, 12	NA	NA	100%		8-9.9' - SILT (ML) - brown, moist, stiff 9.9-12' - CLAY with SILT (CL-ML) - brown, moist, stiff, lenses of gravelly clay noted , gravel >3 cm, rounded

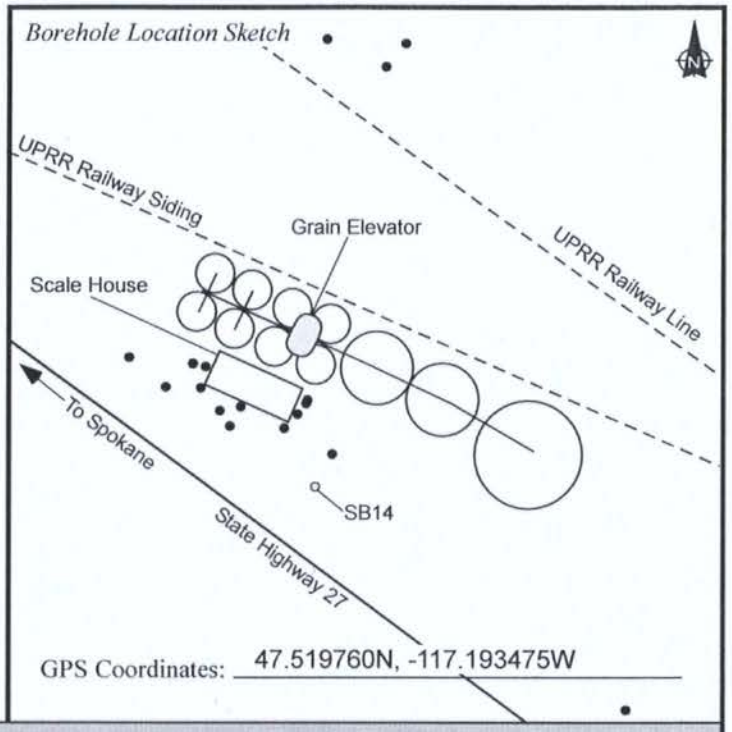
Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
12	SB13SB14	1415	100%		12-12.9' - CLAY with SILT (CL-ML) - brown, moist, stiff, lenses of gravelly clay noted , gravel >3cm, rounded
13					12.9-13 - GRAVEL with CLAY (GW-GC) - Gravel: rounded to sub-rounded, >3cm; Silt: rust red, slightly moist, trace light tan clay
14					13-16' - SILT with CLAY (SW-CL) - orangeish yellow, moist, trace clay, greenish clay lenses present to 16' bgs
15					
16	SB13SB20	1433	100%		16-17.2' - SAND with SILT (SW-SM) - Sand: fine, angular to sub-angular; Silt: soft, reddish orange to orange moist,
17					17.2-18.4' - CLAY (CL) - greenish brown, moist, stiff
18					
19					18.4-20' - SAND with SILT (SW-SM) - Sand: fine, angular to sub-angular; Silt: soft, brown to light gray, moist, greenish brown clay lens at 19.1 to 19.3' bgs
20	SB13SB21.2	1513	100%		20-20.2' - CLAY (CL) - greenish brown, hard, moist 20.2-20.7' - SAND with SILT (SW-SM) - Sand: fine, angular to sub-angular; Silt: soft, brown to light gray, moist, 20.7-20.9' - CLAY (CL) - greenish brown, hard, moist 20.9-24' - SAND with SILT (SW-SM) - Sand: fine, angular to sub-angular; Silt: soft, brown to light gray, moist,
21					
22	SB13SB23	1515			
23					
24	SB13SB27.5	1444	100%		24-26.5' - SAND with SILT (SW-SM) - Sand: angular to sub-angular, fine; Silt: rust red to orangeish red, moist, medium stiff, trace gravel
25					
26					26.5-28' - SILT with CLAY (ML-CL) - grayish blue to rust red, hard, moist
27					
28	SB13SB30	1543			20-30' - GRAVEL with CLAY (GW-GC) - Gravel: rounded to sub-rounded, >3 cm; Silt: rust red, slightly moist, trace light tan clay
29					
30					
31					Total depth = 30-feet bgs Borehole abandoned with Bentonite Chips from Total Depth to surface.
32					

ecology and environment, inc.
International Specialists in the Environment

Drilling Log for SB14

Project Name: Freeman Ground Water
Site Location: Freeman, Washington
Date Started/Finished: 4/24/14
Driller's Name: Alan Jensen
Geologist's Name: Jeff Fetters
Geologist's Signature:
Rig Type(s): GeoProbe
Depth to Water: NA
Total Depth of Borehole: 28-feet bgs

Borehole Location Sketch



GPS Coordinates: 47.519760N, -117.193475W

Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
1 2 3 4	NA	NA	100%		0-6" - GRAVEL with SILT (GW-GM) - Gravel: angular to sub-angular, 2 mm to 3 cm; Silt: brownish gray, moist (fill) 6"-4' - SILT (ML) - brown, moist, stiff
5 6 7 8	NA	NA	100%		4-8' - SILT (ML) - brown, moist, stiff
9 10 11 12	NA	NA	100%		8-11' - SILT (ML) - brown, moist, stiff 11-12' - CLAY with SILT (CL-ML) - brown, moist, stiff, lenses of gravelly clay noted , gravel >3 cm, rounded

Depth (Feet)	Sample Number	Sample Times	Core Recovery	Soil Type	Comments
12					12-14' - CLAY with SILT (CL-ML) - brown, moist, stiff, lenses of gravelly clay noted , gravel > 3cm, rounded
13					
14			100%		14-16' - GRAVEL with SILT (GW-GM) - Gravel: < 3 cm, rounded; Silt: soft, brown, moist,
15					
16					16-17.3' - SAND with SILT (SW-SM) - Sand: fine, angular to sub-angular; Silt: soft, reddish orange to orange moist,
17					17.3-19' - SILT with CLAY (ML-CL) - yellowish green, moist, soft, gray clay nodules mixed through
18	SB14SB18	1710	100%		
19					19-19.2' - CLAY (CL) - greenish brown, moist, medium stiff 19.2-19.9' - SILT (ML) - Silt: soft, rust red to light yellow, slightly, trace clay 19.9-20' - CLAY (CL) - greenish brown, moist, medium stiff
20					20-20.5' - CLAY (CL) - greenish brown, moist, medium stiff
21	SB14SB21.5	1730			20.5-23.6' - SAND with SILT (SW-SM) - Sand: angular to sub-angular, fine to medium; Silt: tan, moist, saturated 20.5 to 22' bgs, color to green 22 to 23.6' bgs
22			100%		
23	SB14SB23.5	1719			23.6-24' - CLAY (CL) - rust red to green, moist, hard, fine lenses of soft green clay present
24					24-28' - CLAY (CL) - rust red to green, moist, hard, fine lenses of soft green clay present, trace gravel
25					
26			100%		
27	SB14SB28	1741			
28					
29					
30					
31					Total depth = 28-feet bgs Borehole abandoned with Bentonite Chips from Total Depth to surface.
32					