
St. Joseph, Missouri Brownfields Sites

302 South 5th Street

Phase II Environmental Site Assessment

St. Joseph, Missouri



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Phase II Environmental Site Assessment Report

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Acronyms & Abbreviations

ARARs	Applicable or Relevant and Appropriate Requirements
ASTM	American Society for Testing and Materials
bgs	Below Ground Surface
City	City of St. Joseph, Missouri
DRO	Diesel-Range Organics
DQO	Data Quality Objective
EDR	Environmental Data Resources
EIGov	Environment International Government, Ltd.
EPA	United States Environmental Protection Agency
ESA	Environmental Site Assessment
GRO	Gasoline-Range Organics
GW	Groundwater
LDTL	Lowest Default Target Level
LUST	Leaking Underground Storage Tank
MDNR	Missouri Department of Natural Resources
mg/kg	Milligrams per Kilogram
mg/L	Milligrams per Liter
MRBCA	Missouri Risk-Based Corrective Action
MS	Matrix Spike
n.d.	No Date
ORO	Oil-Range Organics
PAH	Polycyclic Aromatic Hydrocarbon
PID	Photoionization Detector
PVC	Polyvinyl Chloride
QAPP	Quality Assurance Project Plan
QC	Quality Control
RBTL	Risk-Based Target Level
RCRA	Resource Conservation and Recovery Act
REC	Recognized Environmental Condition
SB	Soil Boring
Seagull	Seagull Environmental Technologies, Inc.
Site	302 South 5 th Street, St. Joseph, Missouri
SOW	Scope of Work
SW	Solid Waste
TPH	Total Petroleum Hydrocarbons
USDA	U.S. Department of Agriculture
VOC	Volatile Organic Compound
XRF	X-Ray Fluorescence

1. INTRODUCTION

The United States Environmental Protection Agency (EPA) tasked Environment International Government Ltd. (ElGov) with conducting Phase I and Phase II Environmental Site Assessments (ESAs) at eleven separate and distinct plats in downtown St. Joseph, Missouri, under Contract Number EP-W-07-096, Task Order Number 0007. Subsequently, three of the eleven plats were eliminated from the project as access to these properties was not granted. Phase I ESAs were conducted by ElGov and its subcontractor Seagull Environmental Technologies, Inc. (Seagull) at the remaining eight properties. Because Recognized Environmental Conditions (RECs) were identified at each of the eight properties during the Phase I ESAs, Phase II ESAs were deemed necessary. Access was denied at one of the eight plats, but Phase II ESAs were completed at seven of the properties in downtown St. Joseph, Missouri. This report covers the Phase II ESA activities completed at the property located at 302 South 5th Street (Site).

This Phase II ESA report was completed for the City of St. Joseph, Missouri (City) under the Targeted Brownfields Assessment program, which is part of EPA's Brownfields Economic Improvement Initiative. Brownfields are potentially contaminated sites that can offer economic improvement through enhanced use, and are often abandoned, idled, or under-used because expansion or redevelopment is complicated by real or perceived contamination issues. EPA's Brownfields Economic Improvement Initiative was established to empower states, communities and other stakeholders to work together to improve the environment, reduce risk to human health and, ultimately, reuse Brownfields sites.

The Site is located within St. Joseph's Riverfront Industrial Redevelopment Area, which consists of approximately 244 acres of land between the Missouri River and 8th street and between St. Joseph's Central Business District and US Highway 36 (City of St. Joseph, MO 2005). A number of revitalization projects are proposed for this area, including fairgrounds and open-air arenas for events, interpretive wetlands, fishing areas, living history areas, and youth and family areas (City of St. Joseph, MO 2005). The proposed revitalization projects also include revitalizing the historic downtown area (City of St. Joseph, MO 2005). There are currently a number of large employers in the downtown area, but few residential units and minimal amenities to serve downtown workers (City of St. Joseph, MO n.d.). The objective of area redevelopment is to provide new residential and commercial units either through new construction or by repurposing existing buildings (City of St. Joseph, MO n.d.). Ultimately, the City aims to return the downtown core to a "vibrant area to work, live, and visit" (City of St. Joseph, MO n.d.).

The City's primary concern is whether contamination that would impede the City's redevelopment plans is present on these properties. The Site was assessed by collecting subsurface soil and groundwater samples, then comparing the analytical data to Missouri Risk-Based Corrective Action (MRBCA) Tier 1 Risk-Based Target Levels to determine the risks posed by contamination potentially identified at the Site.

The purpose of the investigation is to determine whether past operations at and near the sites of interest have resulted in releases of hazardous contaminants to the soil and groundwater. Specifically, the objectives of the Phase II ESA are to:

- Make preliminary determinations of the type and general extent of subsurface soil and groundwater contamination on the property;
- Determine, using published state and federal risk-based regulatory standards, the risks posed by contamination;
- Develop potential alternatives for addressing contamination identified during the investigation;
- Estimate order of magnitude costs of implementing the alternatives to support future residential and commercial redevelopment at the Site; and
- Recommend any follow-up site characterization activities that may be warranted.

ElGov collected a total of six soil samples and one groundwater sample from the Site. Analytical results indicate that contaminants are present in Site soil and groundwater samples. Site subsurface soil samples were found to contain Resource Conservation and Recovery Act (RCRA) metals, volatile organic compounds (VOCs), polycyclic aromatic hydrocarbons (PAHs), and total petroleum hydrocarbons (TPH). Only benzo(a)pyrene, arsenic, and lead were detected in subsurface soil at levels exceeding risk-based criteria. PAHs and TPH were detected in the groundwater sample, but not at levels exceeding risk-based criteria. There is no discernible pattern to the locations of contaminant exceedances, and as such, further study would be warranted prior to making meaningful recommendations with regards to addressing contaminated areas.

2. SITE BACKGROUND

This section describes the 302 South 5th Street Site's location, history, and physical characteristics. This section also briefly describes surrounding properties and summarizes previous assessments performed at the Site and the characteristics of contamination found during those assessments. Current Site operations and proposed redevelopment plans for the Site also are presented herein. **Figure 2-1** shows the Site location and surrounding properties.

2.1 Site Location, Description, and Historical Use

2.1.1 Site Location & Description

The Site is located on the western edge of downtown St. Joseph, Buchanan County, Missouri. The Site address is 302 South 5th Street. The property is accessed and bordered by South 5th Street and Charles Street. (ElGov 2010)

Figure 2-1 shows the location of the Site and the surrounding properties. The Site is located in the southwest quarter of Section 8, Township 57 North, Range 35 West (ElGov 2010). The latitude and longitude coordinates for the approximate center of the Site are 39.764566 degrees north and 94.854453 degrees west, respectively (ElGov 2010).

The eastern portion of the subject property is partially paved with asphalt and partially covered with gravel (ElGov 2010). The west-central portion of the subject property contains a 3-foot high loading dock measuring approximately 143 feet long by 33 feet wide (ElGov 2010). A small freezer building approximately 380 square feet in size is located on the southern end of the loading dock (ElGov 2010). The western portion of the subject property is paved with concrete and asphalt (ElGov 2010).

2.1.2 Physical Characteristics

Topography at the Site is generally level, and based on a recent topographic map, the Site is approximately 834 feet above mean sea level. The topographic gradient at the Site is to the south-southwest. (ElGov 2010)

The annual average precipitation in St. Joseph is 35.3 inches per year and is fairly evenly distributed throughout the year (St. Joseph, MO Weather 2010). Precipitation on the Site would be expected to partially infiltrate into the subsurface soil, but heavy rains would also result in overland flow towards storm drains located along the roadways surrounding the Site.

2.1.3 Geology, Hydrology, and Hydrogeology

The Site is located in Buchanan County in northwest Missouri. The predominant soils at the Site consist of urban land and bottomland soils (U.S. Department of Agriculture [USDA] 2009). Urban land soils have generally been modified by disturbance of the natural layers. The subject property is located between the Missouri and Mississippi River Alluvium and Northwestern Missouri Groundwater Provinces and lies at the boundary of the Missouri River's 500-year floodplain. Geology in the region is generally characterized by unconsolidated alluvial deposits that overlie Pennsylvanian-aged bedrock of the

Lansing Group, which consists primarily of limestone and shale (Missouri Department of Natural Resources [MDNR] 2009).

Environmental Data Resources (EDR) searched database listings for properties within one mile of the site and extracted no data on groundwater flow and velocity. Groundwater in the vicinity of the Site likely flows southwest-west, following the topographic gradient towards the Missouri River. Depth to groundwater in the area ranges from 10 to 30 feet below ground surface (bgs). Based on information provided by EDR, a search of federal and state water well databases determined there are three wells within a 1-mile radius of the site. Potable water in the site area is supplied by Missouri American Water, and is obtained from groundwater sources located along the Missouri River, north of St. Joseph. (EDR 2009)

Surface water likely flows towards the south, where it is directed into stormwater drains located along roadways.

2.1.4 Site History

A review of historical records indicates that from 1883 to 1897 several residential dwellings and a livery stable occupied the subject property. In 1911, a coal yard replaced the livery stable. In 1949, aerial photographs show a surface parking lot and an office building occupying the Site. In addition, the Sanborn® map from 1949 shows that a filling station is located on the northern portion of the subject property. By 1955, the filling station is no longer shown on historical maps. By 1965, the entire Site had been paved and a loading dock constructed in the central portion of the site. (EIGov 2010)

2.2 Current & Future Land Use

2.2.1 Current Site Use

The subject property is primarily used by Roberts Dairy as a truck parking lot which measures approximately 200 feet long by 150 feet wide. A freezer house and loading dock are centrally located at the Site, and metal fences that contain electrical outlets for refrigeration trucks to plug into run along its eastern and southern boundaries. An electrical box is located in the north-central portion of the Site. Most of the property is covered by asphalt and gravel; a small area of concrete is located on the western portion of the site. The property is served by municipal water and sewer services and above-ground electrical power. (EIGov 2010)

2.2.2 Current Uses of Adjoining Properties

Properties surrounding the Site include vacant lots to the south and north, an industrial complex to the east, and storage warehouses to the west. The industrial complex on the east side is the headquarters of the Sunshine Electronic Display Company. The warehouses on the west side are used for storage by I&M Machine and Fabrication. (EIGov 2010)

2.3.2 Future Land Use

The Site is located within the St. Joseph, Missouri Riverfront Industrial Redevelopment Area and would be part of the City's downtown revitalization effort. Redevelopment of the Site would likely include

construction of buildings that support both commercial and residential uses, although no definite plans have been established as of the authoring of this report.

2.3 Previous Investigations

A draft Phase I ESA of the subject property was recently completed by EIGov and Seagull personnel and submitted to EPA Region 7 on March 10, 2010. RECs identified as part of the Phase I ESA included the potential for petroleum hydrocarbon contamination resulting from the operation of an on-Site fueling facility during the early 1950s. Additionally, a potential off-Site source of contamination that may impact subsurface soils and groundwater at the Site includes one leaking underground storage tank (LUST) site located upgradient to the northeast of the property. This LUST site is the Hiland Dairy Division site located at 221 South Fifth Street. The LUST was discovered in 1996 and was subsequently closed; however, residual contamination could have migrated onto the property via a groundwater pathway.

St. Joseph, Missouri Brownfield Sites Phase II ESA



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Date drawn: 10 March 2010

**Figure 2-1: 302 South 5th Street
Site Location Map**

3. PHASE II INVESTIGATIONS & RESULTS

ElGov conducted a Phase II ESA at the 302 South 5th Street Site to assess the nature and extent of Site contamination and to assess potential risk to human health and the environment. The information obtained as part of this investigation will be used to further the City's redevelopment goals. This report details the outcome of the Phase II assessment including the sampling results and the professional interpretation of those results.

3.1 Field Activities

Representatives from ElGov and Seagull performed fieldwork at the Site on February 15, 2010. Site access was coordinated in advance by Seagull and City of St. Joseph representatives. Fieldwork consisted of installing three soil borings at the Site, collecting soil samples from two different depth intervals at each boring, and collecting groundwater samples at pre-determined boring locations. Each boring was also field-logged, and soil cores were screened with a photoionization detector (PID) and an x-ray fluorescence (XRF) spectrometer prior to selecting and packaging the samples for analysis. Photographic documentation of the field event is provided in **Appendix A**. Soil boring logs are provided as **Appendix B**.

3.2 Regulatory Standards

The Phase II investigation was conducted according American Society for Testing and Materials (ASTM) Standard E 1903-97: *Standard Guide for Environmental Site Assessments: Phase II Environmental Site Assessment Process*. ElGov reviewed existing documentation on the historical operations of the Site and spoke with City officials to determine their concerns. Based on this information, ElGov developed the Phase II Scope of Work (SOW) with the input of the EPA and the City. The SOW included reviewing historical data; developing a conceptual site model; and identifying appropriate sampling procedures, health and safety measures, chemical testing methods, and quality assurance/quality control procedures in accordance with the ASTM Standard.

3.3 Analytical Protocol, Sampling Methods, and Rationale

The primary objective of the 302 South 5th Street Phase II ESA sampling program was to assess the nature and extent of potential subsurface soil and groundwater contamination within property boundaries.

ElGov prepared a Quality Assurance Project Plan (QAPP) which outlined the proposed methods by which the nature and extent of Site contamination would be determined. In order to achieve the objectives of the Phase II ESA, ElGov proposed collecting samples of subsurface soil and groundwater and submitting them for chemical analysis. The sampling strategy proposed by ElGov was approved by the EPA. The following sections discuss the methods used for characterizing potential subsurface soil and groundwater contamination.

3.3.1 Subsurface Soil Sampling

In order to evaluate potential soil and groundwater contamination at the site, subsurface soil samples were collected from the three boring locations shown on **Figure 3-1**. The borings, labeled SB-07, SB-08, and SB-09, were placed approximately perpendicular to the expected groundwater flow direction in the area, in order to characterize any offsite contamination entering the site from upgradient locations. The borehole locations were also selected based on current and historical site activities occurring on or near the Site. In addition, the boreholes are downgradient of a former retail fueling station identified during the Phase I ESA as having been previously located on the northern portion of the Site.

EIGov-Seagull personnel collected a total of 6 subsurface soil samples, two per boring. For each soil boring installed at the Site, one subsurface soil sample was collected from either the 1- to 3-foot bgs or the 2- to 4-foot bgs depth interval in order to document near-surface soil conditions¹. A second subsurface soil sample was collected from near the groundwater table from the 18- to 20-foot bgs depth interval to document potential contamination entering groundwater or contamination migrating from offsite. Samples were selected for analysis based on high field screening results, observations such as staining or unusual odors, or proximity to the water table or ground surface if no evidence of contamination was present.

Subsurface soil samples were collected using a Geoprobe® direct-push drilling apparatus in accordance with the procedures outlined in EPA Region 7 Standard Operating Procedure 4230.07A referenced in the EPA-approved QAPP (EIGov 2009). At each borehole, a Geoprobe® Macro-Core soil sampler, fitted with a disposable polyvinyl chloride (PVC) sleeve, was advanced at 4-foot intervals, and the soil cores retrieved and screened for VOCs with a PID and heavy metals using a handheld XRF spectrometer.

Following retrieval and field screening of the soil cores, soil samples to be analyzed for VOCs and TPH-gasoline range organics (GRO) were collected following EPA Method 5035. The remaining soil was removed from the PVC sleeve and placed in a disposable aluminum pie pan for homogenization prior to transfer to 8-ounce jars for analysis of the following: PAHs, RCRA metals, and TPH-diesel range organics (DRO). Following sample collection, excess soil was returned to the respective boreholes, and the remaining void space in the boreholes was filled with bentonite.

Pertinent data, including analyses to be performed, field observations (staining, odor, etc), and sample locations were recorded on field sheets for each sample. All soil samples were stored in coolers maintained at or below 4 degrees Celsius (°C) pending submittal to Accutest Laboratories in Houston, Texas.

3.3.2 Groundwater Sampling

EIGov-Seagull personnel collected one groundwater sample from the temporary Geoprobe® well installed at the SB-09 boring location. The groundwater sample was collected as a grab sample by driving a Geoprobe® Screen Point 15 groundwater sampling apparatus below the water table at the sample location, deploying a 3-feet-long disposable PVC screen, and then using a check valve in

¹ Selection was based on whichever interval yielded the highest field screening results.

conjunction with disposable polyethylene tubing to obtain a groundwater sample from the temporary Geoprobe® well. Groundwater was collected in the sample bottles appropriate for the proposed analyses. Immediately after sampling, the temporary wells were removed, and the open boreholes were abandoned by filling with bentonite and the remaining soil cuttings.

A field sheet was completed for the groundwater sample. The field sheet documented the sample location, laboratory bottle type, and analyses to be performed. The groundwater sample was submitted to Accutest Laboratories for the same analyses as the soil samples collected from SB-09.

3.3.3 Chemical Testing of Subsurface Soil and Groundwater Samples

All subsurface soil and groundwater samples collected from the Site were submitted to a fixed analytical laboratory to be analyzed for the presence of VOCs, PAHs, TPH, and RCRA Metals. TPH samples were analyzed for GRO, DRO, and Oil-Range Organics (ORO). These analyte groups were analyzed using EPA Solid Waste (SW)-846 Methods. These analyte groups were analyzed using EPA Solid Waste (SW)-846 Methods. All samples were submitted to a fixed commercial laboratory for analysis using EPA Solid Waste (SW)-846 Methods.

All samples were submitted to a fixed commercial laboratory for analysis using EPA Solid Waste (SW)-846 Methods. All samples were accompanied by a Chain-of-Custody form which provides a record of sample collection and analyses, including sample number and matrices, analyses requested, and sample condition upon receipt at the assigned laboratories.

Analytical methods employed for this project are summarized in **Table 3-1** below.

Table 3-1		
Analytical Methods Employed for the 302 South 5th Street Phase II ESA Samples		
Sample Media	Contaminant Type	Analytical Method
Subsurface Soil & Groundwater	VOCs	EPA SW-846 Method 8260B
	PAHs	EPA SW-846 Method 8270C
	TPH	EPA SW-846 Methods 8260B (TPH-GRO) and 8270C (TPH-DRO and TPH-ORO)
	RCRA Metals	EPA SW-846 Methods 6010B, 7470A, and 7471A

3.4 Investigation-Derived Wastes

During the course of the investigation, wastes generated as part of the field activities included materials used for sampling and for personal protection, and excess soil from the boreholes. EIGov-Seagull field team members wore nitrile gloves when collecting and handling samples. Used gloves and other sampling materials such as plastic tubing and acetate liners were placed in a plastic bag for disposal. Bags containing used personal protective equipment were disposed of as normal trash as contamination levels were not expected to be significant. Excess soils removed during borehole installation were placed back in each borehole and covered with bentonite.

Stainless steel samplers used for collecting soil samples were decontaminated after sample collection by washing with soap and water. Decontamination fluids were not contained as contamination levels were not expected to be significant.

3.5 Sampling Activities & Analytical Results

The Phase II sampling event took place at the 302 South 5th Street Site on February 15, 2010, and involved collecting a total of 6 subsurface soil samples and one groundwater sample. Analytical results of subsurface soil and groundwater samples are provided in **Appendix C** as **Table C-1** through **Table C-5**. Analytical data are compared to the appropriate risk-based criteria available for a particular compound. Risk-based criteria selected for data comparison are further discussed in Section 3.5.2. Bolded values in the table indicate that the detected values or analytical detection limits exceed risk-based criteria. Bolded values highlighted in green indicate that the compound was detected and exceeds risk-based criteria.

3.5.1 Deviations from the QAPP

A few deviations from the QAPP occurred during the course of the Phase II ESA at the Site. Sample plan alteration forms are provided in Appendix D.

In the EPA-approved QAPP, EIGov proposed that SB-07 and SB-08 be located at the northern edge of the Site. In the field it was determined that, due to constraints posed by utilities and parked vehicles, the two borehole locations would be combined into one (SB-08), and that groundwater would be collected at this location. Boring SB-07 was relocated to a position south of SB-09 (see **Figure 3-1**).

In the EPA-approved QAPP, EIGov proposed collecting groundwater samples to be analyzed for VOCs, GRO, DRO, PAHs, and RCRA metals at both SB-08 and SB-09. Due to the fine-grained nature of subsurface soils at the Site, an insufficient volume of groundwater was produced at SB-08 to obtain any groundwater samples, and at temporary well SB-09 an insufficient volume was produced to fill all the required sample bottles. Accordingly, at SB-08, no groundwater samples were collected; at SB-09, no groundwater sample for RCRA metals was collected.

3.5.2 Assessment Criteria

In order to assess potential risk posed by contamination detected in Site subsurface soil and groundwater, analytical data were compared to published Missouri State risk-based regulatory standards.

Subsurface soil data were compared to Missouri Risk-Based Corrective Action (MRBCA) Tier 1 Risk-Based Target Levels provided in Appendix A of the *2006 Risk-Based Corrective Action Technical Guidance* document. There are eleven sets of MRBCA Tier 1 Risk-Based Target Levels provided in this document, most of which were developed based on land use, soil type, and exposure pathway. Because the ultimate fate of this property is not known at this time, EIGov selected the Lowest Default Target Levels (LDTLs) for direct comparison. In the data tables, EIGov also provided Tier 1 Risk-Based Target Levels (RBTls) for Residential Land Use, Soil Type 2 and Tier 1 RBTls for Non-residential Land Use, Soil Type 2 for informational purposes only. Highlighted, bolded data in **Table C-1** through **Table C-5** represent

analytical values that exceed the LDTLs. The LDTLs were selected because they represent the most conservative values available and represent risk to the most sensitive receptors.

Groundwater data were also directly compared to the LDTLs with Tier 1 RBTs for Residential Land Use, Soil Type 2 and Tier 1 RBTs for Non-residential Land Use, Soil Type 2 provided for informational purposes.

Table 3-2 summarizes the risk-based criteria utilized for assessing contamination in subsurface soil and groundwater samples. Evaluation of subsurface soil and groundwater data based on these criteria is provided in the following sections.

Table 3-2 Risk-Based Criteria & Applicable or Relevant and Appropriate Requirements (ARARs) used for Assessment		
Sample Media	Analysis	Risk-Based Criteria/ARAR
Subsurface Soil & Groundwater	VOCs, PAHs, TPH, & RCRA Metals	Missouri Risk-Based Corrective Action Tier 1 Lowest Default Target Levels <i>Table B-1 in Appendix A of the 2006 MRBCA Technical Guidance.</i>
		MRBCA Tier 1 Residential Land Use, Soil Type 2 <i>Table B-3 in Appendix A of the 2006 MRBCA Technical Guidance.</i>
		MRBCA Tier 1 Non-Residential Land Use, Soil Type 2 <i>Table B-3 in Appendix A of the 2006 MRBCA Technical Guidance.</i>

3.5.3 Subsurface Soil Sampling Analytical Results

The EIGov sampling team collected a total of six subsurface soil samples on February 15, 2010. The EIGov sampling team followed the sampling procedures in the EPA-approved QAPP to collect the soil samples.

All of the subsurface soil samples were shipped to Gulf Coast Accutest Laboratories in Houston, Texas, for all of the analyses described in Table 3-1.

The subsurface soil samples were referred to as Soil Borings (SB), and their station locations were named accordingly. The station locations of the subsurface soil samples were referred to as SB-07 through SB-09, and sample names were further described by the depth interval the sample was collected from. For example, the subsurface soil sample collected from SB-07 from the 18- to 20-foot bgs interval was labeled SB-08-18-20. A summary of the compounds detected in subsurface soil samples, the range of detections, and the number of risk-based screening criteria exceedances is presented in **Table 3-3**. Compounds with detections above risk-based criteria are indicated by bolded values in the table. Analytical results of each subsurface soil samples are provided in **Table C-1** through **Table C-3** which can be found in **Appendix C**. **Appendix D** presents the data validation report which details the usability of the data obtained from the analytical laboratory. **Appendix E** contains the validated sample result reports from each laboratory.

Analytical results for the subsurface soil samples indicate that the RCRA metals, arsenic and lead, were present at levels exceeding risk-based criteria in all six soil samples. Benzo(a)pyrene, a PAH, was also present at a concentration exceeding risk-based criteria, but VOCs and other PAHs were not. Additional details by analysis are presented in Table 3-3 and in the sections that follow.

Table 3-3 Subsurface Soil Analytical Data Summary					
Analyte	MRBCA LDTL	Minimum Detected Value	Maximum Detected Value	Number of Detections/ Samples Collected	Number of Exceedances/ Samples Collected
VOCs [milligrams per kilogram (mg/kg)]					
Acetone	4.2	0.0118	0.0486	5/6	0/6
Benzene	0.0561	0.0009	0.0018	5/6	0/6
sec-Butylbenzene	35.2	0.0381	0.0381	1/6	0/6
Carbon disulfide	6.26	0.0044	0.0044	1/6	0/6
Toluene	29.8	0.00092	0.0048	2/6	0/6
PAHs (mg/kg)					
Anthracene	3,060	0.119	0.119	1/6	0/6
Benzo(a)anthracene	6.12	0.895	0.895	1/6	0/6
Benzo(a)pyrene	0.62	0.923	0.923	1/6	1/6
Benzo(b)fluoranthene	6.19	1.2	1.2	1/6	0/6
Benzo(g,h,i)perylene	1,720	0.781	0.781	1/6	0/6
Benzo(k)fluoranthene	62	0.145	0.145	1/6	0/6
Chrysene	599	1.04	1.04	1/6	0/6
Dibenzo(a,h)anthracene	0.62	0.122	0.122	1/6	0/6
Fluoranthene	2,280	2.57	2.57	1/6	0/6
Indeno(1,2,3-cd)pyrene	3.77	0.722	0.722	1/6	0/6
Phenanthrene	158	1.25	1.25	1/6	0/6
Pyrene	1,500	1.83	1.83	1/6	0/6
TPH (mg/kg)					
TPH-DRO (>C10-C21)	64.9	11.2	28.6	2/6	0/6
TPH-ORO (>C21-C35)	122,000	20.7	20.7	1/6	0/6
RCRA Metals (mg/kg)					
Arsenic	3.89	8.1	13	6/6	6/6
Barium	2,040	223	288	6/6	0/6
Cadmium	9.31	0.44	5.7	6/6	0/6
Chromium	74,600	14.7	18.9	6/6	0/6
Lead	3.74	10.4	330	6/6	6/6
Mercury	2.19	0.024	0.28	5/6	0/6
Selenium	6.27	0.87	1.1	2/6	0/6

Bold values represent compounds with detections exceeding MRBCA LDTLs.

3.5.3.1 Volatile Organic Compounds

All of the subsurface samples were submitted for VOC analysis based on the RECs identified during the Phase I ESA indicating the potential for petroleum hydrocarbon contamination from nearby LUST sites.

VOCs were detected in a number of soil samples but not at concentrations exceeding risk-based criteria. Acetone and benzene were detected in five out of the six soil samples submitted while toluene was detected in two samples. Carbon disulfide and sec-butylbenzene were detected in one soil sample.

It should also be noted that a number of VOC compounds have risk-based criteria that are less than the analytical detection limit. These compounds include 1,2-dibromo-3-chloropropane and 1,2,3-trichloropropane.

Results of the VOC analysis performed on subsurface soil samples are presented in **Table C-1** in Appendix C.

3.5.3.2 Polycyclic Aromatic Hydrocarbons

All of the subsurface soil samples were submitted for PAH analysis. Analytical results for these samples are presented on **Table C-2**. The soil sample collected from the 1- to 3-foot bgs interval at SB-09 is the only soil sample that contained detectable levels of PAHs. Of the 12 compounds detected in this sample, benzo(a)pyrene was present at a concentration exceeding the LDTL. Because this sample was collected from a shallow depth, it is likely that the contaminants are a result of a historical, localized spill.

3.5.3.3 Total Petroleum Hydrocarbons

All six subsurface soil samples were submitted for TPH analysis and the analytical results are provided in Appendix C on **Table C-2**. TPH compounds were detected in both soil samples collected from SB-09, albeit not at concentrations exceeding the LDTLs. Both TPH-DRO and TPH-ORO were detected in the shallow sample interval while only TPH-DRO was detected in the deep sample collected from SB-09.

3.5.3.4 RCRA Metals

All of the subsurface soil samples collected during the Phase II ESA were submitted for RCRA Metals analysis. Analytical results of the metals analysis are presented in **Table C-3**.

All of the soil samples contained detectable levels of RCRA metals. The only RCRA metal not detected in any of the soil samples was silver. Both arsenic and lead were detected at concentrations exceeding the LDTL in all six soil samples. The highest concentrations of RCRA metals were detected in the subsurface soil sample collected from the 1- to 3-foot bgs interval at SB-09. The lead concentration in this sample exceeded the LDTL of 3.74 mg/kg by almost two orders of magnitude.

The concentrations of RCRA metals in the soil samples collected from the shallow and deep intervals of soil borings SB-07 through SB-09 were similar, with the exception of lead, indicating that RCRA metal concentrations are relatively uniform throughout the soil column. The lead concentrations in all three shallow soil samples are significantly higher than the lead concentrations in the deep soil samples, indicating that the lead detected in these samples is likely due to localized contamination.

3.5.4 Groundwater Sampling Analytical Results

One groundwater sample was collected from boring SB-09 during the Phase II ESA field activities. The groundwater sample was collected by the ElGov-Seagull sampling team following the sampling procedures provided in the EPA-approved QAPP. The groundwater sample was shipped to Gulf Coast Accutest Laboratories in Houston, Texas, for all of the analyses described in Table 3-1.

The station locations of the groundwater (GW) sample was referred to as SB-09-GW. The sample name, which incorporated the physical location in its name, was described on the sample labels and chain-of-custody documents. A summary of the compounds detected in groundwater sample, the range of detections, and the number of risk-based screening criteria exceedances is presented in **Table 3-4**. Compounds with detections above risk-based criteria are indicated by bolded values in the table. Analytical results of the groundwater sample are provided in **Table C-4 and Table C-5** which can be found in **Appendix C**. **Appendix D** presents the data validation report which details the usability of the data obtained from the analytical laboratory. **Appendix E** contains the validated sample result reports from each laboratory.

Analytical results of the groundwater samples indicated that no contaminants were present at levels exceeding LDTLs for groundwater. Additional details by analysis are as described in Table 3-4 and in the following sections.

Table 3-4					
Groundwater Analytical Data Summary					
Analyte	MRBCA LDTL	Minimum Detected Value	Maximum Detected Value	Number of Detections/ Samples Collected	Number of Exceedances/ Samples Collected
VOCs [milligrams per liter (mg/L)]					
Naphthalene	0.00109	0.00092	0.00092	1/1	0/1
TPH (mg/L)					
TPH-GRO (C6 – C10)	0.172	0.0803	0.0803	1/1	0/1

3.5.4.1 Volatile Organic Compounds

The groundwater sample was submitted for VOC analysis based on the results of the Phase I ESA indicating the presence of upgradient LUST sites nearby. Only one VOC was detected, which was naphthalene. Naphthalene was detected in the groundwater sample collected from SB-09 but not at a concentration that exceeded the LDTL. It should also be noted that a number of compounds have LDTLs that are less than the analytical detection limit. Those compounds include p-chlorotoluene; 1,2-dibromo-3-chloropropane; 1,1,2,2-tetrachloroethane; and 1,2,3-trichloropropane. Analytical results for VOCs in the groundwater sample are presented in **Table C-4**.

3.5.4.2 Polycyclic Aromatic Hydrocarbons

All of the groundwater samples were submitted for PAH analysis. No PAHs were detected in the groundwater sample. Similar to the VOCs, there were a number of PAHs that have LDTLs that were less than the analytical detection limit. Those compounds included benzo(a)anthracene; benzo(a)pyrene; benzo(b)fluoranthene; benzo(k)fluoranthene; dibenzo(a,h)anthracene; indeno(1,2,3-cd)pyrene; and naphthalene. Analytical results of the groundwater sample submitted for PAH analysis are presented in **Table C-5**.

3.5.4.3 Total Petroleum Hydrocarbons

The groundwater sample collected from SB-09 during this Phase II ESA was submitted for TPH analysis. TPH-DRO was detected but not at a concentration exceeding the LDTL. TPH-GRO and TPH-ORO were not detected in the sample. Analytical results are presented in **Table C-5** in Appendix C.

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**Figure 3-1: 302 South 5th Street
Sample Location Map**

4. Data Quality

ElGov assessed the laboratory analytical data quality for the 302 South 5th Street Site through the following tools and processes:

- Data quality objectives (DQOs) to obtain data of known and appropriate quality as documented in the project QAPP; and
- Data validation and quality assessment.

Following is a description of the laboratory analytical and data validation/assessment methodology and a review of the DQOs as documented in the project QAPP.

4.1 Data Review and Validation

Quality Assurance/Quality Control data are necessary to determine precision and accuracy and to demonstrate the absence of interferences or contamination of sampling equipment, glassware, and reagents. Laboratory samples were analyzed and samples were collected in the field to help assess whether project-specific DQOs were met.

The data for soil samples SB-07-1-3, SB-07-18-20, SB-08-1-3, SB-08-18-20, SB-09-1-3, and SB-09-18-20, and groundwater sample SB-09-GW were qualified according to the EPA documents *Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (USEPA-540-R-04-009, January 2005) and *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (EPA 540-R-04-004, October 2004). The review was intended to identify problems and quality control (QC) deficiencies that were readily apparent from the summary data packages. The data review was limited to the available field and laboratory QC information submitted with the project-specific data package. The full, detailed Level II data validation report is provided in **Appendix D**.

The following summarizes, by analytical method, any problems or deficiencies that were found and data qualifications applied because of non-compliant QC.

- *Volatile Organic Compounds and TPH-GRO by EPA Method SW-846 8260B*. All data were deemed usable for their intended purposes with the following qualifications. On the basis of out-of-control matrix spike (MS) recoveries, detected/non-detected results for several spiked compounds were qualified as estimated (UJ) in samples SB-08-1-3, SB-08-18-20, SB-09-1-3, and SB-09-18-20 due to possible low bias.

On the basis of out-of-control surrogate compound recoveries, the detected result for toluene in sample SB-09-1-3 was qualified as estimated (J).

- *PAHs, TPH-DRO, and TPH-ORO by EPA Method SW-846 8270C*. Overall, the PAH, TPH-DRO, TPH-ORO data were deemed usable for their intended purposes with the following qualifications. On the basis of out-of-control MS recoveries, detected/non-detected results for benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, and chrysene in samples SB-07-1-3, SB-07-18-20,

SB-08-1-3, SB-08-18-20, SB-09-1-3, and SB-09-18-20 were qualified as estimated (J/UJ) due to possible low bias.

- *Metals by EPA Method SW-846 6010B.* Overall, the metals quality data is acceptable. All data were deemed usable for their intended purposes.
- *Mercury by EPA Methods SW-846 7470A and 7471A.* Overall, the mercury quality data are acceptable. All data were deemed usable for their intended purposes.

5. CONCLUSIONS & RECOMMENDATIONS

The 302 South 5th Street Site is in the heart of the downtown area that the City of St. Joseph, Missouri, wishes to revitalize. However, past operations at and near the Site may have left the Site contaminated which would complicate and potentially delay redevelopment in the area.

EIGov was tasked by the EPA to conduct a Phase II Environmental Site Investigation in accordance with ASTM Standard E 1903-97 at the 302 South 5th Street Site to:

- Make preliminary determinations of the type and general extent of subsurface soil and groundwater contamination on the property;
- Determine, using published state and federal risk-based regulatory standards, the risks posed by contamination;
- Develop potential alternatives for addressing contamination identified during the investigation;
- Estimate order of magnitude costs of implementing the alternatives to support future residential and commercial redevelopment at the Site; and
- Recommend any follow-up site characterization activities that may be warranted.

EIGov collected a total of six subsurface soil samples and one groundwater sample from three boreholes installed on the Site. Borehole locations were placed perpendicular to expected groundwater flow in an attempt to intercept any contamination entering the Site from upgradient locations. Samples were collected in accordance with the EPA-approved QAPP with the exception of a couple of deviations noted in Section 3.5.1 of this report.

The Phase II ESA conducted at the 302 South 5th Street Site revealed that the subsurface soil sample collected from the center of the property near the electrical outlet box contained benzo(a)pyrene at a concentration exceeding the LDTL of 0.62 mg/kg. This sample, collected from the shallow interval at SB-09, was the only sample with detectable levels of PAHs and also contained the highest concentrations of arsenic and lead. Both diesel- and oil-range petroleum hydrocarbons were detected in this sample and the deep interval sample from this same borehole, although not at levels exceeding risk-based criteria. Based on the location, depth, and type of contamination found in this sample, it is likely that the contamination resulted from one or more historic, localized fuel spills.

Acetone was detected in all six subsurface soil samples and benzene was detected in all but one soil sample, but not at concentrations exceeding risk-based criteria. Arsenic and lead were detected in all six subsurface soil samples at levels exceeding risk-based criteria. Barium, cadmium, chromium, and mercury were also detected in all six soil samples but not at concentrations exceeding the LDTLs. Although most metals were present at similar concentrations regardless of depth and location, the concentration of lead in the shallow subsurface soil samples was significantly higher than the lead concentration in the deeper soil samples. Because the Site has been used as a parking and loading area since 1965, it is likely that the lead observed in the shallow soil is a result of localized fuel spills that have since degraded, leaving the heavy metals behind.

The analytical data indicate that PAHs and RCRA metals are present in subsurface soil at concentrations exceeding the MRBCA Lowest Default Target Levels and may present a risk to future redevelopment plans. Although the levels and types of contamination observed at the Site do not present an immediate threat, ElGov does not have enough information to make recommendations as to how to address existing contamination and prevent further contaminant migration. ElGov recommends additional sampling to determine if more significant contamination exists, to determine contaminant migration pathways, and to eliminate additional source areas. Data from additional sampling efforts would be used to perform a feasibility study to determine the best and most cost effective technologies available to prevent further contaminant migration onto the property and to minimize any risks to human health or the environment.

6. REFERENCES

City of St. Joseph, Missouri (City of St. Joseph, MO), no date (n.d.), Downtown Revitalization Economic Assistance for Missouri Application, submitted to Missouri Department of Economic Development, Business and Community Development Division by Ken Shearin, Mayor of St. Joseph.

_____. 2005. *Executive Summary of St. Joseph Consolidated Plan, 2005 – 2010*.

Environment International Government, Ltd (ElGov), March 10, 2010, *St. Joseph, MO Brownfields Sites, Targeted Brownfields Assessment Phase I Environmental Assessment Report – 302 South 5th Site*, prepared for the U.S. Environmental Protection Agency, Region 7, under Contract Number EP-W-07-096, Task Order 0007.

_____. December 10, 2009, *Targeted Brownfields Assessment, St. Joseph, Missouri Brownfields Sites Phase II Environmental Site Assessments, Quality Assurance Project Plan*, prepared for the U.S. Environmental Protection Agency, Region 7, under Contract Number EP-W-07-096, Task Order 0007.

“St. Joseph, MO Weather.” www.idcide.com. March 10, 2010.
<<http://www.idcide.com/weather/mo/st-joseph.htm>>

United States Environmental Protection Agency (EPA). January 2005. *Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review*. USEPA-540-R-04-009.

_____. October 2004. *Contract Laboratory Program National Functional Guidelines for Inorganic Data Review*. OSWER 9240.1-45, EPA 540-R-04-004.

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APPENDIX A

Site Photos



Soil Boring #8, looking northwest

GWP 2/16/2010



Soil Boring #8, looking southwest

GWP 2/16/2010



Soil Boring #9, looking south

GWP 2/16/2010



Soil Boring #9, bricks in fill

GWP 2/16/2010

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APPENDIX B

Soil Boring Logs



Date: 2/16/2010
Logged by: G. Porus

Time: 16:25

Project:
Boring No:
Location:
Total Depth (ft):
Drilling Method:
Sampling Method:

St Joseph TBA
SB-7
302 South 5th St.
20
Truck-mounted direct-push Geoprobe
Macro-Core soil sampler

Depth (feet)	Recovery	PID Reading (ppm)	Laboratory Sample ID	Lithology	XRF Reading (ppm)
1	4	0	SB-7 1-3	Fill	Pb = 69
2					Pb <24
3					Pb <31
4					Pb <20
5	4	0		Dark brown clayey silt	Pb <21
6					Pb <21
7					Pb <20
8					Pb <23
9	4	0		wet	
10					
11					
12					
13	4	0			
14					
15					
16					
17	4	0			
18					
19					
20					



Date: 2/16/2010
 Logged by: G. Porus

Time: 13:30

Project:
 Boring No:
 Location:
 Total Depth (ft):
 Drilling Method:
 Sampling Method:

St Joseph TBA
 SB-8
 302 South 5th St.
 20
 Truck-mounted direct-push Geoprobe
 Macro-Core soil sampler

Depth (feet)	Recovery	PID Reading (ppm)	Laboratory Sample ID	Lithology	XRF Reading (ppm)
1	3	0	SB-8 1-3	Fill	Pb <31
2				1" thick layer of black cinders	Pb = 27
3				Dark brown clayey silt	
4					
5	3	0		Medium brown clayey silt	Pb <31
6					Pb <26
7					
8					
9	4	0		Medium brown, moist clayey silt	Pb = 28
10					Pb = 35
11					
12					
13	4	0		Medium brown, moist clayey silt (more clay than above)	Pb <18
14					Pb <22
15					
16					
17	4	0	SB-8 18-20		Pb <21
18					Pb <23
19					
20					



Date: 2/16/2010
 Logged by: G. Porus

Time: 14:30

Project:
 Boring No:
 Location:
 Total Depth (ft):
 Drilling Method:
 Sampling Method:

St Joseph TBA
 SB-9
 302 South 5th St.
 20
 Truck-mounted direct-push Geoprobe
 Macro-Core soil sampler

Depth (feet)	Recovery	PID Reading (ppm)	Laboratory Sample ID	Lithology	XRF Reading (ppm)
1	3.5	0	SB-9 1-3	Fill : Dark brown with gravel and red brick fragments, sand, broken cobbles 2" silt layer at 4'	Pb <31
2					Pb <53
3					
4					4
5					
6	Dark brown clayey silt	Pb <31			
7					
8	4	0		Pb <23	
9					
10					
11					
12	4	~1		slight petroleum odor	Pb <27
13					
14					
15					
16	4	~1		gas petroleum odor in shoe - darker brown/gray color	Pb <18
17					
18					
19					
20	3.5	150	SB-9 18-20	Medium brown, moist clayey silt	Pb <20
1					Pb <24
2					
3					free water in sleeve
4					

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APPENDIX C

Analytical Data Summary Tables

Table C-1: VOC Data in Soil as Compared to Risk-Based Criteria

St. Joseph, MO Phase II ESA - 302 South 5th Street

Client Sample ID: Lab Sample ID: Date Sampled: Units:	Screening Criteria															
	MRBCA LDTLs ^a (mg/kg)		MRBCA Tier 1 RBLTs ^b (mg/kg)						MRBCA Tier 1 RBLTs ^c (mg/kg)							
	All Soil types and All Pathways		Residential Land Use - Surficial Soil - Ing/Inh/DC			Residential Land Use - Subsurface Soil			Non-residential Land Use - Surficial Soil - Ing/Inh/DC			Non-residential Land Use - Subsurface Soil				
GC/MS Volatiles																
Acetone	4.20E+00	GWP		6.15E+04	CH	NC	7.06E+03	CH	NC	8.07E+05	0	NC	5.67E+04	NC		
Benzene	5.61E-02	GWP		1.77E+02	AA	C	8.08E-01	AA	C	7.63E+02		C	4.23E+00	C		
Bromobenzene	NS			NS			NS			NS			NS			
Bromochloromethane	3.05E-01	GWP		2.23E+03	CH	NC	1.53E+01	CH	NC	2.94E+04	0	NC	1.23E+02	NC		
Bromodichloromethane	4.72E-01	INH		9.24E+01	AA	C	1.03E+00	AA	C	3.58E+02		C	5.41E+00	C		
Bromofom	1.15E+00	GWP		6.02E+02	AA	C	2.90E+02	AA	C	2.10E+03	0	C	1.52E+03	C		
n-Butylbenzene	4.16E+01	GWP		2.73E+03	0	CH	NC	2.25E+02	CH	NC	3.59E+04	0	NC	1.81E+03	0	
sec-Butylbenzene	3.52E+01	GWP		2.73E+03	0	CH	NC	1.25E+02	CH	NC	3.59E+04	0	NC	1.00E+03	0	
tert-Butylbenzene	3.41E+01	GWP		2.73E+03	0	CH	NC	1.91E+02	CH	NC	3.59E+04	0	NC	1.54E+03	0	
Chlorobenzene	1.94E+00	GWP		1.34E+03	0	CH	NC	2.99E+01	CH	NC	1.76E+04	0	NC	2.40E+02	NC	
Chloroethane	2.81E-01	GWP		2.09E+03	0	AA	C	1.25E+00	AA	C	8.66E+03	0	C	6.56E+00	C	
Chloroform	7.66E-02	INH		1.80E+02	AA	C	1.72E-01	AA	C	6.78E+02		C	9.00E-01	C		
o-Chlorotoluene	3.88E+00	GWP		1.37E+03	0	CH	NC	7.30E+01	CH	NC	1.79E+04	0	NC	5.87E+02	0	
p-Chlorotoluene	2.35E-02	GWP		3.92E+01	CH	NC	3.43E-01	CH	NC	5.32E+02	0	NC	2.76E+00	NC		
Carbon disulfide	6.26E+00	INH		7.29E+03	0	CH	NC	1.27E+01	CH	NC	9.56E+04	0	NC	1.02E+02	NC	
Carbon tetrachloride	7.96E-02	INH		4.81E+01	AA	C	1.56E-01	AA	C	2.08E+02		C	8.15E-01	C		
1,1-Dichloroethane	1.80E-01	GWP		1.06E+03	AA	C	2.09E+00	AA	C	4.42E+03	0	C	1.10E+01	C		
1,1-Dichloroethylene	1.08E-01	GWP		3.47E+03	0	CH	NC	5.23E+00	CH	NC	4.56E+04	0	NC	4.21E+01	NC	
1,1-Dichloropropene	NS			NS			NS			NS			NS			
1,2-Dibromo-3-chloropropane	1.10E-03	GWP		3.25E+00	CH	NC	7.52E+01	AA	C	1.14E+01		C	3.94E+02	0		
1,2-Dibromoethane	NS			NS			NS			NS			NS			
1,2-Dichloroethane	NS			NS			NS			NS			NS			
1,2-Dichloropropane	4.20E-02	GWP		7.55E+01	CH	NC	6.74E-01	CH	NC	6.98E+02		C	3.69E+00	C		
1,3-Dichloropropane	NS			NS			NS			NS			NS			
2,2-Dichloropropane	NS			NS			NS			NS			NS			
Dibromochloromethane	8.70E-01	GWP		5.52E+01	AA	C	4.79E+00	AA	C	1.88E+02		C	2.51E+01	C		
Dichlorodifluoromethane	1.49E+00	INH		1.04E+04	0	CH	NC	2.79E+00	CH	NC	1.37E+05	0	NC	2.24E+01	NC	
cis-1,2-Dichloroethylene	4.20E-02	GWP		6.83E+02	CH	NC	3.87E+00	CH	NC	8.97E+03	0	NC	3.11E+01	NC		
cis-1,3-Dichloropropene ¹	5.06E-02	GWP		6.34E+01	AA	C	4.68E-01	AA	C	9.75E+04	0	NC	3.02E+03	0		
m-Dichlorobenzene	8.39E+00	GWP		2.05E+03	0	CH	NC	2.87E+02	CH	NC	2.69E+04	0	NC	2.31E+03	0	
o-Dichlorobenzene	5.61E+01	GWP		5.73E+03	0	CH	NC	5.43E+02	CH	NC	7.54E+04	0	NC	4.37E+03	0	
p-Dichlorobenzene	7.02E+00	GWP		9.66E+02	0	AA	C	1.46E+01	AA	C	3.38E+03	0	C	7.63E+01	C	
trans-1,2-Dichloroethylene	4.20E-02	GWP		1.37E+03	CH	NC	4.89E+00	CH	NC	1.79E+04	0	NC	3.94E+01	NC		
trans-1,3-Dichloropropene ¹	5.06E-02	GWP		6.34E+01	AA	C	4.68E-01	AA	C	2.81E+02		C	2.45E+00	C		
Ethylbenzene	3.99E+01	GWP		7.45E+03	0	CH	NC	3.76E+02	CH	NC	9.75E+04	0	NC	3.02E+03	0	
2-Hexanone	NS			NS			NS			NS			NS			
Hexachlorobutadiene	1.60E+01	GWP		1.65E+01	CH	NC	6.90E+01	CH	NC	1.70E+02		NC	5.55E+02	NC		
Isopropylbenzene	1.05E+01	INH		6.94E+03	0	CH	NC	1.99E+01	CH	NC	9.11E+04	0	NC	1.60E+02	NC	
p-Isopropyltoluene	2.71E+02	GWP		2.05E+04	0	CH	NC	2.10E+03	0	CH	NC	1.44E+03	0	NC	3.25E+02	NC
4-Methyl-2-pentanone	NS			NS			NS			NS			NS			
Methyl bromide	1.85E-02	GWP		9.59E+01	CH	NC	2.16E-01	CH	NC	1.26E+03		NC	1.73E+00	NC		
Methyl chloride	2.04E-01	INH		4.79E+02	AA	C	4.23E-01	AA	C	2.06E+03		C	2.22E+00	C		
Methylene bromide	NS			NS			NS			NS			NS			
Methylene chloride	1.76E-02	GWP		8.42E+02	AA	C	7.69E+00	AA	C	3.70E+03	0	C	4.03E+01	C		
Methyl ethyl ketone	7.30E+00	GWP		4.42E+04	0	CH	NC	1.28E+04	CH	NC	5.79E+05	0	NC	1.03E+05	0	
Naphthalene	3.25E-01	GWP		3.63E+01	AA	C	4.96E+01	AA	C	1.19E+02		C	2.60E+02	C		
n-Propylbenzene	1.30E+01	GWP		2.73E+03	0	CH	NC	7.68E+01	CH	NC	3.59E+04	0	NC	6.18E+02	0	
Styrene	1.17E+01	GWP		1.42E+04	0	CH	NC	2.29E+03	0	CH	NC	1.86E+05	0	NC	1.84E+04	0
1,1,1,2-Tetrachloroethane	7.15E-02	GWP		2.33E+02	AA	C	1.91E+00	AA	C	9.67E+02	0	C	9.99E+00	C		
1,1,1-Trichloroethane	4.24E+00	GWP		2.06E+04	0	CH	NC	1.38E+02	CH	NC	2.69E+05	0	NC	1.11E+03	NC	
1,1,2,2-Tetrachloroethane	1.05E-02	GWP		3.02E+01	AA	C	1.90E+00	AA	C	1.25E+02		C	9.96E+00	C		
1,1,2-Trichloroethane	4.48E-02	GWP		1.06E+02	AA	C	1.48E+00	AA	C	4.42E+02		C	7.74E+00	C		
1,2,3-Trichlorobenzene	NS			NS			NS			NS			NS			
1,2,3-Trichloropropane	6.23E-04	GWP		3.03E+00	AA	C	1.21E-01	AA	C	1.26E+01		C	6.35E-01	C		
1,2,4-Trichlorobenzene	1.87E+01	GWP		3.20E+02	CH	NC	8.30E+01	CH	NC	4.27E+03	0	NC	6.67E+02	NC		
1,2,4-Trimethylbenzene	3.93E+00	GWP		7.49E+02	CH	NC	2.72E+01	CH	NC	1.01E+04	0	NC	2.19E+02	NC		
1,3,5-Trimethylbenzene	8.82E-01	GWP		7.49E+02	0	CH	NC	4.33E+00	CH	NC	1.01E+04	0	NC	3.48E+01	NC	
Tetrachloroethylene	1.41E-01	GWP		1.18E+01	AA	C	5.94E-01	AA	C	5.27E+01		C	3.11E+00	C		
Toluene	2.98E+01	GWP		6.21E+03	0	CH	NC	9.92E+02	0	CH	NC	8.11E+04	0	NC	7.98E+03	0
Trichloroethylene	1.41E-01	GWP		4.77E+02	AA	C	2.92E+00	AA	C	2.05E+03	0	C	1.53E+01	C		
Trichlorofluoromethane	7.35E+00	INH		1.93E+04	0	CH	NC	1.38E+01	CH	NC	2.54E+05	0	NC	1.11E+02	NC	
Vinyl chloride	1.92E-02	GWP		4.56E+00	AA	C	6.74E-02	AA	C	2.04E+01		C	3.53E-01	C		
Xylene (total)	2.47E+01	INH		7.83E+03	0	CH	NC	4.80E+01	CH	NC	1.04E+05	0	NC	3.86E+02	NC	
m,p-Xylene ^c	2.47E+01	INH		7.83E+03	0	CH	NC	4.80E+01	CH	NC	1.04E+05	0	NC	3.86E+02	NC	
o-Xylene ^c	2.47E+01	INH		7.83E+03	0	CH	NC	4.80E+01	CH	NC	1.04E+05	0	NC	3.86E+02	NC	

Table C-1: VOC Data in Soil as Compared to Risk-Based Criteria

St. Joseph, MO Phase II ESA - 302 South 5th Street

Client Sample ID: Lab Sample ID: Date Sampled: Units:	MRBCA LDTLs ² (mg/kg)		SB-07-1-3		SB-07-18-20		SB-08-1-3		SB-08-18-20		SB-09-1-3		SB-09-18-20	
	All Soil types and All Pathways		T47658-11		T47658-12		T47658-6		T47658-7		T47658-8		T47658-9	
			2/15/2010		2/15/2010		2/15/2010		2/15/2010		2/15/2010		2/15/2010	
GC/MS Volatiles														
Acetone	4.20E+00	GWP	0.0341	J	0.0486		0.0203	J	0.0118	J	0.0094	U	0.0183	J
Benzene	5.61E-02	GWP	0.0015	J	0.0015	J	0.0009	J	0.0014	J	0.0018	J	0.00079	U
Bromobenzene	NS		0.00057	U	0.00045	U	0.00048	U	0.00053	U	0.00063	U	0.00062	U
Bromochloromethane	3.05E-01	GWP	0.0006	U	0.00048	U	0.00051	U	0.00056	U	0.00066	U	0.00066	U
Bromodichloromethane	4.72E-01	INH	0.00076	U	0.0006	U	0.00064	UJ	0.00071	UJ	0.00084	UJ	0.00083	UJ
Bromoform	1.15E+00	GWP	0.00095	U	0.00076	U	0.00081	UJ	0.00089	UJ	0.001	UJ	0.001	UJ
n-Butylbenzene	4.16E+01	GWP	0.00071	U	0.00056	U	0.0006	U	0.00066	U	0.00078	U	0.00078	U
sec-Butylbenzene	3.52E+01	GWP	0.00079	U	0.00063	U	0.00067	U	0.00074	U	0.00087	U	0.0381	
tert-Butylbenzene	3.41E+01	GWP	0.0011	U	0.00085	U	0.00091	U	0.001	U	0.0012	U	0.0012	U
Chlorobenzene	1.94E+00	GWP	0.00058	U	0.00046	U	0.00049	UJ	0.00054	UJ	0.00064	UJ	0.00063	UJ
Chloroethane	2.81E-01	GWP	0.00094	U	0.00075	U	0.0008	U	0.00088	U	0.001	U	0.001	U
Chloroform	7.66E-02	INH	0.00062	U	0.00049	U	0.00053	U	0.00058	U	0.00068	U	0.00068	U
o-Chlorotoluene	3.88E+00	GWP	0.00087	U	0.00069	U	0.00074	U	0.00081	U	0.00095	U	0.00095	U
p-Chlorotoluene	2.35E-02	GWP	0.0011	U	0.00088	U	0.00094	U	0.001	U	0.0012	U	0.0012	U
Carbon disulfide	6.26E+00	INH	0.00058	U	0.00046	U	0.00049	U	0.00054	U	0.00063	U	0.0044	J
Carbon tetrachloride	7.96E-02	INH	0.00066	U	0.00053	U	0.00056	U	0.00062	U	0.00073	U	0.00072	U
1,1-Dichloroethane	1.80E-01	GWP	0.00093	U	0.00074	U	0.00079	U	0.00087	U	0.001	U	0.001	U
1,1-Dichloroethylene	1.08E-01	GWP	0.00079	U	0.00063	U	0.00067	U	0.00074	U	0.00087	U	0.00087	U
1,1-Dichloropropene	NS		0.00068	U	0.00054	U	0.00058	U	0.00063	U	0.00075	U	0.00074	U
1,2-Dibromo-3-chloropropane	1.10E-03	GWP	0.0027	U	0.0022	U	0.0023	U	0.0026	U	0.003	U	0.003	U
1,2-Dibromoethane	NS		0.001	U	0.00081	U	0.00086	UJ	0.00095	UJ	0.0011	UJ	0.0011	UJ
1,2-Dichloroethane	NS		0.00069	U	0.00055	U	0.00058	UJ	0.00064	UJ	0.00076	UJ	0.00075	UJ
1,2-Dichloropropane	4.20E-02	GWP	0.00083	U	0.00065	U	0.0007	U	0.00077	U	0.00091	U	0.0009	U
1,3-Dichloropropane	NS		0.00072	U	0.00057	U	0.00061	U	0.00067	U	0.00079	U	0.00079	U
2,2-Dichloropropane	NS		0.0006	U	0.00047	U	0.0005	U	0.00056	U	0.00065	U	0.00065	U
Dibromochloromethane	8.70E-01	GWP	0.00056	U	0.00045	U	0.00048	UJ	0.00053	UJ	0.00062	UJ	0.00062	UJ
Dichlorodifluoromethane	1.49E+00	INH	0.0012	U	0.00097	U	0.001	U	0.0011	U	0.0013	U	0.0013	U
cis-1,2-Dichloroethylene	4.20E-02	GWP	0.001	U	0.00082	U	0.00088	U	0.00097	U	0.0011	U	0.0011	U
cis-1,3-Dichloropropene ¹	5.06E-02	GWP	0.00055	U	0.00044	U	0.00047	UJ	0.00052	UJ	0.00061	UJ	0.0006	UJ
m-Dichlorobenzene	8.39E+00	GWP	0.00074	U	0.00058	U	0.00062	UJ	0.00069	UJ	0.00081	UJ	0.00081	UJ
o-Dichlorobenzene	5.61E+01	GWP	0.00074	U	0.00059	U	0.00063	UJ	0.00069	UJ	0.00081	UJ	0.00081	UJ
p-Dichlorobenzene	7.02E+00	GWP	0.00072	U	0.00057	U	0.00061	UJ	0.00067	UJ	0.00079	UJ	0.00079	UJ
trans-1,2-Dichloroethylene	4.20E-02	GWP	0.00081	U	0.00064	U	0.00069	U	0.00075	U	0.00089	U	0.00088	U
trans-1,3-Dichloropropene ¹	5.06E-02	GWP	0.00064	U	0.00051	U	0.00055	UJ	0.0006	UJ	0.00071	UJ	0.00071	UJ
Ethylbenzene	3.99E+01	GWP	0.00093	U	0.00074	U	0.00079	U	0.00087	U	0.0013	J	0.001	U
2-Hexanone	NS		0.0068	U	0.0054	U	0.0057	U	0.0063	U	0.0074	U	0.0074	U
Hexachlorobutadiene	1.60E+01	GWP	0.0012	U	0.00093	U	0.00099	UJ	0.0011	UJ	0.0013	UJ	0.0013	UJ
Isopropylbenzene	1.05E+01	INH	0.00072	U	0.00057	U	0.00061	U	0.00067	U	0.00079	U	0.00079	U
p-Isopropyltoluene	2.71E+02	GWP	0.00093	U	0.00074	U	0.00079	U	0.00087	U	0.001	U	0.001	U
4-Methyl-2-pentanone	NS		0.0057	U	0.0045	U	0.0048	U	0.0053	U	0.0063	U	0.0063	U
Methyl bromide	1.85E-02	GWP	0.0012	U	0.00098	U	0.001	U	0.0012	U	0.0014	U	0.0014	U
Methyl chloride	2.04E-01	INH	0.0012	U	0.00092	U	0.00098	U	0.0011	U	0.0013	U	0.0013	U
Methylene bromide	NS		0.00096	U	0.00076	U	0.00081	UJ	0.0009	UJ	0.0011	UJ	0.0011	UJ
Methylene chloride	1.76E-02	GWP	0.0024	U	0.0019	U	0.002	U	0.0023	U	0.0027	U	0.0026	U
Methyl ethyl ketone	7.30E+00	GWP	0.0059	U	0.0047	U	0.005	U	0.0055	U	0.0065	U	0.0065	U
Naphthalene	3.25E-01	GWP	0.00089	U	0.00071	U	0.00075	UJ	0.00083	UJ	0.00098	UJ	0.00097	UJ
n-Propylbenzene	1.30E+01	GWP	0.00076	U	0.0006	U	0.00064	U	0.00071	U	0.00083	U	0.00083	U
Styrene	1.17E+01	GWP	0.0008	U	0.00063	U	0.00067	UJ	0.00074	UJ	0.00087	UJ	0.00087	UJ
1,1,1,2-Tetrachloroethane	7.15E-02	GWP	0.00044	U	0.00034	U	0.00037	U	0.00041	U	0.00048	U	0.00048	U
1,1,1-Trichloroethane	4.24E+00	GWP	0.00071	U	0.00057	U	0.0006	U	0.00067	U	0.00078	U	0.00078	U
1,1,2,2-Tetrachloroethane	1.05E-02	GWP	0.0014	U	0.0011	U	0.0012	U	0.0013	U	0.0015	U	0.0015	U
1,1,2-Trichloroethane	4.48E-02	GWP	0.002	U	0.0016	U	0.0017	U	0.0019	U	0.0022	U	0.0022	U
1,2,3-Trichlorobenzene	NS		0.0011	U	0.00085	U	0.00091	UJ	0.001	UJ	0.0012	UJ	0.0012	UJ
1,2,3-Trichloropropane	6.23E-04	GWP	0.0018	U	0.0014	U	0.0015	U	0.0017	U	0.0019	U	0.0019	U
1,2,4-Trichlorobenzene	1.87E+01	GWP	0.0011	U	0.00084	U	0.0009	UJ	0.00099	UJ	0.0012	UJ	0.0012	UJ
1,2,4-Trimethylbenzene	3.93E+00	GWP	0.00087	U	0.00069	U	0.00074	U	0.00082	U	0.00096	U	0.00096	U
1,3,5-Trimethylbenzene	8.82E-01	GWP	0.001	U	0.0008	U	0.00086	U	0.00094	U	0.0011	U	0.0011	U
Tetrachloroethylene	1.41E-01	GWP	0.00079	U	0.00063	U	0.00067	U	0.00074	U	0.00087	U	0.00087	U
Toluene	2.98E+01	GWP	0.00098	U	0.00092	J	0.00083	U	0.00091	U	0.0048	J	0.0011	U
Trichloroethylene	1.41E-01	GWP	0.0017	U	0.0014	U	0.0015	U	0.0016	U	0.0019	U	0.0019	U
Trichlorofluoromethane	7.35E+00	INH	0.00072	U	0.00057	U	0.00061	U	0.00067	U	0.00079	U	0.00079	U
Vinyl chloride	1.92E-02	GWP	0.001	U	0.00083	U	0.00089	U	0.00098	U	0.0012	U	0.0011	U
Xylene (total)	2.47E+01	INH	0.0021	U	0.0017	U	0.0018	U	0.002	U	0.0024	U	0.0024	U
m,p-Xylene ²	2.47E+01	INH	0.0015	U	0.0012	U	0.0013	U	0.0014	U	0.0016	U	0.0016	U
o-Xylene ²	2.47E+01	INH	0.00066	U	0.00052	U	0.00056	U	0.00061	U	0.00072	U	0.00072	U

Table C-2: PAH and TPH Data in Soil as Compared to Risk-Based Criteria

St. Joseph, MO Phase II ESA - 302 South 5th Street

Client Sample ID: Lab Sample ID: Date Sampled: Units:	Screening Criteria															
	MRBCA LDTLs ^a (mg/kg)		MRBCA Tier 1 RBTLS ^b (mg/kg)						MRBCA Tier 1 RBTLS ^c (mg/kg)							
	All Soil types and All Pathways		Residential Land Use - Surficial Soil - Ing/Inh/DC			Residential Land Use - Subsurface Soil			Non-residential Land Use - Surficial Soil - Ing/Inh/DC			Non-residential Land Use - Subsurface Soil				
Polycyclic Aromatic Hydrocarbons																
Acenaphthene	1.74E+02	GWP	3.21E+03	0	CH	NC	1.27E+05	0	CH	NC	3.07E+04	0	NC	1.02E+06	0	NC
Acenaphthylene	1.75E+02	GWP	4.31E+03	0	CH	NC	1.59E+05	0	CH	NC	5.38E+04	0	NC	1.28E+06	0	NC
Anthracene	3.06E+03	GWP	1.61E+04	0	CH	NC	7.42E+05	0	CH	NC	1.54E+05	0	NC	5.96E+06	0	NC
Benzo(a)anthracene	6.12E+00	GWP	6.20E+00		AA	C	3.95E+05	0	AA	C	2.11E+01		C	2.07E+06	0	C
Benzo(a)pyrene	6.20E-01	SDC	6.20E-01		AA	C	2.30E+05	0	AA	C	2.11E+00		C	1.21E+06	0	C
Benzo(b)fluoranthene	6.19E+00	SDC	6.19E+00		AA	C	1.05E+05	0	AA	C	2.10E+01	0	C	5.48E+05	0	C
Benzo(g,h,i)perylene	1.72E+03	SDC	1.72E+03	0	CH	NC	3.07E+08	0	CH	NC	1.65E+04	0	NC	2.47E+09	0	NC
Benzo(k)fluoranthene	6.20E+01	SDC	6.20E+01	0	AA	C	5.55E+06	0	AA	C	2.11E+02	0	C	2.91E+07	0	C
Chrysene	5.99E+02	SDC	6.05E+02	0	AA	C	3.61E+05	0	AA	C	2.02E+03	0	C	1.89E+06	0	C
Dibenzo(a,h)anthracene	6.20E-01	SDC	6.20E-01		AA	C	2.85E+06	0	AA	C	2.11E+00		C	1.49E+07	0	C
Fluoranthene	2.28E+03	SDC	2.28E+03	0	CH	NC	1.61E+07	0	CH	NC	2.18E+04	0	NC	1.30E+08	0	NC
Fluorene	2.11E+02	GWP	2.22E+03	0	CH	NC	4.60E+05	0	CH	NC	2.11E+04	0	NC	3.70E+06	0	NC
Indeno(1,2,3-cd)pyrene	3.77E+00	SDC	3.77E+00	0	AA	C	1.25E+07	0	AA	C	1.28E+01	0	C	6.53E+07	0	C
2-Methylnaphthalene	7.55E+00	GWP	2.73E+02		CH	NC	1.20E+03	0	CH	NC	3.59E+03	0	NC	9.61E+03	0	NC
Naphthalene	3.25E-01	GWP	3.63E+01		AA	C	4.96E+01		AA	C	1.19E+02		C	2.60E+02		C
Phenanthrene	1.58E+02	GWP	2.22E+03	0	CH	NC	1.88E+05	0	CH	NC	2.75E+04	0	NC	1.51E+06	0	NC
Pyrene	1.50E+03	GWP	1.71E+03	0	CH	NC	1.83E+07	0	CH	NC	1.64E+04	0	NC	1.47E+08	0	NC
Total Petroleum Hydrocarbons																
TPH-GRO (C6-C10) ³	4.12E+01	GWP	2.84E+03	0	CH	NC	1.54E+02		CH	NC	3.72E+04	0	NC	1.24E+03	0	NC
TPH-DRO (>C10-C21) ⁴	6.49E+01	GWP	2.26E+03	0	CH	NC	8.28E+02	0	CH	NC	2.33E+04	0	NC	6.66E+03	0	NC
TPH-ORO (>C21-C35)	1.22E+05	SDC	1.72E+03	0	CH	NC	N/A	--	--	--	1.65E+04	0	NC	N/A	--	--

Table C-2: PAH and TPH Data in Soil as Compared to Risk-Based Criteria

St. Joseph, MO Phase II ESA - 302 South 5th Street

Client Sample ID: Lab Sample ID: Date Sampled: Units:	MRBCA LDTLs ² (mg/kg)		SB-07-1-3 T47658-11 2/15/2010 mg/kg		SB-07-18-20 T47658-12 2/15/2010 mg/kg		SB-08-1-3 T47658-6 2/15/2010 mg/kg		SB-08-18-20 T47658-7 2/15/2010 mg/kg		SB-09-1-3 T47658-8 2/15/2010 mg/kg		SB-09-18-20 T47658-9 2/15/2010 mg/kg	
	All Soil types and All Pathways													
Polycyclic Aromatic Hydrocarbons														
Acenaphthene	1.74E+02	GWP	0.057	U	0.059	U	0.056	U	0.059	U	0.057	U	0.06	U
Acenaphthylene	1.75E+02	GWP	0.049	U	0.05	U	0.048	U	0.05	U	0.048	U	0.051	U
Anthracene	3.06E+03	GWP	0.04	U	0.041	U	0.039	U	0.041	U	0.119	J	0.042	U
Benzo(a)anthracene	6.12E+00	GWP	0.08	U	0.082	U	0.078	U	0.082	U	0.895		0.084	U
Benzo(a)pyrene	6.20E-01	SDC	0.033	UJ	0.034	UJ	0.032	UJ	0.034	UJ	0.923	J	0.034	UJ
Benzo(b)fluoranthene	6.19E+00	SDC	0.051	UJ	0.052	UJ	0.05	UJ	0.053	UJ	1.2	J	0.054	UJ
Benzo(g,h,i)perylene	1.72E+03	SDC	0.049	U	0.05	U	0.048	U	0.05	U	0.781		0.051	U
Benzo(k)fluoranthene	6.20E+01	SDC	0.039	UJ	0.04	UJ	0.038	UJ	0.04	UJ	0.145	J	0.041	UJ
Chrysene	5.99E+02	SDC	0.045	UJ	0.047	UJ	0.044	UJ	0.047	UJ	1.04	J	0.048	UJ
Dibenzo(a,h)anthracene	6.20E-01	SDC	0.11	U	0.11	U	0.11	U	0.11	U	0.122	J	0.12	U
Fluoranthene	2.28E+03	SDC	0.043	U	0.044	U	0.042	U	0.044	U	2.57		0.045	U
Fluorene	2.11E+02	GWP	0.056	U	0.058	U	0.055	U	0.058	U	0.056	U	0.059	U
Indeno(1,2,3-cd)pyrene	3.77E+00	SDC	0.074	U	0.076	U	0.072	U	0.076	U	0.722		0.078	U
2-Methylnaphthalene	7.55E+00	GWP	0.065	U	0.067	U	0.064	U	0.067	U	0.064	U	0.068	U
Naphthalene	3.25E-01	GWP	0.041	U	0.043	U	0.04	U	0.043	U	0.041	U	0.043	U
Phenanthrene	1.58E+02	GWP	0.056	U	0.057	U	0.054	U	0.057	U	1.25		0.058	U
Pyrene	1.50E+03	GWP	0.04	U	0.041	U	0.039	U	0.041	U	1.83		0.042	U
Total Petroleum Hydrocarbons														
TPH-GRO (C6-C10) ³	4.12E+01	GWP	0.21	U	0.16	U	0.17	U	0.19	U	0.23	U	NA	
TPH-DRO (>C10-C21) ⁴	6.49E+01	GWP	8.1	U	8.3	U	7.9	U	8.3	U	11.2		28.6	
TPH-ORO (>C21-C35)	1.22E+05	SDC	8.1	U	8.3	U	7.9	U	8.3	U	20.7		8.5	U

Table C-3: RCRA Metals Data in Soil as Compared to Risk-Based Criteria

St. Joseph, MO Phase II ESA - 302 South 5th Street

	Screening Criteria												
Client Sample ID: Lab Sample ID: Date Sampled: Units:	MRBCA LDTLs ^a (mg/kg)		MRBCA Tier 1 RBTLS ^b (mg/kg)						MRBCA Tier 1 RBTLS ^c (mg/kg)				
	All Soil types and All Pathways		Residential Land Use - Surficial Soil - Ing/Inh/DC			Residential Land Use - Subsurface Soil			Non-residential Land Use - Surficial Soil - Ing/Inh/DC		Non-residential Land Use - Subsurface Soil		
Metals													
Arsenic	3.89E+00	SDC	3.89E+00	AA	C	N/A	--	--	1.59E+01	C	NA	--	
Barium	2.04E+03	GWP	1.50E+04	CH	NC	N/A	--	--	1.81E+05	NC	NA	--	
Cadmium	9.31E+00	GWP	1.68E+01	AA	C	N/A	--	--	7.48E+01	C	NA	--	
Chromium ^d	7.46E+04	SDC	7.46E+04	CH	NC	N/A	--	--	4.72E+05	NC	NA	--	
Lead	3.74E+00	GWP	2.60E+02	--	--	2.60E+02	--	--	6.60E+02	--	6.60E+02	--	
Mercury	2.19E+00	INH	4.63E+01	0	CH	NC	4.17E+00	0	CH	NC	6.30E+02	0	NC
Selenium	6.27E+00	GWP	3.80E+02	CH	NC	N/A	--	--	4.78E+03	NC	NA	--	
Silver	1.62E+01	GWP	3.74E+02	CH	NC	N/A	--	--	4.48E+03	NC	NA	--	
General Chemistry													
Solids, Percent (%)													

Table C-3: RCRA Metals Data in Soil as Compared to Risk-Based Criteria

St. Joseph, MO Phase II ESA - 302 South 5th Street

Client Sample ID: Lab Sample ID: Date Sampled: Units:			SB-07-1-3 T47658-11 2/15/2010 mg/kg	SB-07-18-20 T47658-12 2/15/2010 mg/kg	SB-08-1-3 T47658-6 2/15/2010 mg/kg	SB-08-18-20 T47658-7 2/15/2010 mg/kg	SB-09-1-3 T47658-8 2/15/2010 mg/kg	SB-09-18-20 T47658-9 2/15/2010 mg/kg
	MRBCA LDTLs ^a (mg/kg)							
	All Soil types and All Pathways							
Metals								
Arsenic	3.89E+00	SDC	8.1	8.9	8.9	8.4	13	11.1
Barium	2.04E+03	GWP	270	223	257	288	224	247
Cadmium	9.31E+00	GWP	0.67	0.44	2.6	0.5	5.7	0.49
Chromium ^d	7.46E+04	SDC	18.6	18.6	17.3	17.7	14.7	18.9
Lead	3.74E+00	GWP	31.9	10.6	110	10.4	330	11.9
Mercury	2.19E+00	INH	0.024	0.28	0.2	0.19	0.018	0.045
Selenium	6.27E+00	GWP	0.7	0.7	0.87	0.73	1.1	0.79
Silver	1.62E+01	GWP	0.7	0.7	0.73	0.73	0.66	0.79
General Chemistry								
Solids, Percent (%)			79.7	77.7	81.6	77.3	80.9	76.1

Table C-4: VOC Data in Groundwater as Compared to Risk-Based Criteria

St. Joseph, MO Phase II ESA - 302 South 5th Street

Client Sample ID: Lab Sample ID: Date Sampled: Units:	Screening Criteria											SB-09-GW T47658-10 2/15/2010 mg/L		
	MRBCA LDTLs ^a (mg/L)		MRBCA Tier 1 RBTLS ^b (mg/L)				MRBCA Tier 1 RBTLS ^c (mg/L)							
	All Soil types and All Pathways		Residential Land Use - Indoor Inhalation of Vapor Emissions			Residential Land Use - Dermal Contact			Non-residential Land Use - Indoor Inhalation of Vapor Emissions			Non-residential Land Use - Dermal Contact		
GC/MS Volatiles														
Acetone	2.97E+00	DWG	6.12E+04	CH	NC	6.66E+03	CH	NC	4.92E+05	NC	3.69E+04	NC	0.0047	U
Benzene	5.00E-03	DWG	1.74E+00	AA	C	2.92E-01	AA	C	9.12E+00	C	1.06E+00	C	0.0005	U
Bromobenzene	NS		NS			NS			NS		NS		0.00082	U
Bromochloromethane	5.44E-02	DWG	5.57E+01	CH	NC	4.87E+01	CH	NC	4.47E+02	NC	2.70E+02	NC	0.0016	U
Bromodichloromethane	8.00E-02	DWG	2.33E+00	AA	C	3.21E-01	AA	C	1.22E+01	C	1.17E+00	C	0.00049	U
Bromoform	8.00E-02	DWG	4.61E+02	AA	C	2.96E+00	AA	C	2.42E+03	C	1.08E+01	C	0.0014	U
n-Butylbenzene	9.89E-02	DWG	1.48E+01	CH	NC	5.36E-01	CH	NC	1.19E+02	NC	2.97E+00	NC	0.00063	U
sec-Butylbenzene	1.06E-01	DWG	1.05E+01	CH	NC	7.27E-01	CH	NC	8.41E+01	NC	4.03E+00	NC	0.00052	U
tert-Butylbenzene	1.03E-01	DWG	1.60E+01	CH	NC	6.34E-01	CH	NC	1.28E+02	NC	3.51E+00	NC	0.0013	U
Chlorobenzene	5.58E-02	DWG	2.21E+01	CH	NC	2.14E+00	CH	NC	1.78E+02	NC	1.19E+01	NC	0.00056	U
Chloroethane	4.85E-02	DWG	4.90E+00	AA	C	9.07E+00	AA	C	2.57E+01	C	3.31E+01	C	0.00092	U
Chloroform	8.00E-02	DWG	4.91E-01	AA	C	5.78E-01	AA	C	2.57E+00	C	2.11E+00	C	0.00064	U
o-Chlorotoluene	6.19E-02	DWG	3.04E+01	CH	NC	1.38E+00	CH	NC	2.44E+02	NC	7.64E+00	NC	0.0007	U
p-Chlorotoluene	3.10E-04	DWG	1.18E-01	CH	NC	1.17E+00	CH	NC	9.50E-01	NC	6.49E+00	NC	0.00056	U
Carbon disulfide	5.27E-01	DWG	2.36E+01	CH	NC	2.08E+01	CH	NC	1.89E+02	NC	1.15E+02	NC	0.00053	U
Carbon tetrachloride	5.00E-03	DWG	1.28E-01	AA	C	4.69E-02	AA	C	6.70E-01	C	1.71E-01	C	0.00066	U
1,1-Dichloroethane	2.49E-02	DWG	6.53E+00	AA	C	3.53E+00	AA	C	3.42E+01	C	1.29E+01	C	0.00052	U
1,1-Dichloroethylene	7.00E-03	DWG	8.99E+00	CH	NC	1.34E+01	CH	NC	7.23E+01	NC	7.44E+01	NC	0.0005	U
1,1-Dichloropropene	NS		NS			NS			NS		NS		0.00078	U
1,2-Dibromo-3-chloropropane	2.00E-04	DWG	2.70E+02	AA	C	9.82E-03	AA	C	1.41E+03	C	3.59E-02	C	0.0019	U
1,2-Dibromoethane	NS		NS			NS			NS		NS		0.00055	U
1,2-Dichloroethane	NS		NS			NS			NS		NS		0.00062	U
1,2-Dichloropropane	5.00E-03	DWG	1.82E+00	CH	NC	4.21E-01	CH	NC	9.97E+00	C	1.65E+00	C	0.00062	U
1,3-Dichloropropane	NS		NS			NS			NS		NS		0.00054	U
2,2-Dichloropropane	NS		NS			NS			NS		NS		0.00062	U
Dibromochloromethane	8.00E-02	DWG	9.81E+00	AA	C	2.55E-01	AA	C	5.14E+01	C	9.32E-01	C	0.00061	U
Dichlorodifluoromethane	2.20E-01	DWG	2.66E+00	CH	NC	6.31E+01	CH	NC	2.14E+01	NC	3.50E+02	NC	0.0011	U
cis-1,2-Dichloroethylene	7.00E-02	DWG	1.16E+01	CH	NC	4.22E+00	CH	NC	9.36E+01	NC	2.34E+01	NC	0.00056	U
cis-1,3-Dichloropropene ¹	4.31E-03	DWG	1.01E+00	AA	C	2.99E-01	AA	C	5.29E+00	C	1.09E+00	C	0.00048	U
m-Dichlorobenzene	8.93E-02	DWG	7.88E+01	CH	NC	1.24E+00	CH	NC	6.33E+02	NC	6.87E+00	NC	0.001	U
o-Dichlorobenzene	6.00E-01	DWG	1.50E+02	CH	NC	5.26E+00	CH	NC	1.20E+03	NC	2.92E+01	NC	0.00069	U
p-Dichlorobenzene	7.50E-02	DWG	4.04E+00	AA	C	4.49E-01	AA	C	2.12E+01	C	1.64E+00	C	0.001	U
trans-1,2-Dichloroethylene	1.00E-01	DWG	1.08E+01	CH	NC	6.14E+00	CH	NC	8.68E+01	NC	3.40E+01	NC	0.00045	U
trans-1,3-Dichloropropene ¹	4.31E-03	DWG	1.01E+00	AA	C	2.99E-01	AA	C	5.29E+00	C	1.09E+00	C	0.00068	U
Ethylbenzene	7.00E-01	DWG	1.77E+02	CH	NC	6.34E+00	CH	NC	1.43E+03	NC	3.51E+01	NC	0.00055	U
2-Hexanone	NS		NS			NS			NS		NS		0.0032	U
Hexachlorobutadiene	2.00E-03	DWG	2.37E-01	CH	NC	4.73E-03	CH	NC	1.90E+00	NC	2.62E-02	NC	0.0013	U
Isopropylbenzene	3.30E-01	DWG	6.56E+00	CH	NC	4.51E+00	CH	NC	5.27E+01	NC	2.50E+01	NC	0.00051	U
p-Isopropyltoluene	7.86E-01	DWG	1.68E+02	CH	NC	5.19E+00	CH	NC	1.35E+03	NC	2.88E+01	NC	0.00065	U
4-Methyl-2-pentanone	NS		NS			NS			NS		NS		0.0099	U
Methyl bromide	4.67E-03	DWG	1.09E+00	CH	NC	1.62E+00	CH	NC	8.78E+00	NC	8.98E+00	NC	0.00094	U
Methyl chloride	1.83E-02	DWG	9.65E-01	AA	C	3.94E+00	AA	C	5.06E+00	C	1.44E+01	C	0.00084	U
Methylene bromide	NS		NS			NS			NS		NS		0.00065	U
Methylene chloride	5.00E-03	DWG	4.08E+01	AA	C	5.54E+00	AA	C	2.14E+02	C	2.02E+01	C	0.00041	U
Methyl ethyl ketone	3.64E+00	DWG	9.20E+04	CH	NC	2.27E+03	CH	NC	7.40E+05	NC	1.26E+04	NC	0.0039	U
Naphthalene	1.09E-03	DWG	4.20E+00	AA	C	2.06E-02	AA	C	2.20E+01	C	7.51E-02	C	0.00092	J
n-Propylbenzene	1.15E-01	DWG	1.85E+01	CH	NC	1.18E+00	CH	NC	1.49E+02	NC	6.54E+00	NC	0.00057	U
Styrene	1.00E-01	DWG	5.10E+02	CH	NC	1.67E+01	CH	NC	4.10E+03	NC	9.27E+01	NC	0.00056	U
1,1,1,2-Tetrachloroethane	5.27E-03	DWG	3.35E+00	AA	C	2.22E-01	AA	C	1.76E+01	C	8.11E-01	C	0.0008	U
1,1,1-Trichloroethane	2.00E-01	DWG	1.72E+02	CH	NC	5.64E+01	CH	NC	1.38E+03	NC	3.13E+02	NC	0.00062	U
1,1,2,2-Tetrachloroethane	6.89E-04	DWG	2.88E+00	AA	C	6.45E-02	AA	C	1.51E+01	C	2.36E-01	C	0.0012	U
1,1,2-Trichloroethane	5.00E-03	DWG	3.65E+00	AA	C	3.05E-01	AA	C	1.91E+01	C	1.11E+00	C	0.00098	U
1,2,3-Trichlorobenzene	NS		NS			NS			NS		NS		0.0011	U
1,2,3-Trichloropropane	6.93E-05	DWG	2.94E-01	AA	C	4.81E-03	AA	C	1.54E+00	C	1.76E-02	C	0.0013	U
1,2,4-Trichlorobenzene	7.00E-02	DWG	7.92E+00	CH	NC	2.91E-01	CH	NC	6.36E+01	NC	1.25E+00	C	0.00082	U
1,2,4-Trimethylbenzene	7.06E-03	DWG	1.33E+00	CH	NC	1.66E+00	CH	NC	1.07E+01	NC	9.23E+00	NC	0.00065	U
1,3,5-Trimethylbenzene	7.05E-03	DWG	9.46E-01	CH	NC	1.54E+00	CH	NC	7.61E+00	NC	8.55E+00	NC	0.0007	U
Tetrachloroethylene	5.00E-03	DWG	5.68E-01	AA	C	5.06E-03	AA	C	2.98E+00	C	1.85E-02	C	0.00091	U
Toluene	1.00E+00	DWG	8.73E+02	CH	NC	8.58E+00	CH	NC	7.02E+03	NC	4.76E+01	NC	0.00043	U
Trichloroethylene	5.00E-03	DWG	2.74E+00	AA	C	7.22E-01	AA	C	1.43E+01	C	2.64E+00	C	0.00052	U
Trichlorofluoromethane	6.98E-01	DWG	8.87E+00	CH	NC	5.89E+01	CH	NC	7.13E+01	NC	3.26E+02	NC	0.0012	U
Vinyl chloride	2.00E-03	DWG	1.83E-01	AA	C	2.06E-02	AA	C	9.59E-01	C	7.53E-02	C	0.001	U
Xylene (total)	1.00E+01	DWG	2.03E+01	CH	NC	2.13E+01	CH	NC	1.63E+02	NC	1.18E+02	NC	0.0017	U
m,p-Xylene ²	1.00E+01	DWG	2.03E+01	CH	NC	2.13E+01	CH	NC	1.63E+02	NC	1.18E+02	NC	0.0011	U
o-Xylene ²	1.00E+01	DWG	2.03E+01	CH	NC	2.13E+01	CH	NC	1.63E+02	NC	1.18E+02	NC	0.00053	U

Table C-5: PAH and TPH Data in Groundwater as Compared to Risk-Based Criteria

St. Joseph, MO Phase II ESA - 302 South 5th Street

Client Sample ID: Lab Sample ID: Date Sampled: Units:	Screening Criteria												SB-09-GW T47658-10 2/15/2010 mg/L					
	MRBCA LDTLs ^a (mg/L)		MRBCA Tier 1 RBTLS ^b (mg/L)						MRBCA Tier 1 RBTLS ^c (mg/L)									
	All Soil types and All Pathways		Residential Land Use - Indoor Inhalation of Vapor Emissions			Residential Land Use - Dermal Contact			Non-residential Land Use - Indoor Inhalation of Vapor Emissions			Non-residential Land Use - Dermal Contact						
Polycyclic Aromatic Hydrocarbons																		
Acenaphthene	1.65E-01	DWG	3.03E+03	0	CH	NC	1.35E+00	CH	NC	2.44E+04	0	NC	7.50E+00	0	NC	0.0016	U	
Acenaphthylene	1.70E-01	DWG	3.89E+03	0	CH	NC	1.60E+00	CH	NC	3.13E+04	0	NC	8.89E+00	0	NC	0.0012	U	
Anthracene	6.96E-01	DWG	4.29E+03	0	CH	NC	3.17E+00	0	CH	NC	3.45E+04	0	NC	1.76E+01	0	NC	0.0011	U
Benzo(a)anthracene	1.03E-04	DWG	1.67E+02	0	AA	C	1.74E-04	AA	C	8.78E+02	0	C	6.37E-04		C	0.0011	U	
Benzo(a)pyrene	1.02E-05	GDC	3.81E+01	0	AA	C	1.02E-05	AA	C	2.00E+02	0	C	3.74E-05		C	0.0011	U	
Benzo(b)fluoranthene	6.27E-05	DWG	1.44E+01	0	AA	C	1.01E-04	AA	C	7.54E+01	0	C	3.68E-04		C	0.00087	U	
Benzo(g,h,i)perylene	2.64E-02	DWG	3.28E+04	0	CH	NC	3.79E-02	0	CH	NC	2.64E+05	0	NC	2.10E-01	0	NC	0.0017	U
Benzo(k)fluoranthene	6.46E-04	DWG	7.62E+02	0	AA	C	1.04E-03	0	AA	C	3.99E+03	0	C	3.80E-03	0	C	0.0011	U
Chrysene	1.03E-02	DWG	1.53E+02	0	AA	C	1.74E-02	0	AA	C	8.03E+02	0	C	6.37E-02	0	C	0.00098	U
Dibenzo(a,h)anthracene	4.21E-06	DWG	1.27E+02	0	AA	C	6.60E-06	AA	C	6.63E+02	0	C	2.41E-05		C	0.0016	U	
Fluoranthene	1.64E-01	DWG	2.55E+04	0	CH	NC	3.00E-01	0	CH	NC	2.05E+05	0	NC	1.66E+00	0	NC	0.00097	U
Fluorene	1.03E-01	DWG	5.63E+03	0	CH	NC	6.27E-01	CH	NC	4.53E+04	0	NC	3.48E+00	0	NC	0.0013	U	
Indeno(1,2,3-cd)pyrene	3.82E-05	DWG	6.07E+02	0	AA	C	6.14E-05	0	AA	C	3.18E+03	0	C	2.24E-04	0	C	0.0018	U
2-Methylnaphthalene	1.17E-02	DWG	4.72E+01	0	CH	NC	1.41E-01	CH	NC	3.79E+02	0	NC	7.84E-01		NC	0.0013	U	
Naphthalene	1.09E-03	DWG	4.20E+00		AA	C	2.06E-02	AA	C	2.20E+01		C	7.51E-02		C	0.0011	U	
Phenanthrene	7.50E-02	DWG	2.25E+03	0	CH	NC	4.20E-01	CH	NC	1.81E+04	0	NC	2.33E+00	0	NC	0.00097	U	
Pyrene	9.61E-02	DWG	2.94E+04	0	CH	NC	1.64E-01	0	CH	NC	2.37E+05	0	NC	9.07E-01	0	NC	0.0017	U
Total Petroleum Hydrocarbons																		
TPH-GRO (C6-C10) ³	1.72E-01	DWG	1.78E+01		CH	NC	NA	--	--	1.43E+02	0	NC	NA	--	--	0.0803	J	
TPH-DRO (>C10-C21) ⁴	1.72E-01	DWG	5.88E+01	0	CH	NC	NA			4.73E+02	0	NC	N/A	--	--	0.12	U	
TPH-ORO (>C21-C35)	4.69E-01	DWG	NA	--	--		NA	--	--	N/A	--	--	N/A	--	--	0.12	U	

Table Key and Notes

Table Key

%	percent
AA	Age-adjusted
Bold Font	Exceeds LDTL
<i>Bold, Italicized Font</i>	Exceeds LDTL, but compound not detected
C	Carcinogenic
CAS #	Chemical Abstract Services Number
CH	Child
DC	Dermal Contact
DRO	Diesel-range Organics
DWG	Domestic water use of groundwater
GC	Gas Chromatograph
GDC	GW dermal contact pathway
GRO	Gasoline-range Organics
GW	Groundwater
GWP	Protection of domestic groundwater use pathway
ID	Indentification
Ing	Ingestion
Inh	Inhalation (vapor emissions and particulates)
INH	Indoor inhalation pathway
J	Detected at a value less than the Contract Required Quantitation Limit
J+	The result is an estimated quantity, but the result may be biased high
J-	The result is an estimated quantity, but the result may be biased low
LDTL	Lowest Default Target Level
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MRBCA	Missouri Risk-Based Corrective Action
MS	Mass Spectrometer
NA	Not Available
N/A	Not Applicable
NtA	Not Analyzed
NC	Non-carcinogenic
NS	No Standard
ORO	Oil-range Organics
PAH	Polycyclic Aromatic Hydrocarbon
RBTL	Risk-Based Target Level
SB	Soil Boring
TPH	Total Petroleum Hydrocarbon
U	The analyte was analyzed for but was not detected above the reported sample quantitation limit
VOC	Volatile Organic Compound

References

- a. Missouri Risk-Based Corrective Action (MRBCA) Technical Guidance, Appendix B, Table B-1: Lowest Default Target Levels (LDTLs), All Soil Types and All Pathways
- b. Missouri Risk-Based Corrective Action (MRBCA) Technical Guidance, Appendix B, Table B-3: Tier 1 Risk-Based Target Levels (RBTLs), Residential Land Use, Soil Type 2 (Silty)
- c. Missouri Risk-Based Corrective Action (MRBCA) Technical Guidance, Appendix B, Table B-6: Tier 1 Risk-Based Target Levels (RBTLs), Non-residential Land Use, Soil Type 2 (Silty)

Notes for Soil Tables - 302 South 5th Street

0. Calculated target level exceeded saturated soil concentration, caculated value is shown
1. cis/trans not specified for this standard.
2. Data for Xylene (total) used
3. A conservative range was used when applying screening criteria to this analyte: TPH-GRO Aromatics - (>C8-C10)
4. A conservative range was used when applying screening criteria to this analyte: TPH-DRO Aromatics - (>C10-C12)
5. Chromium standard is based on chromium (III) total chromium

Notes for Groundwater Tables - 302 South 5th Street

0. Calculated target level exceeded water solubility, calculated value is shown
1. cis/trans not specified for this standard.
2. Data for Xylene (total) used
3. A conservative range was used when applying screening criteria to this analyte: TPH-GRO Aromatics - (>C8-C10)
4. A conservative range was used when applying screening criteria to this analyte: TPH-DRO Aromatics - (>C10-C12)
5. Chromium standard is based on chromium (III) total chromium

**St. Joseph, Missouri Brownfields Sites
302 South 5th Street
Phase II Environmental Site Assessment
St. Joseph, Missouri**



APPENDIX D

Data Validation Reports

DATA VALIDATION REPORT LEVEL II

Site: St. Joseph, MO Brownfield Sites Phase II ESA, 302 South 5th Street

Laboratory: Accutest

Data Reviewer: Jennifer Arthur, Ph.D.

Review Date: March 22, 2010

Sample Delivery Group (SDG): T47658

Sample Numbers: Soil samples SB-07-1-3, SB-07-18-20, SB-08-1-3, SB-08-18-20, SB-09-1-3, and SB-09-18-20, and groundwater sample SB-09-GW

Matrix / Number of Samples: Soil (6) / Groundwater (1)

The data were qualified according to the U.S. Environmental Protection Agency (EPA) documents *Contract Laboratory Program National Functional Guidelines for Superfund Organic Methods Data Review* (USEPA-540-R-04-009, January 2005) and *USEPA Contract Laboratory Program National Functional Guidelines for Inorganic Data Review* (EPA 540-R-04-004, October 2004).

The review was intended to identify problems and quality control (QC) deficiencies that were readily apparent from the summary data package. The following sections discuss any problems or deficiencies that were found and data qualifications applied because of non-compliant QC. The data review was limited to the available field and laboratory QC information submitted with the project-specific data package.

I, Jennifer Arthur, certify that all data validation criteria outlined in the above-referenced documents appropriate for this level of review were assessed, and any qualifications made to the data were in accordance with those documents.

Chemist

Date

DATA VALIDATION QUALIFIERS

- 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.
- UJ** — The analyte was not detected at or above the reported estimated result. The associated numerical value is an estimate of the quantitation limit of 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.

DATA ASSESSMENT

Sample delivery group (SDG) T47658 includes six (6) soil environmental samples and one (1) groundwater sample associated with the 302 South 5th Street site in St. Joseph, Missouri. The samples were analyzed for GC/MS volatiles including gasoline-range organics (GRO) by EPA SW-846 Method 8260B; GC/MS semi-volatiles (PAHs, diesel-range organics [DRO], and oil-range organics [ORO]) by EPA SW-846 Methods 3510C, 3550B, and 8270C; metals by EPA SW-846 Methods 3050B and 6010B; and mercury by EPA SW-846 Method 7471A. There were no trip blanks associated with this SDG. The following summarizes the data validation that was performed.

VOLATILE ORGANIC COMPOUNDS and TPH-GRO BY EPA METHOD SW-846 8260B

I. Holding Time and Chain-of-Custody (COC) Requirements

The samples were received by the laboratory and analyzed within holding time requirements. No anomalies were found with the COC. No data were qualified.

II. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

For analytical batch VZ2779 (aqueous), a non-client sample was used for the MS/MSD. Percent recoveries and relative percent differences (RPDs) for all spiked compounds were within control limits. No data were qualified on this basis.

For analytical batch VY2420 (soil), client sample SB-10-1-3 was used for the MS/MSD for associated samples SB-08-1-3, SB-08-18-20, SB-09-1-3, and SB-09-18-20. Percent recoveries for several spiked compounds were outside control limits, likely due to matrix effects. For the spiked compound with percent recoveries greater than the upper acceptance limit, because this compound was not detected in the associated samples, no data were qualified on this basis. For spiked compounds with percent recoveries greater than or equal to 20%, and less than the lower acceptance limit, non-detected results for bromodichloromethane, bromoform, chlorobenzene, 1,2-dibromoethane, 1,2-dichloroethane, dibromochloromethane, cis-1,3-dichloropropene, m-dichlorobenzene, o-dichlorobenzene, p-dichlorobenzene, trans-1,3-dichloropropene, hexachlorobutadiene, methylene bromide, naphthalene, styrene, 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene in samples SB-08-1-3, SB-08-18-20, SB-09-1-3, and SB-09-18-20 were qualified as estimated (UJ) due to possible low bias. RPDs for all spiked compounds were within control limits, and no data were qualified on this basis.

For analytical batch VY2421 (soil), client sample SB-06-1-3 was used for the MS/MSD for associated samples SB-09-18-20, SB-07-1-3, and SB-07-18-20. Percent recoveries for several spiked compounds were outside control limits, likely due to matrix interference. RPDs for several spiked compounds were outside control limits, likely do to sample non-homogeneity. Because the associated samples contained different soil types and were sampled at different locations, no data were qualified for the associated samples.

III. Blanks

The method blank for all volatile organic compound analyses for both soil and aqueous samples were within established control limits. No data were qualified.

IV. Laboratory Control Sample (LCS)

The percent recoveries for LCSs were within established control limits. No data were qualified.

V. Surrogates

All surrogate recoveries were within established control limits with the following exceptions. Recoveries of surrogate compounds dibromofluoromethane (127%) and toluene-d8 (149%, 165%) from sample SB-09-1-3 were above control limits, indicating that sample results may be biased high. The lab noted that the high recoveries were due to matrix interference, which was confirmed by reanalysis. The detected result, for toluene only, in sample SB-09-1-3 was qualified as estimated (J).

VI. Comments

There are no additional comments on this SDG.

VII. Overall Assessment of Data

All data are usable for their intended purposes, with the following qualifications.

On the basis of out-of-control MS recoveries, non-detected results for bromodichloromethane, bromoform, chlorobenzene, 1,2-dibromoethane, 1,2-dichloroethane, dibromochloromethane, cis-1,3-dichloropropene, m-dichlorobenzene, o-dichlorobenzene, p-dichlorobenzene, trans-1,3-dichloropropene, hexachlorobutadiene, methylene bromide, naphthalene, styrene, 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene in samples SB-08-1-3, SB-08-18-20, SB-09-1-3, and SB-09-18-20 should be qualified as estimated (UJ) due to possible low bias. On the basis of out-of-control surrogate recoveries, the detected result for toluene in sample SB-09-1-3 should be qualified as estimated (J).

**POLYCYCLIC AROMATIC HYDROCARBONS and TPH-DRO and TPH-ORO BY EPA
METHOD SW-846 8270**

I. Holding Time and Chain-of-Custody (COC) Requirements

The samples were extracted and analyzed within required holding times. No anomalies were found with the COC. No data were qualified.

II. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

For prep batch OP14091 and analytical batch EJ725 (aqueous), client sample SB-11-GW was used for the MS/MSD. Percent recoveries for several spiked compounds were greater than the upper acceptance limit. However, because none of these compounds was detected in the associated client sample, SB-09-GW, no data were qualified on this basis. RPDs for all spiked compounds were within control limits, and no data were qualified on this basis.

For prep batch OP14132 and analytical batch EJ728 (soil), a non-client sample was used for the MS/MSD. Several spiked compounds had percent recoveries less than the lower acceptance limits. Because none of the spiked compounds that were outside acceptance limits were those that are spiked to assess matrix effects, it is unclear to what extent the low percent recoveries in the non-client sample affect the other associated client samples. Therefore, detected and non-detected results for benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, and chrysene in samples SB-07-1-3, SB-07-18-20, SB-08-1-3, SB-08-18-20, SB-09-1-3, and SB-09-18-20 were qualified as estimated (J/UJ, respectively) due to possible low bias. RPDs for all spiked compounds were within control limits.

III. Blanks

Method blanks for PAH, TPH-DRO, and TPH-ORO analyses of both soil and aqueous samples were within established control limits. No data were qualified.

IV. Laboratory Control Sample (LCS)

The percent recoveries for LCS analyses of both soil and aqueous samples were within established control limits. No data were qualified.

V. Surrogates

All surrogate recoveries for all analyses were within established control limits. No data were qualified.

VI. Comments

There are no additional comments on this SDG.

VII. Overall Assessment of Data

All data are usable for their intended purposes, with the following qualifications.

On the basis of out-of-control MS recoveries, detected/non-detected results for benzo(a)pyrene, benzo(b)fluoranthene, benzo(k)fluoranthene, and chrysene in samples SB-07-1-3, SB-07-18-20, SB-08-1-3, SB-08-18-20, SB-09-1-3, and SB-09-18-20 should be qualified as estimated (J/UJ) due to possible low bias.

METALS BY METHOD SW-846 6010B

I. Holding Time and Chain-of-Custody (COC) Requirements

All samples were digested and analyzed within required holding times. No anomalies were found with the COC. No data were qualified.

II. Laboratory Duplicate

For QC batch MP11200 (solid), client sample SB-11-1-3 was used for the lab duplicate. Lab duplicate RPDs for barium (59.4), chromium (32.4), lead (29.6), and silver (38.7), were outside control limits, due to possible sample non-homogeneity and low sample and duplicate concentrations. For barium, chromium, and lead, sample and duplicate concentrations were greater than 5-times the reporting limit (RL). The associated client samples for this site were SB-07-1-3, SB-07-18-20, SB-08-1-3, SB-08-18-20, SB-09-1-3, and SB-09-18-20. Because SB-07, SB-08, and SB-09 are at different, nearby locations, and the soil type within the borings changes from fill material in the top three feet to a silt/clay matrix below three feet, no data were qualified. For silver, both sample and duplicate results were less than 5-times the RL, and the absolute value of the difference between sample and duplicate results was less than the RL. As a result, no silver data were qualified.

III. Matrix Spike/Matrix Spike Duplicate (MS/MSD)

For QC batch MP11200 (solid), all MS recoveries and MSD RPDs were within control limits with the following exceptions. MS/MSD recoveries of barium and lead from client sample SB-11-1-3 were significantly outside control limits, possibly due to low spike amounts relative to the barium and lead amounts in the original sample. No post-digestion spikes were performed. Because the sample amounts were greater than 4-times the spike amount added, no data were qualified on this basis.

IV. Blanks

All method blank results are within established control limits. No data were qualified.

V. Laboratory Control Samples

All LCS results are within established control limits. No data were qualified.

VI. Serial Dilutions

All serial dilution results were within established control limits with the following exceptions.

For QC batch MP11200 (solid), the percent differences (%Ds) for barium, cadmium, chromium, lead, selenium, and silver are greater than control limits. The out-of-control %Ds for barium (10.8), cadmium (12.8), chromium (11.7), and lead (13.1) are likely due to matrix interference. However, because associated samples SB-7-1-3, SB-7-18-20, SB-8-1-3, SB-8-18-20, SB-9-1-3, and SB-9-18-20 were taken from different locations and contain different soil types, no data were qualified on this basis. The out-of-control %Ds for selenium and silver are acceptable because of the low initial sample concentrations (<50 times the IDL), so no data were qualified.

VII. Comments

There are no additional comments on this SDG.

VIII. Overall Assessment of Data

Overall, the metals data quality is acceptable. All data are usable for their intended purpose.

MERCURY BY METHODS SW-846 7470A AND 7471A

I. Holding Time and Chain-of-Custody (COC) Requirements

All samples were digested and analyzed within required holding times. No anomalies were found with the COC. No data were qualified.

II. Laboratory Duplicate

Laboratory duplicate results were within control limits. No data were qualified on this basis.

III. Matrix Spike/MSD/Duplicate (MS/MSD)

All MS recoveries and MSD RPDs are within control limits. No data were qualified.

IV. Blanks

All method blank results are within established control limits. No data were qualified.

V. Laboratory Control Samples

All LCS results are within established control limits. No data were qualified.

VI. Comments

There are no additional comments on this SDG.

VII. Overall Assessment of Data

Overall, the mercury data quality is acceptable. All results are usable for their intended purpose.

**St. Joseph, Missouri Brownfields Sites
302 South 5th Street
Phase II Environmental Site Assessment
St. Joseph, Missouri**



APPENDIX E

Validated Sample Result Reports



03/05/10

Technical Report for

EI GOV

St Joe TBA

Accutest Job Number: T47658

Sampling Date: 02/15/10

Report to:

EI GOV
5505 NE 34th Ave
Seattle, WA 98105
gwen.porus@eiltld.net; jpritchard@seagullenvirotech.com
ATTN: Gwen Porus

Total number of pages in report: 133



Test results contained within this data package meet the requirements of the National Environmental Laboratory Accreditation Conference and/or state specific certification programs as applicable.

Paul K Canevaro

Paul Canevaro
Laboratory Director

Client Service contact: Georgia Jones 713-271-4700

Certifications: TX (T104704220-06-TX) AR (88-0756) FL (E87628) KS (E-10366) LA (85695/04004)
OK (9103) UT(7132714700)

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Test results relate only to samples analyzed.

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Sample Summary

EI GOV

Job No: T47658

St Joe TBA

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
T47658-1	02/15/10	10:20 GP	02/16/10	SO	Soil	SB-11-1-3
T47658-2	02/15/10	10:35 GP	02/16/10	SO	Soil	SB-11-10-12
T47658-3	02/15/10	11:00 GP	02/16/10	AQ	Ground Water	SB-11-GW
T47658-3A	02/15/10	11:00 GP	02/16/10	AQ	Groundwater Filtered	SB-11-GW (DISSOLVED)
T47658-3AD	02/15/10	11:00 GP	02/16/10	AQ	Groundwater Filtered	SB-11-GW (DISSOLVED) MSD
T47658-3AS	02/15/10	11:00 GP	02/16/10	AQ	Groundwater Filtered	SB-11-GW (DISSOLVED) MS
T47658-3D	02/15/10	11:00 GP	02/16/10	AQ	Ground Water	SB-11-GW MSD
T47658-3S	02/15/10	11:00 GP	02/16/10	AQ	Ground Water	SB-11-GW MS
T47658-4	02/15/10	13:02 GP	02/16/10	SO	Soil	SB-10-1-3
T47658-5	02/15/10	13:14 GP	02/16/10	SO	Soil	SB-10-18-20
T47658-6	02/15/10	13:45 GP	02/16/10	SO	Soil	SB-8-1-3
T47658-7	02/15/10	14:00 GP	02/16/10	SO	Soil	SB-8-18-20
T47658-8	02/15/10	14:40 GP	02/16/10	SO	Soil	SB-9-1-3

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



Sample Summary
(continued)

EI GOV

Job No: T47658

St Joe TBA

Sample Number	Collected Date	Time By	Received	Matrix Code	Type	Client Sample ID
T47658-9	02/15/10	15:04 GP	02/16/10	SO	Soil	SB-9-18-20
T47658-10	02/15/10	16:05 GP	02/16/10	AQ	Ground Water	SB-9-GW
T47658-11	02/15/10	16:35 GP	02/16/10	SO	Soil	SB-7-1-3
T47658-12	02/15/10	17:10 GP	02/16/10	SO	Soil	SB-7-18-20

Soil samples reported on a dry weight basis unless otherwise indicated on result page.



Sample Results

Report of Analysis

Report of Analysis

Client Sample ID: SB-11-1-3
Lab Sample ID: T47658-1
Matrix: SO - Soil
Method: SW846 8260B
Project: St Joe TBA

Date Sampled: 02/15/10
Date Received: 02/16/10
Percent Solids: 84.1

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y0037893.D	1	02/16/10	JL	n/a	n/a	VY2420
Run #2 ^a	Y0037880.D	1	02/16/10	JL	n/a	n/a	VY2420

	Initial Weight	Final Volume
Run #1	5.33 g	5.0 ml
Run #2	4.82 g	5.0 ml

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0430	0.056	0.0092	mg/kg	J
71-43-2	Benzene	0.0062	0.0056	0.00078	mg/kg	
108-86-1	Bromobenzene	ND	0.0056	0.00062	mg/kg	
74-97-5	Bromochloromethane	ND	0.0056	0.00065	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0056	0.00083	mg/kg	
75-25-2	Bromoform	ND	0.0056	0.0010	mg/kg	
104-51-8	n-Butylbenzene	ND	0.0056	0.00077	mg/kg	
135-98-8	sec-Butylbenzene	ND	0.0056	0.00086	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.0056	0.0012	mg/kg	
108-90-7	Chlorobenzene	ND	0.0056	0.00063	mg/kg	
75-00-3	Chloroethane	ND	0.0056	0.0010	mg/kg	
67-66-3	Chloroform	ND	0.0056	0.00068	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0056	0.00094	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0056	0.0012	mg/kg	
75-15-0	Carbon disulfide	0.0051	0.011	0.00062	mg/kg	J
56-23-5	Carbon tetrachloride	ND	0.0056	0.00072	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0056	0.0010	mg/kg	
75-35-4	1,1-Dichloroethylene	ND	0.0056	0.00086	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0056	0.00074	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0056	0.0030	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0056	0.0011	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0056	0.00075	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0056	0.00090	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0056	0.00078	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0056	0.00065	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0056	0.00061	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0056	0.0013	mg/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	0.0056	0.0011	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0056	0.00060	mg/kg	
541-73-1	m-Dichlorobenzene	ND	0.0056	0.00080	mg/kg	
95-50-1	o-Dichlorobenzene	ND	0.0056	0.00080	mg/kg	
106-46-7	p-Dichlorobenzene	ND	0.0056	0.00078	mg/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB-11-1-3
Lab Sample ID: T47658-1
Matrix: SO - Soil
Method: SW846 8260B
Project: St Joe TBA

Date Sampled: 02/15/10
Date Received: 02/16/10
Percent Solids: 84.1

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	0.0056	0.00088	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0056	0.00070	mg/kg	
100-41-4	Ethylbenzene	ND	0.0056	0.0010	mg/kg	
591-78-6	2-Hexanone	ND	0.056	0.0074	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.0056	0.0013	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0056	0.00078	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0056	0.0010	mg/kg	
108-10-1	4-Methyl-2-pentanone	ND	0.056	0.0062	mg/kg	
74-83-9	Methyl bromide	ND	0.0056	0.0013	mg/kg	
74-87-3	Methyl chloride	ND	0.0056	0.0013	mg/kg	
74-95-3	Methylene bromide	ND	0.0056	0.0010	mg/kg	
75-09-2	Methylene chloride	ND	0.011	0.0026	mg/kg	
78-93-3	Methyl ethyl ketone	ND	0.056	0.0064	mg/kg	
91-20-3	Naphthalene	ND	0.0056	0.00097	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0056	0.00082	mg/kg	
100-42-5	Styrene	ND	0.0056	0.00086	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0056	0.00047	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0056	0.00077	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0056	0.0015	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0056	0.0022	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0056	0.0012	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0056	0.0019	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0056	0.0011	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0056	0.00095	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0056	0.0011	mg/kg	
127-18-4	Tetrachloroethylene	ND	0.0056	0.00086	mg/kg	
108-88-3	Toluene	0.0046	0.0056	0.0011	mg/kg	J
79-01-6	Trichloroethylene	ND	0.0056	0.0019	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0056	0.00078	mg/kg	
75-01-4	Vinyl chloride	ND	0.0056	0.0011	mg/kg	
1330-20-7	Xylene (total)	ND	0.017	0.0023	mg/kg	
	m,p-Xylene	ND	0.011	0.0016	mg/kg	
95-47-6	o-Xylene	ND	0.0056	0.00071	mg/kg	
	TPH-GRO (C6-C10)	ND	0.22		mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%	114%	70-121%
2037-26-5	Toluene-D8	131%	139% ^b	76-132%
460-00-4	4-Bromofluorobenzene	130%	142%	73-165%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-11-1-3	Date Sampled:	02/15/10
Lab Sample ID:	T47658-1	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	84.1
Method:	SW846 8260B		
Project:	St Joe TBA		

VOA 8260 List w/ GRO

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	94%	93%	57-122%

- (a) Confirmation run for internal standard areas.
(b) Outside control limits due to matrix interference. Confirmed by reanalysis.

ND = Not detected	MDL - Method Detection Limit	J = Indicates an estimated value
RL = Reporting Limit		B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range		N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB-11-1-3

Lab Sample ID: T47658-1

Date Sampled: 02/15/10

Matrix: SO - Soil

Date Received: 02/16/10

Method: SW846 8270C SW846 3550B

Percent Solids: 84.1

Project: St Joe TBA

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J150801.D	1	02/23/10	SC	02/22/10	OP14132	EJ728
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.4 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.20	0.054	mg/kg	
208-96-8	Acenaphthylene	ND	0.20	0.046	mg/kg	
120-12-7	Anthracene	ND	0.20	0.038	mg/kg	
56-55-3	Benzo(a)anthracene	0.0922	0.20	0.075	mg/kg	J
50-32-8	Benzo(a)pyrene	0.0974	0.20	0.031	mg/kg	J
205-99-2	Benzo(b)fluoranthene	0.174	0.20	0.048	mg/kg	J
191-24-2	Benzo(g,h,i)perylene	0.109	0.20	0.046	mg/kg	J
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.037	mg/kg	
218-01-9	Chrysene	0.101	0.20	0.043	mg/kg	J
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.10	mg/kg	
206-44-0	Fluoranthene	0.102	0.20	0.040	mg/kg	J
86-73-7	Fluorene	ND	0.20	0.053	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.0893	0.20	0.070	mg/kg	J
91-57-6	2-Methylnaphthalene	ND	0.20	0.061	mg/kg	
91-20-3	Naphthalene	ND	0.20	0.039	mg/kg	
85-01-8	Phenanthrene	0.0680	0.20	0.052	mg/kg	J
129-00-0	Pyrene	0.0766	0.20	0.038	mg/kg	J
	TPH-DRO (> C10-C21)	13.6	9.8	7.6	mg/kg	
	TPH-ORO (> C21-C35)	21.7	9.8	7.6	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	28%		18-104%
321-60-8	2-Fluorobiphenyl	29%		21-114%
1718-51-0	Terphenyl-d14	25%		24-149%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-11-1-3	Date Sampled:	02/15/10
Lab Sample ID:	T47658-1	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	84.1
Project:	St Joe TBA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	15.6	0.67	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Barium	455	13	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Cadmium	12.6	0.34	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Chromium	14.2	0.67	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Lead	302	0.67	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Mercury	1.6	0.17	mg/kg	10	03/01/10	03/01/10 TW	SW846 7471A ³	SW846 7471A ⁵
Selenium	1.3	0.67	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Silver	< 0.67	0.67	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA4557
- (2) Instrument QC Batch: MA4560
- (3) Instrument QC Batch: MA4566
- (4) Prep QC Batch: MP11200
- (5) Prep QC Batch: MP11227

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SB-11-10-12	Date Sampled:	02/15/10
Lab Sample ID:	T47658-2	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	76.2
Method:	SW846 8260B		
Project:	St Joe TBA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y0037881.D	1	02/16/10	JL	n/a	n/a	VY2420
Run #2							

Run #	Initial Weight	Final Volume
Run #1	5.27 g	5.0 ml
Run #2		

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.062	0.010	mg/kg	
71-43-2	Benzene	0.0010	0.0062	0.00087	mg/kg	J
108-86-1	Bromobenzene	ND	0.0062	0.00069	mg/kg	
74-97-5	Bromochloromethane	ND	0.0062	0.00073	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0062	0.00092	mg/kg	
75-25-2	Bromoform	ND	0.0062	0.0012	mg/kg	
104-51-8	n-Butylbenzene	ND	0.0062	0.00086	mg/kg	
135-98-8	sec-Butylbenzene	ND	0.0062	0.00096	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.0062	0.0013	mg/kg	
108-90-7	Chlorobenzene	ND	0.0062	0.00070	mg/kg	
75-00-3	Chloroethane	ND	0.0062	0.0011	mg/kg	
67-66-3	Chloroform	ND	0.0062	0.00075	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0062	0.0011	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0062	0.0013	mg/kg	
75-15-0	Carbon disulfide	ND	0.012	0.00070	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0062	0.00080	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0062	0.0011	mg/kg	
75-35-4	1,1-Dichloroethylene	ND	0.0062	0.00096	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0062	0.00082	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0062	0.0033	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0062	0.0012	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0062	0.00083	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0062	0.0010	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0062	0.00088	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0062	0.00072	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0062	0.00068	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0062	0.0015	mg/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	0.0062	0.0013	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0062	0.00067	mg/kg	
541-73-1	m-Dichlorobenzene	ND	0.0062	0.00089	mg/kg	
95-50-1	o-Dichlorobenzene	ND	0.0062	0.00089	mg/kg	
106-46-7	p-Dichlorobenzene	ND	0.0062	0.00087	mg/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB-11-10-12
Lab Sample ID: T47658-2
Matrix: SO - Soil
Method: SW846 8260B
Project: St Joe TBA

Date Sampled: 02/15/10
Date Received: 02/16/10
Percent Solids: 76.2

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	0.0062	0.00098	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0062	0.00078	mg/kg	
100-41-4	Ethylbenzene	ND	0.0062	0.0011	mg/kg	
591-78-6	2-Hexanone	ND	0.062	0.0082	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.0062	0.0014	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0062	0.00087	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0062	0.0011	mg/kg	
108-10-1	4-Methyl-2-pentanone	ND	0.062	0.0069	mg/kg	
74-83-9	Methyl bromide	ND	0.0062	0.0015	mg/kg	
74-87-3	Methyl chloride	ND	0.0062	0.0014	mg/kg	
74-95-3	Methylene bromide	ND	0.0062	0.0012	mg/kg	
75-09-2	Methylene chloride	ND	0.012	0.0029	mg/kg	
78-93-3	Methyl ethyl ketone	ND	0.062	0.0072	mg/kg	
91-20-3	Naphthalene	ND	0.0062	0.0011	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0062	0.00092	mg/kg	
100-42-5	Styrene	ND	0.0062	0.00096	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0062	0.00053	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0062	0.00086	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0062	0.0017	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0062	0.0024	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0062	0.0013	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0062	0.0021	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0062	0.0013	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0062	0.0011	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0062	0.0012	mg/kg	
127-18-4	Tetrachloroethylene	ND	0.0062	0.00096	mg/kg	
108-88-3	Toluene	ND	0.0062	0.0012	mg/kg	
79-01-6	Trichloroethylene	ND	0.0062	0.0021	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0062	0.00087	mg/kg	
75-01-4	Vinyl chloride	ND	0.0062	0.0013	mg/kg	
1330-20-7	Xylene (total)	ND	0.019	0.0026	mg/kg	
	m,p-Xylene	ND	0.012	0.0018	mg/kg	
95-47-6	o-Xylene	ND	0.0062	0.00080	mg/kg	
	TPH-GRO (C6-C10)	ND	0.25		mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	110%		70-121%
2037-26-5	Toluene-D8	106%		76-132%
460-00-4	4-Bromofluorobenzene	101%		73-165%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-11-10-12	Date Sampled:	02/15/10
Lab Sample ID:	T47658-2	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	76.2
Method:	SW846 8260B		
Project:	St Joe TBA		

VOA 8260 List w/ GRO

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	93%		57-122%

ND = Not detected MDL - Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-11-10-12	Date Sampled:	02/15/10
Lab Sample ID:	T47658-2	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	76.2
Method:	SW846 8270C SW846 3550B		
Project:	St Joe TBA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P08803.D	1	02/23/10	GJ	02/22/10	OP14132	EP419
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.22	0.060	mg/kg	
208-96-8	Acenaphthylene	ND	0.22	0.051	mg/kg	
120-12-7	Anthracene	ND	0.22	0.042	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.22	0.083	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.22	0.034	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.22	0.053	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.22	0.051	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.22	0.041	mg/kg	
218-01-9	Chrysene	ND	0.22	0.047	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.22	0.12	mg/kg	
206-44-0	Fluoranthene	ND	0.22	0.045	mg/kg	
86-73-7	Fluorene	ND	0.22	0.059	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.22	0.078	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.22	0.068	mg/kg	
91-20-3	Naphthalene	ND	0.22	0.043	mg/kg	
85-01-8	Phenanthrene	ND	0.22	0.058	mg/kg	
129-00-0	Pyrene	ND	0.22	0.042	mg/kg	
	TPH-DRO (> C10-C21)	ND	11	8.5	mg/kg	
	TPH-ORO (> C21-C35)	ND	11	8.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	60%		18-104%
321-60-8	2-Fluorobiphenyl	60%		21-114%
1718-51-0	Terphenyl-d14	61%		24-149%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-11-10-12	Date Sampled:	02/15/10
Lab Sample ID:	T47658-2	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	76.2
Project:	St Joe TBA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	11.1	0.76	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Barium	304	15	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Cadmium	0.69	0.38	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Chromium	19.5	0.76	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Lead	12.2	0.76	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Mercury	< 0.020	0.020	mg/kg	1	03/01/10	03/01/10 TW	SW846 7471A ³	SW846 7471A ⁵
Selenium	< 0.76	0.76	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Silver	< 0.76	0.76	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA4557
- (2) Instrument QC Batch: MA4560
- (3) Instrument QC Batch: MA4566
- (4) Prep QC Batch: MP11200
- (5) Prep QC Batch: MP11227

RL = Reporting Limit

Report of Analysis

Client Sample ID: SB-11-GW

Lab Sample ID: T47658-3

Date Sampled: 02/15/10

Matrix: AQ - Ground Water

Date Received: 02/16/10

Method: SW846 8260B

Percent Solids: n/a

Project: St Joe TBA

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z006725.D	1	02/19/10	JL	n/a	n/a	VZ2777
Run #2							

Purge Volume

Run #1 5.0 ml

Run #2

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.050	0.0047	mg/l	
71-43-2	Benzene	ND	0.0020	0.00050	mg/l	
108-86-1	Bromobenzene	ND	0.0020	0.00082	mg/l	
74-97-5	Bromochloromethane	ND	0.0020	0.0016	mg/l	
75-27-4	Bromodichloromethane	ND	0.0020	0.00049	mg/l	
75-25-2	Bromoform	ND	0.0020	0.0014	mg/l	
104-51-8	n-Butylbenzene	ND	0.0020	0.00063	mg/l	
135-98-8	sec-Butylbenzene	ND	0.0020	0.00052	mg/l	
98-06-6	tert-Butylbenzene	ND	0.0020	0.0013	mg/l	
108-90-7	Chlorobenzene	ND	0.0020	0.00056	mg/l	
75-00-3	Chloroethane	ND	0.0020	0.00092	mg/l	
67-66-3	Chloroform	ND	0.0020	0.00064	mg/l	
95-49-8	o-Chlorotoluene	ND	0.0020	0.00070	mg/l	
106-43-4	p-Chlorotoluene	ND	0.0020	0.00056	mg/l	
75-15-0	Carbon disulfide	ND	0.0020	0.00053	mg/l	
56-23-5	Carbon tetrachloride	ND	0.0020	0.00066	mg/l	
75-34-3	1,1-Dichloroethane	ND	0.0020	0.00052	mg/l	
75-35-4	1,1-Dichloroethylene	ND	0.0020	0.00050	mg/l	
563-58-6	1,1-Dichloropropene	ND	0.0020	0.00078	mg/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0020	0.0019	mg/l	
106-93-4	1,2-Dibromoethane	ND	0.0020	0.00055	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0020	0.00062	mg/l	
78-87-5	1,2-Dichloropropane	ND	0.0020	0.00062	mg/l	
142-28-9	1,3-Dichloropropane	ND	0.0020	0.00054	mg/l	
594-20-7	2,2-Dichloropropane	ND	0.0020	0.00062	mg/l	
124-48-1	Dibromochloromethane	ND	0.0020	0.00061	mg/l	
75-71-8	Dichlorodifluoromethane	ND	0.0020	0.0011	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.0020	0.00056	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0020	0.00048	mg/l	
541-73-1	m-Dichlorobenzene	ND	0.0020	0.0010	mg/l	
95-50-1	o-Dichlorobenzene	ND	0.0020	0.00069	mg/l	
106-46-7	p-Dichlorobenzene	ND	0.0020	0.0010	mg/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-11-GW	Date Sampled:	02/15/10
Lab Sample ID:	T47658-3	Date Received:	02/16/10
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	St Joe TBA		

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	0.0020	0.00045	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0020	0.00068	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00055	mg/l	
591-78-6	2-Hexanone	ND	0.010	0.0032	mg/l	
87-68-3	Hexachlorobutadiene	ND	0.0020	0.0013	mg/l	
98-82-8	Isopropylbenzene	ND	0.0020	0.00051	mg/l	
99-87-6	p-Isopropyltoluene	ND	0.0020	0.00065	mg/l	
108-10-1	4-Methyl-2-pentanone	ND	0.010	0.0099	mg/l	
74-83-9	Methyl bromide	ND	0.0020	0.00094	mg/l	
74-87-3	Methyl chloride	ND	0.0020	0.00084	mg/l	
74-95-3	Methylene bromide	ND	0.0020	0.00065	mg/l	
75-09-2	Methylene chloride	ND	0.0050	0.00041	mg/l	
78-93-3	Methyl ethyl ketone	ND	0.010	0.0039	mg/l	
91-20-3	Naphthalene	ND	0.0050	0.00065	mg/l	
103-65-1	n-Propylbenzene	ND	0.0020	0.00057	mg/l	
100-42-5	Styrene	ND	0.0020	0.00056	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0020	0.00080	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0020	0.00062	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0020	0.0012	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0020	0.00098	mg/l	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0020	0.0011	mg/l	
96-18-4	1,2,3-Trichloropropane	ND	0.0020	0.0013	mg/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0020	0.00082	mg/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0020	0.00065	mg/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0020	0.00070	mg/l	
127-18-4	Tetrachloroethylene	ND	0.0020	0.00091	mg/l	
108-88-3	Toluene	ND	0.0020	0.00043	mg/l	
79-01-6	Trichloroethylene	ND	0.0020	0.00052	mg/l	
75-69-4	Trichlorofluoromethane	ND	0.0020	0.0012	mg/l	
75-01-4	Vinyl chloride	ND	0.0020	0.0010	mg/l	
1330-20-7	Xylene (total)	ND	0.0060	0.0017	mg/l	
	m,p-Xylene	ND	0.0040	0.0011	mg/l	
95-47-6	o-Xylene	ND	0.0020	0.00053	mg/l	
	TPH-GRO (C6-C10)	ND	0.20		mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	96%		79-122%
17060-07-0	1,2-Dichloroethane-D4	109%		75-121%
2037-26-5	Toluene-D8	117%		87-119%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-11-GW	Date Sampled:	02/15/10
Lab Sample ID:	T47658-3	Date Received:	02/16/10
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	St Joe TBA		

VOA 8260 List w/ GRO

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	110%		80-133%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-11-GW	Date Sampled:	02/15/10
Lab Sample ID:	T47658-3	Date Received:	02/16/10
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270C SW846 3510C		
Project:	St Joe TBA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J150727.D	1	02/18/10	SC	02/17/10	OP14091	EJ725
Run #2							

Run #	Initial Volume	Final Volume
Run #1	870 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.0057	0.0018	mg/l	
208-96-8	Acenaphthylene	ND	0.0057	0.0014	mg/l	
120-12-7	Anthracene	ND	0.0057	0.0013	mg/l	
56-55-3	Benzo(a)anthracene	ND	0.0057	0.0012	mg/l	
50-32-8	Benzo(a)pyrene	ND	0.0057	0.0012	mg/l	
205-99-2	Benzo(b)fluoranthene	ND	0.0057	0.0010	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.0057	0.0019	mg/l	
207-08-9	Benzo(k)fluoranthene	ND	0.0057	0.0012	mg/l	
218-01-9	Chrysene	ND	0.0057	0.0011	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.0057	0.0018	mg/l	
206-44-0	Fluoranthene	ND	0.0057	0.0011	mg/l	
86-73-7	Fluorene	ND	0.0057	0.0015	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.0057	0.0021	mg/l	
91-57-6	2-Methylnaphthalene	ND	0.0057	0.0015	mg/l	
91-20-3	Naphthalene	ND	0.0057	0.0013	mg/l	
85-01-8	Phenanthrene	ND	0.0057	0.0011	mg/l	
129-00-0	Pyrene	ND	0.0057	0.0019	mg/l	
	TPH-DRO (> C10-C21)	ND	0.29	0.13	mg/l	
	TPH-ORO (> C21-C35)	ND	0.29	0.13	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	51%		29-115%
321-60-8	2-Fluorobiphenyl	60%		34-113%
1718-51-0	Terphenyl-d14	40%		12-145%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-11-GW (DISSOLVED)	Date Sampled:	02/15/10
Lab Sample ID:	T47658-3A	Date Received:	02/16/10
Matrix:	AQ - Groundwater Filtered	Percent Solids:	n/a
Project:	St Joe TBA		

Dissolved Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	< 5.0	5.0	ug/l	1	02/17/10	02/18/10 NS	SW846 6010B ²	SW846 3010A ³
Barium	< 200	200	ug/l	1	02/17/10	02/18/10 NS	SW846 6010B ²	SW846 3010A ³
Cadmium	< 4.0	4.0	ug/l	1	02/17/10	02/18/10 NS	SW846 6010B ²	SW846 3010A ³
Chromium	< 10	10	ug/l	1	02/17/10	02/18/10 NS	SW846 6010B ²	SW846 3010A ³
Lead	28.0	3.0	ug/l	1	02/17/10	02/18/10 NS	SW846 6010B ²	SW846 3010A ³
Mercury	< 0.20	0.20	ug/l	1	02/18/10	02/18/10 TW	SW846 7470A ¹	SW846 7470A ⁴
Selenium	< 5.0	5.0	ug/l	1	02/17/10	02/18/10 NS	SW846 6010B ²	SW846 3010A ³
Silver	< 10	10	ug/l	1	02/17/10	02/18/10 NS	SW846 6010B ²	SW846 3010A ³

- (1) Instrument QC Batch: MA4543
- (2) Instrument QC Batch: MA4545
- (3) Prep QC Batch: MP11153
- (4) Prep QC Batch: MP11157

RL = Reporting Limit

Report of Analysis

Client Sample ID: SB-10-1-3
Lab Sample ID: T47658-4
Matrix: SO - Soil
Method: SW846 8260B
Project: St Joe TBA

Date Sampled: 02/15/10
Date Received: 02/16/10
Percent Solids: 83.5

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y0037882.D	1	02/16/10	JL	n/a	n/a	VY2420
Run #2							

	Initial Weight	Final Volume
Run #1	5.30 g	5.0 ml
Run #2		

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.056	0.0094	mg/kg	J
71-43-2	Benzene	0.0017	0.0056	0.00079	mg/kg	
108-86-1	Bromobenzene	ND	0.0056	0.00063	mg/kg	
74-97-5	Bromochloromethane	ND	0.0056	0.00066	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0056	0.00084	mg/kg	
75-25-2	Bromoform	ND	0.0056	0.0010	mg/kg	
104-51-8	n-Butylbenzene	ND	0.0056	0.00078	mg/kg	
135-98-8	sec-Butylbenzene	ND	0.0056	0.00087	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.0056	0.0012	mg/kg	
108-90-7	Chlorobenzene	ND	0.0056	0.00064	mg/kg	
75-00-3	Chloroethane	ND	0.0056	0.0010	mg/kg	
67-66-3	Chloroform	ND	0.0056	0.00068	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0056	0.00095	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0056	0.0012	mg/kg	
75-15-0	Carbon disulfide	ND	0.011	0.00063	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0056	0.00073	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0056	0.0010	mg/kg	
75-35-4	1,1-Dichloroethylene	ND	0.0056	0.00087	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0056	0.00075	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0056	0.0030	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0056	0.0011	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0056	0.00076	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0056	0.00091	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0056	0.00079	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0056	0.00065	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0056	0.00062	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0056	0.0013	mg/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	0.0056	0.0011	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0056	0.00061	mg/kg	
541-73-1	m-Dichlorobenzene	ND	0.0056	0.00081	mg/kg	
95-50-1	o-Dichlorobenzene	ND	0.0056	0.00081	mg/kg	
106-46-7	p-Dichlorobenzene	ND	0.0056	0.00079	mg/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB-10-1-3
Lab Sample ID: T47658-4
Matrix: SO - Soil
Method: SW846 8260B
Project: St Joe TBA

Date Sampled: 02/15/10
Date Received: 02/16/10
Percent Solids: 83.5

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	0.0056	0.00089	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0056	0.00071	mg/kg	
100-41-4	Ethylbenzene	ND	0.0056	0.0010	mg/kg	
591-78-6	2-Hexanone	ND	0.056	0.0074	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.0056	0.0013	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0056	0.00079	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0056	0.0010	mg/kg	
108-10-1	4-Methyl-2-pentanone	ND	0.056	0.0063	mg/kg	
74-83-9	Methyl bromide	ND	0.0056	0.0014	mg/kg	
74-87-3	Methyl chloride	ND	0.0056	0.0013	mg/kg	
74-95-3	Methylene bromide	ND	0.0056	0.0011	mg/kg	
75-09-2	Methylene chloride	ND	0.011	0.0027	mg/kg	
78-93-3	Methyl ethyl ketone	ND	0.056	0.0065	mg/kg	
91-20-3	Naphthalene	ND	0.0056	0.00098	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0056	0.00083	mg/kg	
100-42-5	Styrene	ND	0.0056	0.00087	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0056	0.00048	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0056	0.00078	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0056	0.0015	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0056	0.0022	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0056	0.0012	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0056	0.0019	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0056	0.0012	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0056	0.00096	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0056	0.0011	mg/kg	
127-18-4	Tetrachloroethylene	ND	0.0056	0.00087	mg/kg	
108-88-3	Toluene	ND	0.0056	0.0011	mg/kg	
79-01-6	Trichloroethylene	ND	0.0056	0.0019	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0056	0.00079	mg/kg	
75-01-4	Vinyl chloride	ND	0.0056	0.0012	mg/kg	
1330-20-7	Xylene (total)	ND	0.017	0.0024	mg/kg	
	m,p-Xylene	ND	0.011	0.0016	mg/kg	
95-47-6	o-Xylene	ND	0.0056	0.00072	mg/kg	
	TPH-GRO (C6-C10)	ND	0.23		mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	122% ^a		70-121%
2037-26-5	Toluene-D8	142% ^a		76-132%
460-00-4	4-Bromofluorobenzene	135%		73-165%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-10-1-3	Date Sampled:	02/15/10
Lab Sample ID:	T47658-4	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	83.5
Method:	SW846 8260B		
Project:	St Joe TBA		

VOA 8260 List w/ GRO

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	102%		57-122%

(a) Outside control limits due to matrix interference. Confirmed by MS/MSD.

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-10-1-3	Date Sampled:	02/15/10
Lab Sample ID:	T47658-4	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	83.5
Method:	SW846 8270C SW846 3550B		
Project:	St Joe TBA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1 ^a	J150802.D	1	02/23/10	SC	02/22/10	OP14132	EJ728
Run #2 ^a	J150797.D	10	02/23/10	SC	02/22/10	OP14132	EJ728

	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2	30.1 g	1.0 ml

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.20	0.055	mg/kg	
208-96-8	Acenaphthylene	ND	0.20	0.047	mg/kg	
120-12-7	Anthracene	0.0824	0.20	0.038	mg/kg	J
56-55-3	Benzo(a)anthracene	0.190	0.20	0.076	mg/kg	J
50-32-8	Benzo(a)pyrene	0.145	0.20	0.031	mg/kg	J
205-99-2	Benzo(b)fluoranthene	0.260	0.20	0.049	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.313	0.20	0.047	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.037	mg/kg	
218-01-9	Chrysene	0.166	0.20	0.043	mg/kg	J
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.11	mg/kg	
206-44-0	Fluoranthene	0.473	0.20	0.041	mg/kg	
86-73-7	Fluorene	ND	0.20	0.054	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.129	0.20	0.071	mg/kg	J
91-57-6	2-Methylnaphthalene	ND	0.20	0.063	mg/kg	
91-20-3	Naphthalene	ND	0.20	0.040	mg/kg	
85-01-8	Phenanthrene	0.347	0.20	0.053	mg/kg	
129-00-0	Pyrene	0.716	0.20	0.039	mg/kg	
	TPH-DRO (> C10-C21)	31.3	10	7.8	mg/kg	
	TPH-ORO (> C21-C35)	19.2	10	7.8	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	34%	38%	18-104%
321-60-8	2-Fluorobiphenyl	60%	39%	21-114%
1718-51-0	Terphenyl-d14	92%	40%	24-149%

(a) Internal standards are not within the advisory limits due to a matrix interference. Confirmed by reanalysis.

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-10-1-3	Date Sampled:	02/15/10
Lab Sample ID:	T47658-4	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	83.5
Project:	St Joe TBA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	16.2	0.65	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Barium	257	13	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Cadmium	6.0	0.32	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Chromium	16.2	0.65	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Lead	419	0.65	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Mercury	1.9	0.20	mg/kg	10	03/01/10	03/01/10 TW	SW846 7471A ³	SW846 7471A ⁵
Selenium	2.1	0.65	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Silver	< 0.65	0.65	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA4557
- (2) Instrument QC Batch: MA4560
- (3) Instrument QC Batch: MA4566
- (4) Prep QC Batch: MP11200
- (5) Prep QC Batch: MP11227

RL = Reporting Limit

Report of Analysis

Client Sample ID: SB-10-18-20
Lab Sample ID: T47658-5
Matrix: SO - Soil
Method: SW846 8260B
Project: St Joe TBA

Date Sampled: 02/15/10
Date Received: 02/16/10
Percent Solids: 77.6

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y0037886.D	1	02/16/10	JL	n/a	n/a	VY2420
Run #2							

	Initial Weight	Final Volume
Run #1	7.34 g	5.0 ml
Run #2		

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.044	0.0073	mg/kg	
71-43-2	Benzene	0.00099	0.0044	0.00061	mg/kg	J
108-86-1	Bromobenzene	ND	0.0044	0.00049	mg/kg	
74-97-5	Bromochloromethane	ND	0.0044	0.00051	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0044	0.00065	mg/kg	
75-25-2	Bromoform	ND	0.0044	0.00081	mg/kg	
104-51-8	n-Butylbenzene	ND	0.0044	0.00061	mg/kg	
135-98-8	sec-Butylbenzene	ND	0.0044	0.00068	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.0044	0.00091	mg/kg	
108-90-7	Chlorobenzene	ND	0.0044	0.00050	mg/kg	
75-00-3	Chloroethane	ND	0.0044	0.00080	mg/kg	
67-66-3	Chloroform	ND	0.0044	0.00053	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0044	0.00074	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0044	0.00095	mg/kg	
75-15-0	Carbon disulfide	ND	0.0088	0.00049	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0044	0.00057	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0044	0.00080	mg/kg	
75-35-4	1,1-Dichloroethylene	ND	0.0044	0.00068	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0044	0.00058	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0044	0.0023	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0044	0.00087	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0044	0.00059	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0044	0.00070	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0044	0.00062	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0044	0.00051	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0044	0.00048	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0044	0.0010	mg/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	0.0044	0.00089	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0044	0.00047	mg/kg	
541-73-1	m-Dichlorobenzene	ND	0.0044	0.00063	mg/kg	
95-50-1	o-Dichlorobenzene	ND	0.0044	0.00063	mg/kg	
106-46-7	p-Dichlorobenzene	ND	0.0044	0.00061	mg/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB-10-18-20
Lab Sample ID: T47658-5
Matrix: SO - Soil
Method: SW846 8260B
Project: St Joe TBA

Date Sampled: 02/15/10
Date Received: 02/16/10
Percent Solids: 77.6

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	0.0044	0.00069	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0044	0.00055	mg/kg	
100-41-4	Ethylbenzene	ND	0.0044	0.00079	mg/kg	
591-78-6	2-Hexanone	ND	0.044	0.0058	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.0044	0.0010	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0044	0.00061	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0044	0.00079	mg/kg	
108-10-1	4-Methyl-2-pentanone	ND	0.044	0.0049	mg/kg	
74-83-9	Methyl bromide	ND	0.0044	0.0011	mg/kg	
74-87-3	Methyl chloride	ND	0.0044	0.00099	mg/kg	
74-95-3	Methylene bromide	ND	0.0044	0.00082	mg/kg	
75-09-2	Methylene chloride	ND	0.0088	0.0021	mg/kg	
78-93-3	Methyl ethyl ketone	ND	0.044	0.0051	mg/kg	
91-20-3	Naphthalene	ND	0.0044	0.00076	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0044	0.00065	mg/kg	
100-42-5	Styrene	ND	0.0044	0.00068	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0044	0.00037	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0044	0.00061	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0044	0.0012	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0044	0.0017	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0044	0.00091	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0044	0.0015	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0044	0.00090	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0044	0.00075	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0044	0.00086	mg/kg	
127-18-4	Tetrachloroethylene	ND	0.0044	0.00068	mg/kg	
108-88-3	Toluene	ND	0.0044	0.00083	mg/kg	
79-01-6	Trichloroethylene	ND	0.0044	0.0015	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0044	0.00061	mg/kg	
75-01-4	Vinyl chloride	ND	0.0044	0.00090	mg/kg	
1330-20-7	Xylene (total)	ND	0.013	0.0018	mg/kg	
	m,p-Xylene	ND	0.0088	0.0013	mg/kg	
95-47-6	o-Xylene	ND	0.0044	0.00056	mg/kg	
	TPH-GRO (C6-C10)	ND	0.18		mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	111%		70-121%
2037-26-5	Toluene-D8	105%		76-132%
460-00-4	4-Bromofluorobenzene	100%		73-165%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-10-18-20	Date Sampled:	02/15/10
Lab Sample ID:	T47658-5	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	77.6
Method:	SW846 8260B		
Project:	St Joe TBA		

VOA 8260 List w/ GRO

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	95%		57-122%

ND = Not detected MDL - Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-10-18-20	Date Sampled:	02/15/10
Lab Sample ID:	T47658-5	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	77.6
Method:	SW846 8270C SW846 3550B		
Project:	St Joe TBA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P08804.D	1	02/23/10	GJ	02/22/10	OP14132	EP419
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.21	0.059	mg/kg	
208-96-8	Acenaphthylene	ND	0.21	0.051	mg/kg	
120-12-7	Anthracene	ND	0.21	0.041	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.21	0.082	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.21	0.034	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.21	0.053	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.21	0.051	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.21	0.040	mg/kg	
218-01-9	Chrysene	ND	0.21	0.047	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.21	0.11	mg/kg	
206-44-0	Fluoranthene	ND	0.21	0.044	mg/kg	
86-73-7	Fluorene	ND	0.21	0.058	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.21	0.077	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.21	0.067	mg/kg	
91-20-3	Naphthalene	ND	0.21	0.043	mg/kg	
85-01-8	Phenanthrene	ND	0.21	0.057	mg/kg	
129-00-0	Pyrene	ND	0.21	0.042	mg/kg	
	TPH-DRO (> C10-C21)	ND	11	8.4	mg/kg	
	TPH-ORO (> C21-C35)	ND	11	8.4	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	56%		18-104%
321-60-8	2-Fluorobiphenyl	61%		21-114%
1718-51-0	Terphenyl-d14	57%		24-149%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-10-18-20	Date Sampled:	02/15/10
Lab Sample ID:	T47658-5	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	77.6
Project:	St Joe TBA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	9.2	0.78	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Barium	198	16	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Cadmium	0.49	0.39	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Chromium	18.1	0.78	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Lead	10.8	0.78	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Mercury	< 0.019	0.019	mg/kg	1	03/01/10	03/01/10 TW	SW846 7471A ³	SW846 7471A ⁵
Selenium	< 0.78	0.78	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Silver	< 0.78	0.78	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA4557
- (2) Instrument QC Batch: MA4560
- (3) Instrument QC Batch: MA4566
- (4) Prep QC Batch: MP11200
- (5) Prep QC Batch: MP11227

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SB-8-1-3	Date Sampled:	02/15/10
Lab Sample ID:	T47658-6	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	81.6
Method:	SW846 8260B		
Project:	St Joe TBA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y0037887.D	1	02/16/10	JL	n/a	n/a	VY2420
Run #2							

	Initial Weight	Final Volume
Run #1	7.03 g	5.0 ml
Run #2		

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0203	0.044	0.0072	mg/kg	J
71-43-2	Benzene	0.00090	0.0044	0.00061	mg/kg	J
108-86-1	Bromobenzene	ND	0.0044	0.00048	mg/kg	
74-97-5	Bromochloromethane	ND	0.0044	0.00051	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0044	0.00064	mg/kg	
75-25-2	Bromoform	ND	0.0044	0.00081	mg/kg	
104-51-8	n-Butylbenzene	ND	0.0044	0.00060	mg/kg	
135-98-8	sec-Butylbenzene	ND	0.0044	0.00067	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.0044	0.00091	mg/kg	
108-90-7	Chlorobenzene	ND	0.0044	0.00049	mg/kg	
75-00-3	Chloroethane	ND	0.0044	0.00080	mg/kg	
67-66-3	Chloroform	ND	0.0044	0.00053	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0044	0.00074	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0044	0.00094	mg/kg	
75-15-0	Carbon disulfide	ND	0.0087	0.00049	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0044	0.00056	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0044	0.00079	mg/kg	
75-35-4	1,1-Dichloroethylene	ND	0.0044	0.00067	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0044	0.00058	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0044	0.0023	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0044	0.00086	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0044	0.00058	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0044	0.00070	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0044	0.00061	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0044	0.00050	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0044	0.00048	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0044	0.0010	mg/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	0.0044	0.00088	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0044	0.00047	mg/kg	
541-73-1	m-Dichlorobenzene	ND	0.0044	0.00062	mg/kg	
95-50-1	o-Dichlorobenzene	ND	0.0044	0.00063	mg/kg	
106-46-7	p-Dichlorobenzene	ND	0.0044	0.00061	mg/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB-8-1-3
Lab Sample ID: T47658-6
Matrix: SO - Soil
Method: SW846 8260B
Project: St Joe TBA

Date Sampled: 02/15/10
Date Received: 02/16/10
Percent Solids: 81.6

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	0.0044	0.00069	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0044	0.00055	mg/kg	
100-41-4	Ethylbenzene	ND	0.0044	0.00079	mg/kg	
591-78-6	2-Hexanone	ND	0.044	0.0057	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.0044	0.00099	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0044	0.00061	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0044	0.00079	mg/kg	
108-10-1	4-Methyl-2-pentanone	ND	0.044	0.0048	mg/kg	
74-83-9	Methyl bromide	ND	0.0044	0.0010	mg/kg	
74-87-3	Methyl chloride	ND	0.0044	0.00098	mg/kg	
74-95-3	Methylene bromide	ND	0.0044	0.00081	mg/kg	
75-09-2	Methylene chloride	ND	0.0087	0.0020	mg/kg	
78-93-3	Methyl ethyl ketone	ND	0.044	0.0050	mg/kg	
91-20-3	Naphthalene	ND	0.0044	0.00075	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0044	0.00064	mg/kg	
100-42-5	Styrene	ND	0.0044	0.00067	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0044	0.00037	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0044	0.00060	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0044	0.0012	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0044	0.0017	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0044	0.00091	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0044	0.0015	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0044	0.00090	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0044	0.00074	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0044	0.00086	mg/kg	
127-18-4	Tetrachloroethylene	ND	0.0044	0.00067	mg/kg	
108-88-3	Toluene	ND	0.0044	0.00083	mg/kg	
79-01-6	Trichloroethylene	ND	0.0044	0.0015	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0044	0.00061	mg/kg	
75-01-4	Vinyl chloride	ND	0.0044	0.00089	mg/kg	
1330-20-7	Xylene (total)	ND	0.013	0.0018	mg/kg	
	m,p-Xylene	ND	0.0087	0.0013	mg/kg	
95-47-6	o-Xylene	ND	0.0044	0.00056	mg/kg	
	TPH-GRO (C6-C10)	ND	0.17		mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	114%		70-121%
2037-26-5	Toluene-D8	116%		76-132%
460-00-4	4-Bromofluorobenzene	112%		73-165%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-8-1-3	Date Sampled:	02/15/10
Lab Sample ID:	T47658-6	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	81.6
Method:	SW846 8260B		
Project:	St Joe TBA		

VOA 8260 List w/ GRO

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	95%		57-122%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-8-1-3	Date Sampled:	02/15/10
Lab Sample ID:	T47658-6	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	81.6
Method:	SW846 8270C SW846 3550B		
Project:	St Joe TBA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P08813.D	1	02/23/10	GJ	02/22/10	OP14132	EP419
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.20	0.056	mg/kg	
208-96-8	Acenaphthylene	ND	0.20	0.048	mg/kg	
120-12-7	Anthracene	ND	0.20	0.039	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.20	0.078	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.20	0.032	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.20	0.050	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.20	0.048	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.20	0.038	mg/kg	
218-01-9	Chrysene	ND	0.20	0.044	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.20	0.11	mg/kg	
206-44-0	Fluoranthene	ND	0.20	0.042	mg/kg	
86-73-7	Fluorene	ND	0.20	0.055	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.20	0.072	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.20	0.064	mg/kg	
91-20-3	Naphthalene	ND	0.20	0.040	mg/kg	
85-01-8	Phenanthrene	ND	0.20	0.054	mg/kg	
129-00-0	Pyrene	ND	0.20	0.039	mg/kg	
	TPH-DRO (> C10-C21)	ND	10	7.9	mg/kg	
	TPH-ORO (> C21-C35)	ND	10	7.9	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	58%		18-104%
321-60-8	2-Fluorobiphenyl	65%		21-114%
1718-51-0	Terphenyl-d14	68%		24-149%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-8-1-3	Date Sampled:	02/15/10
Lab Sample ID:	T47658-6	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	81.6
Project:	St Joe TBA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	8.9	0.73	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Barium	257	15	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Cadmium	2.6	0.37	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Chromium	17.3	0.73	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Lead	110	0.73	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Mercury	0.20	0.020	mg/kg	1	03/01/10	03/01/10 TW	SW846 7471A ³	SW846 7471A ⁵
Selenium	0.87	0.73	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Silver	< 0.73	0.73	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA4557
- (2) Instrument QC Batch: MA4560
- (3) Instrument QC Batch: MA4566
- (4) Prep QC Batch: MP11200
- (5) Prep QC Batch: MP11227

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SB-8-18-20	Date Sampled:	02/15/10
Lab Sample ID:	T47658-7	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	77.3
Method:	SW846 8260B		
Project:	St Joe TBA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y0037888.D	1	02/16/10	JL	n/a	n/a	VY2420
Run #2							

Run #	Initial Weight	Final Volume
Run #1	6.74 g	5.0 ml
Run #2		

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0118	0.048	0.0080	mg/kg	J
71-43-2	Benzene	0.0014	0.0048	0.00067	mg/kg	J
108-86-1	Bromobenzene	ND	0.0048	0.00053	mg/kg	
74-97-5	Bromochloromethane	ND	0.0048	0.00056	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0048	0.00071	mg/kg	
75-25-2	Bromoform	ND	0.0048	0.00089	mg/kg	
104-51-8	n-Butylbenzene	ND	0.0048	0.00066	mg/kg	
135-98-8	sec-Butylbenzene	ND	0.0048	0.00074	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.0048	0.0010	mg/kg	
108-90-7	Chlorobenzene	ND	0.0048	0.00054	mg/kg	
75-00-3	Chloroethane	ND	0.0048	0.00088	mg/kg	
67-66-3	Chloroform	ND	0.0048	0.00058	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0048	0.00081	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0048	0.0010	mg/kg	
75-15-0	Carbon disulfide	ND	0.0096	0.00054	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0048	0.00062	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0048	0.00087	mg/kg	
75-35-4	1,1-Dichloroethylene	ND	0.0048	0.00074	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0048	0.00063	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0048	0.0026	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0048	0.00095	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0048	0.00064	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0048	0.00077	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0048	0.00067	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0048	0.00056	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0048	0.00053	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0048	0.0011	mg/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	0.0048	0.00097	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0048	0.00052	mg/kg	
541-73-1	m-Dichlorobenzene	ND	0.0048	0.00069	mg/kg	
95-50-1	o-Dichlorobenzene	ND	0.0048	0.00069	mg/kg	
106-46-7	p-Dichlorobenzene	ND	0.0048	0.00067	mg/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB-8-18-20
Lab Sample ID: T47658-7
Matrix: SO - Soil
Method: SW846 8260B
Project: St Joe TBA

Date Sampled: 02/15/10
Date Received: 02/16/10
Percent Solids: 77.3

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	0.0048	0.00075	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0048	0.00060	mg/kg	
100-41-4	Ethylbenzene	ND	0.0048	0.00087	mg/kg	
591-78-6	2-Hexanone	ND	0.048	0.0063	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.0048	0.0011	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0048	0.00067	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0048	0.00087	mg/kg	
108-10-1	4-Methyl-2-pentanone	ND	0.048	0.0053	mg/kg	
74-83-9	Methyl bromide	ND	0.0048	0.0012	mg/kg	
74-87-3	Methyl chloride	ND	0.0048	0.0011	mg/kg	
74-95-3	Methylene bromide	ND	0.0048	0.00090	mg/kg	
75-09-2	Methylene chloride	ND	0.0096	0.0023	mg/kg	
78-93-3	Methyl ethyl ketone	ND	0.048	0.0055	mg/kg	
91-20-3	Naphthalene	ND	0.0048	0.00083	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0048	0.00071	mg/kg	
100-42-5	Styrene	ND	0.0048	0.00074	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0048	0.00041	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0048	0.00067	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0048	0.0013	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0048	0.0019	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0048	0.0010	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0048	0.0017	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0048	0.00099	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0048	0.00082	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0048	0.00094	mg/kg	
127-18-4	Tetrachloroethylene	ND	0.0048	0.00074	mg/kg	
108-88-3	Toluene	ND	0.0048	0.00091	mg/kg	
79-01-6	Trichloroethylene	ND	0.0048	0.0016	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0048	0.00067	mg/kg	
75-01-4	Vinyl chloride	ND	0.0048	0.00098	mg/kg	
1330-20-7	Xylene (total)	ND	0.014	0.0020	mg/kg	
	m,p-Xylene	ND	0.0096	0.0014	mg/kg	
95-47-6	o-Xylene	ND	0.0048	0.00061	mg/kg	
	TPH-GRO (C6-C10)	ND	0.19		mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	107%		70-121%
2037-26-5	Toluene-D8	106%		76-132%
460-00-4	4-Bromofluorobenzene	100%		73-165%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-8-18-20	Date Sampled:	02/15/10
Lab Sample ID:	T47658-7	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	77.3
Method:	SW846 8260B		
Project:	St Joe TBA		

VOA 8260 List w/ GRO

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	90%		57-122%

ND = Not detected

MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-8-18-20	Date Sampled:	02/15/10
Lab Sample ID:	T47658-7	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	77.3
Method:	SW846 8270C SW846 3550B		
Project:	St Joe TBA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P08805.D	1	02/23/10	GJ	02/22/10	OP14132	EP419
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.3 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.21	0.059	mg/kg	
208-96-8	Acenaphthylene	ND	0.21	0.050	mg/kg	
120-12-7	Anthracene	ND	0.21	0.041	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.21	0.082	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.21	0.034	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.21	0.053	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.21	0.050	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.21	0.040	mg/kg	
218-01-9	Chrysene	ND	0.21	0.047	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.21	0.11	mg/kg	
206-44-0	Fluoranthene	ND	0.21	0.044	mg/kg	
86-73-7	Fluorene	ND	0.21	0.058	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.21	0.076	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.21	0.067	mg/kg	
91-20-3	Naphthalene	ND	0.21	0.043	mg/kg	
85-01-8	Phenanthrene	ND	0.21	0.057	mg/kg	
129-00-0	Pyrene	ND	0.21	0.041	mg/kg	
	TPH-DRO (> C10-C21)	ND	11	8.3	mg/kg	
	TPH-ORO (> C21-C35)	ND	11	8.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	61%		18-104%
321-60-8	2-Fluorobiphenyl	63%		21-114%
1718-51-0	Terphenyl-d14	61%		24-149%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB-8-18-20**Lab Sample ID:** T47658-7**Matrix:** SO - Soil**Project:** St Joe TBA**Date Sampled:** 02/15/10**Date Received:** 02/16/10**Percent Solids:** 77.3**Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	8.4	0.73	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Barium	288	15	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Cadmium	0.50	0.36	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Chromium	17.7	0.73	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Lead	10.4	0.73	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Mercury	0.19	0.019	mg/kg	1	03/01/10	03/01/10 TW	SW846 7471A ³	SW846 7471A ⁵
Selenium	< 0.73	0.73	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Silver	< 0.73	0.73	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ²	SW846 3050B ⁴

(1) Instrument QC Batch: MA4557

(2) Instrument QC Batch: MA4560

(3) Instrument QC Batch: MA4566

(4) Prep QC Batch: MP11200

(5) Prep QC Batch: MP11227

RL = Reporting Limit

Report of Analysis

Client Sample ID: SB-9-1-3
Lab Sample ID: T47658-8
Matrix: SO - Soil
Method: SW846 8260B
Project: St Joe TBA

Date Sampled: 02/15/10
Date Received: 02/16/10
Percent Solids: 80.9

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y0037889.D	1	02/16/10	JL	n/a	n/a	VY2420
Run #2 ^a	Y0037901.D	1	02/17/10	JL	n/a	n/a	VY2421

	Initial Weight	Final Volume
Run #1	5.47 g	5.0 ml
Run #2	5.81 g	5.0 ml

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.056	0.0094	mg/kg	J
71-43-2	Benzene	0.0018	0.0056	0.00079	mg/kg	
108-86-1	Bromobenzene	ND	0.0056	0.00063	mg/kg	
74-97-5	Bromochloromethane	ND	0.0056	0.00066	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0056	0.00084	mg/kg	
75-25-2	Bromoform	ND	0.0056	0.0010	mg/kg	
104-51-8	n-Butylbenzene	ND	0.0056	0.00078	mg/kg	
135-98-8	sec-Butylbenzene	ND	0.0056	0.00087	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.0056	0.0012	mg/kg	
108-90-7	Chlorobenzene	ND	0.0056	0.00064	mg/kg	
75-00-3	Chloroethane	ND	0.0056	0.0010	mg/kg	
67-66-3	Chloroform	ND	0.0056	0.00068	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0056	0.00095	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0056	0.0012	mg/kg	
75-15-0	Carbon disulfide	ND	0.011	0.00063	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0056	0.00073	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0056	0.0010	mg/kg	
75-35-4	1,1-Dichloroethylene	ND	0.0056	0.00087	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0056	0.00075	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0056	0.0030	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0056	0.0011	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0056	0.00076	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0056	0.00091	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0056	0.00079	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0056	0.00065	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0056	0.00062	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0056	0.0013	mg/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	0.0056	0.0011	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0056	0.00061	mg/kg	
541-73-1	m-Dichlorobenzene	ND	0.0056	0.00081	mg/kg	
95-50-1	o-Dichlorobenzene	ND	0.0056	0.00081	mg/kg	
106-46-7	p-Dichlorobenzene	ND	0.0056	0.00079	mg/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB-9-1-3
Lab Sample ID: T47658-8
Matrix: SO - Soil
Method: SW846 8260B
Project: St Joe TBA

Date Sampled: 02/15/10
Date Received: 02/16/10
Percent Solids: 80.9

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	0.0056	0.00089	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0056	0.00071	mg/kg	
100-41-4	Ethylbenzene	0.0013	0.0056	0.0010	mg/kg	J
591-78-6	2-Hexanone	ND	0.056	0.0074	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.0056	0.0013	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0056	0.00079	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0056	0.0010	mg/kg	
108-10-1	4-Methyl-2-pentanone	ND	0.056	0.0063	mg/kg	
74-83-9	Methyl bromide	ND	0.0056	0.0014	mg/kg	
74-87-3	Methyl chloride	ND	0.0056	0.0013	mg/kg	
74-95-3	Methylene bromide	ND	0.0056	0.0011	mg/kg	
75-09-2	Methylene chloride	ND	0.011	0.0027	mg/kg	
78-93-3	Methyl ethyl ketone	ND	0.056	0.0065	mg/kg	
91-20-3	Naphthalene	ND	0.0056	0.00098	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0056	0.00083	mg/kg	
100-42-5	Styrene	ND	0.0056	0.00087	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0056	0.00048	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0056	0.00078	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0056	0.0015	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0056	0.0022	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0056	0.0012	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0056	0.0019	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0056	0.0012	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0056	0.00096	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0056	0.0011	mg/kg	
127-18-4	Tetrachloroethylene	ND	0.0056	0.00087	mg/kg	
108-88-3	Toluene	0.0048	0.0056	0.0011	mg/kg	J
79-01-6	Trichloroethylene	ND	0.0056	0.0019	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0056	0.00079	mg/kg	
75-01-4	Vinyl chloride	ND	0.0056	0.0012	mg/kg	
1330-20-7	Xylene (total)	ND	0.017	0.0024	mg/kg	
	m,p-Xylene	ND	0.011	0.0016	mg/kg	
95-47-6	o-Xylene	ND	0.0056	0.00072	mg/kg	
	TPH-GRO (C6-C10)	ND	0.23		mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	118%	127% ^b	70-121%
2037-26-5	Toluene-D8	149% ^b	165% ^b	76-132%
460-00-4	4-Bromofluorobenzene	156%	147%	73-165%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-9-1-3	Date Sampled:	02/15/10
Lab Sample ID:	T47658-8	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	80.9
Method:	SW846 8260B		
Project:	St Joe TBA		

VOA 8260 List w/ GRO

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	96%	101%	57-122%

- (a) Confirmation run.
(b) Outside control limits due to matrix interference. Confirmed by reanalysis.

ND = Not detected MDL - Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-9-1-3	Date Sampled:	02/15/10
Lab Sample ID:	T47658-8	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	80.9
Method:	SW846 8270C SW846 3550B		
Project:	St Joe TBA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J150799.D	1	02/23/10	SC	02/22/10	OP14132	EJ728
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.20	0.057	mg/kg	
208-96-8	Acenaphthylene	ND	0.20	0.048	mg/kg	
120-12-7	Anthracene	0.119	0.20	0.039	mg/kg	J
56-55-3	Benzo(a)anthracene	0.895	0.20	0.079	mg/kg	
50-32-8	Benzo(a)pyrene	0.923	0.20	0.032	mg/kg	
205-99-2	Benzo(b)fluoranthene	1.20	0.20	0.050	mg/kg	
191-24-2	Benzo(g,h,i)perylene	0.781	0.20	0.048	mg/kg	
207-08-9	Benzo(k)fluoranthene	0.145	0.20	0.038	mg/kg	J
218-01-9	Chrysene	1.04	0.20	0.045	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	0.122	0.20	0.11	mg/kg	J
206-44-0	Fluoranthene	2.57	0.20	0.042	mg/kg	
86-73-7	Fluorene	ND	0.20	0.056	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	0.722	0.20	0.073	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.20	0.064	mg/kg	
91-20-3	Naphthalene	ND	0.20	0.041	mg/kg	
85-01-8	Phenanthrene	1.25	0.20	0.055	mg/kg	
129-00-0	Pyrene	1.83	0.20	0.040	mg/kg	
	TPH-DRO (> C10-C21)	11.2	10	8.0	mg/kg	
	TPH-ORO (> C21-C35)	20.7	10	8.0	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	28%		18-104%
321-60-8	2-Fluorobiphenyl	35%		21-114%
1718-51-0	Terphenyl-d14	35%		24-149%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-9-1-3	Date Sampled:	02/15/10
Lab Sample ID:	T47658-8	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	80.9
Project:	St Joe TBA		

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	13.0	0.66	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Barium	224	13	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Cadmium	5.7	0.33	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Chromium	14.7	0.66	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Lead	330	0.66	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Mercury	< 0.018	0.018	mg/kg	1	03/01/10	03/01/10 TW	SW846 7471A ³	SW846 7471A ⁵
Selenium	1.1	0.66	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Silver	< 0.66	0.66	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA4557
- (2) Instrument QC Batch: MA4560
- (3) Instrument QC Batch: MA4566
- (4) Prep QC Batch: MP11200
- (5) Prep QC Batch: MP11227

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SB-9-18-20	Date Sampled:	02/15/10
Lab Sample ID:	T47658-9	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	76.1
Method:	SW846 8260B		
Project:	St Joe TBA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y0037890.D	1	02/16/10	JL	n/a	n/a	VY2420
Run #2	Y0037904.D	4	02/17/10	JL	n/a	n/a	VY2421

	Initial Weight	Final Volume	Methanol Aliquot
Run #1	5.84 g	5.0 ml	
Run #2	6.52 g	5.0 ml	100 ul

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0183	0.056	0.0093	mg/kg	J
71-43-2	Benzene	ND	0.0056	0.00079	mg/kg	
108-86-1	Bromobenzene	ND	0.0056	0.00062	mg/kg	
74-97-5	Bromochloromethane	ND	0.0056	0.00066	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0056	0.00083	mg/kg	
75-25-2	Bromoform	ND	0.0056	0.0010	mg/kg	
104-51-8	n-Butylbenzene	ND	0.0056	0.00078	mg/kg	
135-98-8	sec-Butylbenzene	0.0381	0.0056	0.00087	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.0056	0.0012	mg/kg	
108-90-7	Chlorobenzene	ND	0.0056	0.00063	mg/kg	
75-00-3	Chloroethane	ND	0.0056	0.0010	mg/kg	
67-66-3	Chloroform	ND	0.0056	0.00068	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0056	0.00095	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0056	0.0012	mg/kg	
75-15-0	Carbon disulfide	0.0044	0.011	0.00063	mg/kg	J
56-23-5	Carbon tetrachloride	ND	0.0056	0.00072	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0056	0.0010	mg/kg	
75-35-4	1,1-Dichloroethylene	ND	0.0056	0.00087	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0056	0.00074	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0056	0.0030	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0056	0.0011	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0056	0.00075	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0056	0.00090	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0056	0.00079	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0056	0.00065	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0056	0.00062	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0056	0.0013	mg/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	0.0056	0.0011	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0056	0.00060	mg/kg	
541-73-1	m-Dichlorobenzene	ND	0.0056	0.00081	mg/kg	
95-50-1	o-Dichlorobenzene	ND	0.0056	0.00081	mg/kg	
106-46-7	p-Dichlorobenzene	ND	0.0056	0.00079	mg/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB-9-18-20
Lab Sample ID: T47658-9
Matrix: SO - Soil
Method: SW846 8260B
Project: St Joe TBA

Date Sampled: 02/15/10
Date Received: 02/16/10
Percent Solids: 76.1

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	0.0056	0.00088	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0056	0.00071	mg/kg	
100-41-4	Ethylbenzene	ND	0.0056	0.0010	mg/kg	
591-78-6	2-Hexanone	ND	0.056	0.0074	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.0056	0.0013	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0056	0.00079	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0056	0.0010	mg/kg	
108-10-1	4-Methyl-2-pentanone	ND	0.056	0.0063	mg/kg	
74-83-9	Methyl bromide	ND	0.0056	0.0014	mg/kg	
74-87-3	Methyl chloride	ND	0.0056	0.0013	mg/kg	
74-95-3	Methylene bromide	ND	0.0056	0.0011	mg/kg	
75-09-2	Methylene chloride	ND	0.011	0.0026	mg/kg	
78-93-3	Methyl ethyl ketone	ND	0.056	0.0065	mg/kg	
91-20-3	Naphthalene	ND	0.0056	0.00097	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0056	0.00083	mg/kg	
100-42-5	Styrene	ND	0.0056	0.00087	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0056	0.00048	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0056	0.00078	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0056	0.0015	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0056	0.0022	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0056	0.0012	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0056	0.0019	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0056	0.0012	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0056	0.00096	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0056	0.0011	mg/kg	
127-18-4	Tetrachloroethylene	ND	0.0056	0.00087	mg/kg	
108-88-3	Toluene	ND	0.0056	0.0011	mg/kg	
79-01-6	Trichloroethylene	ND	0.0056	0.0019	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0056	0.00079	mg/kg	
75-01-4	Vinyl chloride	ND	0.0056	0.0011	mg/kg	
1330-20-7	Xylene (total)	ND	0.017	0.0024	mg/kg	
	m,p-Xylene	ND	0.011	0.0016	mg/kg	
95-47-6	o-Xylene	ND	0.0056	0.00072	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	121%	109%	70-121%
2037-26-5	Toluene-D8	109%	106%	76-132%
460-00-4	4-Bromofluorobenzene	151%	108%	73-165%
17060-07-0	1,2-Dichloroethane-D4	96%	88%	57-122%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-9-18-20	Date Sampled:	02/15/10
Lab Sample ID:	T47658-9	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	76.1
Method:	SW846 8270C SW846 3550B		
Project:	St Joe TBA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P08806.D	1	02/23/10	GJ	02/22/10	OP14132	EP419
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.1 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.22	0.060	mg/kg	
208-96-8	Acenaphthylene	ND	0.22	0.051	mg/kg	
120-12-7	Anthracene	ND	0.22	0.042	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.22	0.084	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.22	0.034	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.22	0.054	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.22	0.051	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.22	0.041	mg/kg	
218-01-9	Chrysene	ND	0.22	0.048	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.22	0.12	mg/kg	
206-44-0	Fluoranthene	ND	0.22	0.045	mg/kg	
86-73-7	Fluorene	ND	0.22	0.059	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.22	0.078	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.22	0.068	mg/kg	
91-20-3	Naphthalene	ND	0.22	0.043	mg/kg	
85-01-8	Phenanthrene	ND	0.22	0.058	mg/kg	
129-00-0	Pyrene	ND	0.22	0.042	mg/kg	
	TPH-DRO (> C10-C21)	28.6	11	8.5	mg/kg	
	TPH-ORO (> C21-C35)	ND	11	8.5	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	68%		18-104%
321-60-8	2-Fluorobiphenyl	61%		21-114%
1718-51-0	Terphenyl-d14	68%		24-149%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB-9-18-20**Lab Sample ID:** T47658-9**Matrix:** SO - Soil**Project:** St Joe TBA**Date Sampled:** 02/15/10**Date Received:** 02/16/10**Percent Solids:** 76.1**Metals Analysis**

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	11.1	0.79	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Barium	247	16	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Cadmium	0.49	0.40	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Chromium	18.9	0.79	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Lead	11.9	0.79	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Mercury	0.045	0.021	mg/kg	1	03/01/10	03/01/10 TW	SW846 7471A ³	SW846 7471A ⁵
Selenium	< 0.79	0.79	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Silver	< 0.79	0.79	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ²	SW846 3050B ⁴

(1) Instrument QC Batch: MA4557

(2) Instrument QC Batch: MA4560

(3) Instrument QC Batch: MA4566

(4) Prep QC Batch: MP11200

(5) Prep QC Batch: MP11227

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SB-9-GW	Date Sampled:	02/15/10
Lab Sample ID:	T47658-10	Date Received:	02/16/10
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	St Joe TBA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Z006807.D	1	02/24/10	JL	n/a	n/a	VZ2779
Run #2							

	Purge Volume
Run #1	5.0 ml
Run #2	

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	0.050	0.0047	mg/l	
71-43-2	Benzene	ND	0.0020	0.00050	mg/l	
108-86-1	Bromobenzene	ND	0.0020	0.00082	mg/l	
74-97-5	Bromochloromethane	ND	0.0020	0.0016	mg/l	
75-27-4	Bromodichloromethane	ND	0.0020	0.00049	mg/l	
75-25-2	Bromoform	ND	0.0020	0.0014	mg/l	
104-51-8	n-Butylbenzene	ND	0.0020	0.00063	mg/l	
135-98-8	sec-Butylbenzene	ND	0.0020	0.00052	mg/l	
98-06-6	tert-Butylbenzene	ND	0.0020	0.0013	mg/l	
108-90-7	Chlorobenzene	ND	0.0020	0.00056	mg/l	
75-00-3	Chloroethane	ND	0.0020	0.00092	mg/l	
67-66-3	Chloroform	ND	0.0020	0.00064	mg/l	
95-49-8	o-Chlorotoluene	ND	0.0020	0.00070	mg/l	
106-43-4	p-Chlorotoluene	ND	0.0020	0.00056	mg/l	
75-15-0	Carbon disulfide	ND	0.0020	0.00053	mg/l	
56-23-5	Carbon tetrachloride	ND	0.0020	0.00066	mg/l	
75-34-3	1,1-Dichloroethane	ND	0.0020	0.00052	mg/l	
75-35-4	1,1-Dichloroethylene	ND	0.0020	0.00050	mg/l	
563-58-6	1,1-Dichloropropene	ND	0.0020	0.00078	mg/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0020	0.0019	mg/l	
106-93-4	1,2-Dibromoethane	ND	0.0020	0.00055	mg/l	
107-06-2	1,2-Dichloroethane	ND	0.0020	0.00062	mg/l	
78-87-5	1,2-Dichloropropane	ND	0.0020	0.00062	mg/l	
142-28-9	1,3-Dichloropropane	ND	0.0020	0.00054	mg/l	
594-20-7	2,2-Dichloropropane	ND	0.0020	0.00062	mg/l	
124-48-1	Dibromochloromethane	ND	0.0020	0.00061	mg/l	
75-71-8	Dichlorodifluoromethane	ND	0.0020	0.0011	mg/l	
156-59-2	cis-1,2-Dichloroethylene	ND	0.0020	0.00056	mg/l	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0020	0.00048	mg/l	
541-73-1	m-Dichlorobenzene	ND	0.0020	0.0010	mg/l	
95-50-1	o-Dichlorobenzene	ND	0.0020	0.00069	mg/l	
106-46-7	p-Dichlorobenzene	ND	0.0020	0.0010	mg/l	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-9-GW	Date Sampled:	02/15/10
Lab Sample ID:	T47658-10	Date Received:	02/16/10
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	St Joe TBA		

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	0.0020	0.00045	mg/l	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0020	0.00068	mg/l	
100-41-4	Ethylbenzene	ND	0.0020	0.00055	mg/l	
591-78-6	2-Hexanone	ND	0.010	0.0032	mg/l	
87-68-3	Hexachlorobutadiene	ND	0.0020	0.0013	mg/l	
98-82-8	Isopropylbenzene	ND	0.0020	0.00051	mg/l	
99-87-6	p-Isopropyltoluene	ND	0.0020	0.00065	mg/l	
108-10-1	4-Methyl-2-pentanone	ND	0.010	0.0099	mg/l	
74-83-9	Methyl bromide	ND	0.0020	0.00094	mg/l	
74-87-3	Methyl chloride	ND	0.0020	0.00084	mg/l	
74-95-3	Methylene bromide	ND	0.0020	0.00065	mg/l	
75-09-2	Methylene chloride	ND	0.0050	0.00041	mg/l	
78-93-3	Methyl ethyl ketone	ND	0.010	0.0039	mg/l	
91-20-3	Naphthalene	0.00092	0.0050	0.00065	mg/l	J
103-65-1	n-Propylbenzene	ND	0.0020	0.00057	mg/l	
100-42-5	Styrene	ND	0.0020	0.00056	mg/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0020	0.00080	mg/l	
71-55-6	1,1,1-Trichloroethane	ND	0.0020	0.00062	mg/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0020	0.0012	mg/l	
79-00-5	1,1,2-Trichloroethane	ND	0.0020	0.00098	mg/l	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0020	0.0011	mg/l	
96-18-4	1,2,3-Trichloropropane	ND	0.0020	0.0013	mg/l	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0020	0.00082	mg/l	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0020	0.00065	mg/l	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0020	0.00070	mg/l	
127-18-4	Tetrachloroethylene	ND	0.0020	0.00091	mg/l	
108-88-3	Toluene	ND	0.0020	0.00043	mg/l	
79-01-6	Trichloroethylene	ND	0.0020	0.00052	mg/l	
75-69-4	Trichlorofluoromethane	ND	0.0020	0.0012	mg/l	
75-01-4	Vinyl chloride	ND	0.0020	0.0010	mg/l	
1330-20-7	Xylene (total)	ND	0.0060	0.0017	mg/l	
	m,p-Xylene	ND	0.0040	0.0011	mg/l	
95-47-6	o-Xylene	ND	0.0020	0.00053	mg/l	
	TPH-GRO (C6-C10)	0.0803	0.20		mg/l	J

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	83%		79-122%
17060-07-0	1,2-Dichloroethane-D4	106%		75-121%
2037-26-5	Toluene-D8	110%		87-119%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-9-GW	Date Sampled:	02/15/10
Lab Sample ID:	T47658-10	Date Received:	02/16/10
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8260B		
Project:	St Joe TBA		

VOA 8260 List w/ GRO

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
460-00-4	4-Bromofluorobenzene	108%		80-133%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-9-GW	Date Sampled:	02/15/10
Lab Sample ID:	T47658-10	Date Received:	02/16/10
Matrix:	AQ - Ground Water	Percent Solids:	n/a
Method:	SW846 8270C SW846 3510C		
Project:	St Joe TBA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	J150732.D	1	02/18/10	SC	02/17/10	OP14091	EJ725
Run #2							

Run #	Initial Volume	Final Volume
Run #1	1000 ml	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.0050	0.0016	mg/l	
208-96-8	Acenaphthylene	ND	0.0050	0.0012	mg/l	
120-12-7	Anthracene	ND	0.0050	0.0011	mg/l	
56-55-3	Benzo(a)anthracene	ND	0.0050	0.0011	mg/l	
50-32-8	Benzo(a)pyrene	ND	0.0050	0.0011	mg/l	
205-99-2	Benzo(b)fluoranthene	ND	0.0050	0.00087	mg/l	
191-24-2	Benzo(g,h,i)perylene	ND	0.0050	0.0017	mg/l	
207-08-9	Benzo(k)fluoranthene	ND	0.0050	0.0011	mg/l	
218-01-9	Chrysene	ND	0.0050	0.00098	mg/l	
53-70-3	Dibenzo(a,h)anthracene	ND	0.0050	0.0016	mg/l	
206-44-0	Fluoranthene	ND	0.0050	0.00097	mg/l	
86-73-7	Fluorene	ND	0.0050	0.0013	mg/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.0050	0.0018	mg/l	
91-57-6	2-Methylnaphthalene	ND	0.0050	0.0013	mg/l	
91-20-3	Naphthalene	ND	0.0050	0.0011	mg/l	
85-01-8	Phenanthrene	ND	0.0050	0.00097	mg/l	
129-00-0	Pyrene	ND	0.0050	0.0017	mg/l	
	TPH-DRO (> C10-C21)	ND	0.25	0.12	mg/l	
	TPH-ORO (> C21-C35)	ND	0.25	0.12	mg/l	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	53%		29-115%
321-60-8	2-Fluorobiphenyl	61%		34-113%
1718-51-0	Terphenyl-d14	46%		12-145%

ND = Not detected MDL - Method Detection Limit
 RL = Reporting Limit
 E = Indicates value exceeds calibration range

J = Indicates an estimated value
 B = Indicates analyte found in associated method blank
 N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-7-1-3	Date Sampled:	02/15/10
Lab Sample ID:	T47658-11	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	79.7
Method:	SW846 8260B		
Project:	St Joe TBA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y0037902.D	1	02/17/10	JL	n/a	n/a	VY2421
Run #2 ^a	Y0037891.D	1	02/16/10	JL	n/a	n/a	VY2420

	Initial Weight	Final Volume
Run #1	6.10 g	5.0 ml
Run #2	5.52 g	5.0 ml

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0341	0.051	0.0085	mg/kg	J
71-43-2	Benzene	0.0015	0.0051	0.00072	mg/kg	J
108-86-1	Bromobenzene	ND	0.0051	0.00057	mg/kg	
74-97-5	Bromochloromethane	ND	0.0051	0.00060	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0051	0.00076	mg/kg	
75-25-2	Bromoform	ND	0.0051	0.00095	mg/kg	
104-51-8	n-Butylbenzene	ND	0.0051	0.00071	mg/kg	
135-98-8	sec-Butylbenzene	ND	0.0051	0.00079	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.0051	0.0011	mg/kg	
108-90-7	Chlorobenzene	ND	0.0051	0.00058	mg/kg	
75-00-3	Chloroethane	ND	0.0051	0.00094	mg/kg	
67-66-3	Chloroform	ND	0.0051	0.00062	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0051	0.00087	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0051	0.0011	mg/kg	
75-15-0	Carbon disulfide	ND	0.010	0.00058	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0051	0.00066	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0051	0.00093	mg/kg	
75-35-4	1,1-Dichloroethylene	ND	0.0051	0.00079	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0051	0.00068	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0051	0.0027	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0051	0.0010	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0051	0.00069	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0051	0.00083	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0051	0.00072	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0051	0.00060	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0051	0.00056	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0051	0.0012	mg/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	0.0051	0.0010	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0051	0.00055	mg/kg	
541-73-1	m-Dichlorobenzene	ND	0.0051	0.00074	mg/kg	
95-50-1	o-Dichlorobenzene	ND	0.0051	0.00074	mg/kg	
106-46-7	p-Dichlorobenzene	ND	0.0051	0.00072	mg/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB-7-1-3
Lab Sample ID: T47658-11
Matrix: SO - Soil
Method: SW846 8260B
Project: St Joe TBA

Date Sampled: 02/15/10
Date Received: 02/16/10
Percent Solids: 79.7

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	0.0051	0.00081	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0051	0.00064	mg/kg	
100-41-4	Ethylbenzene	ND	0.0051	0.00093	mg/kg	
591-78-6	2-Hexanone	ND	0.051	0.0068	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.0051	0.0012	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0051	0.00072	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0051	0.00093	mg/kg	
108-10-1	4-Methyl-2-pentanone	ND	0.051	0.0057	mg/kg	
74-83-9	Methyl bromide	ND	0.0051	0.0012	mg/kg	
74-87-3	Methyl chloride	ND	0.0051	0.0012	mg/kg	
74-95-3	Methylene bromide	ND	0.0051	0.00096	mg/kg	
75-09-2	Methylene chloride	ND	0.010	0.0024	mg/kg	
78-93-3	Methyl ethyl ketone	ND	0.051	0.0059	mg/kg	
91-20-3	Naphthalene	ND	0.0051	0.00089	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0051	0.00076	mg/kg	
100-42-5	Styrene	ND	0.0051	0.00080	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0051	0.00044	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0051	0.00071	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0051	0.0014	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0051	0.0020	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0051	0.0011	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0051	0.0018	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0051	0.0011	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0051	0.00087	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0051	0.0010	mg/kg	
127-18-4	Tetrachloroethylene	ND	0.0051	0.00079	mg/kg	
108-88-3	Toluene	ND	0.0051	0.00098	mg/kg	
79-01-6	Trichloroethylene	ND	0.0051	0.0017	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0051	0.00072	mg/kg	
75-01-4	Vinyl chloride	ND	0.0051	0.0010	mg/kg	
1330-20-7	Xylene (total)	ND	0.015	0.0021	mg/kg	
	m,p-Xylene	ND	0.010	0.0015	mg/kg	
95-47-6	o-Xylene	ND	0.0051	0.00066	mg/kg	
	TPH-GRO (C6-C10)	ND	0.21		mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	109%	107%	70-121%
2037-26-5	Toluene-D8	124%	123%	76-132%
460-00-4	4-Bromofluorobenzene	136%	138%	73-165%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-7-1-3	Date Sampled:	02/15/10
Lab Sample ID:	T47658-11	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	79.7
Method:	SW846 8260B		
Project:	St Joe TBA		

VOA 8260 List w/ GRO

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	90%	89%	57-122%

(a) Confirmation run.

ND = Not detected MDL - Method Detection Limit J = Indicates an estimated value
RL = Reporting Limit B = Indicates analyte found in associated method blank
E = Indicates value exceeds calibration range N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-7-1-3	Date Sampled:	02/15/10
Lab Sample ID:	T47658-11	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	79.7
Method:	SW846 8270C SW846 3550B		
Project:	St Joe TBA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P08814.D	1	02/23/10	GJ	02/22/10	OP14132	EP419
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.21	0.057	mg/kg	
208-96-8	Acenaphthylene	ND	0.21	0.049	mg/kg	
120-12-7	Anthracene	ND	0.21	0.040	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.21	0.080	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.21	0.033	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.21	0.051	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.21	0.049	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.21	0.039	mg/kg	
218-01-9	Chrysene	ND	0.21	0.045	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.21	0.11	mg/kg	
206-44-0	Fluoranthene	ND	0.21	0.043	mg/kg	
86-73-7	Fluorene	ND	0.21	0.056	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.21	0.074	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.21	0.065	mg/kg	
91-20-3	Naphthalene	ND	0.21	0.041	mg/kg	
85-01-8	Phenanthrene	ND	0.21	0.056	mg/kg	
129-00-0	Pyrene	ND	0.21	0.040	mg/kg	
	TPH-DRO (> C10-C21)	ND	10	8.1	mg/kg	
	TPH-ORO (> C21-C35)	ND	10	8.1	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	81%		18-104%
321-60-8	2-Fluorobiphenyl	89%		21-114%
1718-51-0	Terphenyl-d14	79%		24-149%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB-7-1-3
Lab Sample ID: T47658-11
Matrix: SO - Soil
Project: St Joe TBA

Date Sampled: 02/15/10
Date Received: 02/16/10
Percent Solids: 79.7

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	8.1	0.70	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Barium	270	14	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Cadmium	0.67	0.35	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Chromium	18.6	0.70	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Lead	31.9	0.70	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Mercury	0.024	0.018	mg/kg	1	03/01/10	03/01/10 TW	SW846 7471A ³	SW846 7471A ⁵
Selenium	< 0.70	0.70	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Silver	< 0.70	0.70	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ²	SW846 3050B ⁴

- (1) Instrument QC Batch: MA4557
 (2) Instrument QC Batch: MA4560
 (3) Instrument QC Batch: MA4566
 (4) Prep QC Batch: MP11200
 (5) Prep QC Batch: MP11227

RL = Reporting Limit

Report of Analysis

Client Sample ID:	SB-7-18-20	Date Sampled:	02/15/10
Lab Sample ID:	T47658-12	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	77.7
Method:	SW846 8260B		
Project:	St Joe TBA		

	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	Y0037903.D	1	02/17/10	JL	n/a	n/a	VY2421
Run #2							

	Initial Weight	Final Volume
Run #1	7.89 g	5.0 ml
Run #2		

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	0.0486	0.041	0.0068	mg/kg	
71-43-2	Benzene	0.0015	0.0041	0.00057	mg/kg	J
108-86-1	Bromobenzene	ND	0.0041	0.00045	mg/kg	
74-97-5	Bromochloromethane	ND	0.0041	0.00048	mg/kg	
75-27-4	Bromodichloromethane	ND	0.0041	0.00060	mg/kg	
75-25-2	Bromoform	ND	0.0041	0.00076	mg/kg	
104-51-8	n-Butylbenzene	ND	0.0041	0.00056	mg/kg	
135-98-8	sec-Butylbenzene	ND	0.0041	0.00063	mg/kg	
98-06-6	tert-Butylbenzene	ND	0.0041	0.00085	mg/kg	
108-90-7	Chlorobenzene	ND	0.0041	0.00046	mg/kg	
75-00-3	Chloroethane	ND	0.0041	0.00075	mg/kg	
67-66-3	Chloroform	ND	0.0041	0.00049	mg/kg	
95-49-8	o-Chlorotoluene	ND	0.0041	0.00069	mg/kg	
106-43-4	p-Chlorotoluene	ND	0.0041	0.00088	mg/kg	
75-15-0	Carbon disulfide	ND	0.0082	0.00046	mg/kg	
56-23-5	Carbon tetrachloride	ND	0.0041	0.00053	mg/kg	
75-34-3	1,1-Dichloroethane	ND	0.0041	0.00074	mg/kg	
75-35-4	1,1-Dichloroethylene	ND	0.0041	0.00063	mg/kg	
563-58-6	1,1-Dichloropropene	ND	0.0041	0.00054	mg/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	0.0041	0.0022	mg/kg	
106-93-4	1,2-Dibromoethane	ND	0.0041	0.00081	mg/kg	
107-06-2	1,2-Dichloroethane	ND	0.0041	0.00055	mg/kg	
78-87-5	1,2-Dichloropropane	ND	0.0041	0.00065	mg/kg	
142-28-9	1,3-Dichloropropane	ND	0.0041	0.00057	mg/kg	
594-20-7	2,2-Dichloropropane	ND	0.0041	0.00047	mg/kg	
124-48-1	Dibromochloromethane	ND	0.0041	0.00045	mg/kg	
75-71-8	Dichlorodifluoromethane	ND	0.0041	0.00097	mg/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	0.0041	0.00082	mg/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	0.0041	0.00044	mg/kg	
541-73-1	m-Dichlorobenzene	ND	0.0041	0.00058	mg/kg	
95-50-1	o-Dichlorobenzene	ND	0.0041	0.00059	mg/kg	
106-46-7	p-Dichlorobenzene	ND	0.0041	0.00057	mg/kg	

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB-7-18-20
Lab Sample ID: T47658-12
Matrix: SO - Soil
Method: SW846 8260B
Project: St Joe TBA

Date Sampled: 02/15/10
Date Received: 02/16/10
Percent Solids: 77.7

VOA 8260 List w/ GRO

CAS No.	Compound	Result	RL	MDL	Units	Q
156-60-5	trans-1,2-Dichloroethylene	ND	0.0041	0.00064	mg/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	0.0041	0.00051	mg/kg	
100-41-4	Ethylbenzene	ND	0.0041	0.00074	mg/kg	
591-78-6	2-Hexanone	ND	0.041	0.0054	mg/kg	
87-68-3	Hexachlorobutadiene	ND	0.0041	0.00093	mg/kg	
98-82-8	Isopropylbenzene	ND	0.0041	0.00057	mg/kg	
99-87-6	p-Isopropyltoluene	ND	0.0041	0.00074	mg/kg	
108-10-1	4-Methyl-2-pentanone	ND	0.041	0.0045	mg/kg	
74-83-9	Methyl bromide	ND	0.0041	0.00098	mg/kg	
74-87-3	Methyl chloride	ND	0.0041	0.00092	mg/kg	
74-95-3	Methylene bromide	ND	0.0041	0.00076	mg/kg	
75-09-2	Methylene chloride	ND	0.0082	0.0019	mg/kg	
78-93-3	Methyl ethyl ketone	ND	0.041	0.0047	mg/kg	
91-20-3	Naphthalene	ND	0.0041	0.00071	mg/kg	
103-65-1	n-Propylbenzene	ND	0.0041	0.00060	mg/kg	
100-42-5	Styrene	ND	0.0041	0.00063	mg/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	0.0041	0.00034	mg/kg	
71-55-6	1,1,1-Trichloroethane	ND	0.0041	0.00057	mg/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	0.0041	0.0011	mg/kg	
79-00-5	1,1,2-Trichloroethane	ND	0.0041	0.0016	mg/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	0.0041	0.00085	mg/kg	
96-18-4	1,2,3-Trichloropropane	ND	0.0041	0.0014	mg/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	0.0041	0.00084	mg/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	0.0041	0.00069	mg/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	0.0041	0.00080	mg/kg	
127-18-4	Tetrachloroethylene	ND	0.0041	0.00063	mg/kg	
108-88-3	Toluene	0.00092	0.0041	0.00077	mg/kg	J
79-01-6	Trichloroethylene	ND	0.0041	0.0014	mg/kg	
75-69-4	Trichlorofluoromethane	ND	0.0041	0.00057	mg/kg	
75-01-4	Vinyl chloride	ND	0.0041	0.00083	mg/kg	
1330-20-7	Xylene (total)	ND	0.012	0.0017	mg/kg	
	m,p-Xylene	ND	0.0082	0.0012	mg/kg	
95-47-6	o-Xylene	ND	0.0041	0.00052	mg/kg	
	TPH-GRO (C6-C10)	ND	0.16		mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
1868-53-7	Dibromofluoromethane	115%		70-121%
2037-26-5	Toluene-D8	112%		76-132%
460-00-4	4-Bromofluorobenzene	113%		73-165%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-7-18-20	Date Sampled:	02/15/10
Lab Sample ID:	T47658-12	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	77.7
Method:	SW846 8260B		
Project:	St Joe TBA		

VOA 8260 List w/ GRO

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
17060-07-0	1,2-Dichloroethane-D4	98%		57-122%

ND = Not detected MDL - Method Detection Limit
RL = Reporting Limit
E = Indicates value exceeds calibration range

J = Indicates an estimated value
B = Indicates analyte found in associated method blank
N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID:	SB-7-18-20	Date Sampled:	02/15/10
Lab Sample ID:	T47658-12	Date Received:	02/16/10
Matrix:	SO - Soil	Percent Solids:	77.7
Method:	SW846 8270C SW846 3550B		
Project:	St Joe TBA		

Run #	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
Run #1	P08815.D	1	02/23/10	GJ	02/22/10	OP14132	EP419
Run #2							

Run #	Initial Weight	Final Volume
Run #1	30.2 g	1.0 ml
Run #2		

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	0.21	0.059	mg/kg	
208-96-8	Acenaphthylene	ND	0.21	0.050	mg/kg	
120-12-7	Anthracene	ND	0.21	0.041	mg/kg	
56-55-3	Benzo(a)anthracene	ND	0.21	0.082	mg/kg	
50-32-8	Benzo(a)pyrene	ND	0.21	0.034	mg/kg	
205-99-2	Benzo(b)fluoranthene	ND	0.21	0.052	mg/kg	
191-24-2	Benzo(g,h,i)perylene	ND	0.21	0.050	mg/kg	
207-08-9	Benzo(k)fluoranthene	ND	0.21	0.040	mg/kg	
218-01-9	Chrysene	ND	0.21	0.047	mg/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	0.21	0.11	mg/kg	
206-44-0	Fluoranthene	ND	0.21	0.044	mg/kg	
86-73-7	Fluorene	ND	0.21	0.058	mg/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	0.21	0.076	mg/kg	
91-57-6	2-Methylnaphthalene	ND	0.21	0.067	mg/kg	
91-20-3	Naphthalene	ND	0.21	0.043	mg/kg	
85-01-8	Phenanthrene	ND	0.21	0.057	mg/kg	
129-00-0	Pyrene	ND	0.21	0.041	mg/kg	
	TPH-DRO (> C10-C21)	ND	11	8.3	mg/kg	
	TPH-ORO (> C21-C35)	ND	11	8.3	mg/kg	

CAS No.	Surrogate Recoveries	Run# 1	Run# 2	Limits
4165-60-0	Nitrobenzene-d5	67%		18-104%
321-60-8	2-Fluorobiphenyl	75%		21-114%
1718-51-0	Terphenyl-d14	73%		24-149%

ND = Not detected MDL - Method Detection Limit

RL = Reporting Limit

E = Indicates value exceeds calibration range

J = Indicates an estimated value

B = Indicates analyte found in associated method blank

N = Indicates presumptive evidence of a compound

Report of Analysis

Client Sample ID: SB-7-18-20**Lab Sample ID:** T47658-12**Matrix:** SO - Soil**Project:** St Joe TBA**Date Sampled:** 02/15/10**Date Received:** 02/16/10**Percent Solids:** 77.7

Metals Analysis

Analyte	Result	RL	Units	DF	Prep	Analyzed By	Method	Prep Method
Arsenic	8.9	0.70	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Barium	223	14	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Cadmium	0.44	0.35	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Chromium	18.6	0.70	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Lead	10.6	0.70	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Mercury	0.28	0.021	mg/kg	1	03/01/10	03/01/10 TW	SW846 7471A ³	SW846 7471A ⁵
Selenium	< 0.70	0.70	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ¹	SW846 3050B ⁴
Silver	< 0.70	0.70	mg/kg	1	02/24/10	02/25/10 NS	SW846 6010B ²	SW846 3050B ⁴

(1) Instrument QC Batch: MA4557

(2) Instrument QC Batch: MA4560

(3) Instrument QC Batch: MA4566

(4) Prep QC Batch: MP11200

(5) Prep QC Batch: MP11227

RL = Reporting Limit



Misc. Forms

Custody Documents and Other Forms

Includes the following where applicable:

- Chain of Custody

10165 Harwin, Suite 150 - Houston, TX 77036 - 713-271-4700 fax: 713-271-4770

Client/ Reporting Information		Project Information		FED-EX Tracking #		Bottle Order Control #											
Company Name ET GOV		Project Name / No. Toastmaster-Kirksville S+ Joe TBA		Accutest Quote # BS/2010-631		Accutest Job # T 47658											
Project Contact Glen Perez / Jeff Pittman		Bill to ET GOV		Requested Analyses		Matrix Codes											
Address 12755 Olive Blvd, Suite 110		Address 5505 NE 34th Ave		Volatiles 18260 TPH DRG PAH ROA Metals Disposal & Residuals		DW - Drinking Water GW - Ground Water WW - Wastewater SO - Soil SL - Sludge OI - Oil LIQ - Liquid SOL - Other Solid											
City State Zip St. Louis MO 63144		City State Zip Seattle WA 98105				LAB USE ONLY											
Phone No. Fax No. 314-692-3980 913-220-5887		Phone No. Fax No. 206-525-3362															
Samplers Name GP - RL		Client Purchase Order # 17															
Accutest Sample #	Field ID / Point of Collection	Date	Time	Matrix	# of bottles	Number of preserved bottles											
						ICE	NaOH	MSD	MSCH	MSCH	MSCH	MSCH	MSCH	MSCH	MSCH	MSCH	MSCH
1	SB-11-1-3	2-15-10	1020	So	4												
2	SB-11-10-12	2-15-10	1035	So	4												
3	SB-11-GLW	2-15-10	1100	So	6												
4	SB-11-GLW-MS/MSD	2-15-10	1100	So	12												
5	SB-10-1-3	2-15-10	1302	So	4												
6	SB-8-1-3	2-15-10	1345	So	4												
7	SB-8-18-20	2-15-10	1400	So	4												
8	SB-9-1-3	2-15-10	1440	So	4												
9	SB-9-18-20	2-15-10	1504	So	4												
Turnaround Time (Business days)		Data Deliverable Information		Comments / Remarks													
<input checked="" type="checkbox"/> 10 Day STANDARD <input type="checkbox"/> 7 Day <input type="checkbox"/> 4 Day RUSH <input type="checkbox"/> 3 Day EMERGENCY <input type="checkbox"/> 2 Day EMERGENCY <input type="checkbox"/> 1 Day EMERGENCY <input type="checkbox"/> Other		Approved By/ Date: _____ Commercial "A" <input type="checkbox"/> TRRP-13 Commercial "B" <input type="checkbox"/> EDD Format Reduced Tier 1 <input type="checkbox"/> Other _____ Full Data Package <input type="checkbox"/>															
Real time analytical data available via Lablink		Commercial "A" = Results Only Commercial "B" = Results & Standard QC															
SAMPLE CUSTODY MUST BE DOCUMENTED BELOW EACH TIME SAMPLES CHANGE POSSESSION, INCLUDING COURIER DELIVERY																	
Relinquished by:	Date Time:	Received By:	Date Time:	Relinquished By:	Date Time:	Received By:	Date Time:	Relinquished By:	Date Time:	Received By:	Date Time:	Relinquished By:	Date Time:	Received By:	Date Time:	Relinquished By:	Date Time:
1 Glen Perez	2-15-10 1741			2 Fred E	2-16-10 0900												
3				4													
5				6													
Custody Seal #		Preserved where applicable		On Ice		Cooler Temp.											

T47658: Chain of Custody

Page 2 of 6

SAMPLE INSPECTION FORM

Accutest Job Number: T47658 Client: ET Gov Date/Time Received: 02/16/10 0900
 # of Coolers Received: 1 Thermometer #: 1P-1 Temperature Adjustment Factor: +0.4
 Cooler Temps: #1: 1.8 #2: 1.8 #3: _____ #4: _____ #5: _____ #6: _____ #7: _____ #8: _____
 Method of Delivery: FedEx UPS Accutest Courier Greyhound Delivery Other
 Airbill Numbers: _____

COOLER INFORMATION

- ☐ Custody seal missing or not intact
- ☐ Temperature criteria not met
- ☐ Wet ice received in cooler

CHAIN OF CUSTODY

- ☐ Chain of Custody not received
- ☐ Sample D/T unclear or missing
- ☐ Analyses unclear or missing
- ☐ COC not properly executed

SAMPLE INFORMATION

- ☐ Sample containers received broken
- ☐ VOC vials have headspace
- ☐ Sample labels missing or illegible
- ☐ ID on COC does not match label(s)
- ☐ D/T on COC does not match label(s)
- ☐ Sample/Bottles rec'd but no analysis on COC
- ☐ Sample listed on COC, but not received
- ☐ Bottles missing for requested analysis
- ☐ Insufficient volume for analysis
- ☐ Sample received improperly preserved

TRIP BLANK INFORMATION

- ☐ Trip Blank on COC but not received
- ☐ Trip Blank received but not on COC
- ☐ Trip Blank not intact
- ☐ Received Water Trip Blank
- ☐ Received Soil TB

Number of Encores? _____
 Number of 5035 kits? _____
 Number of lab-filtered metals? _____

Summary of Discrepancies: _____

TECHNICIAN SIGNATURE/DATE: [Signature] 02/16/10
 INFORMATION AND SAMPLE LABELING VERIFIED BY: GC 2-16-10

CORRECTIVE ACTIONS

Client Representative Notified: _____ Date: _____
 By Accutest Representative: _____ Via: Phone Email
 Client Instructions: _____

T47658: Chain of Custody

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SAMPLE RECEIPT LOG

JOB #: T47658 DATE/TIME RECEIVED: 02/16/10 09:00

CLIENT: EI Gov. INITIALS: FF

COOLER#	SAMPLE ID	FIELD ID	DATE	MATRIX	VOL	BOTTLE #	LOCATION	PRESERV	PH
1	1	SB-11-1-3	2/15/10 1020	S	8oz	1	2-77	① 2 3 4 5 6 7 8	<2 >12
					2oz	2	VR	① 2 3 4 5 6 7 8	<2 >12
					40ml	3	↓	1 2 3 4 5 6 ⑦ 8	<2 >12
					"	4-5	↓	1 2 3 4 5 6 7 ⑧	<2 >12
	2	SB-11-10-12	1035		8oz	1	2-77	① 2 3 4 5 6 7 8	<2 >12
					2oz	2	VR	① 2 3 4 5 6 7 8	<2 >12
					40ml	3	↓	1 2 3 4 5 6 ⑦ 8	<2 >12
					"	4-5	↓	1 2 3 4 5 6 7 ⑧	<2 >12
2	3	SB-11	2/15/10 1100	W	LAC	1-2	1GG	① 2 3 4 5 6 7 8	<2 >12
					P500	3	↓	① 2 3 4 5 6 7 8	<2 >12
					40ml	4-6	VR	1 2 3 4 5 6 7 ⑧ TSP	<2 >12
	3	" MS/MSD	1100		LAC	7-10	1GG	① 2 3 4 5 6 7 8	<2 >12
					P500	11-12	↓	① 2 3 4 5 6 7 8	<2 >12
					40ml	13-18	VR	1 2 3 4 5 6 7 ⑧ TSP	<2 >12
1	4	SB-10-1-3	1302	S	8oz	1	2-77	① 2 3 4 5 6 7 8	<2 >12
					2oz	2	VR	① 2 3 4 5 6 7 8	<2 >12
					40ml	3	↓	1 2 3 4 5 6 ⑦ 8	<2 >12
					"	4-5	↓	1 2 3 4 5 6 7 ⑧	<2 >12
	5	SB-10-18-20	1514		8oz	1	2-77	① 2 3 4 5 6 7 8	<2 >12
					2oz	2	VR	① 2 3 4 5 6 7 8	<2 >12
					40ml	3	↓	1 2 3 4 5 6 ⑦ 8	<2 >12
					"	4-5	↓	1 2 3 4 5 6 7 ⑧	<2 >12

PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: DI 7: MeOH 8: Other

LOCATION: 1: Walk-In #1 (Waters) 2: Walk-In #2 (Soils) VR: Volatile Fridge M: Metals SUB: Subcontract EF: Encore Freezer

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T47658: Chain of Custody

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SAMPLE RECEIPT LOG

JOB #: T47658 DATE/TIME RECEIVED: 02/16/10 09:00

CLIENT: EI Gov INITIALS: PF

COOLER#	SAMPLE ID	FIELD ID	DATE	MATRIX	VOL	BOTTLE #	LOCATION	PRESERV	PH
1	6	SB-08-1-3	02/15/10 1745	S	8oz	1	2-77	0 2 3 4 5 6 7 8	<2 >12
					2oz	2	VR	0 2 3 4 5 6 7 8	<2 >12
					40ml	3	↓	1 2 3 4 5 6 7 8	<2 >12
					"	4-5	↓	1 2 3 4 5 6 7 8	<2 >12
	7	SB-8-18-20	1400		8oz	1	2-77	0 2 3 4 5 6 7 8	<2 >12
					2oz	2	VR	0 2 3 4 5 6 7 8	<2 >12
					40ml	3	↓	1 2 3 4 5 6 7 8	<2 >12
					"	4-5	↓	1 2 3 4 5 6 7 8	<2 >12
	8	SB-9-1-3	1440		8oz	1	2-77	0 2 3 4 5 6 7 8	<2 >12
					2oz	2	VR	0 2 3 4 5 6 7 8	<2 >12
					40ml	3	↓	1 2 3 4 5 6 7 8	<2 >12
					"	4-5	↓	1 2 3 4 5 6 7 8	<2 >12
	9	SB-9-18-20	1501		8oz	1	2-77	0 2 3 4 5 6 7 8	<2 >12
					2oz	2	VR	0 2 3 4 5 6 7 8	<2 >12
					40ml	3	↓	1 2 3 4 5 6 7 8	<2 >12
					"	4-5	↓	1 2 3 4 5 6 7 8	<2 >12
2	10	SB-9-6W	1625	W	LAC	1-2	166	0 2 3 4 5 6 7 8	<2 >12
"				"	40ml	3-5	VR	1 2 3 4 5 6 7 8	<2 >12
1	11	SB-7-1-3	1635	S	8oz	1	2-77	0 2 3 4 5 6 7 8	<2 >12
					2oz	2	VR	0 2 3 4 5 6 7 8	<2 >12
					40ml	3	↓	1 2 3 4 5 6 7 8	<2 >12
					"	4-5	↓	1 2 3 4 5 6 7 8	<2 >12

PRESERVATIVES: 1: None 2: HCL 3: HNO3 4: H2SO4 5: NAOH 6: DI 7: MeOH 8: Other

LOCATION: 1: Walk-In #1 (Waters) 2: Walk-In #2 (Soils) VR: Volatile Fridge M: Metals SUB: Subcontract EF: Encore Freezer

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T47658: Chain of Custody

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CLIENT: EI Gov. INITIALS: ff

PRESERVATIVES: 1: None 2: HCl 3: HNO3 4: H2SO4 5: NaOH 6: DI 7: MeOH 8: Other
 LOCATION: 1: Walk-In #1 (Waters) 2: Walk-In #2 (Soils) VR: Volatile Fridge M: Metals SUB: Subcontract EF: Encore Freezer
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GC/MS Volatiles

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

Page 1 of 3

Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY2420-MB	Y0037879.D	1	02/16/10	JL	n/a	n/a	VY2420

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-1, T47658-2, T47658-4, T47658-5, T47658-6, T47658-7, T47658-8, T47658-9

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	8.3	ug/kg	
71-43-2	Benzene	ND	5.0	0.70	ug/kg	
108-86-1	Bromobenzene	ND	5.0	0.56	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	0.59	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	0.74	ug/kg	
75-25-2	Bromoform	ND	5.0	0.93	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	0.69	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	0.77	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.0	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	0.56	ug/kg	
75-00-3	Chloroethane	ND	5.0	0.91	ug/kg	
67-66-3	Chloroform	ND	5.0	0.61	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	0.84	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.1	ug/kg	
75-15-0	Carbon disulfide	ND	10	0.56	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	0.64	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	0.91	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	0.77	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	0.66	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.7	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	0.99	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	0.67	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	0.80	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	0.70	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	0.58	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	0.55	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	1.2	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	0.54	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	0.72	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	0.72	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	0.70	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	0.79	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	0.63	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.90	ug/kg	
591-78-6	2-Hexanone	ND	50	6.6	ug/kg	

Method Blank Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY2420-MB	Y0037879.D	1	02/16/10	JL	n/a	n/a	VY2420

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-1, T47658-2, T47658-4, T47658-5, T47658-6, T47658-7, T47658-8, T47658-9

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	ND	5.0	1.1	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	0.70	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	0.90	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	50	5.6	ug/kg	
74-83-9	Methyl bromide	ND	5.0	1.2	ug/kg	
74-87-3	Methyl chloride	ND	5.0	1.1	ug/kg	
74-95-3	Methylene bromide	ND	5.0	0.94	ug/kg	
75-09-2	Methylene chloride	ND	10	2.4	ug/kg	
78-93-3	Methyl ethyl ketone	ND	50	5.8	ug/kg	
91-20-3	Naphthalene	ND	5.0	0.87	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	0.74	ug/kg	
100-42-5	Styrene	ND	5.0	0.77	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	0.42	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	0.69	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	2.0	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.7	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.0	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.85	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.98	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	0.77	ug/kg	
108-88-3	Toluene	ND	5.0	0.95	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.7	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	0.70	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.1	ug/kg	
	m,p-Xylene	ND	10	1.5	ug/kg	
95-47-6	o-Xylene	ND	5.0	0.64	ug/kg	
	TPH-GRO (C6-C10)	ND	200		ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	109% 70-121%
2037-26-5	Toluene-D8	106% 76-132%

Method Blank Summary

Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY2420-MB	Y0037879.D	1	02/16/10	JL	n/a	n/a	VY2420

The QC reported here applies to the following samples: Method: SW846 8260B

T47658-1, T47658-2, T47658-4, T47658-5, T47658-6, T47658-7, T47658-8, T47658-9

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	99% 73-165%
17060-07-0	1,2-Dichloroethane-D4	90% 57-122%

Method Blank Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY2421-MB	Y0037900.D	1	02/17/10	JL	n/a	n/a	VY2421

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-9, T47658-11, T47658-12

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	8.3	ug/kg	
71-43-2	Benzene	ND	5.0	0.70	ug/kg	
108-86-1	Bromobenzene	ND	5.0	0.56	ug/kg	
74-97-5	Bromochloromethane	ND	5.0	0.59	ug/kg	
75-27-4	Bromodichloromethane	ND	5.0	0.74	ug/kg	
75-25-2	Bromoform	ND	5.0	0.93	ug/kg	
104-51-8	n-Butylbenzene	ND	5.0	0.69	ug/kg	
135-98-8	sec-Butylbenzene	ND	5.0	0.77	ug/kg	
98-06-6	tert-Butylbenzene	ND	5.0	1.0	ug/kg	
108-90-7	Chlorobenzene	ND	5.0	0.56	ug/kg	
75-00-3	Chloroethane	ND	5.0	0.91	ug/kg	
67-66-3	Chloroform	ND	5.0	0.61	ug/kg	
95-49-8	o-Chlorotoluene	ND	5.0	0.84	ug/kg	
106-43-4	p-Chlorotoluene	ND	5.0	1.1	ug/kg	
75-15-0	Carbon disulfide	ND	10	0.56	ug/kg	
56-23-5	Carbon tetrachloride	ND	5.0	0.64	ug/kg	
75-34-3	1,1-Dichloroethane	ND	5.0	0.91	ug/kg	
75-35-4	1,1-Dichloroethylene	ND	5.0	0.77	ug/kg	
563-58-6	1,1-Dichloropropene	ND	5.0	0.66	ug/kg	
96-12-8	1,2-Dibromo-3-chloropropane	ND	5.0	2.7	ug/kg	
106-93-4	1,2-Dibromoethane	ND	5.0	0.99	ug/kg	
107-06-2	1,2-Dichloroethane	ND	5.0	0.67	ug/kg	
78-87-5	1,2-Dichloropropane	ND	5.0	0.80	ug/kg	
142-28-9	1,3-Dichloropropane	ND	5.0	0.70	ug/kg	
594-20-7	2,2-Dichloropropane	ND	5.0	0.58	ug/kg	
124-48-1	Dibromochloromethane	ND	5.0	0.55	ug/kg	
75-71-8	Dichlorodifluoromethane	ND	5.0	1.2	ug/kg	
156-59-2	cis-1,2-Dichloroethylene	ND	5.0	1.0	ug/kg	
10061-01-5	cis-1,3-Dichloropropene	ND	5.0	0.54	ug/kg	
541-73-1	m-Dichlorobenzene	ND	5.0	0.72	ug/kg	
95-50-1	o-Dichlorobenzene	ND	5.0	0.72	ug/kg	
106-46-7	p-Dichlorobenzene	ND	5.0	0.70	ug/kg	
156-60-5	trans-1,2-Dichloroethylene	ND	5.0	0.79	ug/kg	
10061-02-6	trans-1,3-Dichloropropene	ND	5.0	0.63	ug/kg	
100-41-4	Ethylbenzene	ND	5.0	0.90	ug/kg	
591-78-6	2-Hexanone	ND	50	6.6	ug/kg	

Method Blank Summary

Page 2 of 3

Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY2421-MB	Y0037900.D	1	02/17/10	JL	n/a	n/a	VY2421

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-9, T47658-11, T47658-12

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	ND	5.0	1.1	ug/kg	
98-82-8	Isopropylbenzene	ND	5.0	0.70	ug/kg	
99-87-6	p-Isopropyltoluene	ND	5.0	0.90	ug/kg	
108-10-1	4-Methyl-2-pentanone	ND	50	5.6	ug/kg	
74-83-9	Methyl bromide	ND	5.0	1.2	ug/kg	
74-87-3	Methyl chloride	ND	5.0	1.1	ug/kg	
74-95-3	Methylene bromide	ND	5.0	0.94	ug/kg	
75-09-2	Methylene chloride	ND	10	2.4	ug/kg	
78-93-3	Methyl ethyl ketone	ND	50	5.8	ug/kg	
91-20-3	Naphthalene	ND	5.0	0.87	ug/kg	
103-65-1	n-Propylbenzene	ND	5.0	0.74	ug/kg	
100-42-5	Styrene	ND	5.0	0.77	ug/kg	
630-20-6	1,1,1,2-Tetrachloroethane	ND	5.0	0.42	ug/kg	
71-55-6	1,1,1-Trichloroethane	ND	5.0	0.69	ug/kg	
79-34-5	1,1,2,2-Tetrachloroethane	ND	5.0	1.3	ug/kg	
79-00-5	1,1,2-Trichloroethane	ND	5.0	2.0	ug/kg	
87-61-6	1,2,3-Trichlorobenzene	ND	5.0	1.0	ug/kg	
96-18-4	1,2,3-Trichloropropane	ND	5.0	1.7	ug/kg	
120-82-1	1,2,4-Trichlorobenzene	ND	5.0	1.0	ug/kg	
95-63-6	1,2,4-Trimethylbenzene	ND	5.0	0.85	ug/kg	
108-67-8	1,3,5-Trimethylbenzene	ND	5.0	0.98	ug/kg	
127-18-4	Tetrachloroethylene	ND	5.0	0.77	ug/kg	
108-88-3	Toluene	ND	5.0	0.95	ug/kg	
79-01-6	Trichloroethylene	ND	5.0	1.7	ug/kg	
75-69-4	Trichlorofluoromethane	ND	5.0	0.70	ug/kg	
75-01-4	Vinyl chloride	ND	5.0	1.0	ug/kg	
1330-20-7	Xylene (total)	ND	15	2.1	ug/kg	
	m,p-Xylene	ND	10	1.5	ug/kg	
95-47-6	o-Xylene	ND	5.0	0.64	ug/kg	
	TPH-GRO (C6-C10)	ND	200		ug/kg	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	109% 70-121%
2037-26-5	Toluene-D8	106% 76-132%

Method Blank Summary

Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY2421-MB	Y0037900.D	1	02/17/10	JL	n/a	n/a	VY2421

The QC reported here applies to the following samples: Method: SW846 8260B
T47658-9, T47658-11, T47658-12

CAS No.	Surrogate Recoveries	Limits
460-00-4	4-Bromofluorobenzene	98% 73-165%
17060-07-0	1,2-Dichloroethane-D4	90% 57-122%

Method Blank Summary

Page 1 of 3

Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ2777-MB	Z006723.D	1	02/19/10	JL	n/a	n/a	VZ2777

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-3

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	4.7	ug/l	
71-43-2	Benzene	ND	2.0	0.50	ug/l	
108-86-1	Bromobenzene	ND	2.0	0.82	ug/l	
74-97-5	Bromochloromethane	ND	2.0	1.6	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	0.49	ug/l	
75-25-2	Bromoform	ND	2.0	1.4	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.63	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	0.52	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	1.3	ug/l	
108-90-7	Chlorobenzene	ND	2.0	0.56	ug/l	
75-00-3	Chloroethane	ND	2.0	0.92	ug/l	
67-66-3	Chloroform	ND	2.0	0.64	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.70	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.56	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	0.66	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	0.52	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.9	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.55	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	0.62	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.62	ug/l	
142-28-9	1,3-Dichloropropane	ND	2.0	0.54	ug/l	
594-20-7	2,2-Dichloropropane	ND	2.0	0.62	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	0.61	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.1	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	0.56	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.48	ug/l	
541-73-1	m-Dichlorobenzene	ND	2.0	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	2.0	0.69	ug/l	
106-46-7	p-Dichlorobenzene	ND	2.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.68	ug/l	
100-41-4	Ethylbenzene	ND	2.0	0.55	ug/l	
591-78-6	2-Hexanone	ND	10	3.2	ug/l	

Method Blank Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ2777-MB	Z006723.D	1	02/19/10	JL	n/a	n/a	VZ2777

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-3

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	ND	2.0	1.3	ug/l	
98-82-8	Isopropylbenzene	ND	2.0	0.51	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.65	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	9.9	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.94	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.84	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.65	ug/l	
75-09-2	Methylene chloride	ND	5.0	0.41	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	3.9	ug/l	
91-20-3	Naphthalene	ND	5.0	0.65	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.57	ug/l	
100-42-5	Styrene	ND	2.0	0.56	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2.0	0.80	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.62	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	1.2	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.98	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	1.1	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	1.3	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.82	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.65	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.70	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	0.91	ug/l	
108-88-3	Toluene	ND	2.0	0.43	ug/l	
79-01-6	Trichloroethylene	ND	2.0	0.52	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	1.2	ug/l	
75-01-4	Vinyl chloride	ND	2.0	1.0	ug/l	
1330-20-7	Xylene (total)	ND	6.0	1.7	ug/l	
	m,p-Xylene	ND	4.0	1.1	ug/l	
95-47-6	o-Xylene	ND	2.0	0.53	ug/l	
	TPH-GRO (C6-C10)	ND	200		ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	112% 79-122%
17060-07-0	1,2-Dichloroethane-D4	109% 75-121%

Method Blank Summary

Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ2777-MB	Z006723.D	1	02/19/10	JL	n/a	n/a	VZ2777

The QC reported here applies to the following samples: Method: SW846 8260B

T47658-3

CAS No.	Surrogate Recoveries	Limits
2037-26-5	Toluene-D8	121% * a 87-119%
460-00-4	4-Bromofluorobenzene	113% 80-133%

(a) Outside control limits biased high. Only ND results were reported for this sample.

Method Blank Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ2779-MB	Z006798.D	1	02/23/10	JL	n/a	n/a	VZ2779

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-10

CAS No.	Compound	Result	RL	MDL	Units	Q
67-64-1	Acetone	ND	50	4.7	ug/l	
71-43-2	Benzene	ND	2.0	0.50	ug/l	
108-86-1	Bromobenzene	ND	2.0	0.82	ug/l	
74-97-5	Bromochloromethane	ND	2.0	1.6	ug/l	
75-27-4	Bromodichloromethane	ND	2.0	0.49	ug/l	
75-25-2	Bromoform	ND	2.0	1.4	ug/l	
104-51-8	n-Butylbenzene	ND	2.0	0.63	ug/l	
135-98-8	sec-Butylbenzene	ND	2.0	0.52	ug/l	
98-06-6	tert-Butylbenzene	ND	2.0	1.3	ug/l	
108-90-7	Chlorobenzene	ND	2.0	0.56	ug/l	
75-00-3	Chloroethane	ND	2.0	0.92	ug/l	
67-66-3	Chloroform	ND	2.0	0.64	ug/l	
95-49-8	o-Chlorotoluene	ND	2.0	0.70	ug/l	
106-43-4	p-Chlorotoluene	ND	2.0	0.56	ug/l	
75-15-0	Carbon disulfide	ND	2.0	0.53	ug/l	
56-23-5	Carbon tetrachloride	ND	2.0	0.66	ug/l	
75-34-3	1,1-Dichloroethane	ND	2.0	0.52	ug/l	
75-35-4	1,1-Dichloroethylene	ND	2.0	0.50	ug/l	
563-58-6	1,1-Dichloropropene	ND	2.0	0.78	ug/l	
96-12-8	1,2-Dibromo-3-chloropropane	ND	2.0	1.9	ug/l	
106-93-4	1,2-Dibromoethane	ND	2.0	0.55	ug/l	
107-06-2	1,2-Dichloroethane	ND	2.0	0.62	ug/l	
78-87-5	1,2-Dichloropropane	ND	2.0	0.62	ug/l	
142-28-9	1,3-Dichloropropane	ND	2.0	0.54	ug/l	
594-20-7	2,2-Dichloropropane	ND	2.0	0.62	ug/l	
124-48-1	Dibromochloromethane	ND	2.0	0.61	ug/l	
75-71-8	Dichlorodifluoromethane	ND	2.0	1.1	ug/l	
156-59-2	cis-1,2-Dichloroethylene	ND	2.0	0.56	ug/l	
10061-01-5	cis-1,3-Dichloropropene	ND	2.0	0.48	ug/l	
541-73-1	m-Dichlorobenzene	ND	2.0	1.0	ug/l	
95-50-1	o-Dichlorobenzene	ND	2.0	0.69	ug/l	
106-46-7	p-Dichlorobenzene	ND	2.0	1.0	ug/l	
156-60-5	trans-1,2-Dichloroethylene	ND	2.0	0.45	ug/l	
10061-02-6	trans-1,3-Dichloropropene	ND	2.0	0.68	ug/l	
100-41-4	Ethylbenzene	ND	2.0	0.55	ug/l	
591-78-6	2-Hexanone	ND	10	3.2	ug/l	

Method Blank Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ2779-MB	Z006798.D	1	02/23/10	JL	n/a	n/a	VZ2779

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-10

CAS No.	Compound	Result	RL	MDL	Units	Q
87-68-3	Hexachlorobutadiene	ND	2.0	1.3	ug/l	
98-82-8	Isopropylbenzene	ND	2.0	0.51	ug/l	
99-87-6	p-Isopropyltoluene	ND	2.0	0.65	ug/l	
108-10-1	4-Methyl-2-pentanone	ND	10	9.9	ug/l	
74-83-9	Methyl bromide	ND	2.0	0.94	ug/l	
74-87-3	Methyl chloride	ND	2.0	0.84	ug/l	
74-95-3	Methylene bromide	ND	2.0	0.65	ug/l	
75-09-2	Methylene chloride	ND	5.0	0.41	ug/l	
78-93-3	Methyl ethyl ketone	ND	10	3.9	ug/l	
91-20-3	Naphthalene	ND	5.0	0.65	ug/l	
103-65-1	n-Propylbenzene	ND	2.0	0.57	ug/l	
100-42-5	Styrene	ND	2.0	0.56	ug/l	
630-20-6	1,1,1,2-Tetrachloroethane	ND	2.0	0.80	ug/l	
71-55-6	1,1,1-Trichloroethane	ND	2.0	0.62	ug/l	
79-34-5	1,1,2,2-Tetrachloroethane	ND	2.0	1.2	ug/l	
79-00-5	1,1,2-Trichloroethane	ND	2.0	0.98	ug/l	
87-61-6	1,2,3-Trichlorobenzene	ND	2.0	1.1	ug/l	
96-18-4	1,2,3-Trichloropropane	ND	2.0	1.3	ug/l	
120-82-1	1,2,4-Trichlorobenzene	ND	2.0	0.82	ug/l	
95-63-6	1,2,4-Trimethylbenzene	ND	2.0	0.65	ug/l	
108-67-8	1,3,5-Trimethylbenzene	ND	2.0	0.70	ug/l	
127-18-4	Tetrachloroethylene	ND	2.0	0.91	ug/l	
108-88-3	Toluene	ND	2.0	0.43	ug/l	
79-01-6	Trichloroethylene	ND	2.0	0.52	ug/l	
75-69-4	Trichlorofluoromethane	ND	2.0	1.2	ug/l	
75-01-4	Vinyl chloride	ND	2.0	1.0	ug/l	
1330-20-7	Xylene (total)	ND	6.0	1.7	ug/l	
	m,p-Xylene	ND	4.0	1.1	ug/l	
95-47-6	o-Xylene	ND	2.0	0.53	ug/l	
	TPH-GRO (C6-C10)	ND	200		ug/l	

CAS No.	Surrogate Recoveries	Limits
1868-53-7	Dibromofluoromethane	110% 79-122%
17060-07-0	1,2-Dichloroethane-D4	118% 75-121%

Method Blank Summary

Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ2779-MB	Z006798.D	1	02/23/10	JL	n/a	n/a	VZ2779

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-10

CAS No.	Surrogate Recoveries	Limits
2037-26-5	Toluene-D8	104% 87-119%
460-00-4	4-Bromofluorobenzene	103% 80-133%

Blank Spike Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY2420-BS	Y0037874.D	1	02/16/10	JL	n/a	n/a	VY2420

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-1, T47658-2, T47658-4, T47658-5, T47658-6, T47658-7, T47658-8, T47658-9

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	194	78	62-133
71-43-2	Benzene	50	40.9	82	70-114
108-86-1	Bromobenzene	50	39.9	80	73-112
74-97-5	Bromochloromethane	50	45.1	90	70-110
75-27-4	Bromodichloromethane	50	40.6	81	71-104
75-25-2	Bromoform	50	43.0	86	72-116
104-51-8	n-Butylbenzene	50	37.2	74	59-112
135-98-8	sec-Butylbenzene	50	39.2	78	65-112
98-06-6	tert-Butylbenzene	50	35.9	72	66-112
108-90-7	Chlorobenzene	50	40.7	81	72-113
75-00-3	Chloroethane	50	45.4	91	51-133
67-66-3	Chloroform	50	40.9	82	74-115
95-49-8	o-Chlorotoluene	50	37.1	74	70-113
106-43-4	p-Chlorotoluene	50	37.1	74	69-114
75-15-0	Carbon disulfide	50	39.3	79	44-112
56-23-5	Carbon tetrachloride	50	40.5	81	62-115
75-34-3	1,1-Dichloroethane	50	40.2	80	72-116
75-35-4	1,1-Dichloroethylene	50	38.3	77	59-122
563-58-6	1,1-Dichloropropene	50	40.9	82	61-111
96-12-8	1,2-Dibromo-3-chloropropane	50	34.9	70	61-121
106-93-4	1,2-Dibromoethane	50	39.3	79	74-114
107-06-2	1,2-Dichloroethane	50	39.7	79	73-109
78-87-5	1,2-Dichloropropane	50	44.1	88	73-111
142-28-9	1,3-Dichloropropane	50	38.4	77	72-112
594-20-7	2,2-Dichloropropane	50	39.5	79	63-118
124-48-1	Dibromochloromethane	50	40.1	80	74-115
75-71-8	Dichlorodifluoromethane	50	46.2	92	27-104
156-59-2	cis-1,2-Dichloroethylene	50	42.5	85	69-110
10061-01-5	cis-1,3-Dichloropropene	50	42.6	85	75-115
541-73-1	m-Dichlorobenzene	50	41.2	82	69-114
95-50-1	o-Dichlorobenzene	50	41.5	83	74-113
106-46-7	p-Dichlorobenzene	50	41.5	83	70-113
156-60-5	trans-1,2-Dichloroethylene	50	39.2	78	66-119
10061-02-6	trans-1,3-Dichloropropene	50	40.7	81	76-122
100-41-4	Ethylbenzene	50	38.4	77	60-119
591-78-6	2-Hexanone	250	180	72	61-131

Blank Spike Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY2420-BS	Y0037874.D	1	02/16/10	JL	n/a	n/a	VY2420

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-1, T47658-2, T47658-4, T47658-5, T47658-6, T47658-7, T47658-8, T47658-9

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
87-68-3	Hexachlorobutadiene	50	41.5	83	53-123
98-82-8	Isopropylbenzene	50	43.1	86	70-114
99-87-6	p-Isopropyltoluene	50	38.9	78	65-113
108-10-1	4-Methyl-2-pentanone	250	208	83	64-128
74-83-9	Methyl bromide	50	43.8	88	64-117
74-87-3	Methyl chloride	50	47.9	96	46-139
74-95-3	Methylene bromide	50	41.0	82	76-115
75-09-2	Methylene chloride	50	45.3	91	66-113
78-93-3	Methyl ethyl ketone	250	189	76	65-129
91-20-3	Naphthalene	50	36.8	74	63-127
103-65-1	n-Propylbenzene	50	37.0	74	58-115
100-42-5	Styrene	50	39.5	79	65-99
630-20-6	1,1,1,2-Tetrachloroethane	50	41.9	84	73-112
71-55-6	1,1,1-Trichloroethane	50	38.9	78	65-118
79-34-5	1,1,2,2-Tetrachloroethane	50	38.7	77	65-121
79-00-5	1,1,2-Trichloroethane	50	38.9	78	73-110
87-61-6	1,2,3-Trichlorobenzene	50	37.8	76	45-142
96-18-4	1,2,3-Trichloropropane	50	37.9	76	68-103
120-82-1	1,2,4-Trichlorobenzene	50	38.3	77	54-125
95-63-6	1,2,4-Trimethylbenzene	50	38.2	76	62-113
108-67-8	1,3,5-Trimethylbenzene	50	37.6	75	62-116
127-18-4	Tetrachloroethylene	50	41.7	83	62-119
108-88-3	Toluene	50	37.6	75	68-115
79-01-6	Trichloroethylene	50	40.6	81	67-113
75-69-4	Trichlorofluoromethane	50	43.5	87	57-113
75-01-4	Vinyl chloride	50	50.2	100	50-106
1330-20-7	Xylene (total)	150	121	81	61-115
	m,p-Xylene	100	81.0	81	60-115
95-47-6	o-Xylene	50	39.7	79	63-114
	TPH-GRO (C6-C10)	1000	909	91	72-150

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	106%	70-121%
2037-26-5	Toluene-D8	104%	76-132%

Blank Spike Summary

Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY2420-BS	Y0037874.D	1	02/16/10	JL	n/a	n/a	VY2420

The QC reported here applies to the following samples: Method: SW846 8260B

T47658-1, T47658-2, T47658-4, T47658-5, T47658-6, T47658-7, T47658-8, T47658-9

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	96%	73-165%
17060-07-0	1,2-Dichloroethane-D4	88%	57-122%

Blank Spike Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY2421-BS	Y0037896.D	1	02/17/10	JL	n/a	n/a	VY2421

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-9, T47658-11, T47658-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
67-64-1	Acetone	250	224	90	62-133
71-43-2	Benzene	50	47.8	96	70-114
108-86-1	Bromobenzene	50	46.7	93	73-112
74-97-5	Bromochloromethane	50	53.9	108	70-110
75-27-4	Bromodichloromethane	50	47.5	95	71-104
75-25-2	Bromoform	50	48.8	98	72-116
104-51-8	n-Butylbenzene	50	40.4	81	59-112
135-98-8	sec-Butylbenzene	50	43.5	87	65-112
98-06-6	tert-Butylbenzene	50	41.0	82	66-112
108-90-7	Chlorobenzene	50	47.4	95	72-113
75-00-3	Chloroethane	50	40.1	80	51-133
67-66-3	Chloroform	50	47.7	95	74-115
95-49-8	o-Chlorotoluene	50	42.8	86	70-113
106-43-4	p-Chlorotoluene	50	42.3	85	69-114
75-15-0	Carbon disulfide	50	47.9	96	44-112
56-23-5	Carbon tetrachloride	50	45.7	91	62-115
75-34-3	1,1-Dichloroethane	50	46.7	93	72-116
75-35-4	1,1-Dichloroethylene	50	45.4	91	59-122
563-58-6	1,1-Dichloropropene	50	47.3	95	61-111
96-12-8	1,2-Dibromo-3-chloropropane	50	39.8	80	61-121
106-93-4	1,2-Dibromoethane	50	46.9	94	74-114
107-06-2	1,2-Dichloroethane	50	47.5	95	73-109
78-87-5	1,2-Dichloropropane	50	51.1	102	73-111
142-28-9	1,3-Dichloropropane	50	44.9	90	72-112
594-20-7	2,2-Dichloropropane	50	45.9	92	63-118
124-48-1	Dibromochloromethane	50	46.5	93	74-115
75-71-8	Dichlorodifluoromethane	50	40.5	81	27-104
156-59-2	cis-1,2-Dichloroethylene	50	49.7	99	69-110
10061-01-5	cis-1,3-Dichloropropene	50	49.9	100	75-115
541-73-1	m-Dichlorobenzene	50	46.3	93	69-114
95-50-1	o-Dichlorobenzene	50	46.6	93	74-113
106-46-7	p-Dichlorobenzene	50	46.2	92	70-113
156-60-5	trans-1,2-Dichloroethylene	50	47.0	94	66-119
10061-02-6	trans-1,3-Dichloropropene	50	47.3	95	76-122
100-41-4	Ethylbenzene	50	43.6	87	60-119
591-78-6	2-Hexanone	250	212	85	61-131

Blank Spike Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY2421-BS	Y0037896.D	1	02/17/10	JL	n/a	n/a	VY2421

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-9, T47658-11, T47658-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
87-68-3	Hexachlorobutadiene	50	43.7	87	53-123
98-82-8	Isopropylbenzene	50	49.6	99	70-114
99-87-6	p-Isopropyltoluene	50	43.1	86	65-113
108-10-1	4-Methyl-2-pentanone	250	253	101	64-128
74-83-9	Methyl bromide	50	39.1	78	64-117
74-87-3	Methyl chloride	50	38.9	78	46-139
74-95-3	Methylene bromide	50	49.0	98	76-115
75-09-2	Methylene chloride	50	51.6	103	66-113
78-93-3	Methyl ethyl ketone	250	227	91	65-129
91-20-3	Naphthalene	50	40.6	81	63-127
103-65-1	n-Propylbenzene	50	42.1	84	58-115
100-42-5	Styrene	50	45.1	90	65-99
630-20-6	1,1,1,2-Tetrachloroethane	50	48.2	96	73-112
71-55-6	1,1,1-Trichloroethane	50	44.5	89	65-118
79-34-5	1,1,2,2-Tetrachloroethane	50	44.6	89	65-121
79-00-5	1,1,2-Trichloroethane	50	45.4	91	73-110
87-61-6	1,2,3-Trichlorobenzene	50	40.6	81	45-142
96-18-4	1,2,3-Trichloropropane	50	36.2	72	68-103
120-82-1	1,2,4-Trichlorobenzene	50	40.7	81	54-125
95-63-6	1,2,4-Trimethylbenzene	50	43.4	87	62-113
108-67-8	1,3,5-Trimethylbenzene	50	43.3	87	62-116
127-18-4	Tetrachloroethylene	50	46.8	94	62-119
108-88-3	Toluene	50	43.6	87	68-115
79-01-6	Trichloroethylene	50	47.2	94	67-113
75-69-4	Trichlorofluoromethane	50	37.8	76	57-113
75-01-4	Vinyl chloride	50	41.2	82	50-106
1330-20-7	Xylene (total)	150	138	92	61-115
	m,p-Xylene	100	92.3	92	60-115
95-47-6	o-Xylene	50	45.6	91	63-114
	TPH-GRO (C6-C10)	1000	992	99	72-150

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	106%	70-121%
2037-26-5	Toluene-D8	103%	76-132%

Blank Spike Summary

Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VY2421-BS	Y0037896.D	1	02/17/10	JL	n/a	n/a	VY2421

The QC reported here applies to the following samples: Method: SW846 8260B

T47658-9, T47658-11, T47658-12

CAS No.	Surrogate Recoveries	BSP	Limits
460-00-4	4-Bromofluorobenzene	98%	73-165%
17060-07-0	1,2-Dichloroethane-D4	89%	57-122%

Blank Spike Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ2777-BS	Z006719.D	1	02/19/10	JL	n/a	n/a	VZ2777

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	110	88	62-124
71-43-2	Benzene	25	27.8	111	76-118
108-86-1	Bromobenzene	25	26.6	106	72-110
74-97-5	Bromochloromethane	25	25.4	102	69-110
75-27-4	Bromodichloromethane	25	25.9	104	68-107
75-25-2	Bromoform	25	21.6	86	64-103
104-51-8	n-Butylbenzene	25	23.8	95	74-114
135-98-8	sec-Butylbenzene	25	24.7	99	76-118
98-06-6	tert-Butylbenzene	25	24.6	98	72-116
108-90-7	Chlorobenzene	25	26.3	105	74-111
75-00-3	Chloroethane	25	22.9	92	75-135
67-66-3	Chloroform	25	26.3	105	75-117
95-49-8	o-Chlorotoluene	25	26.2	105	74-113
106-43-4	p-Chlorotoluene	25	25.5	102	72-114
75-15-0	Carbon disulfide	25	25.7	103	57-126
56-23-5	Carbon tetrachloride	25	27.5	110	75-125
75-34-3	1,1-Dichloroethane	25	27.0	108	76-121
75-35-4	1,1-Dichloroethylene	25	25.6	102	71-128
563-58-6	1,1-Dichloropropene	25	26.8	107	76-122
96-12-8	1,2-Dibromo-3-chloropropane	25	22.2	89	55-121
106-93-4	1,2-Dibromoethane	25	25.3	101	69-106
107-06-2	1,2-Dichloroethane	25	25.2	101	70-111
78-87-5	1,2-Dichloropropane	25	26.6	106	71-113
142-28-9	1,3-Dichloropropane	25	25.0	100	69-106
594-20-7	2,2-Dichloropropane	25	23.5	94	68-130
124-48-1	Dibromochloromethane	25	23.5	94	69-104
75-71-8	Dichlorodifluoromethane	25	20.1	80	28-120
156-59-2	cis-1,2-Dichloroethylene	25	29.3	117* a	68-113
10061-01-5	cis-1,3-Dichloropropene	25	24.1	96	71-111
541-73-1	m-Dichlorobenzene	25	26.6	106	74-110
95-50-1	o-Dichlorobenzene	25	26.1	104	72-108
106-46-7	p-Dichlorobenzene	25	25.4	102	74-110
156-60-5	trans-1,2-Dichloroethylene	25	25.7	103	70-125
10061-02-6	trans-1,3-Dichloropropene	25	24.4	98	75-111
100-41-4	Ethylbenzene	25	27.7	111	75-112
591-78-6	2-Hexanone	125	98.0	78	60-113

Blank Spike Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ2777-BS	Z006719.D	1	02/19/10	JL	n/a	n/a	VZ2777

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-3

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
87-68-3	Hexachlorobutadiene	25	26.9	108	72-123
98-82-8	Isopropylbenzene	25	29.0	116	75-123
99-87-6	p-Isopropyltoluene	25	24.7	99	76-116
108-10-1	4-Methyl-2-pentanone	125	96.1	77	63-115
74-83-9	Methyl bromide	25	21.2	85	59-132
74-87-3	Methyl chloride	25	22.8	91	56-150
74-95-3	Methylene bromide	25	25.8	103	68-114
75-09-2	Methylene chloride	25	25.3	101	70-113
78-93-3	Methyl ethyl ketone	125	103	82	62-117
91-20-3	Naphthalene	25	22.0	88	53-127
103-65-1	n-Propylbenzene	25	25.4	102	74-115
100-42-5	Styrene	25	24.3	97	66-100
630-20-6	1,1,1,2-Tetrachloroethane	25	26.4	106	72-108
71-55-6	1,1,1-Trichloroethane	25	27.4	110	76-125
79-34-5	1,1,2,2-Tetrachloroethane	25	24.1	96	67-110
79-00-5	1,1,2-Trichloroethane	25	24.4	98	69-107
87-61-6	1,2,3-Trichlorobenzene	25	25.4	102	51-128
96-18-4	1,2,3-Trichloropropane	25	19.8	79	55-116
120-82-1	1,2,4-Trichlorobenzene	25	23.7	95	63-114
95-63-6	1,2,4-Trimethylbenzene	25	25.4	102	73-111
108-67-8	1,3,5-Trimethylbenzene	25	25.4	102	74-115
127-18-4	Tetrachloroethylene	25	29.4	118	77-120
108-88-3	Toluene	25	27.9	112	77-114
79-01-6	Trichloroethylene	25	25.8	103	74-117
75-69-4	Trichlorofluoromethane	25	20.0	80	64-132
75-01-4	Vinyl chloride	25	24.8	99	64-121
1330-20-7	Xylene (total)	75	76.0	101	75-111
	m,p-Xylene	50	50.8	102	75-112
95-47-6	o-Xylene	25	25.2	101	74-110
	TPH-GRO (C6-C10)	1000	771	77	52-134

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	106%	79-122%
17060-07-0	1,2-Dichloroethane-D4	103%	75-121%

Blank Spike Summary

Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ2777-BS	Z006719.D	1	02/19/10	JL	n/a	n/a	VZ2777

The QC reported here applies to the following samples: Method: SW846 8260B

T47658-3

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	117%	87-119%
460-00-4	4-Bromofluorobenzene	116%	80-133%

(a) Outside control limits biased high. Only ND results for this compound are reported for all the samples associated with this BS.

Blank Spike Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ2779-BS	Z006794.D	1	02/23/10	JL	n/a	n/a	VZ2779

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
67-64-1	Acetone	125	119	95	62-124
71-43-2	Benzene	25	24.3	97	76-118
108-86-1	Bromobenzene	25	22.1	88	72-110
74-97-5	Bromochloromethane	25	26.1	104	69-110
75-27-4	Bromodichloromethane	25	24.7	99	68-107
75-25-2	Bromoform	25	21.3	85	64-103
104-51-8	n-Butylbenzene	25	21.2	85	74-114
135-98-8	sec-Butylbenzene	25	22.7	91	76-118
98-06-6	tert-Butylbenzene	25	22.8	91	72-116
108-90-7	Chlorobenzene	25	22.0	88	74-111
75-00-3	Chloroethane	25	26.3	105	75-135
67-66-3	Chloroform	25	24.4	98	75-117
95-49-8	o-Chlorotoluene	25	22.1	88	74-113
106-43-4	p-Chlorotoluene	25	21.8	87	72-114
75-15-0	Carbon disulfide	25	24.6	98	57-126
56-23-5	Carbon tetrachloride	25	25.3	101	75-125
75-34-3	1,1-Dichloroethane	25	24.3	97	76-121
75-35-4	1,1-Dichloroethylene	25	25.8	103	71-128
563-58-6	1,1-Dichloropropene	25	25.7	103	76-122
96-12-8	1,2-Dibromo-3-chloropropane	25	23.5	94	55-121
106-93-4	1,2-Dibromoethane	25	24.1	96	69-106
107-06-2	1,2-Dichloroethane	25	25.2	101	70-111
78-87-5	1,2-Dichloropropane	25	25.3	101	71-113
142-28-9	1,3-Dichloropropane	25	24.0	96	69-106
594-20-7	2,2-Dichloropropane	25	20.2	81	68-130
124-48-1	Dibromochloromethane	25	22.2	89	69-104
75-71-8	Dichlorodifluoromethane	25	21.2	85	28-120
156-59-2	cis-1,2-Dichloroethylene	25	27.4	110	68-113
10061-01-5	cis-1,3-Dichloropropene	25	26.8	107	71-111
541-73-1	m-Dichlorobenzene	25	21.4	86	74-110
95-50-1	o-Dichlorobenzene	25	21.7	87	72-108
106-46-7	p-Dichlorobenzene	25	22.7	91	74-110
156-60-5	trans-1,2-Dichloroethylene	25	25.4	102	70-125
10061-02-6	trans-1,3-Dichloropropene	25	24.5	98	75-111
100-41-4	Ethylbenzene	25	22.7	91	75-112
591-78-6	2-Hexanone	125	105	84	60-113

Blank Spike Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ2779-BS	Z006794.D	1	02/23/10	JL	n/a	n/a	VZ2779

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
87-68-3	Hexachlorobutadiene	25	21.9	88	72-123
98-82-8	Isopropylbenzene	25	26.4	106	75-123
99-87-6	p-Isopropyltoluene	25	22.5	90	76-116
108-10-1	4-Methyl-2-pentanone	125	117	94	63-115
74-83-9	Methyl bromide	25	24.4	98	59-132
74-87-3	Methyl chloride	25	23.9	96	56-150
74-95-3	Methylene bromide	25	26.3	105	68-114
75-09-2	Methylene chloride	25	25.0	100	70-113
78-93-3	Methyl ethyl ketone	125	119	95	62-117
91-20-3	Naphthalene	25	23.4	94	53-127
103-65-1	n-Propylbenzene	25	22.8	91	74-115
100-42-5	Styrene	25	23.5	94	66-100
630-20-6	1,1,1,2-Tetrachloroethane	25	22.3	89	72-108
71-55-6	1,1,1-Trichloroethane	25	24.8	99	76-125
79-34-5	1,1,2,2-Tetrachloroethane	25	24.9	100	67-110
79-00-5	1,1,2-Trichloroethane	25	22.7	91	69-107
87-61-6	1,2,3-Trichlorobenzene	25	23.3	93	51-128
96-18-4	1,2,3-Trichloropropane	25	22.6	90	55-116
120-82-1	1,2,4-Trichlorobenzene	25	22.1	88	63-114
95-63-6	1,2,4-Trimethylbenzene	25	22.2	89	73-111
108-67-8	1,3,5-Trimethylbenzene	25	22.2	89	74-115
127-18-4	Tetrachloroethylene	25	23.9	96	77-120
108-88-3	Toluene	25	22.1	88	77-114
79-01-6	Trichloroethylene	25	24.5	98	74-117
75-69-4	Trichlorofluoromethane	25	21.8	87	64-132
75-01-4	Vinyl chloride	25	27.9	112	64-121
1330-20-7	Xylene (total)	75	70.2	94	75-111
	m,p-Xylene	50	46.6	93	75-112
95-47-6	o-Xylene	25	23.6	94	74-110
	TPH-GRO (C6-C10)	1000	800	80	52-134

CAS No.	Surrogate Recoveries	BSP	Limits
1868-53-7	Dibromofluoromethane	108%	79-122%
17060-07-0	1,2-Dichloroethane-D4	110%	75-121%

Blank Spike Summary

Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
VZ2779-BS	Z006794.D	1	02/23/10	JL	n/a	n/a	VZ2779

The QC reported here applies to the following samples: Method: SW846 8260B

T47658-10

CAS No.	Surrogate Recoveries	BSP	Limits
2037-26-5	Toluene-D8	101%	87-119%
460-00-4	4-Bromofluorobenzene	104%	80-133%

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T47658-4MS	Y0037883.D	1	02/16/10	JL	n/a	n/a	VY2420
T47658-4MSD	Y0037884.D	1	02/16/10	JL	n/a	n/a	VY2420
T47658-4	Y0037882.D	1	02/16/10	JL	n/a	n/a	VY2420

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-1, T47658-2, T47658-4, T47658-5, T47658-6, T47658-7, T47658-8, T47658-9

CAS No.	Compound	T47658-4 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		259	205	79	246	89	18	62-133/34
71-43-2	Benzene	1.7	J	51.9	39.2	72	41.8	72	6	70-114/38
108-86-1	Bromobenzene	ND		51.9	48.7	94	46.1	83	5	73-112/36
74-97-5	Bromochloromethane	ND		51.9	41.7	80	45.1	81	8	70-110/34
75-27-4	Bromodichloromethane	ND		51.9	36.5	70*	38.6	69*	6	71-104/35
75-25-2	Bromoform	ND		51.9	33.9	65*	35.8	64*	5	72-116/34
104-51-8	n-Butylbenzene	ND		51.9	34.8	67	33.5	60	4	59-112/40
135-98-8	sec-Butylbenzene	ND		51.9	52.6	101	52.1	94	1	65-112/38
98-06-6	tert-Butylbenzene	ND		51.9	57.9	112	57.5	104	1	66-112/38
108-90-7	Chlorobenzene	ND		51.9	35.9	69*	36.1	65*	1	72-113/37
75-00-3	Chloroethane	ND		51.9	48.6	94	50.6	91	4	51-133/36
67-66-3	Chloroform	ND		51.9	40.3	78	43.0	77	6	74-115/35
95-49-8	o-Chlorotoluene	ND		51.9	53.9	104	50.7	91	6	70-113/38
106-43-4	p-Chlorotoluene	ND		51.9	43.8	84	41.5	75	5	69-114/37
75-15-0	Carbon disulfide	ND		51.9	39.5	76	42.5	77	7	44-112/39
56-23-5	Carbon tetrachloride	ND		51.9	39.6	76	42.4	76	7	62-115/38
75-34-3	1,1-Dichloroethane	ND		51.9	41.9	81	44.8	81	7	72-116/37
75-35-4	1,1-Dichloroethylene	ND		51.9	40.5	78	43.7	79	8	59-122/38
563-58-6	1,1-Dichloropropene	ND		51.9	37.1	71	39.6	71	7	61-111/38
96-12-8	1,2-Dibromo-3-chloropropane	ND		51.9	33.8	65	40.0	72	17	61-121/40
106-93-4	1,2-Dibromoethane	ND		51.9	35.6	69*	37.3	67*	5	74-114/33
107-06-2	1,2-Dichloroethane	ND		51.9	36.1	70*	39.5	71*	9	73-109/33
78-87-5	1,2-Dichloropropane	ND		51.9	41.5	80	44.2	80	6	73-111/35
142-28-9	1,3-Dichloropropane	ND		51.9	39.0	75	40.4	73	4	72-112/33
594-20-7	2,2-Dichloropropane	ND		51.9	42.7	82	45.3	82	6	63-118/37
124-48-1	Dibromochloromethane	ND		51.9	38.8	75	40.2	72*	4	74-115/34
75-71-8	Dichlorodifluoromethane	ND		51.9	45.4	87	47.2	85	4	27-104/37
156-59-2	cis-1,2-Dichloroethylene	ND		51.9	39.6	76	42.1	76	6	69-110/36
10061-01-5	cis-1,3-Dichloropropene	ND		51.9	33.0	64*	35.5	64*	7	75-115/36
541-73-1	m-Dichlorobenzene	ND		51.9	38.0	73	37.1	67*	2	69-114/37
95-50-1	o-Dichlorobenzene	ND		51.9	36.0	69*	35.6	64*	1	74-113/38
106-46-7	p-Dichlorobenzene	ND		51.9	35.9	69*	34.2	62*	5	70-113/37
156-60-5	trans-1,2-Dichloroethylene	ND		51.9	37.0	71	38.7	70	4	66-119/38
10061-02-6	trans-1,3-Dichloropropene	ND		51.9	35.3	68*	35.8	64*	1	76-122/34
100-41-4	Ethylbenzene	ND		51.9	38.2	74	38.4	69	1	60-119/40
591-78-6	2-Hexanone	ND		259	159	61	194	70	20	61-131/37

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T47658-4MS	Y0037883.D	1	02/16/10	JL	n/a	n/a	VY2420
T47658-4MSD	Y0037884.D	1	02/16/10	JL	n/a	n/a	VY2420
T47658-4	Y0037882.D	1	02/16/10	JL	n/a	n/a	VY2420

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-1, T47658-2, T47658-4, T47658-5, T47658-6, T47658-7, T47658-8, T47658-9

CAS No.	Compound	T47658-4 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	ND		51.9	27.2	52*	25.5	46*	6	53-123/43
98-82-8	Isopropylbenzene	ND		51.9	74.9	144*	71.5	129*	5	70-114/38
99-87-6	p-Isopropyltoluene	ND		51.9	48.8	94	48.0	86	2	65-113/40
108-10-1	4-Methyl-2-pentanone	ND		259	172	66	208	75	19	64-128/37
74-83-9	Methyl bromide	ND		51.9	42.7	82	45.5	82	6	64-117/36
74-87-3	Methyl chloride	ND		51.9	45.8	88	49.6	89	8	46-139/33
74-95-3	Methylene bromide	ND		51.9	33.6	65*	36.9	66*	9	76-115/35
75-09-2	Methylene chloride	ND		51.9	42.4	82	47.5	86	11	66-113/34
78-93-3	Methyl ethyl ketone	ND		259	176	68	216	78	20	65-129/36
91-20-3	Naphthalene	ND		51.9	12.7	24*	13.6	24*	7	63-127/36
103-65-1	n-Propylbenzene	ND		51.9	53.9	104	51.1	92	5	58-115/40
100-42-5	Styrene	ND		51.9	28.7	55*	29.1	52*	1	65-99/38
630-20-6	1,1,1,2-Tetrachloroethane	ND		51.9	45.8	88	47.0	85	3	73-112/36
71-55-6	1,1,1-Trichloroethane	ND		51.9	39.8	77	42.9	77	7	65-118/38
79-34-5	1,1,2,2-Tetrachloroethane	ND		51.9	58.6	113	60.5	109	3	65-121/37
79-00-5	1,1,2-Trichloroethane	ND		51.9	40.3	78	43.2	78	7	73-110/34
87-61-6	1,2,3-Trichlorobenzene	ND		51.9	13.4	26*	12.8	23*	5	45-142/37
96-18-4	1,2,3-Trichloropropane	ND		51.9	50.1	97	50.1	90	0	68-103/38
120-82-1	1,2,4-Trichlorobenzene	ND		51.9	14.2	27*	14.9	27*	5	54-125/37
95-63-6	1,2,4-Trimethylbenzene	ND		51.9	51.4	99	49.6	89	4	62-113/41
108-67-8	1,3,5-Trimethylbenzene	ND		51.9	56.3	108	54.8	99	3	62-116/39
127-18-4	Tetrachloroethylene	ND		51.9	43.6	84	44.8	81	3	62-119/40
108-88-3	Toluene	ND		51.9	42.0	81	42.4	76	1	68-115/38
79-01-6	Trichloroethylene	ND		51.9	35.1	68	37.5	68	7	67-113/39
75-69-4	Trichlorofluoromethane	ND		51.9	42.6	82	45.9	83	7	57-113/33
75-01-4	Vinyl chloride	ND		51.9	50.5	97	52.9	95	5	50-106/33
1330-20-7	Xylene (total)	ND		156	115	74	117	70	2	61-115/39
	m,p-Xylene	ND		104	76.5	74	78.1	70	2	60-115/40
95-47-6	o-Xylene	ND		51.9	38.7	75	39.3	71	2	63-114/37

CAS No.	Surrogate Recoveries	MS	MSD	T47658-4	Limits
1868-53-7	Dibromofluoromethane	106%	107%	122% * a	70-121%
2037-26-5	Toluene-D8	126%	122%	142% * a	76-132%
460-00-4	4-Bromofluorobenzene	134%	130%	135%	73-165%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T47658-4MS	Y0037883.D	1	02/16/10	JL	n/a	n/a	VY2420
T47658-4MSD	Y0037884.D	1	02/16/10	JL	n/a	n/a	VY2420
T47658-4	Y0037882.D	1	02/16/10	JL	n/a	n/a	VY2420

The QC reported here applies to the following samples: Method: SW846 8260B

T47658-1, T47658-2, T47658-4, T47658-5, T47658-6, T47658-7, T47658-8, T47658-9

CAS No.	Surrogate Recoveries	MS	MSD	T47658-4	Limits
17060-07-0	1,2-Dichloroethane-D4	85%	87%	102%	57-122%

(a) Outside control limits due to matrix interference. Confirmed by MS/MSD.

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T47737-1MS	Y0037906.D	1	02/17/10	JL	n/a	n/a	VY2421
T47737-1MSD	Y0037907.D	1	02/17/10	JL	n/a	n/a	VY2421
T47737-1	Y0037905.D	1	02/17/10	JL	n/a	n/a	VY2421

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-9, T47658-11, T47658-12

CAS No.	Compound	T47737-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	28.8	J	276	293	96	790	170*	92*	62-133/34
71-43-2	Benzene	2.7	J	55.1	42.3	72	63.0	67*	39*	70-114/38
108-86-1	Bromobenzene	ND		55.1	44.9	81	58.9	66*	27	73-112/36
74-97-5	Bromochloromethane	ND		55.1	48.8	89	71.8	80	38*	70-110/34
75-27-4	Bromodichloromethane	ND		55.1	41.4	75	61.8	69*	40*	71-104/35
75-25-2	Bromoform	ND		55.1	44.4	81	70.9	79	46*	72-116/34
104-51-8	n-Butylbenzene	ND		55.1	40.4	73	60.3	67	40	59-112/40
135-98-8	sec-Butylbenzene	ND		55.1	47.2	86	66.3	74	34	65-112/38
98-06-6	tert-Butylbenzene	ND		55.1	43.1	78	58.5	65*	30	66-112/38
108-90-7	Chlorobenzene	ND		55.1	41.0	74	57.9	65*	34	72-113/37
75-00-3	Chloroethane	ND		55.1	43.7	79	69.7	78	46*	51-133/36
67-66-3	Chloroform	ND		55.1	41.0	74	61.3	68*	40*	74-115/35
95-49-8	o-Chlorotoluene	ND		55.1	44.1	80	56.2	63*	24	70-113/38
106-43-4	p-Chlorotoluene	ND		55.1	42.0	76	52.7	59*	23	69-114/37
75-15-0	Carbon disulfide	ND		55.1	40.2	73	64.0	71	46*	44-112/39
56-23-5	Carbon tetrachloride	ND		55.1	40.6	74	64.1	72	45*	62-115/38
75-34-3	1,1-Dichloroethane	ND		55.1	39.9	72	61.8	69*	43*	72-116/37
75-35-4	1,1-Dichloroethylene	ND		55.1	36.5	66	60.0	67	49*	59-122/38
563-58-6	1,1-Dichloropropene	ND		55.1	42.0	76	64.5	72	42*	61-111/38
96-12-8	1,2-Dibromo-3-chloropropane	ND		55.1	39.6	72	71.1	79	57*	61-121/40
106-93-4	1,2-Dibromoethane	ND		55.1	44.7	81	68.3	76	42*	74-114/33
107-06-2	1,2-Dichloroethane	ND		55.1	43.0	78	65.6	73	42*	73-109/33
78-87-5	1,2-Dichloropropane	ND		55.1	44.1	80	66.8	75	41*	73-111/35
142-28-9	1,3-Dichloropropane	ND		55.1	42.2	77	62.8	70*	39*	72-112/33
594-20-7	2,2-Dichloropropane	ND		55.1	40.7	74	63.3	71	43*	63-118/37
124-48-1	Dibromochloromethane	ND		55.1	42.4	77	62.0	69*	38*	74-115/34
75-71-8	Dichlorodifluoromethane	ND		55.1	45.6	83	81.4	91	56*	27-104/37
156-59-2	cis-1,2-Dichloroethylene	ND		55.1	42.3	77	63.7	71	40*	69-110/36
10061-01-5	cis-1,3-Dichloropropene	ND		55.1	42.7	77	64.0	71*	40*	75-115/36
541-73-1	m-Dichlorobenzene	ND		55.1	41.9	76	56.3	63*	29	69-114/37
95-50-1	o-Dichlorobenzene	ND		55.1	40.0	73*	54.8	61*	31	74-113/38
106-46-7	p-Dichlorobenzene	ND		55.1	41.8	76	55.2	62*	28	70-113/37
156-60-5	trans-1,2-Dichloroethylene	ND		55.1	40.8	74	61.0	68	40*	66-119/38
10061-02-6	trans-1,3-Dichloropropene	ND		55.1	43.0	78	61.8	69*	36*	76-122/34
100-41-4	Ethylbenzene	2.2	J	55.1	40.6	70	58.7	63	36	60-119/40
591-78-6	2-Hexanone	ND		276	229	83	458	102	67*	61-131/37

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T47737-1MS	Y0037906.D	1	02/17/10	JL	n/a	n/a	VY2421
T47737-1MSD	Y0037907.D	1	02/17/10	JL	n/a	n/a	VY2421
T47737-1	Y0037905.D	1	02/17/10	JL	n/a	n/a	VY2421

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-9, T47658-11, T47658-12

CAS No.	Compound	T47737-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	ND		55.1	33.4	61	60.2	67	57*	53-123/43
98-82-8	Isopropylbenzene	ND		55.1	53.2	96	68.6	77	25	70-114/38
99-87-6	p-Isopropyltoluene	ND		55.1	45.7	83	63.7	71	33	65-113/40
108-10-1	4-Methyl-2-pentanone	ND		276	276	100	517	115	61*	64-128/37
74-83-9	Methyl bromide	ND		55.1	35.8	65	55.7	62*	43*	64-117/36
74-87-3	Methyl chloride	ND		55.1	38.7	70	63.6	71	49*	46-139/33
74-95-3	Methylene bromide	ND		55.1	45.4	82	71.2	79	44*	76-115/35
75-09-2	Methylene chloride	ND		55.1	39.9	72	59.9	67	40*	66-113/34
78-93-3	Methyl ethyl ketone	ND		276	260	94	627	140*	83*	65-129/36
91-20-3	Naphthalene	ND		55.1	17.4	32*	39.9	45*	79*	63-127/36
103-65-1	n-Propylbenzene	ND		55.1	45.7	83	60.3	67	28	58-115/40
100-42-5	Styrene	ND		55.1	36.1	65	52.9	59*	38	65-99/38
630-20-6	1,1,1,2-Tetrachloroethane	ND		55.1	42.6	77	60.9	68*	35	73-112/36
71-55-6	1,1,1-Trichloroethane	ND		55.1	38.6	70	59.4	66	42*	65-118/38
79-34-5	1,1,2,2-Tetrachloroethane	ND		55.1	50.0	91	71.2	79	35	65-121/37
79-00-5	1,1,2-Trichloroethane	ND		55.1	42.6	77	64.3	72*	41*	73-110/34
87-61-6	1,2,3-Trichlorobenzene	ND		55.1	17.8	32*	37.5	42*	71*	45-142/37
96-18-4	1,2,3-Trichloropropane	ND		55.1	41.3	75	59.5	66*	36	68-103/38
120-82-1	1,2,4-Trichlorobenzene	ND		55.1	20.9	38*	39.7	44*	62*	54-125/37
95-63-6	1,2,4-Trimethylbenzene	2.0	J	55.1	45.9	80	60.1	65	27	62-113/41
108-67-8	1,3,5-Trimethylbenzene	ND		55.1	46.3	84	60.5	67	27	62-116/39
127-18-4	Tetrachloroethylene	ND		55.1	43.7	79	63.5	71	37	62-119/40
108-88-3	Toluene	6.4		55.1	41.5	64*	60.4	60*	37	68-115/38
79-01-6	Trichloroethylene	ND		55.1	40.4	73	60.7	68	40*	67-113/39
75-69-4	Trichlorofluoromethane	ND		55.1	41.9	76	71.5	80	52*	57-113/33
75-01-4	Vinyl chloride	ND		55.1	45.0	82	76.7	86	52*	50-106/33
1330-20-7	Xylene (total)	4.4	J	165	127	74	179	65	34	61-115/39
	m,p-Xylene	4.4	J	110	85.3	73	121	65	35	60-115/40
95-47-6	o-Xylene	ND		55.1	41.2	75	57.7	64	33	63-114/37

CAS No.	Surrogate Recoveries	MS	MSD	T47737-1	Limits
1868-53-7	Dibromofluoromethane	106%	109%	104%	70-121%
2037-26-5	Toluene-D8	106%	105%	104%	76-132%
460-00-4	4-Bromofluorobenzene	106%	102%	106%	73-165%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T47737-1MS	Y0037906.D	1	02/17/10	JL	n/a	n/a	VY2421
T47737-1MSD	Y0037907.D	1	02/17/10	JL	n/a	n/a	VY2421
T47737-1	Y0037905.D	1	02/17/10	JL	n/a	n/a	VY2421

The QC reported here applies to the following samples: Method: SW846 8260B

T47658-9, T47658-11, T47658-12

CAS No.	Surrogate Recoveries	MS	MSD	T47737-1	Limits
17060-07-0	1,2-Dichloroethane-D4	92%	96%	88%	57-122%

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T47658-3MS	Z006726.D	1	02/19/10	JL	n/a	n/a	VZ2777
T47658-3MSD	Z006727.D	1	02/19/10	JL	n/a	n/a	VZ2777
T47658-3	Z006725.D	1	02/19/10	JL	n/a	n/a	VZ2777

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-3

CAS No.	Compound	T47658-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND		125	167	134*	156	125*	7	62-124/21
71-43-2	Benzene	ND		25	29.1	116	28.4	114	2	76-118/16
108-86-1	Bromobenzene	ND		25	27.2	109	27.2	109	0	72-110/12
74-97-5	Bromochloromethane	ND		25	27.4	110	26.6	106	3	69-110/12
75-27-4	Bromodichloromethane	ND		25	19.1	76	18.8	75	2	68-107/12
75-25-2	Bromoform	ND		25	23.3	93	22.9	92	2	64-103/14
104-51-8	n-Butylbenzene	ND		25	24.3	97	23.0	92	5	74-114/12
135-98-8	sec-Butylbenzene	ND		25	25.0	100	24.2	97	3	76-118/12
98-06-6	tert-Butylbenzene	ND		25	24.3	97	24.2	97	0	72-116/14
108-90-7	Chlorobenzene	ND		25	26.8	107	26.6	106	1	74-111/11
75-00-3	Chloroethane	ND		25	24.0	96	23.2	93	3	75-135/15
67-66-3	Chloroform	ND		25	27.0	108	26.1	104	3	75-117/12
95-49-8	o-Chlorotoluene	ND		25	26.6	106	25.9	104	3	74-113/12
106-43-4	p-Chlorotoluene	ND		25	25.9	104	25.4	102	2	72-114/12
75-15-0	Carbon disulfide	ND		25	15.7	63	14.7	59	7	57-126/13
56-23-5	Carbon tetrachloride	ND		25	29.4	118	28.1	112	5	75-125/12
75-34-3	1,1-Dichloroethane	ND		25	28.9	116	27.6	110	5	76-121/13
75-35-4	1,1-Dichloroethylene	ND		25	42.9	172*	41.7	167*	3	71-128/19
563-58-6	1,1-Dichloropropene	ND		25	29.0	116	27.6	110	5	76-122/12
96-12-8	1,2-Dibromo-3-chloropropane	ND		25	12.1	48*	11.1	44*	9	55-121/33
106-93-4	1,2-Dibromoethane	ND		25	28.6	114*	28.1	112*	2	69-106/13
107-06-2	1,2-Dichloroethane	ND		25	27.2	109	26.5	106	3	70-111/14
78-87-5	1,2-Dichloropropane	ND		25	28.1	112	27.7	111	1	71-113/12
142-28-9	1,3-Dichloropropane	ND		25	27.7	111*	27.4	110*	1	69-106/12
594-20-7	2,2-Dichloropropane	ND		25	21.4	86	20.3	81	5	68-130/14
124-48-1	Dibromochloromethane	ND		25	20.7	83	20.4	82	1	69-104/12
75-71-8	Dichlorodifluoromethane	ND		25	22.0	88	20.4	82	8	28-120/21
156-59-2	cis-1,2-Dichloroethylene	ND		25	31.4	126*	30.6	122*	3	68-113/13
10061-01-5	cis-1,3-Dichloropropene	ND		25	22.8	91	22.3	89	2	71-111/12
541-73-1	m-Dichlorobenzene	ND		25	26.7	107	26.5	106	1	74-110/12
95-50-1	o-Dichlorobenzene	ND		25	27.0	108	27.2	109*	1	72-108/12
106-46-7	p-Dichlorobenzene	ND		25	25.6	102	24.8	99	3	74-110/12
156-60-5	trans-1,2-Dichloroethylene	ND		25	28.4	114	26.4	106	7	70-125/14
10061-02-6	trans-1,3-Dichloropropene	ND		25	22.7	91	22.4	90	1	75-111/12
100-41-4	Ethylbenzene	ND		25	28.8	115*	27.6	110	4	75-112/12
591-78-6	2-Hexanone	ND		125	165	132*	152	122*	8	60-113/18

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T47658-3MS	Z006726.D	1	02/19/10	JL	n/a	n/a	VZ2777
T47658-3MSD	Z006727.D	1	02/19/10	JL	n/a	n/a	VZ2777
T47658-3	Z006725.D	1	02/19/10	JL	n/a	n/a	VZ2777

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-3

CAS No.	Compound	T47658-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	ND		25	28.3	113	27.5	110	3	72-123/17
98-82-8	Isopropylbenzene	ND		25	29.7	119	29.0	116	2	75-123/12
99-87-6	p-Isopropyltoluene	ND		25	25.0	100	24.2	97	3	76-116/12
108-10-1	4-Methyl-2-pentanone	ND		125	159	127*	149	119*	6	63-115/21
74-83-9	Methyl bromide	ND		25	15.0	60	13.9	56*	8	59-132/15
74-87-3	Methyl chloride	ND		25	21.9	88	20.6	82	6	56-150/17
74-95-3	Methylene bromide	ND		25	28.9	116*	28.0	112	3	68-114/13
75-09-2	Methylene chloride	ND		25	25.6	102	25.3	101	1	70-113/13
78-93-3	Methyl ethyl ketone	ND		125	152	122*	142	114	7	62-117/21
91-20-3	Naphthalene	ND		25	28.0	112	27.0	108	4	53-127/34
103-65-1	n-Propylbenzene	ND		25	26.0	104	24.8	99	5	74-115/12
100-42-5	Styrene	ND		25	25.1	100	24.5	98	2	66-100/11
630-20-6	1,1,1,2-Tetrachloroethane	ND		25	22.5	90	21.7	87	4	72-108/11
71-55-6	1,1,1-Trichloroethane	ND		25	28.9	116	28.1	112	3	76-125/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		25	ND	0*	ND	0*	nc	67-110/20
79-00-5	1,1,2-Trichloroethane	ND		25	7.9	32*	7.3	29*	8	69-107/14
87-61-6	1,2,3-Trichlorobenzene	ND		25	27.9	112	27.3	109	2	51-128/31
96-18-4	1,2,3-Trichloropropane	ND		25	22.9	92	22.0	88	4	55-116/27
120-82-1	1,2,4-Trichlorobenzene	ND		25	24.7	99	24.3	97	2	63-114/21
95-63-6	1,2,4-Trimethylbenzene	ND		25	25.5	102	24.9	100	2	73-111/13
108-67-8	1,3,5-Trimethylbenzene	ND		25	25.5	102	24.9	100	2	74-115/12
127-18-4	Tetrachloroethylene	ND		25	53.6	214*	51.1	204*	5	77-120/13
108-88-3	Toluene	ND		25	29.1	116*	28.8	115*	1	77-114/12
79-01-6	Trichloroethylene	ND		25	53.3	213*	51.3	205*	4	74-117/12
75-69-4	Trichlorofluoromethane	ND		25	22.3	89	20.0	80	11	64-132/18
75-01-4	Vinyl chloride	ND		25	24.8	99	24.5	98	1	64-121/19
1330-20-7	Xylene (total)	ND		75	80.0	107	78.3	104	2	75-111/12
	m,p-Xylene	ND		50	53.8	108	52.7	105	2	75-112/12
95-47-6	o-Xylene	ND		25	26.1	104	25.6	102	2	74-110/11

CAS No.	Surrogate Recoveries	MS	MSD	T47658-3	Limits
1868-53-7	Dibromofluoromethane	92%	92%	96%	79-122%
17060-07-0	1,2-Dichloroethane-D4	107%	105%	109%	75-121%
2037-26-5	Toluene-D8	116%	115%	117%	87-119%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T47658-3MS	Z006726.D	1	02/19/10	JL	n/a	n/a	VZ2777
T47658-3MSD	Z006727.D	1	02/19/10	JL	n/a	n/a	VZ2777
T47658-3	Z006725.D	1	02/19/10	JL	n/a	n/a	VZ2777

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-3

CAS No.	Surrogate Recoveries	MS	MSD	T47658-3	Limits
460-00-4	4-Bromofluorobenzene	116%	115%	110%	80-133%

Matrix Spike/Matrix Spike Duplicate Summary

Page 1 of 3

Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T47520-1MS	Z006800.D	25	02/24/10	JL	n/a	n/a	VZ2779
T47520-1MSD	Z006801.D	25	02/24/10	JL	n/a	n/a	VZ2779
T47520-1	Z006799.D	25	02/24/10	JL	n/a	n/a	VZ2779

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-10

CAS No.	Compound	T47520-1 ug/l	Spike Q ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
67-64-1	Acetone	ND	3130	2810	90	2820	90	0	62-124/21
71-43-2	Benzene	553	625	1140	94	1120	91	2	76-118/16
108-86-1	Bromobenzene	ND	625	541	87	540	86	0	72-110/12
74-97-5	Bromochloromethane	ND	625	640	102	638	102	0	69-110/12
75-27-4	Bromodichloromethane	ND	625	596	95	584	93	2	68-107/12
75-25-2	Bromoform	ND	625	517	83	518	83	0	64-103/14
104-51-8	n-Butylbenzene	ND	625	533	85	528	84	1	74-114/12
135-98-8	sec-Butylbenzene	ND	625	555	89	563	90	1	76-118/12
98-06-6	tert-Butylbenzene	ND	625	556	89	555	89	0	72-116/14
108-90-7	Chlorobenzene	ND	625	542	87	545	87	1	74-111/11
75-00-3	Chloroethane	ND	625	571	91	548	88	4	75-135/15
67-66-3	Chloroform	ND	625	607	97	594	95	2	75-117/12
95-49-8	o-Chlorotoluene	ND	625	550	88	549	88	0	74-113/12
106-43-4	p-Chlorotoluene	ND	625	535	86	539	86	1	72-114/12
75-15-0	Carbon disulfide	ND	625	615	98	574	92	7	57-126/13
56-23-5	Carbon tetrachloride	ND	625	627	100	595	95	5	75-125/12
75-34-3	1,1-Dichloroethane	ND	625	611	98	598	96	2	76-121/13
75-35-4	1,1-Dichloroethylene	ND	625	648	104	600	96	8	71-128/19
563-58-6	1,1-Dichloropropene	ND	625	631	101	609	97	4	76-122/12
96-12-8	1,2-Dibromo-3-chloropropane	ND	625	559	89	569	91	2	55-121/33
106-93-4	1,2-Dibromoethane	ND	625	578	92	575	92	1	69-106/13
107-06-2	1,2-Dichloroethane	ND	625	613	98	609	97	1	70-111/14
78-87-5	1,2-Dichloropropane	ND	625	615	98	602	96	2	71-113/12
142-28-9	1,3-Dichloropropane	ND	625	570	91	585	94	3	69-106/12
594-20-7	2,2-Dichloropropane	ND	625	458	73	455	73	1	68-130/14
124-48-1	Dibromochloromethane	ND	625	528	84	541	87	2	69-104/12
75-71-8	Dichlorodifluoromethane	ND	625	358	57	315	50	13	28-120/21
156-59-2	cis-1,2-Dichloroethylene	ND	625	666	107	654	105	2	68-113/13
10061-01-5	cis-1,3-Dichloropropene	ND	625	629	101	617	99	2	71-111/12
541-73-1	m-Dichlorobenzene	ND	625	517	83	528	84	2	74-110/12
95-50-1	o-Dichlorobenzene	ND	625	524	84	528	84	1	72-108/12
106-46-7	p-Dichlorobenzene	ND	625	549	88	554	89	1	74-110/12
156-60-5	trans-1,2-Dichloroethylene	ND	625	609	97	618	99	1	70-125/14
10061-02-6	trans-1,3-Dichloropropene	ND	625	573	92	579	93	1	75-111/12
100-41-4	Ethylbenzene	76.2	625	636	90	634	89	0	75-112/12
591-78-6	2-Hexanone	ND	3130	2370	76	2420	77	2	60-113/18

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T47520-1MS	Z006800.D	25	02/24/10	JL	n/a	n/a	VZ2779
T47520-1MSD	Z006801.D	25	02/24/10	JL	n/a	n/a	VZ2779
T47520-1	Z006799.D	25	02/24/10	JL	n/a	n/a	VZ2779

The QC reported here applies to the following samples:

Method: SW846 8260B

T47658-10

CAS No.	Compound	T47520-1 ug/l	Spike Q	ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
87-68-3	Hexachlorobutadiene	ND		625	511	82	521	83	2	72-123/17
98-82-8	Isopropylbenzene	16.1	J	625	667	104	668	104	0	75-123/12
99-87-6	p-Isopropyltoluene	ND		625	552	88	549	88	1	76-116/12
108-10-1	4-Methyl-2-pentanone	ND		3130	2840	91	2750	88	3	63-115/21
74-83-9	Methyl bromide	ND		625	517	83	500	80	3	59-132/15
74-87-3	Methyl chloride	ND		625	480	77	456	73	5	56-150/17
74-95-3	Methylene bromide	ND		625	639	102	623	100	3	68-114/13
75-09-2	Methylene chloride	ND		625	613	98	607	97	1	70-113/13
78-93-3	Methyl ethyl ketone	ND		3130	2790	89	2830	91	1	62-117/21
91-20-3	Naphthalene	1480		625	2190	114	2130	104	3	53-127/34
103-65-1	n-Propylbenzene	ND		625	556	89	548	88	1	74-115/12
100-42-5	Styrene	191		625	798	97	798	97	0	66-100/11
630-20-6	1,1,1,2-Tetrachloroethane	ND		625	548	88	559	89	2	72-108/11
71-55-6	1,1,1-Trichloroethane	ND		625	621	99	594	95	4	76-125/11
79-34-5	1,1,2,2-Tetrachloroethane	ND		625	602	96	595	95	1	67-110/20
79-00-5	1,1,2-Trichloroethane	ND		625	553	88	554	89	0	69-107/14
87-61-6	1,2,3-Trichlorobenzene	ND		625	534	85	545	87	2	51-128/31
96-18-4	1,2,3-Trichloropropane	ND		625	530	85	537	86	1	55-116/27
120-82-1	1,2,4-Trichlorobenzene	ND		625	519	83	538	86	4	63-114/21
95-63-6	1,2,4-Trimethylbenzene	56.8		625	621	90	628	91	1	73-111/13
108-67-8	1,3,5-Trimethylbenzene	56.8		625	621	90	628	91	1	74-115/12
127-18-4	Tetrachloroethylene	ND		625	553	88	542	87	2	77-120/13
108-88-3	Toluene	555		625	1070	82	1060	81	1	77-114/12
79-01-6	Trichloroethylene	ND		625	612	98	594	95	3	74-117/12
75-69-4	Trichlorofluoromethane	ND		625	480	77	436	70	10	64-132/18
75-01-4	Vinyl chloride	ND		625	569	91	536	86	6	64-121/19
1330-20-7	Xylene (total)	384		1880	2140	94	2150	94	0	75-111/12
	m,p-Xylene	186		1250	1340	92	1340	92	0	75-112/12
95-47-6	o-Xylene	197		625	806	97	804	97	0	74-110/11

CAS No.	Surrogate Recoveries	MS	MSD	T47520-1	Limits
1868-53-7	Dibromofluoromethane	108%	108%	112%	79-122%
17060-07-0	1,2-Dichloroethane-D4	110%	108%	117%	75-121%
2037-26-5	Toluene-D8	103%	103%	106%	87-119%

Matrix Spike/Matrix Spike Duplicate Summary

Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
T47520-1MS	Z006800.D	25	02/24/10	JL	n/a	n/a	VZ2779
T47520-1MSD	Z006801.D	25	02/24/10	JL	n/a	n/a	VZ2779
T47520-1	Z006799.D	25	02/24/10	JL	n/a	n/a	VZ2779

The QC reported here applies to the following samples: Method: SW846 8260B

T47658-10

CAS No.	Surrogate Recoveries	MS	MSD	T47520-1	Limits
460-00-4	4-Bromofluorobenzene	103%	102%	101%	80-133%



GC/MS Semi-volatiles

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QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Blank Spike Summaries
- Matrix Spike and Duplicate Summaries

Method Blank Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP14091-MB	J150722.D	1	02/18/10	SC	02/17/10	OP14091	EJ725

The QC reported here applies to the following samples:

Method: SW846 8270C

T47658-3, T47658-10

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	5.0	1.6	ug/l	
208-96-8	Acenaphthylene	ND	5.0	1.2	ug/l	
120-12-7	Anthracene	ND	5.0	1.1	ug/l	
56-55-3	Benzo(a)anthracene	ND	5.0	1.1	ug/l	
50-32-8	Benzo(a)pyrene	ND	5.0	1.1	ug/l	
205-99-2	Benzo(b)fluoranthene	ND	5.0	0.87	ug/l	
191-24-2	Benzo(g,h,i)perylene	ND	5.0	1.7	ug/l	
207-08-9	Benzo(k)fluoranthene	ND	5.0	1.1	ug/l	
218-01-9	Chrysene	ND	5.0	0.98	ug/l	
53-70-3	Dibenzo(a,h)anthracene	ND	5.0	1.6	ug/l	
206-44-0	Fluoranthene	ND	5.0	0.97	ug/l	
86-73-7	Fluorene	ND	5.0	1.3	ug/l	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	5.0	1.8	ug/l	
91-57-6	2-Methylnaphthalene	ND	5.0	1.3	ug/l	
91-20-3	Naphthalene	ND	5.0	1.1	ug/l	
85-01-8	Phenanthrene	ND	5.0	0.97	ug/l	
129-00-0	Pyrene	ND	5.0	1.7	ug/l	
	TPH-DRO (> C10-C21)	ND	250	120	ug/l	
	TPH-ORO (> C21-C35)	ND	250	120	ug/l	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	67% 29-115%
321-60-8	2-Fluorobiphenyl	77% 34-113%
1718-51-0	Terphenyl-d14	41% 12-145%

Method Blank Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP14132-MB	P08800.D	1	02/23/10	GJ	02/22/10	OP14132	EP419

The QC reported here applies to the following samples:

Method: SW846 8270C

T47658-1, T47658-2, T47658-4, T47658-5, T47658-6, T47658-7, T47658-8, T47658-9, T47658-11, T47658-12

CAS No.	Compound	Result	RL	MDL	Units	Q
83-32-9	Acenaphthene	ND	170	46	ug/kg	
208-96-8	Acenaphthylene	ND	170	39	ug/kg	
120-12-7	Anthracene	ND	170	32	ug/kg	
56-55-3	Benzo(a)anthracene	ND	170	64	ug/kg	
50-32-8	Benzo(a)pyrene	ND	170	26	ug/kg	
205-99-2	Benzo(b)fluoranthene	ND	170	41	ug/kg	
191-24-2	Benzo(g,h,i)perylene	ND	170	39	ug/kg	
207-08-9	Benzo(k)fluoranthene	ND	170	31	ug/kg	
218-01-9	Chrysene	ND	170	36	ug/kg	
53-70-3	Dibenzo(a,h)anthracene	ND	170	88	ug/kg	
206-44-0	Fluoranthene	ND	170	34	ug/kg	
86-73-7	Fluorene	ND	170	45	ug/kg	
193-39-5	Indeno(1,2,3-cd)pyrene	ND	170	60	ug/kg	
91-57-6	2-Methylnaphthalene	ND	170	52	ug/kg	
91-20-3	Naphthalene	ND	170	33	ug/kg	
85-01-8	Phenanthrene	ND	170	45	ug/kg	
129-00-0	Pyrene	ND	170	32	ug/kg	
	TPH-DRO (> C10-C21)	ND	8300	6500	ug/kg	
	TPH-ORO (> C21-C35)	ND	8300	6500	ug/kg	

CAS No.	Surrogate Recoveries	Limits
4165-60-0	Nitrobenzene-d5	51% 18-104%
321-60-8	2-Fluorobiphenyl	58% 21-114%
1718-51-0	Terphenyl-d14	56% 24-149%

Blank Spike Summary

Page 1 of 1

Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP14091-BS	J150724.D	1	02/18/10	SC	02/17/10	OP14091	EJ725

The QC reported here applies to the following samples:

Method: SW846 8270C

T47658-3, T47658-10

CAS No.	Compound	Spike ug/l	BSP ug/l	BSP %	Limits
83-32-9	Acenaphthene	50	38.0	76	41-110
208-96-8	Acenaphthylene	50	40.1	80	49-113
120-12-7	Anthracene	50	39.6	79	59-105
56-55-3	Benzo(a)anthracene	50	44.5	89	64-112
50-32-8	Benzo(a)pyrene	50	41.2	82	62-116
205-99-2	Benzo(b)fluoranthene	50	43.2	86	62-114
191-24-2	Benzo(g,h,i)perylene	50	58.1	116	55-124
207-08-9	Benzo(k)fluoranthene	50	33.7	67	62-119
218-01-9	Chrysene	50	43.4	87	67-112
53-70-3	Dibenzo(a,h)anthracene	50	59.3	119	55-123
206-44-0	Fluoranthene	50	50.1	100	62-116
86-73-7	Fluorene	50	42.5	85	47-99
193-39-5	Indeno(1,2,3-cd)pyrene	50	62.6	125	52-126
91-57-6	2-Methylnaphthalene	50	33.7	67	36-91
91-20-3	Naphthalene	50	33.6	67	37-89
85-01-8	Phenanthrene	50	41.6	83	59-103
129-00-0	Pyrene	50	30.3	61	58-110
	TPH-DRO (> C10-C21)	1000	338	34	10-162

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	73%	29-115%
321-60-8	2-Fluorobiphenyl	76%	34-113%
1718-51-0	Terphenyl-d14	55%	12-145%

Blank Spike Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP14132-BS	P08802.D	1	02/23/10	GJ	02/22/10	OP14132	EP419

The QC reported here applies to the following samples:

Method: SW846 8270C

T47658-1, T47658-2, T47658-4, T47658-5, T47658-6, T47658-7, T47658-8, T47658-9, T47658-11, T47658-12

CAS No.	Compound	Spike ug/kg	BSP ug/kg	BSP %	Limits
83-32-9	Acenaphthene	1670	1180	71	53-106
208-96-8	Acenaphthylene	1670	1240	74	61-121
120-12-7	Anthracene	1670	1230	74	66-105
56-55-3	Benzo(a)anthracene	1670	1220	73	62-113
50-32-8	Benzo(a)pyrene	1670	1130	68	61-118
205-99-2	Benzo(b)fluoranthene	1670	1110	67	67-110
191-24-2	Benzo(g,h,i)perylene	1670	1300	78	57-124
207-08-9	Benzo(k)fluoranthene	1670	1300	78	65-116
218-01-9	Chrysene	1670	1300	78	71-106
53-70-3	Dibenzo(a,h)anthracene	1670	1440	86	59-123
206-44-0	Fluoranthene	1670	1180	71	64-114
86-73-7	Fluorene	1670	1150	69	65-99
193-39-5	Indeno(1,2,3-cd)pyrene	1670	1470	88	51-133
91-57-6	2-Methylnaphthalene	1670	1070	64	48-101
91-20-3	Naphthalene	1670	1110	67	57-94
85-01-8	Phenanthrene	1670	1270	76	66-102
129-00-0	Pyrene	1670	1310	79	49-117
	TPH-DRO (> C10-C21)	33300	20500	62	30-167

CAS No.	Surrogate Recoveries	BSP	Limits
4165-60-0	Nitrobenzene-d5	64%	18-104%
321-60-8	2-Fluorobiphenyl	74%	21-114%
1718-51-0	Terphenyl-d14	67%	24-149%

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP14091-MS	J150730.D	1	02/18/10	SC	02/17/10	OP14091	EJ725
OP14091-MSD	J150731.D	1	02/18/10	SC	02/17/10	OP14091	EJ725
T47658-3	J150727.D	1	02/18/10	SC	02/17/10	OP14091	EJ725

The QC reported here applies to the following samples:

Method: SW846 8270C

T47658-3, T47658-10

CAS No.	Compound	T47658-3 ug/l	Q	Spike ug/l	MS ug/l	MS %	MSD ug/l	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		111	91.5	82	91.3	82	0	41-110/21
208-96-8	Acenaphthylene	ND		111	96.7	87	96.4	87	0	49-113/23
120-12-7	Anthracene	ND		111	90.4	81	90.8	82	0	59-105/18
56-55-3	Benzo(a)anthracene	ND		111	101	91	98.6	89	2	64-112/20
50-32-8	Benzo(a)pyrene	ND		111	90.7	82	91.4	82	1	62-116/23
205-99-2	Benzo(b)fluoranthene	ND		111	87.3	79	92.2	83	5	62-114/22
191-24-2	Benzo(g,h,i)perylene	ND		111	130	117	128	115	2	55-124/36
207-08-9	Benzo(k)fluoranthene	ND		111	73.7	66	74.1	67	1	62-119/30
218-01-9	Chrysene	ND		111	96.6	87	97.4	88	1	67-112/19
53-70-3	Dibenzo(a,h)anthracene	ND		111	140	126*	138	124*	1	55-123/37
206-44-0	Fluoranthene	ND		111	111	100	111	100	0	62-116/24
86-73-7	Fluorene	ND		111	97.8	88	97.3	88	1	47-99/22
193-39-5	Indeno(1,2,3-cd)pyrene	ND		111	141	127*	139	125	1	52-126/30
91-57-6	2-Methylnaphthalene	ND		111	88.2	79	87.8	79	0	36-91/29
91-20-3	Naphthalene	ND		111	87.1	78	87.0	78	0	37-89/24
85-01-8	Phenanthrene	ND		111	92.3	83	92.6	83	0	59-103/19
129-00-0	Pyrene	ND		111	68.8	62	68.5	62	0	58-110/25
	TPH-DRO (> C10-C21)	ND		2220	1250	56	1110	50	12	10-162/48

CAS No.	Surrogate Recoveries	MS	MSD	T47658-3	Limits
4165-60-0	Nitrobenzene-d5	79%	80%	51%	29-115%
321-60-8	2-Fluorobiphenyl	84%	84%	60%	34-113%
1718-51-0	Terphenyl-d14	59%	59%	40%	12-145%

Matrix Spike/Matrix Spike Duplicate Summary

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Job Number: T47658
Account: EIGOVWAS EI GOV
Project: St Joe TBA

Sample	File ID	DF	Analyzed	By	Prep Date	Prep Batch	Analytical Batch
OP14132-MS	J150791.D	1	02/23/10	SC	02/22/10	OP14132	EJ728
OP14132-MSD	J150792.D	1	02/23/10	SC	02/22/10	OP14132	EJ728
T47737-1	J150790.D	1	02/23/10	SC	02/22/10	OP14132	EJ728

The QC reported here applies to the following samples:

Method: SW846 8270C

T47658-1, T47658-2, T47658-4, T47658-5, T47658-6, T47658-7, T47658-8, T47658-9, T47658-11, T47658-12

CAS No.	Compound	T47737-1 ug/kg	Q	Spike ug/kg	MS ug/kg	MS %	MSD ug/kg	MSD %	RPD	Limits Rec/RPD
83-32-9	Acenaphthene	ND		1980	1310	66	1200	61	9	53-106/49
208-96-8	Acenaphthylene	ND		1980	1400	71	1340	68	4	61-121/49
120-12-7	Anthracene	ND		1980	1380	70	1310	66	5	66-105/40
56-55-3	Benzo(a)anthracene	ND		1980	1390	70	1390	70	0	62-113/43
50-32-8	Benzo(a)pyrene	ND		1980	1270	64	1170	59*	8	61-118/44
205-99-2	Benzo(b)fluoranthene	ND		1980	1250	63*	1230	62*	2	67-110/42
191-24-2	Benzo(g,h,i)perylene	ND		1980	1680	85	1720	87	2	57-124/50
207-08-9	Benzo(k)fluoranthene	ND		1980	1020	52*	907	46*	12	65-116/37
218-01-9	Chrysene	ND		1980	1380	70*	1360	69*	1	71-106/39
53-70-3	Dibenzo(a,h)anthracene	ND		1980	1860	94	1940	98	4	59-123/37
206-44-0	Fluoranthene	ND		1980	1690	86	1630	83	4	64-114/45
86-73-7	Fluorene	ND		1980	1470	74	1670	85	13	65-99/42
193-39-5	Indeno(1,2,3-cd)pyrene	ND		1980	1900	96	2000	101	5	51-133/55
91-57-6	2-Methylnaphthalene	ND		1980	1230	62	1200	61	2	48-101/48
91-20-3	Naphthalene	ND		1980	1210	61	1210	61	0	57-94/49
85-01-8	Phenanthrene	ND		1980	1390	70	1370	69	1	66-102/47
129-00-0	Pyrene	ND		1980	1320	67	1270	64	4	49-117/46
	TPH-DRO (> C10-C21)	ND		39500	21300	54	31600	80	39	10-167/54

CAS No.	Surrogate Recoveries	MS	MSD	T47737-1	Limits
4165-60-0	Nitrobenzene-d5	59%	59%	68%	18-104%
321-60-8	2-Fluorobiphenyl	82%	75%	80%	21-114%
1718-51-0	Terphenyl-d14	61%	60%	63%	24-149%



Metals Analysis

QC Data Summaries

Includes the following where applicable:

- Method Blank Summaries
- Matrix Spike and Duplicate Summaries
- Blank Spike and Lab Control Sample Summaries
- Serial Dilution Summaries

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: T47658
Account: EIGOVWAS - EI GOV
Project: St Joe TBA

QC Batch ID: MP11153
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 02/17/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	200	8.3	12		
Antimony	5.0	1	2.9		
Arsenic	5.0	1.7	1	0.14	<5.0
Barium	200	.97	3.4	-0.090	<200
Beryllium	5.0	.056	.16		
Boron	100	1.4	7.8		
Cadmium	4.0	.11	.11	0.060	<4.0
Calcium	5000	7.4	25		
Chromium	10	.23	.27	0.010	<10
Cobalt	50	.15	.22		
Copper	25	1.1	5.9		
Iron	100	1.1	23		
Lead	3.0	1	1.8	-0.20	<3.0
Lithium	300	2	2		
Magnesium	5000	7.7	7.9		
Manganese	15	.054	1.9		
Molybdenum	10	.39	.39		
Nickel	40	.69	1.4		
Potassium	5000	39	45		
Selenium	5.0	1.5	1.5	-0.44	<5.0
Silver	10	1.2	1.2	0.15	<10
Sodium	5000	9.2	100		
Strontium	10	.061	.4		
Thallium	10	.67	1.2		
Tin	20	.69	2.8		
Titanium	20	.29	.3		
Vanadium	50	.3	.3		
Zinc	20	.51	3.5		

Associated samples MP11153: T47658-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T47658
 Account: EIGOVWAS - EI GOV
 Project: St Joe TBA

QC Batch ID: MP11153
 Matrix Type: AQUEOUS

Methods: SW846 6010B
 Units: ug/l

Prep Date:

02/17/10

02/17/10

Metal	T47658-3A			QC	T47658-3A		Spikelot		QC
	Original	DUP	RPD	Limits	Original	MS	MPTW4	% Rec	Limits
Aluminum									
Antimony									
Arsenic	0.0	0.0	NC	0-20	0.0	415	400	103.8	80-120
Barium	129	126	2.4	0-20	129	540	400	102.8	80-120
Beryllium									
Boron									
Cadmium	0.34	0.32	6.1	0-20	0.34	418	400	104.4	80-120
Calcium									
Chromium	0.82	0.60	31.0 (a)	0-20	0.82	395	400	98.5	80-120
Cobalt									
Copper									
Iron									
Lead	28.0	27.1	3.3	0-20	28.0	424	400	99.0	80-120
Lithium									
Magnesium									
Manganese									
Molybdenum									
Nickel									
Potassium									
Selenium	4.3	2.7	45.7 (a)	0-20	4.3	419	400	103.7	80-120
Silver	0.0	0.0	NC	0-20	0.0	404	400	101.0	80-120
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc									

Associated samples MP11153: T47658-3A

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T47658
Account: EIGOVWAS - EI GOV
Project: St Joe TBA

QC Batch ID: MP11153
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 02/17/10

Metal	T47658-3A Original	MSD	Spikelot MPTW4	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	0.0	407	400	101.8	1.9	20
Barium	129	534	400	101.3	1.1	20
Beryllium						
Boron						
Cadmium	0.34	411	400	102.7	1.7	20
Calcium						
Chromium	0.82	387	400	96.5	2.0	20
Cobalt						
Copper						
Iron						
Lead	28.0	418	400	97.5	1.4	20
Lithium						
Magnesium						
Manganese						
Molybdenum						
Nickel						
Potassium						
Selenium	4.3	413	400	102.2	1.4	20
Silver	0.0	396	400	99.0	2.0	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc						

Associated samples MP11153: T47658-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: T47658
Account: EIGOVWAS - EI GOV
Project: St Joe TBA

QC Batch ID: MP11153
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 02/17/10

Metal	BSP Result	Spikelot MPTW4	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	397	400	99.3	80-120
Barium	414	400	103.5	80-120
Beryllium				
Boron				
Cadmium	407	400	101.8	80-120
Calcium				
Chromium	406	400	101.5	80-120
Cobalt				
Copper				
Iron				
Lead	393	400	98.3	80-120
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium	404	400	101.0	80-120
Silver	390	400	97.5	80-120
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP11153: T47658-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: T47658
Account: EIGOVWAS - EI GOV
Project: St Joe TBA

QC Batch ID: MP11153
Matrix Type: AQUEOUS

Methods: SW846 6010B
Units: ug/l

Prep Date: 02/17/10

Metal	T47658-3A Original SDL 1:5		%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	0.00	0.00	NC	0-10
Barium	129	128	0.7	0-10
Beryllium				
Boron				
Cadmium	0.340	0.00	100.0(a)	0-10
Calcium				
Chromium	0.820	0.00	100.0(a)	0-10
Cobalt				
Copper				
Iron				
Lead	28.0	29.4	4.8	0-10
Lithium				
Magnesium				
Manganese				
Molybdenum				
Nickel				
Potassium				
Selenium	4.30	0.00	100.0(a)	0-10
Silver	0.00	0.00	NC	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc				

Associated samples MP11153: T47658-3A

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: T47658
Account: EIGOVWAS - EI GOV
Project: St Joe TBA

QC Batch ID: MP11157
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 02/18/10

Metal	RL	IDL	MDL	MB	
				raw	final

Mercury	0.20	.049	.094	0.010	<0.20
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Associated samples MP11157: T47658-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T47658
Account: EIGOVWAS - EI GOV
Project: St Joe TBA

QC Batch ID: MP11157
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 02/18/10 02/18/10

Metal	T47658-3A			QC	T47658-3A			Spikelot	QC
	Original	DUP	RPD	Limits	Original	MS		HGTXAQ40 % Rec	Limits
Mercury	0.060	0.0	200.0(a)	0-6.6	0.060	3.2	3	104.7	78-118

Associated samples MP11157: T47658-3A

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) RPD acceptable due to low duplicate and sample concentrations.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T47658
Account: EIGOVWAS - EI GOV
Project: St Joe TBA

QC Batch ID: MP11157
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 02/18/10

Metal	T47658-3A Original MSD	Spikelot HGTXAQ40	% Rec	MSD RPD	QC Limit
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Mercury	0.060	3.3	3	108.0	3.1
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Associated samples MP11157: T47658-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(N) Matrix Spike Rec. outside of QC limits
(anr) Analyte not requested

6.2.2

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SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: T47658
Account: EIGOVWAS - EI GOV
Project: St Joe TBA

QC Batch ID: MP11157
Matrix Type: AQUEOUS

Methods: SW846 7470A
Units: ug/l

Prep Date: 02/18/10

Metal	BSP Result	Spikelot HGTXAQ40	% Rec	QC Limits
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Mercury	3.2	3	106.7	80-120
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Associated samples MP11157: T47658-3A

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: T47658
Account: EIGOVWAS - EI GOV
Project: St Joe TBA

QC Batch ID: MP11200
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 02/24/10

Metal	RL	IDL	MDL	MB raw	final
Aluminum	10	.82	2.2		
Antimony	0.50	.11	.14		
Arsenic	0.50	.089	.1	0.063	<0.50
Barium	10	.007	.03	-0.00050	<10
Beryllium	0.25	.0055	.01		
Boron	5.0	.054	.11		
Cadmium	0.25	.013	.05	-0.0040	<0.25
Calcium	250	.27	.86		
Chromium	0.50	.055	.035	-0.028	<0.50
Cobalt	2.5	.025	.09		
Copper	1.3	.029	.065		
Iron	5.0	.65	1.1		
Lead	0.50	.079	.2	0.072	<0.50
Magnesium	250	.34	.58		
Manganese	0.75	.01	.035		
Molybdenum	0.50	.048	.075		
Nickel	2.0	.048	.065		
Potassium	250	2.7	16		
Selenium	0.50	.16	.12	0.041	<0.50
Silver	0.50	.043	.04	0.0030	<0.50
Sodium	250	6.5	13		
Strontium	1.0	.0085	.025		
Thallium	0.50	.16	.25		
Tin	1.0	.09	.12		
Titanium	1.0	.015	.045		
Vanadium	2.5	.03	.06		
Zinc	1.0	.025	.2		

Associated samples MP11200: T47658-1, T47658-2, T47658-4, T47658-5, T47658-6, T47658-7, T47658-8, T47658-9, T47658-11, T47658-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T47658
Account: EIGOVWAS - EI GOV
Project: St Joe TBA

QC Batch ID: MP11200
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date:

02/24/10

02/24/10

Metal	T47658-1 Original	DUP	RPD	QC Limits	T47658-1 Original	MS	Spikelot MPTW4	% Rec	QC Limits
Aluminum									
Antimony									
Arsenic	15.6	17.7	12.6	0-20	15.6	38.2	26.1	86.7	80-120
Barium	455	839	59.4*(a)	0-20	455	422	26.1	-126.6(c)	80-120
Beryllium									
Boron									
Cadmium	12.6	14.4	13.3	0-20	12.6	33.6	26.1	80.5	80-120
Calcium									
Chromium	14.2	19.7	32.4*(a)	0-20	14.2	43.1	26.1	110.8	80-120
Cobalt	anr								
Copper									
Iron									
Lead	302	407	29.6*(a)	0-20	302	377	26.1	287.6(c)	80-120
Magnesium									
Manganese									
Molybdenum									
Nickel	anr								
Potassium									
Selenium	1.3	1.4	7.4	0-20	1.3	24.2	26.1	87.8	80-120
Silver	0.36	0.37	38.7 (b)	0-20	0.36	25.9	26.1	98.4	80-120
Sodium									
Strontium									
Thallium									
Tin									
Titanium									
Vanadium									
Zinc	anr								

Associated samples MP11200: T47658-1, T47658-2, T47658-4, T47658-5, T47658-6, T47658-7, T47658-8, T47658-9, T47658-11, T47658-12

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) High RPD due to possible sample nonhomogeneity.

(b) RPD acceptable due to low duplicate and sample concentrations.

(c) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T47658
Account: EIGOVWAS - EI GOV
Project: St Joe TBA

QC Batch ID: MP11200
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 02/24/10

Metal	T47658-1 Original	MSD	Spikelot MPTW4	% Rec	MSD RPD	QC Limit
Aluminum						
Antimony						
Arsenic	15.6	39.8	27.9	86.8	4.1	20
Barium	455	431	27.9	-86.1(a)	2.1	20
Beryllium						
Boron						
Cadmium	12.6	35.6	27.9	82.5	5.8	20
Calcium						
Chromium	14.2	41.7	27.9	98.6	3.3	20
Cobalt	anr					
Copper						
Iron						
Lead	302	365	27.9	226.0(a)	3.2	20
Magnesium						
Manganese						
Molybdenum						
Nickel	anr					
Potassium						
Selenium	1.3	25.1	27.9	85.4	3.7	20
Silver	0.36	27.4	27.9	97.4	5.6	20
Sodium						
Strontium						
Thallium						
Tin						
Titanium						
Vanadium						
Zinc	anr					

Associated samples MP11200: T47658-1, T47658-2, T47658-4, T47658-5, T47658-6, T47658-7, T47658-8, T47658-9, T47658-11, T47658-12

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

(a) Spike amount low relative to the sample amount. Refer to lab control or spike blank for recovery information.

SPIKE BLANK AND LAB CONTROL SAMPLE SUMMARY

Login Number: T47658
Account: EIGOVWAS - EI GOV
Project: St Joe TBA

QC Batch ID: MP11200
Matrix Type: SOLID

Methods: SW846 6010B
Units: mg/kg

Prep Date: 02/24/10

Metal	LCS Result	Spikelot MPLCD054	% Rec	QC Limits
Aluminum				
Antimony				
Arsenic	147	158	93.0	82-118
Barium	352	348	101.1	81-119
Beryllium				
Boron				
Cadmium	170	187	90.9	82-118
Calcium				
Chromium	82.5	89.5	92.2	79-121
Cobalt	anr			
Copper				
Iron				
Lead	160	172	93.0	79-120
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Potassium				
Selenium	132	148	89.2	78-121
Silver	62.5	66	94.7	66-134
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	anr			

Associated samples MP11200: T47658-1, T47658-2, T47658-4, T47658-5, T47658-6, T47658-7, T47658-8, T47658-9, T47658-11, T47658-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

SERIAL DILUTION RESULTS SUMMARY

Login Number: T47658
Account: EIGOVWAS - EI GOV
Project: St Joe TBA

QC Batch ID: MP11200
Matrix Type: SOLID

Methods: SW846 6010B
Units: ug/l

Prep Date: 02/24/10

Metal	T47658-1 Original	SDL 1:5	%DIF	QC Limits
Aluminum				
Antimony				
Arsenic	230	249	8.0	0-10
Barium	6750	7480	10.8*(a)	0-10
Beryllium				
Boron				
Cadmium	187	211	12.8*(a)	0-10
Calcium				
Chromium	210	235	11.7*(a)	0-10
Cobalt	anr			
Copper				
Iron				
Lead	4480	5060	13.1*(a)	0-10
Magnesium				
Manganese				
Molybdenum				
Nickel	anr			
Potassium				
Selenium	20.0	25.9	29.7 (b)	0-10
Silver	5.30	0.00	100.0(b)	0-10
Sodium				
Strontium				
Thallium				
Tin				
Titanium				
Vanadium				
Zinc	anr			

Associated samples MP11200: T47658-1, T47658-2, T47658-4, T47658-5, T47658-6, T47658-7, T47658-8, T47658-9, T47658-11, T47658-12

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(anr) Analyte not requested

(a) Serial dilution indicates possible matrix interference.

(b) Percent difference acceptable due to low initial sample concentration (< 50 times IDL).

BLANK RESULTS SUMMARY
Part 2 - Method Blanks

Login Number: T47658
Account: EIGOVWAS - EI GOV
Project: St Joe TBA

QC Batch ID: MP11227
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 03/01/10

Metal	RL	IDL	MDL	MB raw	final
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Mercury	0.017	.0041	.00066	-0.0023	<0.017
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Associated samples MP11227: T47658-1, T47658-2, T47658-4, T47658-5, T47658-6, T47658-7, T47658-8, T47658-9, T47658-11, T47658-12

Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T47658
Account: EIGOVWAS - EI GOV
Project: St Joe TBA

QC Batch ID: MP11227
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 03/01/10 03/01/10

Metal	T47737-14		QC Limits	T47737-14		Spikelot HGTXWS1	% Rec	QC Limits
	Original	DUP		Original	MS			
Mercury	0.023	0.022	4.4	0.023	0.32	0.309	96.0	75-125

Associated samples MP11227: T47658-1, T47658-2, T47658-4, T47658-5, T47658-6, T47658-7, T47658-8, T47658-9, T47658-11, T47658-12

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

MATRIX SPIKE AND DUPLICATE RESULTS SUMMARY

Login Number: T47658
Account: EIGOVWAS - EI GOV
Project: St Joe TBA

QC Batch ID: MP11227
Matrix Type: SOLID

Methods: SW846 7471A
Units: mg/kg

Prep Date: 03/01/10

Metal	T47737-14 Original MSD	Spikelot HGTXWS1	% Rec	MSD RPD	QC Limit
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Mercury	0.023	0.32	0.304	97.8	0.0
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Associated samples MP11227: T47658-1, T47658-2, T47658-4, T47658-5, T47658-6, T47658-7, T47658-8, T47658-9, T47658-11, T47658-12

Results < IDL are shown as zero for calculation purposes

(*) Outside of QC limits

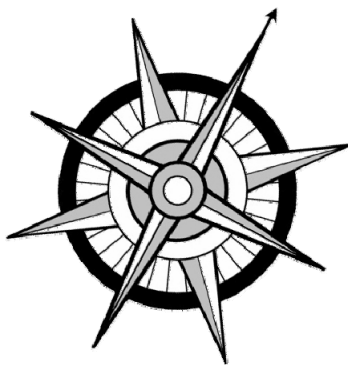
(N) Matrix Spike Rec. outside of QC limits

(anr) Analyte not requested

6.4.3

Metal	LCS Result	Spikelot HGLCD054 % Rec	QC Limits
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Results < IDL are shown as zero for calculation purposes
(*) Outside of QC limits
(anr) Analyte not requested



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