

# PARCEL 10 ADDITIONAL CHARACTERIZATION REPORT

## CITY OF ALBUQUERQUE RAIL YARDS

Albuquerque, Bernalillo County, New Mexico



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## ACRONYMS AND ABBREVIATIONS

°C	degrees Celsius
°F	degrees Fahrenheit
µg/L	micrograms per liter
µg/m <sup>3</sup>	micrograms per cubic meter
ACBM	asbestos-containing building materials
ASTM	ASTM International
ATSF	Atchison, Topeka and Santa Fe
Beacon	Beacon Environmental Services
BNSF	Burlington Northern Santa Fe
BTEX	benzene, toluene, ethylbenzene, and total xylenes
bgs	below ground surface
CCOC	Conditional Certificate of Completion
CNS	Covenant Not to Sue
COA	City of Albuquerque
COC	Certificate of Completion
COPC	contaminants of potential concern
Crisp	Crisp Analytical LLC
CSM	conceptual site model
DCE	DC Environmental
DRO	diesel range organics
EDB	1,2-dibromoethane
EPA	U.S. Environmental Protection Agency
ft	feet <i>or</i> foot
GRO	gasoline range organics
HEAL	Hall Environmental Analysis Laboratory
INTERA	INTERA Incorporated
LBP	lead-based paint
LNAPL	light non-aqueous phase liquid
MDL	method detection limit
mg/cm <sup>2</sup>	milligrams per square centimeter
mg/kg	milligrams per kilogram
mL	milliliter



MRO	motor oil range organics
NMED	New Mexico Environment Department
NMWQCC	New Mexico Water Quality Control Commission
OSHA	Occupational Safety and Health Administration
PAH	polynuclear aromatic hydrocarbons
PID	photoionization detector
PPE	personal protective equipment
PRT	post run tubing
Report	<i>this Parcel 10 Additional Characterization Report</i>
RL	reporting detection limit
RMD	Radiation Monitoring Device
Site	Albuquerque Rail Yards located in downtown Albuquerque, New Mexico
SOP	standard operating procedure
SOW	Scope of Work (INTERA, 2016a)
SSL	Soil Screening Levels
SSHASP	site-specific health and safety plan
TPH	total petroleum hydrocarbons
VISL	vapor intrusion screening level
Vista	Vista Geosciences LLC
VOC	volatile organic compound
VRP	Voluntary Remediation Program (New Mexico Environment Department)
XRF	X-Ray Fluorescence

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## 1.0 INTRODUCTION

In accordance with the Scope of Work (SOW) submitted on August 10, 2016 (INTERA, 2016a) to the City of Albuquerque (COA), INTERA Incorporated (INTERA) is submitting this *Parcel 10 Additional Characterization Report* (Report) documenting the completion of the additional characterization activities conducted at the Albuquerque Rail Yards (Site) located in downtown Albuquerque, New Mexico. This Report was completed in support of participation in the New Mexico Environmental Department (NMED) Voluntary Remediation Program (VRP) and ultimately, Site redevelopment. The Albuquerque Rail Yards consists of Areas A, B, C and Tract A. The Site location is presented on **Figure 1**.

### 1.1 Background

The Site is located between 2nd Street and Commercial Street in downtown Albuquerque, New Mexico, and comprises approximately 27 acres (Areas A, B, C and Tract A) located within the former Atchison, Topeka and Santa Fe (ATSF)/Burlington Northern Santa Fe (BNSF) Central Works Equipment Facility Railyard that operated from the 1880s to the early 1990s. As a result of previous operations, the Site sustained environmental impacts from both petroleum hydrocarbon and metal contamination. Contamination is present in both the Site vadose/unsaturated zone (Site soils and soil vapor) and in the saturated zone (Site groundwater) and includes residual light non-aqueous phase liquid (LNAPL), metals adsorbed to soil particles, organic vapors, and organic and inorganic solutes dissolved in groundwater.

Although substantial efforts have been made in the past to fully delineate contamination for impacted Site media, the extent of contamination is still unknown for certain media and Site areas and these are identified as data gaps in the Conceptual Site Model (CSM) developed for the Site (INTERA, 2015). In the CSM, INTERA concluded that the magnitude with which identified data gaps will impact Site redevelopment plans is dependent on the final redevelopment scenario(s) selected for the Site. Additional characterization sampling efforts at the Site should be conducted based on the redevelopment option(s) selected; however, full characterization or remediation of all impacted media may not be required if sufficient information exists to document that exposure pathways to these media are incomplete or if engineering controls are proposed that would render a potential exposure pathway incomplete. In addition, both asbestos-containing building materials (ACBM) and lead-based paint (LBP) were used in many of the remaining Site buildings; contamination related to these building materials will also need to be mitigated during any building demolition or building renovation activities.

Numerous environmental investigations have been conducted at the Albuquerque Rail Yards since 1991. Current soil and groundwater environmental contamination persists at the Site. The

nature and extent of the contamination within environmental media varies across the Site regarding depth and contaminants of potential concern (COPCs). Metal contamination in soils is generally more prevalent in the center and northern portions of the Site, and petroleum hydrocarbon contamination persists in soils and groundwater in the central and southern portions of the Site. Based on the CSM developed for the Site, the following constituents are identified as Site soil COPCs (INTERA, 2016a):

- Residential: antimony, arsenic, benzo(a)anthracene, benzo(a)pyrene, benzo(b)fluoranthene, chromium, dibenzo(a,h)anthracene, indeno(1,2,3-cd)pyrene, iron, lead, thallium, TPH DRO + MRO (the sum of total petroleum hydrocarbons [TPH] diesel range organics [DRO] plus motor oil range organics [MRO]), and TPH
- Industrial/occupational: arsenic, benzo(a)pyrene, lead, thallium, TPH DRO + MRO, and TPH
- Construction worker: arsenic, chromium, lead, manganese, and thallium

Additionally, based on the magnitude of Site soil petroleum hydrocarbon concentrations, residual LNAPL is likely present in Site soils in the southeastern portion of the Site.

The COA and the Site Developer, are seeking to complete Site redevelopment within the NMED VRP. By actively participating in the NMED VRP (and upon successful completion of any remediation actions deemed necessary), the COA will be able to obtain a Conditional Certificate of Completion (CCOC) and/or Certificate of Completion (COC) for either the entire Site or specific parcels at the Site. The CCOC or the COC will document that current conditions in a designated area(s) and/or throughout the Site meet applicable environmental quality standards and will provide NMED enforcement protection for the COA and liability protection for lenders. In addition, once a CCOC or COC is issued, a Covenant Not to Sue (CNS) may be transferred to a selected prospective purchaser and/or future owner of the Site.

The Site Developer has divided the Site into ten parcels (Parcel 1 – Parcel 10) for redevelopment purposes. The locations of the ten parcels are shown on **Figure 2a**. Parcel 10, which this Report summarizes, completes the northern portion of the Site and is similar to Parcel 1 to the south except that its primary use designation is business rather than cultural. Parcel 10 contains the proposed Paseo North building and the subterranean parking garage below (**Figure 2b**). As such, Parcel 10 is envisioned as an auxiliary parcel to Parcels 7 and 8, which contain historic structures, and likewise may be less flexible with regard to development options. Uses contained in the Paseo North building are intended to complement those uses in the historic structures, e.g., laboratory space, training/education, or research and development. Parcel 10 also contains perimeter Acoustic Mounds and a retail-zoned edge that will act as an extension of Parcel 9 to

the south. Such retail uses may be more business-oriented and may include options for limited on-site hotel facilities (Samitaur, 2014).

## 1.2 Scope of Work

INTERA developed a SOW to complete additional characterization activities throughout the Site to fill in the data gaps identified in the CSM (INTERA, 2015). Although the Site redevelopment plan has been developed (business/office space and one level subterranean parking), additional characterization activities were designed to ensure data collection that provides good spatial coverage, and for a site-wide residential redevelopment scenario, to allow flexibility for a potential change of redevelopment plans while also evaluating construction worker safety. The additional characterization in Parcel 10, specifically, includes the sampling of Site soils and soil vapor, an ACBM and LBP survey for the North Wash Room, Pattern House, and Sheet Metal House, and the sampling of groundwater monitoring wells within Parcel 10. For soil, the primary concern is the potential for exposing construction workers to soil impacted with metals and/or petroleum hydrocarbons during excavation activities required as part of redevelopment. Soil vapor is an environmental concern due to the potential for exposure to volatile organic compounds (VOCs) resulting from vapor intrusion due to the established presence of VOC constituents in Site surface and near-surface soils and in Site groundwater. The future occupants of the property are considered the potential receptors. The CSM developed for the Site (INTERA, 2015), VRP Preliminary Work Plan (INTERA, 2016b), and Site redevelopment plan (Samitaur, 2014) were critical in the development of this report.

The approved SOW (INTERA, 2016a) included the following tasks for Parcel 10:

- Advance eight soil borings to obtain good spatial coverage over the parcel without too much focus on proposed redevelopment due to the likelihood that the proposed redevelopment will change.
- Field-screen soil samples for the presence of VOCs using a photoionization detector (PID) to assist in selecting which soil samples will be submitted for laboratory analysis.
- Collect one soil sample from each soil boring location and submit for analysis of the following:
  - VOCs via U.S. Environmental Protection Agency (EPA) Method 8260B;
  - Polynuclear Aromatic Hydrocarbons (PAHs) via EPA Method 8310;
  - TPH: gasoline range organics (GRO), –DRO, and –MRO via EPA Method 8015 modified; and,

- Metals: antimony, arsenic, chromium, iron, lead, manganese, and thallium via EPA Method 6010.
- Collect four soil gas samples from select soil borings and submit for analysis of VOCs via EPA Method TO-17.
- Oversee an ACBM and LBP survey for the North Wash Room, Pattern House, and Sheet Metal House.
- Gauge and sample the groundwater monitoring wells (MW-06, MW-07, MW-08, and MW-09) located in Parcel 10 and submit for analysis of VOCs via EPA Method 8260B and 1,2-dibromoethane (EDB) via EPA Method 504.1.

### **1.3 Work Plan Deviations**

There were no work plan deviations during this additional characterization field event with the exception of the following:

- Monitoring well MW-09 was not located during the groundwater sampling event so a sample was not collected and submitted for analyses.

## 2.0 FIELD ACTIVITIES

Field activities for this additional characterization event were conducted on October 26 and 27, 2016. The Site-Specific Health and Safety Plan (SSHASP) was reviewed in detail by INTERA field staff, was followed during all Site activities, and was used as a guide for the field-work health and safety meeting. Work was performed in Occupational Safety and Health Administration (OSHA) Level D personal protective equipment (PPE). Copies of the field notes and field forms are included in **Appendix A**.

### 2.1 Soil Sampling

On October 27, 2016, eight soil borings (SB-21, SB-22, SB-23, SB-24, SB-25, SB-26, SB-27, and SB-32) were drilled using a truck-mounted Geoprobe<sup>®</sup> drilling rig operated by Vista GeoScience, LLC (Vista) of Golden, Colorado (**Figure 2b**). These eight soil boring locations were chosen based on the data gaps identified in the CSM and the proposed redevelopment plans provided by the COA. The Geoprobe<sup>®</sup> utilizes a rotary hammer mounted on a hydraulic ram that, in conjunction with the weight of the vehicle, advances a threaded, hollow-probed steel tube (Post Run Tubing or PRT) into the subsurface. Soil borings (SB-22, SB-24, SB-25, and SB-32) were advanced to a depth of 6 feet below ground surface (ft bgs) and soil borings (SB-21, SB-23, SB-26, and SB-27) were advanced to a depth of 15 ft bgs. The soil sampling locations were selected to collect data for the current proposed redevelopment scenario while also providing good spatial coverage across Parcel 10 in the event the proposed redevelopment scenario changes.

Soil cores were collected continuously to the terminal depth of each boring. The soil cores were contained within the acetate liners, which measured 5 ft in length by 1.125 inches in diameter. The Vista drill crew cut the liner lengthwise at two locations approximately 180 degrees apart and provided the sample to INTERA personnel. Immediately after opening the liner, a portion of the soil core was placed in a clean pint-size glass jar for field screening for the presence of VOCs using a PID and the heated headspace method. Another portion of the soil core was placed in a laboratory-provided four-ounce glass jar with a Teflon<sup>™</sup>-lined lid and stored on ice for potential laboratory analysis. These soil jars were labeled with the borehole number, depth interval, and time at which the sample was collected. Methanol extraction was performed on samples selected for laboratory analysis of VOCs and/or TPH-GRO.

An INTERA field scientist logged the lithology of each soil boring in accordance with *ASTM Standard D 2488-09a Standard Practice for Description and Identification of Soils (Visual Manual Procedure)* (ASTM, 2009). The soil classification, description, and field screening

results are on the boring logs provided in **Appendix A**. Field screening results for select soil samples are presented in **Table 1**.

The soil was also visually examined for the presence of staining, and any odors detected were also noted. Evidence of staining and/or odors were noted on the soil boring log. The PID results were then evaluated and assisted in selecting which soil samples was to be submitted for laboratory analysis. Samples are described by soil boring name and a depth interval (ft bgs). The soil samples selected for analyses from Parcel 10 are as follows:

- SB-21 (0-5)
- SB-22 (3-6)
- SB-23 (0-5)
- SB-24 (0-5)
- SB-25 (0-3)
- SB-26 (10-15)
- SB-27 (0-5)
- SB-32 (0-3)

After collection, the soil samples were labeled and immediately placed on ice for transport to Hall Environmental Analysis Laboratory (HEAL) for analyses. Proper chain-of-custody procedures were adhered to during sample collection, transport, and delivery to HEAL. Laboratory analytical results are discussed in Section 3 and are summarized in **Table 1** and **Table 2**. A copy of the analytical laboratory report is provided in **Appendix B**.

## 2.2 Soil Gas Sampling

A soil gas survey was conducted at Parcel 10 on October 27, 2016, by Vista under INTERA oversight. Four soil gas samples (SV-21, SV-23, SV-27, and SV-32) were collected from the soil borings locations located within Parcel 10. The soil gas sampling locations were selected to collect data for the current proposed redevelopment scenario while also providing good spatial coverage across Parcel 10 in the event the proposed redevelopment scenario changes.

Soil gas samples were collected at each sampling location at an approximate depth of 5 ft bgs using a truck-mounted Geoprobe<sup>®</sup> drill rig. Soil gas samples were collected through clean, dedicated, Teflon-lined polyethylene tubing attached by an adaptor (expandable anchor point or an open retractable probe tip) to the bottom Geoprobe<sup>®</sup> rod section. A hollow-stem pipe was inserted into the subsurface, and a sampling “port” was attached to the drive-end of the hollow-stem piping, which was attached to tubing. The tubing was stretched from the subsurface, up through the hollow-stem piping, to hand-held sampling units and/or the collection vessel (sorberent



tubes) located at the surface. A vacuum device (metered pump) was used to extract soil gas from the subsurface when the desired depth was reached.

Once the soil gas sampling system was set up, the soil gas was purged from the soil boring using a vacuum pump and flow meter, carbon dioxide and oxygen (CO<sub>2</sub>/O<sub>2</sub>) readings were monitored, and purging continued until these readings remained stable for one minute. Once a minimum of three volumes was purged and stabilization was achieved, the soil gas was screened using a hand-held PID, and the concentration was recorded. The soil gas samples were then collected by INTERA by pumping through a sorbent tube for 5 minutes (1-liter sample volume). The soil gas samples were submitted for laboratory analysis of VOCs via EPA Method TO-17 by Vista to Beacon Environmental Services (Beacon). Copies of Vista field forms are provided in **Appendix A** and a copy of the analytical laboratory report is provided in **Appendix C**.

### **2.3 ACBM and LBP Sampling**

DC Environmental, Inc. (DCE) of Albuquerque, New Mexico, an INTERA subcontractor, performed an asbestos and LBP survey at the Site on October 26 and 27, 2016. The asbestos/LBP survey was conducted to determine the presence, location, and quantity of asbestos remaining within the Pattern House, Sheet Metal House and the North Wash Room and to establish the basis for the presence of lead-containing finishes within the Site structure (DCE, 2016).

DCE conducted a visual inspection for asbestos-containing building materials within the Sheet Metal House and the North Wash Room and collected bulk samples that were tested for asbestos using Polarized Light Microscopy and stereomicroscopy bulk asbestos analysis. Analysis was conducted by Crisp Analytical, LLC (Crisp) of Carrollton, Texas. Crisp is an accredited laboratory and recognized by the National Voluntary Laboratory Accreditation Program (DCE, 2016).

The presence of lead-based paint was assessed in substantial compliance with the Housing and Urban Development guidelines. DCE conducted the surface coating screening survey of the interior and exterior of the building to generally identify building components coated with a surface coating that contains lead. The survey consisted of testing the lead concentrations of each of the accessible surfaces using a Radiation Monitoring Device (RMD) LPA-1 X-Ray Fluorescence (XRF) device. The determination of lead in paint is defined as a surface content of at least 1.0 milligrams per square centimeter. If the XRF readings were between the 0.9 to 1.0 mg/cm<sup>2</sup> range, then the readings are declared as either lead-based paint or lead-containing materials, and sampling is recommended. Surfaces that were tested with the XRF device included, but were not limited to the following: doors, ceiling, painted walls, structural steel

support, painted door components, roof components, ventilation duct, gates, and framing. In addition, bulk samples of paint chips were collected to verify the XRF readings. Lead-based paint is further defined if laboratory analysis determines the lead content to be one-half percent (0.5 %) by weight or greater when analyzed by Flame Atomic Absorption (DCE, 2016).

## **2.4 Groundwater Sampling**

On November 4, 2016 groundwater samples were collected from the groundwater monitoring wells located in Parcel 10 including: MW-6, MW-7, and MW-8. Monitoring well MW-9 was not located so a groundwater sample was not collected. All monitoring wells were purged using dedicated, disposable polyethylene bailers.

A groundwater sample was collected once three well casing volumes were removed from the monitoring well and water quality parameters stabilized for three consecutive readings. The groundwater sample was labeled and immediately placed on ice for transport to HEAL for analysis of VOCs via EPA Method 8260B and EDB via EPA Method 504.1. Proper chain-of-custody procedures were adhered to during sample collection, transport, and delivery to HEAL.

More details, including field forms and water quality data, can be found in the site-wide groundwater monitoring report developed by INTERA (INTERA, 2017).

### 3.0 RESULTS AND DISCUSSION

The soil, soil gas, ACBM/LBP survey, and groundwater results of the 2016 additional characterization field activities conducted within Parcel 10 of the Site are summarized in the following subsections. These new data have been compiled with historic data previously summarized in the Site CSM (INTERA, 2015) to provide an overall assessment of the nature and extent of the contamination for Parcel 10. For each media (soil, soil gas, ACBM, LBP, and groundwater) investigated, a CSM Update section has been included to facilitate evaluation of all Site data with regards to impacts to future redevelopment. Unless otherwise stated, all data results are discussed for a residential scenario. For soil, the state regulation defines accessible soil for a residential scenario to be located from 0 to 10 ft bgs, (NMED, 2015).

Select soil and soil gas samples had elevated laboratory reporting detection limits (RLs) for select constituents due to interference from elevated concentrations of other compounds. For these samples, INTERA requested that the laboratories (HEAL and Beacon) report using the method detection limit (MDL) and flag the results as estimated (J qualifier). Reporting down to the MDL resulted in all laboratory RLs being lower than the residential/construction worker soil screening levels (SSLs) and NMED vapor intrusion screening levels (VISLs) with the exception of EDB in soil gas. The RL for EDB will be discussed further in Section 3.2.

NMED does not have an established VISLs for several constituents, including: 1,2,4-trimethylbenzene, 1,3,5-trimethylbenzene, 1,3-dichlorobenzene, 1,4-dioxane, and 2-methylnaphthalene. INTERA was, however, able to calculate the VISLs for 1,2,4-trimethylbenzene and 1,4-dioxane using the EPA VISLs Calculator. The methodology behind the calculations is explained in more detail in **Appendix D**.

The spatial trends are discussed below for all COPCs listed in Section 1.1. Figures were developed to illustrate the spatial trend of SSL exceedances for COPCs over the investigation time period, between 1995 and 2016. Red-colored locations illustrate sampling locations where the selected COPC has been detected at a concentration that exceeds the corresponding SSL. The green-colored locations illustrate sampling locations where the selected COPC has been detected at a concentration below the corresponding SSL. The orange-colored locations illustrate sampling locations where the selected COPC has not been detected. The black-colored locations illustrate sampling locations where the selected COPC has not been detected, but the laboratory detection limit is greater than the SSL; therefore, exceedances are unable to be determined at these locations. For all non-detect locations, the minimum detection limit over the monitoring time period was used for comparison. One sampling location may have several different “types”

of detections; for conservative purposes, only the SSL exceedance is shown. Furthermore, the shape of these points represents the sampling location type: squares represent soil borings, diamonds represent surface soil samples, and squares with a cross represent test pits. Figures illustrating soil, soil gas, and groundwater results for the entire Site (Parcels 1 through 10) are included in **Appendix E**. The results discussed below are specific to Parcel 10.

### 3.1 Soil Sampling Results

#### 3.1.1 Metals

Antimony was detected soil samples SB-25 (240 milligrams per kilograms [mg/kg]) and SB-32 (3.6 mg/kg); however, the soil sample collected at SB-25 (0-3 ft bgs) exceeded the antimony residential SSL of 31.3 mg/kg. Arsenic was detected in five of the eight soil samples: SB-21 (3.5 mg/kg), SB-22 (3.8 mg/kg), SB-24 (2.9 mg/kg), SB-25 (18 mg/kg), and SB-32 (17 mg/kg). The soil samples collected from SB-25 (0-3 ft bgs) and SB-32 (0-3 ft bgs) had arsenic concentration that exceed the arsenic residential SSL of 4.25 mg/kg. Chromium and iron were detected in all eight soil samples at concentrations above the laboratory RLs; however, the concentrations did not exceed their residential SSLs of 96.6 mg/kg and 54,800 mg/kg, respectively. Lead was detected in all eight soil samples; the lead concentration at SB-25 (3,900 mg/kg) exceeds the lead residential SSL of 400 mg/kg. Manganese was also detected in all eight soil samples. Manganese concentrations were below the residential SSL of 10,500 mg/kg; and were also below the more conservative construction worker SSL of 464 mg/kg. A summary of the detected laboratory analytical results is provided in **Table 2** and illustrated on **Figures 3a** through **3g**. A copy of the laboratory analytical report is provided in **Appendix B**.

#### 3.1.2 Petroleum Hydrocarbons

Benzo(a)anthracene was detected in the soil samples collected from soil borings SB-25 (0.89J mg/kg) and SB-32 (6.5 mg/kg), the benzo(a)anthracene concentration at SB-32 (0-3 ft bgs) exceeds the residential SSL of 1.53 mg/kg. Benzo(a)pyrene was detected in the soil samples collected from soil borings SB-23 (0.098J mg/kg), SB-25 (0.54J mg/kg), and SB-32 (7.1 mg/kg); however, only the soil samples collected from SB-25 (0-3 ft bgs) and SB-32 (0-3 ft bgs) had benzo(a)pyrene concentrations that exceed the residential SSL of 0.153 mg/kg. Benzo(b)fluoranthene was detected in the soil samples collected from soil borings SB-25 (0.69J mg/kg) and SB-32 (4.4 mg/kg), the benzo(b)fluoranthene concentration at SB-32 (0-3 ft bgs) exceeds the residential SSL of 1.53 mg/kg. Dibenzo(a,h)anthracene was detected in the soil sample collected at SB-32 (0.40 J mg/kg) at a concentration that exceeds the residential SSL of 0.153 mg/kg. Indeno(1,2,3-cd)pyrene was detected in soil samples SB-24 (0.29 mg/kg), SB-25 (1.3J mg/kg), and SB-32 (1.5 mg/kg) above their laboratory RLs; however, the indeno(1,2,3-

cd)pyrene concentrations did not exceed the residential SSLs of 1.53 mg/kg. and Naphthalene was not detected above the laboratory RL in any of the soil samples collected within Parcel 10.

TPH DRO + MRO was detected above the laboratory RLs in soil samples collected from soil boring SB-22 (5,700 mg/kg), SB-23 (740 mg/kg), SB-24 (99 mg/kg), SB-25 (450 mg/kg), and SB-32 (93 mg/kg); however, concentrations did not exceed the residential SSL of 1,000 mg/kg with the exception of soil sample SB-22 (3-6 ft bgs). TPH GRO was not detected above the laboratory RL in all 8 soil samples in Parcel 10. A summary of the detected laboratory analytical results is provided in **Table 1** and illustrated on **Figures 4a** through **4e** and **Figure 5**. A copy of the laboratory analytical report is provided in **Appendix B**.

### 3.1.3 Conceptual Site Model Update

The CSM identified soil data gaps along the northern boundary of the Site, specifically where Parcel 10 is located. Therefore, INTERA designed the 2016 additional characterization sampling plan to collect soil samples specifically in these areas where data were identified as missing in the initial CSM.

**Figures 3a** through **3g** illustrate there are no longer any data gaps for Site metal COPCs and the cumulative data is distributed well throughout Parcel 10. Antimony exceeds the residential SSL at four locations; these locations are located near the former sand blasting area, north of the Sheet Metal House, and north of the Blacksmith Shop (**Figure 3a**). **Figure 3b** illustrates that the arsenic concentrations exceeding residential SSLs are located throughout Parcel 10, in both surface and soil boring locations. Chromium exceeds the residential SSL at one location; this location is located within the former sand blasting area (**Figure 3c**). **Figure 3d** illustrates the one location that had an iron concentration exceeding residential SSLs; this sample location is north of the Sheet Metal House. Lead exceedances are numerous throughout Parcel 10, and are primarily located in the former sand blasting area and former battery storage area. **Figure 3f** illustrates the manganese concentrations exceeding construction worker SSLs are located north of the Flue Shop and Blacksmith Shop. **Figure 3g** illustrates that the two soil samples with thallium concentrations exceeding residential SSLs are located in the former and blasting area and north of the Blacksmith Shop.

**Figure 4a** through **4e** illustrates there are no longer any data gaps for petroleum hydrocarbons in Parcel 10 soil and the cumulative data is distributed well throughout Parcel 10. **Figures 4a**, **4c**, and **4d** illustrate that benzo(a)anthracene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene exceed their respective residential SSLs at one location between the Sheet Metal House and the Flue Shop. Benzo(a)pyrene exceeds its residential SSL at three sample locations; between the Sheet Metal House and the Flue Shop and west of the former sand blasting area (**Figure 4b**). **Figure 4e** illustrates that indeno(1,2,3-cd)pyrene concentrations do not exceed residential SSLs in Parcel 10.

**Figure 5** illustrates there are no longer any data gaps for TPH and the cumulative data is distributed well throughout Parcel 10. This figure illustrates that TPH concentrations exceed the residential SSL at one location, this location is located north of Blacksmith Shop.

### 3.2 Soil Gas Sampling Results

1,3-dichlorobenzene was detected in three of the four soil gas samples: SB-21 (949.69 micrograms per cubic meter [ $\mu\text{g}/\text{m}^3$ ]), SB-23 (1076.85  $\mu\text{g}/\text{m}^3$ ), and SB-27 (876.94  $\mu\text{g}/\text{m}^3$ ). NMED does not have an established VISL for 1,3-dichlorobenzene and a VISL could not be calculated using the EPA VISLs Calculator (**Appendix C**). 1,4-dioxane was detected in all four soil gas samples (SB-21, SB-23, SB-27, and SB-32) at concentrations that did not exceed the EPA VISLs. The concentration of naphthalenes detected at SB-32 (12.38  $\mu\text{g}/\text{m}^3$ ) exceeds the NMED VISL of 8.26  $\mu\text{g}/\text{m}^3$  (**Figure 6**). P&m-xylene was detected at one soil gas sample location (SB-32) and toluene was detected at all four soil gas sample locations; however, the detected concentrations were below their respective VISL. A summary of the detected laboratory analytical results is provided in **Table 3**. Isoleth maps illustrating the distribution of select contaminants are provided in **Appendix C**. A copy of the laboratory analytical report is included in **Appendix C**. It should be noted that the laboratory RL for EDB (10  $\mu\text{g}/\text{m}^3$ ) was greater than the NMED VISL of 0.468  $\mu\text{g}/\text{m}^3$  and EPA VISL of 1.6  $\mu\text{g}/\text{m}^3$  for EDB. EDB was not identified in any of the soil gas samples above the laboratory reporting limit.

#### 3.2.1 Conceptual Site Model Update

The CSM identified that there was inadequate coverage with regard to soil gas within Parcel 10. To fill this data gap, INTERA collected four soil gas samples within Parcel 10. The results from the soil gas sampling revealed the presence of 1,3-dichlorobenzene, 1,4-dioxane, p&m-xylenes, toluene, and naphthalene in soil gas. Additionally, the naphthalene soil gas detection was greater than the NMED VISL at one sampling location indicating a potential for soil vapor intrusion into any retrofitted building or building constructed within Parcel 10.

### 3.3 ACBM and LBP Sampling Results

#### 3.3.1 ACBM Sampling Results

Asbestos was not identified in the Sheet Metal House. Asbestos was detected in the North Wash Room and Pattern house and are summarized in Table 4.

**Table 4. Asbestos Sample Analyses**

Sample #	Building Name	Analyst physical description of subsample	Asbestos Visual Estimate Percent/Type
16-187-100	North Wash Room	Window Putty	<1% Chrysotile
16-186-104	Pattern House	Door frame caulking	3% Chrysotile
16-186-105	Pattern House	Roof mastic	5% Chrysotile

A copy of the asbestos survey report, which includes the asbestos laboratory results, is provided in **Appendix F**.

### 3.3.2 LBP Sampling Results

LBP was identified in the Sheet Metal House, North Wash Room, and Pattern House. The lead based paint surfaces detected in the *Sheet Metal House* included:

- white paint on a standard wood door, and,
- red paint on wood entry door.

The lead based paint surfaces detected in the *North Wash Room* included:

- interior white paint on brick,
- interior white paint on wood,
- exterior red paint on wood,
- exterior red paint on cast iron, and,
- exterior red paint on hydrant and hydrant rail.

The lead based paint surfaces detected in the *Pattern House* included:

- light green paint on concrete and metal in the north room,
- teal paint on concrete and metal in the north room,
- cream colored paint on concrete in the south room, and,
- red colored paint on concrete in the south room.

A copy of the LBP survey report, which includes the LBP chip laboratory results and XRF screening results, is provided in **Appendix F**.

### 3.3.3 Conceptual Site Model Update

The CSM recommended that a Site inspection of all building materials at the Site be conducted to determine if the asbestos and LBP sampling historically conducted at the Site was comprehensive and fill in any data gaps as necessary. DCE reviewed the historical asbestos and LBP sampling locations and resulting data and designed their sample collection to target



locations and/or buildings that had not previously been surveyed and/or confirm locations already sampled.

#### Sheet Metal House

No evidence of previous asbestos inspections performed at the Sheet Metal House were found (INTERA, 2015). To fill in the data gap, DCE collected three asbestos bulk samples in the Sheet Metal House. Asbestos was not identified in the Sheet Metal House. The location of the asbestos samples within the Sheet Metal House is discussed in detail in the DCE Survey Report provided in **Appendix F**.

There are no data indicated LBP samples were historically collected in the Sheet Metal House (INTERA, 2015). To fill in the data gap, DCE screened 13 samples in the Sheet Metal House using the XRF device. The 2016 results indicate that LBP was detected. Details pertaining to the locations of the LBP is discussed in detail in Section 3.3.2 and in the DCE Survey Report provided in **Appendix F**.

#### North Wash Room

No evidence of previous asbestos inspections performed at the North Wash Room were found (INTERA, 2015). To fill in the data gap, DCE collected two asbestos bulk samples in the North Wash Room; one sample was positive for the presence of asbestos in the North Wash Room. Details pertaining to the location of asbestos within the North Wash Room is discussed in detail in Section 3.3.1 and in the DCE Survey Report provided in **Appendix F**.

There are no data indicated LBP samples were historically collected in the North Wash Room (INTERA, 2015). To fill in the data gap, DCE screened 29 samples in the North Wash Room using the XRF device. The 2016 results indicate that LBP was detected. Details pertaining to the locations of the LBP is discussed in detail in Section 3.3.2 and in the DCE Survey Report provided in **Appendix F**.

#### Pattern House

No evidence of previous asbestos inspections performed at the Pattern House were found (INTERA, 2015). To fill in the data gap, DCE collected seven asbestos bulk samples in the Pattern House; two samples were positive for the presence of asbestos in the Pattern House. Details pertaining to the location of asbestos within the Pattern House is discussed in detail in Section 3.3.1 and in the DCE Survey Report provided in **Appendix F**.

Previous LBP samples collected in the Pattern House in 2011 by Innovar Environmental, Inc. (Innovar) indicate that LBP was identified in the Pattern House (INTERA, 2015). DCE screened 21 paint samples in the Pattern House using the XRF device. In addition to identifying additional LBP, the 2016 results confirmed observations made by Innovar. Details pertaining to the

locations of the LBP within the Pattern House is discussed in detail in Section 3.2.2 and in the DCE Survey Report provided in **Appendix F**.

### **3.4 Groundwater Analytical Results**

Groundwater samples were collected from monitoring wells MW-6, MW-7, and MW-8 on November 4, 2016 and analyzed for VOCs via EPA Method 8260B and EDB via EPA Method 504.1. VOCs and EDB were not detected above the laboratory RLs for the three groundwater wells (**Figure 7**).

More details, including field forms and water quality data, can be found in the site-wide groundwater monitoring report developed by INTERA (INTERA, 2017). A copy of the laboratory analytical report is included in **Appendix G**.

#### **3.4.1 Conceptual Model Update**

The CSM noted that the presence (or absence) of EDB in groundwater has not been determined. To address this data gap, INTERA collected groundwater samples from the Site wells and submitted them for analysis of VOCs via EPA Method 8260B and EDB via EPA Method 504.1. The laboratory RL for EDB via EPA Method 504.1 (0.010 µg/L) is below the NMWQCC Standard of 0.10 µg/L; therefore, the presence or absence of EDB, at a concentration above the EDB NMWQCC Standard, if present, could be determined.

Site groundwater wells have been sampled intermittently since 1996 and **Table 6** presents the historical data for benzene, toluene, ethylbenzene, and total xylenes (BTEX), EDB, and total naphthalenes. According to the historical data, VOCs and EDB have never been present in monitoring wells MW-6, MW-7, and MW-8 and were also not detected during the 2016 groundwater sampling event. Additionally, VOCs and EDB have not been detected in monitoring well MW-9.

INTERA is scheduled to conduct another site-wide annual groundwater monitoring event in November 2017.

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## 4.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the results of the field investigation, INTERA has compiled the following conclusions and recommendations.

### 4.1 Conclusions

- Four soil samples were identified to contain an antimony concentration that exceeds the antimony residential SSL, these locations are located near the former sand blasting area, north of the Sheet Metal House, and north of the Blacksmith Shop (**Figure 3a**).
- Numerous soil sampling locations contain arsenic concentrations that exceed the arsenic residential SSL, these locations are throughout Parcel 10 (**Figure 3b**).
- One soil sample was identified to contain a chromium concentration that exceeds the chromium residential SSL, the location of this soil sample is in the former sand blasting area (**Figure 3c**).
- One soil sample was identified to contain an iron concentration that exceeds the iron residential SSL, the location of this soil sample is north of the Sheet Metal House (**Figure 3d**).
- Numerous soil sampling locations contain lead concentrations that exceed the lead residential SSL, these locations are primarily located in the former sand blasting area and former battery storage area (**Figure 3e**).
- Three soil samples were identified to contain a manganese concentration that exceeds the manganese construction worker SSL, these soil sample are located north of the Flue Shop and Blacksmith Shop (**Figure 3f**).
- Two soil samples with thallium concentrations exceeding residential SSLs are located in the former and blasting area and north of the Blacksmith Shop (**Figure 3f**).
- Benzo(a)anthracene, benzo(b)fluoranthene, and dibenzo(a,h)anthracene exceed their respective residential SSLs at one location between the Sheet Metal House and the Flue Shop (**Figures 4a, 4c, and 4d**).
- Three soil samples were identified to contain benzo(a)pyrene concentrations that exceed the residential SSL. These soil samples were collected between the Sheet Metal House and the Flue Shop and west of the former sand blasting area (**Figure 4b**).
- One soil sample was identified to contain a TPH DRO+MRO concentration that exceeds the residential SSL. This soil sample was collected north of the Blacksmith Shop (**Figure 5**).

- Naphthalene concentrations in soil gas exceeded the NMED VISL of 8.26  $\mu\text{g}/\text{m}^3$  at one soil gas sampling location indicating a potential for vapor intrusion (**Table 3** and **Figure 6**).
- The laboratory RL for EDB in soil gas exceeded the corresponding NMED VISL (**Table 3**).
- Asbestos and LBP were detected in the Pattern House and North Wash Room.
- Asbestos was not detected in the Sheet Metal House.
- LBP was detected in the Sheet Metal House.

## 4.2 Recommendations

Based on the results of the additional characterization field event for Parcel 10, INTERA makes the following recommendations:

- Contaminated Soil (metals and PCS): Soil contamination is present throughout Parcel 10, from the ground surface to 10 ft bgs.
  - Removal: If soil is excavated during Site construction, the soil should be field-screened if applicable, segregated, characterized, and either reused on-Site or disposed of properly. The extent to which encountered contaminated soil may have to be removed shall be dependent on the final chosen land use scenario (e.g., residential/commercial or industrial) and proposed land cover (e.g., asphalt or concrete).
  - Engineering Controls: If contaminated soil is left in place, engineering controls must be implemented to minimize or remove the potential exposure to residual contamination. Engineering controls provide a physical barrier to the contamination and can include soil capping with clean fill, or if contaminant mobility via leaching is of concern, soil capping with an impermeable surface (e.g., asphalt, concrete). INTERA recommends capping the southern portion of Parcel 9 with an impermeable surface to prevent exposure to residual contamination and reduce contaminant mobility via leaching.
  - Institutional Controls: If engineering controls are implemented than institutional controls (administrative or legal controls) are typically necessary to provide information regarding residual contamination left in place, document engineering controls implemented, and record any land use restrictions. In the event that residual contamination is left in place and engineering controls are implemented, INTERA recommends documenting these using institutional controls.

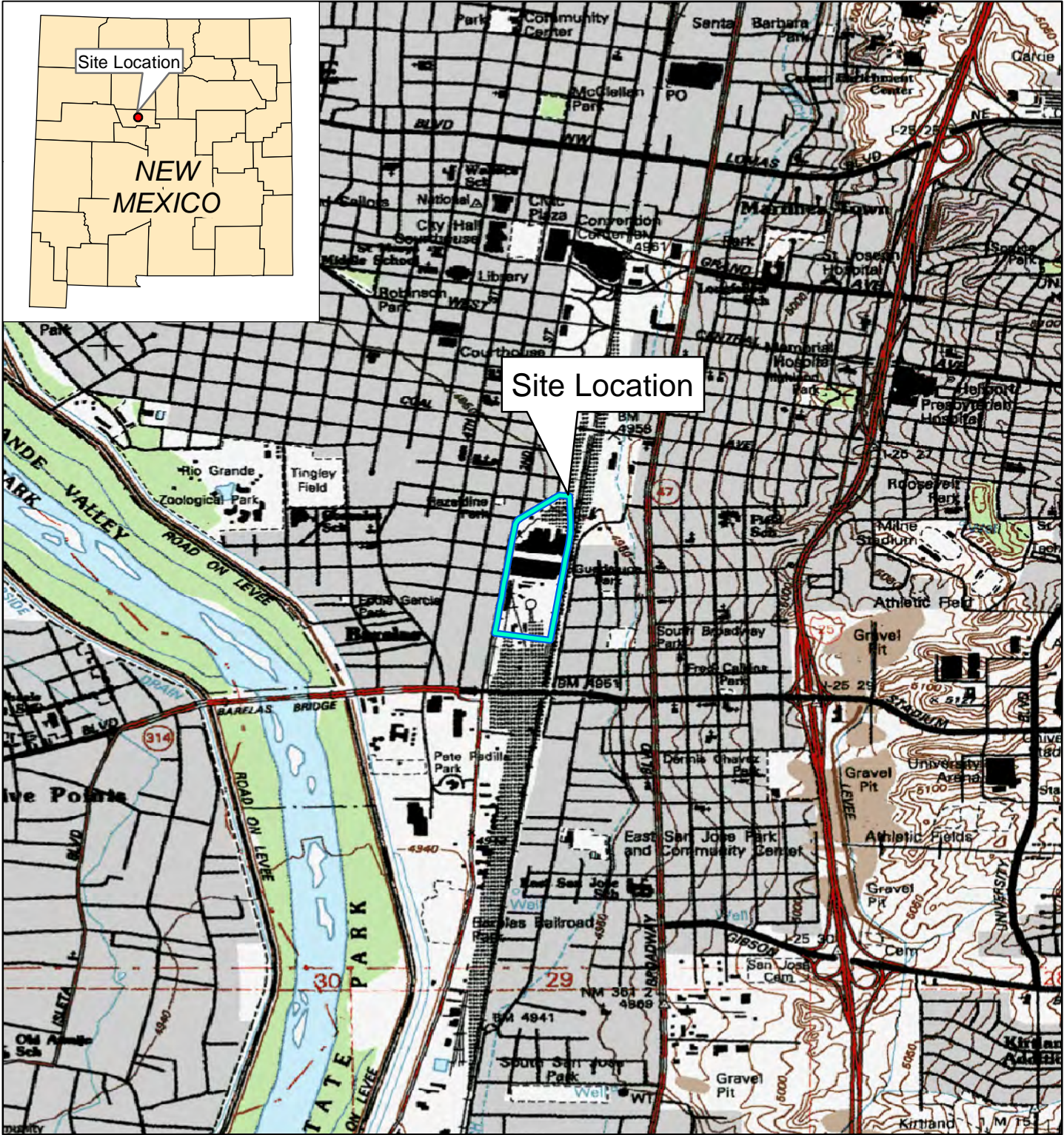
- Soil Gas Engineering Controls: Soil gas samples collected within Parcel 10 revealed potential vapor intrusion issues (naphthalene concentrations in soil gas). Even though the laboratory RL for EDB in soil gas exceeded the corresponding NMED VISL, EDB is not considered a contaminant of concern of the Site because it has not been identified above RL in either Site soil or ground water or was associated with historical Site uses. Engineering controls to prevent vapor intrusion should be evaluated and selected to eliminate this exposure pathway. These engineering controls could include a vapor intrusion membrane, passive depressurization system, active depressurization system, or some combination. INTERA recommends installing a vapor intrusion membrane in all new buildings. If the North Wash Room, Pattern House, and Sheet Metal House are retrofitted for occupancy, a vapor intrusion membrane should be installed or a depressurization system should be evaluated to minimize the potential exposure to vapor. INTERA recommends documenting any engineering controls implemented via institutional controls.
- Immobilization/Containment of Asbestos and LBP Materials: The materials containing asbestos and LBP will require abatement or encapsulation before substantial renovation or demolition, if proposed, can commence. The final building renovation design should be considered and a decision will have to be made as to their final deposition. Any remaining asbestos and/or LBP left within the North Wash Room, Pattern House, and Sheet Metal House will need to be documented, and a management plan will need to be developed stating how these materials should be handled following renovation activities.

## 5.0 REFERENCES

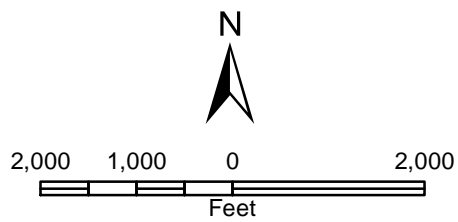
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## **FIGURES**





Site Location



**Figure 1**  
**Site Location**  
 Additional Characterization,  
 Voluntary Remediation Program Activities,  
 Albuquerque Rail Yards, Albuquerque,  
 Bernalillo County, New Mexico

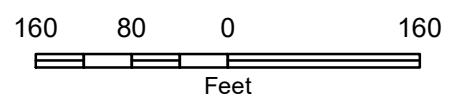
**INTERA** Source(s): USGS, Albuquerque West  
 Quadrangle, 1996





**Legend**

- |                                      |                                  |                                |
|--------------------------------------|----------------------------------|--------------------------------|
| ▲ Subslab Soil Vapor Sample (2016)   | ▲ Soil Vapor Monitoring Location | ⊕ Monitoring Well; not located |
| ⊕ Soil Boring Sample (2016)          | ⊕ Excavation Soil Sample         | ▭ Site Feature                 |
| ⊕ Soil Boring/Soil Gas Sample (2016) | ◆ Field Screening Only           | ▭ Parcel Boundary and ID       |
| ⊕ Monitoring Well                    | ⊕ Subslab Soil Sample            | ▭ Property Boundary            |
| ⊕ Soil Boring Sample                 | ⊕ Sump                           |                                |
| ⊕ Surface Soil Sample                | ⊕ Test Pit Sample                |                                |
|                                      | ⊕ Water Supply Well              |                                |
|                                      | ⊕ Wood Floor Sample              |                                |



**Figure 2a**  
**Site Plan, Parcels**  
 Additional Characterization,  
 Voluntary Remediation Program Activities,  
 Albuquerque Rail Yards, Albuquerque,  
 Bernalillo County, New Mexico



Source(s): Aerial – BERNCO GIS website, dated 2014.



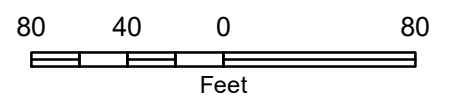


**Legend**

- ▲ Subslab Soil Vapor Sample (2016)
- ⊗ Soil Boring Sample (2016)
- ⊕ Soil Boring/Soil Gas Sample (2016)
- ⊙ Soil Boring Sample

- ⊕ Monitoring Well
- Surface Soil Sample
- ⊕ Monitoring Well; not located

- ▭ Parcel 10 Boundary
- ▭ Property Boundary

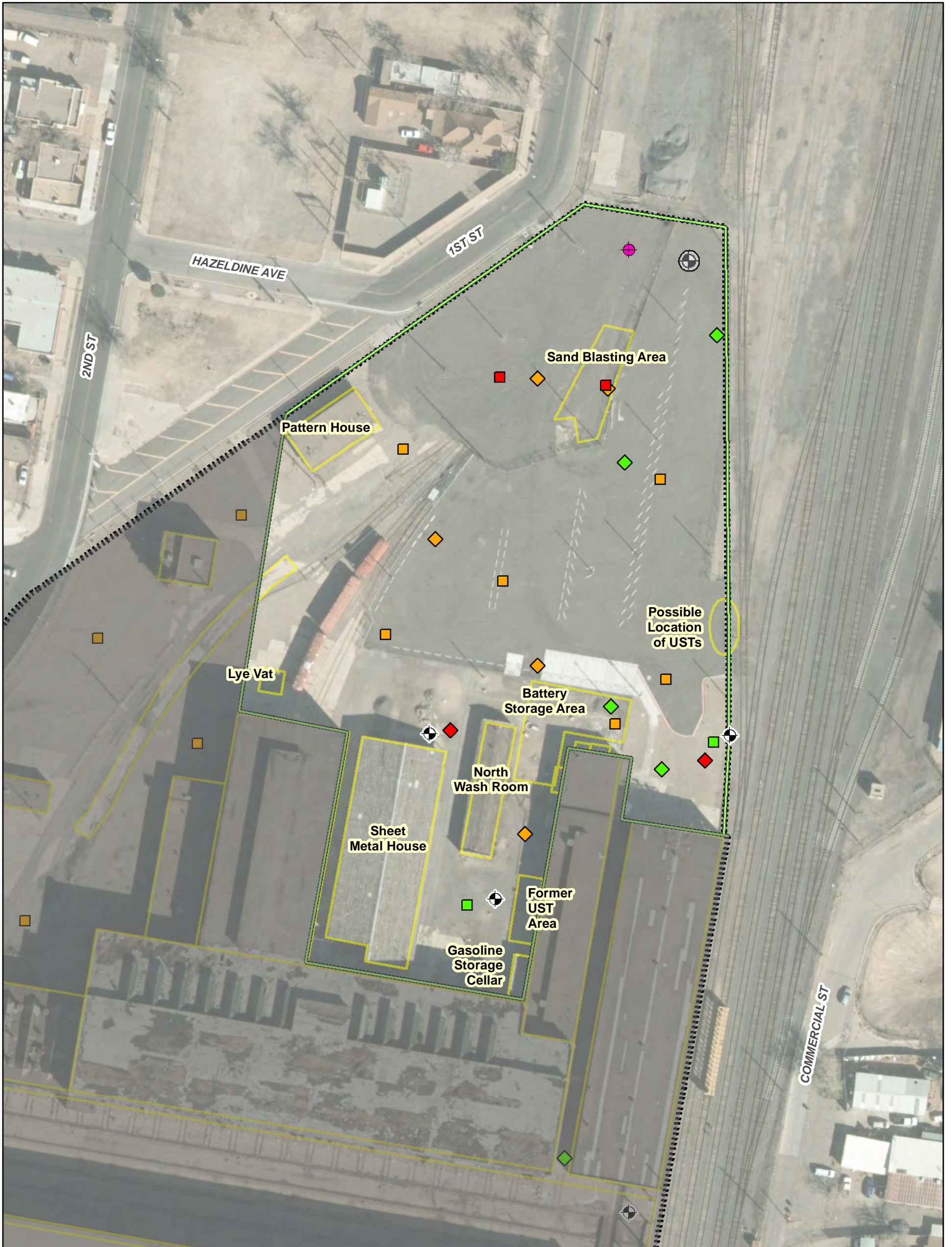


**Figure 2b**  
**Parcel 10 Soil and Soil Vapor Locations**  
 Additional Characterization,  
 Voluntary Remediation Program Activities,  
 Albuquerque Rail Yards, Albuquerque,  
 Bernalillo County, New Mexico



Source(s): Aerial – BERNCO GIS website, dated 2014.





**SSL Exceedance**

- Soil Boring
- ◆ Surface Soil
- Detect below SSL**
- Soil Boring
- ◆ Surface Soil

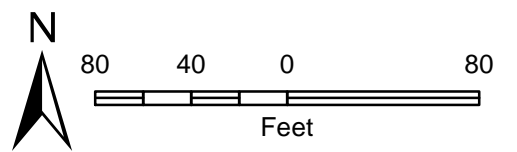
**Non-Detect**

- Soil Boring
- ◆ Surface Soil; Subslab

**Legend**

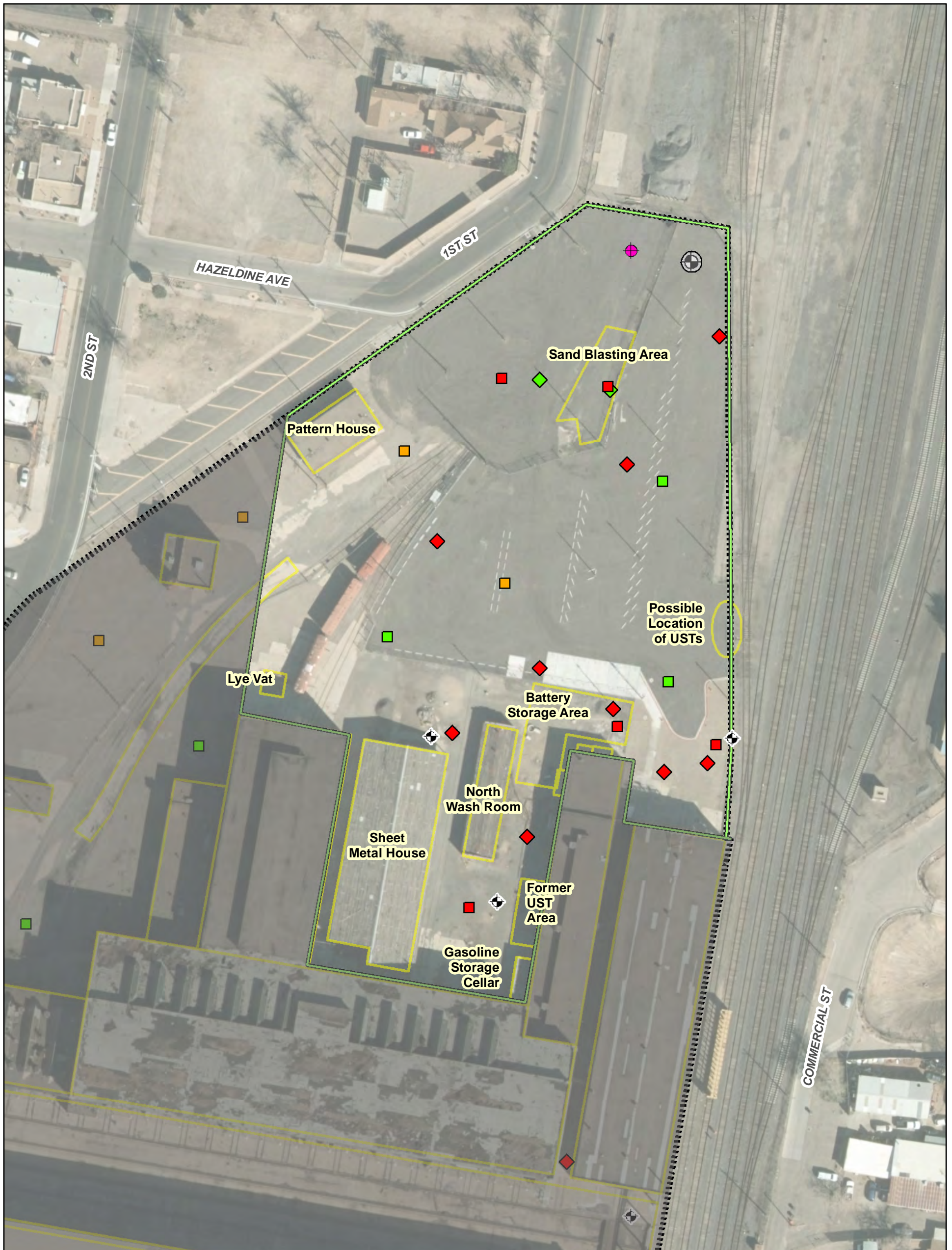
- 2016 Soil Boring - Soil Sample >10 ft bgs
- ⊕ Monitoring Well
- ⊕ Monitoring Well; not located
- ▭ Parcel 10 Boundary
- ▨ Property Boundary

Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
SSL: Soil Screening Levels (NMED, 2015)



**Figure 3a**  
Residential SSL Exceedances  
(0-10 ft bgs), Antimony  
Additional Characterization,  
Voluntary Remediation Program Activities,  
Albuquerque Rail Yards, Albuquerque,  
Bernalillo County, New Mexico

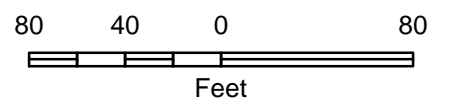




**Legend**

- |                         |   |                    |
|-------------------------|---|--------------------|
| <b>SSL Exceedance</b>   | 2016 Soil Boring - Soil Sample >10 ft bgs | Parcel 10 Boundary |
| Soil Boring             | Monitoring Well; not located              | Property Boundary  |
| Surface Soil            | Monitoring Well                           |                    |
| <b>Detect below SSL</b> |   |                    |
| Soil Boring             |   |                    |
| Surface Soil            |   |                    |
| <b>Non-Detect</b>       |   |                    |
| Soil Boring             |   |                    |

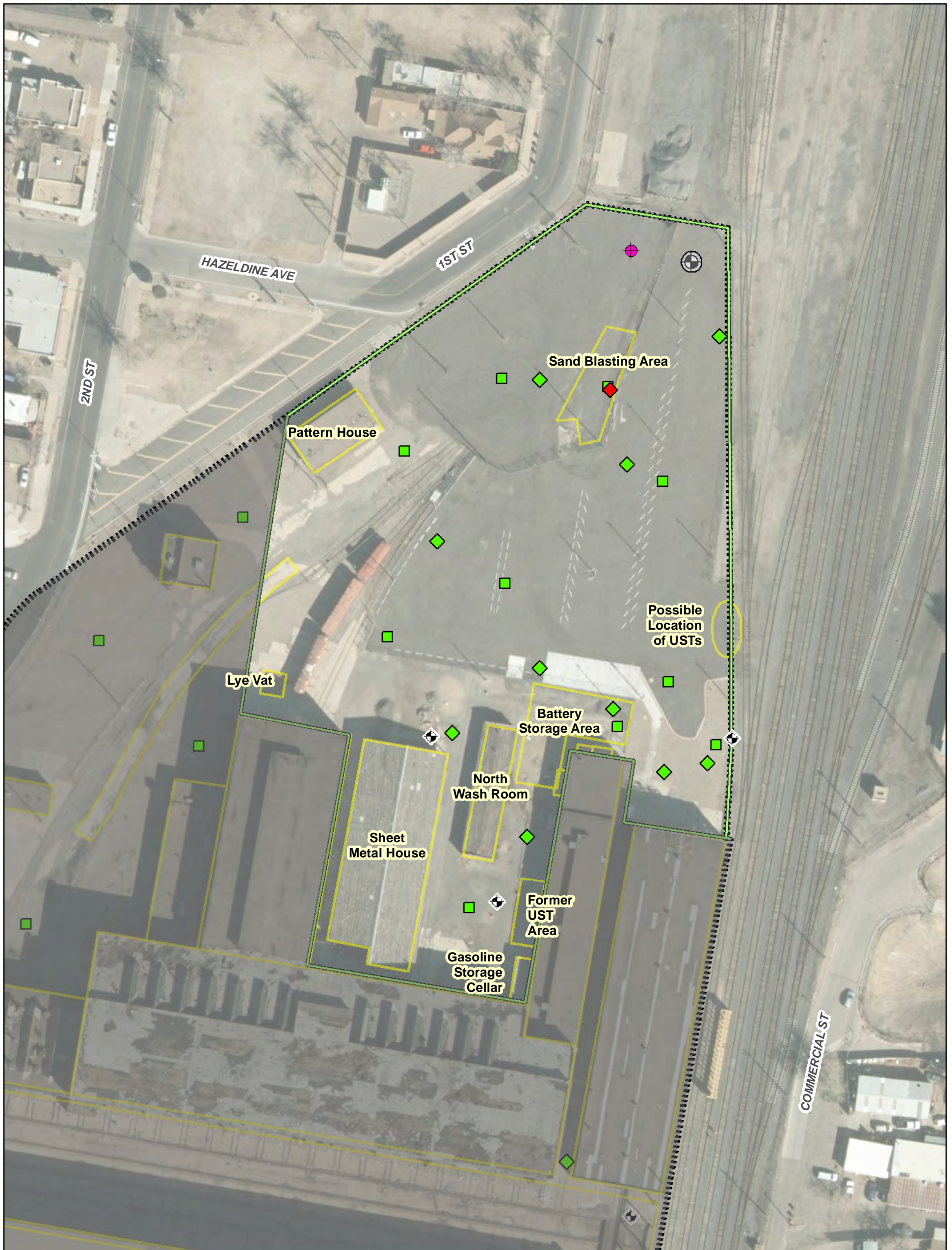
Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
 SSL: Soil Screening Levels (NMED, 2015)



**Figure 3b**  
 Residential SSL Exceedances  
 (0-10 ft bgs), Arsenic  
 Additional Characterization,  
 Voluntary Remediation Program Activities,  
 Albuquerque Rail Yards, Albuquerque,  
 Bernalillo County, New Mexico



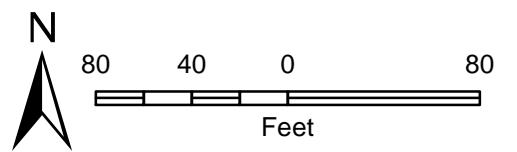




**Legend**

- |                         |   |                    |
|-------------------------|---|--------------------|
| <b>SSL Exceedance</b>   | 2016 Soil Boring - Soil Sample >10 ft bgs | Parcel 10 Boundary |
| Surface Soil            | Monitoring Well                           | Property Boundary  |
| <b>Detect below SSL</b> | Soil Boring                               |                    |
| Surface Soil            | Monitoring Well; not located              |                    |

Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
 SSL: Soil Screening Levels (NMED, 2015)



**Figure 3c**  
 Residential SSL Exceedances  
 (0-10 ft bgs), Chromium  
 Additional Characterization,  
 Voluntary Remediation Program Activities,  
 Albuquerque Rail Yards, Albuquerque,  
 Bernalillo County, New Mexico

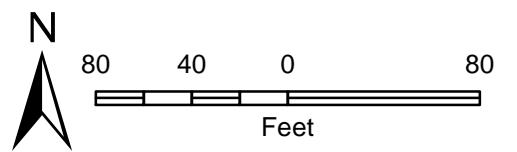




**Legend**

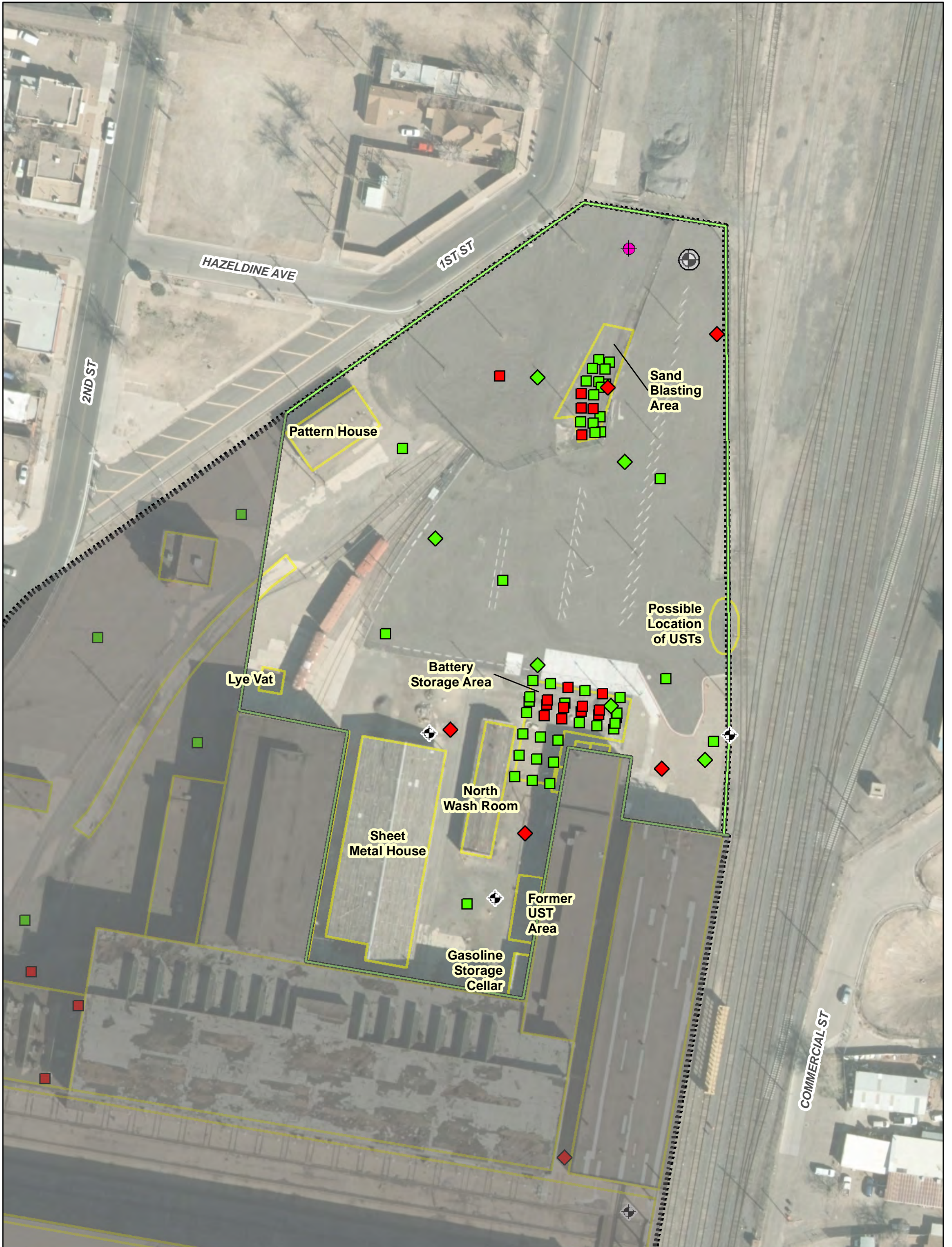
- |                         |   |                    |
|-------------------------|---|--------------------|
| <b>SSL Exceedance</b>   | 2016 Soil Boring - Soil Sample >10 ft bgs | Parcel 10 Boundary |
| Surface Soil            | Monitoring Well                           | Property Boundary  |
| <b>Detect below SSL</b> | Soil Boring                               |                    |
| Surface Soil            | Monitoring Well; not located              |                    |

Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
 SSL: Soil Screening Levels (NMED, 2015)



**Figure 3d**  
 Residential SSL Exceedances  
 (0-10 ft bgs), Iron  
 Additional Characterization,  
 Voluntary Remediation Program Activities,  
 Albuquerque Rail Yards, Albuquerque,  
 Bernalillo County, New Mexico

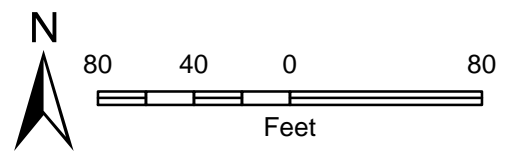




**Legend**

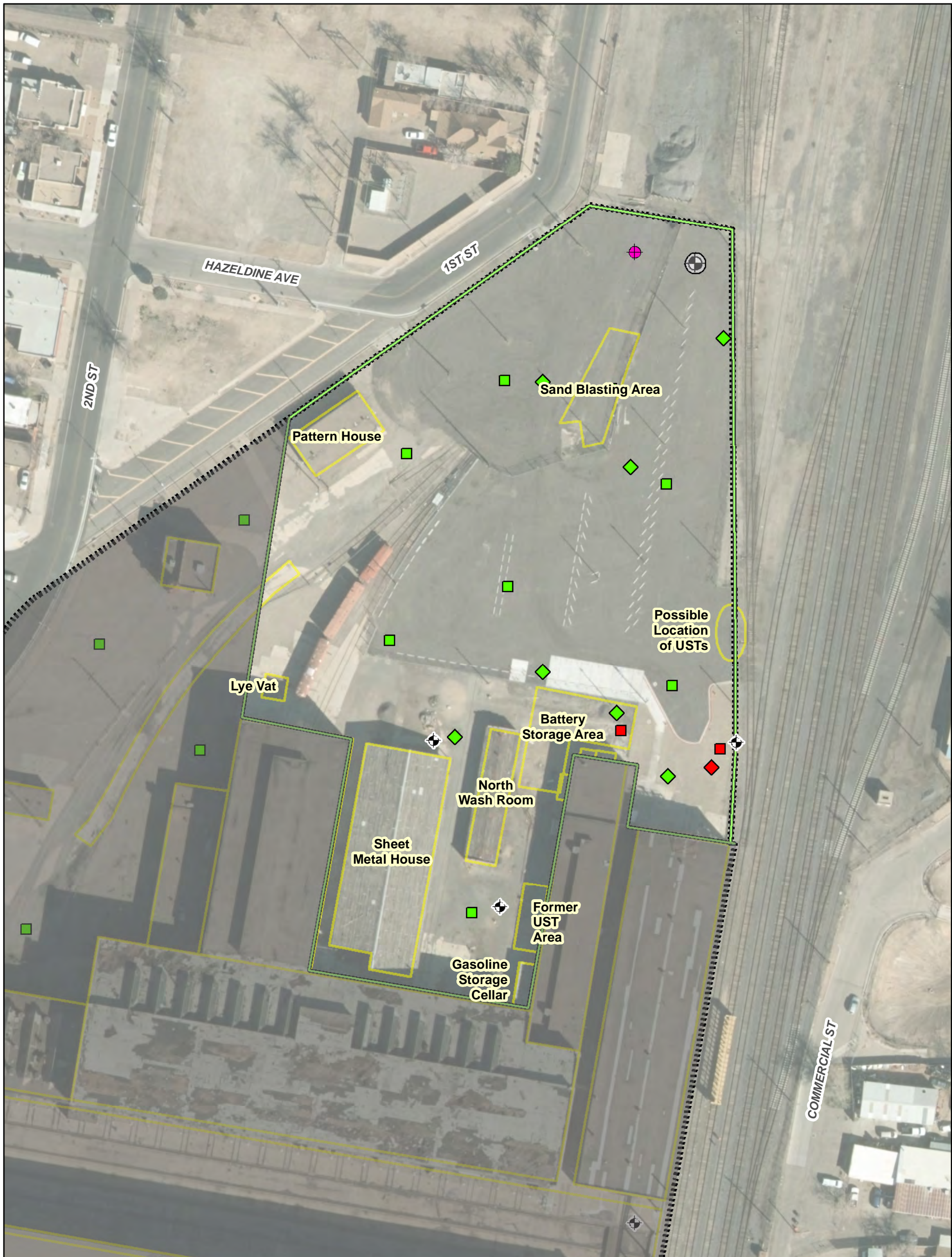
- |                         |   |                    |
|-------------------------|---|--------------------|
| <b>SSL Exceedance</b>   | 2016 Soil Boring - Soil Sample >10 ft bgs | Parcel 10 Boundary |
| Soil Boring             | Monitoring Well                           | Property Boundary  |
| Surface Soil            | Monitoring Well; not located              |                    |
| <b>Detect below SSL</b> |   |                    |
| Soil Boring             |   |                    |
| Surface Soil            |   |                    |

Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
 SSL: Soil Screening Levels (NMED, 2015)



**Figure 3e**  
 Residential SSL Exceedances  
 (0-10 ft bgs), Lead  
 Additional Characterization,  
 Voluntary Remediation Program Activities,  
 Albuquerque Rail Yards, Albuquerque,  
 Bernalillo County, New Mexico





**Legend**

**SSL Exceedance**

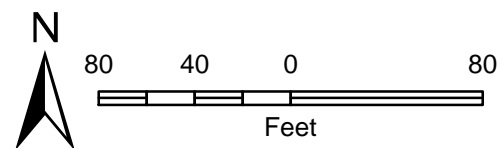
- Soil Boring
- ◆ Surface Soil
- Detect below SSL**
- Soil Boring
- ◆ Surface Soil

- 2016 Soil Boring - Soil Sample >10 ft bgs

- ⊕ Monitoring Well

- ⊕ Monitoring Well; not located

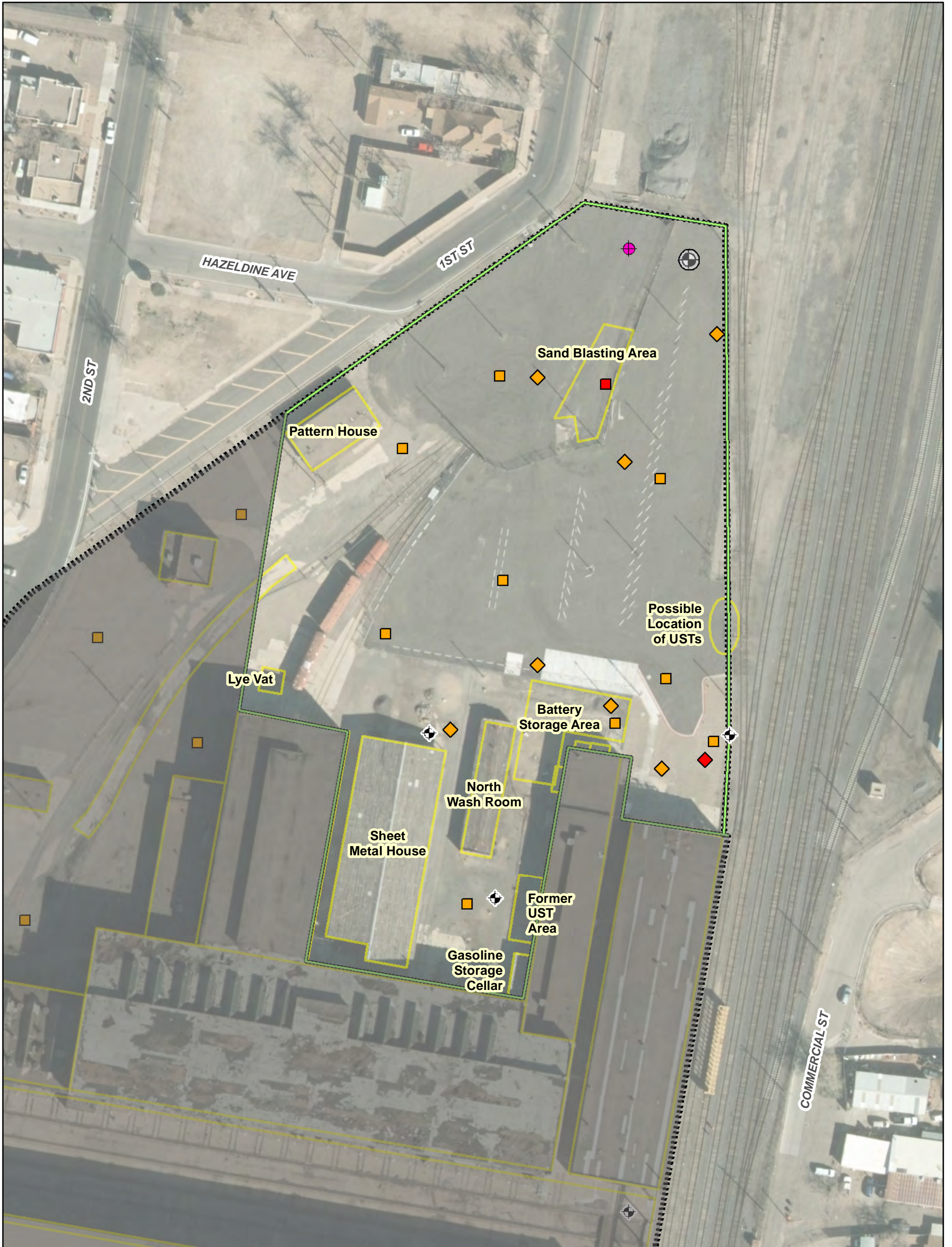
- Parcel 10 Boundary
- Property Boundary



Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
 SSL: Soil Screening Levels (NMED, 2015)

**Figure 3f**  
 Construction Worker SSL Exceedances  
 (0-10 ft bgs), Manganese  
 Additional Characterization,  
 Voluntary Remediation Program Activities,  
 Albuquerque Rail Yards, Albuquerque,  
 Bernalillo County, New Mexico





**SSL Exceedance**

■ Soil Boring

◆ Surface Soil

**Detect below SSL**

■ Soil Boring

◆ Surface Soil

**Non-Detect**

■ Soil Boring

◆ Surface Soil; Subslab

**Legend**

● 2016 Soil Boring - Soil Sample >10 ft bgs

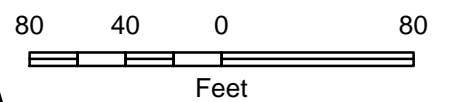
⊕ Monitoring Well

⊕ Monitoring Well; not located

▭ Parcel 10 Boundary

▨ Property Boundary

Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
SSL: Soil Screening Levels (NMED, 2015)



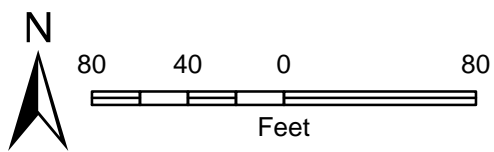
**Figure 3g**  
Residential SSL Exceedances  
(0-10 ft bgs), Thallium  
Additional Characterization,  
Voluntary Remediation Program Activities,  
Albuquerque Rail Yards, Albuquerque,  
Bernalillo County, New Mexico





**Legend**

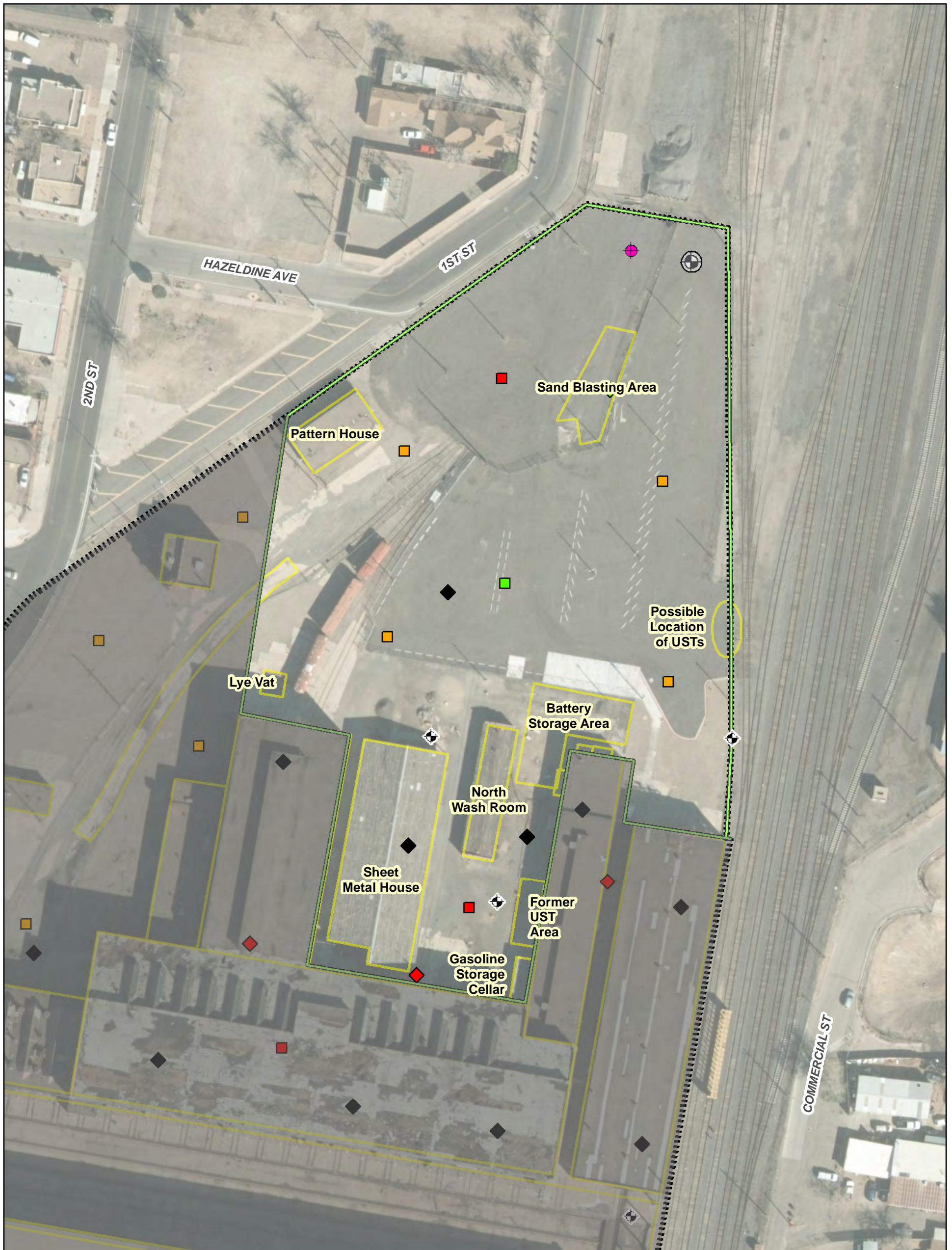
- |                         |   |                    |
|-------------------------|---|--------------------|
| <b>SSL Exceedance</b>   | 2016 Soil Boring - Soil Sample >10 ft bgs | Parcel 10 Boundary |
| Soil Boring             | Monitoring Well                           | Property Boundary  |
| <b>Detect below SSL</b> | Soil Boring                               |                    |
| Surface Soil            | Monitoring Well; not located              |                    |
| <b>Non-Detect</b>       |   |                    |
| Soil Boring             |   |                    |



Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
 SSL: Soil Screening Levels (NMED, 2015)

**Figure 4a**  
 Residential SSL Exceedances  
 (0-10 ft bgs), Benzo(a)anthracene  
 Additional Characterization,  
 Voluntary Remediation Program Activities,  
 Albuquerque Rail Yards, Albuquerque,  
 Bernalillo County, New Mexico

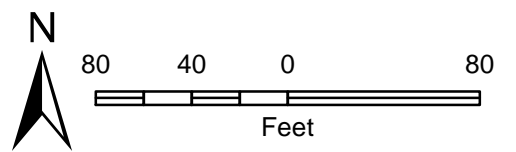




**Legend**

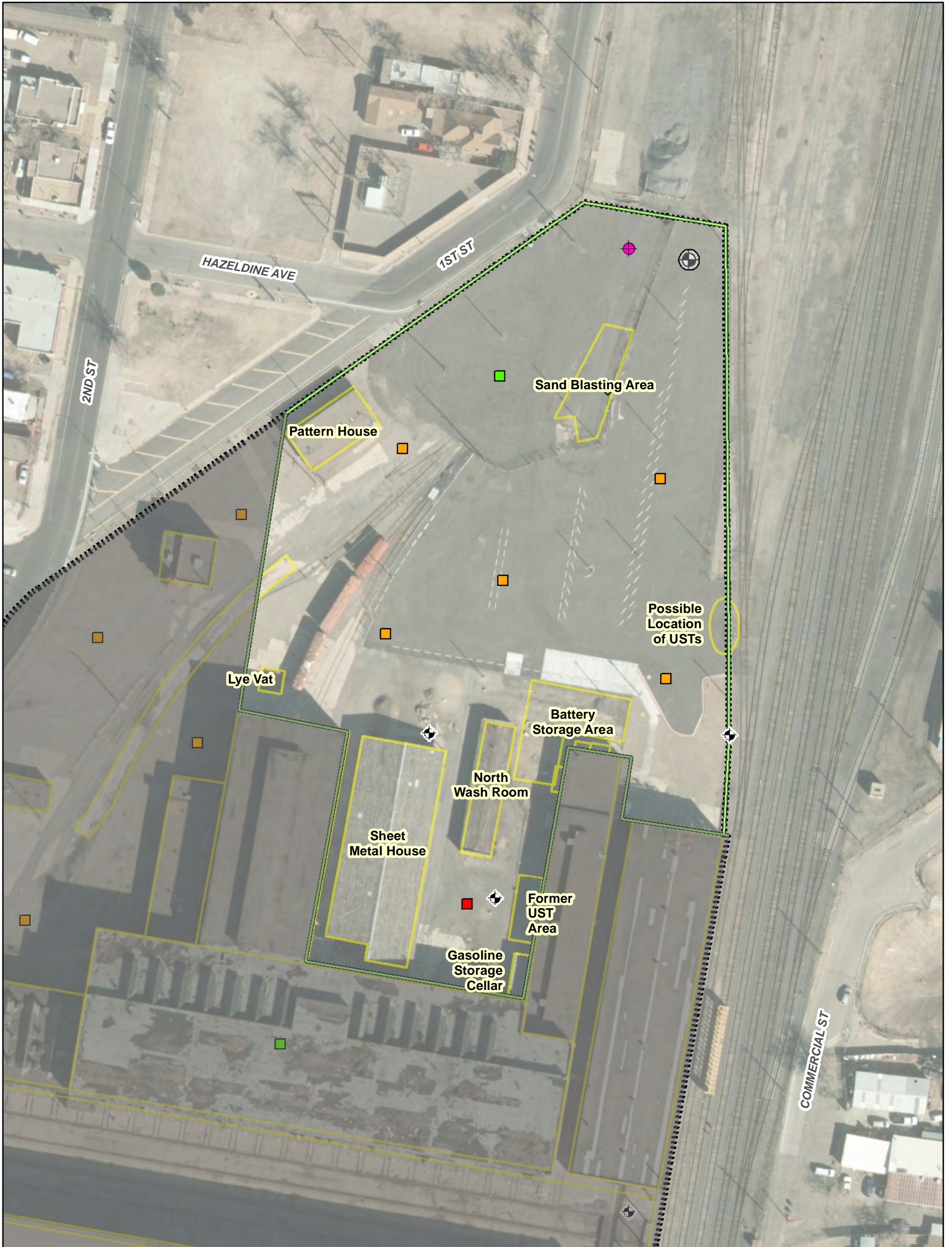
- |                         |  |                                |
|-------------------------|--|--------------------------------|
| <b>SSL Exceedance</b>   | <b>Non-Detect</b>                              | ⊕ Monitoring Well              |
| ■ Soil Boring           | ■ Soil Boring                                  | ⊕ Monitoring Well; not located |
| ◆ Surface Soil          | <b>Non-Detect; Detection Limit exceeds SSL</b> | ▭ Parcel 10 Boundary           |
| <b>Detect below SSL</b> | ◆ Surface Soil                                 | ▨ Property Boundary            |
| ■ Soil Boring           | ⊕ 2016 Soil Boring - Soil Sample >10 ft bgs    |                                |
| ◆ Surface Soil          |  |                                |

Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
 SSL: Soil Screening Levels (NMED, 2015)



**Figure 4b**  
 Residential SSL Exceedances  
 (0-10 ft bgs), Benzo(a)pyrene  
 Additional Characterization,  
 Voluntary Remediation Program Activities,  
 Albuquerque Rail Yards, Albuquerque,  
 Bernalillo County, New Mexico

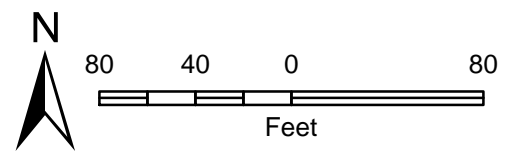




**Legend**

- |                         |   |                    |
|-------------------------|---|--------------------|
| <b>SSL Exceedance</b>   | 2016 Soil Boring - Soil Sample >10 ft bgs | Parcel 10 Boundary |
| Soil Boring             | Monitoring Well                           | Property Boundary  |
| <b>Detect below SSL</b> | Soil Boring                               |                    |
| Surface Soil            | Monitoring Well; not located              |                    |
| <b>Non-Detect</b>       |   |                    |
| Soil Boring             |   |                    |

Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
 SSL: Soil Screening Levels (NMED, 2015)



**Figure 4c**  
 Residential SSL Exceedances  
 (0-10 ft bgs), Benzo(b)fluoranthene  
 Additional Characterization,  
 Voluntary Remediation Program Activities,  
 Albuquerque Rail Yards, Albuquerque,  
 Bernalillo County, New Mexico

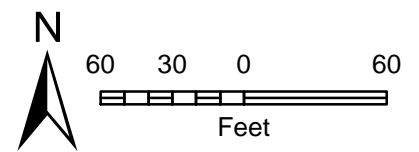




- SSL Exceedance**  
 ■ Soil Boring
- Detect below SSL**  
 ■ Soil Boring  
 ◆ Surface Soil
- Non-Detect**  
 ■ Soil Boring

- Legend**
- 2016 Soil Boring - Soil Sample >10 ft bgs
  - ⊕ Monitoring Well
  - ⊕ Monitoring Well; not located

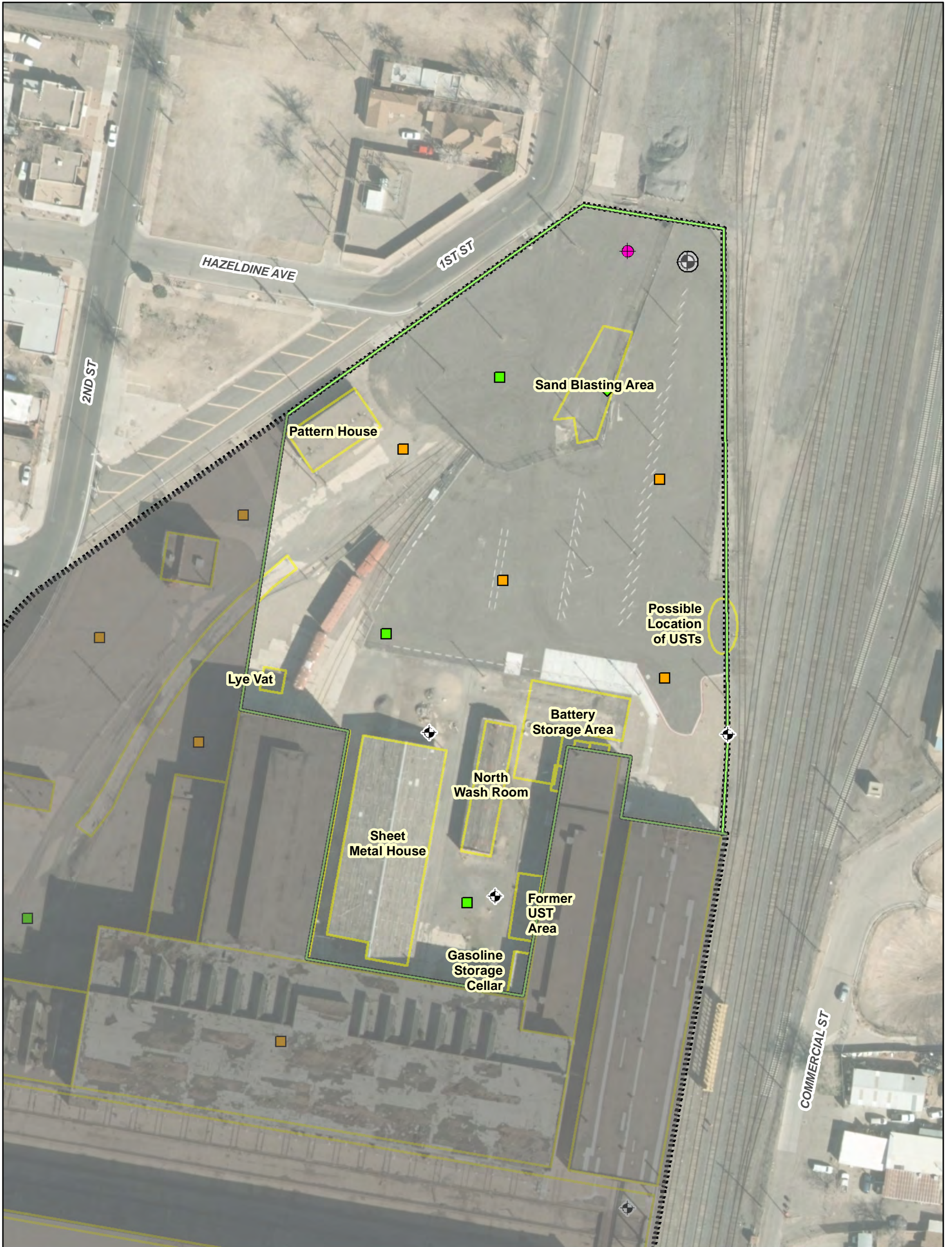
- ▭ Parcel 10 Boundary
- ▭ Property Boundary



Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
 SSL: Soil Screening Levels (NMED, 2015)

**Figure 4d**  
 Residential SSL Exceedances (0-10 ft bgs), Dibenzo(a,h)anthracene  
 Additional Characterization, Voluntary Remediation Program Activities, Albuquerque Rail Yards, Albuquerque, Bernalillo County, New Mexico

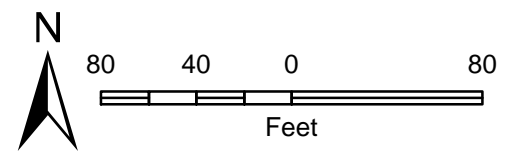




**Legend**

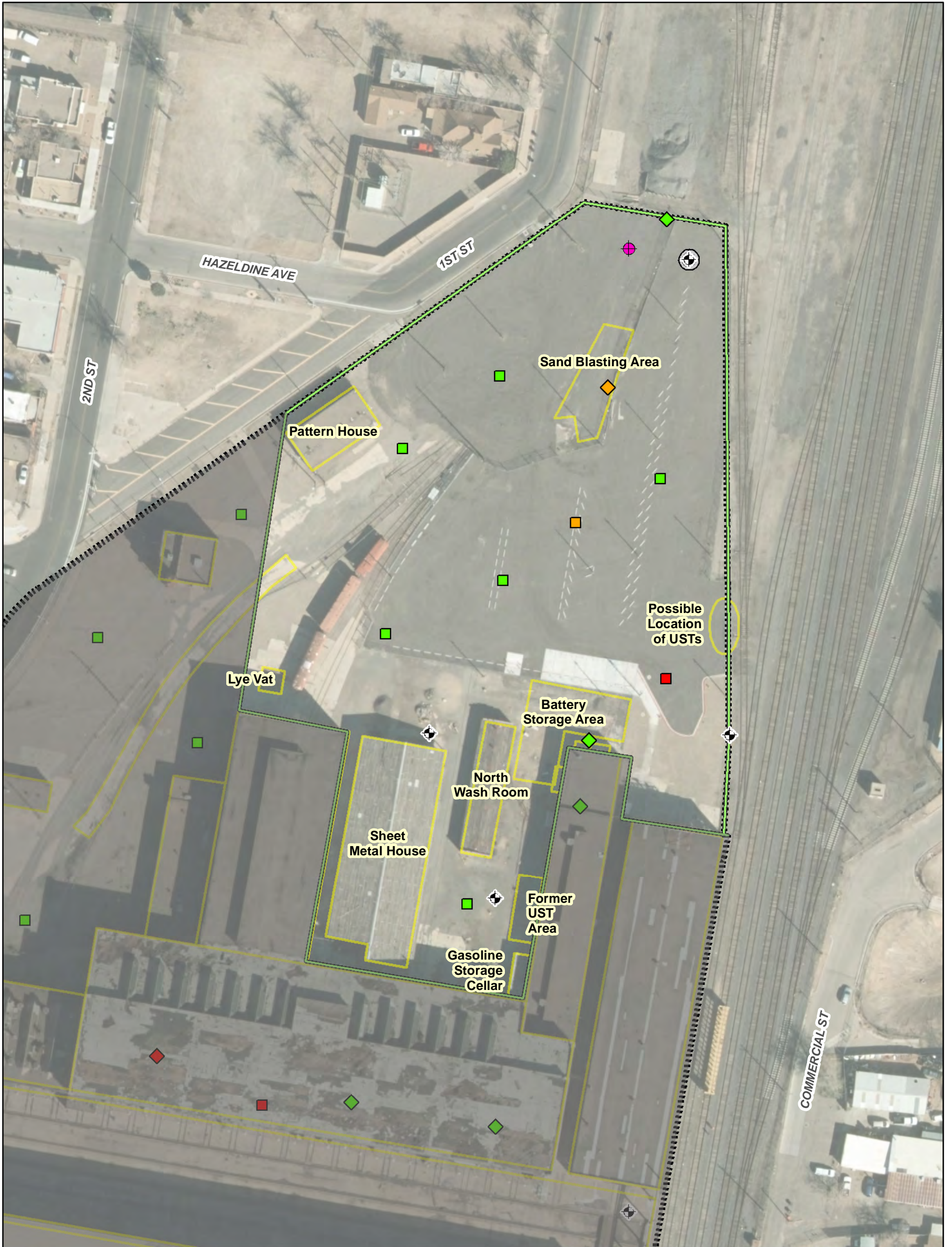
- |                         |   |                    |
|-------------------------|---|--------------------|
| <b>Detect below SSL</b> | 2016 Soil Boring - Soil Sample >10 ft bgs | Parcel 10 Boundary |
| Surface Soil            | Monitoring Well                           | Property Boundary  |
| <b>Non-Detect</b>       | Monitoring Well; not located              |                    |
| Soil Boring             |   |                    |

Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
 SSL: Soil Screening Levels (NMED, 2015)



**Figure 4e**  
 Residential SSL Exceedances  
 (0-10 ft bgs), Indeno(1,2,3-cd)pyrene  
 Additional Characterization,  
 Voluntary Remediation Program Activities,  
 Albuquerque Rail Yards, Albuquerque,  
 Bernalillo County, New Mexico

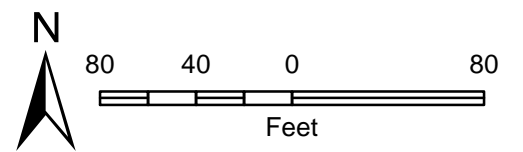




**Legend**

- |                         |                         |   |
|-------------------------|-------------------------|---|
| <b>SSL Exceedance</b>   | <b>Non-Detect</b>       | ● 2016 Soil Boring - Soil Sample >10 ft bgs |
| ■ Soil Boring           | ■ Soil Boring           | ⊕ Monitoring Well; not located              |
| ◆ Surface Soil          | ◆ Surface Soil; Subslab | ⊕ Monitoring Well                           |
| <b>Detect below SSL</b> | ▭ Parcel 9 Boundary     |   |
| ■ Soil Boring           | ▨ Property Boundary     |   |
| ◆ Surface Soil          |                         |   |

Note: TPH DRO + MRO is the summation of TPH DRO and TPH MRO, if non-detect than the laboratory reporting limit was used. Older TPH results from are reported as Total TPH. Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs). SSL: Soil Screening Levels (NMED, 2015)



**Figure 5**  
**Residential SSL Exceedances**  
 (0-10 ft bgs), TPH DRO + MRO, TPH  
 Additional Characterization,  
 Voluntary Remediation Program Activities,  
 Albuquerque Rail Yards, Albuquerque,  
 Bernalillo County, New Mexico





**Legend**

**VISL Exceedence**

- Soil Gas Sample
- Sub-Slab Soil Vapor Sample

**Non-Detect**

- Soil Gas Sample
- Sub-Slab Soil Vapor Sample

**Detect below VISL**

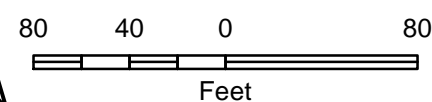
- Sub-Slab Soil Vapor Sample

⊕ Monitoring Well

⊕ Monitoring Well; not located

▭ Parcel 10 Boundary

▨ Property Boundary

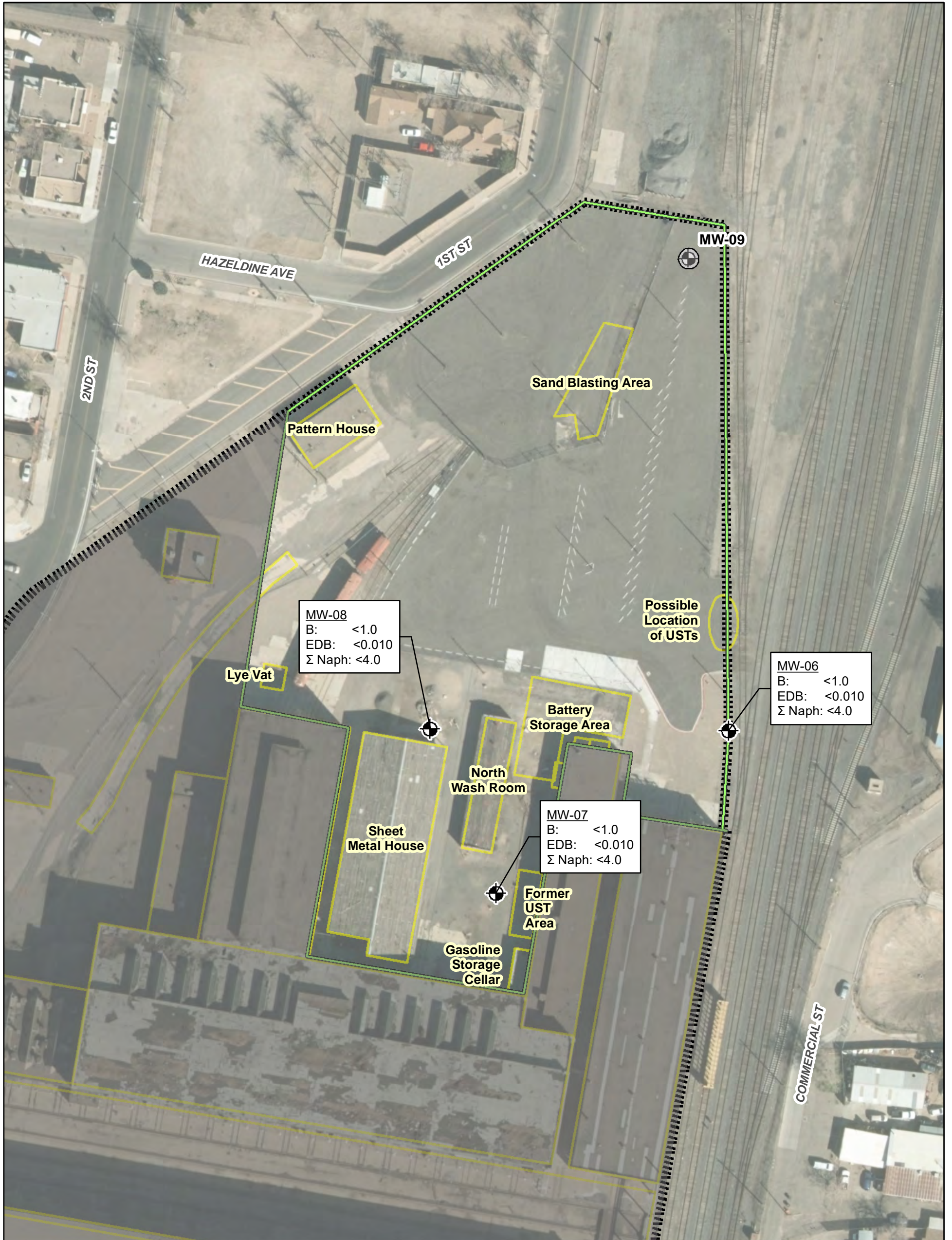


**Figure 6**  
 Naphthalene Soil Gas and Sub-Slab  
 Soil Vapor Residential VISL Exceedence  
 Additional Characterization,  
 Voluntary Remediation Program Activities,  
 Albuquerque Rail Yards, Albuquerque,  
 Bernalillo County, New Mexico

Note: VISL: Vapor Intrusion Screening Levels (NMED, 2015)







**MW-08**  
 B: <1.0  
 EDB: <0.010  
 Σ Naph: <4.0

**MW-06**  
 B: <1.0  
 EDB: <0.010  
 Σ Naph: <4.0

**MW-07**  
 B: <1.0  
 EDB: <0.010  
 Σ Naph: <4.0

**Legend**



Monitoring Well



Property Boundary



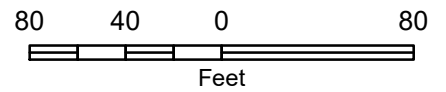
Monitoring Well; not located



Parcel 10 Boundary

B= Benzene  
 EDB = 1,2-dibromoethane  
 Σ Naph = Naphthalene + 1, Methyl-naphthalene  
 + 2, Methyl-naphthalene

**Well ID**  
 Analyte: Results in µg/L (micrograms per liter),  
**Red/Bold** indicates value or laboratory reporting  
 limit in excess of the NMWQCC standards or  
 Petroleum Storage Tank Bureau Action Level.



**Figure 7**  
 Distribution of Dissolved-Phase Contaminants,  
 November 4, 2016  
 Additional Characterization,  
 Voluntary Remediation Program Activities,  
 Albuquerque Rail Yards, Albuquerque,  
 Bernalillo County, New Mexico



Source(s): Aerial – BERNCO GIS website, dated 2014.



## **TABLES**

**TABLE 1**  
**Laboratory Analytical Results - Soil, Organics**  
**Parcel 10 Additional Site Characterization Report**  
**City of Albuquerque Rail Yards, Albuquerque, New Mexico**

Soil Boring ID	Collection Date	Sample Depth (ft bgs)	PID (ppmv)	PAHs <sup>1</sup>					VOCs <sup>2</sup>	Organics <sup>3</sup>		
				Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Dibenzo(a,h)anthracene	Indo(1,2,3-cd)pyrene	Naphthalene	Naphthalene	TPH DRO/ MRO <sup>4</sup>	TPH GRO
SSLs <sup>a</sup>	Residential		NE	1.53	0.153	1.53	0.153	1.53	49.7	49.7	1000 <sup>b</sup>	NE
	Industrial/Occupational		NE	32.3	3.23	32.3	3.23	32.3	241	241	3000 <sup>b</sup>	NE
	Construction Worker		NE	240	24.0	240	24.0	240	159	159	NE	NE
SB-21 (0-5)	10/27/2016	0-5	5.3	< 0.0099	< 0.0099	< 0.0099	< 0.0099	< 0.0099	< 0.25	< 0.061	< 49	< 3.0
SB-22 (3-6)	10/27/2016	3-6	2.1	< 0.97	< 0.039	< 0.97	< 0.049	< 0.97	< 24	< 0.072	<b>5700</b>	< 3.6
SB-23 (0-5)	10/27/2016	0-5	0.0	< 0.49	0.098 J	< 0.49	< 0.025	< 0.49	< 12	< 0.074	740	< 3.7
SB-24 (0-5)	10/27/2016	0-5	2.1	< 0.10	< 0.10	< 0.10	< 0.10	0.29	< 2.5	< 0.053	99	< 2.6
SB-25 (0-3)	10/27/2016	0-3	0.4	0.89 J	<b>0.54 J</b>	0.69 J	< 0.099	1.3 J	< 49	< 0.078	450	< 3.9
SB-26 (10-15)	10/27/2016	10-15	1.8	< 0.010	< 0.010	< 0.010	< 0.010	< 0.010	< 0.25	< 0.057	< 49	< 2.9
SB-27 (0-5)	10/27/2016	0-5	1.4	< 0.0099	< 0.0099	< 0.0099	< 0.0099	< 0.0099	< 0.25	< 0.059	< 48	< 3.0
SB-32 (0-3)	10/27/2016	0-3	0.0	<b>6.5</b>	<b>7.1</b>	<b>4.4</b>	<b>0.40 J</b>	1.5	< 25	< 0.061	93	< 3.0

**Notes:**

All laboratory results reported in milligrams per kilogram (mg/kg) unless otherwise noted

**Bold red text** indicates values or RLs in excess of one of the NMED SSLs

**Bold black text** indicates PID values over 100 ppm

For select samples the RL did not meet Residential SSLs; therefore, analytical laboratory reported down to MDL

a = New Mexico Environment Department SSLs (NMED, 2015)

b = Soil screening levels from Table 6-2 (NMED, 2015)

1 = Analyzed by EPA Method 8310

2 = Analyzed by EPA Method 8260B; includes in-field methanol extraction

3 = Analyzed by EPA Method 8015B; GRO testing includes in-field methanol extraction detections, values listed as "<" RL in the laboratory report are assumed to be 0

**TABLE 1**  
**Laboratory Analytical Results - Soil, Organics**  
**Parcel 10 Additional Site Characterization Report**  
**City of Albuquerque Rail Yards, Albuquerque, New Mexico**

Soil Boring ID	Collection Date	Sample Depth (ft bgs)	PID (ppmv)	PAHs <sup>1</sup>						VOCs <sup>2</sup>	Organics <sup>3</sup>	
				Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Dibenzo(a,h)anthracene	Indo(1,2,3-cd)pyrene	Naphthalene	Naphthalene	TPH DRO/ MRO <sup>4</sup>	TPH GRO
SSLs <sup>a</sup>	Residential		NE	1.53	0.153	1.53	0.153	1.53	49.7	49.7	1000 <sup>b</sup>	NE
	Industrial/Occupational		NE	32.3	3.23	32.3	3.23	32.3	241	241	3000 <sup>b</sup>	NE
	Construction Worker		NE	240	24.0	240	24.0	240	159	159	NE	NE

bgs = below ground surface

DRO = diesel range organics

GRO = gasoline range organics

EPA = U.S. Environmental Protection Agency

ft = feet

J = Estimated value below the RL

MDL = method detection limit

MRO = motor oil range organics

NE = None Established

NMED = New Mexico Environment Department

PAH = polycyclic aromatic hydrocarbon

PID = photoionization detector

ppmv = parts per million by volume

RL = reporting detection limit

SSLs = soil screening levels; Risk Assessment Guidance for

Investigations and Remediation, July 2015

TPH = total petroleum hydrocarbons

VOCs = volatile organic compounds

**TABLE 2**  
**Laboratory Analytical Results - Soil, Inorganics**  
Parcel 10 Additional Site Characterization Report  
City of Albuquerque Rail Yards, Albuquerque, New Mexico

Soil Boring ID	Collection Date	Sample Depth Interval (ft bgs)	Inorganics <sup>1</sup>						
			Antimony	Arsenic	Chromium	Iron	Lead	Manganese	Thallium
SSLs <sup>a</sup>	Residential		31.3	4.25	96.6	54,800	400	10500	0.782
	Industrial/Occupational		519	21.5	505	908,000	800	160,000	13.0
	Construction Worker		142	57.4	134	248,000	800	464	3.54
SB-21 (0-5)	10/27/2016	0-5	< 2.4	3.5	6.9	11,000	1.7	410	< 0.74
SB-22 (3-6)	10/27/2016	3-6	< 2.5	3.8	7.2	11,000	1.7	320	< 0.77
SB-23 (0-5)	10/27/2016	0-5	< 2.5	< 2.5	4.4	11,000	21	190	< 0.77
SB-24 (0-5)	10/27/2016	0-5	< 2.5	2.9	4.1	14,000	28	230	< 0.77
SB-25 (0-3)	10/27/2016	0-3	<b>240</b>	<b>18</b>	4.5	15,000	<b>3900</b>	130	< 0.76
SB-26 (10-15)	10/27/2016	10-15	< 2.4	< 2.4	3	3900	1.6	20	< 0.75
SB-27 (0-5)	10/27/2016	0-5	< 2.5	< 2.5	3.6	8700	1.9	130	< 0.76
SB-32 (0-3)	10/27/2016	0-3	3.6	<b>17</b>	12	18,000	210	390	< 0.74

**Notes:**

All laboratory results reported in milligrams per kilogram (mg/kg) unless otherwise noted

For select samples the RL did not meet Residential SSLs; therefore analytical laboratory reported down to MDL

**Bold** red text indicates values or RLs in excess of the NMED SSLs

a = New Mexico Environment Department SSLs (NMED, 2015)

1 = Analyzed by EPA Method 6010B

bgs = below ground surface

EPA = U.S. Environmental Protection Agency

ft = feet

J = Estimated value below the RL

MDL = method detection limit

NMED = New Mexico Environment Department

RL = reporting detection limit

SSLs = soil screening levels; Risk Assessment

Guidance for Investigations and Remediation, July 2015

**TABLE 3**  
**Laboratory Analytical Results - Soil Vapor**  
**Parcel 10 Additional Site Characterization Report**  
**City of Albuquerque Rail Yards, Albuquerque, New Mexico**

Soil Boring ID	Soil Vapor ID	Collection Date	VOCs <sup>1</sup>														
			1,1,1-Trichloroethane	1,2,4-Trimethylbenzene	1,3,5-Trimethylbenzene	1,3-Dichlorobenzene	1,4-Dioxane	2-Methylnaphthalene	Benzene	Carbon Tetrachloride	Ethylbenzene	Naphthalene	o-Xylene	p&m-Xylene	Tetrachloroethene	Toluene	EDB
VISL	NMED VISLs <sup>a</sup>		52,100	NE	NE	NE	NE	NE	36	46.8	112	8.26	1040	1040	417	52,100	0.468
	EPA VISL <sup>b</sup>		170,000	240	NE	NE	190	NE	120	160	370	28	3500	3500	1400	170,000	1.6
SB-21	SV-21A	10/27/2016	<10	<10	<10	949.69 E	14.72	<10	<10	<10	<10	<2.5	<10	<10	<10	36.29	<10
SB-23	SV-23A	10/27/2016	<10	<10	<10	1076.85 E	15.2	<10	<10	<10	<10	<2.5	<10	<10	<10	28.15	<10
SB-27	SV-27A	10/27/2016	<10	<10	<10	876.94 E	<10	<10	<10	<10	<10	<2.5	<10	<10	<10	45.91	<10
SB-32	SV-32A	10/27/2016	<10	<10	<10	<10	13.64	<10	<10	<10	<10	<b>12.38</b>	<10	22.89	<10	48.76	<10

**Notes:**

All laboratory results reported in micrograms per cubic meter (µg/m<sup>3</sup>) unless otherwise noted

**Bold** red text indicates values or RLs in excess of one of the VISLs

For select samples the RL did not meet NMED or EPA VISL; therefore, analytical laboratory reported down to MDL

a = New Mexico Environment Department (NMED) VISLs from Table A-3 (NMED, 2015) unless otherwise noted

b = Calculated from EPA VISL Calculator (EPA, 2016) because the VISL was not available from NMED

1 = Analyzed by EPA Method TO-17

EPA = U.S. Environmental Protection Agency

E = Measurement exceeded upper calibration range of instrument

MDL = method detection limit

NE = None Established

NMED = New Mexico Environment Department

RL = Reporting Limit

VISL = Vapor Intrusion Screening Level

VOCs = volatile organic compounds



**TABLE 5**  
**Laboratory Analytical Results - Groundwater**  
**Parcel 10 Additional Site Characterization Report**  
**City of Albuquerque Rail Yards, Albuquerque, New Mexico**

Sample ID	Date	Organics (µg/L)						
		Benzene <sup>1</sup>	Toluene <sup>1</sup>	Ethylbenzene <sup>1</sup>	Total Xylenes <sup>1</sup>	EDB <sup>2</sup>	Total Naphthalenes <sup>3,4</sup>	Total Naphthalenes <sup>1,4</sup>
NMWQCC Standard		10	750	750	620	0.1	30	30
MW-6	7/29/1996	<1.0	<1.0	<1.0	<5	<5	<2.5	<4.0
	11/1/1996	<1.0	<1.0	<1.0	<5	<5	<2.5	<4.0
	2/6/1997	<1.0	<1.0	<1.0	<5	<5	<2.5	<4.0
	6/11/1998	<1.0	<1.0	<1.0	-	-	-	<4.0
	9/15/1998	<1.0	<1.0	<1.0	-	-	-	<4.0
	12/21/1998	<1.0	<1.0	<1.0	-	-	-	<4.0
	4/29/1999	<1.0	<1.0	<1.0	-	-	-	<4.0
	12/2/1999	<1.0	<1.0	<1.0	<1	<1	<2.5	<4.0
	10/16/2005	<1.0	<1.0	<1.0	<1.5	-	0.30	<4.0
	2/10/2010	<1.0	<1.0	<1.0	-	<0.18	-	<4.0
11/4/2016	<1.0	<1.0	<1.0	<1.5	<0.010	-	<4.0	
MW-7	6/11/1998	<1.0	<1.0	<1.0	-	-	-	<4.0
	10/16/2005	<1.0	<1.0	<1.0	<1.5	-	0.32	<4.0
	9/4/2010	<1.0	<1.0	<1.0	<0.54	-	<0.95	<4.0
	11/4/2016	<1.0	<1.0	<1.0	<1.5	<0.010	-	<4.0
MW-8	6/11/1998	<1.0	<1.0	<1.0	-	-	-	<4.0
	10/16/2005	<1.0	<1.0	<1.0	<1.5	-	0.3	<4.0
	2/11/2010	<1.0	<1.0	<1.0	-	<0.18	-	<4.0
	11/4/2016	<1.0	<1.0	<1.0	<1.5	<0.010	-	<4.0
MW-9	4/19/2000	<1	<1	<1	<1	<1	-	-
	10/22/2005	<1	-	-	-	-	-	-
	2/10/2010	<0.16	<0.17	<0.16	-	<0.18	-	-
	11/4/2016	No sample collected. Could not locate well.						

**Notes:**

**Bold**, red font indicates values or RLs in excess of the NMWQCC Standard

<sup>1</sup> = Analyzed by EPA Method 8260B.

<sup>2</sup> = Analyzed by EPA Method 504.1 or Method 8260B.

<sup>3</sup> = Analyzed by EPA Method 8270

<sup>4</sup> = Total naphthalenes includes the sum of naphthalene, 1-methylnaphthalene, and 2-methylnaphthalene. RL for Total naphthalenes = highest RL for individual compounds; when summing detections, values listed as "<" RL in the laboratory report are assumed to be 0.

EDB = 1,2-dibromoethane

µg/L = microgram(s) per liter

NMWQCC = New Mexico Water Quality Control Commission

NMWQCC Standard = Groundwater Standards as defined by the State of New Mexico Water Quality Control Commission (NMWQCC, 2002)

RL = laboratory reporting limit

**Appendix A**  
**Field Notes, Field Forms, and Boring Logs**

Site Location: Co A Airfield Drilling Co: Vista Boring No.: SB-21  
 Drilling Method: Direct Push Driller: J. Fajdel Depth to Water (ft): \_\_\_\_\_  
 Drilling Equipment: Geoprobe Northing: \_\_\_\_\_ Easting: \_\_\_\_\_ Total Depth (ft): 15 Date: 10/27/12 Drilling Start: 0810  
 Borehole Diameter: \_\_\_\_\_ Date: \_\_\_\_\_ Drilling Finish: 0815

Split Spoon Length: <u>5</u> Coord. System															
Depth in Feet (BLS)	USCS	Descriptor	Soil Type	Color	Particle Size	Grading	Angularity/shape	Density (sand or gravel)	Plasticity	Moisture	Odor	PID/FID	% Rec.	Sample No./Int.	Comments
<u>0-4</u>		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	<u>10R</u> <u>3/1</u> <u>dark grey</u>	very fine <u>fine</u> medium <u>coarse</u>	poor <u>well</u>	angular subangular subrounded rounded	very loose <u>loose</u> dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon	<u>0-5</u> <u>53</u>	<u>85</u> <u>80</u>		<u>SB-21(0-5)</u> <u>@OSIS</u>
<u>4-4.5</u> <u>4.5</u>		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	<u>5/3</u> <u>tan</u>	very fine fine medium coarse	poor well	angular subangular subrounded rounded	very loose loose dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon				
<u>4.5-11.9</u> <u>11.9</u>		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	<u>5/3</u> <u>tan</u>	very fine <u>fine</u> medium coarse	poor well	angular subangular subrounded rounded	very loose loose dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon		<u>85</u> <u>85</u>		
<u>11.9-12.5</u> <u>12.5</u>		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	<u>5/3</u> <u>tan</u>	very fine fine medium coarse	poor well	angular subangular subrounded rounded	very loose loose dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon		<u>10-15</u> <u>10-15</u> <u>90</u>		

Sample Method: \_\_\_\_\_ Logger: LF  
soft plastic None  
clay g/l gray  
12.5  
15

Site Location: CoA Railway Drilling Co: Vista Boring No.: SB-22  
 Drilling Method: Direct Push Driller: J. Zaydel Date: 10/27/14 Drilling Start: 0830  
 Drilling Equipment: Casagrande Northing: \_\_\_\_\_ Easting: \_\_\_\_\_ Borehole Diameter: \_\_\_\_\_ Drilling Finish: 0833  
 Depth to Water (ft): \_\_\_\_\_ Total Depth (ft): 4

Sample Method: Split Spoon Length: 5 Coord. System \_\_\_\_\_

Depth in Feet (BLS)	USCS	Descriptor	Soil Type	Color	Particle Size	Grading	Angularity/shape	Density (sand or gravel)	Plasticity	Moisture	Odor	PID/ PID Rec.	% Rec.	Sample No./Int.	Comments
0-2		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	3/1	very fine fine medium coarse	poor well	angular subangular subrounded rounded	very loose loose dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon	0-3 1.2	80		
2-4		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	2/1	very fine fine medium coarse	poor well	angular subangular subrounded rounded	very loose loose dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon	3.6 2.1	80	SB-22 (3-4) @ 535	
4-6		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	4/3	very fine fine medium coarse	poor well	angular subangular subrounded rounded	very loose loose dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon		80		Slight HC odor
		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL		very fine fine medium coarse	poor well	angular subangular subrounded rounded	very loose loose dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon				

Site Location: CoA Parkway Drilling Co: Vista Geoscience Soil Boring Log  
 Drilling Method: Direc Push Driller: J. Zaydel  
 Drilling Equipment: Geoprobe Northing: \_\_\_\_\_ Easting: \_\_\_\_\_  
 Depth to Water (ft): \_\_\_\_\_ Boring No.: SB-23  
 Total Depth (ft): 15 Date: 10/27/11 Drilling Start: 0853  
 Borehole Diameter: \_\_\_\_\_ Date: \_\_\_\_\_ Drilling Finish: 0856

Sample Method:		Split Spoon Length: <u>5</u>										Coord. System			
Depth in Feet (BLS)	USCS	Descriptor	Soil Type	Color	Partial Size	Grading	Angularity/shape	Density	Plasticity	Moisture	Odor	PID/FID	% Rec.	Sample No./Int.	Comments
<u>0-4</u>		<u>SANDY</u> Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	<u>2/1</u>	very fine fine medium coarse	poor well	angular subangular subrounded rounded	(sand or gravel) very loose loose dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon	<u>0.5</u> <u>0.0</u>	<u>80</u>	<u>SB-23(0-5)</u> <u>0858</u>	
<u>4-5</u>		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	<u>4/3</u>	very fine fine medium coarse	poor well	angular subangular subrounded rounded	(sand or gravel) very loose loose dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon	<u>5.0</u> <u>2.0</u>	<u>80</u>		
<u>5-9</u> <u>11</u>		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	<u>6/4</u>	very fine fine medium coarse	poor well	angular subangular subrounded rounded	(sand or gravel) very loose loose dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon	<u>12.0</u> <u>6.0</u>	<u>80</u>		
<u>11-15</u>		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	<u>6/4</u>	very fine fine medium coarse	poor well	angular subangular subrounded rounded	(sand or gravel) very loose loose dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon		<u>80</u>		

Site Location: CoA Parkway Drilling Co: Vista Boring No.: SB-24  
 Drilling Method: Direct Push Driller: J. Fajdel Depth to Water (ft): \_\_\_\_\_  
 Drilling Equipment: Geoprobe Northing: \_\_\_\_\_ Easting: \_\_\_\_\_ Total Depth (ft): 4 Date: 10/27/14 Drilling Start: 0915  
 Borehole Diameter: \_\_\_\_\_ Date: \_\_\_\_\_ Drilling Finish: 0918

Split Spoon Length: <u>5</u> Coord. System															
Depth in Feet (BLS)	USCS	Descriptor	Soil Type	Color	Particle Size	Grading	Angularity/shape	Density	Plasticity	Moisture	Odor	PID/FID	% Rec.	Sample No./Int.	Comments
<u>0-2.5</u>		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	<u>10YK</u> <u>9/1</u> <u>d.</u> <u>gray</u>	very fine <u>fine</u> medium <u>coarse</u>	poor <u>well</u>	angular subangular subrounded rounded	(sand or gravel) very loose <u>loose</u> dense very dense (silt or clay) very soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	<u>none</u> organic hydrocarbon	<u>0-3</u> <u>2.1</u>	<u>0-5</u> <u>90</u>	<u>SB-24 (0-5)</u> <u>@0920</u>	
<u>2.5-3.5</u> <u>3.5</u>		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	<u>6/6</u> <u>brownish</u> <u>yellow</u>	very fine <u>fine</u> medium coarse	poor <u>well</u>	angular subangular subrounded rounded	(sand or gravel) very loose loose <u>dense</u> very dense (silt or clay) very soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	<u>none</u> organic hydrocarbon	<u>6-6</u> <u>100</u> <u>3-6</u> <u>0.0</u>			
<u>3.5-6</u>		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	<u>5/3</u> <u>10YR</u>	very fine <u>fine</u> medium coarse	poor <u>well</u>	angular subangular subrounded rounded	(sand or gravel) very loose loose <u>dense</u> very dense (silt or clay) very soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	<u>none</u> organic hydrocarbon				<u>some clay</u>
		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL		very fine fine medium coarse	poor well	angular subangular subrounded rounded	(sand or gravel) very loose loose dense very dense (silt or clay) very soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon				



Site Location: Coft Pail yard Drilling Co: Viste Geoprobe **Soil Boring Log** Boring No.: SB-25  
 (Field)  
 Drilling Method: Direct Push Driller: J. Zayed Depth to Water (ft): \_\_\_\_\_  
 Drilling Equipment: Geoprobe Northing: \_\_\_\_\_ Easting: \_\_\_\_\_ Total Depth (ft): 6 Date: 10/27/16 Drilling Start: 0937  
 Borehole Diameter: \_\_\_\_\_ Date: \_\_\_\_\_ Drilling Finish: 0940

Sample Method:		Split Spoon Length: <u>5</u>										Coord. System			
Depth in Feet (BLS)	USCS	Descriptor	Soil Type	Color	Partical Size	Grading	Angularity/shape	Density	Plasticity	Moisture	Odor	PID/FID	% Rec.	Sample No./Int.	Comments
<u>6</u> <u>2.8</u>		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	<u>10YR 4/1 d. gray</u>	very fine <u>fine to medium coarse</u>	poor <u>well</u>	angular subangular subrounded rounded	(sand or gravel) very loose loose dense very dense (silt or clay) very soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon	<u>0-3</u> <u>0.4</u>		<u>SB-25 (0-3)</u> <u>0945</u>	
<u>2.8</u> <u>3.2</u> <u>6</u>		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	<u>5/3 d. brown</u>	very fine fine medium coarse	poor well	angular subangular subrounded rounded	(sand or gravel) very loose loose dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon				
<u>3.2</u> <u>6</u>		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	<u>5/8 yellowish brown</u>	very fine <u>fine</u> medium coarse	poor well	angular subangular subrounded rounded	(sand or gravel) very loose loose dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon				
		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL		very fine fine medium coarse	poor well	angular subangular subrounded rounded	(sand or gravel) very loose loose dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon				

Site Location: CoA Railway Drilling Co: Vista Geoservices **Soil Boring Log** Boring No.: SB-26  
 (Field)  
 Drilling Method: Direct Push Driller: J. Fajdel Depth to Water (ft): \_\_\_\_\_  
 Drilling Equipment: Geoprobe Northing: \_\_\_\_\_ Easting: \_\_\_\_\_ Total Depth (ft): 15 Date: 10/27/14 Drilling Start: 0957  
 Borehole Diameter: \_\_\_\_\_ Date: \_\_\_\_\_ Drilling Finish: 1005

Sample Method:		Split Spoon Length: <u>5</u>										Coord. System			
Depth in Feet (BLS)	USCS	Descriptor	Soil Type	Color	Partical Size	Grading	Angularity/shape	Density	Plasticity	Moisture	Odor	PID/FID	% Rec.	Sample No./Int.	Comments
0-2.2		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	10YR 5/1 grayish brown	very fine fine medium coarse	poor well	angular subangular subrounded rounded	(sand or gravel) very loose loose dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon	0-5 0.8 0.11			
2.2-4		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	5/2 grayish brown	very fine fine medium coarse	poor well	angular subangular subrounded rounded	(sand or gravel) very loose loose dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon				
4-9		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	5/3 brown	very fine fine medium coarse	poor well	angular subangular subrounded rounded	(sand or gravel) very loose loose dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon	5-16 0.11			
9-10.5		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	7/3 pale brown	very fine fine medium coarse	poor well	angular subangular subrounded rounded	(sand or gravel) very loose loose dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon	10-18 1.3		SB-26 (10-15) e	

10.5-14.9 CU-1 5/3 brown  
 14.4-15 sand 7/3 pale brown  
 soft plastic dry none  
 loose | none  
 dry | none



Site Location: CoA Railway Drilling Co: Vista Geoscience **Soil Boring Log** (Field)  
 Drilling Method: Direct Push Driller: J. Zajdel  
 Drilling Equipment: Geoprobe Northing: \_\_\_\_\_ Easting: \_\_\_\_\_  
 Boring No.: SB-27  
 Date: 10/27/14 Drilling Start: 1035  
 Date: \_\_\_\_\_ Drilling Finish: 1037  
 Depth to Water (ft): \_\_\_\_\_  
 Total Depth (ft): 15  
 Borehole Diameter: \_\_\_\_\_  
 Split Spoon Length: 5  
 Coord. System: \_\_\_\_\_

Depth in Feet (BLS)	USCS	Descriptor	Soil Type	Color	Partical Size	Grading	Angularity/shape	Density (sand or gravel)	Plasticity	Moisture	Odor	PID/FID	% Rec.	Sample No./Int.	Comments
0-2.5		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	10YR 3/1 dust gray	very fine fine medium coarse	poor well	angular subangular subrounded rounded	very loose loose dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon	0.5 1.4	0.5 80	SB-27(0-5) 1038	
2.5-5.5		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	4/6 yellow	very fine fine medium coarse	poor well	angular subangular subrounded rounded	very loose loose dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon		5-10 85		few gravel pieces
5.5-8.5		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	4/3 brown	very fine fine medium coarse	poor well	angular subangular subrounded rounded	very loose loose dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon	5-10 0.2			
8.5-15		Sandy Clayey Silty Gravelly	SAND CLAY SILT GRAVEL	4/1 lt. yellowish brown	very fine fine medium coarse	poor well 11.5	angular subangular subrounded rounded	very loose loose dense very dense (silt or clay) very soft soft hard very hard	non-plastic slightly plastic plastic very plastic	dry moist wet	none organic hydrocarbon	0-15 0.2	10 15 85		

Site Location: COA Railway Drilling Co. Vista Cassin Soil Boring Log (Field)  
 Drilling Method: Direct Push Driller: J. Zydul  
 Drilling Equipment: Geoprobe Northing: \_\_\_\_\_ Easting: \_\_\_\_\_  
 Boring No.: SB-32  
 Date: 10/27/16 Drilling Start: 1300  
 Drilling Finish: 1305

Sample Method:		Logger:		Split Spoon Length:		Coord. System									
Depth in Feet (BLS)	USCS	Descriptor	Soil Type	Color	Partial Size	Grading	Angularity/shape	Density	Plasticity	Moisture	Odor	PID/FID	% Rec.	Sample No./Int.	Comments
0-0.2		Sandy	SAND	10YR 5/2	very fine	poor	angular	(sand or gravel) very loose	non-plastic	dry	none	0-3	0-5		
0.2		Clayey	CLAY	5/2	fine	well	subangular	(loose) dense	slightly plastic	moist	organic	0.2	90		SB-32(0-3) @ 1305
0.2		Silty	SILT	10YR 5/2	medium		subrounded	very dense	plastic	wet	hydrocarbon				
0.2		Gravelly	GRAVEL	10YR 5/2	coarse		rounded	(silt or clay) very soft	very plastic						
0.2		Sandy	SAND	10YR 3/1	very fine	poor	angular	(sand or gravel) very loose	non-plastic	dry	none	3-6	5-6		with some clay lenses
0.2		Clayey	CLAY	3/1	fine	well	subangular	(loose) dense	slightly plastic	moist	organic	0.2	100		
0.2		Silty	SILT	10YR 3/1	medium		subrounded	very dense	plastic	wet	hydrocarbon				
0.2		Gravelly	GRAVEL	10YR 3/1	coarse		rounded	(silt or clay) very soft	very plastic						
0.2		Sandy	SAND	10YR 3/1	very fine	poor	angular	(sand or gravel) very loose	non-plastic	dry	none				
0.2		Clayey	CLAY	10YR 3/1	fine	well	subangular	loose	slightly plastic	moist	organic				
0.2		Silty	SILT	10YR 3/1	medium		subrounded	very dense	plastic	wet	hydrocarbon				
0.2		Gravelly	GRAVEL	10YR 3/1	coarse		rounded	(silt or clay) very soft	very plastic						
0.2		Sandy	SAND	10YR 3/1	very fine	poor	angular	(sand or gravel) very loose	non-plastic	dry	none				
0.2		Clayey	CLAY	10YR 3/1	fine	well	subangular	loose	slightly plastic	moist	organic				
0.2		Silty	SILT	10YR 3/1	medium		subrounded	very dense	plastic	wet	hydrocarbon				
0.2		Gravelly	GRAVEL	10YR 3/1	coarse		rounded	(silt or clay) very soft	very plastic						

3/2/12

• Decoupled bladder pump with  
liquinox and DI. Switched out  
bladder.

• 0915 moved to MW-03  
• Started pumping at 0942  
water silty at first, black

• Minimal drawdown observed  
Pumping at

• Collected sample @ 1004  
final readings

pH = 7.38

Temp C = 17.89

SpC<sub>ys/cn</sub> = 567

ORP<sub>mv</sub> = -88.4

DO<sub>mg/L</sub> = 2.12

6-VOAs

w/HCL

82605L

8015

Tagged DTWA ~~MW-03~~ SB-09  
DTW = 29.69, NO LNAPL detected  
Pulled well and backfilled with  
bentonite

• Cleanup. Off-site 1020

10/19/2016

One Call Utility Marking MJS

1000 M. Sophy on-site in Northern Parking Lot  
Weather: Sunny, 60's  
TC & SM - watch for traffic

Objective:

- ① Mark "Spot" on western boundary  
of Rail yard: 1<sup>st</sup> + 2<sup>nd</sup> Street
- ② Contact One-Call Utility Check
- ③ Coordinate site access between One-Call  
+ COA.

1015 Meet Justin D. Schanz, E.I. from  
High Mesa Consulting Group.  
His company is designing storm drain  
system for the Rail yard.  
They have U.G. Utility Map, we can  
contact A.M. Surveyor Chuck Cala  
for more info.

1115 Complete Spot Marking "SPOT 10/19"  
on N/S Boundary at 1<sup>st</sup>/2<sup>nd</sup> Street  
of Rail yard.  
Call One-Call, Ticket #160c190394

10/19/2016

One Call Utility Marking MJS

- One call will issue 10-Day work permit, expires COB Nov 4.
- Must notify one call 2 Business days before Nov 4 for Permit Extension
- Utility Locator to Complete work by 10/21/2016.

1120 Update J. Tracy, E. Morcillo

1135 M. Sophy off-site

10/24/2016

Attil Site Characterization MJS

0850 M. Sophy on-site to meet w/ David Charlesworth Environmental (DCE) & City of Albuquerque (COA) representatives regarding Asbestos & Lead Testing.

0920 Mei Wheels Museum representative  
Anne Chavez

call 550-5066

office 243-6269

she will open close Wheels museum during DCE's investigation

Mat Butkus - COA

here today while Prake is unavailable

cell: (505) 507-0212

Michael Nieman - DCE

all (505) 401-8905

0930

Site tour w/ Mat Butkus  
D Charlesworth would like to visit/sample sites requiring lift, first. Rather than visit parcel by parcel. Will check if OK w/ E. Morcillo/J. Tracy.

10/24/16 Addn'l Site Charac. N/S

1000 M Soph off site to INTERA Abg office to mob for Soil Sampling

1300 Lynde on-site @ wheels Museum and meet Vista drillers. They are getting prepped.

Objectives | Start drilling in parcel 1 or 2. Collect soil + vapor samples

1315 Conduct H+S meeting  
1325 Walk around Parcels 1+2 to identify site boundary and proposed locations.

1400 Vista begins unloading geoprbe. Calibrate PID Mini. Rae (INTERA's)

1420 Eileen + Matt on-site  
1445 Begin setting up @ SB-1 (Parcel 1, SE corner)

1645 Finished collecting sample @ SB-4. Have collected soil samples from SB-2 + SB-3 as well.

4/m/s Addn'l Site Charac. 10/24/16  
Summary of PID results Sample Submitted

SB-1 ≠ 0-4 = 3402  
4-9 = 788  
9-10 = >10,000  
SB-1 (9-10) @ 1510

SB-2 0-4 = 921  
4-8.5 = 874  
8.5-10 = >9999  
SB-2 (8.5-10) @ 1535

SB-3 0-3.5 = 33.4  
3.5-4.5 = 28.5  
4.5-7 = 55.6  
8.5-10 = 479  
SB-3 (8.5-10) @ 1600

SB-4 0-4 = 51.8  
4-10 = 3.7  
10-12 = 227  
12-15 = 156.  
SB-4 (10-12) @ 1630

- Soil samples will be submitted to HEAL for VOCs (8260B), PAHs (8310) TPH (GRO, DRO MRO via 8015) + metals (antimony, arsenic, chromium, iron, lead, manganese, thallium via 6010)
- We used the heated head space method to collect PID readings
- Mason jars + tools were deconned between borings. Geoprbe equip as well.

1650 Matt from the city on-site to lock gate  
1705 INTERA + geo Vista geo off site.

UP 10/24/16

10/25/14

## Add'l Site Characterization

4

4

October 25, 2014

Lynda Price

Cloudy, little rain in a.m. (50's); partly sunny pm (70s)

0720 Lynda on-site

0725 Vista Geo on-site

0740 Matt Butkus from COA on-site to unlock the gate.

**Objectives:** Finish collecting soil samples from Parcels 1 + 4. Collect soil <sup>vapor</sup> samples from these parcels too.

0755 Conduct H+S meeting + go over objectives. Cal. PID.

0810 Walk site to spray paint the next 3 boring locations

825 Drilling boring @ **SB-5** (located in Parcel 1, SE portion)

PID is not working properly so Jim was called + he is bringing a new PID to the site. We will start

## Add'l Site Characterization 10/25/14

collecting SV samples in Parcel 4 since we know the locations.

0955 Begin marking boring locations in Parcel 4.

1005 Vista Geo sets up @ **SB-6** location to collect soil vapor sample @ 5' bga.

1025 Jim from INTERA on-site and has new PID. I finish doing the <sup>needed</sup> head space readings and they are more accurate. **SB-5 (6-10)** is collected @ 0840

1045 JIM offsite. Vista did not get a good seal on the first boring so they are moving over to drill again to 5' and will try to set up again.

Vista collects **SV-06** (2 sorbant tubes). They purge 3 volumes before collecting sample + verify O<sub>2</sub>/CO<sub>2</sub> is stable. PID value is measured after purging and before sample collection.

**PID = 1.1 ppm**



10/25/14

Add'l Site Charac.

cp/ms

u/ms

Add'l Site Charac.

10/25/14

1145 Finished collect sv sample: Move over to collect soil sample + drill to 10'.

1157 SB-6(5-10) collected

1210 Begin drilling SB-7 (In parcel 4, most western location)

1220 SB-7(5-10) collected

→ Soil Vapor samples were collected

@ ~ 1335. PID = 1.9 ppm

SV-07

1320 Matt Sophy m-site

1345 At SB-8 (in Parcel 4, central)

1356 Sampled SB-8(5-10)

1400 Vista Geo sets up to collect SV sample. CO<sub>2</sub> is reading zero, indicating a possible leak in tubing set-up. They drill a new boring next to the original. O<sub>2</sub>/CO<sub>2</sub> levels look good.

They collect SV-08 PID = 4.5 ppm

1605 Begin drilling SB-9 (In parcel 4, SE corner)

1613 SB-9(5-10) collected.

1615 Move over to set up to drill borehole for SV-09

Had difficulties with sealing 3 way valve but made it work after trouble shooting for a while.

PID = 0.0 ppm

1745 At SB-10 to drill (Parcel 1, NE)

1755 SB-10(5-10) collected

### Summary of PID Results

	Interval	ppm	★ = Interval soil sample was collected & submitted.
<u>SB-5</u>	0-4'	= 2.2	
	4.5-6	= 0.0	
	6-10	= 10.7	★
<u>SB-6</u>	0-3	= 0.0	
	3-5	= 0.0	
	5-10	0.5	★
<u>SB-7</u>	0-5	= 1.6	
	5-10	= 9.4	★
<u>SB-8</u>	0-5	= 0.0	
	5-10	0.1	★
<u>SB-9</u>	0-5	= 0.0	
	5-10	= 1.2	★



10/25/14

Add'l Site Charac.

UP/mg

UP

SB-10 0-5 = 0.4  
 5-10 = 0.5

- Mason jars + geoprobe were decontam between sample locations.
- Vista Geoscience were contracted to collect SV samples. They recorded O<sub>2</sub>/CO<sub>2</sub>/MeOH values on field forms. 2 sorbent tubes were collected at each location.

1800 Matt from the COA on-site to lock up site.  
 INTERA + Vista clean up area + they secure their Geoprobes

1815 INTERA, Vista Geo, + Matt off-site.

UP 10/25/14

Add'l Site Charac.

10/26/14

October 26, 2014

Sunny 90's am, 70's pm

Lynde Pitt

0720 Lynde on-site

0725 Geo Vista on-site and Matt from the city. Matt opens the gate for us.

0735 Conduct H+S meeting. Go over objectives for today.

Objectives Finish collecting soil samples in Parcels 1 + 2. Collect as many SV samples as possible.

0745 Calibrate PID MiniRae w/ 100 ppm Isobutylene. (ESP Rental)

0755 Start drilling @ SB-11 (in Parcel 1, in NW corner)

0802 Collect SB-11 (0-5)

0845 Starting drilling @ SB-12 (Parcel 1, west side)

0852 SB-12 (0-5) collected

10/22/14

Add'l Site Charac.

cf

0923 Starting to drill @ SB-13  
(Parcel 1, East side)

0930 SB-13 (10-15) Collected

0958 Starting to drill @ SB-14  
(Parcel 2, NE corner)

1003 SB-14 (5-10) Collected

1029 Drilling SB-15 (Parcel 2,  
SW of SB-14)

1035 SB-15 (3-6) collected

~~1055~~

1055 Drilling SB-16 (Parcel 2,  
E of platform [on east side])

1106 SB-16 (5-10) collected

1135 Drilling SB-17 (Parcel 2,  
W of platform + south of SB-14)

1140 SB-17 (3-6) collected

1155 Drilling SB-18 (Parcel 2,  
W of platform + south of SB-17)

1202 Sampled SB-18 (3-6)

Add'l Site Charac.

10/22/14

1214 Drilling SB-19 (Parcel 2, S central)

1217 Sampled SB-19 (5-10)

1225 Drilling SB-20 (Parcel 2, middle  
of the southern border)

1232 Sampled SB-20 (3-6)

1300 Vista Geo begins setting up @  
SB-16 for soil vapor collection.  
O<sub>2</sub>/CO<sub>2</sub> levels stable + 2 sorbent  
tubes are filled PID = 2.9 ppm  
SV-16 collected

1315 Discuss w/ Eileen about SV sample  
locations and instead of collecting  
them where we saw the highest PID  
values, we decide to spread them  
across the footprint of the proposed  
development in parcels 1 + 2. (buildings  
and/or parking structures)

Decide to collect them from:

Parcel 1

SB-4; SB-12  
SB-10;  
SB-11;

Parcel 2

SB-3; SB-14  
SB-14;  
SB-17;

10/26/16

Addn'l Site Charac.

up of

Addn'l Site Charac. 10/26/16

1400 Set up @ SB-17 to collect  
 [SV-17] Purged 3 volumes;  
 O<sub>2</sub>/CO<sub>2</sub> levels good/stable;  
 PID = 1.6 ppm (before sample collected)

1440 Set up @ SB-3 to collect  
 [SV-03] Purged 3 volumes;  
 O<sub>2</sub>/CO<sub>2</sub> levels good/stable;  
 PID = 2.1 ppm (before sample collected)

1512 Heading to SB-14 to collect  
 [SV-14] Purged 3 volumes;  
 O<sub>2</sub>/CO<sub>2</sub> levels stable;  
 PID = 3.6 ppm.

1550 Setting up @ SB-4 to collect  
 [SV-04] Purged 3 volumes;  
 O<sub>2</sub>/CO<sub>2</sub> levels stable;  
 PID = 1.9 ppm

1620 Setting up @ SB-12 to collect  
 [SV-12] Purged 3 volumes;  
 O<sub>2</sub>/CO<sub>2</sub> levels stable;  
 PID = 1.3 ppm

1650 Moving to SB-11 to collect  
 [SV-11]. CO<sub>2</sub>/O<sub>2</sub> levels are  
 not stabilizing so we will move  
 over and drill in a new location,  
 ~2' over

The new location is producing stable  
 O<sub>2</sub>/CO<sub>2</sub> levels. 3 volumes purged.  
 PID = 0.5 ppm

1730 At SB-10 to collect  
 [SV-11]. Purged over 3 volumes;  
 O<sub>2</sub>/CO<sub>2</sub> stabilized;  
 PID = 1.0 ppm

- The soil + soil vapor samples have ~~not~~<sup>not</sup> been collected from Parcels 1, 2 + 4 successfully. Will move to the northern portion of the Site tomorrow.
- The soil samples are on ice, labeled and the methanol extraction kits have been used.
- Mason jars for head space readings + Geoprobe rods were deco



10/26/14 Addn'l Site Charac.

LP

Summary of PID Readings

Interval (ft) ppm

SB-11 0-5 = 0.4 \*  
5-10 = 0.1

SB-12 0-5 = 0.2 \*  
5-10 = 0.0

SB-13 0-5 = 1.3 \*  
5-10 = 0.4  
10-15 = 3.5 \*

SB-14 0-5 = 1.3  
5-10 = 28.3 \*

SB-15 0-3 = 0.8  
3-6 = 558 \*

SB-16 0-5 = 1.8  
5-10 = 358 \*

SB-17 0-3 = 0.3  
3-6 = 0.9 \*

SB-18 0-3 = 0.4  
3-6 = 0.8 \*

SB-19 0-5 = 0.7  
5-10 = 44.4 \*

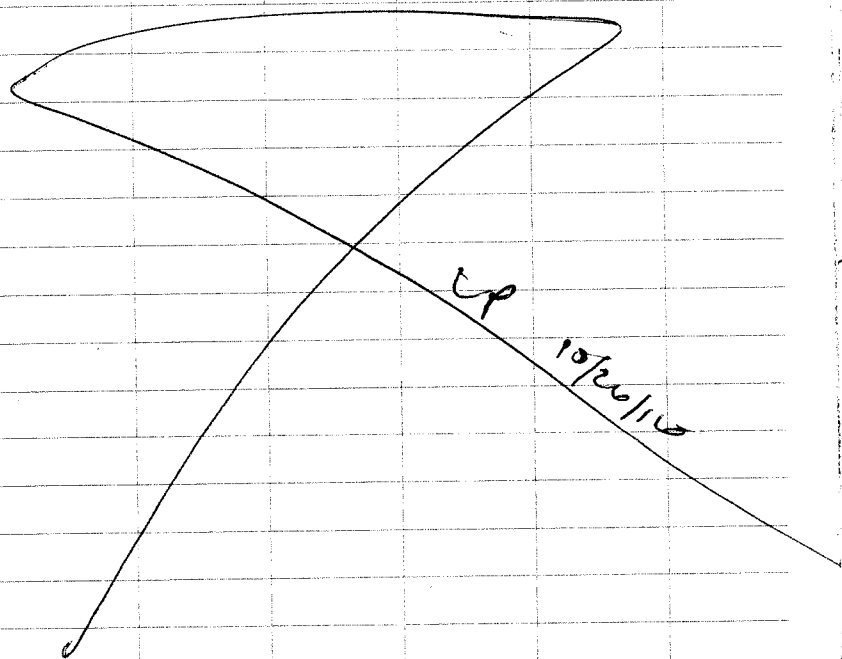
SB-20 0-3 = 0.4  
3-6 = 0.9 \*

\* = Interval the soil sample was collected + submitted to HEAL.

Addn'l Site Charac. 10/26/14

1825 Matt B. on-site. He locks the southern portion of the site and he brings us to the northern portion of the site so Vista can drop off their Geoprobe/trailer.

1900 Gate is locked + INTERA, Vista, + COA off-site. Site is secure



10/27/16

Add'l Site Charac.

u/ms

October 27, 2016  
Sunny, 40's a.m. + 70's p.m., breezy  
Lynda Price + Matt Sophy

0725 Matt + Lynda on-site + meet  
Vista Geo + Matt B. from the city.  
Matt B. opens the gates on the  
north side of the property for us.

0740 Conduct H + Safety meeting +  
go over today's objectives.

Objectives Collect all soil samples  
from Section 9 + 10 and  
collect as many soil vapor  
samples as we can from  
those locations.

0755 Calibrate the Mini Rae PID  
(rental from ESP) w/ Isobutylene  
100 ppm.

0810 Begin drilling at SB-21 (Parcel  
10, E side).

0815 Sample collected SB-21 (0-5)

u/ms

Add'l Site Charac.

10/27/16

0830 Begin drilling @ SB-22 (Parcel 10,  
SE)

0835 SB-22 (3-6) collected

0853 Begin drilling @ SB-23 (Parcel 10,  
central)

0858 SB-23 (0-5) collected.

0915 Begin drilling SB-24 (Parcel 10,  
SW corner)

0920 SB-24 (0-5) collected

0937 Begin drilling SB-25 (Parcel 10,  
central N)

0945 SB-25 (0-3) collected

0957 Begin drilling SB-26 (Parcel 10,  
N)

1002 SB-26 (10-15) collected

1035 Begin drilling SB-27 (Parcel 10,  
NW)

1038 SB-27 (0-5) collected

1055 Begin drilling SB-28 (Parcel 9,  
NE corner)

1057 SB-28 (0-5) collected

10/27/16 Add'l Site Characterization w/ms

1120 Begin drilling SB-29 (Parcel 9, NW)

1122 SB-29 (0-5) collected

1138 Begin drilling SB-30 (Parcel 9, southern portion of parcel)

1146 SB-30 (0-5) collected

1200 Lunch break

1235 End of break

1244 Begin drilling SB-31 (Parcel 9, E side)

1250 SB-31 (0-5) collected

1300 Begin drilling @ SB-32 (Parcel 10, southern border)

1305 SB-32 (0-3) collected

1320 Vista Geoscience begins setting up @ SB-32 to collect a soil vapor sample here

SV-32

10/27/16 Add'l Site Charac.

10/27/16

I talked to Eileen and confirmed the SV locations in Parcel 10.

We will collect them @:

SB-21; SB-23; SB-27; SB-32

1330 The O<sub>2</sub>/CO<sub>2</sub> levels have stabilized and > 3 volumes have been purged @ SV-32.

PID = 0.9 ppm

1345 At SB-31 to collect a soil vapor sample SV-31 (Parcel 9) O<sub>2</sub>/CO<sub>2</sub> stabilized, > 3 volumes removed.

PID = 1.3 ppm

1410 At SB-30 to collect SV-30

Note Each soil vapor point is pushed to E bgs.

1420 CO<sub>2</sub>/O<sub>2</sub> levels stable; > 3 volumes purged; PID = 1.0 ppm



10/27/14

Add'l Site Charac.

u/ms

u/ms

Add'l Site Charac

10/27/14

1440 At SB-29 to collect  
 [SV-29] O<sub>2</sub>/CO<sub>2</sub> levels stable;  
 >3 volumes purged;  
 PID = 1.3 ppm

1510 At SB-28 to drill + collect  
 [SV-28] O<sub>2</sub>/CO<sub>2</sub> levels stable; >3 volumes  
 purged; PID = 1.5 ppm

1540 At [SB-27] to drill + collect  
 [SV-27] O<sub>2</sub>/CO<sub>2</sub> levels stable; >3 volumes  
 purged; PID = 2.7 ppm

1605 At SB-21 to drill + collect  
 [SV-21] O<sub>2</sub>/CO<sub>2</sub> levels stable; >3 volms  
 purged; PID = 1.5 ppm

1640 At SB-23 to drill + collect  
 [SV-23] O<sub>2</sub>/CO<sub>2</sub> levels stable; >3  
 volumes purged;  
 PID = 1.6 ppm

[Note] Vista Geosciences gave INTERA  
 the remaining sorbant tubes.  
 There were [11] total left  
 over.

1700 Parcels 9 + 10 have  
 successfully been sampled -  
 soil + soil vapor. INTERA  
 will drop off soil sample + HEAL  
 first thing in the morning + Vista  
 Geosciences will submit the  
 sorbant tubes.

### Summary of PID Results

	Interval	ppm
[SB-21]	0-5	5.3 *
	5-10	0.0
	10-15	0.3
[SB-22]	0-3	1.2
	3-6	2.1 *
[SB-23]	0-5	0.0 *
	5-10	0.0
	10-15	0.0
[SB-24]	0-3	2.1 *
	3-6	0.0

10/27/14

Addnl Site Charact.

Interval ppm

SB-25 0-3 = 0.4 ★

3-6 = 0.0

SB-26 0-5 = 0.8

5-10 = 0.0

10-15 = 1.8 ★

SB-27 0-5 = 1.4 ★

5-10 = 0.0

10-15 = 0.0

SB-28 0-5 = 0.0 ★

5-10 = 0.0

SB-29 0-5 = 0.0 ★

5-10 = 0.0

SB-30 0-5 = 5.0 ★

5-10 = 0.0

SB-31 0-5 = 1.2 ★

5-10 = 0.0

SB-32 0-3 = 0.0 ★

3-6 = 0.0

★ = Indicates the interval that the soil sample was ~~subm~~ collected + submitted to HEAL.

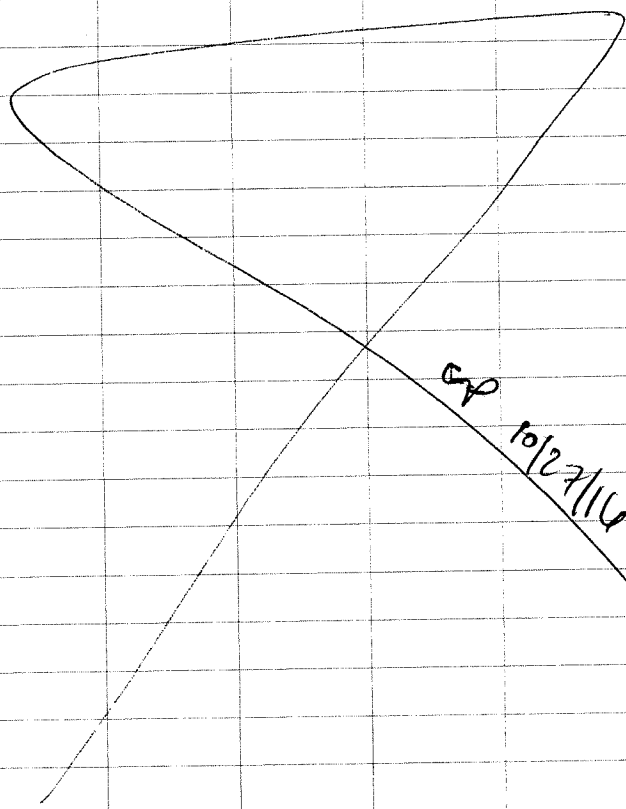
1715 INTERA calls Matt B. Form COA + let him know

c/m/s c/m/s

Addnl Site Charac. 10/27/14

we are finished. He's ok w/ us leaving w/out him there. We will dummy lock the gates.

1720 INTERA + Vista Geosciences offsite.



10/31/2016 Sub-Slab Soil Vapor MS/CS

750 MS Supply, <sup>Sheet on-site</sup>  
Meet Gabriel (COA) to open N. Gate &  
S. Gate to rail yard  
Gabriel is point of contact. He will  
meet us every day at 0800 & 1700 to  
open/close gates.

Objective: Install 6 vapor pins in Machine Shop  
Collect 6 sub-slab vapor samples from  
pins in Machine Shop.

Weather: Clear, 60's

0815 TGSMS Calibrate CGI: CO<sub>2</sub> <sup>100ppm</sup>, LEL: 2.5% <sup>25ppm</sup>, H<sub>2</sub>S: 10ppm <sup>10ppm</sup>, O<sub>2</sub>: 21% <sup>21%</sup>

0830 Mark 6x vapor pin locations.  
Phone call to confirm locations w/ E. Marallo

0845 Set up to install Vapor pin  
SV-5-1  
↑ ↑ ↑  
Soil Vapor Pin # Sample #

0930 First Location, slab too thick for  
5/8" bit, 16" long.  
Move North to Train Bay, ~3' deep  
Will test w/ small bit first.

10/31/2016 Sub-Slab Soil Vapor MS/CS

1015 Unable to get through slab in train sump.  
At least 16-inch thick. Scrap metal  
Contact E. Marallo to let her know situation.  
She says to go attempt pin install in boiler room.

1114 Successfully install first vapor pin.  
Broke through concrete slab into sand @ 11" bgs  
Located in 3' bay from west in Boiler Room  
SV-8-1

Check gass to scout additional vapor pin locations

1155 Install Vapor Pin #2

In first train sump from west side of building  
SV-8-2

1225 Attempt to drill through slab at ground  
surface, not in a train sump.

Next to entrance to Tender Shop, east side  
of change

Cannot penetrate slab, <16" thick

Lunch



10/31/2016

Sub-Slab Soil Vapor

MS/CS

1320 Phone call w/ Eikon

- Concrete core company will be on-site tomorrow at 1200. 5/8" core bit is 22" long, if slab is deeper, we will order a longer bit.

- Core company has 1-1/2" core to test slab thickness if we can't get through w/ 5/8" bit. Will fill w/ Cement - Gabriel (COA) to meet us at Wheels Museum at 0900 on Wednesday.

- Current plan, install 2x vapor pins in Tender House.

1330 Set up to install Vapor Pin

Concrete slab < 16"

Also, high torque at bottom, possible different material

1345 Set up to install Vapor pin near to office along E. Wall of Tender shop.

< 16" Concrete Slab

High torque at bottom

10/31/2016

Sub-Slab Soil Vapor

MS/CS

1400 Set up to install Vapor pin in Northern End of Flew Shop

1415 Install Vapor Pin SV-8-3  
5 1/2" of concrete slab (bags)

Drill vapor well 16" bags

Mark location w/ Arrow on Wall (See Photos)

1430 Set up to install vapor pin in Central Flew Shop

SV-8-4

14-1/2" of slab concrete bags

Drill vapor well 16" bags

Mark location w/ Arrow on Flew (See Photos)

1500 Set-up to collect soil vapor sample at SV-8-4

Phone call to John Fontana (Vista Geosciences)

confirm to pass 1" of air through subsent tube

Calibrate PID, w/ 100 ppm Iso-butylene gas  
CGI w/ O<sub>2</sub> 18 ppm CO 10 ppm H<sub>2</sub> LEI: 2.52  
H<sub>2</sub>S: 25 ppm

SV0804 3CV's = 300 cm<sup>3</sup>, 1.5 min @ 200 cfm

Stabilized Parameters:

CO: 0 ppm LEI: 0 ppm H<sub>2</sub>S: 0 ppm O<sub>2</sub>: 6.8 ppm

PID = 3.2 ppm, Vol: 0.96

10/31/2016 Sub-Slab Soil Vapor MS/CS

Sample collected at 1614

1630 Set-up to collect soil vapor sample at  
[SV-08-03] 3 CVs: 301 cm<sup>3</sup>, 1.5 mm pore  
200 cm<sup>3</sup> / min

Stabilized parameters:

CO: 0 ppm LEL: 0 ppm H<sub>2</sub>S: 0.0 ppm O<sub>2</sub>: 11.1 ppm PID: 11.30  
Vol: 1.0L

Sample collected at 1652

Samples placed in cooler, no ice

1710 Phone call to Gabriel Rivera (COA)

Confirm he will lock N Gate (1<sup>st</sup>)

Will meet INTERA at 0800 tomorrow at  
1<sup>st</sup> St. Gate

1717 M. Saphy  
C. Street off-site

11/1/2016 Sub-Slab Soil Vapor MS/FR

0720 M. Saphy, F. Rucker to Home Depot to purchase  
Shop Vac, Dust Mops, Concrete Patch Materials

0755 M. Saphy, F. Rucker on-site, North end Rail Yard  
J. Tracy (INTERA), Gabe Rivera (COA)  
on-site

- Walk through Blacksmith shop to site vapor  
pin locations

- Will set pins 1) SE corner next to kitchen  
2) W. Side, next to office

0815 J. Tracy, G. Rivera off-site to COA office to  
collect building blueprints to determine  
concrete slab thickness

- M. Saphy, F. Rucker off-site to get fuel for generator

0830 M. Saphy, F. Rucker on-site at Te-de shop

- TGSM

- Set up to concrete P&A 3 failed soil vapor  
pin locations.



11/11/2016

Sub-Slab Soil Vapor

MS/FR

0915 Patching complete  
Take photos to document job.

J. Tracy, G. Rivera on-site.  
DCE Heun on-site

- DCE needs to cut lock on powerhouse  
building to continue CBP, Asbestos survey

- INTERA looking for belt cutters to  
open powerhouse.

0950 G. Rivera open up gate on south side of  
Machine Shop to access Machine Shop

Set up to PrA 2 failed vapor pin wells.  
- Photos to document work - 2x

J. Tracy (INTERA) looking at blueprints  
to determine slab thickness in Blacksmith shop  
- Will mark vapor pin locations for M. Sully / F. Roeder  
to install this AM.

11/11/2016

Sub-Slab Soil Vapor

MS/FR

1020 Set-up to install vapor pins in Blacksmith Shop  
SV-07-01 w/ Stainless steel flush-mount cap.  
Slab 5-1/2" thick  
Well TD - 18" logs

1040 - J. Tracy on-site at Blacksmith shop.  
- He has marked 9 vapor pin locations in  
Blacksmith shop  
- Instructs us to split distance between  
polder locations in buildings, where slab is  
thick. Everywhere else, slab is "6" thick

1050 J. Tracy, M. Sully, F. Roeder <sup>MS</sup> walk through to  
Powerhouse  
F. Roeder cuts lock on Powerhouse  
G. Rivera on-site  
- he installs new lock w/ key in Powerhouse  
DCE vicar to enter Powerhouse to sample for  
LBP + Asbestos

1115 J. Tracy, F. Roeder, M. Sully walk through  
Machine Shop.  
- Mark 6x vapor pin locations.  
- Coretek company will drill these

11/1/2016 Sub-Slab Soil Vap- MS/FR

holes w/ 5/8" bit to 6" below slab

1145 J. Tray, M. Sph, F. Roeder enter Boilers room  
to mark 14 x Vapor pin locations

1200 J. Tray, M. Sph, F. Roeder enter  
Tender house  
- Mark 2x Vapor Pin Locations.

1230 Lunch

1240 Set-up to install SV-07-02  
Slab was 7" thick  
Vapor well TD = 21" bgs

1250 Set-up to install SV-07-03  
Slab thickness 10-1/2"  
TD = 21" bgs

1315 Set-up to install SV-07-04  
Slab thickness 13"  
TD = 21" bgs

11/1/2016 Sub-Slab Soil Vap- MS/FR

1345 Concrete Casting Company on Site  
F. Roeder, M. Sph meet CCC at  
Machine Shop

Phone call w/ E. Macillo  
- if we run out of ~~fuel~~, Frank + I will  
start to locate monitoring wells.

1400 CCC Set-up to drill 5/8" core on  
SV-05-01 Slab 6" thick  
SV-05-02 Slab

1430 CCC Set-up to drill dry holes, no core  
w/ water.  
E. Macillo is concerned about contamination  
to the well

SV-05-01 Slab 6" thick  
SV-05-02 Slab 6" thick  
SV-05-03 Slab 6" thick  
SV-05-04 Slab 6" thick  
SV-05-05 Slab 5" thick  
SV-05-06 Slab 5" thick



11/11/2016 Sub-Slab Soil Vapor MS/FR

1530 M. Saphy takes CCC crew to Boilerhouse to continue Hammer Drilling  $5/8"$  holes. F. Roecker cont. drilling  $1-1/2"$  top hole for SV-05-01 to 06 wells

- Set Vapor pins SV-05-01 TD=21" bgs
- SV-05-02 TD=21" bgs
- Cover w/ Black Plastic SV-05-03 TD=21" bgs
- caps, Label SV-05-04 TD=21" bgs
- w/ Black Sharps SV-05-05 TD=21" bgs
- SV-05-06 TD=21" bgs

- Plan to let vapor pins equilibrate at least 24-hours before sampling.

1605 M. Saphy, F. Roecker to Boiler room to check on CCC crew.

1620 CCC crew has drilled • 4x  $5/8"$  wells in Boiler Shop  
• 2x  $5/8"$  wells in Tender House

1630 CCC crew off-site.

1640 M. Saphy, F. Roecker Set-up to drill  $1-1/2"$  hole in wells in Tender House and set Vapor Pins.

11/11/2016 Sub-Slab Soil Vapor MS/FR

MJ • SV-05-05 Slab=12", TD=21" bgs  
MJ • SV-05-06 Slab=12", TD=21" bgs

Wells have stainless steel caps since building may get new roof (prevent damage)

1715 M. Saphy, F. Roecker set-up to drill  $1-1/2"$  hole in Boiler Shop, & set Vapor pins

- MS • SV-05-07 Slab=6" TD=21" bgs
- MS • SV-05-08 Slab=6" TD=21" bgs
- MJ • SV-05-09 Slab=6" TD=21" bgs
- MJ • SV-05-10 Slab=6" TD=21" bgs

1730 G. Rivera (COA) stops by Boiler Shop to let us know the Southern Railway Gates are Secure, including door on Boilerhouse.

- He asks us to Lock 1<sup>st</sup> Street (North) when we leave

- Plan to meet at Wheels museum tomorrow at 0800.

1745 M. Saphy, F. Roecker off-site

Call to J. Tracy for update

- Plan to Set Vapor pins in Wheels Museum in AM sample in PM, or 24-hours later.

get pins installed for sample

11/11/2016

Sub-Slab Soil Vapor

MS/FR

Summary:

20

23 Vapor Pins installed

2 Vapor Pins sampled, so far

Will install 3x Vapor Pins in Wheels Museum tomorrow

4x Stainless Caps - Black

2x 20 Stainless Trench  
Wash one Plastic Caps

- Used Shop Vac to Remove Dust From Vapor wells while drilling
- Wear Dust Masks to Protect Breathing Zone
- Generator capable of powering Vac & Drill at Same Time
- If Vapor pin silicon sleeve is not properly seated, move sleeve ~ 1cm below bottom of pin. If slides up, along pin during install & seals properly
- Sharpie marker used to Label Vapor Pin Caps.

11/12/2016

Sub-Slab Soil Vapor

MS/FR

0755 M. Sphy, F. Roeker on-site

Weather: Sunny, 50°F.

Objective: 1) Install 3x vapor pins in the Storehouse aka Wheels Museum

2) Begin sampling vapor pins, starting in Boiler House, then Blacksmith Shop

0800 G. Rivera (COA) on-site

0815 M. Sphy, F. Roeker set-up to install 3x Vapor pins in Wheels Museum. (Storehouse)

0845 J. Tracy (INTERA) on-site to confirm vapor pin locations

- TGSM

0900 Set-up to install SV-03-01, in closet behind stairs

Slab 6" thick

TD = 21" bag

Cover w/ Stainless steel cap.

0920 Set-up to install SV-03-02



11/2/2016

Sub-Slab Soil Vapor

MS/FR

- cont -
- SV-03-02 located in 1<sup>st</sup> Large Room when walking South from offices at museum
  - Located in SE Corner
  - Slab 7" thick
  - TD = 21" bgs
  - Conn w/ stainless steel cap

0940 Set-up to install SV-03-03

- located in 2<sup>nd</sup> Large room when walking South from Wheels museum
- 1 room south from SV-03-02
- Located in SE corner of room
- Slab 6" thick
- TD = 21" bgs

0955 Clean-up equipment in Wheels Museum  
Will return tomorrow morning at 0900  
to collect vapor samples  
G. Rivera off-site, J. Troy off-site

0000 M. Sophy, F. Roecker to Blacksmith shop  
to collect soil vapor samples  
J. Troy calls to confirm sampling  
At Wheel Museum

11/2/2016

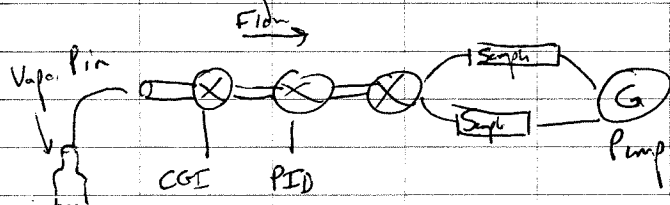
Sub-Slab Soil Vapor

MS/FR

1010 G. Rivera meets M. Sophy, F. Roecker at Blacksmith shop to open lock  
G. Rivera off-site

1030 - Calibrate PID w/ 100ppm Isobutylene Gas  
- Calibrate CGI w/ O<sub>2</sub> 18 ppm, LEL 2.5%, H<sub>2</sub>S 25 ppm  
CO 100 ppm

- Build Valving & Tubing for ~~soil~~ soil vapor



1100 Set-up to collect sample at SV-07-01  
3 CV's = 346 cm<sup>3</sup>

Stabilized parameters:

PID: 82.6 ppm, CO = 0 ppm, LEL = 0%, H<sub>2</sub>S = 0.0 ppm, O<sub>2</sub> = 11.4 ppm  
Sample collected at 1135  
Vol: 1.06<sup>l</sup>

- PID reading was high, but consistent, checked w/ rental PID, read 0 ppm.

11/2/2016 Sub-Slab Soil Vapor MS/FR

- Phone call to E. Munnillo

- she says to use rental PID from view on

- Calibrat rental PID w/ 100ppm Isobutylene Gas

1200 Lunch

F. Roeder off-site to INTERA office for supplies

1240 Setup to collect sample at SV-07-02  
3CV's: 346 cm<sup>3</sup>

Stabilized parameters:

PID: 1.6 ppm, CO: 0 ppm, LEL: 0%, H<sub>2</sub>S: 0.0 ppm  
O<sub>2</sub>: 12.1 ppm, Vol: 1.0L

Sample collected at 1232

1240 F Roeder on-site

Setup to collect vapor sample at SV-07-01  
MS  
3CV's: 346 cm<sup>3</sup>

Stabilized Parameter

PID: 1.5 ppm, CO: 0 ppm, LEL: 0 ppm, H<sub>2</sub>S: 0.0 ppm  
O<sub>2</sub>: 14.0 ppm, Vol: 1.0L

Sample Collected at 1259

1308 Setup to collect vapor sample at SV-07-03

3CV's: 346 cm<sup>3</sup>

Stabilized Parameters:

11/2/2016 Sub-Slab Soil Vapor MS/FR

cont: Stabilized parameters

PID: 1.7 ppm, CO: 0 ppm, LEL: 0%, H<sub>2</sub>S: 0.0 ppm

O<sub>2</sub>: 14.0 ppm, Vol: 1.0L

Sample collected at 1321

1330 Lock-up Blacksmith Shop  
Move to Tender Shop

1340 Setup to collect soil vapor sample at SV-08-05

3CV's: 346 cm<sup>3</sup>

Stabilized parameters:

PID: 2.0 ppm, CO: 0 ppm, LEL: 0%, H<sub>2</sub>S: 0.0 ppm

O<sub>2</sub>: 13.5 ppm, Vol: 1.0L

Sample Collected at 1352

1400 Set up to collect soil vapor sample at SV-08-06

3CV's: 346 cm<sup>3</sup>

Stabilized Parameters:

PID: 2.0 ppm; CO: 0 ppm, LEL: 0%, H<sub>2</sub>S: 0.0 ppm

O<sub>2</sub>: 11.0 ppm, Vol: 1.0L

Sample Collected at 1415

1430 Set up to collect SV sample at SV-08-02



11/2/2016

Sub-Slab Soil Vapor

MS/FR

SV-08-02

cont:

3 CV's: 346 cm<sup>3</sup>

Stabilized Parameters:

PID: —, CO: 0 ppm, LEL: 0%, H<sub>2</sub>S: 0.0 ppmO<sub>2</sub>: 14.4 ppm, Vol: 1.0 L

Sample collected at 1450

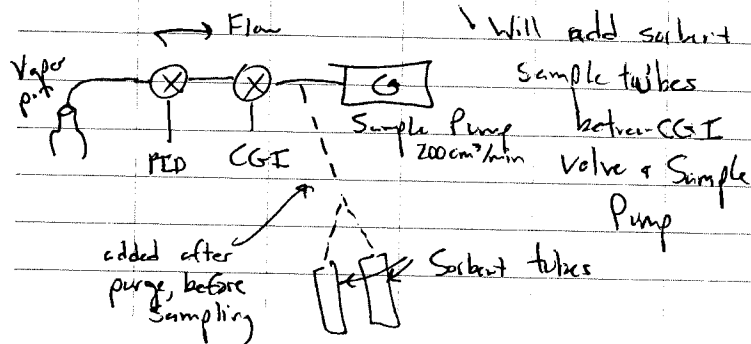
- Note: low flow from well caused PID pump to stall. Stabilized O<sub>2</sub> readings indicated well was purged, therefore no PID reading taken.

1450 Set-up to collect SV sample at SV-08-01  
3 CV's: 346 cm<sup>3</sup>

- Not able to get enough flow from well, PID pump stalls out.

Phone call w/ E. Marallo

Plan to use sample pump to pull from well while sampling PID, CGI on side outlet valves.



11/2/2016

Sub-Slab Soil Vapor

MS/FR

1330

Ream <sup>MS</sup> Pull vapor pin  
Ream out 5/8" hole  
Set Pin

Will let well sit for 24-hours prior to sampling

1600

Set-up to collect SV sample at SV-08-093 CV's: 346 cm<sup>3</sup>

Stabilized Parameters:

PID: 1.4 ppm, CO: 0 ppm, LEL: 0%, H<sub>2</sub>S: 0.0 ppmO<sub>2</sub>: 12.8 ppm, Vol: 0.8 L

Sample collected at 1636

1640

Set-up to collect SV sample at SV-08-103 CV's: 346 cm<sup>3</sup>

Stabilized parameters:

PID: 4.2 ppm, CO: 0 ppm, LEL: 0%, H<sub>2</sub>S: 0.0 ppmO<sub>2</sub>: 13.7 ppm, Vol: 0.8 L

Sample collected at 1656

1710

Secure Gate to Tender Shop & N. Railroad Entrance (1<sup>st</sup> Street)

1715

M. Sophy, F. Coroker off-site

11/3/2016

Sub-Slab Soil Vapor

MS/FR

0855 M. Saphy, Floecker on-site at Wheels Museum  
Meet Anne to access Museum to Sample  
3x Vapor Pin Locations

- PID: 100ppm isobutylene gas  
 - TGS SM Cellbreak CGT: H<sub>2</sub>S: 2ppm, CO: 10ppm, LEL: 2.5%, O<sub>2</sub>: 18%  
 - Objective: Continue collecting Soil Vapor Samples from 12 remaining vapor pin locations.  
 - Start in Wheels Museum (3x)  
 - Move to Machine Shop (6x)

0820 Set-up to collect soil vapor sample at SV-03-01  
 3 CV's, 346 cm<sup>3</sup> (1 min 45 sec purge) at 0.2 L/min

Stabilized Parameters:

PID: 0.0ppm, CO: 0ppm, LEL: 0%, H<sub>2</sub>S: 0.0ppm  
 O<sub>2</sub>: 20.0ppm, Vol: 0.8L

Sample Collected at 0941

0840 Phone call to E. Merville to inform her  
 of relatively higher O<sub>2</sub> readings in Wheels  
 Museum than other Parks.

11/3/16

Sub-Slab Soil Vapor

MS/FR

- We see ~16.0ppm O<sub>2</sub> on the vapor wells  
 SV-03-01 + SV-03-03, but  
 ~20.9ppm O<sub>2</sub> in ambient air. The  
 consistent decrease indicates no fresh-air  
 intrusion of samples

0850 Set-up to collect soil vapor sample at SV-03-03  
 3 CV's, 346 mL or 1 min 45 sec at 0.2 L/min  
 Stabilized Parameters:  
 PID: 0.0ppm; CO: 0ppm H<sub>2</sub>S: 0.0ppm, LEL: 0%  
 O<sub>2</sub>: 17.5ppm, Vol: 0.6L  
 Sample collected at 0910

0910 Set-up to collect soil vapor sample at SV-02-01  
 3-CV's: 346 mL or 1 min 45 sec at 0.2 L/min  
 Stabilized Parameters:  
 PID: 0.0ppm, CO: 0ppm, LEL: 0%, H<sub>2</sub>S: 0.0ppm  
 O<sub>2</sub>: 16.2ppm, Vol: 0.6L  
 Sample collected at 0926.

0925 Return to collect Sample (Soil Vapor) at SV-01-01  
 - Perform 3CV purge  
 - See Stabilized Parameters on Facing Page.



11/3/16

Sub-Slab Soil Vapor

MS/FR

1010 Meet w/ G. Rivera, he opens N. Gate (1<sup>st</sup> St)

1015 Scout for monitoring wells, located:

MW-6

MW-8

MW-7

Could not locate MW-09 (possibly buried)

1020 Set-up to collect SV sample at SV-08-07  
3CV's: 346mL or 1min 45sec purge at 0.2L/min  
Stabilized Parameters:PID: 0.9ppm, CO: 0ppm, LEL: 0%, H<sub>2</sub>S: 0.0ppmO<sub>2</sub>: 7.8 ppm, Vol: 0.6L

Sample Collected at: 1041

1045 Set-up to collect SV sample at SV-08-08  
3CV's: 346mL or 1min 45sec purge at 0.2L/min

Stabilized parameters

mg PID: 0.9ppm, CO: 0ppm, LEL: 0%, H<sub>2</sub>S: 0.0ppm  
O<sub>2</sub>:PID: 0.7ppm, CO: 0ppm, LEL: 0%, H<sub>2</sub>S: 0ppmO<sub>2</sub>: 3.6 ppm, Vol: 0.6L

Sample Collected at: 1105

11/3/16

Sub-Slab Soil Vapor

MS/FR

10

1115 Set-up to collect soil vapor sample at SV-08-01- reared well yesterday to check for blockage  
since the low flow stalled out the PID pump.

- re-set pm w/ new silicon sleeve.

3CV's: 346mL or 1min 45sec + 0.2L/min

Stabilized Parameters

PID: 1.5ppm, CO: 0ppm, LEL: 0%, H<sub>2</sub>S: 0.0ppmO<sub>2</sub>: 15.5ppm, Vol: 0.8LSample collected at: 1130  
MS1200 M. Saphy, F. Ruecker checking for monitoring  
wells on South side of Railroad

- Located: MW-02, rise band, PVC band (scaphotes)

MW-02, possibly mislocated on map  
found well riser (same type as others)  
on East Side of Building (scaph)

MW-03

MW-04

MW-05

1230 Lunch in Machine Shop

1245 Phone call w/ E. Marallo

11/13/16

Sub Slab Soil Vapor

MS/FR

cont: Phone call w/ E. Marcollo  
M. Sphy, Froecker to conduct GW sampling  
on 9 MW's at Railroad Tower  
E. Marcollo will confirm this w/ G. Rivera (COA)

1300 Set-up to collect soil vapor sample at SV-05-01  
3CV's: 346 mL, 1 min 45 sec purge at 0.2 L/min  
Stabilized Parameters:  
PID: 1.1 ppm, CO: 0 ppm, LEL: 0%, H<sub>2</sub>S: 0.0 ppm  
O<sub>2</sub>: 7.8 ppm, Vol: 1.0 L  
Sample Collected at 1322

F. Roecker set up to plug & abandon 2x  
core wells drilled in machine shop  
w/ Concrete Mix

1325 Set up to collect soil vapor sample at SV-05-02  
3CV's: 346 mL, 1 min 45 sec  
Stabilized Parameters:  
PID: 0.9 ppm, CO: 0 ppm, H<sub>2</sub>S: 0.0 ppm, LEL: 0%  
O<sub>2</sub>: 0.4 ppm, Vol: 1.0 L  
Sample Collected at 1342

11/13/16

Sub Slab Soil Vapor

MS/FR

1345 Set up to collect soil vapor sample at  
SV-05-03  
3CV's: 346 mL or 1 min 45 sec purge at 0.24 L/min  
Stabilized Parameters  
PID: 0.7 ppm, CO: 0 ppm, LEL: 0%, H<sub>2</sub>S: 0 ppm  
O<sub>2</sub>: 12.6 ppm, Vol: 1.0 L  
Sample Collected at 1410

1415 Set up <sup>M<sup>s</sup></sup> ~~to~~ collect soil vapor sample at  
SV-05-04  
3CV's: 346 mL or 1 min 45 sec purge at 0.24 L/min  
Purge for 3 min, Vol: 1.0 L  
Stabilized Parameters:  
PID: 0.9 ppm, CO: 0 ppm, LEL: 0%, H<sub>2</sub>S: 0.0 ppm  
O<sub>2</sub>: 0.0 ppm  
Sample collected at 1428

1435 Set up to collect soil vapor sample at SV-05-05  
3CV's: 346 mL or 1 min 45 sec purge at 0.2 L/min  
Stabilized Parameters  
PID: 0.9 ppm, CO: 0 ppm, LEL: 0%, H<sub>2</sub>S: 0.0 ppm  
O<sub>2</sub>: 0.0 ppm, Vol: 0.6 L  
Sample Collected at 1442

11/3/16

Sub-Slab Soil Vapor

MS/FR

1450 Set up to collect soil vapor sample at

SV-05-063 CV's: 346 mL = 1 min 45 sec purg  
at 0.2 L/min rate

Stabilized Parameters:

PID: 0.9 ppm, CO: 0 ppm, LEL: 0%

H<sub>2</sub>S: 0.0 ppm, O<sub>2</sub>: 1.8 ppm, 0.6%

Sample Collected at 1506

1500 Sort out samples by parcel #.

10 x Parcel 8: Boiler Shop, Trade Shop, Flea Shop

SV-08-01 SV-08-06

SV-08-02 SV-08-07

SV-08-03 SV-08-08

SV-08-04 SV-08-09

SV-08-05 SV-08-10

6 x Parcel 5: Machine Shop

SV-05-01 SV-05-02 SV-05-05

SV-05-03 SV-05-04 SV-05-06

3 x Parcel 3: Storehouse (Wheels Museum)

SV-03-01, SV-03-02, SV-03-03

4 x Parcel 7: Blacksmith Shop

SV-07-01 SV-07-03

SV-07-02 SV-07-04

11/3/16

Sub-Slab Soil Vapor

MS/FR

1530 Text to E. Moralle / J Tracy confirming  
that Sub-Slab Soil Vapor Sampling  
is complete1535 Phone call to G. Rivera (COA) to  
confirm work complete.Mr. Butkus (COA) will open gates at  
1<sup>st</sup> St (N. Side) to give INTERA  
access for SW Sampling.

1540 M. Saphy, F. Kuecker off-site

Summary:

- Installed 23 x vapor pins to collect sub-slab soil vapor samples
- Collected 23 x soil vapor samples in 4 parcel locations at the rail yard - list on facing page.
- Sample (sorbent tubes) sampled at 200 cm<sup>3</sup>/min for 5 min (1 L)
- Test for TO-17 Solids

MJD



11/14/16 GW Sampling MS/FR

0755 M. Sophy, F. Roacker on-site  
N. Gate open, pull in near site of MW-09

- TGS-SM

- Weather: overcast, rainy, 55°F.

- Objectives: 1) <sup>MS</sup>Gauge locate 9 MW's  
2) Gauge DTW, DTB in MW's  
3) GW Sample for VOC's 8260  
EDB 504.1

0805 M. Butkus (COA) on-site.

Ac will open South Gate near Wheels museum  
for GW sampling.

0810 F. Roacker attempts to locate MW-09

- after using metal detector & shovel

- for 20 min, no well found

- will not gauge/sample this well

- Calibrate Oakton pH-1150 Water Quality Meter <sup>pH: 4.1, 7.10</sup>  
<sub>Spec Cond: 1417  $\mu$ S/cm</sub>

0830 - Begin gauging DTW / DTB using properly  
decontaminated Solinst O.I. / Water interface  
probe & EnviroSupply Water Level Meter

- Will Gauge wells on N. Side of Site,  
then sample to get out of way  
of filming crew.

11/14/16 GW Sampling MS/FR

← [ft bTOCN] →

Well ID	DTP	DTW	DTB	Notes
MW-09				Not located
MW-08	—	26.16	46.11	0839; <sup>4"</sup> 2"; J-Plug OK
MW-06	—	29.44	49.28	0832; 2"; J-Plug OK
MW-07	—	26.74	44.85	0847; 2"; J-Plug OK
MW-02	—	19.10	41.34	1245; 2"; Needs Mem J-Plug
MW-01	—	22.65	44.16	1002; 2"; J-Plug OK
MW-03	—	24.33	44.75	1008; 2"; J-Plug OK
MW-04	—	25.37	44.48	1015; 2"; J-Plug OK
MW-05	—	26.52	46.16	1024; 2"; Needs J-Plug

0850 - Completed gauging of wells on north side  
of site.

- Plan to collect GW samples of n. side wells  
to stay clear of film crew.

0855 Set-up to collect GW sample at MW-07

- 3 CV: 9.2 gal

- Stabilized Parameters:

pH: 4.41; Temp: 18.6°C; Spec Cond: 829.2  $\mu$ S/cm  
7.17 Vol: 9.3 gal

Sample Collected at 0912

4  
11/18/16  
MS

## GW Sampling

MS/FR

0920 Setup to collect GW sample at MW-06  
• 3 CV's: 11.4 gal  
• Stab. Parameters:  
Temp: 17.9°C; pH: 7.28; Spec Cond: 803.2 µS-cm  
Vol: 11.5 gal  
• Sample collected at 0947

0950 Will head to south side of site to gauge MW's, specifically to check casing diameters. If any 4" wells, we will get larger bailers from office

1030 - Gauging of all wells complete except MW-02. This well casing riser is damaged. We will return later today to repair, access, gauge, sample +  
- M. Sophy, F. Becker off-site to get ice

1045 Set up to collect GW sample at MW-08  
• 3 CV's: 39.6 gal  
• Stab. Parameters:  
Temp: 18.8°C, pH: 7.17; Spec Cond: 951.9 µS-cm  
Vol: 40 gal  
Sample collected at 1145

4  
11/18/16  
MS

## GW Sampling

MS/FR

1200 Move to South Side of site  
Lunch

1215 MW-02 riser pipe bent & cement skirt is sticking up  
Break off concrete around riser.  
Remove riser.

Cut PVC casing (22") to ground level  
INTERA will replace surface completion at a later date (E. Marcillo)

1245 . Setup to collect gauge water level in MW-02  
- Set up to collect GW sample at MW-02  
• 3 CV's: 11.4 gal  
• Stabilized parameters:  
Temp: 18.5°C, pH: 7.74, Spec. Cond: 667.2 µS-cm  
Vol: 12.0 gal  
Sample collected at 1310

1315 Set up to collect GW sample at MW-01  
• 3 CV's: 11.1 gal  
• Stabilized parameters:  
Temp: 18.7°C, pH: 7.42; Spec Cond: 996.0 µS-cm  
Vol: 11.5 gal  
Sample collected at 1335

4  
11/28/16  
MS

GW Sampling

MS/FR

1340 Set up to collect GW sample at MW-03

• 3CV's: 10.5 gal

• Stabilized parameters:

Temp: 19.0°C, pH: 7.31, Spec Cond: 671.2  $\mu\text{S/cm}$

Vol: 11.0 gal

Sample collected at 1402

1410 Set up to collect GW sample at MW-04

• 3CV's: 9.6 gal

• Stabilized parameters:

pH: 7.18, Temp: 18.6°C, Spec Cond: 936.5  $\mu\text{S/cm}$

Vol: 10.5 gal

Sample collected at 1427.

1435 Set up to collect GW sample at MW-05

• 3CV's: 9.9 gal

• Stabilized parameters:

Temp: 18.6°C, pH: 7.05; Spec Cond: 819.5  $\mu\text{S/cm}$

Vol: 11.0 gal

Sample collected at 1500

1510 Decon all equipment.

Place GW Samples in Cooler w/ Ice.

4  
11/28/16  
MS

GW Sampling

MS/FR

-Notes:

• MW-08 has 4" casing and well vault will not properly close due to PVC casing and J-Plug. Recommend trimming PVC casing

• MW-02 needs new surface completion well is evenly exposed as PVC casing cut ~1 ft high. J-Plug is taped into place to prevent debris/water entering well. Left 2 parking cones around well for protection.

• MW-05 needs a J-Plug (missing)

1515 M. Supply, FRoacker off-site.

Summary:

• Located 8 of 9 MW's (MW-09 missing)

• Gauged fluid levels / total depth in 8 wells

• Sampled 8 wells for groundwater

• 8260 (VOC's) - unfiltered

• 504.1 (FDB) - unfiltered

• Purged wells for Casing Volume & confirmed Stabilization of Water Quality Parameters before sampling.



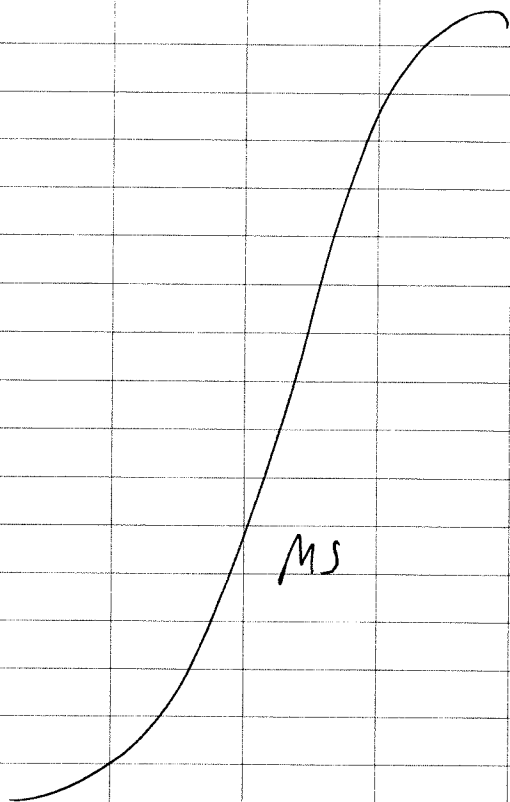
11/28/16  
MS

GW Sampling

MS/FR

cont:

• All perched fluids spread on impermeable surface to evaporate



Use 24-hour clock for time. Fill out at end of each probe hole entry. Number holes based on clients description of the location. Start with a new sheet for each day. Note operators and change of operator. Include all PID/Landtec/FID readings etc...

Date: 10/27/16 Day #: 4 Page #: 1 of 4 Project #: 16117.01  
 Client: Entera Project Name: COA Railway

START TIME	END TIME	LOCATION#	ACTIVITY DESCRIPTION	READINGS
0727			on site / setup / safety meeting / DT 2 sampling	
0807	0824	SB-21	(0-5)(5-10)(10-15); pull & backfill w/ bentonite chips; Decm	
0808	0838	SB-22	(0-6); pull & backfill; Decm	
0848	0910	SB-23	(0-5)(5-10)(10-15); backfill & pull; Decm	
0914	0922	SB-24	(0-6); pull & backfill; Decm	
0938	0948	SB-25	<del>Drill Steel</del> (0-6); <del>pull &amp; backfill</del> ; Decm	
0955	1009	SB-26	(0-5)(5-10)(10-15); pull & backfill; Decm	
1030	1047	SB-27	(0-5)(5-10)(10-15); pull & backfill; Decm	
1053	1107	SB-28	Drill Steel (0-5)(5-10); pull & backfill; Decm	
1114	1131	SB-29	Drill Steel (0-5)(5-10); pull & backfill; Decm	
1138	1149	SB-30	(0-5)(5-10); pull & backfill; Decm	
			client had to run to get more sampling jars	
1243	1251	SB-31	(0-5)(5-10); pull & backfill; Decm; <del>Setup soil gas equipment</del>	
1254	1343	SV-32	(0-6); pull & backfill; Decm; Setup Soil gas equipment DPT 1.5' to 5'; pull to 4'; purge & sample; pull & backfill	
1344	1407	SV-31	DPT 1.5' to 5'; pull to 4'; purge & sample; pull & backfill	
1414	1441	SV-30	DPT 1.5' to 5'; pull to 4'; purge & sample; pull & backfill	

Operator Initials: J (Required) Bent: 1111 10) 21, 23, 27, 32  
 9) 31, 32, 28, 28





# Vista GeoScience

130 Capital Drive, Suite C  
 Golden, CO 80401-5654  
 Phone: 303-277-1694  
 Fax: 303-278-0104

PAGE: <u>7</u> OF
DATE / TIME: <u>10/27/10</u>
PROJECT: <u>1611201</u>
JOB NO. :
REC / SAMP BY:

## SOIL-VAPOR SAMPLING FORM

WELL/LOC. NO. :	WELL TYPE:	<input type="checkbox"/> Monitor	<input type="checkbox"/> Extraction	<input checked="" type="checkbox"/> PRT Sys.	<input type="checkbox"/> Other
	WELL MATERIAL:	<input type="checkbox"/> PVC	<input checked="" type="checkbox"/> Poly / Implant	<input type="checkbox"/> Teflon	<input type="checkbox"/> Other

### WELL OR PRT PURGING & SAMPLING LOG

<b>PURGE VOLUME</b> Casing/Tubing Inner Diameter: <input checked="" type="checkbox"/> 1/4-inch <input type="checkbox"/> 1/2-inch <input type="checkbox"/> 3/4-inch <input type="checkbox"/> 1-inch <input type="checkbox"/> Other _____ Total Length of Tubing/Casing: <u>7'</u> Number of Well Volumes to be Purged (# Vols): <u>3</u>	<b>PURGING METHOD</b> <input checked="" type="checkbox"/> Landtec <input type="checkbox"/> Peristaltic pump <input type="checkbox"/> Other - Type: _____ Well Depth: _____
--	--

**PURGE VOLUME CALCULATION:** (Tubing Volume/ft x length) X (# Purge Volumes) = 204 CC or Liters  
 (Refer to Tubing / Hole Volume Table)

<b>PURGE TIME</b> START <u>1327</u> STOP <u>1331</u> ELAPSED _____ <u>1355</u> <u>1357</u>	<b>PURGE RATE</b> Initial <u>200</u> L/pm Final <u>200</u> L/pm <u>200</u> <u>200</u>	<b>ACTUAL PURGE VOLUME</b> _____ Liters
--	---	--

**FIELD PARAMETER MEASUREMENT**

Time	Minutes	FLOW	Vacuum	PID	FID	CH4	CO2	O2	Bal
00:00		L/min		ppm	ppm	%	%	%	%
SV-32	1330	200		0.9	—	0	3.3	16.3	80.9
SV-31	1357	200		1.3	—	0	6.0	13.1	80.9

Observations/Note:

### SAMPLE COLLECTION

**SAMPLE CONTAINER TYPE**

Tedlar Bag  Sorption Tubes  Summa Canister  Septum Bottle

**SAMPLES** Sample Series: \_\_\_\_\_

Sample/Location ID	Contain ID	Date	Time	Depth	Volume	Comments
SV-32-A	G016 4984	10/27	1336	4-5'	1L	
SV-32-B	G017 7478	10/27	1336	4-5'	1L	
SV-31-A	H020 0236	10/27	1403	4-5'	1L	
SV-31-B	M110 2989	10/27	1403	4-5'	1L	

# Vista GeoScience

130 Capital Drive, Suite C  
 Golden, CO 80401-5654  
 Phone: 303-277-1694  
 Fax: 303-278-0104

PAGE: <u>9</u> OF
DATE / TIME: <u>10/27/16</u>
PROJECT: <u>16117.01</u>
JOB NO. :
REC / SAMP BY:

## SOIL-VAPOR SAMPLING FORM

WELL/LOC. NO. :	WELL TYPE:	<input type="checkbox"/> Monitor	<input type="checkbox"/> Extraction	<input checked="" type="checkbox"/> PRT Sys.	<input type="checkbox"/> Other
	WELL MATERIAL:	<input type="checkbox"/> PVC	<input checked="" type="checkbox"/> Poly / Implant	<input type="checkbox"/> Teflon	<input type="checkbox"/> Other

### WELL OR PRT PURGING & SAMPLING LOG

<b>PURGE VOLUME</b> Casing/Tubing Inner Diameter: <input checked="" type="checkbox"/> 1/4-inch <input type="checkbox"/> 1/2-inch <input type="checkbox"/> 3/4-inch <input type="checkbox"/> 1-inch <input type="checkbox"/> Other _____ Total Length of Tubing/Casing: <u>7</u> Number of Well Volumes to be Purged (# Vols): <u>3</u>	<b>PURGING METHOD</b> <input checked="" type="checkbox"/> Landtec <input type="checkbox"/> Peristaltic pump <input type="checkbox"/> Other - Type: _____ Well Depth: _____
---	--

**PURGE VOLUME CALCULATION:** (Tubing Volume/ft x length) X (# Purge Volumes) = 204 CC or Liters  
 (Refer to Tubing / Hole Volume Table)

PURGE TIME SU-28 SU-27 1518 START 1520 STOP _____ ELAPSED 1547	PURGE RATE Initial <u>200</u> L/pm Final <u>200</u> L/pm	ACTUAL PURGE VOLUME _____ Liters
	(Note: Initial and Final flow rates are handwritten as 200 L/pm)	

### FIELD PARAMETER MEASUREMENT

Time	Minutes	FLOW	Vacuum	PID	FID	CH4	CO2	O2	Bal
		L/min		ppm	ppm	%	%	%	%
SU-28	1520	200		1.5	-	0	8.5	11.3	80.1
SU-27	1549	200		2.7	-	0	6.4	12.5	81.1

Observations/Note:

### SAMPLE COLLECTION

**SAMPLE CONTAINER TYPE**  
 Tedlar Bag  Sorption Tubes  Summa Canister  Septum Bottle

**SAMPLES** Sample Series: \_\_\_\_\_

Sample/Location ID	Contain ID	Date	Time	Depth	Volume	Comments
SU-28-A	1100 863	10/27	1526	4-5'	1L	
SU-28-B	1100 880	10/27	1526	4-5'	1L	
SU-27-A	1049 249	10/27	1555	4-5'	1L	
SU-27-B	6016 8290	10/27	1555	4-5'	1L	

# Vista GeoScience

130 Capital Drive, Suite C  
 Golden, CO 80401-5654  
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PAGE: 10 OF
DATE / TIME: 10/27/16
PROJECT: 16117.01
JOB NO. :
REC / SAMP BY:

## SOIL-VAPOR SAMPLING FORM

WELL/LOC. NO. :	WELL TYPE:	<input type="checkbox"/> Monitor	<input type="checkbox"/> Extraction	<input checked="" type="checkbox"/> PRT Sys.	<input type="checkbox"/> Other
	WELL MATERIAL:	<input type="checkbox"/> PVC	<input checked="" type="checkbox"/> Poly / Implant	<input type="checkbox"/> Teflon	<input type="checkbox"/> Other

### WELL OR PRT PURGING & SAMPLING LOG

<b>PURGE VOLUME</b> Casing/Tubing Inner Diameter: <input checked="" type="checkbox"/> 1/4-inch <input type="checkbox"/> 1/2-inch <input type="checkbox"/> 3/4-inch <input type="checkbox"/> 1-inch <input type="checkbox"/> Other _____ Total Length of Tubing/Casing: <u>7</u> Number of Well Volumes to be Purged (# Vols): <u>3</u>	<b>PURGING METHOD</b> <input checked="" type="checkbox"/> Landtec <input type="checkbox"/> Peristaltic pump <input type="checkbox"/> Other - Type: _____ Well Depth: _____
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**PURGE VOLUME CALCULATION:** (Tubing Volume/ft x length) X (# Purge Volumes) = 209 CC or Liters  
 (Refer to Tubing / Hole Volume Table)

SV-21 SV-23	<b>PURGE TIME</b>	<b>PURGE RATE</b>	<b>ACTUAL PURGE VOLUME</b>
	1616 START 1619 STOP _____ ELAPSED	Initial <u>200</u> L/pm Final <u>200</u> L/pm	_____ Liters

### FIELD PARAMETER MEASUREMENT

Time	Minutes	FLOW	Vacuum	PID	FID	CH4	CO2	O2	Bal
00:00		L/min		ppm	ppm	%	%	%	%
SV-21	1619	200		1.5	-	0	15.6	1.6	82.8
SV-23	1652	200		1.6	-	0	9.8	4.9	85.8

Observations/Note:

### SAMPLE COLLECTION

**SAMPLE CONTAINER TYPE**

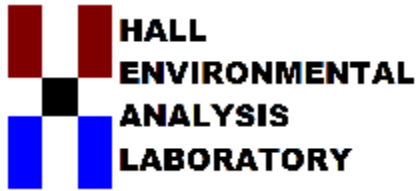
Tedlar Bag  Sorption Tubes  Summa Canister  Septum Bottle

**SAMPLES** Sample Series: \_\_\_\_\_

Sample/Location ID	Contain ID	Date	Time	Depth	Volume	Comments
SV-21-A	H0199 664	10/27	1624	4-5'	1L	
SV-21-B	G016 3271	10/27	1624	4-5'	1L	
SV-23-A	H0200 288	10/27	1657	4-5'	1L	
SV-23-B	H019 4654	10/27	1657	4-5'	1L	



**Appendix B**  
**Laboratory Analytical Report for Soil**



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

November 22, 2016

Joseph Tracy  
Intera, Inc.  
6000 Uptown Boulevard, NE Suite 220  
Albuquerque, NM 87110  
TEL: (505) 246-1600  
FAX (505) 246-2600

RE: COA Railyards

OrderNo.: 1610E23

Dear Joseph Tracy:

Hall Environmental Analysis Laboratory received 33 sample(s) on 10/28/2016 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued November 15, 2016.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,

A handwritten signature in black ink, appearing to read "Andy Freeman", is written over a white background.

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-1 (9-10)

Project: COA Railyards

Collection Date: 10/24/2016 3:10:00 PM

Lab ID: 1610E23-001

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>	
Diesel Range Organics (DRO)	8.6	1.8	9.7	J	mg/Kg	1	11/1/2016 2:57:59 PM	28372
Motor Oil Range Organics (MRO)	ND	49	49		mg/Kg	1	11/1/2016 2:57:59 PM	28372
Surr: DNOP	98.4	0	70-130		%Rec	1	11/1/2016 2:57:59 PM	28372
<b>EPA METHOD 8310: PAHS</b>							Analyst: <b>SCC</b>	
Naphthalene	ND	0.035	0.25		mg/Kg	1	11/6/2016 5:04:33 PM	28374
1-Methylnaphthalene	ND	0.037	0.25		mg/Kg	1	11/6/2016 5:04:33 PM	28374
2-Methylnaphthalene	ND	0.035	0.25		mg/Kg	1	11/6/2016 5:04:33 PM	28374
Acenaphthylene	ND	0.034	0.25		mg/Kg	1	11/6/2016 5:04:33 PM	28374
Acenaphthene	ND	0.031	0.25		mg/Kg	1	11/6/2016 5:04:33 PM	28374
Fluorene	ND	0.0033	0.030		mg/Kg	1	11/6/2016 5:04:33 PM	28374
Phenanthrene	ND	0.0016	0.015		mg/Kg	1	11/6/2016 5:04:33 PM	28374
Anthracene	ND	0.0024	0.015		mg/Kg	1	11/6/2016 5:04:33 PM	28374
Fluoranthene	ND	0.0033	0.020		mg/Kg	1	11/6/2016 5:04:33 PM	28374
Pyrene	ND	0.0034	0.025		mg/Kg	1	11/6/2016 5:04:33 PM	28374
Benz(a)anthracene	ND	0.00050	0.010		mg/Kg	1	11/6/2016 5:04:33 PM	28374
Chrysene	ND	0.0014	0.010		mg/Kg	1	11/6/2016 5:04:33 PM	28374
Benzo(b)fluoranthene	ND	0.00071	0.010		mg/Kg	1	11/6/2016 5:04:33 PM	28374
Benzo(k)fluoranthene	ND	0.00040	0.010		mg/Kg	1	11/6/2016 5:04:33 PM	28374
Benzo(a)pyrene	ND	0.00040	0.010		mg/Kg	1	11/6/2016 5:04:33 PM	28374
Dibenz(a,h)anthracene	ND	0.00050	0.010		mg/Kg	1	11/6/2016 5:04:33 PM	28374
Benzo(g,h,i)perylene	ND	0.00060	0.010		mg/Kg	1	11/6/2016 5:04:33 PM	28374
Indeno(1,2,3-cd)pyrene	ND	0.00080	0.010		mg/Kg	1	11/6/2016 5:04:33 PM	28374
Surr: Benzo(e)pyrene	42.3	0	27.4-110		%Rec	1	11/6/2016 5:04:33 PM	28374
<b>EPA METHOD 6010B: SOIL METALS</b>							Analyst: <b>MED</b>	
Antimony	ND	0.98	2.4		mg/Kg	1	10/31/2016 11:04:42 AM	28363
Arsenic	3.4	0.87	2.4		mg/Kg	1	10/31/2016 11:04:42 AM	28363
Chromium	5.7	0.092	0.29		mg/Kg	1	10/31/2016 11:04:42 AM	28363
Iron	8800	37	120		mg/Kg	50	10/31/2016 1:30:42 PM	28363
Lead	4.7	0.17	0.24		mg/Kg	1	10/31/2016 11:04:42 AM	28363
Manganese	49	0.052	0.098		mg/Kg	1	10/31/2016 11:04:42 AM	28363
Thallium	ND	0.75	2.4		mg/Kg	1	10/31/2016 11:04:42 AM	28363
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>	
Benzene	ND	0.015	0.019		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Toluene	ND	0.0023	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Ethylbenzene	ND	0.0032	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Methyl tert-butyl ether (MTBE)	ND	0.012	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
1,2,4-Trimethylbenzene	ND	0.0028	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
1,3,5-Trimethylbenzene	ND	0.0028	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-1 (9-10)

Project: COA Railyards

Collection Date: 10/24/2016 3:10:00 PM

Lab ID: 1610E23-001

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.010	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
1,2-Dibromoethane (EDB)	ND	0.0027	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Naphthalene	ND	0.0060	0.077		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
1-Methylnaphthalene	ND	0.0086	0.15		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
2-Methylnaphthalene	ND	0.0083	0.15		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Acetone	ND	0.050	0.58		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Bromobenzene	ND	0.0031	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Bromodichloromethane	ND	0.0022	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Bromoform	ND	0.0047	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Bromomethane	0.040	0.014	0.12	J	mg/Kg	1	10/31/2016 11:47:34 AM	S38351
2-Butanone	0.035	0.022	0.39	J	mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Carbon disulfide	ND	0.013	0.39		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Carbon tetrachloride	ND	0.0025	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Chlorobenzene	ND	0.0031	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Chloroethane	ND	0.0077	0.077		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Chloroform	ND	0.0029	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Chloromethane	0.014	0.0034	0.12	J	mg/Kg	1	10/31/2016 11:47:34 AM	S38351
2-Chlorotoluene	ND	0.0028	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
4-Chlorotoluene	ND	0.0034	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
cis-1,2-DCE	ND	0.0022	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
cis-1,3-Dichloropropene	ND	0.0036	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
1,2-Dibromo-3-chloropropane	ND	0.012	0.077		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Dibromochloromethane	ND	0.0035	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Dibromomethane	ND	0.0033	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
1,2-Dichlorobenzene	ND	0.0034	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
1,3-Dichlorobenzene	ND	0.0032	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
1,4-Dichlorobenzene	ND	0.0048	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Dichlorodifluoromethane	ND	0.012	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
1,1-Dichloroethane	ND	0.0021	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
1,1-Dichloroethene	ND	0.013	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
1,2-Dichloropropane	ND	0.0032	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
1,3-Dichloropropane	ND	0.0044	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
2,2-Dichloropropane	ND	0.0022	0.077		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
1,1-Dichloropropene	ND	0.0031	0.077		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Hexachlorobutadiene	ND	0.0047	0.077		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
2-Hexanone	ND	0.021	0.39		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Isopropylbenzene	ND	0.0033	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
4-Isopropyltoluene	ND	0.0035	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
4-Methyl-2-pentanone	ND	0.011	0.39		mg/Kg	1	10/31/2016 11:47:34 AM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-1 (9-10)

Project: COA Railyards

Collection Date: 10/24/2016 3:10:00 PM

Lab ID: 1610E23-001

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.014	0.011	0.12	J	mg/Kg	1	10/31/2016 11:47:34 AM	S38351
n-Butylbenzene	ND	0.0034	0.12		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
n-Propylbenzene	ND	0.0030	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
sec-Butylbenzene	ND	0.0053	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Styrene	ND	0.0034	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
tert-Butylbenzene	ND	0.0032	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
1,1,1,2-Tetrachloroethane	ND	0.0037	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
1,1,2,2-Tetrachloroethane	ND	0.0062	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Tetrachloroethene (PCE)	ND	0.0032	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
trans-1,2-DCE	ND	0.011	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
trans-1,3-Dichloropropene	ND	0.0056	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
1,2,3-Trichlorobenzene	ND	0.0058	0.077		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
1,2,4-Trichlorobenzene	ND	0.0041	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
1,1,1-Trichloroethane	ND	0.0024	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
1,1,2-Trichloroethane	ND	0.0045	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Trichloroethene (TCE)	ND	0.0041	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Trichlorofluoromethane	ND	0.0029	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
1,2,3-Trichloropropane	ND	0.0067	0.077		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Vinyl chloride	ND	0.0032	0.039		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Xylenes, Total	ND	0.0073	0.077		mg/Kg	1	10/31/2016 11:47:34 AM	S38351
Surr: Dibromofluoromethane	102		70-130		%Rec	1	10/31/2016 11:47:34 AM	S38351
Surr: 1,2-Dichloroethane-d4	99.2		70-130		%Rec	1	10/31/2016 11:47:34 AM	S38351
Surr: Toluene-d8	93.1		70-130		%Rec	1	10/31/2016 11:47:34 AM	S38351
Surr: 4-Bromofluorobenzene	94.4		70-130		%Rec	1	10/31/2016 11:47:34 AM	S38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.58	3.9		mg/Kg	1	10/31/2016 11:47:34 AM	GS3835
Surr: BFB	99.3	0	70-130		%Rec	1	10/31/2016 11:47:34 AM	GS3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-2 (8.5-10)

Project: COA Railyards

Collection Date: 10/24/2016 3:35:00 PM

Lab ID: 1610E23-002

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								Analyst: TOM
Diesel Range Organics (DRO)	ND	1.8	9.5		mg/Kg	1	11/1/2016 3:19:44 PM	28372
Motor Oil Range Organics (MRO)	ND	48	48		mg/Kg	1	11/1/2016 3:19:44 PM	28372
Surr: DNOP	90.0	0	70-130		%Rec	1	11/1/2016 3:19:44 PM	28372
<b>EPA METHOD 8310: PAHS</b>								Analyst: SCC
Naphthalene	ND	0.034	0.25		mg/Kg	1	11/6/2016 5:33:46 PM	28374
1-Methylnaphthalene	ND	0.037	0.25		mg/Kg	1	11/6/2016 5:33:46 PM	28374
2-Methylnaphthalene	ND	0.035	0.25		mg/Kg	1	11/6/2016 5:33:46 PM	28374
Acenaphthylene	ND	0.033	0.25		mg/Kg	1	11/6/2016 5:33:46 PM	28374
Acenaphthene	ND	0.030	0.25		mg/Kg	1	11/6/2016 5:33:46 PM	28374
Fluorene	ND	0.0033	0.030		mg/Kg	1	11/6/2016 5:33:46 PM	28374
Phenanthrene	0.0032	0.0016	0.015	J	mg/Kg	1	11/6/2016 5:33:46 PM	28374
Anthracene	ND	0.0024	0.015		mg/Kg	1	11/6/2016 5:33:46 PM	28374
Fluoranthene	ND	0.0033	0.020		mg/Kg	1	11/6/2016 5:33:46 PM	28374
Pyrene	ND	0.0034	0.025		mg/Kg	1	11/6/2016 5:33:46 PM	28374
Benz(a)anthracene	ND	0.00049	0.0099		mg/Kg	1	11/6/2016 5:33:46 PM	28374
Chrysene	0.0017	0.0014	0.0099	J	mg/Kg	1	11/6/2016 5:33:46 PM	28374
Benzo(b)fluoranthene	ND	0.00070	0.0099		mg/Kg	1	11/6/2016 5:33:46 PM	28374
Benzo(k)fluoranthene	0.00049	0.00039	0.0099	J	mg/Kg	1	11/6/2016 5:33:46 PM	28374
Benzo(a)pyrene	0.00049	0.00039	0.0099	J	mg/Kg	1	11/6/2016 5:33:46 PM	28374
Dibenz(a,h)anthracene	ND	0.00049	0.0099		mg/Kg	1	11/6/2016 5:33:46 PM	28374
Benzo(g,h,i)perylene	0.00074	0.00059	0.0099	J	mg/Kg	1	11/6/2016 5:33:46 PM	28374
Indeno(1,2,3-cd)pyrene	0.0012	0.00079	0.0099	J	mg/Kg	1	11/6/2016 5:33:46 PM	28374
Surr: Benzo(e)pyrene	80.4	0	27.4-110		%Rec	1	11/6/2016 5:33:46 PM	28374
<b>EPA METHOD 6010B: SOIL METALS</b>								Analyst: MED
Antimony	ND	0.98	2.4		mg/Kg	1	10/31/2016 11:08:16 AM	28363
Arsenic	1.2	0.86	2.4	J	mg/Kg	1	10/31/2016 11:08:16 AM	28363
Chromium	2.5	0.092	0.29		mg/Kg	1	10/31/2016 11:08:16 AM	28363
Iron	4500	37	120		mg/Kg	50	10/31/2016 1:32:13 PM	28363
Lead	2.1	0.17	0.24		mg/Kg	1	10/31/2016 11:08:16 AM	28363
Manganese	33	0.052	0.097		mg/Kg	1	10/31/2016 11:08:16 AM	28363
Thallium	ND	0.75	2.4		mg/Kg	1	10/31/2016 11:08:16 AM	28363
<b>EPA METHOD 8260B: VOLATILES</b>								Analyst: DJF
Benzene	ND	0.015	0.019		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Toluene	ND	0.0023	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Ethylbenzene	ND	0.0031	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Methyl tert-butyl ether (MTBE)	ND	0.012	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
1,2,4-Trimethylbenzene	ND	0.0028	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
1,3,5-Trimethylbenzene	ND	0.0028	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-2 (8.5-10)

Project: COA Railyards

Collection Date: 10/24/2016 3:35:00 PM

Lab ID: 1610E23-002

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.010	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
1,2-Dibromoethane (EDB)	ND	0.0027	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Naphthalene	ND	0.0060	0.077		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
1-Methylnaphthalene	ND	0.0085	0.15		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
2-Methylnaphthalene	ND	0.0082	0.15		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Acetone	ND	0.050	0.58		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Bromobenzene	ND	0.0031	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Bromodichloromethane	ND	0.0022	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Bromoform	ND	0.0047	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Bromomethane	0.052	0.014	0.12	J	mg/Kg	1	10/31/2016 1:14:05 PM	S38351
2-Butanone	ND	0.022	0.38		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Carbon disulfide	ND	0.013	0.38		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Carbon tetrachloride	ND	0.0025	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Chlorobenzene	ND	0.0031	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Chloroethane	ND	0.0077	0.077		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Chloroform	ND	0.0029	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Chloromethane	0.014	0.0034	0.12	J	mg/Kg	1	10/31/2016 1:14:05 PM	S38351
2-Chlorotoluene	ND	0.0028	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
4-Chlorotoluene	ND	0.0034	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
cis-1,2-DCE	ND	0.0022	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
cis-1,3-Dichloropropene	ND	0.0035	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
1,2-Dibromo-3-chloropropane	ND	0.012	0.077		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Dibromochloromethane	ND	0.0035	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Dibromomethane	ND	0.0033	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
1,2-Dichlorobenzene	ND	0.0033	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
1,3-Dichlorobenzene	ND	0.0031	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
1,4-Dichlorobenzene	ND	0.0048	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Dichlorodifluoromethane	ND	0.012	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
1,1-Dichloroethane	ND	0.0021	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
1,1-Dichloroethene	ND	0.013	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
1,2-Dichloropropane	ND	0.0032	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
1,3-Dichloropropane	ND	0.0043	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
2,2-Dichloropropane	ND	0.0022	0.077		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
1,1-Dichloropropene	ND	0.0030	0.077		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Hexachlorobutadiene	ND	0.0047	0.077		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
2-Hexanone	ND	0.021	0.38		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Isopropylbenzene	ND	0.0033	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
4-Isopropyltoluene	ND	0.0034	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
4-Methyl-2-pentanone	ND	0.011	0.38		mg/Kg	1	10/31/2016 1:14:05 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-2 (8.5-10)

Project: COA Railyards

Collection Date: 10/24/2016 3:35:00 PM

Lab ID: 1610E23-002

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.014	0.011	0.12	J	mg/Kg	1	10/31/2016 1:14:05 PM	S38351
n-Butylbenzene	ND	0.0034	0.12		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
n-Propylbenzene	ND	0.0030	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
sec-Butylbenzene	ND	0.0053	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Styrene	ND	0.0034	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
tert-Butylbenzene	ND	0.0032	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
1,1,1,2-Tetrachloroethane	ND	0.0037	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
1,1,2,2-Tetrachloroethane	ND	0.0062	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Tetrachloroethene (PCE)	ND	0.0032	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
trans-1,2-DCE	ND	0.011	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
trans-1,3-Dichloropropene	ND	0.0056	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
1,2,3-Trichlorobenzene	ND	0.0057	0.077		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
1,2,4-Trichlorobenzene	ND	0.0041	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
1,1,1-Trichloroethane	ND	0.0023	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
1,1,2-Trichloroethane	ND	0.0045	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Trichloroethene (TCE)	ND	0.0041	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Trichlorofluoromethane	ND	0.0029	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
1,2,3-Trichloropropane	ND	0.0066	0.077		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Vinyl chloride	ND	0.0031	0.038		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Xylenes, Total	ND	0.0073	0.077		mg/Kg	1	10/31/2016 1:14:05 PM	S38351
Surr: Dibromofluoromethane	103		70-130		%Rec	1	10/31/2016 1:14:05 PM	S38351
Surr: 1,2-Dichloroethane-d4	101		70-130		%Rec	1	10/31/2016 1:14:05 PM	S38351
Surr: Toluene-d8	94.8		70-130		%Rec	1	10/31/2016 1:14:05 PM	S38351
Surr: 4-Bromofluorobenzene	94.7		70-130		%Rec	1	10/31/2016 1:14:05 PM	S38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.58	3.8		mg/Kg	1	10/31/2016 1:14:05 PM	GS3835
Surr: BFB	99.5	0	70-130		%Rec	1	10/31/2016 1:14:05 PM	GS3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-3 (8.5-10)

Project: COA Railyards

Collection Date: 10/24/2016 4:00:00 PM

Lab ID: 1610E23-003

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								Analyst: TOM
Diesel Range Organics (DRO)	9.8	1.7	9.4		mg/Kg	1	11/1/2016 3:41:30 PM	28372
Motor Oil Range Organics (MRO)	ND	47	47		mg/Kg	1	11/1/2016 3:41:30 PM	28372
Surr: DNOP	95.0	0	70-130		%Rec	1	11/1/2016 3:41:30 PM	28372
<b>EPA METHOD 8310: PAHS</b>								Analyst: SCC
Naphthalene	0.33	0.034	0.25		mg/Kg	1	11/6/2016 6:03:01 PM	28374
1-Methylnaphthalene	0.13	0.036	0.25	J	mg/Kg	1	11/6/2016 6:03:01 PM	28374
2-Methylnaphthalene	0.31	0.034	0.25		mg/Kg	1	11/6/2016 6:03:01 PM	28374
Acenaphthylene	ND	0.033	0.25		mg/Kg	1	11/6/2016 6:03:01 PM	28374
Acenaphthene	ND	0.030	0.25		mg/Kg	1	11/6/2016 6:03:01 PM	28374
Fluorene	ND	0.0033	0.030		mg/Kg	1	11/6/2016 6:03:01 PM	28374
Phenanthrene	0.0059	0.0016	0.015	J	mg/Kg	1	11/6/2016 6:03:01 PM	28374
Anthracene	ND	0.0024	0.015		mg/Kg	1	11/6/2016 6:03:01 PM	28374
Fluoranthene	ND	0.0033	0.020		mg/Kg	1	11/6/2016 6:03:01 PM	28374
Pyrene	ND	0.0033	0.025		mg/Kg	1	11/6/2016 6:03:01 PM	28374
Benz(a)anthracene	ND	0.00049	0.0099		mg/Kg	1	11/6/2016 6:03:01 PM	28374
Chrysene	ND	0.0014	0.0099		mg/Kg	1	11/6/2016 6:03:01 PM	28374
Benzo(b)fluoranthene	ND	0.00070	0.0099		mg/Kg	1	11/6/2016 6:03:01 PM	28374
Benzo(k)fluoranthene	ND	0.00039	0.0099		mg/Kg	1	11/6/2016 6:03:01 PM	28374
Benzo(a)pyrene	ND	0.00039	0.0099		mg/Kg	1	11/6/2016 6:03:01 PM	28374
Dibenz(a,h)anthracene	0.00074	0.00049	0.0099	J	mg/Kg	1	11/6/2016 6:03:01 PM	28374
Benzo(g,h,i)perylene	ND	0.00059	0.0099		mg/Kg	1	11/6/2016 6:03:01 PM	28374
Indeno(1,2,3-cd)pyrene	ND	0.00079	0.0099		mg/Kg	1	11/6/2016 6:03:01 PM	28374
Surr: Benzo(e)pyrene	61.3	0	27.4-110		%Rec	1	11/6/2016 6:03:01 PM	28374
<b>EPA METHOD 6010B: SOIL METALS</b>								Analyst: MED
Antimony	ND	1.0	2.5		mg/Kg	1	10/31/2016 11:11:36 AM	28363
Arsenic	2.1	0.89	2.5	J	mg/Kg	1	10/31/2016 11:11:36 AM	28363
Chromium	4.9	0.094	0.30		mg/Kg	1	10/31/2016 11:11:36 AM	28363
Iron	7800	38	120		mg/Kg	50	10/31/2016 1:33:57 PM	28363
Lead	3.0	0.17	0.25		mg/Kg	1	10/31/2016 11:11:36 AM	28363
Manganese	72	0.054	0.10		mg/Kg	1	10/31/2016 11:11:36 AM	28363
Thallium	ND	0.77	2.5		mg/Kg	1	10/31/2016 11:11:36 AM	28363
<b>EPA METHOD 8260B: VOLATILES</b>								Analyst: DJF
Benzene	ND	0.013	0.017		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Toluene	0.0044	0.0020	0.034	J	mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Ethylbenzene	0.027	0.0028	0.034	J	mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Methyl tert-butyl ether (MTBE)	ND	0.011	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
1,2,4-Trimethylbenzene	0.019	0.0025	0.034	J	mg/Kg	1	10/31/2016 2:40:42 PM	S38351
1,3,5-Trimethylbenzene	0.0060	0.0024	0.034	J	mg/Kg	1	10/31/2016 2:40:42 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-3 (8.5-10)

Project: COA Railyards

Collection Date: 10/24/2016 4:00:00 PM

Lab ID: 1610E23-003

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0088	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
1,2-Dibromoethane (EDB)	ND	0.0024	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Naphthalene	1.0	0.0053	0.067		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
1-Methylnaphthalene	0.32	0.0075	0.13		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
2-Methylnaphthalene	0.67	0.0072	0.13		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Acetone	0.15	0.043	0.50	J	mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Bromobenzene	ND	0.0027	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Bromodichloromethane	ND	0.0020	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Bromoform	ND	0.0041	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Bromomethane	0.034	0.012	0.10	J	mg/Kg	1	10/31/2016 2:40:42 PM	S38351
2-Butanone	0.045	0.019	0.34	J	mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Carbon disulfide	ND	0.011	0.34		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Carbon tetrachloride	ND	0.0022	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Chlorobenzene	ND	0.0027	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Chloroethane	ND	0.0067	0.067		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Chloroform	0.0081	0.0025	0.034	J	mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Chloromethane	ND	0.0030	0.10		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
2-Chlorotoluene	ND	0.0025	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
4-Chlorotoluene	ND	0.0030	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
cis-1,2-DCE	ND	0.0020	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
cis-1,3-Dichloropropene	ND	0.0031	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
1,2-Dibromo-3-chloropropane	ND	0.010	0.067		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Dibromochloromethane	ND	0.0030	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Dibromomethane	ND	0.0029	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
1,2-Dichlorobenzene	ND	0.0029	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
1,3-Dichlorobenzene	ND	0.0028	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
1,4-Dichlorobenzene	ND	0.0042	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Dichlorodifluoromethane	ND	0.010	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
1,1-Dichloroethane	ND	0.0018	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
1,1-Dichloroethene	ND	0.011	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
1,2-Dichloropropane	ND	0.0028	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
1,3-Dichloropropane	ND	0.0038	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
2,2-Dichloropropane	ND	0.0019	0.067		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
1,1-Dichloropropene	ND	0.0027	0.067		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Hexachlorobutadiene	ND	0.0041	0.067		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
2-Hexanone	ND	0.018	0.34		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Isopropylbenzene	0.028	0.0029	0.034	J	mg/Kg	1	10/31/2016 2:40:42 PM	S38351
4-Isopropyltoluene	0.0077	0.0030	0.034	J	mg/Kg	1	10/31/2016 2:40:42 PM	S38351
4-Methyl-2-pentanone	0.024	0.0098	0.34	J	mg/Kg	1	10/31/2016 2:40:42 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-3 (8.5-10)

Project: COA Railyards

Collection Date: 10/24/2016 4:00:00 PM

Lab ID: 1610E23-003

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.024	0.0097	0.10	J	mg/Kg	1	10/31/2016 2:40:42 PM	S38351
n-Butylbenzene	0.064	0.0030	0.10	J	mg/Kg	1	10/31/2016 2:40:42 PM	S38351
n-Propylbenzene	0.12	0.0026	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
sec-Butylbenzene	0.019	0.0047	0.034	J	mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Styrene	ND	0.0030	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
tert-Butylbenzene	ND	0.0028	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
1,1,1,2-Tetrachloroethane	ND	0.0032	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
1,1,2,2-Tetrachloroethane	ND	0.0054	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Tetrachloroethene (PCE)	ND	0.0028	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
trans-1,2-DCE	ND	0.0094	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
trans-1,3-Dichloropropene	ND	0.0049	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
1,2,3-Trichlorobenzene	ND	0.0050	0.067		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
1,2,4-Trichlorobenzene	ND	0.0036	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
1,1,1-Trichloroethane	ND	0.0021	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
1,1,2-Trichloroethane	ND	0.0040	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Trichloroethene (TCE)	ND	0.0036	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Trichlorofluoromethane	ND	0.0025	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
1,2,3-Trichloropropane	ND	0.0058	0.067		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Vinyl chloride	ND	0.0027	0.034		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Xylenes, Total	ND	0.0064	0.067		mg/Kg	1	10/31/2016 2:40:42 PM	S38351
Surr: Dibromofluoromethane	103		70-130		%Rec	1	10/31/2016 2:40:42 PM	S38351
Surr: 1,2-Dichloroethane-d4	98.9		70-130		%Rec	1	10/31/2016 2:40:42 PM	S38351
Surr: Toluene-d8	95.3		70-130		%Rec	1	10/31/2016 2:40:42 PM	S38351
Surr: 4-Bromofluorobenzene	96.4		70-130		%Rec	1	10/31/2016 2:40:42 PM	S38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	2.1	0.51	3.4	J	mg/Kg	1	10/31/2016 2:40:42 PM	GS3835
Surr: BFB	101	0	70-130		%Rec	1	10/31/2016 2:40:42 PM	GS3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-4 (10-12)

Project: COA Railyards

Collection Date: 10/24/2016 4:30:00 PM

Lab ID: 1610E23-004

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								Analyst: TOM
Diesel Range Organics (DRO)	7.5	1.7	9.1	J	mg/Kg	1	11/1/2016 4:03:23 PM	28372
Motor Oil Range Organics (MRO)	ND	46	46		mg/Kg	1	11/1/2016 4:03:23 PM	28372
Surr: DNOP	91.1	0	70-130		%Rec	1	11/1/2016 4:03:23 PM	28372
<b>EPA METHOD 8310: PAHS</b>								Analyst: SCC
Naphthalene	ND	0.035	0.25		mg/Kg	1	11/6/2016 7:01:27 PM	28374
1-Methylnaphthalene	ND	0.037	0.25		mg/Kg	1	11/6/2016 7:01:27 PM	28374
2-Methylnaphthalene	ND	0.035	0.25		mg/Kg	1	11/6/2016 7:01:27 PM	28374
Acenaphthylene	ND	0.033	0.25		mg/Kg	1	11/6/2016 7:01:27 PM	28374
Acenaphthene	ND	0.031	0.25		mg/Kg	1	11/6/2016 7:01:27 PM	28374
Fluorene	ND	0.0033	0.030		mg/Kg	1	11/6/2016 7:01:27 PM	28374
Phenanthrene	0.0035	0.0016	0.015	J	mg/Kg	1	11/6/2016 7:01:27 PM	28374
Anthracene	ND	0.0024	0.015		mg/Kg	1	11/6/2016 7:01:27 PM	28374
Fluoranthene	ND	0.0033	0.020		mg/Kg	1	11/6/2016 7:01:27 PM	28374
Pyrene	ND	0.0034	0.025		mg/Kg	1	11/6/2016 7:01:27 PM	28374
Benz(a)anthracene	ND	0.00050	0.010		mg/Kg	1	11/6/2016 7:01:27 PM	28374
Chrysene	ND	0.0014	0.010		mg/Kg	1	11/6/2016 7:01:27 PM	28374
Benzo(b)fluoranthene	ND	0.00070	0.010		mg/Kg	1	11/6/2016 7:01:27 PM	28374
Benzo(k)fluoranthene	ND	0.00040	0.010		mg/Kg	1	11/6/2016 7:01:27 PM	28374
Benzo(a)pyrene	ND	0.00040	0.010		mg/Kg	1	11/6/2016 7:01:27 PM	28374
Dibenz(a,h)anthracene	0.00050	0.00050	0.010	J	mg/Kg	1	11/6/2016 7:01:27 PM	28374
Benzo(g,h,i)perylene	ND	0.00060	0.010		mg/Kg	1	11/6/2016 7:01:27 PM	28374
Indeno(1,2,3-cd)pyrene	ND	0.00080	0.010		mg/Kg	1	11/6/2016 7:01:27 PM	28374
Surr: Benzo(e)pyrene	64.9	0	27.4-110		%Rec	1	11/6/2016 7:01:27 PM	28374
<b>EPA METHOD 6010B: SOIL METALS</b>								Analyst: MED
Antimony	ND	0.96	2.4		mg/Kg	1	10/31/2016 11:15:10 AM	28363
Arsenic	2.3	0.85	2.4	J	mg/Kg	1	10/31/2016 11:15:10 AM	28363
Chromium	6.1	0.090	0.29		mg/Kg	1	10/31/2016 11:15:10 AM	28363
Iron	8500	36	120		mg/Kg	50	10/31/2016 1:35:28 PM	28363
Lead	3.3	0.17	0.24		mg/Kg	1	10/31/2016 11:15:10 AM	28363
Manganese	98	0.051	0.096		mg/Kg	1	10/31/2016 11:15:10 AM	28363
Thallium	ND	0.74	2.4		mg/Kg	1	10/31/2016 11:15:10 AM	28363
<b>EPA METHOD 8260B: VOLATILES</b>								Analyst: DJF
Benzene	ND	0.013	0.017		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Toluene	ND	0.0020	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Ethylbenzene	ND	0.0027	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Methyl tert-butyl ether (MTBE)	ND	0.010	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
1,2,4-Trimethylbenzene	ND	0.0025	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
1,3,5-Trimethylbenzene	ND	0.0024	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-4 (10-12)

Project: COA Railyards

Collection Date: 10/24/2016 4:30:00 PM

Lab ID: 1610E23-004

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0087	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
1,2-Dibromoethane (EDB)	ND	0.0024	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Naphthalene	0.0078	0.0052	0.067	J	mg/Kg	1	10/31/2016 3:09:20 PM	S38351
1-Methylnaphthalene	0.011	0.0074	0.13	J	mg/Kg	1	10/31/2016 3:09:20 PM	S38351
2-Methylnaphthalene	0.022	0.0071	0.13	J	mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Acetone	0.088	0.043	0.50	J	mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Bromobenzene	ND	0.0027	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Bromodichloromethane	ND	0.0019	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Bromoform	ND	0.0041	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Bromomethane	0.034	0.012	0.10	J	mg/Kg	1	10/31/2016 3:09:20 PM	S38351
2-Butanone	ND	0.019	0.33		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Carbon disulfide	ND	0.011	0.33		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Carbon tetrachloride	ND	0.0022	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Chlorobenzene	ND	0.0027	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Chloroethane	ND	0.0067	0.067		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Chloroform	ND	0.0025	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Chloromethane	ND	0.0030	0.10		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
2-Chlorotoluene	ND	0.0025	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
4-Chlorotoluene	ND	0.0029	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
cis-1,2-DCE	ND	0.0019	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
cis-1,3-Dichloropropene	ND	0.0031	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
1,2-Dibromo-3-chloropropane	ND	0.010	0.067		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Dibromochloromethane	ND	0.0030	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Dibromomethane	ND	0.0029	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
1,2-Dichlorobenzene	ND	0.0029	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
1,3-Dichlorobenzene	ND	0.0027	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
1,4-Dichlorobenzene	ND	0.0041	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Dichlorodifluoromethane	ND	0.010	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
1,1-Dichloroethane	ND	0.0018	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
1,1-Dichloroethene	ND	0.011	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
1,2-Dichloropropane	ND	0.0028	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
1,3-Dichloropropane	ND	0.0038	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
2,2-Dichloropropane	ND	0.0019	0.067		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
1,1-Dichloropropene	ND	0.0026	0.067		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Hexachlorobutadiene	ND	0.0041	0.067		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
2-Hexanone	ND	0.018	0.33		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Isopropylbenzene	ND	0.0029	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
4-Isopropyltoluene	ND	0.0030	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
4-Methyl-2-pentanone	ND	0.0097	0.33		mg/Kg	1	10/31/2016 3:09:20 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-4 (10-12)

Project: COA Railyards

Collection Date: 10/24/2016 4:30:00 PM

Lab ID: 1610E23-004

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.017	0.0096	0.10	J	mg/Kg	1	10/31/2016 3:09:20 PM	S38351
n-Butylbenzene	ND	0.0029	0.10		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
n-Propylbenzene	ND	0.0026	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
sec-Butylbenzene	ND	0.0046	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Styrene	ND	0.0030	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
tert-Butylbenzene	ND	0.0028	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
1,1,1,2-Tetrachloroethane	ND	0.0032	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
1,1,2,2-Tetrachloroethane	ND	0.0054	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Tetrachloroethene (PCE)	ND	0.0028	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
trans-1,2-DCE	ND	0.0093	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
trans-1,3-Dichloropropene	ND	0.0049	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
1,2,3-Trichlorobenzene	ND	0.0050	0.067		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
1,2,4-Trichlorobenzene	ND	0.0036	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
1,1,1-Trichloroethane	ND	0.0020	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
1,1,2-Trichloroethane	ND	0.0039	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Trichloroethene (TCE)	ND	0.0036	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Trichlorofluoromethane	ND	0.0025	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
1,2,3-Trichloropropane	ND	0.0058	0.067		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Vinyl chloride	ND	0.0027	0.033		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Xylenes, Total	ND	0.0063	0.067		mg/Kg	1	10/31/2016 3:09:20 PM	S38351
Surr: Dibromofluoromethane	103		70-130		%Rec	1	10/31/2016 3:09:20 PM	S38351
Surr: 1,2-Dichloroethane-d4	95.6		70-130		%Rec	1	10/31/2016 3:09:20 PM	S38351
Surr: Toluene-d8	96.2		70-130		%Rec	1	10/31/2016 3:09:20 PM	S38351
Surr: 4-Bromofluorobenzene	100		70-130		%Rec	1	10/31/2016 3:09:20 PM	S38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	0.65	0.50	3.3	J	mg/Kg	1	10/31/2016 3:09:20 PM	GS3835
Surr: BFB	104	0	70-130		%Rec	1	10/31/2016 3:09:20 PM	GS3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-5 (6-10)

Project: COA Railyards

Collection Date: 10/25/2016 8:40:00 AM

Lab ID: 1610E23-005

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								Analyst: TOM
Diesel Range Organics (DRO)	38	1.8	9.6		mg/Kg	1	11/2/2016 10:15:26 PM	28372
Motor Oil Range Organics (MRO)	130	48	48		mg/Kg	1	11/2/2016 10:15:26 PM	28372
Surr: DNOP	99.9	0	70-130		%Rec	1	11/2/2016 10:15:26 PM	28372
<b>EPA METHOD 8310: PAHS</b>								Analyst: SCC
Naphthalene	ND	0.87	6.3	D	mg/Kg	5	11/7/2016 2:02:23 PM	28374
1-Methylnaphthalene	ND	0.93	6.3	D	mg/Kg	5	11/7/2016 2:02:23 PM	28374
2-Methylnaphthalene	ND	0.88	6.3	D	mg/Kg	5	11/7/2016 2:02:23 PM	28374
Acenaphthylene	ND	0.84	6.3	D	mg/Kg	5	11/7/2016 2:02:23 PM	28374
Acenaphthene	ND	0.77	6.3	D	mg/Kg	5	11/7/2016 2:02:23 PM	28374
Fluorene	ND	0.083	0.75	D	mg/Kg	5	11/7/2016 2:02:23 PM	28374
Phenanthrene	ND	0.040	0.38	D	mg/Kg	5	11/7/2016 2:02:23 PM	28374
Anthracene	ND	0.060	0.38	D	mg/Kg	5	11/7/2016 2:02:23 PM	28374
Fluoranthene	ND	0.083	0.50	D	mg/Kg	5	11/7/2016 2:02:23 PM	28374
Pyrene	ND	0.085	0.63	D	mg/Kg	5	11/7/2016 2:02:23 PM	28374
Benz(a)anthracene	ND	0.013	0.25	D	mg/Kg	5	11/7/2016 2:02:23 PM	28374
Chrysene	ND	0.035	0.25	D	mg/Kg	5	11/7/2016 2:02:23 PM	28374
Benzo(b)fluoranthene	ND	0.018	0.25	D	mg/Kg	5	11/7/2016 2:02:23 PM	28374
Benzo(k)fluoranthene	ND	0.010	0.25	D	mg/Kg	5	11/7/2016 2:02:23 PM	28374
Benzo(a)pyrene	ND	0.010	0.25	D	mg/Kg	5	11/7/2016 2:02:23 PM	28374
Dibenz(a,h)anthracene	ND	0.013	0.25	D	mg/Kg	5	11/7/2016 2:02:23 PM	28374
Benzo(g,h,i)perylene	ND	0.015	0.25	D	mg/Kg	5	11/7/2016 2:02:23 PM	28374
Indeno(1,2,3-cd)pyrene	ND	0.020	0.25	D	mg/Kg	5	11/7/2016 2:02:23 PM	28374
Surr: Benzo(e)pyrene	0	0	27.4-110	SD	%Rec	5	11/7/2016 2:02:23 PM	28374
<b>EPA METHOD 6010B: SOIL METALS</b>								Analyst: MED
Antimony	ND	0.96	2.4		mg/Kg	1	10/31/2016 11:19:01 AM	28363
Arsenic	3.4	0.85	2.4		mg/Kg	1	10/31/2016 11:19:01 AM	28363
Chromium	8.1	0.090	0.29		mg/Kg	1	10/31/2016 11:19:01 AM	28363
Iron	11000	36	120		mg/Kg	50	10/31/2016 1:36:58 PM	28363
Lead	4.0	0.17	0.24		mg/Kg	1	10/31/2016 11:19:01 AM	28363
Manganese	350	0.10	0.19		mg/Kg	2	10/31/2016 11:20:50 AM	28363
Thallium	ND	0.74	2.4		mg/Kg	1	10/31/2016 11:19:01 AM	28363
<b>EPA METHOD 8260B: VOLATILES</b>								Analyst: DJF
Benzene	ND	0.012	0.015		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Toluene	ND	0.0018	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Ethylbenzene	ND	0.0025	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Methyl tert-butyl ether (MTBE)	ND	0.0097	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
1,2,4-Trimethylbenzene	ND	0.0023	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
1,3,5-Trimethylbenzene	ND	0.0022	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-5 (6-10)

Project: COA Railyards

Collection Date: 10/25/2016 8:40:00 AM

Lab ID: 1610E23-005

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0080	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
1,2-Dibromoethane (EDB)	ND	0.0022	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Naphthalene	ND	0.0048	0.061		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
1-Methylnaphthalene	ND	0.0068	0.12		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
2-Methylnaphthalene	ND	0.0066	0.12		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Acetone	0.045	0.040	0.46	J	mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Bromobenzene	ND	0.0025	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Bromodichloromethane	ND	0.0018	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Bromoform	ND	0.0037	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Bromomethane	0.023	0.011	0.092	J	mg/Kg	1	10/31/2016 3:38:07 PM	S38351
2-Butanone	0.055	0.018	0.31	J	mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Carbon disulfide	ND	0.010	0.31		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Carbon tetrachloride	ND	0.0020	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Chlorobenzene	ND	0.0025	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Chloroethane	ND	0.0061	0.061		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Chloroform	ND	0.0023	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Chloromethane	0.012	0.0027	0.092	J	mg/Kg	1	10/31/2016 3:38:07 PM	S38351
2-Chlorotoluene	ND	0.0023	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
4-Chlorotoluene	ND	0.0027	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
cis-1,2-DCE	ND	0.0018	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
cis-1,3-Dichloropropene	ND	0.0028	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
1,2-Dibromo-3-chloropropane	ND	0.0094	0.061		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Dibromochloromethane	ND	0.0028	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Dibromomethane	ND	0.0027	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
1,2-Dichlorobenzene	ND	0.0027	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
1,3-Dichlorobenzene	ND	0.0025	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
1,4-Dichlorobenzene	ND	0.0038	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Dichlorodifluoromethane	ND	0.0095	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
1,1-Dichloroethane	ND	0.0017	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
1,1-Dichloroethene	ND	0.010	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
1,2-Dichloropropane	ND	0.0026	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
1,3-Dichloropropane	ND	0.0035	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
2,2-Dichloropropane	ND	0.0018	0.061		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
1,1-Dichloropropene	ND	0.0024	0.061		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Hexachlorobutadiene	ND	0.0038	0.061		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
2-Hexanone	ND	0.017	0.31		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Isopropylbenzene	ND	0.0026	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
4-Isopropyltoluene	ND	0.0028	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
4-Methyl-2-pentanone	ND	0.0089	0.31		mg/Kg	1	10/31/2016 3:38:07 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-5 (6-10)

Project: COA Railyards

Collection Date: 10/25/2016 8:40:00 AM

Lab ID: 1610E23-005

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.015	0.0089	0.092	J	mg/Kg	1	10/31/2016 3:38:07 PM	S38351
n-Butylbenzene	ND	0.0027	0.092		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
n-Propylbenzene	ND	0.0024	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
sec-Butylbenzene	ND	0.0043	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Styrene	ND	0.0027	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
tert-Butylbenzene	ND	0.0025	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
1,1,1,2-Tetrachloroethane	ND	0.0029	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
1,1,2,2-Tetrachloroethane	ND	0.0050	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Tetrachloroethene (PCE)	ND	0.0025	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
trans-1,2-DCE	ND	0.0086	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
trans-1,3-Dichloropropene	ND	0.0045	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
1,2,3-Trichlorobenzene	ND	0.0046	0.061		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
1,2,4-Trichlorobenzene	ND	0.0033	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
1,1,1-Trichloroethane	ND	0.0019	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
1,1,2-Trichloroethane	ND	0.0036	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Trichloroethene (TCE)	ND	0.0033	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Trichlorofluoromethane	ND	0.0023	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
1,2,3-Trichloropropane	ND	0.0053	0.061		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Vinyl chloride	ND	0.0025	0.031		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Xylenes, Total	ND	0.0058	0.061		mg/Kg	1	10/31/2016 3:38:07 PM	S38351
Surr: Dibromofluoromethane	101		70-130		%Rec	1	10/31/2016 3:38:07 PM	S38351
Surr: 1,2-Dichloroethane-d4	96.2		70-130		%Rec	1	10/31/2016 3:38:07 PM	S38351
Surr: Toluene-d8	93.9		70-130		%Rec	1	10/31/2016 3:38:07 PM	S38351
Surr: 4-Bromofluorobenzene	99.7		70-130		%Rec	1	10/31/2016 3:38:07 PM	S38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	1.8	0.46	3.1	J	mg/Kg	1	10/31/2016 3:38:07 PM	GS3835
Surr: BFB	95.0	0	70-130		%Rec	1	10/31/2016 3:38:07 PM	GS3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-6 (5-10)

Project: COA Railyards

Collection Date: 10/25/2016 11:57:00 AM

Lab ID: 1610E23-006

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								Analyst: TOM
Diesel Range Organics (DRO)	ND	1.8	9.8		mg/Kg	1	11/1/2016 5:09:17 PM	28372
Motor Oil Range Organics (MRO)	ND	49	49		mg/Kg	1	11/1/2016 5:09:17 PM	28372
Surr: DNOP	95.1	0	70-130		%Rec	1	11/1/2016 5:09:17 PM	28372
<b>EPA METHOD 8310: PAHS</b>								Analyst: SCC
Naphthalene	ND	0.035	0.25		mg/Kg	1	11/6/2016 7:59:51 PM	28374
1-Methylnaphthalene	ND	0.037	0.25		mg/Kg	1	11/6/2016 7:59:51 PM	28374
2-Methylnaphthalene	ND	0.035	0.25		mg/Kg	1	11/6/2016 7:59:51 PM	28374
Acenaphthylene	ND	0.033	0.25		mg/Kg	1	11/6/2016 7:59:51 PM	28374
Acenaphthene	ND	0.030	0.25		mg/Kg	1	11/6/2016 7:59:51 PM	28374
Fluorene	ND	0.0033	0.030		mg/Kg	1	11/6/2016 7:59:51 PM	28374
Phenanthrene	ND	0.0016	0.015		mg/Kg	1	11/6/2016 7:59:51 PM	28374
Anthracene	ND	0.0024	0.015		mg/Kg	1	11/6/2016 7:59:51 PM	28374
Fluoranthene	ND	0.0033	0.020		mg/Kg	1	11/6/2016 7:59:51 PM	28374
Pyrene	ND	0.0034	0.025		mg/Kg	1	11/6/2016 7:59:51 PM	28374
Benz(a)anthracene	ND	0.00050	0.0099		mg/Kg	1	11/6/2016 7:59:51 PM	28374
Chrysene	ND	0.0014	0.0099		mg/Kg	1	11/6/2016 7:59:51 PM	28374
Benzo(b)fluoranthene	ND	0.00070	0.0099		mg/Kg	1	11/6/2016 7:59:51 PM	28374
Benzo(k)fluoranthene	ND	0.00040	0.0099		mg/Kg	1	11/6/2016 7:59:51 PM	28374
Benzo(a)pyrene	ND	0.00040	0.0099		mg/Kg	1	11/6/2016 7:59:51 PM	28374
Dibenz(a,h)anthracene	ND	0.00050	0.0099		mg/Kg	1	11/6/2016 7:59:51 PM	28374
Benzo(g,h,i)perylene	ND	0.00060	0.0099		mg/Kg	1	11/6/2016 7:59:51 PM	28374
Indeno(1,2,3-cd)pyrene	ND	0.00079	0.0099		mg/Kg	1	11/6/2016 7:59:51 PM	28374
Surr: Benzo(e)pyrene	39.6	0	27.4-110		%Rec	1	11/6/2016 7:59:51 PM	28374
<b>EPA METHOD 6010B: SOIL METALS</b>								Analyst: MED
Antimony	ND	2.0	4.9		mg/Kg	2	10/31/2016 11:33:38 AM	28363
Arsenic	3.2	1.8	4.9	J	mg/Kg	2	10/31/2016 11:33:38 AM	28363
Chromium	10	0.19	0.59		mg/Kg	2	10/31/2016 11:33:38 AM	28363
Iron	22000	75	250		mg/Kg	100	11/2/2016 10:36:38 AM	28363
Lead	6.6	0.34	0.49		mg/Kg	2	10/31/2016 11:33:38 AM	28363
Manganese	290	0.11	0.20		mg/Kg	2	10/31/2016 11:33:38 AM	28363
Thallium	ND	1.5	4.9		mg/Kg	2	10/31/2016 11:33:38 AM	28363
<b>EPA METHOD 8260B: VOLATILES</b>								Analyst: DJF
Benzene	ND	0.011	0.014		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Toluene	ND	0.0016	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Ethylbenzene	ND	0.0023	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Methyl tert-butyl ether (MTBE)	ND	0.0087	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
1,2,4-Trimethylbenzene	ND	0.0020	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
1,3,5-Trimethylbenzene	ND	0.0020	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-6 (5-10)

Project: COA Railyards

Collection Date: 10/25/2016 11:57:00 AM

Lab ID: 1610E23-006

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0072	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
1,2-Dibromoethane (EDB)	ND	0.0020	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Naphthalene	ND	0.0043	0.056		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
1-Methylnaphthalene	ND	0.0062	0.11		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
2-Methylnaphthalene	ND	0.0059	0.11		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Acetone	ND	0.036	0.42		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Bromobenzene	ND	0.0022	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Bromodichloromethane	ND	0.0016	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Bromoform	ND	0.0034	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Bromomethane	0.019	0.010	0.083	J	mg/Kg	1	10/31/2016 4:06:39 PM	S38351
2-Butanone	ND	0.016	0.28		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Carbon disulfide	ND	0.0092	0.28		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Carbon tetrachloride	ND	0.0018	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Chlorobenzene	ND	0.0023	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Chloroethane	ND	0.0055	0.056		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Chloroform	ND	0.0021	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Chloromethane	ND	0.0025	0.083		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
2-Chlorotoluene	ND	0.0020	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
4-Chlorotoluene	ND	0.0025	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
cis-1,2-DCE	ND	0.0016	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
cis-1,3-Dichloropropene	ND	0.0026	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
1,2-Dibromo-3-chloropropane	ND	0.0085	0.056		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Dibromochloromethane	ND	0.0025	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Dibromomethane	ND	0.0024	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
1,2-Dichlorobenzene	ND	0.0024	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
1,3-Dichlorobenzene	ND	0.0023	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
1,4-Dichlorobenzene	ND	0.0034	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Dichlorodifluoromethane	ND	0.0086	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
1,1-Dichloroethane	ND	0.0015	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
1,1-Dichloroethene	ND	0.0091	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
1,2-Dichloropropane	ND	0.0023	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
1,3-Dichloropropane	ND	0.0031	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
2,2-Dichloropropane	ND	0.0016	0.056		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
1,1-Dichloropropene	ND	0.0022	0.056		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Hexachlorobutadiene	ND	0.0034	0.056		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
2-Hexanone	ND	0.015	0.28		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Isopropylbenzene	ND	0.0024	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
4-Isopropyltoluene	ND	0.0025	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
4-Methyl-2-pentanone	ND	0.0081	0.28		mg/Kg	1	10/31/2016 4:06:39 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-6 (5-10)

Project: COA Railyards

Collection Date: 10/25/2016 11:57:00 AM

Lab ID: 1610E23-006

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.014	0.0080	0.083	J	mg/Kg	1	10/31/2016 4:06:39 PM	S38351
n-Butylbenzene	ND	0.0025	0.083		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
n-Propylbenzene	ND	0.0021	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
sec-Butylbenzene	ND	0.0038	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Styrene	ND	0.0025	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
tert-Butylbenzene	ND	0.0023	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
1,1,1,2-Tetrachloroethane	ND	0.0027	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
1,1,2,2-Tetrachloroethane	ND	0.0045	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Tetrachloroethene (PCE)	ND	0.0023	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
trans-1,2-DCE	ND	0.0078	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
trans-1,3-Dichloropropene	ND	0.0041	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
1,2,3-Trichlorobenzene	ND	0.0042	0.056		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
1,2,4-Trichlorobenzene	ND	0.0030	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
1,1,1-Trichloroethane	ND	0.0017	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
1,1,2-Trichloroethane	ND	0.0033	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Trichloroethene (TCE)	ND	0.0030	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Trichlorofluoromethane	ND	0.0021	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
1,2,3-Trichloropropane	ND	0.0048	0.056		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Vinyl chloride	ND	0.0023	0.028		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Xylenes, Total	ND	0.0053	0.056		mg/Kg	1	10/31/2016 4:06:39 PM	S38351
Surr: Dibromofluoromethane	101		70-130		%Rec	1	10/31/2016 4:06:39 PM	S38351
Surr: 1,2-Dichloroethane-d4	95.2		70-130		%Rec	1	10/31/2016 4:06:39 PM	S38351
Surr: Toluene-d8	94.2		70-130		%Rec	1	10/31/2016 4:06:39 PM	S38351
Surr: 4-Bromofluorobenzene	96.1		70-130		%Rec	1	10/31/2016 4:06:39 PM	S38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.42	2.8		mg/Kg	1	10/31/2016 4:06:39 PM	GS3835
Surr: BFB	97.7	0	70-130		%Rec	1	10/31/2016 4:06:39 PM	GS3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Intera, Inc.**Client Sample ID:** SB-7 (5-10)**Project:** COA Railyards**Collection Date:** 10/25/2016 12:20:00 PM**Lab ID:** 1610E23-007**Matrix:** MEOH (SOIL) **Received Date:** 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>	
Diesel Range Organics (DRO)	140	1.9	10		mg/Kg	1	11/2/2016 10:58:51 PM	28372
Motor Oil Range Organics (MRO)	400	50	50		mg/Kg	1	11/2/2016 10:58:51 PM	28372
Surr: DNOP	110	0	70-130		%Rec	1	11/2/2016 10:58:51 PM	28372
<b>EPA METHOD 8310: PAHS</b>							Analyst: <b>SCC</b>	
Naphthalene	0.039	0.034	0.24	J	mg/Kg	1	11/6/2016 8:29:03 PM	28374
1-Methylnaphthalene	ND	0.036	0.24		mg/Kg	1	11/6/2016 8:29:03 PM	28374
2-Methylnaphthalene	0.061	0.034	0.24	J	mg/Kg	1	11/6/2016 8:29:03 PM	28374
Acenaphthylene	ND	0.033	0.24		mg/Kg	1	11/6/2016 8:29:03 PM	28374
Acenaphthene	ND	0.030	0.24		mg/Kg	1	11/6/2016 8:29:03 PM	28374
Fluorene	0.032	0.0032	0.029		mg/Kg	1	11/6/2016 8:29:03 PM	28374
Phenanthrene	0.22	0.016	0.15	D	mg/Kg	10	11/7/2016 2:31:42 PM	28374
Anthracene	0.066	0.0023	0.015		mg/Kg	1	11/6/2016 8:29:03 PM	28374
Fluoranthene	0.18	0.0032	0.019		mg/Kg	1	11/6/2016 8:29:03 PM	28374
Pyrene	0.15	0.0033	0.024		mg/Kg	1	11/6/2016 8:29:03 PM	28374
Benz(a)anthracene	0.050	0.00097	0.019		mg/Kg	2	11/9/2016 9:25:21 AM	28374
Chrysene	0.029	0.0014	0.0097		mg/Kg	1	11/6/2016 8:29:03 PM	28374
Benzo(b)fluoranthene	0.037	0.0014	0.019		mg/Kg	2	11/9/2016 9:25:21 AM	28374
Benzo(k)fluoranthene	0.026	0.00078	0.019		mg/Kg	2	11/9/2016 9:25:21 AM	28374
Benzo(a)pyrene	0.050	0.0019	0.049		mg/Kg	5	11/9/2016 9:54:36 AM	28374
Dibenz(a,h)anthracene	0.0037	0.00049	0.0097	J	mg/Kg	1	11/6/2016 8:29:03 PM	28374
Benzo(g,h,i)perylene	0.035	0.0012	0.019		mg/Kg	2	11/9/2016 9:25:21 AM	28374
Indeno(1,2,3-cd)pyrene	0.055	0.00078	0.0097		mg/Kg	1	11/6/2016 8:29:03 PM	28374
Surr: Benzo(e)pyrene	69.6	0	27.4-110		%Rec	1	11/6/2016 8:29:03 PM	28374
<b>EPA METHOD 6010B: SOIL METALS</b>							Analyst: <b>MED</b>	
Antimony	ND	0.96	2.4		mg/Kg	1	10/31/2016 11:35:47 AM	28363
Arsenic	1.6	0.85	2.4	J	mg/Kg	1	10/31/2016 11:35:47 AM	28363
Chromium	5.0	0.090	0.29		mg/Kg	1	10/31/2016 11:35:47 AM	28363
Iron	7900	36	120		mg/Kg	50	10/31/2016 1:40:02 PM	28363
Lead	4.9	0.17	0.24		mg/Kg	1	10/31/2016 11:35:47 AM	28363
Manganese	180	0.051	0.096		mg/Kg	1	10/31/2016 11:35:47 AM	28363
Thallium	ND	0.74	2.4		mg/Kg	1	10/31/2016 11:35:47 AM	28363
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>	
Benzene	ND	0.010	0.013		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Toluene	ND	0.0015	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Ethylbenzene	ND	0.0021	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Methyl tert-butyl ether (MTBE)	ND	0.0081	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
1,2,4-Trimethylbenzene	ND	0.0019	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
1,3,5-Trimethylbenzene	ND	0.0019	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-7 (5-10)

Project: COA Railyards

Collection Date: 10/25/2016 12:20:00 PM

Lab ID: 1610E23-007

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0067	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
1,2-Dibromoethane (EDB)	ND	0.0018	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Naphthalene	0.022	0.0040	0.052	J	mg/Kg	1	10/31/2016 4:35:30 PM	S38351
1-Methylnaphthalene	ND	0.0057	0.10		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
2-Methylnaphthalene	0.0062	0.0055	0.10	J	mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Acetone	0.041	0.033	0.39	J	mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Bromobenzene	ND	0.0021	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Bromodichloromethane	ND	0.0015	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Bromoform	ND	0.0031	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Bromomethane	0.018	0.0095	0.078	J	mg/Kg	1	10/31/2016 4:35:30 PM	S38351
2-Butanone	ND	0.015	0.26		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Carbon disulfide	ND	0.0085	0.26		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Carbon tetrachloride	ND	0.0017	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Chlorobenzene	ND	0.0021	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Chloroethane	ND	0.0052	0.052		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Chloroform	ND	0.0020	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Chloromethane	ND	0.0023	0.078		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
2-Chlorotoluene	ND	0.0019	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
4-Chlorotoluene	ND	0.0023	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
cis-1,2-DCE	ND	0.0015	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
cis-1,3-Dichloropropene	ND	0.0024	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
1,2-Dibromo-3-chloropropane	ND	0.0079	0.052		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Dibromochloromethane	ND	0.0023	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Dibromomethane	ND	0.0022	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
1,2-Dichlorobenzene	ND	0.0023	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
1,3-Dichlorobenzene	ND	0.0021	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
1,4-Dichlorobenzene	ND	0.0032	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Dichlorodifluoromethane	ND	0.0080	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
1,1-Dichloroethane	ND	0.0014	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
1,1-Dichloroethene	ND	0.0085	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
1,2-Dichloropropane	ND	0.0022	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
1,3-Dichloropropane	ND	0.0029	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
2,2-Dichloropropane	ND	0.0015	0.052		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
1,1-Dichloropropene	ND	0.0021	0.052		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Hexachlorobutadiene	ND	0.0032	0.052		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
2-Hexanone	ND	0.014	0.26		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Isopropylbenzene	ND	0.0022	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
4-Isopropyltoluene	ND	0.0023	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
4-Methyl-2-pentanone	ND	0.0075	0.26		mg/Kg	1	10/31/2016 4:35:30 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-7 (5-10)

Project: COA Railyards

Collection Date: 10/25/2016 12:20:00 PM

Lab ID: 1610E23-007

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.014	0.0075	0.078	J	mg/Kg	1	10/31/2016 4:35:30 PM	S38351
n-Butylbenzene	ND	0.0023	0.078		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
n-Propylbenzene	ND	0.0020	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
sec-Butylbenzene	ND	0.0036	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Styrene	ND	0.0023	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
tert-Butylbenzene	ND	0.0021	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
1,1,1,2-Tetrachloroethane	ND	0.0025	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
1,1,2,2-Tetrachloroethane	ND	0.0042	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Tetrachloroethene (PCE)	ND	0.0021	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
trans-1,2-DCE	ND	0.0072	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
trans-1,3-Dichloropropene	ND	0.0038	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
1,2,3-Trichlorobenzene	ND	0.0039	0.052		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
1,2,4-Trichlorobenzene	ND	0.0028	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
1,1,1-Trichloroethane	ND	0.0016	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
1,1,2-Trichloroethane	ND	0.0030	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Trichloroethene (TCE)	ND	0.0028	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Trichlorofluoromethane	ND	0.0019	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
1,2,3-Trichloropropane	ND	0.0045	0.052		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Vinyl chloride	ND	0.0021	0.026		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Xylenes, Total	ND	0.0049	0.052		mg/Kg	1	10/31/2016 4:35:30 PM	S38351
Surr: Dibromofluoromethane	105		70-130		%Rec	1	10/31/2016 4:35:30 PM	S38351
Surr: 1,2-Dichloroethane-d4	96.9		70-130		%Rec	1	10/31/2016 4:35:30 PM	S38351
Surr: Toluene-d8	96.7		70-130		%Rec	1	10/31/2016 4:35:30 PM	S38351
Surr: 4-Bromofluorobenzene	96.1		70-130		%Rec	1	10/31/2016 4:35:30 PM	S38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.39	2.6		mg/Kg	1	10/31/2016 4:35:30 PM	GS3835
Surr: BFB	102	0	70-130		%Rec	1	10/31/2016 4:35:30 PM	GS3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-8 (5-10)

Project: COA Railyards

Collection Date: 10/25/2016 1:56:00 PM

Lab ID: 1610E23-008

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								Analyst: TOM
Diesel Range Organics (DRO)	ND	1.8	9.5		mg/Kg	1	11/1/2016 6:15:18 PM	28372
Motor Oil Range Organics (MRO)	ND	48	48		mg/Kg	1	11/1/2016 6:15:18 PM	28372
Surr: DNOP	98.2	0	70-130		%Rec	1	11/1/2016 6:15:18 PM	28372
<b>EPA METHOD 8310: PAHS</b>								Analyst: SCC
Naphthalene	ND	0.034	0.25		mg/Kg	1	11/6/2016 8:58:19 PM	28374
1-Methylnaphthalene	ND	0.037	0.25		mg/Kg	1	11/6/2016 8:58:19 PM	28374
2-Methylnaphthalene	ND	0.035	0.25		mg/Kg	1	11/6/2016 8:58:19 PM	28374
Acenaphthylene	ND	0.033	0.25		mg/Kg	1	11/6/2016 8:58:19 PM	28374
Acenaphthene	ND	0.030	0.25		mg/Kg	1	11/6/2016 8:58:19 PM	28374
Fluorene	ND	0.0033	0.030		mg/Kg	1	11/6/2016 8:58:19 PM	28374
Phenanthrene	0.0037	0.0016	0.015	J	mg/Kg	1	11/6/2016 8:58:19 PM	28374
Anthracene	ND	0.0024	0.015		mg/Kg	1	11/6/2016 8:58:19 PM	28374
Fluoranthene	0.0040	0.0033	0.020	J	mg/Kg	1	11/6/2016 8:58:19 PM	28374
Pyrene	0.0037	0.0034	0.025	J	mg/Kg	1	11/6/2016 8:58:19 PM	28374
Benz(a)anthracene	0.00074	0.00049	0.0099	J	mg/Kg	1	11/6/2016 8:58:19 PM	28374
Chrysene	ND	0.0014	0.0099		mg/Kg	1	11/6/2016 8:58:19 PM	28374
Benzo(b)fluoranthene	ND	0.00070	0.0099		mg/Kg	1	11/6/2016 8:58:19 PM	28374
Benzo(k)fluoranthene	0.00049	0.00040	0.0099	J	mg/Kg	1	11/6/2016 8:58:19 PM	28374
Benzo(a)pyrene	0.00074	0.00040	0.0099	J	mg/Kg	1	11/6/2016 8:58:19 PM	28374
Dibenz(a,h)anthracene	ND	0.00049	0.0099		mg/Kg	1	11/6/2016 8:58:19 PM	28374
Benzo(g,h,i)perylene	ND	0.00059	0.0099		mg/Kg	1	11/6/2016 8:58:19 PM	28374
Indeno(1,2,3-cd)pyrene	ND	0.00079	0.0099		mg/Kg	1	11/6/2016 8:58:19 PM	28374
Surr: Benzo(e)pyrene	57.6	0	27.4-110		%Rec	1	11/6/2016 8:58:19 PM	28374
<b>EPA METHOD 6010B: SOIL METALS</b>								Analyst: MED
Antimony	ND	0.98	2.4		mg/Kg	1	10/31/2016 12:13:50 PM	28363
Arsenic	1.7	0.87	2.4	J	mg/Kg	1	10/31/2016 12:13:50 PM	28363
Chromium	8.1	0.092	0.29		mg/Kg	1	10/31/2016 12:13:50 PM	28363
Iron	16000	74	240		mg/Kg	100	11/2/2016 10:38:09 AM	28363
Lead	3.6	0.17	0.24		mg/Kg	1	10/31/2016 12:13:50 PM	28363
Manganese	210	0.052	0.098		mg/Kg	1	10/31/2016 12:13:50 PM	28363
Thallium	ND	0.75	2.4		mg/Kg	1	10/31/2016 12:13:50 PM	28363
<b>EPA METHOD 8260B: VOLATILES</b>								Analyst: DJF
Benzene	ND	0.011	0.014		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Toluene	ND	0.0017	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Ethylbenzene	ND	0.0023	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Methyl tert-butyl ether (MTBE)	ND	0.0090	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
1,2,4-Trimethylbenzene	ND	0.0021	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
1,3,5-Trimethylbenzene	ND	0.0021	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-8 (5-10)

Project: COA Railyards

Collection Date: 10/25/2016 1:56:00 PM

Lab ID: 1610E23-008

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0074	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
1,2-Dibromoethane (EDB)	ND	0.0020	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Naphthalene	ND	0.0045	0.057		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
1-Methylnaphthalene	ND	0.0063	0.11		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
2-Methylnaphthalene	ND	0.0061	0.11		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Acetone	ND	0.037	0.43		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Bromobenzene	ND	0.0023	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Bromodichloromethane	ND	0.0017	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Bromoform	ND	0.0035	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Bromomethane	0.011	0.010	0.086	J	mg/Kg	1	10/31/2016 5:04:19 PM	S38351
2-Butanone	ND	0.016	0.29		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Carbon disulfide	ND	0.0094	0.29		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Carbon tetrachloride	ND	0.0019	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Chlorobenzene	ND	0.0023	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Chloroethane	ND	0.0057	0.057		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Chloroform	ND	0.0022	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Chloromethane	ND	0.0025	0.086		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
2-Chlorotoluene	ND	0.0021	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
4-Chlorotoluene	ND	0.0025	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
cis-1,2-DCE	ND	0.0017	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
cis-1,3-Dichloropropene	ND	0.0026	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
1,2-Dibromo-3-chloropropane	ND	0.0087	0.057		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Dibromochloromethane	ND	0.0026	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Dibromomethane	ND	0.0025	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
1,2-Dichlorobenzene	ND	0.0025	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
1,3-Dichlorobenzene	ND	0.0023	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
1,4-Dichlorobenzene	ND	0.0035	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Dichlorodifluoromethane	ND	0.0088	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
1,1-Dichloroethane	ND	0.0015	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
1,1-Dichloroethene	ND	0.0093	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
1,2-Dichloropropane	ND	0.0024	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
1,3-Dichloropropane	ND	0.0032	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
2,2-Dichloropropane	ND	0.0016	0.057		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
1,1-Dichloropropene	ND	0.0023	0.057		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Hexachlorobutadiene	ND	0.0035	0.057		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
2-Hexanone	ND	0.016	0.29		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Isopropylbenzene	ND	0.0024	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
4-Isopropyltoluene	ND	0.0026	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
4-Methyl-2-pentanone	ND	0.0083	0.29		mg/Kg	1	10/31/2016 5:04:19 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-8 (5-10)

Project: COA Railyards

Collection Date: 10/25/2016 1:56:00 PM

Lab ID: 1610E23-008

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.021	0.0082	0.086	J	mg/Kg	1	10/31/2016 5:04:19 PM	S38351
n-Butylbenzene	ND	0.0025	0.086		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
n-Propylbenzene	ND	0.0022	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
sec-Butylbenzene	ND	0.0039	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Styrene	ND	0.0025	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
tert-Butylbenzene	ND	0.0024	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
1,1,1,2-Tetrachloroethane	ND	0.0027	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
1,1,2,2-Tetrachloroethane	ND	0.0046	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Tetrachloroethene (PCE)	ND	0.0024	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
trans-1,2-DCE	ND	0.0080	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
trans-1,3-Dichloropropene	ND	0.0042	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
1,2,3-Trichlorobenzene	ND	0.0043	0.057		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
1,2,4-Trichlorobenzene	ND	0.0030	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
1,1,1-Trichloroethane	ND	0.0017	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
1,1,2-Trichloroethane	ND	0.0034	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Trichloroethene (TCE)	ND	0.0031	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Trichlorofluoromethane	ND	0.0021	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
1,2,3-Trichloropropane	ND	0.0049	0.057		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Vinyl chloride	ND	0.0023	0.029		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Xylenes, Total	ND	0.0054	0.057		mg/Kg	1	10/31/2016 5:04:19 PM	S38351
Surr: Dibromofluoromethane	103		70-130		%Rec	1	10/31/2016 5:04:19 PM	S38351
Surr: 1,2-Dichloroethane-d4	93.6		70-130		%Rec	1	10/31/2016 5:04:19 PM	S38351
Surr: Toluene-d8	96.2		70-130		%Rec	1	10/31/2016 5:04:19 PM	S38351
Surr: 4-Bromofluorobenzene	93.7		70-130		%Rec	1	10/31/2016 5:04:19 PM	S38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.43	2.9		mg/Kg	1	10/31/2016 5:04:19 PM	GS3835
Surr: BFB	99.7	0	70-130		%Rec	1	10/31/2016 5:04:19 PM	GS3835

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	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-9 (5-10)

Project: COA Railyards

Collection Date: 10/25/2016 4:13:00 PM

Lab ID: 1610E23-009

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								Analyst: TOM
Diesel Range Organics (DRO)	ND	1.7	9.4		mg/Kg	1	11/1/2016 6:37:25 PM	28372
Motor Oil Range Organics (MRO)	ND	47	47		mg/Kg	1	11/1/2016 6:37:25 PM	28372
Surr: DNOP	98.0	0	70-130		%Rec	1	11/1/2016 6:37:25 PM	28372
<b>EPA METHOD 8310: PAHS</b>								Analyst: SCC
Naphthalene	ND	0.035	0.25		mg/Kg	1	11/6/2016 9:27:30 PM	28374
1-Methylnaphthalene	ND	0.037	0.25		mg/Kg	1	11/6/2016 9:27:30 PM	28374
2-Methylnaphthalene	ND	0.035	0.25		mg/Kg	1	11/6/2016 9:27:30 PM	28374
Acenaphthylene	ND	0.033	0.25		mg/Kg	1	11/6/2016 9:27:30 PM	28374
Acenaphthene	ND	0.031	0.25		mg/Kg	1	11/6/2016 9:27:30 PM	28374
Fluorene	ND	0.0033	0.030		mg/Kg	1	11/6/2016 9:27:30 PM	28374
Phenanthrene	0.0017	0.0016	0.015	J	mg/Kg	1	11/6/2016 9:27:30 PM	28374
Anthracene	ND	0.0024	0.015		mg/Kg	1	11/6/2016 9:27:30 PM	28374
Fluoranthene	ND	0.0033	0.020		mg/Kg	1	11/6/2016 9:27:30 PM	28374
Pyrene	ND	0.0034	0.025		mg/Kg	1	11/6/2016 9:27:30 PM	28374
Benz(a)anthracene	0.00050	0.00050	0.010	J	mg/Kg	1	11/6/2016 9:27:30 PM	28374
Chrysene	ND	0.0014	0.010		mg/Kg	1	11/6/2016 9:27:30 PM	28374
Benzo(b)fluoranthene	ND	0.00071	0.010		mg/Kg	1	11/6/2016 9:27:30 PM	28374
Benzo(k)fluoranthene	0.00050	0.00040	0.010	J	mg/Kg	1	11/6/2016 9:27:30 PM	28374
Benzo(a)pyrene	0.00050	0.00040	0.010	J	mg/Kg	1	11/6/2016 9:27:30 PM	28374
Dibenz(a,h)anthracene	ND	0.00050	0.010		mg/Kg	1	11/6/2016 9:27:30 PM	28374
Benzo(g,h,i)perylene	ND	0.00060	0.010		mg/Kg	1	11/6/2016 9:27:30 PM	28374
Indeno(1,2,3-cd)pyrene	ND	0.00080	0.010		mg/Kg	1	11/6/2016 9:27:30 PM	28374
Surr: Benzo(e)pyrene	48.0	0	27.4-110		%Rec	1	11/6/2016 9:27:30 PM	28374
<b>EPA METHOD 6010B: SOIL METALS</b>								Analyst: MED
Antimony	ND	0.98	2.4		mg/Kg	1	10/31/2016 12:17:36 PM	28363
Arsenic	4.1	0.87	2.4		mg/Kg	1	10/31/2016 12:17:36 PM	28363
Chromium	7.3	0.092	0.29		mg/Kg	1	10/31/2016 12:17:36 PM	28363
Iron	11000	37	120		mg/Kg	50	10/31/2016 1:48:52 PM	28363
Lead	2.5	0.17	0.24		mg/Kg	1	10/31/2016 12:17:36 PM	28363
Manganese	240	0.052	0.098		mg/Kg	1	10/31/2016 12:17:36 PM	28363
Thallium	ND	0.75	2.4		mg/Kg	1	10/31/2016 12:17:36 PM	28363
<b>EPA METHOD 8260B: VOLATILES</b>								Analyst: DJF
Benzene	ND	0.010	0.013		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Toluene	0.0022	0.0015	0.026	J	mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Ethylbenzene	ND	0.0021	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Methyl tert-butyl ether (MTBE)	ND	0.0081	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
1,2,4-Trimethylbenzene	ND	0.0019	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
1,3,5-Trimethylbenzene	ND	0.0019	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-9 (5-10)

Project: COA Railyards

Collection Date: 10/25/2016 4:13:00 PM

Lab ID: 1610E23-009

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0067	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
1,2-Dibromoethane (EDB)	ND	0.0018	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Naphthalene	ND	0.0040	0.052		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
1-Methylnaphthalene	ND	0.0057	0.10		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
2-Methylnaphthalene	ND	0.0055	0.10		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Acetone	0.034	0.033	0.39	J	mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Bromobenzene	ND	0.0021	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Bromodichloromethane	ND	0.0015	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Bromoform	ND	0.0031	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Bromomethane	0.021	0.0095	0.077	J	mg/Kg	1	10/31/2016 5:33:05 PM	S38351
2-Butanone	0.026	0.015	0.26	J	mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Carbon disulfide	ND	0.0085	0.26		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Carbon tetrachloride	ND	0.0017	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Chlorobenzene	ND	0.0021	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Chloroethane	ND	0.0052	0.052		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Chloroform	ND	0.0019	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Chloromethane	ND	0.0023	0.077		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
2-Chlorotoluene	ND	0.0019	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
4-Chlorotoluene	ND	0.0023	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
cis-1,2-DCE	ND	0.0015	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
cis-1,3-Dichloropropene	ND	0.0024	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
1,2-Dibromo-3-chloropropane	ND	0.0079	0.052		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Dibromochloromethane	ND	0.0023	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Dibromomethane	ND	0.0022	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
1,2-Dichlorobenzene	ND	0.0023	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
1,3-Dichlorobenzene	ND	0.0021	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
1,4-Dichlorobenzene	ND	0.0032	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Dichlorodifluoromethane	ND	0.0080	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
1,1-Dichloroethane	ND	0.0014	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
1,1-Dichloroethene	ND	0.0085	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
1,2-Dichloropropane	ND	0.0022	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
1,3-Dichloropropane	ND	0.0029	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
2,2-Dichloropropane	ND	0.0015	0.052		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
1,1-Dichloropropene	ND	0.0020	0.052		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Hexachlorobutadiene	ND	0.0032	0.052		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
2-Hexanone	ND	0.014	0.26		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Isopropylbenzene	ND	0.0022	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
4-Isopropyltoluene	ND	0.0023	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
4-Methyl-2-pentanone	ND	0.0075	0.26		mg/Kg	1	10/31/2016 5:33:05 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-9 (5-10)

Project: COA Railyards

Collection Date: 10/25/2016 4:13:00 PM

Lab ID: 1610E23-009

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.022	0.0074	0.077	J	mg/Kg	1	10/31/2016 5:33:05 PM	S38351
n-Butylbenzene	ND	0.0023	0.077		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
n-Propylbenzene	ND	0.0020	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
sec-Butylbenzene	ND	0.0036	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Styrene	ND	0.0023	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
tert-Butylbenzene	ND	0.0021	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
1,1,1,2-Tetrachloroethane	ND	0.0025	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
1,1,2,2-Tetrachloroethane	ND	0.0042	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Tetrachloroethene (PCE)	ND	0.0021	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
trans-1,2-DCE	ND	0.0072	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
trans-1,3-Dichloropropene	ND	0.0038	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
1,2,3-Trichlorobenzene	ND	0.0039	0.052		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
1,2,4-Trichlorobenzene	ND	0.0028	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
1,1,1-Trichloroethane	ND	0.0016	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
1,1,2-Trichloroethane	ND	0.0030	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Trichloroethene (TCE)	ND	0.0028	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Trichlorofluoromethane	ND	0.0019	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
1,2,3-Trichloropropane	ND	0.0045	0.052		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Vinyl chloride	ND	0.0021	0.026		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Xylenes, Total	ND	0.0049	0.052		mg/Kg	1	10/31/2016 5:33:05 PM	S38351
Surr: Dibromofluoromethane	101		70-130		%Rec	1	10/31/2016 5:33:05 PM	S38351
Surr: 1,2-Dichloroethane-d4	96.4		70-130		%Rec	1	10/31/2016 5:33:05 PM	S38351
Surr: Toluene-d8	92.2		70-130		%Rec	1	10/31/2016 5:33:05 PM	S38351
Surr: 4-Bromofluorobenzene	96.2		70-130		%Rec	1	10/31/2016 5:33:05 PM	S38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.39	2.6		mg/Kg	1	10/31/2016 5:33:05 PM	GS3835
Surr: BFB	97.3	0	70-130		%Rec	1	10/31/2016 5:33:05 PM	GS3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-10 (5-10)

Project: COA Railyards

Collection Date: 10/25/2016 5:55:00 PM

Lab ID: 1610E23-010

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								Analyst: TOM
Diesel Range Organics (DRO)	ND	1.7	9.4		mg/Kg	1	11/1/2016 6:59:27 PM	28372
Motor Oil Range Organics (MRO)	ND	47	47		mg/Kg	1	11/1/2016 6:59:27 PM	28372
Surr: DNOP	98.1	0	70-130		%Rec	1	11/1/2016 6:59:27 PM	28372
<b>EPA METHOD 8310: PAHS</b>								Analyst: SCC
Naphthalene	ND	0.035	0.25		mg/Kg	1	11/6/2016 9:56:44 PM	28398
1-Methylnaphthalene	ND	0.037	0.25		mg/Kg	1	11/6/2016 9:56:44 PM	28398
2-Methylnaphthalene	ND	0.035	0.25		mg/Kg	1	11/6/2016 9:56:44 PM	28398
Acenaphthylene	ND	0.033	0.25		mg/Kg	1	11/6/2016 9:56:44 PM	28398
Acenaphthene	ND	0.031	0.25		mg/Kg	1	11/6/2016 9:56:44 PM	28398
Fluorene	ND	0.0033	0.030		mg/Kg	1	11/6/2016 9:56:44 PM	28398
Phenanthrene	ND	0.0016	0.015		mg/Kg	1	11/6/2016 9:56:44 PM	28398
Anthracene	ND	0.0024	0.015		mg/Kg	1	11/6/2016 9:56:44 PM	28398
Fluoranthene	ND	0.0033	0.020		mg/Kg	1	11/6/2016 9:56:44 PM	28398
Pyrene	ND	0.0034	0.025		mg/Kg	1	11/6/2016 9:56:44 PM	28398
Benz(a)anthracene	ND	0.00050	0.010		mg/Kg	1	11/6/2016 9:56:44 PM	28398
Chrysene	ND	0.0014	0.010		mg/Kg	1	11/6/2016 9:56:44 PM	28398
Benzo(b)fluoranthene	ND	0.00071	0.010		mg/Kg	1	11/6/2016 9:56:44 PM	28398
Benzo(k)fluoranthene	ND	0.00040	0.010		mg/Kg	1	11/6/2016 9:56:44 PM	28398
Benzo(a)pyrene	ND	0.00040	0.010		mg/Kg	1	11/6/2016 9:56:44 PM	28398
Dibenz(a,h)anthracene	ND	0.00050	0.010		mg/Kg	1	11/6/2016 9:56:44 PM	28398
Benzo(g,h,i)perylene	ND	0.00060	0.010		mg/Kg	1	11/6/2016 9:56:44 PM	28398
Indeno(1,2,3-cd)pyrene	ND	0.00080	0.010		mg/Kg	1	11/6/2016 9:56:44 PM	28398
Surr: Benzo(e)pyrene	56.7	0	27.4-110		%Rec	1	11/6/2016 9:56:44 PM	28398
<b>EPA METHOD 6010B: SOIL METALS</b>								Analyst: MED
Antimony	ND	0.99	2.5		mg/Kg	1	10/31/2016 12:21:18 PM	28363
Arsenic	2.3	0.88	2.5	J	mg/Kg	1	10/31/2016 12:21:18 PM	28363
Chromium	7.5	0.093	0.30		mg/Kg	1	10/31/2016 12:21:18 PM	28363
Iron	16000	74	250		mg/Kg	100	11/2/2016 10:39:40 AM	28363
Lead	3.4	0.17	0.25		mg/Kg	1	10/31/2016 12:21:18 PM	28363
Manganese	150	0.053	0.099		mg/Kg	1	10/31/2016 12:21:18 PM	28363
Thallium	ND	0.76	2.5		mg/Kg	1	10/31/2016 12:21:18 PM	28363
<b>EPA METHOD 8260B: VOLATILES</b>								Analyst: DJF
Benzene	ND	0.012	0.015		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Toluene	ND	0.0018	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Ethylbenzene	ND	0.0025	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Methyl tert-butyl ether (MTBE)	ND	0.0097	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
1,2,4-Trimethylbenzene	ND	0.0023	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
1,3,5-Trimethylbenzene	ND	0.0022	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-10 (5-10)

Project: COA Railyards

Collection Date: 10/25/2016 5:55:00 PM

Lab ID: 1610E23-010

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0081	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
1,2-Dibromoethane (EDB)	ND	0.0022	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Naphthalene	ND	0.0048	0.062		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
1-Methylnaphthalene	ND	0.0069	0.12		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
2-Methylnaphthalene	ND	0.0066	0.12		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Acetone	ND	0.040	0.46		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Bromobenzene	ND	0.0025	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Bromodichloromethane	ND	0.0018	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Bromoform	ND	0.0038	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Bromomethane	0.022	0.011	0.093	J	mg/Kg	1	10/31/2016 6:01:47 PM	S38351
2-Butanone	0.042	0.018	0.31	J	mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Carbon disulfide	ND	0.010	0.31		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Carbon tetrachloride	ND	0.0020	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Chlorobenzene	ND	0.0025	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Chloroethane	ND	0.0062	0.062		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Chloroform	ND	0.0023	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Chloromethane	ND	0.0028	0.093		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
2-Chlorotoluene	ND	0.0023	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
4-Chlorotoluene	ND	0.0027	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
cis-1,2-DCE	ND	0.0018	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
cis-1,3-Dichloropropene	ND	0.0029	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
1,2-Dibromo-3-chloropropane	ND	0.0095	0.062		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Dibromochloromethane	ND	0.0028	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Dibromomethane	ND	0.0027	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
1,2-Dichlorobenzene	ND	0.0027	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
1,3-Dichlorobenzene	ND	0.0025	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
1,4-Dichlorobenzene	ND	0.0038	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Dichlorodifluoromethane	ND	0.0096	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
1,1-Dichloroethane	ND	0.0017	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
1,1-Dichloroethene	ND	0.010	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
1,2-Dichloropropane	ND	0.0026	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
1,3-Dichloropropane	ND	0.0035	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
2,2-Dichloropropane	ND	0.0018	0.062		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
1,1-Dichloropropene	ND	0.0025	0.062		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Hexachlorobutadiene	ND	0.0038	0.062		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
2-Hexanone	ND	0.017	0.31		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Isopropylbenzene	ND	0.0027	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
4-Isopropyltoluene	ND	0.0028	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
4-Methyl-2-pentanone	ND	0.0090	0.31		mg/Kg	1	10/31/2016 6:01:47 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-10 (5-10)

Project: COA Railyards

Collection Date: 10/25/2016 5:55:00 PM

Lab ID: 1610E23-010

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.019	0.0089	0.093	J	mg/Kg	1	10/31/2016 6:01:47 PM	S38351
n-Butylbenzene	ND	0.0027	0.093		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
n-Propylbenzene	ND	0.0024	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
sec-Butylbenzene	ND	0.0043	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Styrene	ND	0.0028	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
tert-Butylbenzene	ND	0.0026	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
1,1,1,2-Tetrachloroethane	ND	0.0030	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
1,1,2,2-Tetrachloroethane	ND	0.0050	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Tetrachloroethene (PCE)	ND	0.0026	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
trans-1,2-DCE	ND	0.0087	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
trans-1,3-Dichloropropene	ND	0.0045	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
1,2,3-Trichlorobenzene	ND	0.0046	0.062		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
1,2,4-Trichlorobenzene	ND	0.0033	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
1,1,1-Trichloroethane	ND	0.0019	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
1,1,2-Trichloroethane	ND	0.0036	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Trichloroethene (TCE)	ND	0.0033	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Trichlorofluoromethane	ND	0.0023	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
1,2,3-Trichloropropane	ND	0.0054	0.062		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Vinyl chloride	ND	0.0025	0.031		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Xylenes, Total	ND	0.0059	0.062		mg/Kg	1	10/31/2016 6:01:47 PM	S38351
Surr: Dibromofluoromethane	103		70-130		%Rec	1	10/31/2016 6:01:47 PM	S38351
Surr: 1,2-Dichloroethane-d4	97.1		70-130		%Rec	1	10/31/2016 6:01:47 PM	S38351
Surr: Toluene-d8	93.8		70-130		%Rec	1	10/31/2016 6:01:47 PM	S38351
Surr: 4-Bromofluorobenzene	91.5		70-130		%Rec	1	10/31/2016 6:01:47 PM	S38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.47	3.1		mg/Kg	1	10/31/2016 6:01:47 PM	GS3835
Surr: BFB	98.8	0	70-130		%Rec	1	10/31/2016 6:01:47 PM	GS3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-11 (0-5)

Project: COA Railyards

Collection Date: 10/26/2016 8:02:00 AM

Lab ID: 1610E23-011

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								Analyst: TOM
Diesel Range Organics (DRO)	ND	1.8	9.7		mg/Kg	1	11/1/2016 7:21:26 PM	28372
Motor Oil Range Organics (MRO)	ND	48	48		mg/Kg	1	11/1/2016 7:21:26 PM	28372
Surr: DNOP	101	0	70-130		%Rec	1	11/1/2016 7:21:26 PM	28372
<b>EPA METHOD 8310: PAHS</b>								Analyst: SCC
Naphthalene	ND	0.033	0.24		mg/Kg	1	11/6/2016 11:24:33 PM	28398
1-Methylnaphthalene	ND	0.036	0.24		mg/Kg	1	11/6/2016 11:24:33 PM	28398
2-Methylnaphthalene	ND	0.034	0.24		mg/Kg	1	11/6/2016 11:24:33 PM	28398
Acenaphthylene	ND	0.032	0.24		mg/Kg	1	11/6/2016 11:24:33 PM	28398
Acenaphthene	ND	0.029	0.24		mg/Kg	1	11/6/2016 11:24:33 PM	28398
Fluorene	ND	0.0032	0.029		mg/Kg	1	11/6/2016 11:24:33 PM	28398
Phenanthrene	0.021	0.0015	0.014		mg/Kg	1	11/6/2016 11:24:33 PM	28398
Anthracene	0.0074	0.0023	0.014	J	mg/Kg	1	11/6/2016 11:24:33 PM	28398
Fluoranthene	0.031	0.0032	0.019		mg/Kg	1	11/6/2016 11:24:33 PM	28398
Pyrene	0.031	0.0033	0.024		mg/Kg	1	11/6/2016 11:24:33 PM	28398
Benz(a)anthracene	0.012	0.00048	0.0096		mg/Kg	1	11/6/2016 11:24:33 PM	28398
Chrysene	0.0074	0.0013	0.0096	J	mg/Kg	1	11/6/2016 11:24:33 PM	28398
Benzo(b)fluoranthene	0.0077	0.00068	0.0096	J	mg/Kg	1	11/6/2016 11:24:33 PM	28398
Benzo(k)fluoranthene	0.0086	0.00038	0.0096	J	mg/Kg	1	11/6/2016 11:24:33 PM	28398
Benzo(a)pyrene	0.015	0.00038	0.0096		mg/Kg	1	11/6/2016 11:24:33 PM	28398
Dibenz(a,h)anthracene	0.0043	0.00048	0.0096	J	mg/Kg	1	11/6/2016 11:24:33 PM	28398
Benzo(g,h,i)perylene	0.010	0.00058	0.0096		mg/Kg	1	11/6/2016 11:24:33 PM	28398
Indeno(1,2,3-cd)pyrene	0.023	0.00077	0.0096		mg/Kg	1	11/6/2016 11:24:33 PM	28398
Surr: Benzo(e)pyrene	48.4	0	27.4-110		%Rec	1	11/6/2016 11:24:33 PM	28398
<b>EPA METHOD 6010B: SOIL METALS</b>								Analyst: MED
Antimony	ND	0.97	2.4		mg/Kg	1	10/31/2016 12:36:10 PM	28363
Arsenic	3.6	0.86	2.4		mg/Kg	1	10/31/2016 12:36:10 PM	28363
Chromium	5.5	0.091	0.29		mg/Kg	1	10/31/2016 12:36:10 PM	28363
Iron	8400	37	120		mg/Kg	50	10/31/2016 1:52:02 PM	28363
Lead	2.0	0.17	0.24		mg/Kg	1	10/31/2016 12:36:10 PM	28363
Manganese	230	0.052	0.097		mg/Kg	1	10/31/2016 12:36:10 PM	28363
Thallium	ND	0.75	2.4		mg/Kg	1	10/31/2016 12:36:10 PM	28363
<b>EPA METHOD 8260B: VOLATILES</b>								Analyst: DJF
Benzene	ND	0.015	0.019		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Toluene	ND	0.0023	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Ethylbenzene	ND	0.0031	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Methyl tert-butyl ether (MTBE)	ND	0.012	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
1,2,4-Trimethylbenzene	ND	0.0028	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
1,3,5-Trimethylbenzene	ND	0.0028	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-11 (0-5)

Project: COA Railyards

Collection Date: 10/26/2016 8:02:00 AM

Lab ID: 1610E23-011

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.010	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
1,2-Dibromoethane (EDB)	ND	0.0027	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Naphthalene	ND	0.0060	0.077		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
1-Methylnaphthalene	ND	0.0085	0.15		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
2-Methylnaphthalene	ND	0.0082	0.15		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Acetone	ND	0.050	0.58		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Bromobenzene	ND	0.0031	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Bromodichloromethane	ND	0.0022	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Bromoform	ND	0.0047	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Bromomethane	0.026	0.014	0.12	J	mg/Kg	1	10/31/2016 6:30:21 PM	S38351
2-Butanone	0.040	0.022	0.38	J	mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Carbon disulfide	ND	0.013	0.38		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Carbon tetrachloride	ND	0.0025	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Chlorobenzene	ND	0.0031	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Chloroethane	ND	0.0077	0.077		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Chloroform	ND	0.0029	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Chloromethane	0.013	0.0034	0.12	J	mg/Kg	1	10/31/2016 6:30:21 PM	S38351
2-Chlorotoluene	ND	0.0028	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
4-Chlorotoluene	ND	0.0034	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
cis-1,2-DCE	ND	0.0022	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
cis-1,3-Dichloropropene	ND	0.0035	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
1,2-Dibromo-3-chloropropane	ND	0.012	0.077		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Dibromochloromethane	ND	0.0035	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Dibromomethane	ND	0.0033	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
1,2-Dichlorobenzene	ND	0.0033	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
1,3-Dichlorobenzene	ND	0.0031	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
1,4-Dichlorobenzene	ND	0.0048	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Dichlorodifluoromethane	ND	0.012	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
1,1-Dichloroethane	ND	0.0021	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
1,1-Dichloroethene	ND	0.013	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
1,2-Dichloropropane	ND	0.0032	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
1,3-Dichloropropane	ND	0.0043	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
2,2-Dichloropropane	ND	0.0022	0.077		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
1,1-Dichloropropene	ND	0.0030	0.077		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Hexachlorobutadiene	ND	0.0047	0.077		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
2-Hexanone	ND	0.021	0.38		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Isopropylbenzene	ND	0.0033	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
4-Isopropyltoluene	ND	0.0034	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
4-Methyl-2-pentanone	ND	0.011	0.38		mg/Kg	1	10/31/2016 6:30:21 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-11 (0-5)

Project: COA Railyards

Collection Date: 10/26/2016 8:02:00 AM

Lab ID: 1610E23-011

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.026	0.011	0.12	J	mg/Kg	1	10/31/2016 6:30:21 PM	S38351
n-Butylbenzene	ND	0.0034	0.12		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
n-Propylbenzene	ND	0.0030	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
sec-Butylbenzene	ND	0.0053	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Styrene	ND	0.0034	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
tert-Butylbenzene	ND	0.0032	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
1,1,1,2-Tetrachloroethane	ND	0.0037	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
1,1,2,2-Tetrachloroethane	ND	0.0062	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Tetrachloroethene (PCE)	ND	0.0032	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
trans-1,2-DCE	ND	0.011	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
trans-1,3-Dichloropropene	ND	0.0056	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
1,2,3-Trichlorobenzene	ND	0.0057	0.077		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
1,2,4-Trichlorobenzene	ND	0.0041	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
1,1,1-Trichloroethane	ND	0.0023	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
1,1,2-Trichloroethane	ND	0.0045	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Trichloroethene (TCE)	ND	0.0041	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Trichlorofluoromethane	ND	0.0029	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
1,2,3-Trichloropropane	ND	0.0066	0.077		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Vinyl chloride	ND	0.0031	0.038		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Xylenes, Total	ND	0.0073	0.077		mg/Kg	1	10/31/2016 6:30:21 PM	S38351
Surr: Dibromofluoromethane	101		70-130		%Rec	1	10/31/2016 6:30:21 PM	S38351
Surr: 1,2-Dichloroethane-d4	95.1		70-130		%Rec	1	10/31/2016 6:30:21 PM	S38351
Surr: Toluene-d8	97.9		70-130		%Rec	1	10/31/2016 6:30:21 PM	S38351
Surr: 4-Bromofluorobenzene	95.0		70-130		%Rec	1	10/31/2016 6:30:21 PM	S38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.58	3.8		mg/Kg	1	10/31/2016 6:30:21 PM	GS3835
Surr: BFB	100	0	70-130		%Rec	1	10/31/2016 6:30:21 PM	GS3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-12 (0-5)

Project: COA Railyards

Collection Date: 10/26/2016 8:52:00 AM

Lab ID: 1610E23-012

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>	
Diesel Range Organics (DRO)	44	1.8	9.6		mg/Kg	1	11/2/2016 11:42:16 PM	28372
Motor Oil Range Organics (MRO)	110	48	48		mg/Kg	1	11/2/2016 11:42:16 PM	28372
Surr: DNOP	102	0	70-130		%Rec	1	11/2/2016 11:42:16 PM	28372
<b>EPA METHOD 8310: PAHS</b>							Analyst: <b>SCC</b>	
Naphthalene	ND	1.8	13	D	mg/Kg	10	11/7/2016 12:22:59 AM	28398
1-Methylnaphthalene	ND	1.9	13	D	mg/Kg	10	11/7/2016 12:22:59 AM	28398
2-Methylnaphthalene	ND	1.8	13	D	mg/Kg	10	11/7/2016 12:22:59 AM	28398
Acenaphthylene	ND	1.7	13	D	mg/Kg	10	11/7/2016 12:22:59 AM	28398
Acenaphthene	ND	1.5	13	D	mg/Kg	10	11/7/2016 12:22:59 AM	28398
Fluorene	ND	0.17	1.5	D	mg/Kg	10	11/7/2016 12:22:59 AM	28398
Phenanthrene	0.48	0.081	0.76	JD	mg/Kg	10	11/7/2016 12:22:59 AM	28398
Anthracene	ND	0.12	0.76	D	mg/Kg	10	11/7/2016 12:22:59 AM	28398
Fluoranthene	0.54	0.17	1.0	JD	mg/Kg	10	11/7/2016 12:22:59 AM	28398
Pyrene	1.0	0.17	1.3	JD	mg/Kg	10	11/7/2016 12:22:59 AM	28398
Benz(a)anthracene	0.39	0.025	0.51	JD	mg/Kg	10	11/7/2016 12:22:59 AM	28398
Chrysene	0.41	0.071	0.51	JD	mg/Kg	10	11/7/2016 12:22:59 AM	28398
Benzo(b)fluoranthene	0.29	0.036	0.51	JD	mg/Kg	10	11/7/2016 12:22:59 AM	28398
Benzo(k)fluoranthene	0.27	0.020	0.51	JD	mg/Kg	10	11/7/2016 12:22:59 AM	28398
Benzo(a)pyrene	0.72	0.020	0.51	D	mg/Kg	10	11/7/2016 12:22:59 AM	28398
Dibenz(a,h)anthracene	0.15	0.025	0.51	JD	mg/Kg	10	11/7/2016 12:22:59 AM	28398
Benzo(g,h,i)perylene	0.63	0.030	0.51	D	mg/Kg	10	11/7/2016 12:22:59 AM	28398
Indeno(1,2,3-cd)pyrene	0.97	0.041	0.51	D	mg/Kg	10	11/7/2016 12:22:59 AM	28398
Surr: Benzo(e)pyrene	0	0	27.4-110	SD	%Rec	10	11/7/2016 12:22:59 AM	28398
<b>EPA METHOD 6010B: SOIL METALS</b>							Analyst: <b>MED</b>	
Antimony	ND	0.99	2.5		mg/Kg	1	10/31/2016 12:39:59 PM	28363
Arsenic	2.6	0.87	2.5		mg/Kg	1	10/31/2016 12:39:59 PM	28363
Chromium	3.3	0.093	0.29		mg/Kg	1	10/31/2016 12:39:59 PM	28363
Iron	7800	37	120		mg/Kg	50	10/31/2016 1:53:34 PM	28363
Lead	490	8.5	12		mg/Kg	50	10/31/2016 1:53:34 PM	28363
Manganese	110	0.053	0.098		mg/Kg	1	10/31/2016 12:39:59 PM	28363
Thallium	ND	0.76	2.5		mg/Kg	1	10/31/2016 12:39:59 PM	28363
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>	
Benzene	ND	0.014	0.017		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Toluene	0.0020	0.0020	0.034	J	mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Ethylbenzene	ND	0.0028	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Methyl tert-butyl ether (MTBE)	ND	0.011	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
1,2,4-Trimethylbenzene	ND	0.0025	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
1,3,5-Trimethylbenzene	ND	0.0025	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-12 (0-5)

Project: COA Railyards

Collection Date: 10/26/2016 8:52:00 AM

Lab ID: 1610E23-012

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0090	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
1,2-Dibromoethane (EDB)	ND	0.0025	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Naphthalene	0.023	0.0054	0.069	J	mg/Kg	1	10/31/2016 6:58:56 PM	S38351
1-Methylnaphthalene	0.0079	0.0077	0.14	J	mg/Kg	1	10/31/2016 6:58:56 PM	S38351
2-Methylnaphthalene	0.014	0.0074	0.14	J	mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Acetone	0.10	0.045	0.52	J	mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Bromobenzene	ND	0.0028	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Bromodichloromethane	ND	0.0020	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Bromoform	ND	0.0042	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Bromomethane	0.032	0.013	0.10	J	mg/Kg	1	10/31/2016 6:58:56 PM	S38351
2-Butanone	0.032	0.020	0.34	J	mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Carbon disulfide	ND	0.011	0.34		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Carbon tetrachloride	ND	0.0023	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Chlorobenzene	ND	0.0028	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Chloroethane	ND	0.0069	0.069		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Chloroform	0.017	0.0026	0.034	J	mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Chloromethane	ND	0.0031	0.10		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
2-Chlorotoluene	ND	0.0025	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
4-Chlorotoluene	ND	0.0030	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
cis-1,2-DCE	ND	0.0020	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
cis-1,3-Dichloropropene	ND	0.0032	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
1,2-Dibromo-3-chloropropane	ND	0.011	0.069		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Dibromochloromethane	ND	0.0031	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Dibromomethane	ND	0.0030	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
1,2-Dichlorobenzene	ND	0.0030	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
1,3-Dichlorobenzene	ND	0.0028	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
1,4-Dichlorobenzene	ND	0.0043	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Dichlorodifluoromethane	ND	0.011	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
1,1-Dichloroethane	ND	0.0019	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
1,1-Dichloroethene	ND	0.011	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
1,2-Dichloropropane	ND	0.0029	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
1,3-Dichloropropane	ND	0.0039	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
2,2-Dichloropropane	ND	0.0020	0.069		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
1,1-Dichloropropene	ND	0.0027	0.069		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Hexachlorobutadiene	ND	0.0042	0.069		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
2-Hexanone	ND	0.019	0.34		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Isopropylbenzene	ND	0.0030	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
4-Isopropyltoluene	ND	0.0031	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
4-Methyl-2-pentanone	ND	0.010	0.34		mg/Kg	1	10/31/2016 6:58:56 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-12 (0-5)

Project: COA Railyards

Collection Date: 10/26/2016 8:52:00 AM

Lab ID: 1610E23-012

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.028	0.0099	0.10	J	mg/Kg	1	10/31/2016 6:58:56 PM	S38351
n-Butylbenzene	ND	0.0031	0.10		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
n-Propylbenzene	ND	0.0027	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
sec-Butylbenzene	ND	0.0048	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Styrene	ND	0.0031	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
tert-Butylbenzene	ND	0.0029	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
1,1,1,2-Tetrachloroethane	ND	0.0033	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
1,1,2,2-Tetrachloroethane	ND	0.0056	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Tetrachloroethene (PCE)	ND	0.0029	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
trans-1,2-DCE	ND	0.0097	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
trans-1,3-Dichloropropene	ND	0.0050	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
1,2,3-Trichlorobenzene	ND	0.0052	0.069		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
1,2,4-Trichlorobenzene	ND	0.0037	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
1,1,1-Trichloroethane	ND	0.0021	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
1,1,2-Trichloroethane	ND	0.0041	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Trichloroethene (TCE)	ND	0.0037	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Trichlorofluoromethane	ND	0.0026	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
1,2,3-Trichloropropane	ND	0.0060	0.069		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Vinyl chloride	ND	0.0028	0.034		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Xylenes, Total	ND	0.0065	0.069		mg/Kg	1	10/31/2016 6:58:56 PM	S38351
Surr: Dibromofluoromethane	100		70-130		%Rec	1	10/31/2016 6:58:56 PM	S38351
Surr: 1,2-Dichloroethane-d4	97.4		70-130		%Rec	1	10/31/2016 6:58:56 PM	S38351
Surr: Toluene-d8	94.7		70-130		%Rec	1	10/31/2016 6:58:56 PM	S38351
Surr: 4-Bromofluorobenzene	94.1		70-130		%Rec	1	10/31/2016 6:58:56 PM	S38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	0.54	0.52	3.4	J	mg/Kg	1	10/31/2016 6:58:56 PM	GS3835
Surr: BFB	99.2	0	70-130		%Rec	1	10/31/2016 6:58:56 PM	GS3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-13 (10-15)

Project: COA Railyards

Collection Date: 10/26/2016 9:30:00 AM

Lab ID: 1610E23-013

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								Analyst: TOM
Diesel Range Organics (DRO)	ND	1.7	9.3		mg/Kg	1	11/1/2016 8:27:10 PM	28372
Motor Oil Range Organics (MRO)	ND	47	47		mg/Kg	1	11/1/2016 8:27:10 PM	28372
Surr: DNOP	96.7	0	70-130		%Rec	1	11/1/2016 8:27:10 PM	28372
<b>EPA METHOD 8310: PAHS</b>								Analyst: SCC
Naphthalene	ND	0.034	0.25		mg/Kg	1	11/7/2016 12:52:12 AM	28398
1-Methylnaphthalene	ND	0.037	0.25		mg/Kg	1	11/7/2016 12:52:12 AM	28398
2-Methylnaphthalene	ND	0.035	0.25		mg/Kg	1	11/7/2016 12:52:12 AM	28398
Acenaphthylene	ND	0.033	0.25		mg/Kg	1	11/7/2016 12:52:12 AM	28398
Acenaphthene	ND	0.030	0.25		mg/Kg	1	11/7/2016 12:52:12 AM	28398
Fluorene	ND	0.0033	0.030		mg/Kg	1	11/7/2016 12:52:12 AM	28398
Phenanthrene	0.0035	0.0016	0.015	J	mg/Kg	1	11/7/2016 12:52:12 AM	28398
Anthracene	ND	0.0024	0.015		mg/Kg	1	11/7/2016 12:52:12 AM	28398
Fluoranthene	ND	0.0033	0.020		mg/Kg	1	11/7/2016 12:52:12 AM	28398
Pyrene	ND	0.0034	0.025		mg/Kg	1	11/7/2016 12:52:12 AM	28398
Benz(a)anthracene	ND	0.00050	0.0099		mg/Kg	1	11/7/2016 12:52:12 AM	28398
Chrysene	ND	0.0014	0.0099		mg/Kg	1	11/7/2016 12:52:12 AM	28398
Benzo(b)fluoranthene	ND	0.00070	0.0099		mg/Kg	1	11/7/2016 12:52:12 AM	28398
Benzo(k)fluoranthene	ND	0.00040	0.0099		mg/Kg	1	11/7/2016 12:52:12 AM	28398
Benzo(a)pyrene	ND	0.00040	0.0099		mg/Kg	1	11/7/2016 12:52:12 AM	28398
Dibenz(a,h)anthracene	ND	0.00050	0.0099		mg/Kg	1	11/7/2016 12:52:12 AM	28398
Benzo(g,h,i)perylene	ND	0.00059	0.0099		mg/Kg	1	11/7/2016 12:52:12 AM	28398
Indeno(1,2,3-cd)pyrene	ND	0.00079	0.0099		mg/Kg	1	11/7/2016 12:52:12 AM	28398
Surr: Benzo(e)pyrene	56.0	0	27.4-110		%Rec	1	11/7/2016 12:52:12 AM	28398
<b>EPA METHOD 6010B: SOIL METALS</b>								Analyst: MED
Antimony	ND	1.0	2.5		mg/Kg	1	10/31/2016 12:43:31 PM	28363
Arsenic	1.2	0.89	2.5	J	mg/Kg	1	10/31/2016 12:43:31 PM	28363
Chromium	3.7	0.094	0.30		mg/Kg	1	10/31/2016 12:43:31 PM	28363
Iron	5300	38	120		mg/Kg	50	10/31/2016 1:55:05 PM	28363
Lead	2.1	0.17	0.25		mg/Kg	1	10/31/2016 12:43:31 PM	28363
Manganese	35	0.053	0.10		mg/Kg	1	10/31/2016 12:43:31 PM	28363
Thallium	ND	0.77	2.5		mg/Kg	1	10/31/2016 12:43:31 PM	28363
<b>EPA METHOD 8260B: VOLATILES</b>								Analyst: DJF
Benzene	ND	0.013	0.016		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Toluene	ND	0.0019	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Ethylbenzene	ND	0.0026	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Methyl tert-butyl ether (MTBE)	ND	0.010	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
1,2,4-Trimethylbenzene	ND	0.0024	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
1,3,5-Trimethylbenzene	ND	0.0023	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-13 (10-15)

Project: COA Railyards

Collection Date: 10/26/2016 9:30:00 AM

Lab ID: 1610E23-013

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0084	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
1,2-Dibromoethane (EDB)	ND	0.0023	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Naphthalene	ND	0.0050	0.064		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
1-Methylnaphthalene	ND	0.0072	0.13		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
2-Methylnaphthalene	ND	0.0069	0.13		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Acetone	0.043	0.042	0.48	J	mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Bromobenzene	ND	0.0026	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Bromodichloromethane	ND	0.0019	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Bromoform	ND	0.0039	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Bromomethane	0.019	0.012	0.097	J	mg/Kg	1	10/31/2016 7:27:34 PM	S38351
2-Butanone	ND	0.018	0.32		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Carbon disulfide	ND	0.011	0.32		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Carbon tetrachloride	ND	0.0021	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Chlorobenzene	ND	0.0026	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Chloroethane	ND	0.0064	0.064		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Chloroform	ND	0.0024	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Chloromethane	ND	0.0029	0.097		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
2-Chlorotoluene	ND	0.0024	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
4-Chlorotoluene	ND	0.0028	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
cis-1,2-DCE	ND	0.0019	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
cis-1,3-Dichloropropene	ND	0.0030	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
1,2-Dibromo-3-chloropropane	ND	0.0099	0.064		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Dibromochloromethane	ND	0.0029	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Dibromomethane	ND	0.0028	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
1,2-Dichlorobenzene	ND	0.0028	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
1,3-Dichlorobenzene	ND	0.0026	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
1,4-Dichlorobenzene	ND	0.0040	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Dichlorodifluoromethane	ND	0.010	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
1,1-Dichloroethane	ND	0.0017	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
1,1-Dichloroethene	ND	0.011	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
1,2-Dichloropropane	ND	0.0027	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
1,3-Dichloropropane	ND	0.0037	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
2,2-Dichloropropane	ND	0.0018	0.064		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
1,1-Dichloropropene	ND	0.0026	0.064		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Hexachlorobutadiene	ND	0.0039	0.064		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
2-Hexanone	ND	0.018	0.32		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Isopropylbenzene	ND	0.0028	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
4-Isopropyltoluene	ND	0.0029	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
4-Methyl-2-pentanone	ND	0.0094	0.32		mg/Kg	1	10/31/2016 7:27:34 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-13 (10-15)

Project: COA Railyards

Collection Date: 10/26/2016 9:30:00 AM

Lab ID: 1610E23-013

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.025	0.0093	0.097	J	mg/Kg	1	10/31/2016 7:27:34 PM	S38351
n-Butylbenzene	ND	0.0028	0.097		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
n-Propylbenzene	ND	0.0025	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
sec-Butylbenzene	ND	0.0045	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Styrene	ND	0.0029	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
tert-Butylbenzene	ND	0.0027	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
1,1,1,2-Tetrachloroethane	ND	0.0031	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
1,1,2,2-Tetrachloroethane	ND	0.0052	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Tetrachloroethene (PCE)	ND	0.0027	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
trans-1,2-DCE	ND	0.0090	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
trans-1,3-Dichloropropene	ND	0.0047	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
1,2,3-Trichlorobenzene	ND	0.0048	0.064		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
1,2,4-Trichlorobenzene	ND	0.0034	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
1,1,1-Trichloroethane	ND	0.0020	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
1,1,2-Trichloroethane	ND	0.0038	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Trichloroethene (TCE)	ND	0.0035	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Trichlorofluoromethane	ND	0.0024	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
1,2,3-Trichloropropane	ND	0.0056	0.064		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Vinyl chloride	ND	0.0026	0.032		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Xylenes, Total	ND	0.0061	0.064		mg/Kg	1	10/31/2016 7:27:34 PM	S38351
Surr: Dibromofluoromethane	101		70-130		%Rec	1	10/31/2016 7:27:34 PM	S38351
Surr: 1,2-Dichloroethane-d4	95.0		70-130		%Rec	1	10/31/2016 7:27:34 PM	S38351
Surr: Toluene-d8	98.0		70-130		%Rec	1	10/31/2016 7:27:34 PM	S38351
Surr: 4-Bromofluorobenzene	98.4		70-130		%Rec	1	10/31/2016 7:27:34 PM	S38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.48	3.2		mg/Kg	1	10/31/2016 7:27:34 PM	GS3835
Surr: BFB	105	0	70-130		%Rec	1	10/31/2016 7:27:34 PM	GS3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:								
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank					
D	Sample Diluted Due to Matrix	E	Value above quantitation range					
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits					
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range					
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit					
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified					

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-14 (5-10)

Project: COA Railyards

Collection Date: 10/26/2016 10:03:00 AM

Lab ID: 1610E23-014

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>	
Diesel Range Organics (DRO)	1.8	1.8	9.5	J	mg/Kg	1	11/1/2016 8:49:07 PM	28372
Motor Oil Range Organics (MRO)	ND	47	47		mg/Kg	1	11/1/2016 8:49:07 PM	28372
Surr: DNOP	94.3	0	70-130		%Rec	1	11/1/2016 8:49:07 PM	28372
<b>EPA METHOD 8310: PAHS</b>							Analyst: <b>SCC</b>	
Naphthalene	0.036	0.034	0.24	J	mg/Kg	1	11/7/2016 1:21:26 AM	28398
1-Methylnaphthalene	ND	0.036	0.24		mg/Kg	1	11/7/2016 1:21:26 AM	28398
2-Methylnaphthalene	ND	0.034	0.24		mg/Kg	1	11/7/2016 1:21:26 AM	28398
Acenaphthylene	ND	0.033	0.24		mg/Kg	1	11/7/2016 1:21:26 AM	28398
Acenaphthene	ND	0.030	0.24		mg/Kg	1	11/7/2016 1:21:26 AM	28398
Fluorene	0.0068	0.0032	0.029	J	mg/Kg	1	11/7/2016 1:21:26 AM	28398
Phenanthrene	0.045	0.0016	0.015		mg/Kg	1	11/7/2016 1:21:26 AM	28398
Anthracene	0.0078	0.0023	0.015	J	mg/Kg	1	11/7/2016 1:21:26 AM	28398
Fluoranthene	0.034	0.0032	0.019		mg/Kg	1	11/7/2016 1:21:26 AM	28398
Pyrene	0.030	0.0033	0.024		mg/Kg	1	11/7/2016 1:21:26 AM	28398
Benz(a)anthracene	0.012	0.00049	0.0097		mg/Kg	1	11/7/2016 1:21:26 AM	28398
Chrysene	0.0054	0.0014	0.0097	J	mg/Kg	1	11/7/2016 1:21:26 AM	28398
Benzo(b)fluoranthene	0.0046	0.00069	0.0097	J	mg/Kg	1	11/7/2016 1:21:26 AM	28398
Benzo(k)fluoranthene	0.0056	0.00039	0.0097	J	mg/Kg	1	11/7/2016 1:21:26 AM	28398
Benzo(a)pyrene	0.011	0.00039	0.0097		mg/Kg	1	11/7/2016 1:21:26 AM	28398
Dibenz(a,h)anthracene	0.0012	0.00049	0.0097	J	mg/Kg	1	11/7/2016 1:21:26 AM	28398
Benzo(g,h,i)perylene	0.0063	0.00058	0.0097	J	mg/Kg	1	11/7/2016 1:21:26 AM	28398
Indeno(1,2,3-cd)pyrene	ND	0.00078	0.0097		mg/Kg	1	11/7/2016 1:21:26 AM	28398
Surr: Benzo(e)pyrene	52.8	0	27.4-110		%Rec	1	11/7/2016 1:21:26 AM	28398
<b>EPA METHOD 6010B: SOIL METALS</b>							Analyst: <b>MED</b>	
Antimony	ND	1.0	2.5		mg/Kg	1	10/31/2016 12:46:54 PM	28363
Arsenic	1.5	0.89	2.5	J	mg/Kg	1	10/31/2016 12:46:54 PM	28363
Chromium	5.5	0.094	0.30		mg/Kg	1	10/31/2016 12:46:54 PM	28363
Iron	9800	38	120		mg/Kg	50	10/31/2016 1:56:35 PM	28363
Lead	2.9	0.17	0.25		mg/Kg	1	10/31/2016 12:46:54 PM	28363
Manganese	93	0.053	0.10		mg/Kg	1	10/31/2016 12:46:54 PM	28363
Thallium	ND	0.77	2.5		mg/Kg	1	10/31/2016 12:46:54 PM	28363
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>	
Benzene	ND	0.011	0.013		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Toluene	ND	0.0016	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Ethylbenzene	ND	0.0022	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Methyl tert-butyl ether (MTBE)	ND	0.0084	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
1,2,4-Trimethylbenzene	ND	0.0020	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
1,3,5-Trimethylbenzene	ND	0.0019	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-14 (5-10)

Project: COA Railyards

Collection Date: 10/26/2016 10:03:00 AM

Lab ID: 1610E23-014

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0070	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
1,2-Dibromoethane (EDB)	ND	0.0019	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Naphthalene	0.021	0.0042	0.053	J	mg/Kg	1	10/31/2016 7:56:16 PM	S38351
1-Methylnaphthalene	0.0068	0.0059	0.11	J	mg/Kg	1	10/31/2016 7:56:16 PM	S38351
2-Methylnaphthalene	0.0099	0.0057	0.11	J	mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Acetone	ND	0.035	0.40		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Bromobenzene	ND	0.0022	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Bromodichloromethane	ND	0.0016	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Bromoform	ND	0.0032	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Bromomethane	0.012	0.0098	0.080	J	mg/Kg	1	10/31/2016 7:56:16 PM	S38351
2-Butanone	ND	0.015	0.27		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Carbon disulfide	ND	0.0088	0.27		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Carbon tetrachloride	ND	0.0018	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Chlorobenzene	ND	0.0022	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Chloroethane	ND	0.0053	0.053		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Chloroform	ND	0.0020	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Chloromethane	ND	0.0024	0.080		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
2-Chlorotoluene	ND	0.0020	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
4-Chlorotoluene	ND	0.0024	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
cis-1,2-DCE	ND	0.0016	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
cis-1,3-Dichloropropene	ND	0.0025	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
1,2-Dibromo-3-chloropropane	ND	0.0082	0.053		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Dibromochloromethane	ND	0.0024	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Dibromomethane	ND	0.0023	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
1,2-Dichlorobenzene	ND	0.0023	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
1,3-Dichlorobenzene	ND	0.0022	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
1,4-Dichlorobenzene	ND	0.0033	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Dichlorodifluoromethane	ND	0.0083	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
1,1-Dichloroethane	ND	0.0014	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
1,1-Dichloroethene	ND	0.0087	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
1,2-Dichloropropane	ND	0.0022	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
1,3-Dichloropropane	ND	0.0030	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
2,2-Dichloropropane	ND	0.0015	0.053		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
1,1-Dichloropropene	ND	0.0021	0.053		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Hexachlorobutadiene	ND	0.0033	0.053		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
2-Hexanone	ND	0.015	0.27		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Isopropylbenzene	ND	0.0023	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
4-Isopropyltoluene	ND	0.0024	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
4-Methyl-2-pentanone	ND	0.0078	0.27		mg/Kg	1	10/31/2016 7:56:16 PM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-14 (5-10)

Project: COA Railyards

Collection Date: 10/26/2016 10:03:00 AM

Lab ID: 1610E23-014

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.018	0.0077	0.080	J	mg/Kg	1	10/31/2016 7:56:16 PM	S38351
n-Butylbenzene	ND	0.0024	0.080		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
n-Propylbenzene	0.0042	0.0021	0.027	J	mg/Kg	1	10/31/2016 7:56:16 PM	S38351
sec-Butylbenzene	0.0046	0.0037	0.027	J	mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Styrene	ND	0.0024	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
tert-Butylbenzene	ND	0.0022	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
1,1,1,2-Tetrachloroethane	ND	0.0026	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
1,1,2,2-Tetrachloroethane	ND	0.0043	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Tetrachloroethene (PCE)	ND	0.0022	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
trans-1,2-DCE	ND	0.0075	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
trans-1,3-Dichloropropene	ND	0.0039	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
1,2,3-Trichlorobenzene	ND	0.0040	0.053		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
1,2,4-Trichlorobenzene	ND	0.0029	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
1,1,1-Trichloroethane	ND	0.0016	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
1,1,2-Trichloroethane	ND	0.0031	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Trichloroethene (TCE)	ND	0.0029	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Trichlorofluoromethane	ND	0.0020	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
1,2,3-Trichloropropane	ND	0.0046	0.053		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Vinyl chloride	ND	0.0022	0.027		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Xylenes, Total	ND	0.0051	0.053		mg/Kg	1	10/31/2016 7:56:16 PM	S38351
Surr: Dibromofluoromethane	101		70-130		%Rec	1	10/31/2016 7:56:16 PM	S38351
Surr: 1,2-Dichloroethane-d4	91.9		70-130		%Rec	1	10/31/2016 7:56:16 PM	S38351
Surr: Toluene-d8	93.3		70-130		%Rec	1	10/31/2016 7:56:16 PM	S38351
Surr: 4-Bromofluorobenzene	94.7		70-130		%Rec	1	10/31/2016 7:56:16 PM	S38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.40	2.7		mg/Kg	1	10/31/2016 7:56:16 PM	GS3835
Surr: BFB	99.7	0	70-130		%Rec	1	10/31/2016 7:56:16 PM	GS3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-15 (3-6)

Project: COA Railyards

Collection Date: 10/26/2016 10:35:00 AM

Lab ID: 1610E23-015

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								Analyst: TOM
Diesel Range Organics (DRO)	2.2	1.7	9.2	J	mg/Kg	1	11/1/2016 9:11:00 PM	28372
Motor Oil Range Organics (MRO)	ND	46	46		mg/Kg	1	11/1/2016 9:11:00 PM	28372
Surr: DNOP	93.6	0	70-130		%Rec	1	11/1/2016 9:11:00 PM	28372
<b>EPA METHOD 8310: PAHS</b>								Analyst: SCC
Naphthalene	ND	0.035	0.25		mg/Kg	1	11/7/2016 1:50:38 AM	28398
1-Methylnaphthalene	ND	0.037	0.25		mg/Kg	1	11/7/2016 1:50:38 AM	28398
2-Methylnaphthalene	0.039	0.035	0.25	J	mg/Kg	1	11/7/2016 1:50:38 AM	28398
Acenaphthylene	ND	0.034	0.25		mg/Kg	1	11/7/2016 1:50:38 AM	28398
Acenaphthene	ND	0.031	0.25		mg/Kg	1	11/7/2016 1:50:38 AM	28398
Fluorene	ND	0.0033	0.030		mg/Kg	1	11/7/2016 1:50:38 AM	28398
Phenanthrene	0.0040	0.0016	0.015	J	mg/Kg	1	11/7/2016 1:50:38 AM	28398
Anthracene	ND	0.0024	0.015		mg/Kg	1	11/7/2016 1:50:38 AM	28398
Fluoranthene	ND	0.0033	0.020		mg/Kg	1	11/7/2016 1:50:38 AM	28398
Pyrene	ND	0.0034	0.025		mg/Kg	1	11/7/2016 1:50:38 AM	28398
Benz(a)anthracene	ND	0.00050	0.010		mg/Kg	1	11/7/2016 1:50:38 AM	28398
Chrysene	ND	0.0014	0.010		mg/Kg	1	11/7/2016 1:50:38 AM	28398
Benzo(b)fluoranthene	ND	0.00071	0.010		mg/Kg	1	11/7/2016 1:50:38 AM	28398
Benzo(k)fluoranthene	0.00050	0.00040	0.010	J	mg/Kg	1	11/7/2016 1:50:38 AM	28398
Benzo(a)pyrene	0.00075	0.00040	0.010	J	mg/Kg	1	11/7/2016 1:50:38 AM	28398
Dibenz(a,h)anthracene	ND	0.00050	0.010		mg/Kg	1	11/7/2016 1:50:38 AM	28398
Benzo(g,h,i)perylene	0.0010	0.00060	0.010	J	mg/Kg	1	11/7/2016 1:50:38 AM	28398
Indeno(1,2,3-cd)pyrene	0.0020	0.00080	0.010	J	mg/Kg	1	11/7/2016 1:50:38 AM	28398
Surr: Benzo(e)pyrene	55.7	0	27.4-110		%Rec	1	11/7/2016 1:50:38 AM	28398
<b>EPA METHOD 6010B: SOIL METALS</b>								Analyst: MED
Antimony	ND	1.0	2.5		mg/Kg	1	10/31/2016 12:50:28 PM	28363
Arsenic	2.9	0.88	2.5		mg/Kg	1	10/31/2016 12:50:28 PM	28363
Chromium	7.2	0.094	0.30		mg/Kg	1	10/31/2016 12:50:28 PM	28363
Iron	12000	37	120		mg/Kg	50	10/31/2016 1:58:08 PM	28363
Lead	3.4	0.17	0.25		mg/Kg	1	10/31/2016 12:50:28 PM	28363
Manganese	330	0.11	0.20		mg/Kg	2	10/31/2016 12:52:15 PM	28363
Thallium	ND	0.77	2.5		mg/Kg	1	10/31/2016 12:50:28 PM	28363
<b>EPA METHOD 8260B: VOLATILES</b>								Analyst: DJF
Benzene	ND	0.014	0.018		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Toluene	ND	0.0021	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Ethylbenzene	ND	0.0029	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Methyl tert-butyl ether (MTBE)	ND	0.011	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
1,2,4-Trimethylbenzene	0.0029	0.0026	0.036	J	mg/Kg	1	11/1/2016 1:12:17 AM	S38351
1,3,5-Trimethylbenzene	ND	0.0026	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-15 (3-6)

Project: COA Railyards

Collection Date: 10/26/2016 10:35:00 AM

Lab ID: 1610E23-015

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0093	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
1,2-Dibromoethane (EDB)	ND	0.0025	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Naphthalene	0.0094	0.0056	0.071	J	mg/Kg	1	11/1/2016 1:12:17 AM	S38351
1-Methylnaphthalene	0.012	0.0079	0.14	J	mg/Kg	1	11/1/2016 1:12:17 AM	S38351
2-Methylnaphthalene	0.022	0.0076	0.14	J	mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Acetone	0.074	0.046	0.53	J	mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Bromobenzene	ND	0.0029	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Bromodichloromethane	ND	0.0021	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Bromoform	ND	0.0043	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Bromomethane	0.019	0.013	0.11	J	mg/Kg	1	11/1/2016 1:12:17 AM	S38351
2-Butanone	0.051	0.020	0.36	J	mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Carbon disulfide	ND	0.012	0.36		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Carbon tetrachloride	ND	0.0023	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Chlorobenzene	ND	0.0029	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Chloroethane	ND	0.0071	0.071		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Chloroform	ND	0.0027	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Chloromethane	ND	0.0032	0.11		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
2-Chlorotoluene	ND	0.0026	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
4-Chlorotoluene	ND	0.0032	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
cis-1,2-DCE	ND	0.0021	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
cis-1,3-Dichloropropene	ND	0.0033	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
1,2-Dibromo-3-chloropropane	ND	0.011	0.071		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Dibromochloromethane	ND	0.0032	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Dibromomethane	ND	0.0031	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
1,2-Dichlorobenzene	ND	0.0031	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
1,3-Dichlorobenzene	ND	0.0029	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
1,4-Dichlorobenzene	ND	0.0044	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Dichlorodifluoromethane	ND	0.011	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
1,1-Dichloroethane	ND	0.0019	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
1,1-Dichloroethene	ND	0.012	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
1,2-Dichloropropane	ND	0.0030	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
1,3-Dichloropropane	ND	0.0040	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
2,2-Dichloropropane	ND	0.0020	0.071		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
1,1-Dichloropropene	ND	0.0028	0.071		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Hexachlorobutadiene	ND	0.0044	0.071		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
2-Hexanone	ND	0.019	0.36		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Isopropylbenzene	ND	0.0031	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
4-Isopropyltoluene	ND	0.0032	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
4-Methyl-2-pentanone	ND	0.010	0.36		mg/Kg	1	11/1/2016 1:12:17 AM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-15 (3-6)

Project: COA Railyards

Collection Date: 10/26/2016 10:35:00 AM

Lab ID: 1610E23-015

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.023	0.010	0.11	J	mg/Kg	1	11/1/2016 1:12:17 AM	S38351
n-Butylbenzene	ND	0.0032	0.11		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
n-Propylbenzene	0.0072	0.0027	0.036	J	mg/Kg	1	11/1/2016 1:12:17 AM	S38351
sec-Butylbenzene	0.0070	0.0049	0.036	J	mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Styrene	ND	0.0032	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
tert-Butylbenzene	ND	0.0030	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
1,1,1,2-Tetrachloroethane	ND	0.0034	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
1,1,2,2-Tetrachloroethane	ND	0.0058	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Tetrachloroethene (PCE)	ND	0.0030	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
trans-1,2-DCE	ND	0.010	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
trans-1,3-Dichloropropene	ND	0.0052	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
1,2,3-Trichlorobenzene	ND	0.0053	0.071		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
1,2,4-Trichlorobenzene	ND	0.0038	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
1,1,1-Trichloroethane	ND	0.0022	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
1,1,2-Trichloroethane	ND	0.0042	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Trichloroethene (TCE)	ND	0.0038	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Trichlorofluoromethane	ND	0.0027	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
1,2,3-Trichloropropane	ND	0.0062	0.071		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Vinyl chloride	ND	0.0029	0.036		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Xylenes, Total	ND	0.0067	0.071		mg/Kg	1	11/1/2016 1:12:17 AM	S38351
Surr: Dibromofluoromethane	100		70-130		%Rec	1	11/1/2016 1:12:17 AM	S38351
Surr: 1,2-Dichloroethane-d4	92.3		70-130		%Rec	1	11/1/2016 1:12:17 AM	S38351
Surr: Toluene-d8	94.6		70-130		%Rec	1	11/1/2016 1:12:17 AM	S38351
Surr: 4-Bromofluorobenzene	96.2		70-130		%Rec	1	11/1/2016 1:12:17 AM	S38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	0.76	0.54	3.6	J	mg/Kg	1	11/1/2016 1:12:17 AM	GS3835
Surr: BFB	100	0	70-130		%Rec	1	11/1/2016 1:12:17 AM	GS3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-16 (5-10)

Project: COA Railyards

Collection Date: 10/26/2016 11:06:00 AM

Lab ID: 1610E23-016

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>	
Diesel Range Organics (DRO)	120	1.8	9.9		mg/Kg	1	11/1/2016 9:32:58 PM	28372
Motor Oil Range Organics (MRO)	ND	50	50		mg/Kg	1	11/1/2016 9:32:58 PM	28372
Surr: DNOP	94.2	0	70-130		%Rec	1	11/1/2016 9:32:58 PM	28372
<b>EPA METHOD 8310: PAHS</b>							Analyst: <b>SCC</b>	
Naphthalene	ND	0.035	0.25		mg/Kg	1	11/7/2016 2:19:53 AM	28398
1-Methylnaphthalene	0.46	0.037	0.25		mg/Kg	1	11/7/2016 2:19:53 AM	28398
2-Methylnaphthalene	ND	0.035	0.25		mg/Kg	1	11/7/2016 2:19:53 AM	28398
Acenaphthylene	ND	0.034	0.25		mg/Kg	1	11/7/2016 2:19:53 AM	28398
Acenaphthene	ND	0.031	0.25		mg/Kg	1	11/7/2016 2:19:53 AM	28398
Fluorene	ND	0.0033	0.030		mg/Kg	1	11/7/2016 2:19:53 AM	28398
Phenanthrene	0.030	0.0016	0.015		mg/Kg	1	11/7/2016 2:19:53 AM	28398
Anthracene	ND	0.0024	0.015		mg/Kg	1	11/7/2016 2:19:53 AM	28398
Fluoranthene	0.0035	0.0033	0.020	J	mg/Kg	1	11/7/2016 2:19:53 AM	28398
Pyrene	0.0053	0.0034	0.025	J	mg/Kg	1	11/7/2016 2:19:53 AM	28398
Benz(a)anthracene	0.00076	0.00050	0.010	J	mg/Kg	1	11/7/2016 2:19:53 AM	28398
Chrysene	0.0035	0.0014	0.010	J	mg/Kg	1	11/7/2016 2:19:53 AM	28398
Benzo(b)fluoranthene	ND	0.00071	0.010		mg/Kg	1	11/7/2016 2:19:53 AM	28398
Benzo(k)fluoranthene	0.00050	0.00040	0.010	J	mg/Kg	1	11/7/2016 2:19:53 AM	28398
Benzo(a)pyrene	0.00076	0.00040	0.010	J	mg/Kg	1	11/7/2016 2:19:53 AM	28398
Dibenz(a,h)anthracene	ND	0.00050	0.010		mg/Kg	1	11/7/2016 2:19:53 AM	28398
Benzo(g,h,i)perylene	0.00076	0.00061	0.010	J	mg/Kg	1	11/7/2016 2:19:53 AM	28398
Indeno(1,2,3-cd)pyrene	ND	0.00081	0.010		mg/Kg	1	11/7/2016 2:19:53 AM	28398
Surr: Benzo(e)pyrene	57.4	0	27.4-110		%Rec	1	11/7/2016 2:19:53 AM	28398
<b>EPA METHOD 6010B: SOIL METALS</b>							Analyst: <b>MED</b>	
Antimony	ND	2.0	4.9		mg/Kg	2	10/31/2016 1:02:13 PM	28363
Arsenic	4.2	1.7	4.9	J	mg/Kg	2	10/31/2016 1:02:13 PM	28363
Chromium	8.8	0.18	0.58		mg/Kg	2	10/31/2016 1:02:13 PM	28363
Iron	11000	37	120		mg/Kg	50	10/31/2016 1:59:40 PM	28363
Lead	12	0.34	0.49		mg/Kg	2	10/31/2016 1:02:13 PM	28363
Manganese	120	0.10	0.19		mg/Kg	2	10/31/2016 1:02:13 PM	28363
Thallium	ND	1.5	4.9		mg/Kg	2	10/31/2016 1:02:13 PM	28363
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>	
Benzene	ND	0.013	0.016		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Toluene	0.0034	0.0019	0.031	J	mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Ethylbenzene	0.086	0.0026	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Methyl tert-butyl ether (MTBE)	ND	0.0099	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
1,2,4-Trimethylbenzene	0.0028	0.0023	0.031	J	mg/Kg	1	11/1/2016 1:40:55 AM	S38351
1,3,5-Trimethylbenzene	ND	0.0023	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-16 (5-10)

Project: COA Railyards

Collection Date: 10/26/2016 11:06:00 AM

Lab ID: 1610E23-016

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0082	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
1,2-Dibromoethane (EDB)	ND	0.0022	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Naphthalene	0.013	0.0049	0.063	J	mg/Kg	1	11/1/2016 1:40:55 AM	S38351
1-Methylnaphthalene	0.66	0.0070	0.13		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
2-Methylnaphthalene	0.0072	0.0067	0.13	J	mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Acetone	0.053	0.041	0.47	J	mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Bromobenzene	ND	0.0025	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Bromodichloromethane	ND	0.0018	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Bromoform	ND	0.0038	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Bromomethane	0.016	0.012	0.094	J	mg/Kg	1	11/1/2016 1:40:55 AM	S38351
2-Butanone	0.083	0.018	0.31	J	mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Carbon disulfide	0.012	0.010	0.31	J	mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Carbon tetrachloride	ND	0.0021	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Chlorobenzene	ND	0.0026	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Chloroethane	ND	0.0063	0.063		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Chloroform	ND	0.0024	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Chloromethane	0.011	0.0028	0.094	J	mg/Kg	1	11/1/2016 1:40:55 AM	S38351
2-Chlorotoluene	ND	0.0023	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
4-Chlorotoluene	ND	0.0028	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
cis-1,2-DCE	ND	0.0018	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
cis-1,3-Dichloropropene	ND	0.0029	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
1,2-Dibromo-3-chloropropane	ND	0.0096	0.063		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Dibromochloromethane	ND	0.0028	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Dibromomethane	ND	0.0027	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
1,2-Dichlorobenzene	ND	0.0027	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
1,3-Dichlorobenzene	ND	0.0026	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
1,4-Dichlorobenzene	ND	0.0039	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Dichlorodifluoromethane	ND	0.0097	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
1,1-Dichloroethane	ND	0.0017	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
1,1-Dichloroethene	ND	0.010	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
1,2-Dichloropropane	ND	0.0026	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
1,3-Dichloropropane	ND	0.0036	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
2,2-Dichloropropane	ND	0.0018	0.063		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
1,1-Dichloropropene	ND	0.0025	0.063		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Hexachlorobutadiene	ND	0.0038	0.063		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
2-Hexanone	ND	0.017	0.31		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Isopropylbenzene	0.14	0.0027	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
4-Isopropyltoluene	0.054	0.0028	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
4-Methyl-2-pentanone	ND	0.0092	0.31		mg/Kg	1	11/1/2016 1:40:55 AM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-16 (5-10)

Project: COA Railyards

Collection Date: 10/26/2016 11:06:00 AM

Lab ID: 1610E23-016

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.021	0.0091	0.094	J	mg/Kg	1	11/1/2016 1:40:55 AM	S38351
n-Butylbenzene	0.19	0.0028	0.094		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
n-Propylbenzene	0.38	0.0024	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
sec-Butylbenzene	0.10	0.0044	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Styrene	ND	0.0028	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
tert-Butylbenzene	0.015	0.0026	0.031	J	mg/Kg	1	11/1/2016 1:40:55 AM	S38351
1,1,1,2-Tetrachloroethane	ND	0.0030	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
1,1,2,2-Tetrachloroethane	ND	0.0051	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Tetrachloroethene (PCE)	ND	0.0026	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
trans-1,2-DCE	ND	0.0088	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
trans-1,3-Dichloropropene	ND	0.0046	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
1,2,3-Trichlorobenzene	ND	0.0047	0.063		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
1,2,4-Trichlorobenzene	ND	0.0034	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
1,1,1-Trichloroethane	ND	0.0019	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
1,1,2-Trichloroethane	ND	0.0037	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Trichloroethene (TCE)	ND	0.0034	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Trichlorofluoromethane	ND	0.0024	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
1,2,3-Trichloropropane	ND	0.0054	0.063		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Vinyl chloride	ND	0.0026	0.031		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Xylenes, Total	ND	0.0060	0.063		mg/Kg	1	11/1/2016 1:40:55 AM	S38351
Surr: Dibromofluoromethane	96.6		70-130		%Rec	1	11/1/2016 1:40:55 AM	S38351
Surr: 1,2-Dichloroethane-d4	94.1		70-130		%Rec	1	11/1/2016 1:40:55 AM	S38351
Surr: Toluene-d8	92.5		70-130		%Rec	1	11/1/2016 1:40:55 AM	S38351
Surr: 4-Bromofluorobenzene	129		70-130		%Rec	1	11/1/2016 1:40:55 AM	S38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	92	0.47	3.1		mg/Kg	1	11/1/2016 1:40:55 AM	GS3835
Surr: BFB	150	0	70-130	S	%Rec	1	11/1/2016 1:40:55 AM	GS3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Intera, Inc.**Client Sample ID:** SB-17 (3-6)**Project:** COA Railyards**Collection Date:** 10/26/2016 11:40:00 AM**Lab ID:** 1610E23-017**Matrix:** MEOH (SOIL) **Received Date:** 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	ND	1.9	10		mg/Kg	1	11/1/2016 9:54:52 PM	28372
Motor Oil Range Organics (MRO)	ND	50	50		mg/Kg	1	11/1/2016 9:54:52 PM	28372
Surr: DNOP	92.1	0	70-130		%Rec	1	11/1/2016 9:54:52 PM	28372
<b>EPA METHOD 8310: PAHS</b>								Analyst: <b>SCC</b>
Naphthalene	ND	0.035	0.25		mg/Kg	1	11/7/2016 2:49:07 AM	28398
1-Methylnaphthalene	ND	0.037	0.25		mg/Kg	1	11/7/2016 2:49:07 AM	28398
2-Methylnaphthalene	ND	0.035	0.25		mg/Kg	1	11/7/2016 2:49:07 AM	28398
Acenaphthylene	ND	0.033	0.25		mg/Kg	1	11/7/2016 2:49:07 AM	28398
Acenaphthene	ND	0.031	0.25		mg/Kg	1	11/7/2016 2:49:07 AM	28398
Fluorene	ND	0.0033	0.030		mg/Kg	1	11/7/2016 2:49:07 AM	28398
Phenanthrene	0.0070	0.0016	0.015	J	mg/Kg	1	11/7/2016 2:49:07 AM	28398
Anthracene	ND	0.0024	0.015		mg/Kg	1	11/7/2016 2:49:07 AM	28398
Fluoranthene	0.0075	0.0033	0.020	J	mg/Kg	1	11/7/2016 2:49:07 AM	28398
Pyrene	0.0075	0.0034	0.025	J	mg/Kg	1	11/7/2016 2:49:07 AM	28398
Benz(a)anthracene	0.0020	0.00050	0.010	J	mg/Kg	1	11/7/2016 2:49:07 AM	28398
Chrysene	0.0025	0.0014	0.010	J	mg/Kg	1	11/7/2016 2:49:07 AM	28398
Benzo(b)fluoranthene	ND	0.00071	0.010		mg/Kg	1	11/7/2016 2:49:07 AM	28398
Benzo(k)fluoranthene	0.0015	0.00040	0.010	J	mg/Kg	1	11/7/2016 2:49:07 AM	28398
Benzo(a)pyrene	0.0025	0.00040	0.010	J	mg/Kg	1	11/7/2016 2:49:07 AM	28398
Dibenz(a,h)anthracene	ND	0.00050	0.010		mg/Kg	1	11/7/2016 2:49:07 AM	28398
Benzo(g,h,i)perylene	0.0020	0.00060	0.010	J	mg/Kg	1	11/7/2016 2:49:07 AM	28398
Indeno(1,2,3-cd)pyrene	0.0010	0.00080	0.010	J	mg/Kg	1	11/7/2016 2:49:07 AM	28398
Surr: Benzo(e)pyrene	56.2	0	27.4-110		%Rec	1	11/7/2016 2:49:07 AM	28398
<b>EPA METHOD 6010B: SOIL METALS</b>								Analyst: <b>MED</b>
Antimony	ND	1.0	2.5		mg/Kg	1	10/31/2016 1:04:02 PM	28363
Arsenic	3.6	0.88	2.5		mg/Kg	1	10/31/2016 1:04:02 PM	28363
Chromium	8.2	0.094	0.30		mg/Kg	1	10/31/2016 1:04:02 PM	28363
Iron	15000	75	250		mg/Kg	100	11/2/2016 10:41:09 AM	28363
Lead	4.9	0.17	0.25		mg/Kg	1	10/31/2016 1:04:02 PM	28363
Manganese	1100	0.27	0.50		mg/Kg	5	11/4/2016 10:28:42 AM	28363
Thallium	ND	0.77	2.5		mg/Kg	1	10/31/2016 1:04:02 PM	28363
<b>EPA METHOD 8260B: VOLATILES</b>								Analyst: <b>DJF</b>
Benzene	ND	0.010	0.013		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Toluene	ND	0.0015	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Ethylbenzene	ND	0.0021	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Methyl tert-butyl ether (MTBE)	ND	0.0080	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
1,2,4-Trimethylbenzene	ND	0.0019	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
1,3,5-Trimethylbenzene	ND	0.0019	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-17 (3-6)

Project: COA Railyards

Collection Date: 10/26/2016 11:40:00 AM

Lab ID: 1610E23-017

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0067	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
1,2-Dibromoethane (EDB)	ND	0.0018	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Naphthalene	ND	0.0040	0.051		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
1-Methylnaphthalene	0.031	0.0057	0.10	J	mg/Kg	1	11/1/2016 2:09:33 AM	S38351
2-Methylnaphthalene	ND	0.0055	0.10		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Acetone	ND	0.033	0.38		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Bromobenzene	ND	0.0021	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Bromodichloromethane	ND	0.0015	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Bromoform	ND	0.0031	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Bromomethane	ND	0.0094	0.077		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
2-Butanone	0.027	0.015	0.26	J	mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Carbon disulfide	ND	0.0084	0.26		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Carbon tetrachloride	ND	0.0017	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Chlorobenzene	ND	0.0021	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Chloroethane	ND	0.0051	0.051		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Chloroform	ND	0.0019	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Chloromethane	ND	0.0023	0.077		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
2-Chlorotoluene	ND	0.0019	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
4-Chlorotoluene	ND	0.0023	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
cis-1,2-DCE	ND	0.0015	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
cis-1,3-Dichloropropene	ND	0.0024	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
1,2-Dibromo-3-chloropropane	ND	0.0078	0.051		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Dibromochloromethane	ND	0.0023	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Dibromomethane	ND	0.0022	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
1,2-Dichlorobenzene	ND	0.0022	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
1,3-Dichlorobenzene	ND	0.0021	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
1,4-Dichlorobenzene	ND	0.0032	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Dichlorodifluoromethane	ND	0.0079	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
1,1-Dichloroethane	ND	0.0014	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
1,1-Dichloroethene	ND	0.0084	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
1,2-Dichloropropane	ND	0.0021	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
1,3-Dichloropropane	ND	0.0029	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
2,2-Dichloropropane	ND	0.0015	0.051		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
1,1-Dichloropropene	ND	0.0020	0.051		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Hexachlorobutadiene	ND	0.0031	0.051		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
2-Hexanone	ND	0.014	0.26		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Isopropylbenzene	ND	0.0022	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
4-Isopropyltoluene	ND	0.0023	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
4-Methyl-2-pentanone	ND	0.0075	0.26		mg/Kg	1	11/1/2016 2:09:33 AM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-17 (3-6)

Project: COA Railyards

Collection Date: 10/26/2016 11:40:00 AM

Lab ID: 1610E23-017

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.016	0.0074	0.077	J	mg/Kg	1	11/1/2016 2:09:33 AM	S38351
n-Butylbenzene	ND	0.0023	0.077		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
n-Propylbenzene	ND	0.0020	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
sec-Butylbenzene	ND	0.0035	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Styrene	ND	0.0023	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
tert-Butylbenzene	ND	0.0021	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
1,1,1,2-Tetrachloroethane	ND	0.0024	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
1,1,2,2-Tetrachloroethane	ND	0.0041	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Tetrachloroethene (PCE)	ND	0.0021	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
trans-1,2-DCE	ND	0.0072	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
trans-1,3-Dichloropropene	ND	0.0037	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
1,2,3-Trichlorobenzene	ND	0.0038	0.051		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
1,2,4-Trichlorobenzene	ND	0.0027	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
1,1,1-Trichloroethane	ND	0.0016	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
1,1,2-Trichloroethane	ND	0.0030	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Trichloroethene (TCE)	ND	0.0027	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Trichlorofluoromethane	ND	0.0019	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
1,2,3-Trichloropropane	ND	0.0044	0.051		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Vinyl chloride	ND	0.0021	0.026		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Xylenes, Total	ND	0.0048	0.051		mg/Kg	1	11/1/2016 2:09:33 AM	S38351
Surr: Dibromofluoromethane	99.4		70-130		%Rec	1	11/1/2016 2:09:33 AM	S38351
Surr: 1,2-Dichloroethane-d4	96.2		70-130		%Rec	1	11/1/2016 2:09:33 AM	S38351
Surr: Toluene-d8	95.4		70-130		%Rec	1	11/1/2016 2:09:33 AM	S38351
Surr: 4-Bromofluorobenzene	96.2		70-130		%Rec	1	11/1/2016 2:09:33 AM	S38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	0.77	0.38	2.6	J	mg/Kg	1	11/1/2016 2:09:33 AM	GS3835
Surr: BFB	102	0	70-130		%Rec	1	11/1/2016 2:09:33 AM	GS3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-18 (3-6)

Project: COA Railyards

Collection Date: 10/26/2016 12:02:00 PM

Lab ID: 1610E23-018

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>	
Diesel Range Organics (DRO)	3.3	1.7	9.4	J	mg/Kg	1	11/1/2016 11:22:01 PM	28375
Motor Oil Range Organics (MRO)	ND	47	47		mg/Kg	1	11/1/2016 11:22:01 PM	28375
Surr: DNOP	94.4	0	70-130		%Rec	1	11/1/2016 11:22:01 PM	28375
<b>EPA METHOD 8310: PAHS</b>							Analyst: <b>SCC</b>	
Naphthalene	ND	0.034	0.24		mg/Kg	1	11/7/2016 3:18:20 AM	28398
1-Methylnaphthalene	ND	0.036	0.24		mg/Kg	1	11/7/2016 3:18:20 AM	28398
2-Methylnaphthalene	ND	0.034	0.24		mg/Kg	1	11/7/2016 3:18:20 AM	28398
Acenaphthylene	ND	0.033	0.24		mg/Kg	1	11/7/2016 3:18:20 AM	28398
Acenaphthene	ND	0.030	0.24		mg/Kg	1	11/7/2016 3:18:20 AM	28398
Fluorene	ND	0.0032	0.029		mg/Kg	1	11/7/2016 3:18:20 AM	28398
Phenanthrene	0.0024	0.0016	0.015	J	mg/Kg	1	11/7/2016 3:18:20 AM	28398
Anthracene	ND	0.0023	0.015		mg/Kg	1	11/7/2016 3:18:20 AM	28398
Fluoranthene	ND	0.0032	0.020		mg/Kg	1	11/7/2016 3:18:20 AM	28398
Pyrene	ND	0.0033	0.024		mg/Kg	1	11/7/2016 3:18:20 AM	28398
Benz(a)anthracene	ND	0.00049	0.0098		mg/Kg	1	11/7/2016 3:18:20 AM	28398
Chrysene	ND	0.0014	0.0098		mg/Kg	1	11/7/2016 3:18:20 AM	28398
Benzo(b)fluoranthene	ND	0.00069	0.0098		mg/Kg	1	11/7/2016 3:18:20 AM	28398
Benzo(k)fluoranthene	ND	0.00039	0.0098		mg/Kg	1	11/7/2016 3:18:20 AM	28398
Benzo(a)pyrene	ND	0.00039	0.0098		mg/Kg	1	11/7/2016 3:18:20 AM	28398
Dibenz(a,h)anthracene	ND	0.00049	0.0098		mg/Kg	1	11/7/2016 3:18:20 AM	28398
Benzo(g,h,i)perylene	0.00073	0.00059	0.0098	J	mg/Kg	1	11/7/2016 3:18:20 AM	28398
Indeno(1,2,3-cd)pyrene	ND	0.00078	0.0098		mg/Kg	1	11/7/2016 3:18:20 AM	28398
Surr: Benzo(e)pyrene	60.6	0	27.4-110		%Rec	1	11/7/2016 3:18:20 AM	28398
<b>EPA METHOD 6010B: SOIL METALS</b>							Analyst: <b>MED</b>	
Antimony	ND	0.96	2.4		mg/Kg	1	11/2/2016 11:23:58 AM	28364
Arsenic	3.0	0.85	2.4		mg/Kg	1	11/2/2016 11:23:58 AM	28364
Chromium	4.9	0.090	0.29		mg/Kg	1	11/2/2016 11:23:58 AM	28364
Iron	9200	72	240		mg/Kg	100	11/2/2016 10:42:40 AM	28364
Lead	3.0	0.17	0.24		mg/Kg	1	11/2/2016 11:23:58 AM	28364
Manganese	180	0.051	0.096		mg/Kg	1	11/2/2016 11:23:58 AM	28364
Thallium	ND	0.74	2.4		mg/Kg	1	11/2/2016 11:23:58 AM	28364
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>	
Benzene	ND	0.012	0.015		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Toluene	ND	0.0017	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Ethylbenzene	ND	0.0024	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Methyl tert-butyl ether (MTBE)	ND	0.0092	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
1,2,4-Trimethylbenzene	ND	0.0022	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
1,3,5-Trimethylbenzene	ND	0.0021	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-18 (3-6)

Project: COA Railyards

Collection Date: 10/26/2016 12:02:00 PM

Lab ID: 1610E23-018

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0076	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
1,2-Dibromoethane (EDB)	ND	0.0021	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Naphthalene	ND	0.0046	0.058		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
1-Methylnaphthalene	ND	0.0065	0.12		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
2-Methylnaphthalene	ND	0.0063	0.12		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Acetone	ND	0.038	0.44		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Bromobenzene	ND	0.0024	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Bromodichloromethane	ND	0.0017	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Bromoform	ND	0.0036	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Bromomethane	0.012	0.011	0.088	J	mg/Kg	1	11/1/2016 2:38:06 AM	S38351
2-Butanone	0.029	0.017	0.29	J	mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Carbon disulfide	ND	0.0097	0.29		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Carbon tetrachloride	ND	0.0019	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Chlorobenzene	ND	0.0024	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Chloroethane	ND	0.0058	0.058		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Chloroform	ND	0.0022	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Chloromethane	ND	0.0026	0.088		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
2-Chlorotoluene	ND	0.0022	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
4-Chlorotoluene	ND	0.0026	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
cis-1,2-DCE	ND	0.0017	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
cis-1,3-Dichloropropene	ND	0.0027	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
1,2-Dibromo-3-chloropropane	ND	0.0090	0.058		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Dibromochloromethane	ND	0.0026	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Dibromomethane	ND	0.0025	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
1,2-Dichlorobenzene	ND	0.0026	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
1,3-Dichlorobenzene	ND	0.0024	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
1,4-Dichlorobenzene	ND	0.0036	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Dichlorodifluoromethane	ND	0.0090	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
1,1-Dichloroethane	ND	0.0016	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
1,1-Dichloroethene	ND	0.0096	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
1,2-Dichloropropane	ND	0.0025	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
1,3-Dichloropropane	ND	0.0033	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
2,2-Dichloropropane	ND	0.0017	0.058		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
1,1-Dichloropropene	ND	0.0023	0.058		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Hexachlorobutadiene	ND	0.0036	0.058		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
2-Hexanone	ND	0.016	0.29		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Isopropylbenzene	ND	0.0025	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
4-Isopropyltoluene	ND	0.0026	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
4-Methyl-2-pentanone	ND	0.0085	0.29		mg/Kg	1	11/1/2016 2:38:06 AM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-18 (3-6)

Project: COA Railyards

Collection Date: 10/26/2016 12:02:00 PM

Lab ID: 1610E23-018

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.021	0.0084	0.088	J	mg/Kg	1	11/1/2016 2:38:06 AM	S38351
n-Butylbenzene	ND	0.0026	0.088		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
n-Propylbenzene	ND	0.0023	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
sec-Butylbenzene	ND	0.0040	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Styrene	ND	0.0026	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
tert-Butylbenzene	ND	0.0024	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
1,1,1,2-Tetrachloroethane	ND	0.0028	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
1,1,2,2-Tetrachloroethane	ND	0.0047	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Tetrachloroethene (PCE)	ND	0.0024	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
trans-1,2-DCE	ND	0.0082	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
trans-1,3-Dichloropropene	ND	0.0043	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
1,2,3-Trichlorobenzene	ND	0.0044	0.058		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
1,2,4-Trichlorobenzene	ND	0.0031	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
1,1,1-Trichloroethane	ND	0.0018	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
1,1,2-Trichloroethane	ND	0.0034	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Trichloroethene (TCE)	ND	0.0031	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Trichlorofluoromethane	ND	0.0022	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
1,2,3-Trichloropropane	ND	0.0051	0.058		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Vinyl chloride	ND	0.0024	0.029		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Xylenes, Total	ND	0.0055	0.058		mg/Kg	1	11/1/2016 2:38:06 AM	S38351
Surr: Dibromofluoromethane	95.0		70-130		%Rec	1	11/1/2016 2:38:06 AM	S38351
Surr: 1,2-Dichloroethane-d4	93.6		70-130		%Rec	1	11/1/2016 2:38:06 AM	S38351
Surr: Toluene-d8	95.3		70-130		%Rec	1	11/1/2016 2:38:06 AM	S38351
Surr: 4-Bromofluorobenzene	95.1		70-130		%Rec	1	11/1/2016 2:38:06 AM	S38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.44	2.9		mg/Kg	1	11/1/2016 2:38:06 AM	GS3835
Surr: BFB	104	0	70-130		%Rec	1	11/1/2016 2:38:06 AM	GS3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-19 (5-10)

Project: COA Railyards

Collection Date: 10/26/2016 12:17:00 PM

Lab ID: 1610E23-019

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>	
Diesel Range Organics (DRO)	280	1.8	9.9		mg/Kg	1	11/2/2016 12:27:41 AM	28375
Motor Oil Range Organics (MRO)	ND	49	49		mg/Kg	1	11/2/2016 12:27:41 AM	28375
Surr: DNOP	102	0	70-130		%Rec	1	11/2/2016 12:27:41 AM	28375
<b>EPA METHOD 8310: PAHS</b>							Analyst: <b>SCC</b>	
Naphthalene	ND	0.034	0.24		mg/Kg	1	11/7/2016 3:47:37 AM	28398
1-Methylnaphthalene	ND	0.036	0.24		mg/Kg	1	11/7/2016 3:47:37 AM	28398
2-Methylnaphthalene	0.039	0.034	0.24	J	mg/Kg	1	11/7/2016 3:47:37 AM	28398
Acenaphthylene	ND	0.032	0.24		mg/Kg	1	11/7/2016 3:47:37 AM	28398
Acenaphthene	ND	0.029	0.24		mg/Kg	1	11/7/2016 3:47:37 AM	28398
Fluorene	0.018	0.0032	0.029	J	mg/Kg	1	11/7/2016 3:47:37 AM	28398
Phenanthrene	0.12	0.0015	0.014		mg/Kg	1	11/7/2016 3:47:37 AM	28398
Anthracene	ND	0.0023	0.014		mg/Kg	1	11/7/2016 3:47:37 AM	28398
Fluoranthene	0.0065	0.0032	0.019	J	mg/Kg	1	11/7/2016 3:47:37 AM	28398
Pyrene	0.026	0.0033	0.024		mg/Kg	1	11/7/2016 3:47:37 AM	28398
Benz(a)anthracene	ND	0.00048	0.0096		mg/Kg	1	11/7/2016 3:47:37 AM	28398
Chrysene	0.11	0.0013	0.0096		mg/Kg	1	11/7/2016 3:47:37 AM	28398
Benzo(b)fluoranthene	ND	0.00068	0.0096		mg/Kg	1	11/7/2016 3:47:37 AM	28398
Benzo(k)fluoranthene	ND	0.00039	0.0096		mg/Kg	1	11/7/2016 3:47:37 AM	28398
Benzo(a)pyrene	ND	0.00039	0.0096		mg/Kg	1	11/7/2016 3:47:37 AM	28398
Dibenz(a,h)anthracene	ND	0.00048	0.0096		mg/Kg	1	11/7/2016 3:47:37 AM	28398
Benzo(g,h,i)perylene	ND	0.00058	0.0096		mg/Kg	1	11/7/2016 3:47:37 AM	28398
Indeno(1,2,3-cd)pyrene	ND	0.00077	0.0096		mg/Kg	1	11/7/2016 3:47:37 AM	28398
Surr: Benzo(e)pyrene	59.3	0	27.4-110		%Rec	1	11/7/2016 3:47:37 AM	28398
<b>EPA METHOD 6010B: SOIL METALS</b>							Analyst: <b>MED</b>	
Antimony	ND	1.9	4.8		mg/Kg	2	11/2/2016 11:29:02 AM	28364
Arsenic	2.6	1.7	4.8	J	mg/Kg	2	11/2/2016 11:29:02 AM	28364
Chromium	7.2	0.18	0.58		mg/Kg	2	11/2/2016 11:29:02 AM	28364
Iron	12000	72	240		mg/Kg	100	11/2/2016 10:44:10 AM	28364
Lead	4.4	0.33	0.48		mg/Kg	2	11/2/2016 11:29:02 AM	28364
Manganese	160	0.10	0.19		mg/Kg	2	11/2/2016 11:29:02 AM	28364
Thallium	ND	1.9	4.8		mg/Kg	2	11/2/2016 11:29:02 AM	28364
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>	
Benzene	ND	0.014	0.017		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Toluene	ND	0.0021	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Ethylbenzene	ND	0.0028	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Methyl tert-butyl ether (MTBE)	ND	0.011	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
1,2,4-Trimethylbenzene	ND	0.0026	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
1,3,5-Trimethylbenzene	ND	0.0025	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-19 (5-10)

Project: COA Railyards

Collection Date: 10/26/2016 12:17:00 PM

Lab ID: 1610E23-019

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0091	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
1,2-Dibromoethane (EDB)	ND	0.0025	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Naphthalene	ND	0.0054	0.069		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
1-Methylnaphthalene	0.068	0.0077	0.14	J	mg/Kg	1	11/1/2016 3:06:41 AM	S38351
2-Methylnaphthalene	0.047	0.0074	0.14	J	mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Acetone	0.082	0.045	0.52	J	mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Bromobenzene	ND	0.0028	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Bromodichloromethane	ND	0.0020	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Bromoform	ND	0.0042	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Bromomethane	0.013	0.013	0.10	J	mg/Kg	1	11/1/2016 3:06:41 AM	S38351
2-Butanone	ND	0.020	0.35		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Carbon disulfide	ND	0.011	0.35		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Carbon tetrachloride	ND	0.0023	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Chlorobenzene	ND	0.0028	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Chloroethane	ND	0.0069	0.069		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Chloroform	ND	0.0026	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Chloromethane	ND	0.0031	0.10		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
2-Chlorotoluene	ND	0.0026	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
4-Chlorotoluene	ND	0.0031	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
cis-1,2-DCE	ND	0.0020	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
cis-1,3-Dichloropropene	ND	0.0032	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
1,2-Dibromo-3-chloropropane	ND	0.011	0.069		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Dibromochloromethane	ND	0.0031	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Dibromomethane	ND	0.0030	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
1,2-Dichlorobenzene	ND	0.0030	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
1,3-Dichlorobenzene	ND	0.0028	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
1,4-Dichlorobenzene	ND	0.0043	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Dichlorodifluoromethane	ND	0.011	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
1,1-Dichloroethane	ND	0.0019	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
1,1-Dichloroethene	ND	0.011	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
1,2-Dichloropropane	ND	0.0029	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
1,3-Dichloropropane	ND	0.0039	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
2,2-Dichloropropane	ND	0.0020	0.069		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
1,1-Dichloropropene	ND	0.0028	0.069		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Hexachlorobutadiene	ND	0.0042	0.069		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
2-Hexanone	ND	0.019	0.35		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Isopropylbenzene	ND	0.0030	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
4-Isopropyltoluene	ND	0.0031	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
4-Methyl-2-pentanone	0.018	0.010	0.35	J	mg/Kg	1	11/1/2016 3:06:41 AM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Intera, Inc.**Client Sample ID:** SB-19 (5-10)**Project:** COA Railyards**Collection Date:** 10/26/2016 12:17:00 PM**Lab ID:** 1610E23-019**Matrix:** MEOH (SOIL) **Received Date:** 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.023	0.010	0.10	J	mg/Kg	1	11/1/2016 3:06:41 AM	S38351
n-Butylbenzene	ND	0.0031	0.10		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
n-Propylbenzene	ND	0.0027	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
sec-Butylbenzene	ND	0.0048	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Styrene	ND	0.0031	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
tert-Butylbenzene	ND	0.0029	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
1,1,1,2-Tetrachloroethane	ND	0.0033	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
1,1,2,2-Tetrachloroethane	ND	0.0056	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Tetrachloroethene (PCE)	ND	0.0029	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
trans-1,2-DCE	ND	0.0097	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
trans-1,3-Dichloropropene	ND	0.0051	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
1,2,3-Trichlorobenzene	0.0087	0.0052	0.069	J	mg/Kg	1	11/1/2016 3:06:41 AM	S38351
1,2,4-Trichlorobenzene	ND	0.0037	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
1,1,1-Trichloroethane	ND	0.0021	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
1,1,2-Trichloroethane	ND	0.0041	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Trichloroethene (TCE)	ND	0.0037	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Trichlorofluoromethane	ND	0.0026	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
1,2,3-Trichloropropane	ND	0.0060	0.069		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Vinyl chloride	ND	0.0028	0.035		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Xylenes, Total	ND	0.0066	0.069		mg/Kg	1	11/1/2016 3:06:41 AM	S38351
Surr: Dibromofluoromethane	103		70-130		%Rec	1	11/1/2016 3:06:41 AM	S38351
Surr: 1,2-Dichloroethane-d4	94.2		70-130		%Rec	1	11/1/2016 3:06:41 AM	S38351
Surr: Toluene-d8	95.1		70-130		%Rec	1	11/1/2016 3:06:41 AM	S38351
Surr: 4-Bromofluorobenzene	96.1		70-130		%Rec	1	11/1/2016 3:06:41 AM	S38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	2.0	0.52	3.5	J	mg/Kg	1	11/1/2016 3:06:41 AM	GS3835
Surr: BFB	105	0	70-130		%Rec	1	11/1/2016 3:06:41 AM	GS3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:				
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank	
D	Sample Diluted Due to Matrix	E	Value above quantitation range	
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits	
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range	
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit	
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified	



## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-20 (3-6)

Project: COA Railyards

Collection Date: 10/26/2016 12:32:00 PM

Lab ID: 1610E23-020

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: TOM	
Diesel Range Organics (DRO)	11	1.8	9.8		mg/Kg	1	11/2/2016 12:49:22 AM	28375
Motor Oil Range Organics (MRO)	ND	49	49		mg/Kg	1	11/2/2016 12:49:22 AM	28375
Surr: DNOP	96.8	0	70-130		%Rec	1	11/2/2016 12:49:22 AM	28375
<b>EPA METHOD 8310: PAHS</b>							Analyst: SCC	
Naphthalene	ND	0.033	0.24		mg/Kg	1	11/7/2016 4:16:51 AM	28398
1-Methylnaphthalene	ND	0.035	0.24		mg/Kg	1	11/7/2016 4:16:51 AM	28398
2-Methylnaphthalene	ND	0.034	0.24		mg/Kg	1	11/7/2016 4:16:51 AM	28398
Acenaphthylene	ND	0.032	0.24		mg/Kg	1	11/7/2016 4:16:51 AM	28398
Acenaphthene	ND	0.029	0.24		mg/Kg	1	11/7/2016 4:16:51 AM	28398
Fluorene	ND	0.0032	0.029		mg/Kg	1	11/7/2016 4:16:51 AM	28398
Phenanthrene	0.016	0.0015	0.014		mg/Kg	1	11/7/2016 4:16:51 AM	28398
Anthracene	ND	0.0023	0.014		mg/Kg	1	11/7/2016 4:16:51 AM	28398
Fluoranthene	0.0034	0.0032	0.019	J	mg/Kg	1	11/7/2016 4:16:51 AM	28398
Pyrene	0.0041	0.0033	0.024	J	mg/Kg	1	11/7/2016 4:16:51 AM	28398
Benz(a)anthracene	0.00072	0.00048	0.0096	J	mg/Kg	1	11/7/2016 4:16:51 AM	28398
Chrysene	0.0041	0.0013	0.0096	J	mg/Kg	1	11/7/2016 4:16:51 AM	28398
Benzo(b)fluoranthene	0.0019	0.00068	0.0096	J	mg/Kg	1	11/7/2016 4:16:51 AM	28398
Benzo(k)fluoranthene	0.0012	0.00038	0.0096	J	mg/Kg	1	11/7/2016 4:16:51 AM	28398
Benzo(a)pyrene	0.00072	0.00038	0.0096	J	mg/Kg	1	11/7/2016 4:16:51 AM	28398
Dibenz(a,h)anthracene	ND	0.00048	0.0096		mg/Kg	1	11/7/2016 4:16:51 AM	28398
Benzo(g,h,i)perylene	0.00096	0.00057	0.0096	J	mg/Kg	1	11/7/2016 4:16:51 AM	28398
Indeno(1,2,3-cd)pyrene	0.0012	0.00077	0.0096	J	mg/Kg	1	11/7/2016 4:16:51 AM	28398
Surr: Benzo(e)pyrene	61.1	0	27.4-110		%Rec	1	11/7/2016 4:16:51 AM	28398
<b>EPA METHOD 6010B: SOIL METALS</b>							Analyst: MED	
Antimony	ND	0.99	2.5		mg/Kg	1	11/2/2016 11:30:42 AM	28364
Arsenic	3.1	0.88	2.5		mg/Kg	1	11/2/2016 11:30:42 AM	28364
Chromium	5.0	0.093	0.30		mg/Kg	1	11/2/2016 11:30:42 AM	28364
Iron	13000	74	250		mg/Kg	100	11/2/2016 10:45:39 AM	28364
Lead	5.1	0.17	0.25		mg/Kg	1	11/2/2016 11:30:42 AM	28364
Manganese	190	0.053	0.098		mg/Kg	1	11/2/2016 11:30:42 AM	28364
Thallium	ND	0.76	2.5		mg/Kg	1	11/2/2016 11:30:42 AM	28364
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Benzene	ND	0.013	0.016		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Toluene	ND	0.0019	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Ethylbenzene	ND	0.0026	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Methyl tert-butyl ether (MTBE)	ND	0.010	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
1,2,4-Trimethylbenzene	ND	0.0024	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
1,3,5-Trimethylbenzene	ND	0.0023	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-20 (3-6)

Project: COA Railyards

Collection Date: 10/26/2016 12:32:00 PM

Lab ID: 1610E23-020

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0084	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
1,2-Dibromoethane (EDB)	ND	0.0023	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Naphthalene	ND	0.0051	0.065		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
1-Methylnaphthalene	ND	0.0072	0.13		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
2-Methylnaphthalene	ND	0.0069	0.13		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Acetone	ND	0.042	0.49		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Bromobenzene	ND	0.0026	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Bromodichloromethane	ND	0.0019	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Bromoform	ND	0.0039	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Bromomethane	0.015	0.012	0.097	J	mg/Kg	1	11/1/2016 3:35:07 AM	S38351
2-Butanone	ND	0.018	0.32		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Carbon disulfide	ND	0.011	0.32		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Carbon tetrachloride	ND	0.0021	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Chlorobenzene	ND	0.0026	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Chloroethane	ND	0.0065	0.065		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Chloroform	ND	0.0024	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Chloromethane	ND	0.0029	0.097		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
2-Chlorotoluene	ND	0.0024	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
4-Chlorotoluene	ND	0.0029	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
cis-1,2-DCE	ND	0.0019	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
cis-1,3-Dichloropropene	ND	0.0030	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
1,2-Dibromo-3-chloropropane	ND	0.0099	0.065		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Dibromochloromethane	ND	0.0029	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Dibromomethane	ND	0.0028	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
1,2-Dichlorobenzene	ND	0.0028	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
1,3-Dichlorobenzene	ND	0.0027	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
1,4-Dichlorobenzene	ND	0.0040	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Dichlorodifluoromethane	ND	0.010	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
1,1-Dichloroethane	ND	0.0017	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
1,1-Dichloroethene	ND	0.011	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
1,2-Dichloropropane	ND	0.0027	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
1,3-Dichloropropane	ND	0.0037	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
2,2-Dichloropropane	ND	0.0019	0.065		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
1,1-Dichloropropene	ND	0.0026	0.065		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Hexachlorobutadiene	ND	0.0040	0.065		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
2-Hexanone	ND	0.018	0.32		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Isopropylbenzene	ND	0.0028	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
4-Isopropyltoluene	ND	0.0029	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
4-Methyl-2-pentanone	ND	0.0094	0.32		mg/Kg	1	11/1/2016 3:35:07 AM	S38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-20 (3-6)

Project: COA Railyards

Collection Date: 10/26/2016 12:32:00 PM

Lab ID: 1610E23-020

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.021	0.0093	0.097	J	mg/Kg	1	11/1/2016 3:35:07 AM	S38351
n-Butylbenzene	ND	0.0029	0.097		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
n-Propylbenzene	ND	0.0025	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
sec-Butylbenzene	ND	0.0045	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Styrene	ND	0.0029	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
tert-Butylbenzene	ND	0.0027	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
1,1,1,2-Tetrachloroethane	ND	0.0031	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
1,1,2,2-Tetrachloroethane	ND	0.0052	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Tetrachloroethene (PCE)	ND	0.0027	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
trans-1,2-DCE	ND	0.0091	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
trans-1,3-Dichloropropene	ND	0.0047	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
1,2,3-Trichlorobenzene	ND	0.0048	0.065		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
1,2,4-Trichlorobenzene	ND	0.0035	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
1,1,1-Trichloroethane	ND	0.0020	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
1,1,2-Trichloroethane	ND	0.0038	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Trichloroethene (TCE)	ND	0.0035	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Trichlorofluoromethane	ND	0.0024	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
1,2,3-Trichloropropane	ND	0.0056	0.065		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Vinyl chloride	ND	0.0026	0.032		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Xylenes, Total	ND	0.0061	0.065		mg/Kg	1	11/1/2016 3:35:07 AM	S38351
Surr: Dibromofluoromethane	101		70-130		%Rec	1	11/1/2016 3:35:07 AM	S38351
Surr: 1,2-Dichloroethane-d4	90.7		70-130		%Rec	1	11/1/2016 3:35:07 AM	S38351
Surr: Toluene-d8	100		70-130		%Rec	1	11/1/2016 3:35:07 AM	S38351
Surr: 4-Bromofluorobenzene	92.7		70-130		%Rec	1	11/1/2016 3:35:07 AM	S38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.49	3.2		mg/Kg	1	11/1/2016 3:35:07 AM	GS3835
Surr: BFB	104	0	70-130		%Rec	1	11/1/2016 3:35:07 AM	GS3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-21 (0-5)

Project: COA Railyards

Collection Date: 10/27/2016 8:15:00 AM

Lab ID: 1610E23-021

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								Analyst: TOM
Diesel Range Organics (DRO)	ND	1.8	9.8		mg/Kg	1	11/2/2016 1:11:11 AM	28375
Motor Oil Range Organics (MRO)	ND	49	49		mg/Kg	1	11/2/2016 1:11:11 AM	28375
Surr: DNOP	95.5	0	70-130		%Rec	1	11/2/2016 1:11:11 AM	28375
<b>EPA METHOD 8310: PAHS</b>								Analyst: SCC
Naphthalene	ND	0.035	0.25		mg/Kg	1	11/7/2016 4:46:05 AM	28398
1-Methylnaphthalene	ND	0.037	0.25		mg/Kg	1	11/7/2016 4:46:05 AM	28398
2-Methylnaphthalene	ND	0.035	0.25		mg/Kg	1	11/7/2016 4:46:05 AM	28398
Acenaphthylene	ND	0.033	0.25		mg/Kg	1	11/7/2016 4:46:05 AM	28398
Acenaphthene	ND	0.030	0.25		mg/Kg	1	11/7/2016 4:46:05 AM	28398
Fluorene	ND	0.0033	0.030		mg/Kg	1	11/7/2016 4:46:05 AM	28398
Phenanthrene	0.0035	0.0016	0.015	J	mg/Kg	1	11/7/2016 4:46:05 AM	28398
Anthracene	ND	0.0024	0.015		mg/Kg	1	11/7/2016 4:46:05 AM	28398
Fluoranthene	ND	0.0033	0.020		mg/Kg	1	11/7/2016 4:46:05 AM	28398
Pyrene	ND	0.0034	0.025		mg/Kg	1	11/7/2016 4:46:05 AM	28398
Benz(a)anthracene	ND	0.00050	0.0099		mg/Kg	1	11/7/2016 4:46:05 AM	28398
Chrysene	ND	0.0014	0.0099		mg/Kg	1	11/7/2016 4:46:05 AM	28398
Benzo(b)fluoranthene	ND	0.00070	0.0099		mg/Kg	1	11/7/2016 4:46:05 AM	28398
Benzo(k)fluoranthene	ND	0.00040	0.0099		mg/Kg	1	11/7/2016 4:46:05 AM	28398
Benzo(a)pyrene	0.00050	0.00040	0.0099	J	mg/Kg	1	11/7/2016 4:46:05 AM	28398
Dibenz(a,h)anthracene	ND	0.00050	0.0099		mg/Kg	1	11/7/2016 4:46:05 AM	28398
Benzo(g,h,i)perylene	0.00074	0.00060	0.0099	J	mg/Kg	1	11/7/2016 4:46:05 AM	28398
Indeno(1,2,3-cd)pyrene	0.0087	0.00079	0.0099	J	mg/Kg	1	11/7/2016 4:46:05 AM	28398
Surr: Benzo(e)pyrene	66.7	0	27.4-110		%Rec	1	11/7/2016 4:46:05 AM	28398
<b>EPA METHOD 6010B: SOIL METALS</b>								Analyst: MED
Antimony	ND	0.96	2.4		mg/Kg	1	11/2/2016 11:40:23 AM	28364
Arsenic	3.5	0.85	2.4		mg/Kg	1	11/2/2016 11:40:23 AM	28364
Chromium	6.9	0.090	0.29		mg/Kg	1	11/2/2016 11:40:23 AM	28364
Iron	11000	72	240		mg/Kg	100	11/2/2016 10:47:08 AM	28364
Lead	1.7	0.17	0.24		mg/Kg	1	11/2/2016 11:40:23 AM	28364
Manganese	410	0.10	0.19		mg/Kg	2	11/2/2016 11:42:00 AM	28364
Thallium	ND	0.74	2.4		mg/Kg	1	11/2/2016 11:40:23 AM	28364
<b>EPA METHOD 8260B: VOLATILES</b>								Analyst: DJF
Benzene	ND	0.012	0.015		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Toluene	ND	0.0018	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Ethylbenzene	ND	0.0025	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Methyl tert-butyl ether (MTBE)	ND	0.0095	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
1,2,4-Trimethylbenzene	ND	0.0022	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
1,3,5-Trimethylbenzene	ND	0.0022	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-21 (0-5)

Project: COA Railyards

Collection Date: 10/27/2016 8:15:00 AM

Lab ID: 1610E23-021

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0079	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
1,2-Dibromoethane (EDB)	ND	0.0022	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Naphthalene	ND	0.0047	0.061		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
1-Methylnaphthalene	ND	0.0067	0.12		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
2-Methylnaphthalene	ND	0.0065	0.12		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Acetone	0.044	0.039	0.46	J	mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Bromobenzene	ND	0.0024	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Bromodichloromethane	ND	0.0018	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Bromoform	ND	0.0037	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Bromomethane	0.012	0.011	0.091	J	mg/Kg	1	11/1/2016 4:03:34 AM	T38351
2-Butanone	ND	0.017	0.30		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Carbon disulfide	ND	0.010	0.30		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Carbon tetrachloride	ND	0.0020	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Chlorobenzene	ND	0.0025	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Chloroethane	ND	0.0061	0.061		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Chloroform	ND	0.0023	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Chloromethane	ND	0.0027	0.091		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
2-Chlorotoluene	ND	0.0022	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
4-Chlorotoluene	ND	0.0027	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
cis-1,2-DCE	ND	0.0018	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
cis-1,3-Dichloropropene	ND	0.0028	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
1,2-Dibromo-3-chloropropane	ND	0.0093	0.061		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Dibromochloromethane	ND	0.0027	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Dibromomethane	ND	0.0026	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
1,2-Dichlorobenzene	ND	0.0026	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
1,3-Dichlorobenzene	ND	0.0025	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
1,4-Dichlorobenzene	ND	0.0038	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Dichlorodifluoromethane	ND	0.0094	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
1,1-Dichloroethane	ND	0.0016	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
1,1-Dichloroethene	ND	0.0099	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
1,2-Dichloropropane	ND	0.0025	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
1,3-Dichloropropane	ND	0.0034	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
2,2-Dichloropropane	ND	0.0017	0.061		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
1,1-Dichloropropene	ND	0.0024	0.061		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Hexachlorobutadiene	ND	0.0037	0.061		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
2-Hexanone	ND	0.017	0.30		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Isopropylbenzene	ND	0.0026	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
4-Isopropyltoluene	ND	0.0027	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
4-Methyl-2-pentanone	ND	0.0088	0.30		mg/Kg	1	11/1/2016 4:03:34 AM	T38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-21 (0-5)

Project: COA Railyards

Collection Date: 10/27/2016 8:15:00 AM

Lab ID: 1610E23-021

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.020	0.0087	0.091	J	mg/Kg	1	11/1/2016 4:03:34 AM	T38351
n-Butylbenzene	ND	0.0027	0.091		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
n-Propylbenzene	ND	0.0023	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
sec-Butylbenzene	ND	0.0042	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Styrene	ND	0.0027	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
tert-Butylbenzene	ND	0.0025	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
1,1,1,2-Tetrachloroethane	ND	0.0029	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
1,1,2,2-Tetrachloroethane	ND	0.0049	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Tetrachloroethene (PCE)	ND	0.0025	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
trans-1,2-DCE	ND	0.0085	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
trans-1,3-Dichloropropene	ND	0.0044	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
1,2,3-Trichlorobenzene	ND	0.0045	0.061		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
1,2,4-Trichlorobenzene	ND	0.0032	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
1,1,1-Trichloroethane	ND	0.0019	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
1,1,2-Trichloroethane	ND	0.0036	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Trichloroethene (TCE)	ND	0.0033	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Trichlorofluoromethane	ND	0.0023	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
1,2,3-Trichloropropane	ND	0.0052	0.061		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Vinyl chloride	ND	0.0025	0.030		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Xylenes, Total	ND	0.0057	0.061		mg/Kg	1	11/1/2016 4:03:34 AM	T38351
Surr: Dibromofluoromethane	97.8		70-130		%Rec	1	11/1/2016 4:03:34 AM	T38351
Surr: 1,2-Dichloroethane-d4	88.1		70-130		%Rec	1	11/1/2016 4:03:34 AM	T38351
Surr: Toluene-d8	98.7		70-130		%Rec	1	11/1/2016 4:03:34 AM	T38351
Surr: 4-Bromofluorobenzene	91.1		70-130		%Rec	1	11/1/2016 4:03:34 AM	T38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.46	3.0		mg/Kg	1	11/1/2016 4:03:34 AM	GT3835
Surr: BFB	98.6	0	70-130		%Rec	1	11/1/2016 4:03:34 AM	GT3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-22 (3-6)

Project: COA Railyards

Collection Date: 10/27/2016 8:35:00 AM

Lab ID: 1610E23-022

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>	
Diesel Range Organics (DRO)	1100	18	98		mg/Kg	10	11/3/2016 12:25:33 AM	28375
Motor Oil Range Organics (MRO)	4600	490	490		mg/Kg	10	11/3/2016 12:25:33 AM	28375
Surr: DNOP	0	0	70-130	S	%Rec	10	11/3/2016 12:25:33 AM	28375
<b>EPA METHOD 8310: PAHS</b>							Analyst: <b>SCC</b>	
Naphthalene	ND	3.4	24	D	mg/Kg	10	11/8/2016 11:55:31 AM	28398
1-Methylnaphthalene	ND	3.6	24	D	mg/Kg	10	11/8/2016 11:55:31 AM	28398
2-Methylnaphthalene	ND	3.4	24	D	mg/Kg	10	11/8/2016 11:55:31 AM	28398
Acenaphthylene	ND	3.3	24	D	mg/Kg	10	11/8/2016 11:55:31 AM	28398
Acenaphthene	ND	3.0	24	D	mg/Kg	10	11/8/2016 11:55:31 AM	28398
Fluorene	ND	0.32	2.9	D	mg/Kg	10	11/8/2016 11:55:31 AM	28398
Phenanthrene	ND	0.16	1.5	D	mg/Kg	10	11/8/2016 11:55:31 AM	28398
Anthracene	ND	0.23	1.5	D	mg/Kg	10	11/8/2016 11:55:31 AM	28398
Fluoranthene	ND	0.32	1.9	D	mg/Kg	10	11/8/2016 11:55:31 AM	28398
Pyrene	ND	0.33	2.4	D	mg/Kg	10	11/8/2016 11:55:31 AM	28398
Benz(a)anthracene	ND	0.049	0.97	D	mg/Kg	10	11/8/2016 11:55:31 AM	28398
Chrysene	ND	0.14	0.97	D	mg/Kg	10	11/8/2016 11:55:31 AM	28398
Benzo(b)fluoranthene	ND	0.069	0.97	D	mg/Kg	10	11/8/2016 11:55:31 AM	28398
Benzo(k)fluoranthene	ND	0.039	0.97	D	mg/Kg	10	11/8/2016 11:55:31 AM	28398
Benzo(a)pyrene	ND	0.039	0.97	D	mg/Kg	10	11/8/2016 11:55:31 AM	28398
Dibenz(a,h)anthracene	ND	0.049	0.97	D	mg/Kg	10	11/8/2016 11:55:31 AM	28398
Benzo(g,h,i)perylene	0.073	0.058	0.97	JD	mg/Kg	10	11/8/2016 11:55:31 AM	28398
Indeno(1,2,3-cd)pyrene	ND	0.078	0.97	D	mg/Kg	10	11/8/2016 11:55:31 AM	28398
Surr: Benzo(e)pyrene	0	0	27.4-110	SD	%Rec	10	11/8/2016 11:55:31 AM	28398
<b>EPA METHOD 6010B: SOIL METALS</b>							Analyst: <b>MED</b>	
Antimony	ND	1.0	2.5		mg/Kg	1	11/2/2016 11:43:41 AM	28364
Arsenic	3.8	0.89	2.5		mg/Kg	1	11/2/2016 11:43:41 AM	28364
Chromium	7.2	0.094	0.30		mg/Kg	1	11/2/2016 11:43:41 AM	28364
Iron	11000	75	250		mg/Kg	100	11/2/2016 10:54:57 AM	28364
Lead	1.7	0.17	0.25		mg/Kg	1	11/2/2016 11:43:41 AM	28364
Manganese	320	0.11	0.20		mg/Kg	2	11/2/2016 11:45:14 AM	28364
Thallium	ND	0.77	2.5		mg/Kg	1	11/2/2016 11:43:41 AM	28364
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>	
Benzene	ND	0.014	0.018		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Toluene	ND	0.0021	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Ethylbenzene	ND	0.0029	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Methyl tert-butyl ether (MTBE)	ND	0.011	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
1,2,4-Trimethylbenzene	ND	0.0026	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
1,3,5-Trimethylbenzene	ND	0.0026	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Intera, Inc.**Client Sample ID:** SB-22 (3-6)**Project:** COA Railyards**Collection Date:** 10/27/2016 8:35:00 AM**Lab ID:** 1610E23-022**Matrix:** MEOH (SOIL) **Received Date:** 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0094	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
1,2-Dibromoethane (EDB)	ND	0.0026	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Naphthalene	ND	0.0056	0.072		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
1-Methylnaphthalene	ND	0.0080	0.14		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
2-Methylnaphthalene	ND	0.0077	0.14		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Acetone	ND	0.046	0.54		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Bromobenzene	ND	0.0029	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Bromodichloromethane	ND	0.0021	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Bromoform	ND	0.0044	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Bromomethane	0.013	0.013	0.11	J	mg/Kg	1	11/1/2016 5:29:40 AM	T38351
2-Butanone	0.032	0.021	0.36	J	mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Carbon disulfide	ND	0.012	0.36		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Carbon tetrachloride	ND	0.0024	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Chlorobenzene	ND	0.0029	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Chloroethane	ND	0.0072	0.072		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Chloroform	ND	0.0027	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Chloromethane	ND	0.0032	0.11		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
2-Chlorotoluene	ND	0.0026	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
4-Chlorotoluene	ND	0.0032	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
cis-1,2-DCE	ND	0.0021	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
cis-1,3-Dichloropropene	ND	0.0033	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
1,2-Dibromo-3-chloropropane	ND	0.011	0.072		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Dibromochloromethane	ND	0.0032	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Dibromomethane	ND	0.0031	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
1,2-Dichlorobenzene	ND	0.0031	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
1,3-Dichlorobenzene	ND	0.0029	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
1,4-Dichlorobenzene	ND	0.0045	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Dichlorodifluoromethane	ND	0.011	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
1,1-Dichloroethane	ND	0.0019	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
1,1-Dichloroethene	ND	0.012	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
1,2-Dichloropropane	ND	0.0030	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
1,3-Dichloropropane	ND	0.0041	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
2,2-Dichloropropane	ND	0.0021	0.072		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
1,1-Dichloropropene	ND	0.0028	0.072		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Hexachlorobutadiene	ND	0.0044	0.072		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
2-Hexanone	ND	0.020	0.36		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Isopropylbenzene	ND	0.0031	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
4-Isopropyltoluene	ND	0.0032	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
4-Methyl-2-pentanone	ND	0.010	0.36		mg/Kg	1	11/1/2016 5:29:40 AM	T38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-22 (3-6)

Project: COA Railyards

Collection Date: 10/27/2016 8:35:00 AM

Lab ID: 1610E23-022

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.030	0.010	0.11	J	mg/Kg	1	11/1/2016 5:29:40 AM	T38351
n-Butylbenzene	ND	0.0032	0.11		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
n-Propylbenzene	ND	0.0028	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
sec-Butylbenzene	ND	0.0050	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Styrene	ND	0.0032	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
tert-Butylbenzene	ND	0.0030	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
1,1,1,2-Tetrachloroethane	ND	0.0034	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
1,1,2,2-Tetrachloroethane	ND	0.0058	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Tetrachloroethene (PCE)	ND	0.0030	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
trans-1,2-DCE	ND	0.010	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
trans-1,3-Dichloropropene	ND	0.0053	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
1,2,3-Trichlorobenzene	ND	0.0054	0.072		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
1,2,4-Trichlorobenzene	ND	0.0038	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
1,1,1-Trichloroethane	ND	0.0022	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
1,1,2-Trichloroethane	ND	0.0042	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Trichloroethene (TCE)	ND	0.0038	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Trichlorofluoromethane	ND	0.0027	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
1,2,3-Trichloropropane	ND	0.0062	0.072		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Vinyl chloride	ND	0.0029	0.036		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Xylenes, Total	ND	0.0068	0.072		mg/Kg	1	11/1/2016 5:29:40 AM	T38351
Surr: Dibromofluoromethane	93.9		70-130		%Rec	1	11/1/2016 5:29:40 AM	T38351
Surr: 1,2-Dichloroethane-d4	91.1		70-130		%Rec	1	11/1/2016 5:29:40 AM	T38351
Surr: Toluene-d8	93.3		70-130		%Rec	1	11/1/2016 5:29:40 AM	T38351
Surr: 4-Bromofluorobenzene	94.4		70-130		%Rec	1	11/1/2016 5:29:40 AM	T38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.54	3.6		mg/Kg	1	11/1/2016 5:29:40 AM	GT3835
Surr: BFB	99.0	0	70-130		%Rec	1	11/1/2016 5:29:40 AM	GT3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-23 (0-5)

Project: COA Railyards

Collection Date: 10/27/2016 8:58:00 AM

Lab ID: 1610E23-023

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								Analyst: <b>TOM</b>
Diesel Range Organics (DRO)	170	3.6	20		mg/Kg	2	11/5/2016 3:14:19 AM	28375
Motor Oil Range Organics (MRO)	570	98	98		mg/Kg	2	11/5/2016 3:14:19 AM	28375
Surr: DNOP	99.8	0	70-130		%Rec	2	11/5/2016 3:14:19 AM	28375
<b>EPA METHOD 8310: PAHS</b>								Analyst: <b>SCC</b>
Naphthalene	ND	1.7	12	D	mg/Kg	5	11/7/2016 3:30:10 PM	28398
1-Methylnaphthalene	ND	1.8	12	D	mg/Kg	5	11/7/2016 3:30:10 PM	28398
2-Methylnaphthalene	ND	1.7	12	D	mg/Kg	5	11/7/2016 3:30:10 PM	28398
Acenaphthylene	ND	1.6	12	D	mg/Kg	5	11/7/2016 3:30:10 PM	28398
Acenaphthene	ND	1.5	12	D	mg/Kg	5	11/7/2016 3:30:10 PM	28398
Fluorene	ND	0.16	1.5	D	mg/Kg	5	11/7/2016 3:30:10 PM	28398
Phenanthrene	0.22	0.078	0.74	JD	mg/Kg	5	11/7/2016 3:30:10 PM	28398
Anthracene	ND	0.12	0.74	D	mg/Kg	5	11/7/2016 3:30:10 PM	28398
Fluoranthene	0.20	0.16	0.98	JD	mg/Kg	5	11/7/2016 3:30:10 PM	28398
Pyrene	0.22	0.17	1.2	JD	mg/Kg	5	11/7/2016 3:30:10 PM	28398
Benz(a)anthracene	0.098	0.025	0.49	JD	mg/Kg	5	11/7/2016 3:30:10 PM	28398
Chrysene	0.11	0.069	0.49	JD	mg/Kg	5	11/7/2016 3:30:10 PM	28398
Benzo(b)fluoranthene	0.098	0.035	0.49	JD	mg/Kg	5	11/7/2016 3:30:10 PM	28398
Benzo(k)fluoranthene	0.061	0.020	0.49	JD	mg/Kg	5	11/7/2016 3:30:10 PM	28398
Benzo(a)pyrene	0.098	0.020	0.49	JD	mg/Kg	5	11/7/2016 3:30:10 PM	28398
Dibenz(a,h)anthracene	ND	0.025	0.49	D	mg/Kg	5	11/7/2016 3:30:10 PM	28398
Benzo(g,h,i)perylene	0.11	0.029	0.49	JD	mg/Kg	5	11/7/2016 3:30:10 PM	28398
Indeno(1,2,3-cd)pyrene	0.34	0.039	0.49	JD	mg/Kg	5	11/7/2016 3:30:10 PM	28398
Surr: Benzo(e)pyrene	0	0	27.4-110	SD	%Rec	5	11/7/2016 3:30:10 PM	28398
<b>EPA METHOD 6010B: SOIL METALS</b>								Analyst: <b>MED</b>
Antimony	ND	1.0	2.5		mg/Kg	1	11/2/2016 11:46:56 AM	28364
Arsenic	1.9	0.88	2.5	J	mg/Kg	1	11/2/2016 11:46:56 AM	28364
Chromium	4.4	0.094	0.30		mg/Kg	1	11/2/2016 11:46:56 AM	28364
Iron	11000	75	250		mg/Kg	100	11/2/2016 10:56:27 AM	28364
Lead	21	0.17	0.25		mg/Kg	1	11/2/2016 11:46:56 AM	28364
Manganese	190	0.053	0.099		mg/Kg	1	11/2/2016 11:46:56 AM	28364
Thallium	ND	0.77	2.5		mg/Kg	1	11/2/2016 11:46:56 AM	28364
<b>EPA METHOD 8260B: VOLATILES</b>								Analyst: <b>DJF</b>
Benzene	ND	0.015	0.018		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Toluene	0.0071	0.0022	0.037	J	mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Ethylbenzene	ND	0.0030	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Methyl tert-butyl ether (MTBE)	ND	0.012	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
1,2,4-Trimethylbenzene	0.0099	0.0027	0.037	J	mg/Kg	1	11/1/2016 6:55:35 AM	T38351
1,3,5-Trimethylbenzene	ND	0.0027	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-23 (0-5)

Project: COA Railyards

Collection Date: 10/27/2016 8:58:00 AM

Lab ID: 1610E23-023

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0096	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
1,2-Dibromoethane (EDB)	ND	0.0026	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Naphthalene	0.020	0.0058	0.074	J	mg/Kg	1	11/1/2016 6:55:35 AM	T38351
1-Methylnaphthalene	0.013	0.0082	0.15	J	mg/Kg	1	11/1/2016 6:55:35 AM	T38351
2-Methylnaphthalene	0.024	0.0079	0.15	J	mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Acetone	0.13	0.048	0.55	J	mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Bromobenzene	ND	0.0030	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Bromodichloromethane	ND	0.0022	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Bromoform	ND	0.0045	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Bromomethane	ND	0.014	0.11		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
2-Butanone	ND	0.021	0.37		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Carbon disulfide	ND	0.012	0.37		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Carbon tetrachloride	ND	0.0024	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Chlorobenzene	ND	0.0030	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Chloroethane	ND	0.0074	0.074		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Chloroform	0.032	0.0028	0.037	J	mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Chloromethane	ND	0.0033	0.11		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
2-Chlorotoluene	ND	0.0027	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
4-Chlorotoluene	ND	0.0033	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
cis-1,2-DCE	ND	0.0021	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
cis-1,3-Dichloropropene	ND	0.0034	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
1,2-Dibromo-3-chloropropane	ND	0.011	0.074		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Dibromochloromethane	ND	0.0033	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Dibromomethane	ND	0.0032	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
1,2-Dichlorobenzene	ND	0.0032	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
1,3-Dichlorobenzene	ND	0.0030	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
1,4-Dichlorobenzene	ND	0.0046	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Dichlorodifluoromethane	ND	0.011	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
1,1-Dichloroethane	ND	0.0020	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
1,1-Dichloroethene	ND	0.012	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
1,2-Dichloropropane	ND	0.0031	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
1,3-Dichloropropane	ND	0.0042	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
2,2-Dichloropropane	ND	0.0021	0.074		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
1,1-Dichloropropene	ND	0.0029	0.074		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Hexachlorobutadiene	ND	0.0045	0.074		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
2-Hexanone	ND	0.020	0.37		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Isopropylbenzene	ND	0.0032	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
4-Isopropyltoluene	ND	0.0033	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
4-Methyl-2-pentanone	0.021	0.011	0.37	J	mg/Kg	1	11/1/2016 6:55:35 AM	T38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-23 (0-5)

Project: COA Railyards

Collection Date: 10/27/2016 8:58:00 AM

Lab ID: 1610E23-023

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.023	0.011	0.11	J	mg/Kg	1	11/1/2016 6:55:35 AM	T38351
n-Butylbenzene	ND	0.0033	0.11		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
n-Propylbenzene	ND	0.0028	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
sec-Butylbenzene	ND	0.0051	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Styrene	ND	0.0033	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
tert-Butylbenzene	ND	0.0031	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
1,1,1,2-Tetrachloroethane	ND	0.0035	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
1,1,2,2-Tetrachloroethane	ND	0.0060	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Tetrachloroethene (PCE)	ND	0.0031	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
trans-1,2-DCE	ND	0.010	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
trans-1,3-Dichloropropene	ND	0.0054	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
1,2,3-Trichlorobenzene	ND	0.0055	0.074		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
1,2,4-Trichlorobenzene	ND	0.0040	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
1,1,1-Trichloroethane	ND	0.0023	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
1,1,2-Trichloroethane	ND	0.0044	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Trichloroethene (TCE)	ND	0.0040	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Trichlorofluoromethane	ND	0.0028	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
1,2,3-Trichloropropane	ND	0.0064	0.074		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Vinyl chloride	ND	0.0030	0.037		mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Xylenes, Total	0.016	0.0070	0.074	J	mg/Kg	1	11/1/2016 6:55:35 AM	T38351
Surr: Dibromofluoromethane	98.4		70-130		%Rec	1	11/1/2016 6:55:35 AM	T38351
Surr: 1,2-Dichloroethane-d4	93.0		70-130		%Rec	1	11/1/2016 6:55:35 AM	T38351
Surr: Toluene-d8	94.6		70-130		%Rec	1	11/1/2016 6:55:35 AM	T38351
Surr: 4-Bromofluorobenzene	97.2		70-130		%Rec	1	11/1/2016 6:55:35 AM	T38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	1.1	0.56	3.7	J	mg/Kg	1	11/1/2016 6:55:35 AM	GT3835
Surr: BFB	101	0	70-130		%Rec	1	11/1/2016 6:55:35 AM	GT3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Intera, Inc.**Client Sample ID:** SB-24 (0-5)**Project:** COA Railyards**Collection Date:** 10/27/2016 9:20:00 AM**Lab ID:** 1610E23-024**Matrix:** MEOH (SOIL) **Received Date:** 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>	
Diesel Range Organics (DRO)	29	1.8	10		mg/Kg	1	11/3/2016 1:52:18 AM	28375
Motor Oil Range Organics (MRO)	70	50	50		mg/Kg	1	11/3/2016 1:52:18 AM	28375
Surr: DNOP	102	0	70-130		%Rec	1	11/3/2016 1:52:18 AM	28375
<b>EPA METHOD 8310: PAHS</b>							Analyst: <b>SCC</b>	
Naphthalene	ND	0.35	2.5	D	mg/Kg	1	11/7/2016 6:42:54 AM	28417
1-Methylnaphthalene	ND	0.37	2.5	D	mg/Kg	1	11/7/2016 6:42:54 AM	28417
2-Methylnaphthalene	ND	0.35	2.5	D	mg/Kg	1	11/7/2016 6:42:54 AM	28417
Acenaphthylene	ND	0.33	2.5	D	mg/Kg	1	11/7/2016 6:42:54 AM	28417
Acenaphthene	ND	0.30	2.5	D	mg/Kg	1	11/7/2016 6:42:54 AM	28417
Fluorene	ND	0.033	0.30	D	mg/Kg	1	11/7/2016 6:42:54 AM	28417
Phenanthrene	0.11	0.016	0.15	JD	mg/Kg	1	11/7/2016 6:42:54 AM	28417
Anthracene	ND	0.024	0.15	D	mg/Kg	1	11/7/2016 6:42:54 AM	28417
Fluoranthene	0.070	0.033	0.20	JD	mg/Kg	1	11/7/2016 6:42:54 AM	28417
Pyrene	0.080	0.034	0.25	JD	mg/Kg	1	11/7/2016 6:42:54 AM	28417
Benz(a)anthracene	0.027	0.0050	0.10	JD	mg/Kg	1	11/7/2016 6:42:54 AM	28417
Chrysene	0.032	0.014	0.10	JD	mg/Kg	1	11/7/2016 6:42:54 AM	28417
Benzo(b)fluoranthene	0.020	0.0070	0.10	JD	mg/Kg	1	11/7/2016 6:42:54 AM	28417
Benzo(k)fluoranthene	0.022	0.0040	0.10	JD	mg/Kg	1	11/7/2016 6:42:54 AM	28417
Benzo(a)pyrene	0.040	0.0040	0.10	JD	mg/Kg	1	11/7/2016 6:42:54 AM	28417
Dibenz(a,h)anthracene	ND	0.0050	0.10	D	mg/Kg	1	11/7/2016 6:42:54 AM	28417
Benzo(g,h,i)perylene	0.027	0.0060	0.10	JD	mg/Kg	1	11/7/2016 6:42:54 AM	28417
Indeno(1,2,3-cd)pyrene	0.29	0.0080	0.10	D	mg/Kg	1	11/7/2016 6:42:54 AM	28417
Surr: Benzo(e)pyrene	0	0	27.4-110	SD	%Rec	1	11/7/2016 6:42:54 AM	28417
<b>EPA METHOD 6010B: SOIL METALS</b>							Analyst: <b>MED</b>	
Antimony	ND	1.0	2.5		mg/Kg	1	11/2/2016 11:50:19 AM	28364
Arsenic	2.9	0.88	2.5		mg/Kg	1	11/2/2016 11:50:19 AM	28364
Chromium	4.1	0.094	0.30		mg/Kg	1	11/2/2016 11:50:19 AM	28364
Iron	14000	75	250		mg/Kg	100	11/2/2016 10:57:58 AM	28364
Lead	28	0.17	0.25		mg/Kg	1	11/2/2016 11:50:19 AM	28364
Manganese	230	0.053	0.099		mg/Kg	1	11/2/2016 11:50:19 AM	28364
Thallium	ND	0.77	2.5		mg/Kg	1	11/2/2016 11:50:19 AM	28364
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>	
Benzene	ND	0.011	0.013		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Toluene	ND	0.0016	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Ethylbenzene	ND	0.0022	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Methyl tert-butyl ether (MTBE)	ND	0.0083	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
1,2,4-Trimethylbenzene	ND	0.0019	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
1,3,5-Trimethylbenzene	ND	0.0019	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.****CLIENT:** Intera, Inc.**Client Sample ID:** SB-24 (0-5)**Project:** COA Railyards**Collection Date:** 10/27/2016 9:20:00 AM**Lab ID:** 1610E23-024**Matrix:** MEOH (SOIL) **Received Date:** 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0069	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
1,2-Dibromoethane (EDB)	ND	0.0019	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Naphthalene	ND	0.0041	0.053		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
1-Methylnaphthalene	ND	0.0059	0.11		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
2-Methylnaphthalene	ND	0.0057	0.11		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Acetone	ND	0.034	0.40		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Bromobenzene	ND	0.0021	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Bromodichloromethane	ND	0.0015	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Bromoform	ND	0.0032	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Bromomethane	ND	0.0097	0.079		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
2-Butanone	ND	0.015	0.26		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Carbon disulfide	ND	0.0087	0.26		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Carbon tetrachloride	ND	0.0017	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Chlorobenzene	ND	0.0021	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Chloroethane	ND	0.0053	0.053		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Chloroform	ND	0.0020	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Chloromethane	ND	0.0023	0.079		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
2-Chlorotoluene	ND	0.0019	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
4-Chlorotoluene	ND	0.0023	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
cis-1,2-DCE	ND	0.0015	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
cis-1,3-Dichloropropene	ND	0.0024	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
1,2-Dibromo-3-chloropropane	ND	0.0081	0.053		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Dibromochloromethane	ND	0.0024	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Dibromomethane	ND	0.0023	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
1,2-Dichlorobenzene	ND	0.0023	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
1,3-Dichlorobenzene	ND	0.0022	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
1,4-Dichlorobenzene	ND	0.0033	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Dichlorodifluoromethane	ND	0.0082	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
1,1-Dichloroethane	ND	0.0014	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
1,1-Dichloroethene	ND	0.0086	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
1,2-Dichloropropane	ND	0.0022	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
1,3-Dichloropropane	ND	0.0030	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
2,2-Dichloropropane	ND	0.0015	0.053		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
1,1-Dichloropropene	ND	0.0021	0.053		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Hexachlorobutadiene	ND	0.0032	0.053		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
2-Hexanone	ND	0.014	0.26		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Isopropylbenzene	ND	0.0023	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
4-Isopropyltoluene	ND	0.0024	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
4-Methyl-2-pentanone	ND	0.0077	0.26		mg/Kg	1	11/1/2016 7:24:14 AM	T38351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-24 (0-5)

Project: COA Railyards

Collection Date: 10/27/2016 9:20:00 AM

Lab ID: 1610E23-024

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.017	0.0076	0.079	J	mg/Kg	1	11/1/2016 7:24:14 AM	T38351
n-Butylbenzene	ND	0.0023	0.079		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
n-Propylbenzene	ND	0.0020	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
sec-Butylbenzene	ND	0.0037	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Styrene	ND	0.0024	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
tert-Butylbenzene	ND	0.0022	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
1,1,1,2-Tetrachloroethane	ND	0.0025	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
1,1,2,2-Tetrachloroethane	ND	0.0043	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Tetrachloroethene (PCE)	ND	0.0022	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
trans-1,2-DCE	ND	0.0074	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
trans-1,3-Dichloropropene	ND	0.0039	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
1,2,3-Trichlorobenzene	ND	0.0039	0.053		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
1,2,4-Trichlorobenzene	ND	0.0028	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
1,1,1-Trichloroethane	ND	0.0016	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
1,1,2-Trichloroethane	ND	0.0031	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Trichloroethene (TCE)	ND	0.0028	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Trichlorofluoromethane	ND	0.0020	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
1,2,3-Trichloropropane	ND	0.0046	0.053		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Vinyl chloride	ND	0.0022	0.026		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Xylenes, Total	ND	0.0050	0.053		mg/Kg	1	11/1/2016 7:24:14 AM	T38351
Surr: Dibromofluoromethane	93.6		70-130		%Rec	1	11/1/2016 7:24:14 AM	T38351
Surr: 1,2-Dichloroethane-d4	85.3		70-130		%Rec	1	11/1/2016 7:24:14 AM	T38351
Surr: Toluene-d8	95.4		70-130		%Rec	1	11/1/2016 7:24:14 AM	T38351
Surr: 4-Bromofluorobenzene	94.1		70-130		%Rec	1	11/1/2016 7:24:14 AM	T38351
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.40	2.6		mg/Kg	1	11/1/2016 7:24:14 AM	GT3835
Surr: BFB	99.4	0	70-130		%Rec	1	11/1/2016 7:24:14 AM	GT3835

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-25 (0-3)

Project: COA Railyards

Collection Date: 10/27/2016 9:45:00 AM

Lab ID: 1610E23-025

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: TOM	
Diesel Range Organics (DRO)	150	3.5	19		mg/Kg	2	11/5/2016 4:18:32 AM	28375
Motor Oil Range Organics (MRO)	300	94	94		mg/Kg	2	11/5/2016 4:18:32 AM	28375
Surr: DNOP	105	0	70-130		%Rec	2	11/5/2016 4:18:32 AM	28375
<b>EPA METHOD 8310: PAHS</b>							Analyst: SCC	
Naphthalene	ND	6.9	49	D	mg/Kg	20	11/7/2016 7:12:05 AM	28417
1-Methylnaphthalene	ND	7.3	49	D	mg/Kg	20	11/7/2016 7:12:05 AM	28417
2-Methylnaphthalene	ND	6.9	49	D	mg/Kg	20	11/7/2016 7:12:05 AM	28417
Acenaphthylene	ND	6.6	49	D	mg/Kg	20	11/7/2016 7:12:05 AM	28417
Acenaphthene	ND	6.1	49	D	mg/Kg	20	11/7/2016 7:12:05 AM	28417
Fluorene	ND	0.65	5.9	D	mg/Kg	20	11/7/2016 7:12:05 AM	28417
Phenanthrene	3.0	0.32	3.0	D	mg/Kg	20	11/7/2016 7:12:05 AM	28417
Anthracene	ND	0.47	3.0	D	mg/Kg	20	11/7/2016 7:12:05 AM	28417
Fluoranthene	3.5	0.65	4.0	JD	mg/Kg	20	11/7/2016 7:12:05 AM	28417
Pyrene	4.0	0.67	4.9	JD	mg/Kg	20	11/7/2016 7:12:05 AM	28417
Benz(a)anthracene	0.89	0.099	2.0	JD	mg/Kg	20	11/7/2016 7:12:05 AM	28417
Chrysene	0.74	0.28	2.0	JD	mg/Kg	20	11/7/2016 7:12:05 AM	28417
Benzo(b)fluoranthene	0.69	0.14	2.0	JD	mg/Kg	20	11/7/2016 7:12:05 AM	28417
Benzo(k)fluoranthene	0.49	0.079	2.0	JD	mg/Kg	20	11/7/2016 7:12:05 AM	28417
Benzo(a)pyrene	0.54	0.079	2.0	JD	mg/Kg	20	11/7/2016 7:12:05 AM	28417
Dibenz(a,h)anthracene	ND	0.099	2.0	D	mg/Kg	20	11/7/2016 7:12:05 AM	28417
Benzo(g,h,i)perylene	0.59	0.12	2.0	JD	mg/Kg	20	11/7/2016 7:12:05 AM	28417
Indeno(1,2,3-cd)pyrene	1.3	0.16	2.0	JD	mg/Kg	20	11/7/2016 7:12:05 AM	28417
Surr: Benzo(e)pyrene	0	0	27.4-110	SD	%Rec	20	11/7/2016 7:12:05 AM	28417
<b>EPA METHOD 6010B: SOIL METALS</b>							Analyst: MED	
Antimony	240	50	120		mg/Kg	50	11/2/2016 1:44:06 PM	28364
Arsenic	18	0.88	2.5		mg/Kg	1	11/2/2016 11:53:38 AM	28364
Chromium	4.5	0.093	0.30		mg/Kg	1	11/2/2016 11:53:38 AM	28364
Iron	15000	75	250		mg/Kg	100	11/2/2016 10:59:32 AM	28364
Lead	3900	17	25		mg/Kg	100	11/2/2016 10:59:32 AM	28364
Manganese	130	0.053	0.099		mg/Kg	1	11/2/2016 11:53:38 AM	28364
Thallium	ND	0.76	2.5		mg/Kg	1	11/2/2016 11:53:38 AM	28364
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Benzene	ND	0.016	0.020		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Toluene	ND	0.0023	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Ethylbenzene	ND	0.0032	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Methyl tert-butyl ether (MTBE)	ND	0.012	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
1,2,4-Trimethylbenzene	ND	0.0029	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
1,3,5-Trimethylbenzene	ND	0.0028	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-25 (0-3)

Project: COA Railyards

Collection Date: 10/27/2016 9:45:00 AM

Lab ID: 1610E23-025

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.010	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
1,2-Dibromoethane (EDB)	ND	0.0028	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Naphthalene	0.059	0.0061	0.078	J	mg/Kg	1	11/1/2016 12:46:15 PM	S38379
1-Methylnaphthalene	0.093	0.0087	0.16	J	mg/Kg	1	11/1/2016 12:46:15 PM	S38379
2-Methylnaphthalene	0.14	0.0084	0.16	J	mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Acetone	0.091	0.050	0.59	J	mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Bromobenzene	ND	0.0031	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Bromodichloromethane	ND	0.0023	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Bromoform	ND	0.0048	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Bromomethane	ND	0.014	0.12		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
2-Butanone	0.038	0.022	0.39	J	mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Carbon disulfide	ND	0.013	0.39		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Carbon tetrachloride	ND	0.0026	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Chlorobenzene	ND	0.0032	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Chloroethane	ND	0.0078	0.078		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Chloroform	0.014	0.0029	0.039	J	mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Chloromethane	ND	0.0035	0.12		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
2-Chlorotoluene	ND	0.0029	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
4-Chlorotoluene	ND	0.0035	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
cis-1,2-DCE	ND	0.0023	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
cis-1,3-Dichloropropene	ND	0.0036	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
1,2-Dibromo-3-chloropropane	ND	0.012	0.078		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Dibromochloromethane	ND	0.0035	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Dibromomethane	ND	0.0034	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
1,2-Dichlorobenzene	ND	0.0034	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
1,3-Dichlorobenzene	ND	0.0032	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
1,4-Dichlorobenzene	ND	0.0048	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Dichlorodifluoromethane	ND	0.012	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
1,1-Dichloroethane	ND	0.0021	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
1,1-Dichloroethene	ND	0.013	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
1,2-Dichloropropane	ND	0.0033	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
1,3-Dichloropropane	ND	0.0044	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
2,2-Dichloropropane	ND	0.0022	0.078		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
1,1-Dichloropropene	ND	0.0031	0.078		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Hexachlorobutadiene	ND	0.0048	0.078		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
2-Hexanone	ND	0.021	0.39		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Isopropylbenzene	ND	0.0034	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
4-Isopropyltoluene	ND	0.0035	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
4-Methyl-2-pentanone	0.029	0.011	0.39	J	mg/Kg	1	11/1/2016 12:46:15 PM	S38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-25 (0-3)

Project: COA Railyards

Collection Date: 10/27/2016 9:45:00 AM

Lab ID: 1610E23-025

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.013	0.011	0.12	J	mg/Kg	1	11/1/2016 12:46:15 PM	S38379
n-Butylbenzene	ND	0.0035	0.12		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
n-Propylbenzene	ND	0.0030	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
sec-Butylbenzene	ND	0.0054	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Styrene	ND	0.0035	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
tert-Butylbenzene	ND	0.0032	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
1,1,1,2-Tetrachloroethane	ND	0.0037	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
1,1,2,2-Tetrachloroethane	ND	0.0063	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Tetrachloroethene (PCE)	ND	0.0032	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
trans-1,2-DCE	ND	0.011	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
trans-1,3-Dichloropropene	ND	0.0057	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
1,2,3-Trichlorobenzene	ND	0.0058	0.078		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
1,2,4-Trichlorobenzene	ND	0.0042	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
1,1,1-Trichloroethane	ND	0.0024	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
1,1,2-Trichloroethane	ND	0.0046	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Trichloroethene (TCE)	ND	0.0042	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Trichlorofluoromethane	ND	0.0029	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
1,2,3-Trichloropropane	ND	0.0067	0.078		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Vinyl chloride	ND	0.0032	0.039		mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Xylenes, Total	0.0098	0.0074	0.078	J	mg/Kg	1	11/1/2016 12:46:15 PM	S38379
Surr: Dibromofluoromethane	101		70-130		%Rec	1	11/1/2016 12:46:15 PM	S38379
Surr: 1,2-Dichloroethane-d4	100		70-130		%Rec	1	11/1/2016 12:46:15 PM	S38379
Surr: Toluene-d8	94.5		70-130		%Rec	1	11/1/2016 12:46:15 PM	S38379
Surr: 4-Bromofluorobenzene	93.7		70-130		%Rec	1	11/1/2016 12:46:15 PM	S38379
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.59	3.9		mg/Kg	1	11/1/2016 12:46:15 PM	G38379
Surr: BFB	100	0	70-130		%Rec	1	11/1/2016 12:46:15 PM	G38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-26 (10-15)

Project: COA Railyards

Collection Date: 10/27/2016 10:02:00 AM

Lab ID: 1610E23-026

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: TOM	
Diesel Range Organics (DRO)	ND	1.8	9.9		mg/Kg	1	11/2/2016 4:26:00 AM	28375
Motor Oil Range Organics (MRO)	ND	49	49		mg/Kg	1	11/2/2016 4:26:00 AM	28375
Surr: DNOP	98.8	0	70-130		%Rec	1	11/2/2016 4:26:00 AM	28375
<b>EPA METHOD 8310: PAHS</b>							Analyst: SCC	
Naphthalene	ND	0.035	0.25		mg/Kg	1	11/7/2016 7:41:21 AM	28417
1-Methylnaphthalene	ND	0.037	0.25		mg/Kg	1	11/7/2016 7:41:21 AM	28417
2-Methylnaphthalene	ND	0.035	0.25		mg/Kg	1	11/7/2016 7:41:21 AM	28417
Acenaphthylene	ND	0.033	0.25		mg/Kg	1	11/7/2016 7:41:21 AM	28417
Acenaphthene	ND	0.031	0.25		mg/Kg	1	11/7/2016 7:41:21 AM	28417
Fluorene	ND	0.0033	0.030		mg/Kg	1	11/7/2016 7:41:21 AM	28417
Phenanthrene	ND	0.0016	0.015		mg/Kg	1	11/7/2016 7:41:21 AM	28417
Anthracene	ND	0.0024	0.015		mg/Kg	1	11/7/2016 7:41:21 AM	28417
Fluoranthene	ND	0.0033	0.020		mg/Kg	1	11/7/2016 7:41:21 AM	28417
Pyrene	ND	0.0034	0.025		mg/Kg	1	11/7/2016 7:41:21 AM	28417
Benz(a)anthracene	ND	0.00050	0.010		mg/Kg	1	11/7/2016 7:41:21 AM	28417
Chrysene	ND	0.0014	0.010		mg/Kg	1	11/7/2016 7:41:21 AM	28417
Benzo(b)fluoranthene	ND	0.00071	0.010		mg/Kg	1	11/7/2016 7:41:21 AM	28417
Benzo(k)fluoranthene	ND	0.00040	0.010		mg/Kg	1	11/7/2016 7:41:21 AM	28417
Benzo(a)pyrene	ND	0.00040	0.010		mg/Kg	1	11/7/2016 7:41:21 AM	28417
Dibenz(a,h)anthracene	ND	0.00050	0.010		mg/Kg	1	11/7/2016 7:41:21 AM	28417
Benzo(g,h,i)perylene	ND	0.00060	0.010		mg/Kg	1	11/7/2016 7:41:21 AM	28417
Indeno(1,2,3-cd)pyrene	ND	0.00080	0.010		mg/Kg	1	11/7/2016 7:41:21 AM	28417
Surr: Benzo(e)pyrene	60.6	0	27.4-110		%Rec	1	11/7/2016 7:41:21 AM	28417
<b>EPA METHOD 6010B: SOIL METALS</b>							Analyst: MED	
Antimony	ND	0.98	2.4		mg/Kg	1	11/2/2016 12:04:59 PM	28364
Arsenic	ND	0.86	2.4		mg/Kg	1	11/2/2016 12:04:59 PM	28364
Chromium	3.0	0.092	0.29		mg/Kg	1	11/2/2016 12:04:59 PM	28364
Iron	3900	73	240		mg/Kg	100	11/2/2016 11:01:04 AM	28364
Lead	1.6	0.17	0.24		mg/Kg	1	11/2/2016 12:04:59 PM	28364
Manganese	20	0.052	0.097		mg/Kg	1	11/2/2016 12:04:59 PM	28364
Thallium	ND	0.75	2.4		mg/Kg	1	11/2/2016 12:04:59 PM	28364
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Benzene	ND	0.011	0.014		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Toluene	ND	0.0017	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Ethylbenzene	ND	0.0023	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Methyl tert-butyl ether (MTBE)	ND	0.0090	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
1,2,4-Trimethylbenzene	ND	0.0021	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
1,3,5-Trimethylbenzene	ND	0.0021	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-26 (10-15)

Project: COA Railyards

Collection Date: 10/27/2016 10:02:00 AM

Lab ID: 1610E23-026

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0074	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
1,2-Dibromoethane (EDB)	ND	0.0020	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Naphthalene	ND	0.0045	0.057		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
1-Methylnaphthalene	ND	0.0063	0.11		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
2-Methylnaphthalene	ND	0.0061	0.11		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Acetone	0.043	0.037	0.43	J	mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Bromobenzene	ND	0.0023	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Bromodichloromethane	ND	0.0017	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Bromoform	ND	0.0035	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Bromomethane	ND	0.011	0.086		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
2-Butanone	ND	0.016	0.29		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Carbon disulfide	ND	0.0094	0.29		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Carbon tetrachloride	ND	0.0019	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Chlorobenzene	ND	0.0023	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Chloroethane	ND	0.0057	0.057		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Chloroform	ND	0.0022	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Chloromethane	ND	0.0025	0.086		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
2-Chlorotoluene	ND	0.0021	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
4-Chlorotoluene	ND	0.0025	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
cis-1,2-DCE	ND	0.0017	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
cis-1,3-Dichloropropene	ND	0.0026	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
1,2-Dibromo-3-chloropropane	ND	0.0087	0.057		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Dibromochloromethane	ND	0.0026	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Dibromomethane	ND	0.0025	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
1,2-Dichlorobenzene	ND	0.0025	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
1,3-Dichlorobenzene	ND	0.0023	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
1,4-Dichlorobenzene	ND	0.0035	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Dichlorodifluoromethane	ND	0.0088	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
1,1-Dichloroethane	ND	0.0015	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
1,1-Dichloroethene	ND	0.0093	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
1,2-Dichloropropane	ND	0.0024	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
1,3-Dichloropropane	ND	0.0032	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
2,2-Dichloropropane	ND	0.0016	0.057		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
1,1-Dichloropropene	ND	0.0023	0.057		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Hexachlorobutadiene	ND	0.0035	0.057		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
2-Hexanone	ND	0.016	0.29		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Isopropylbenzene	ND	0.0025	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
4-Isopropyltoluene	ND	0.0026	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
4-Methyl-2-pentanone	ND	0.0083	0.29		mg/Kg	1	11/1/2016 1:15:01 PM	S38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-26 (10-15)

Project: COA Railyards

Collection Date: 10/27/2016 10:02:00 AM

Lab ID: 1610E23-026

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.013	0.0082	0.086	J	mg/Kg	1	11/1/2016 1:15:01 PM	S38379
n-Butylbenzene	ND	0.0025	0.086		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
n-Propylbenzene	ND	0.0022	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
sec-Butylbenzene	ND	0.0040	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Styrene	ND	0.0025	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
tert-Butylbenzene	ND	0.0024	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
1,1,1,2-Tetrachloroethane	ND	0.0027	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
1,1,2,2-Tetrachloroethane	ND	0.0046	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Tetrachloroethene (PCE)	ND	0.0024	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
trans-1,2-DCE	ND	0.0080	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
trans-1,3-Dichloropropene	ND	0.0042	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
1,2,3-Trichlorobenzene	ND	0.0043	0.057		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
1,2,4-Trichlorobenzene	ND	0.0031	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
1,1,1-Trichloroethane	ND	0.0017	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
1,1,2-Trichloroethane	ND	0.0034	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Trichloroethene (TCE)	ND	0.0031	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Trichlorofluoromethane	ND	0.0021	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
1,2,3-Trichloropropane	ND	0.0049	0.057		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Vinyl chloride	ND	0.0023	0.029		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Xylenes, Total	ND	0.0054	0.057		mg/Kg	1	11/1/2016 1:15:01 PM	S38379
Surr: Dibromofluoromethane	98.7		70-130		%Rec	1	11/1/2016 1:15:01 PM	S38379
Surr: 1,2-Dichloroethane-d4	90.1		70-130		%Rec	1	11/1/2016 1:15:01 PM	S38379
Surr: Toluene-d8	94.8		70-130		%Rec	1	11/1/2016 1:15:01 PM	S38379
Surr: 4-Bromofluorobenzene	91.8		70-130		%Rec	1	11/1/2016 1:15:01 PM	S38379
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.43	2.9		mg/Kg	1	11/1/2016 1:15:01 PM	G38379
Surr: BFB	99.6	0	70-130		%Rec	1	11/1/2016 1:15:01 PM	G38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-27 (0-5)

Project: COA Railyards

Collection Date: 10/27/2016 10:38:00 AM

Lab ID: 1610E23-027

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: TOM	
Diesel Range Organics (DRO)	ND	1.8	9.6		mg/Kg	1	11/2/2016 4:47:10 AM	28375
Motor Oil Range Organics (MRO)	ND	48	48		mg/Kg	1	11/2/2016 4:47:10 AM	28375
Surr: DNOP	100	0	70-130		%Rec	1	11/2/2016 4:47:10 AM	28375
<b>EPA METHOD 8310: PAHS</b>							Analyst: SCC	
Naphthalene	ND	0.034	0.25		mg/Kg	1	11/7/2016 8:10:31 AM	28417
1-Methylnaphthalene	ND	0.037	0.25		mg/Kg	1	11/7/2016 8:10:31 AM	28417
2-Methylnaphthalene	ND	0.035	0.25		mg/Kg	1	11/7/2016 8:10:31 AM	28417
Acenaphthylene	ND	0.033	0.25		mg/Kg	1	11/7/2016 8:10:31 AM	28417
Acenaphthene	ND	0.030	0.25		mg/Kg	1	11/7/2016 8:10:31 AM	28417
Fluorene	ND	0.0033	0.030		mg/Kg	1	11/7/2016 8:10:31 AM	28417
Phenanthrene	ND	0.0016	0.015		mg/Kg	1	11/7/2016 8:10:31 AM	28417
Anthracene	ND	0.0024	0.015		mg/Kg	1	11/7/2016 8:10:31 AM	28417
Fluoranthene	ND	0.0033	0.020		mg/Kg	1	11/7/2016 8:10:31 AM	28417
Pyrene	ND	0.0034	0.025		mg/Kg	1	11/7/2016 8:10:31 AM	28417
Benz(a)anthracene	ND	0.00050	0.0099		mg/Kg	1	11/7/2016 8:10:31 AM	28417
Chrysene	ND	0.0014	0.0099		mg/Kg	1	11/7/2016 8:10:31 AM	28417
Benzo(b)fluoranthene	ND	0.00070	0.0099		mg/Kg	1	11/7/2016 8:10:31 AM	28417
Benzo(k)fluoranthene	ND	0.00040	0.0099		mg/Kg	1	11/7/2016 8:10:31 AM	28417
Benzo(a)pyrene	ND	0.00040	0.0099		mg/Kg	1	11/7/2016 8:10:31 AM	28417
Dibenz(a,h)anthracene	ND	0.00050	0.0099		mg/Kg	1	11/7/2016 8:10:31 AM	28417
Benzo(g,h,i)perylene	ND	0.00059	0.0099		mg/Kg	1	11/7/2016 8:10:31 AM	28417
Indeno(1,2,3-cd)pyrene	ND	0.00079	0.0099		mg/Kg	1	11/7/2016 8:10:31 AM	28417
Surr: Benzo(e)pyrene	57.6	0	27.4-110		%Rec	1	11/7/2016 8:10:31 AM	28417
<b>EPA METHOD 6010B: SOIL METALS</b>							Analyst: MED	
Antimony	ND	0.99	2.5		mg/Kg	1	11/2/2016 12:08:13 PM	28364
Arsenic	1.1	0.88	2.5	J	mg/Kg	1	11/2/2016 12:08:13 PM	28364
Chromium	3.6	0.093	0.30		mg/Kg	1	11/2/2016 12:08:13 PM	28364
Iron	8700	74	250		mg/Kg	100	11/2/2016 11:03:00 AM	28364
Lead	1.9	0.17	0.25		mg/Kg	1	11/2/2016 12:08:13 PM	28364
Manganese	130	0.053	0.098		mg/Kg	1	11/2/2016 12:08:13 PM	28364
Thallium	ND	0.76	2.5		mg/Kg	1	11/2/2016 12:08:13 PM	28364
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Benzene	ND	0.012	0.015		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Toluene	ND	0.0017	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Ethylbenzene	ND	0.0024	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Methyl tert-butyl ether (MTBE)	ND	0.0093	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
1,2,4-Trimethylbenzene	ND	0.0022	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
1,3,5-Trimethylbenzene	ND	0.0021	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-27 (0-5)

Project: COA Railyards

Collection Date: 10/27/2016 10:38:00 AM

Lab ID: 1610E23-027

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0077	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
1,2-Dibromoethane (EDB)	ND	0.0021	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Naphthalene	ND	0.0046	0.059		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
1-Methylnaphthalene	ND	0.0066	0.12		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
2-Methylnaphthalene	ND	0.0063	0.12		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Acetone	ND	0.038	0.44		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Bromobenzene	ND	0.0024	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Bromodichloromethane	ND	0.0017	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Bromoform	ND	0.0036	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Bromomethane	ND	0.011	0.088		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
2-Butanone	ND	0.017	0.30		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Carbon disulfide	ND	0.0097	0.30		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Carbon tetrachloride	ND	0.0019	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Chlorobenzene	ND	0.0024	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Chloroethane	ND	0.0059	0.059		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Chloroform	ND	0.0022	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Chloromethane	ND	0.0026	0.088		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
2-Chlorotoluene	ND	0.0022	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
4-Chlorotoluene	ND	0.0026	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
cis-1,2-DCE	ND	0.0017	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
cis-1,3-Dichloropropene	ND	0.0027	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
1,2-Dibromo-3-chloropropane	ND	0.0090	0.059		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Dibromochloromethane	ND	0.0027	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Dibromomethane	ND	0.0026	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
1,2-Dichlorobenzene	ND	0.0026	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
1,3-Dichlorobenzene	ND	0.0024	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
1,4-Dichlorobenzene	ND	0.0037	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Dichlorodifluoromethane	ND	0.0091	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
1,1-Dichloroethane	ND	0.0016	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
1,1-Dichloroethene	ND	0.0097	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
1,2-Dichloropropane	ND	0.0025	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
1,3-Dichloropropane	ND	0.0033	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
2,2-Dichloropropane	ND	0.0017	0.059		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
1,1-Dichloropropene	ND	0.0023	0.059		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Hexachlorobutadiene	ND	0.0036	0.059		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
2-Hexanone	ND	0.016	0.30		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Isopropylbenzene	ND	0.0025	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
4-Isopropyltoluene	ND	0.0026	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
4-Methyl-2-pentanone	ND	0.0086	0.30		mg/Kg	1	11/1/2016 2:12:22 PM	S38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-27 (0-5)

Project: COA Railyards

Collection Date: 10/27/2016 10:38:00 AM

Lab ID: 1610E23-027

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.0091	0.0085	0.088	J	mg/Kg	1	11/1/2016 2:12:22 PM	S38379
n-Butylbenzene	ND	0.0026	0.088		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
n-Propylbenzene	ND	0.0023	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
sec-Butylbenzene	ND	0.0041	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Styrene	ND	0.0026	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
tert-Butylbenzene	ND	0.0024	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
1,1,1,2-Tetrachloroethane	ND	0.0028	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
1,1,2,2-Tetrachloroethane	ND	0.0048	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Tetrachloroethene (PCE)	ND	0.0024	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
trans-1,2-DCE	ND	0.0083	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
trans-1,3-Dichloropropene	ND	0.0043	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
1,2,3-Trichlorobenzene	ND	0.0044	0.059		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
1,2,4-Trichlorobenzene	ND	0.0032	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
1,1,1-Trichloroethane	ND	0.0018	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
1,1,2-Trichloroethane	ND	0.0035	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Trichloroethene (TCE)	ND	0.0032	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Trichlorofluoromethane	ND	0.0022	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
1,2,3-Trichloropropane	ND	0.0051	0.059		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Vinyl chloride	ND	0.0024	0.030		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Xylenes, Total	ND	0.0056	0.059		mg/Kg	1	11/1/2016 2:12:22 PM	S38379
Surr: Dibromofluoromethane	99.2		70-130		%Rec	1	11/1/2016 2:12:22 PM	S38379
Surr: 1,2-Dichloroethane-d4	91.1		70-130		%Rec	1	11/1/2016 2:12:22 PM	S38379
Surr: Toluene-d8	93.7		70-130		%Rec	1	11/1/2016 2:12:22 PM	S38379
Surr: 4-Bromofluorobenzene	95.1		70-130		%Rec	1	11/1/2016 2:12:22 PM	S38379
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.44	3.0		mg/Kg	1	11/1/2016 2:12:22 PM	G38379
Surr: BFB	98.4	0	70-130		%Rec	1	11/1/2016 2:12:22 PM	G38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-28 (0-5)

Project: COA Railyards

Collection Date: 10/27/2016 10:57:00 AM

Lab ID: 1610E23-028

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								Analyst: TOM
Diesel Range Organics (DRO)	ND	1.7	9.4		mg/Kg	1	11/2/2016 5:08:48 AM	28375
Motor Oil Range Organics (MRO)	ND	47	47		mg/Kg	1	11/2/2016 5:08:48 AM	28375
Surr: DNOP	104	0	70-130		%Rec	1	11/2/2016 5:08:48 AM	28375
<b>EPA METHOD 8310: PAHS</b>								Analyst: SCC
Naphthalene	ND	0.034	0.24		mg/Kg	1	11/7/2016 8:39:44 AM	28417
1-Methylnaphthalene	ND	0.036	0.24		mg/Kg	1	11/7/2016 8:39:44 AM	28417
2-Methylnaphthalene	ND	0.034	0.24		mg/Kg	1	11/7/2016 8:39:44 AM	28417
Acenaphthylene	ND	0.032	0.24		mg/Kg	1	11/7/2016 8:39:44 AM	28417
Acenaphthene	ND	0.030	0.24		mg/Kg	1	11/7/2016 8:39:44 AM	28417
Fluorene	ND	0.0032	0.029		mg/Kg	1	11/7/2016 8:39:44 AM	28417
Phenanthrene	0.0017	0.0015	0.014	J	mg/Kg	1	11/7/2016 8:39:44 AM	28417
Anthracene	ND	0.0023	0.014		mg/Kg	1	11/7/2016 8:39:44 AM	28417
Fluoranthene	ND	0.0032	0.019		mg/Kg	1	11/7/2016 8:39:44 AM	28417
Pyrene	ND	0.0033	0.024		mg/Kg	1	11/7/2016 8:39:44 AM	28417
Benz(a)anthracene	ND	0.00048	0.0096		mg/Kg	1	11/7/2016 8:39:44 AM	28417
Chrysene	ND	0.0014	0.0096		mg/Kg	1	11/7/2016 8:39:44 AM	28417
Benzo(b)fluoranthene	ND	0.00068	0.0096		mg/Kg	1	11/7/2016 8:39:44 AM	28417
Benzo(k)fluoranthene	ND	0.00039	0.0096		mg/Kg	1	11/7/2016 8:39:44 AM	28417
Benzo(a)pyrene	ND	0.00039	0.0096		mg/Kg	1	11/7/2016 8:39:44 AM	28417
Dibenz(a,h)anthracene	ND	0.00048	0.0096		mg/Kg	1	11/7/2016 8:39:44 AM	28417
Benzo(g,h,i)perylene	ND	0.00058	0.0096		mg/Kg	1	11/7/2016 8:39:44 AM	28417
Indeno(1,2,3-cd)pyrene	ND	0.00077	0.0096		mg/Kg	1	11/7/2016 8:39:44 AM	28417
Surr: Benzo(e)pyrene	55.6	0	27.4-110		%Rec	1	11/7/2016 8:39:44 AM	28417
<b>EPA METHOD 6010B: SOIL METALS</b>								Analyst: MED
Antimony	ND	0.98	2.4		mg/Kg	1	11/2/2016 12:11:31 PM	28364
Arsenic	1.3	0.86	2.4	J	mg/Kg	1	11/2/2016 12:11:31 PM	28364
Chromium	4.1	0.092	0.29		mg/Kg	1	11/2/2016 12:11:31 PM	28364
Iron	9100	73	240		mg/Kg	100	11/2/2016 11:04:41 AM	28364
Lead	2.3	0.17	0.24		mg/Kg	1	11/2/2016 12:11:31 PM	28364
Manganese	210	0.052	0.097		mg/Kg	1	11/2/2016 12:11:31 PM	28364
Thallium	ND	0.75	2.4		mg/Kg	1	11/2/2016 12:11:31 PM	28364
<b>EPA METHOD 8260B: VOLATILES</b>								Analyst: DJF
Benzene	ND	0.010	0.013		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Toluene	ND	0.0016	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Ethylbenzene	ND	0.0021	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Methyl tert-butyl ether (MTBE)	ND	0.0082	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
1,2,4-Trimethylbenzene	ND	0.0019	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
1,3,5-Trimethylbenzene	ND	0.0019	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-28 (0-5)

Project: COA Railyards

Collection Date: 10/27/2016 10:57:00 AM

Lab ID: 1610E23-028

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0068	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
1,2-Dibromoethane (EDB)	ND	0.0019	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Naphthalene	ND	0.0041	0.052		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
1-Methylnaphthalene	ND	0.0058	0.10		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
2-Methylnaphthalene	ND	0.0056	0.10		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Acetone	ND	0.034	0.39		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Bromobenzene	ND	0.0021	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Bromodichloromethane	ND	0.0015	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Bromoform	ND	0.0032	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Bromomethane	ND	0.0096	0.079		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
2-Butanone	ND	0.015	0.26		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Carbon disulfide	ND	0.0086	0.26		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Carbon tetrachloride	ND	0.0017	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Chlorobenzene	ND	0.0021	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Chloroethane	ND	0.0052	0.052		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Chloroform	ND	0.0020	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Chloromethane	ND	0.0023	0.079		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
2-Chlorotoluene	ND	0.0019	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
4-Chlorotoluene	ND	0.0023	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
cis-1,2-DCE	ND	0.0015	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
cis-1,3-Dichloropropene	ND	0.0024	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
1,2-Dibromo-3-chloropropane	ND	0.0080	0.052		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Dibromochloromethane	ND	0.0024	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Dibromomethane	ND	0.0023	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
1,2-Dichlorobenzene	ND	0.0023	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
1,3-Dichlorobenzene	ND	0.0021	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
1,4-Dichlorobenzene	ND	0.0032	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Dichlorodifluoromethane	ND	0.0081	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
1,1-Dichloroethane	ND	0.0014	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
1,1-Dichloroethene	ND	0.0086	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
1,2-Dichloropropane	ND	0.0022	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
1,3-Dichloropropane	ND	0.0030	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
2,2-Dichloropropane	ND	0.0015	0.052		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
1,1-Dichloropropene	ND	0.0021	0.052		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Hexachlorobutadiene	ND	0.0032	0.052		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
2-Hexanone	ND	0.014	0.26		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Isopropylbenzene	ND	0.0023	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
4-Isopropyltoluene	ND	0.0024	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
4-Methyl-2-pentanone	0.013	0.0076	0.26	J	mg/Kg	1	11/1/2016 2:40:52 PM	S38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-28 (0-5)

Project: COA Railyards

Collection Date: 10/27/2016 10:57:00 AM

Lab ID: 1610E23-028

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.0081	0.0075	0.079	J	mg/Kg	1	11/1/2016 2:40:52 PM	S38379
n-Butylbenzene	ND	0.0023	0.079		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
n-Propylbenzene	ND	0.0020	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
sec-Butylbenzene	ND	0.0036	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Styrene	ND	0.0023	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
tert-Butylbenzene	ND	0.0022	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
1,1,1,2-Tetrachloroethane	ND	0.0025	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
1,1,2,2-Tetrachloroethane	ND	0.0042	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Tetrachloroethene (PCE)	ND	0.0022	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
trans-1,2-DCE	ND	0.0073	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
trans-1,3-Dichloropropene	ND	0.0038	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
1,2,3-Trichlorobenzene	ND	0.0039	0.052		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
1,2,4-Trichlorobenzene	ND	0.0028	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
1,1,1-Trichloroethane	ND	0.0016	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
1,1,2-Trichloroethane	ND	0.0031	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Trichloroethene (TCE)	ND	0.0028	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Trichlorofluoromethane	ND	0.0020	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
1,2,3-Trichloropropane	ND	0.0045	0.052		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Vinyl chloride	ND	0.0021	0.026		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Xylenes, Total	ND	0.0050	0.052		mg/Kg	1	11/1/2016 2:40:52 PM	S38379
Surr: Dibromofluoromethane	101		70-130		%Rec	1	11/1/2016 2:40:52 PM	S38379
Surr: 1,2-Dichloroethane-d4	93.7		70-130		%Rec	1	11/1/2016 2:40:52 PM	S38379
Surr: Toluene-d8	97.4		70-130		%Rec	1	11/1/2016 2:40:52 PM	S38379
Surr: 4-Bromofluorobenzene	97.7		70-130		%Rec	1	11/1/2016 2:40:52 PM	S38379
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.39	2.6		mg/Kg	1	11/1/2016 2:40:52 PM	G38379
Surr: BFB	102	0	70-130		%Rec	1	11/1/2016 2:40:52 PM	G38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-29 (0-5)

Project: COA Railyards

Collection Date: 10/27/2016 11:22:00 AM

Lab ID: 1610E23-029

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>	
Diesel Range Organics (DRO)	ND	1.7	9.3		mg/Kg	1	11/2/2016 5:30:28 AM	28375
Motor Oil Range Organics (MRO)	ND	47	47		mg/Kg	1	11/2/2016 5:30:28 AM	28375
Surr: DNOP	104	0	70-130		%Rec	1	11/2/2016 5:30:28 AM	28375
<b>EPA METHOD 8310: PAHS</b>							Analyst: <b>SCC</b>	
Naphthalene	ND	0.035	0.25		mg/Kg	1	11/7/2016 9:09:36 AM	28417
1-Methylnaphthalene	ND	0.037	0.25		mg/Kg	1	11/7/2016 9:09:36 AM	28417
2-Methylnaphthalene	ND	0.035	0.25		mg/Kg	1	11/7/2016 9:09:36 AM	28417
Acenaphthylene	ND	0.033	0.25		mg/Kg	1	11/7/2016 9:09:36 AM	28417
Acenaphthene	ND	0.030	0.25		mg/Kg	1	11/7/2016 9:09:36 AM	28417
Fluorene	ND	0.0033	0.030		mg/Kg	1	11/7/2016 9:09:36 AM	28417
Phenanthrene	ND	0.0016	0.015		mg/Kg	1	11/7/2016 9:09:36 AM	28417
Anthracene	ND	0.0024	0.015		mg/Kg	1	11/7/2016 9:09:36 AM	28417
Fluoranthene	ND	0.0033	0.020		mg/Kg	1	11/7/2016 9:09:36 AM	28417
Pyrene	ND	0.0034	0.025		mg/Kg	1	11/7/2016 9:09:36 AM	28417
Benz(a)anthracene	ND	0.00050	0.0099		mg/Kg	1	11/7/2016 9:09:36 AM	28417
Chrysene	ND	0.0014	0.0099		mg/Kg	1	11/7/2016 9:09:36 AM	28417
Benzo(b)fluoranthene	ND	0.00070	0.0099		mg/Kg	1	11/7/2016 9:09:36 AM	28417
Benzo(k)fluoranthene	ND	0.00040	0.0099		mg/Kg	1	11/7/2016 9:09:36 AM	28417
Benzo(a)pyrene	ND	0.00040	0.0099		mg/Kg	1	11/7/2016 9:09:36 AM	28417
Dibenz(a,h)anthracene	ND	0.00050	0.0099		mg/Kg	1	11/7/2016 9:09:36 AM	28417
Benzo(g,h,i)perylene	ND	0.00060	0.0099		mg/Kg	1	11/7/2016 9:09:36 AM	28417
Indeno(1,2,3-cd)pyrene	ND	0.00079	0.0099		mg/Kg	1	11/7/2016 9:09:36 AM	28417
Surr: Benzo(e)pyrene	67.0	0	27.4-110		%Rec	1	11/7/2016 9:09:36 AM	28417
<b>EPA METHOD 6010B: SOIL METALS</b>							Analyst: <b>MED</b>	
Antimony	ND	1.0	2.5		mg/Kg	1	11/2/2016 12:14:51 PM	28364
Arsenic	2.3	0.88	2.5	J	mg/Kg	1	11/2/2016 12:14:51 PM	28364
Chromium	6.0	0.094	0.30		mg/Kg	1	11/2/2016 12:14:51 PM	28364
Iron	10000	75	250		mg/Kg	100	11/2/2016 11:06:24 AM	28364
Lead	2.2	0.17	0.25		mg/Kg	1	11/2/2016 12:14:51 PM	28364
Manganese	210	0.053	0.099		mg/Kg	1	11/2/2016 12:14:51 PM	28364
Thallium	ND	0.77	2.5		mg/Kg	1	11/2/2016 12:14:51 PM	28364
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>	
Benzene	ND	0.011	0.014		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Toluene	ND	0.0016	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Ethylbenzene	ND	0.0023	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Methyl tert-butyl ether (MTBE)	ND	0.0087	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
1,2,4-Trimethylbenzene	ND	0.0020	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
1,3,5-Trimethylbenzene	ND	0.0020	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-29 (0-5)

Project: COA Railyards

Collection Date: 10/27/2016 11:22:00 AM

Lab ID: 1610E23-029

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0072	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
1,2-Dibromoethane (EDB)	ND	0.0020	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Naphthalene	ND	0.0043	0.055		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
1-Methylnaphthalene	ND	0.0061	0.11		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
2-Methylnaphthalene	ND	0.0059	0.11		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Acetone	0.048	0.036	0.41	J	mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Bromobenzene	ND	0.0022	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Bromodichloromethane	ND	0.0016	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Bromoform	ND	0.0034	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Bromomethane	ND	0.010	0.083		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
2-Butanone	ND	0.016	0.28		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Carbon disulfide	ND	0.0091	0.28		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Carbon tetrachloride	ND	0.0018	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Chlorobenzene	ND	0.0022	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Chloroethane	ND	0.0055	0.055		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Chloroform	ND	0.0021	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Chloromethane	ND	0.0025	0.083		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
2-Chlorotoluene	ND	0.0020	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
4-Chlorotoluene	ND	0.0024	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
cis-1,2-DCE	ND	0.0016	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
cis-1,3-Dichloropropene	ND	0.0025	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
1,2-Dibromo-3-chloropropane	ND	0.0084	0.055		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Dibromochloromethane	ND	0.0025	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Dibromomethane	ND	0.0024	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
1,2-Dichlorobenzene	ND	0.0024	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
1,3-Dichlorobenzene	ND	0.0023	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
1,4-Dichlorobenzene	ND	0.0034	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Dichlorodifluoromethane	ND	0.0085	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
1,1-Dichloroethane	ND	0.0015	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
1,1-Dichloroethene	ND	0.0090	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
1,2-Dichloropropane	ND	0.0023	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
1,3-Dichloropropane	ND	0.0031	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
2,2-Dichloropropane	ND	0.0016	0.055		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
1,1-Dichloropropene	ND	0.0022	0.055		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Hexachlorobutadiene	ND	0.0034	0.055		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
2-Hexanone	ND	0.015	0.28		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Isopropylbenzene	ND	0.0024	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
4-Isopropyltoluene	ND	0.0025	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
4-Methyl-2-pentanone	ND	0.0080	0.28		mg/Kg	1	11/1/2016 3:09:30 PM	S38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-29 (0-5)

Project: COA Railyards

Collection Date: 10/27/2016 11:22:00 AM

Lab ID: 1610E23-029

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.0084	0.0079	0.083	J	mg/Kg	1	11/1/2016 3:09:30 PM	S38379
n-Butylbenzene	ND	0.0024	0.083		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
n-Propylbenzene	ND	0.0021	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
sec-Butylbenzene	ND	0.0038	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Styrene	ND	0.0025	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
tert-Butylbenzene	ND	0.0023	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
1,1,1,2-Tetrachloroethane	ND	0.0026	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
1,1,2,2-Tetrachloroethane	ND	0.0045	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Tetrachloroethene (PCE)	ND	0.0023	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
trans-1,2-DCE	ND	0.0077	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
trans-1,3-Dichloropropene	ND	0.0040	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
1,2,3-Trichlorobenzene	ND	0.0041	0.055		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
1,2,4-Trichlorobenzene	ND	0.0029	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
1,1,1-Trichloroethane	ND	0.0017	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
1,1,2-Trichloroethane	ND	0.0032	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Trichloroethene (TCE)	ND	0.0030	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Trichlorofluoromethane	ND	0.0021	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
1,2,3-Trichloropropane	ND	0.0048	0.055		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Vinyl chloride	ND	0.0023	0.028		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Xylenes, Total	ND	0.0052	0.055		mg/Kg	1	11/1/2016 3:09:30 PM	S38379
Surr: Dibromofluoromethane	98.1		70-130		%Rec	1	11/1/2016 3:09:30 PM	S38379
Surr: 1,2-Dichloroethane-d4	92.4		70-130		%Rec	1	11/1/2016 3:09:30 PM	S38379
Surr: Toluene-d8	93.6		70-130		%Rec	1	11/1/2016 3:09:30 PM	S38379
Surr: 4-Bromofluorobenzene	95.2		70-130		%Rec	1	11/1/2016 3:09:30 PM	S38379
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.41	2.8		mg/Kg	1	11/1/2016 3:09:30 PM	G38379
Surr: BFB	101	0	70-130		%Rec	1	11/1/2016 3:09:30 PM	G38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-30 (0-5)

Project: COA Railyards

Collection Date: 10/27/2016 11:46:00 AM

Lab ID: 1610E23-030

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>							Analyst: <b>TOM</b>	
Diesel Range Organics (DRO)	6.2	1.8	9.7	J	mg/Kg	1	11/2/2016 5:52:19 AM	28375
Motor Oil Range Organics (MRO)	ND	49	49		mg/Kg	1	11/2/2016 5:52:19 AM	28375
Surr: DNOP	107	0	70-130		%Rec	1	11/2/2016 5:52:19 AM	28375
<b>EPA METHOD 8310: PAHS</b>							Analyst: <b>SCC</b>	
Naphthalene	0.052	0.035	0.25	J	mg/Kg	1	11/7/2016 9:38:49 AM	28417
1-Methylnaphthalene	0.087	0.037	0.25	J	mg/Kg	1	11/7/2016 9:38:49 AM	28417
2-Methylnaphthalene	0.12	0.035	0.25	J	mg/Kg	1	11/7/2016 9:38:49 AM	28417
Acenaphthylene	ND	0.033	0.25		mg/Kg	1	11/7/2016 9:38:49 AM	28417
Acenaphthene	ND	0.030	0.25		mg/Kg	1	11/7/2016 9:38:49 AM	28417
Fluorene	ND	0.0033	0.030		mg/Kg	1	11/7/2016 9:38:49 AM	28417
Phenanthrene	0.031	0.0016	0.015		mg/Kg	1	11/7/2016 9:38:49 AM	28417
Anthracene	ND	0.0024	0.015		mg/Kg	1	11/7/2016 9:38:49 AM	28417
Fluoranthene	0.0067	0.0033	0.020	J	mg/Kg	1	11/7/2016 9:38:49 AM	28417
Pyrene	0.011	0.0034	0.025	J	mg/Kg	1	11/7/2016 9:38:49 AM	28417
Benz(a)anthracene	0.0027	0.00050	0.010	J	mg/Kg	1	11/7/2016 9:38:49 AM	28417
Chrysene	0.0060	0.0014	0.010	J	mg/Kg	1	11/7/2016 9:38:49 AM	28417
Benzo(b)fluoranthene	ND	0.00070	0.010		mg/Kg	1	11/7/2016 9:38:49 AM	28417
Benzo(k)fluoranthene	0.0020	0.00040	0.010	J	mg/Kg	1	11/7/2016 9:38:49 AM	28417
Benzo(a)pyrene	0.0037	0.00040	0.010	J	mg/Kg	1	11/7/2016 9:38:49 AM	28417
Dibenz(a,h)anthracene	ND	0.00050	0.010		mg/Kg	1	11/7/2016 9:38:49 AM	28417
Benzo(g,h,i)perylene	0.0022	0.00060	0.010	J	mg/Kg	1	11/7/2016 9:38:49 AM	28417
Indeno(1,2,3-cd)pyrene	0.016	0.00080	0.010		mg/Kg	1	11/7/2016 9:38:49 AM	28417
Surr: Benzo(e)pyrene	60.4	0	27.4-110		%Rec	1	11/7/2016 9:38:49 AM	28417
<b>EPA METHOD 6010B: SOIL METALS</b>							Analyst: <b>MED</b>	
Antimony	ND	1.0	2.5		mg/Kg	1	11/2/2016 12:18:16 PM	28364
Arsenic	3.4	0.88	2.5		mg/Kg	1	11/2/2016 12:18:16 PM	28364
Chromium	7.3	0.093	0.30		mg/Kg	1	11/2/2016 12:18:16 PM	28364
Iron	12000	75	250		mg/Kg	100	11/2/2016 11:07:57 AM	28364
Lead	3.2	0.17	0.25		mg/Kg	1	11/2/2016 12:18:16 PM	28364
Manganese	300	0.11	0.20		mg/Kg	2	11/2/2016 12:19:50 PM	28364
Thallium	ND	0.76	2.5		mg/Kg	1	11/2/2016 12:18:16 PM	28364
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>	
Benzene	ND	0.015	0.019		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Toluene	ND	0.0023	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Ethylbenzene	0.0035	0.0031	0.038	J	mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Methyl tert-butyl ether (MTBE)	ND	0.012	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
1,2,4-Trimethylbenzene	ND	0.0028	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
1,3,5-Trimethylbenzene	ND	0.0028	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-30 (0-5)

Project: COA Railyards

Collection Date: 10/27/2016 11:46:00 AM

Lab ID: 1610E23-030

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.010	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
1,2-Dibromoethane (EDB)	ND	0.0027	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Naphthalene	ND	0.0060	0.076		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
1-Methylnaphthalene	ND	0.0085	0.15		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
2-Methylnaphthalene	ND	0.0082	0.15		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Acetone	0.052	0.049	0.57	J	mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Bromobenzene	ND	0.0031	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Bromodichloromethane	ND	0.0022	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Bromoform	ND	0.0046	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Bromomethane	ND	0.014	0.11		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
2-Butanone	ND	0.022	0.38		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Carbon disulfide	ND	0.013	0.38		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Carbon tetrachloride	ND	0.0025	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Chlorobenzene	ND	0.0031	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Chloroethane	ND	0.0076	0.076		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Chloroform	ND	0.0029	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Chloromethane	ND	0.0034	0.11		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
2-Chlorotoluene	ND	0.0028	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
4-Chlorotoluene	ND	0.0034	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
cis-1,2-DCE	ND	0.0022	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
cis-1,3-Dichloropropene	ND	0.0035	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
1,2-Dibromo-3-chloropropane	ND	0.012	0.076		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Dibromochloromethane	ND	0.0034	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Dibromomethane	ND	0.0033	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
1,2-Dichlorobenzene	ND	0.0033	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
1,3-Dichlorobenzene	ND	0.0031	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
1,4-Dichlorobenzene	ND	0.0047	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Dichlorodifluoromethane	ND	0.012	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
1,1-Dichloroethane	ND	0.0021	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
1,1-Dichloroethene	ND	0.012	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
1,2-Dichloropropane	ND	0.0032	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
1,3-Dichloropropane	ND	0.0043	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
2,2-Dichloropropane	ND	0.0022	0.076		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
1,1-Dichloropropene	ND	0.0030	0.076		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Hexachlorobutadiene	ND	0.0047	0.076		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
2-Hexanone	ND	0.021	0.38		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Isopropylbenzene	ND	0.0033	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
4-Isopropyltoluene	ND	0.0034	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
4-Methyl-2-pentanone	ND	0.011	0.38		mg/Kg	1	11/1/2016 3:38:01 PM	S38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-30 (0-5)

Project: COA Railyards

Collection Date: 10/27/2016 11:46:00 AM

Lab ID: 1610E23-030

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.012	0.011	0.11	J	mg/Kg	1	11/1/2016 3:38:01 PM	S38379
n-Butylbenzene	ND	0.0034	0.11		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
n-Propylbenzene	ND	0.0029	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
sec-Butylbenzene	ND	0.0053	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Styrene	ND	0.0034	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
tert-Butylbenzene	ND	0.0032	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
1,1,1,2-Tetrachloroethane	ND	0.0037	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
1,1,2,2-Tetrachloroethane	ND	0.0062	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Tetrachloroethene (PCE)	ND	0.0032	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
trans-1,2-DCE	ND	0.011	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
trans-1,3-Dichloropropene	ND	0.0056	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
1,2,3-Trichlorobenzene	ND	0.0057	0.076		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
1,2,4-Trichlorobenzene	ND	0.0041	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
1,1,1-Trichloroethane	ND	0.0023	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
1,1,2-Trichloroethane	ND	0.0045	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Trichloroethene (TCE)	ND	0.0041	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Trichlorofluoromethane	ND	0.0029	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
1,2,3-Trichloropropane	ND	0.0066	0.076		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Vinyl chloride	ND	0.0031	0.038		mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Xylenes, Total	0.047	0.0072	0.076	J	mg/Kg	1	11/1/2016 3:38:01 PM	S38379
Surr: Dibromofluoromethane	99.5		70-130		%Rec	1	11/1/2016 3:38:01 PM	S38379
Surr: 1,2-Dichloroethane-d4	92.4		70-130		%Rec	1	11/1/2016 3:38:01 PM	S38379
Surr: Toluene-d8	95.4		70-130		%Rec	1	11/1/2016 3:38:01 PM	S38379
Surr: 4-Bromofluorobenzene	98.6		70-130		%Rec	1	11/1/2016 3:38:01 PM	S38379
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.57	3.8		mg/Kg	1	11/1/2016 3:38:01 PM	G38379
Surr: BFB	101	0	70-130		%Rec	1	11/1/2016 3:38:01 PM	G38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-31 (0-5)

Project: COA Railyards

Collection Date: 10/27/2016 12:50:00 PM

Lab ID: 1610E23-031

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								Analyst: TOM
Diesel Range Organics (DRO)	ND	1.8	9.6		mg/Kg	1	11/2/2016 6:13:51 AM	28375
Motor Oil Range Organics (MRO)	ND	48	48		mg/Kg	1	11/2/2016 6:13:51 AM	28375
Surr: DNOP	91.0	0	70-130		%Rec	1	11/2/2016 6:13:51 AM	28375
<b>EPA METHOD 8310: PAHS</b>								Analyst: SCC
Naphthalene	ND	0.035	0.25		mg/Kg	1	11/7/2016 10:08:03 AM	28417
1-Methylnaphthalene	ND	0.037	0.25		mg/Kg	1	11/7/2016 10:08:03 AM	28417
2-Methylnaphthalene	ND	0.035	0.25		mg/Kg	1	11/7/2016 10:08:03 AM	28417
Acenaphthylene	ND	0.034	0.25		mg/Kg	1	11/7/2016 10:08:03 AM	28417
Acenaphthene	ND	0.031	0.25		mg/Kg	1	11/7/2016 10:08:03 AM	28417
Fluorene	ND	0.0033	0.030		mg/Kg	1	11/7/2016 10:08:03 AM	28417
Phenanthrene	0.0023	0.0016	0.015	J	mg/Kg	1	11/7/2016 10:08:03 AM	28417
Anthracene	ND	0.0024	0.015		mg/Kg	1	11/7/2016 10:08:03 AM	28417
Fluoranthene	ND	0.0033	0.020		mg/Kg	1	11/7/2016 10:08:03 AM	28417
Pyrene	ND	0.0034	0.025		mg/Kg	1	11/7/2016 10:08:03 AM	28417
Benz(a)anthracene	0.00050	0.00050	0.010	J	mg/Kg	1	11/7/2016 10:08:03 AM	28417
Chrysene	ND	0.0014	0.010		mg/Kg	1	11/7/2016 10:08:03 AM	28417
Benzo(b)fluoranthene	ND	0.00071	0.010		mg/Kg	1	11/7/2016 10:08:03 AM	28417
Benzo(k)fluoranthene	ND	0.00040	0.010		mg/Kg	1	11/7/2016 10:08:03 AM	28417
Benzo(a)pyrene	0.00050	0.00040	0.010	J	mg/Kg	1	11/7/2016 10:08:03 AM	28417
Dibenz(a,h)anthracene	ND	0.00050	0.010		mg/Kg	1	11/7/2016 10:08:03 AM	28417
Benzo(g,h,i)perylene	ND	0.00060	0.010		mg/Kg	1	11/7/2016 10:08:03 AM	28417
Indeno(1,2,3-cd)pyrene	0.0020	0.00081	0.010	J	mg/Kg	1	11/7/2016 10:08:03 AM	28417
Surr: Benzo(e)pyrene	63.2	0	27.4-110		%Rec	1	11/7/2016 10:08:03 AM	28417
<b>EPA METHOD 6010B: SOIL METALS</b>								Analyst: MED
Antimony	ND	0.98	2.4		mg/Kg	1	11/2/2016 12:29:38 PM	28364
Arsenic	3.7	0.87	2.4		mg/Kg	1	11/2/2016 12:29:38 PM	28364
Chromium	5.9	0.092	0.29		mg/Kg	1	11/2/2016 12:29:38 PM	28364
Iron	9300	74	240		mg/Kg	100	11/2/2016 11:09:30 AM	28364
Lead	4.8	0.17	0.24		mg/Kg	1	11/2/2016 12:29:38 PM	28364
Manganese	280	0.10	0.20		mg/Kg	2	11/2/2016 12:31:22 PM	28364
Thallium	ND	0.75	2.4		mg/Kg	1	11/2/2016 12:29:38 PM	28364
<b>EPA METHOD 8260B: VOLATILES</b>								Analyst: DJF
Benzene	ND	0.015	0.019		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Toluene	ND	0.0022	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Ethylbenzene	ND	0.0031	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Methyl tert-butyl ether (MTBE)	ND	0.012	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
1,2,4-Trimethylbenzene	ND	0.0028	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
1,3,5-Trimethylbenzene	ND	0.0027	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-31 (0-5)

Project: COA Railyards

Collection Date: 10/27/2016 12:50:00 PM

Lab ID: 1610E23-031

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0098	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
1,2-Dibromoethane (EDB)	ND	0.0027	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Naphthalene	ND	0.0059	0.075		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
1-Methylnaphthalene	ND	0.0083	0.15		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
2-Methylnaphthalene	ND	0.0080	0.15		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Acetone	0.057	0.048	0.56	J	mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Bromobenzene	ND	0.0030	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Bromodichloromethane	ND	0.0022	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Bromoform	ND	0.0046	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Bromomethane	ND	0.014	0.11		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
2-Butanone	ND	0.021	0.37		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Carbon disulfide	ND	0.012	0.37		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Carbon tetrachloride	ND	0.0025	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Chlorobenzene	ND	0.0030	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Chloroethane	ND	0.0075	0.075		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Chloroform	ND	0.0028	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Chloromethane	ND	0.0033	0.11		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
2-Chlorotoluene	ND	0.0028	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
4-Chlorotoluene	ND	0.0033	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
cis-1,2-DCE	ND	0.0022	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
cis-1,3-Dichloropropene	ND	0.0035	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
1,2-Dibromo-3-chloropropane	ND	0.011	0.075		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Dibromochloromethane	ND	0.0034	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Dibromomethane	ND	0.0032	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
1,2-Dichlorobenzene	ND	0.0033	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
1,3-Dichlorobenzene	ND	0.0031	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
1,4-Dichlorobenzene	ND	0.0046	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Dichlorodifluoromethane	ND	0.012	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
1,1-Dichloroethane	ND	0.0020	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
1,1-Dichloroethene	ND	0.012	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
1,2-Dichloropropane	ND	0.0031	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
1,3-Dichloropropane	ND	0.0042	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
2,2-Dichloropropane	ND	0.0021	0.075		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
1,1-Dichloropropene	ND	0.0030	0.075		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Hexachlorobutadiene	ND	0.0046	0.075		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
2-Hexanone	ND	0.020	0.37		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Isopropylbenzene	ND	0.0032	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
4-Isopropyltoluene	ND	0.0034	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
4-Methyl-2-pentanone	ND	0.011	0.37		mg/Kg	1	11/1/2016 4:06:51 PM	S38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-31 (0-5)

Project: COA Railyards

Collection Date: 10/27/2016 12:50:00 PM

Lab ID: 1610E23-031

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.012	0.011	0.11	J	mg/Kg	1	11/1/2016 4:06:51 PM	S38379
n-Butylbenzene	ND	0.0033	0.11		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
n-Propylbenzene	ND	0.0029	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
sec-Butylbenzene	ND	0.0052	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Styrene	ND	0.0033	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
tert-Butylbenzene	ND	0.0031	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
1,1,1,2-Tetrachloroethane	ND	0.0036	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
1,1,2,2-Tetrachloroethane	ND	0.0061	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Tetrachloroethene (PCE)	ND	0.0031	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
trans-1,2-DCE	ND	0.010	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
trans-1,3-Dichloropropene	ND	0.0055	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
1,2,3-Trichlorobenzene	ND	0.0056	0.075		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
1,2,4-Trichlorobenzene	ND	0.0040	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
1,1,1-Trichloroethane	ND	0.0023	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
1,1,2-Trichloroethane	ND	0.0044	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Trichloroethene (TCE)	ND	0.0040	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Trichlorofluoromethane	ND	0.0028	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
1,2,3-Trichloropropane	ND	0.0065	0.075		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Vinyl chloride	ND	0.0031	0.037		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Xylenes, Total	ND	0.0071	0.075		mg/Kg	1	11/1/2016 4:06:51 PM	S38379
Surr: Dibromofluoromethane	100		70-130		%Rec	1	11/1/2016 4:06:51 PM	S38379
Surr: 1,2-Dichloroethane-d4	92.2		70-130		%Rec	1	11/1/2016 4:06:51 PM	S38379
Surr: Toluene-d8	94.9		70-130		%Rec	1	11/1/2016 4:06:51 PM	S38379
Surr: 4-Bromofluorobenzene	97.7		70-130		%Rec	1	11/1/2016 4:06:51 PM	S38379
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	ND	0.56	3.7		mg/Kg	1	11/1/2016 4:06:51 PM	G38379
Surr: BFB	100	0	70-130		%Rec	1	11/1/2016 4:06:51 PM	G38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: SB-32 (0-3)

Project: COA Railyards

Collection Date: 10/27/2016 1:05:00 PM

Lab ID: 1610E23-032

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8015M/D: DIESEL RANGE ORGANICS</b>								Analyst: TOM
Diesel Range Organics (DRO)	24	1.8	9.5		mg/Kg	1	11/3/2016 3:18:51 AM	28375
Motor Oil Range Organics (MRO)	69	48	48		mg/Kg	1	11/3/2016 3:18:51 AM	28375
Surr: DNOP	0	0	70-130	S	%Rec	1	11/3/2016 3:18:51 AM	28375
<b>EPA METHOD 8310: PAHS</b>								Analyst: SCC
Naphthalene	ND	3.5	25	D	mg/Kg	10	11/7/2016 11:06:30 AM	28417
1-Methylnaphthalene	ND	3.7	25	D	mg/Kg	10	11/7/2016 11:06:30 AM	28417
2-Methylnaphthalene	ND	3.5	25	D	mg/Kg	10	11/7/2016 11:06:30 AM	28417
Acenaphthylene	ND	3.3	25	D	mg/Kg	10	11/7/2016 11:06:30 AM	28417
Acenaphthene	ND	3.0	25	D	mg/Kg	10	11/7/2016 11:06:30 AM	28417
Fluorene	ND	0.33	3.0	D	mg/Kg	10	11/7/2016 11:06:30 AM	28417
Phenanthrene	8.5	0.16	1.5	D	mg/Kg	10	11/7/2016 11:06:30 AM	28417
Anthracene	0.97	0.24	1.5	JD	mg/Kg	10	11/7/2016 11:06:30 AM	28417
Fluoranthene	16	0.33	2.0	D	mg/Kg	10	11/7/2016 11:06:30 AM	28417
Pyrene	15	0.34	2.5	D	mg/Kg	10	11/7/2016 11:06:30 AM	28417
Benz(a)anthracene	6.5	0.25	5.0	D	mg/Kg	50	11/7/2016 4:57:48 PM	28417
Chrysene	4.7	0.14	0.99	D	mg/Kg	10	11/7/2016 11:06:30 AM	28417
Benzo(b)fluoranthene	4.4	0.14	2.0	D	mg/Kg	20	11/7/2016 4:28:36 PM	28417
Benzo(k)fluoranthene	3.2	0.080	2.0	D	mg/Kg	20	11/7/2016 4:28:36 PM	28417
Benzo(a)pyrene	7.1	0.20	5.0	D	mg/Kg	50	11/7/2016 4:57:48 PM	28417
Dibenz(a,h)anthracene	0.40	0.050	0.99	JD	mg/Kg	10	11/7/2016 11:06:30 AM	28417
Benzo(g,h,i)perylene	4.3	0.12	2.0	D	mg/Kg	20	11/7/2016 4:28:36 PM	28417
Indeno(1,2,3-cd)pyrene	1.5	0.080	0.99	D	mg/Kg	10	11/7/2016 11:06:30 AM	28417
Surr: Benzo(e)pyrene	0	0	27.4-110	SD	%Rec	10	11/7/2016 11:06:30 AM	28417
<b>EPA METHOD 6010B: SOIL METALS</b>								Analyst: MED
Antimony	3.6	0.97	2.4		mg/Kg	1	11/2/2016 12:33:02 PM	28364
Arsenic	17	0.86	2.4		mg/Kg	1	11/2/2016 12:33:02 PM	28364
Chromium	12	0.091	0.29		mg/Kg	1	11/2/2016 12:33:02 PM	28364
Iron	18000	73	240		mg/Kg	100	11/2/2016 11:17:20 AM	28364
Lead	210	0.84	1.2		mg/Kg	5	11/4/2016 10:35:46 AM	28364
Manganese	390	0.10	0.19		mg/Kg	2	11/2/2016 12:34:54 PM	28364
Thallium	ND	0.74	2.4		mg/Kg	1	11/2/2016 12:33:02 PM	28364
<b>EPA METHOD 8260B: VOLATILES</b>								Analyst: DJF
Benzene	ND	0.012	0.015		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Toluene	0.0045	0.0018	0.030	J	mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Ethylbenzene	ND	0.0025	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Methyl tert-butyl ether (MTBE)	ND	0.0095	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
1,2,4-Trimethylbenzene	0.0026	0.0022	0.030	J	mg/Kg	1	11/1/2016 1:43:43 PM	S38379
1,3,5-Trimethylbenzene	ND	0.0022	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-32 (0-3)

Project: COA Railyards

Collection Date: 10/27/2016 1:05:00 PM

Lab ID: 1610E23-032

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,2-Dichloroethane (EDC)	ND	0.0079	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
1,2-Dibromoethane (EDB)	ND	0.0022	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Naphthalene	0.0057	0.0047	0.061	J	mg/Kg	1	11/1/2016 1:43:43 PM	S38379
1-Methylnaphthalene	ND	0.0067	0.12		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
2-Methylnaphthalene	0.0095	0.0065	0.12	J	mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Acetone	0.094	0.039	0.45	J	mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Bromobenzene	ND	0.0024	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Bromodichloromethane	ND	0.0018	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Bromoform	ND	0.0037	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Bromomethane	ND	0.011	0.091		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
2-Butanone	ND	0.017	0.30		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Carbon disulfide	ND	0.010	0.30		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Carbon tetrachloride	ND	0.0020	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Chlorobenzene	ND	0.0025	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Chloroethane	ND	0.0060	0.061		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Chloroform	0.024	0.0023	0.030	J	mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Chloromethane	ND	0.0027	0.091		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
2-Chlorotoluene	ND	0.0022	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
4-Chlorotoluene	ND	0.0027	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
cis-1,2-DCE	ND	0.0018	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
cis-1,3-Dichloropropene	ND	0.0028	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
1,2-Dibromo-3-chloropropane	ND	0.0093	0.061		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Dibromochloromethane	ND	0.0027	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Dibromomethane	ND	0.0026	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
1,2-Dichlorobenzene	ND	0.0026	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
1,3-Dichlorobenzene	ND	0.0025	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
1,4-Dichlorobenzene	ND	0.0038	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Dichlorodifluoromethane	ND	0.0094	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
1,1-Dichloroethane	ND	0.0016	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
1,1-Dichloroethene	ND	0.0099	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
1,2-Dichloropropane	ND	0.0025	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
1,3-Dichloropropane	ND	0.0034	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
2,2-Dichloropropane	ND	0.0017	0.061		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
1,1-Dichloropropene	ND	0.0024	0.061		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Hexachlorobutadiene	ND	0.0037	0.061		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
2-Hexanone	ND	0.016	0.30		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Isopropylbenzene	ND	0.0026	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
4-Isopropyltoluene	ND	0.0027	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
4-Methyl-2-pentanone	0.015	0.0088	0.30	J	mg/Kg	1	11/1/2016 1:43:43 PM	S38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: SB-32 (0-3)

Project: COA Railyards

Collection Date: 10/27/2016 1:05:00 PM

Lab ID: 1610E23-032

Matrix: MEOH (SOIL) Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Methylene chloride	0.0088	0.0087	0.091	J	mg/Kg	1	11/1/2016 1:43:43 PM	S38379
n-Butylbenzene	ND	0.0027	0.091		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
n-Propylbenzene	ND	0.0023	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
sec-Butylbenzene	ND	0.0042	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Styrene	ND	0.0027	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
tert-Butylbenzene	ND	0.0025	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
1,1,1,2-Tetrachloroethane	ND	0.0029	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
1,1,2,2-Tetrachloroethane	ND	0.0049	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Tetrachloroethene (PCE)	ND	0.0025	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
trans-1,2-DCE	ND	0.0085	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
trans-1,3-Dichloropropene	ND	0.0044	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
1,2,3-Trichlorobenzene	ND	0.0045	0.061		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
1,2,4-Trichlorobenzene	ND	0.0032	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
1,1,1-Trichloroethane	ND	0.0018	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
1,1,2-Trichloroethane	ND	0.0036	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Trichloroethene (TCE)	ND	0.0032	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Trichlorofluoromethane	ND	0.0023	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
1,2,3-Trichloropropane	ND	0.0052	0.061		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Vinyl chloride	ND	0.0025	0.030		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Xylenes, Total	ND	0.0057	0.061		mg/Kg	1	11/1/2016 1:43:43 PM	S38379
Surr: Dibromofluoromethane	99.3		70-130		%Rec	1	11/1/2016 1:43:43 PM	S38379
Surr: 1,2-Dichloroethane-d4	91.9		70-130		%Rec	1	11/1/2016 1:43:43 PM	S38379
Surr: Toluene-d8	96.3		70-130		%Rec	1	11/1/2016 1:43:43 PM	S38379
Surr: 4-Bromofluorobenzene	95.3		70-130		%Rec	1	11/1/2016 1:43:43 PM	S38379
<b>EPA METHOD 8015D MOD: GASOLINE RANGE</b>							Analyst: DJF	
Gasoline Range Organics (GRO)	0.70	0.46	3.0	J	mg/Kg	1	11/1/2016 1:43:43 PM	G38379
Surr: BFB	99.5	0	70-130		%Rec	1	11/1/2016 1:43:43 PM	G38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

## Hall Environmental Analysis Laboratory, Inc.

CLIENT: Intera, Inc.

Client Sample ID: MEOH BLANK

Project: COA Railyards

Collection Date:

Lab ID: 1610E23-033

Matrix: MEOH BLAN

Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
Benzene	ND	0.020	0.025		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Toluene	ND	0.0030	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Ethylbenzene	ND	0.0041	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Methyl tert-butyl ether (MTBE)	ND	0.016	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
1,2,4-Trimethylbenzene	ND	0.0037	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
1,3,5-Trimethylbenzene	ND	0.0036	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
1,2-Dichloroethane (EDC)	ND	0.013	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
1,2-Dibromoethane (EDB)	ND	0.0036	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Naphthalene	ND	0.0078	0.10		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
1-Methylnaphthalene	ND	0.011	0.20		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
2-Methylnaphthalene	ND	0.011	0.20		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Acetone	ND	0.065	0.75		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Bromobenzene	ND	0.0040	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Bromodichloromethane	ND	0.0029	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Bromoform	ND	0.0061	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Bromomethane	ND	0.018	0.15		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
2-Butanone	ND	0.029	0.50		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Carbon disulfide	ND	0.017	0.50		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Carbon tetrachloride	ND	0.0033	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Chlorobenzene	ND	0.0041	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Chloroethane	ND	0.010	0.10		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Chloroform	ND	0.0038	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Chloromethane	0.017	0.0044	0.15	J	mg/Kg	1	11/1/2016 4:35:34 PM	S38379
2-Chlorotoluene	ND	0.0037	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
4-Chlorotoluene	ND	0.0044	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
cis-1,2-DCE	ND	0.0029	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
cis-1,3-Dichloropropene	ND	0.0046	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
1,2-Dibromo-3-chloropropane	ND	0.015	0.10		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Dibromochloromethane	ND	0.0045	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Dibromomethane	ND	0.0043	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
1,2-Dichlorobenzene	ND	0.0044	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
1,3-Dichlorobenzene	ND	0.0041	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
1,4-Dichlorobenzene	ND	0.0062	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Dichlorodifluoromethane	ND	0.015	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
1,1-Dichloroethane	ND	0.0027	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
1,1-Dichloroethene	ND	0.016	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
1,2-Dichloropropane	ND	0.0042	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
1,3-Dichloropropane	ND	0.0057	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
2,2-Dichloropropane	ND	0.0029	0.10		mg/Kg	1	11/1/2016 4:35:34 PM	S38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

**Hall Environmental Analysis Laboratory, Inc.**

CLIENT: Intera, Inc.

Client Sample ID: MEOH BLANK

Project: COA Railyards

Collection Date:

Lab ID: 1610E23-033

Matrix: MEOH BLAN

Received Date: 10/28/2016 10:11:00 AM

Analyses	Result	MDL	PQL	Qual	Units	DF	Date Analyzed	Batch ID
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF	
1,1-Dichloropropene	ND	0.0040	0.10		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Hexachlorobutadiene	ND	0.0061	0.10		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
2-Hexanone	ND	0.027	0.50		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Isopropylbenzene	ND	0.0043	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
4-Isopropyltoluene	ND	0.0045	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
4-Methyl-2-pentanone	ND	0.015	0.50		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Methylene chloride	0.017	0.014	0.15	J	mg/Kg	1	11/1/2016 4:35:34 PM	S38379
n-Butylbenzene	ND	0.0044	0.15		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
n-Propylbenzene	ND	0.0038	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
sec-Butylbenzene	ND	0.0069	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Styrene	ND	0.0045	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
tert-Butylbenzene	ND	0.0041	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
1,1,1,2-Tetrachloroethane	ND	0.0048	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
1,1,2,2-Tetrachloroethane	ND	0.0081	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Tetrachloroethene (PCE)	ND	0.0041	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
trans-1,2-DCE	ND	0.014	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
trans-1,3-Dichloropropene	ND	0.0073	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
1,2,3-Trichlorobenzene	ND	0.0075	0.10		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
1,2,4-Trichlorobenzene	ND	0.0053	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
1,1,1-Trichloroethane	ND	0.0031	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
1,1,2-Trichloroethane	ND	0.0059	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Trichloroethene (TCE)	ND	0.0054	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Trichlorofluoromethane	ND	0.0037	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
1,2,3-Trichloropropane	ND	0.0086	0.10		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Vinyl chloride	ND	0.0041	0.050		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Xylenes, Total	ND	0.0095	0.10		mg/Kg	1	11/1/2016 4:35:34 PM	S38379
Surr: Dibromofluoromethane	102		70-130		%Rec	1	11/1/2016 4:35:34 PM	S38379
Surr: 1,2-Dichloroethane-d4	97.0		70-130		%Rec	1	11/1/2016 4:35:34 PM	S38379
Surr: Toluene-d8	96.1		70-130		%Rec	1	11/1/2016 4:35:34 PM	S38379
Surr: 4-Bromofluorobenzene	98.2		70-130		%Rec	1	11/1/2016 4:35:34 PM	S38379

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1610E23

22-Nov-16

**Client:** Intera, Inc.  
**Project:** COA Railyards

Sample ID	<b>1610E23-018AMS</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>SB-18 (3-6)</b>	Batch ID:	<b>28375</b>	RunNo:	<b>38355</b>					
Prep Date:	<b>10/31/2016</b>	Analysis Date:	<b>11/1/2016</b>	SeqNo:	<b>1198166</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	46	10	50.20	3.258	86.1	33.9	141			
Surr: DNOP	4.4		5.020		86.9	70	130			

Sample ID	<b>1610E23-018AMSD</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>SB-18 (3-6)</b>	Batch ID:	<b>28375</b>	RunNo:	<b>38355</b>					
Prep Date:	<b>10/31/2016</b>	Analysis Date:	<b>11/2/2016</b>	SeqNo:	<b>1198167</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	49	10	50.45	3.258	90.9	33.9	141	5.47	20	
Surr: DNOP	4.6		5.045		91.0	70	130	0	0	

Sample ID	<b>LCS-28372</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>28372</b>	RunNo:	<b>38355</b>					
Prep Date:	<b>10/31/2016</b>	Analysis Date:	<b>11/1/2016</b>	SeqNo:	<b>1198183</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45	10	50.00	0	90.0	62.6	124			
Surr: DNOP	4.0		5.000		79.6	70	130			

Sample ID	<b>LCS-28375</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>28375</b>	RunNo:	<b>38355</b>					
Prep Date:	<b>10/31/2016</b>	Analysis Date:	<b>11/1/2016</b>	SeqNo:	<b>1198184</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	48	10	50.00	0	95.9	62.6	124			
Surr: DNOP	4.4		5.000		87.3	70	130			

Sample ID	<b>MB-28372</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>28372</b>	RunNo:	<b>38355</b>					
Prep Date:	<b>10/31/2016</b>	Analysis Date:	<b>11/1/2016</b>	SeqNo:	<b>1198185</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	8.9		10.00		89.1	70	130			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1610E23

22-Nov-16

**Client:** Intera, Inc.  
**Project:** COA Railyards

Sample ID	<b>MB-28375</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 8015M/D: Diesel Range Organics</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>28375</b>	RunNo:	<b>38355</b>					
Prep Date:	<b>10/31/2016</b>	Analysis Date:	<b>11/1/2016</b>	SeqNo:	<b>1198186</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	ND	10								
Motor Oil Range Organics (MRO)	ND	50								
Surr: DNOP	9.2		10.00		92.3	70	130			

**Qualifiers:**

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1610E23

22-Nov-16

**Client:** Intera, Inc.  
**Project:** COA Railyards

Sample ID	rb	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8260B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID: <b>S38351</b>			RunNo: <b>38351</b>					
Prep Date:		Analysis Date: <b>10/31/2016</b>			SeqNo: <b>1197175</b>		Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Methyl tert-butyl ether (MTBE)	ND	0.050								
1,2,4-Trimethylbenzene	ND	0.050								
1,3,5-Trimethylbenzene	ND	0.050								
1,2-Dichloroethane (EDC)	ND	0.050								
1,2-Dibromoethane (EDB)	ND	0.050								
Naphthalene	ND	0.10								
1-Methylnaphthalene	ND	0.20								
2-Methylnaphthalene	ND	0.20								
Acetone	ND	0.75								
Bromobenzene	ND	0.050								
Bromodichloromethane	ND	0.050								
Bromoform	ND	0.050								
Bromomethane	ND	0.15								
2-Butanone	0.046	0.50								J
Carbon disulfide	ND	0.50								
Carbon tetrachloride	ND	0.050								
Chlorobenzene	ND	0.050								
Chloroethane	ND	0.10								
Chloroform	ND	0.050								
Chloromethane	0.016	0.15								J
2-Chlorotoluene	ND	0.050								
4-Chlorotoluene	ND	0.050								
cis-1,2-DCE	ND	0.050								
cis-1,3-Dichloropropene	ND	0.050								
1,2-Dibromo-3-chloropropane	ND	0.10								
Dibromochloromethane	ND	0.050								
Dibromomethane	ND	0.050								
1,2-Dichlorobenzene	ND	0.050								
1,3-Dichlorobenzene	ND	0.050								
1,4-Dichlorobenzene	ND	0.050								
Dichlorodifluoromethane	ND	0.050								
1,1-Dichloroethane	ND	0.050								
1,1-Dichloroethene	ND	0.050								
1,2-Dichloropropane	ND	0.050								
1,3-Dichloropropane	ND	0.050								
2,2-Dichloropropane	ND	0.10								

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1610E23

22-Nov-16

**Client:** Intera, Inc.  
**Project:** COA Railyards

Sample ID	rb	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8260B: Volatiles</b>					
Client ID:	<b>PBS</b>	Batch ID: <b>S38351</b>			RunNo: <b>38351</b>					
Prep Date:		Analysis Date: <b>10/31/2016</b>			SeqNo: <b>1197175</b>		Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.10								
Hexachlorobutadiene	ND	0.10								
2-Hexanone	ND	0.50								
Isopropylbenzene	ND	0.050								
4-Isopropyltoluene	ND	0.050								
4-Methyl-2-pentanone	ND	0.50								
Methylene chloride	0.018	0.15								J
n-Butylbenzene	ND	0.15								
n-Propylbenzene	ND	0.050								
sec-Butylbenzene	ND	0.050								
Styrene	ND	0.050								
tert-Butylbenzene	ND	0.050								
1,1,1,2-Tetrachloroethane	ND	0.050								
1,1,2,2-Tetrachloroethane	ND	0.050								
Tetrachloroethene (PCE)	ND	0.050								
trans-1,2-DCE	ND	0.050								
trans-1,3-Dichloropropene	ND	0.050								
1,2,3-Trichlorobenzene	ND	0.10								
1,2,4-Trichlorobenzene	ND	0.050								
1,1,1-Trichloroethane	ND	0.050								
1,1,2-Trichloroethane	ND	0.050								
Trichloroethene (TCE)	ND	0.050								
Trichlorofluoromethane	ND	0.050								
1,2,3-Trichloropropane	ND	0.10								
Vinyl chloride	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: Dibromofluoromethane	0.50		0.5000		101	70	130			
Surr: 1,2-Dichloroethane-d4	0.49		0.5000		97.8	70	130			
Surr: Toluene-d8	0.47		0.5000		94.6	70	130			
Surr: 4-Bromofluorobenzene	0.50		0.5000		100	70	130			

Sample ID	100NG LCS	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8260B: Volatiles</b>					
Client ID:	<b>LCSS</b>	Batch ID: <b>S38351</b>			RunNo: <b>38351</b>					
Prep Date:		Analysis Date: <b>10/31/2016</b>			SeqNo: <b>1197178</b>		Units: <b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.96	0.025	1.000	0	96.1	70	130			
Toluene	1.0	0.050	1.000	0	102	70	130			
Chlorobenzene	1.0	0.050	1.000	0	100	70	130			

**Qualifiers:**

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1610E23

22-Nov-16

**Client:** Intera, Inc.  
**Project:** COA Railyards

Sample ID <b>100NG LCS</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8260B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>S38351</b>		RunNo: <b>38351</b>							
Prep Date:	Analysis Date: <b>10/31/2016</b>		SeqNo: <b>1197178</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	1.0	0.050	1.000	0	102	72	146			
Trichloroethene (TCE)	0.97	0.050	1.000	0	96.8	70	130			
Surr: Dibromofluoromethane	0.47		0.5000		94.2	70	130			
Surr: 1,2-Dichloroethane-d4	0.47		0.5000		94.0	70	130			
Surr: Toluene-d8	0.49		0.5000		98.2	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		97.4	70	130			

Sample ID <b>1610e23-001ams</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8260B: Volatiles</b>							
Client ID: <b>SB-1 (9-10)</b>	Batch ID: <b>S38351</b>		RunNo: <b>38351</b>							
Prep Date:	Analysis Date: <b>10/31/2016</b>		SeqNo: <b>1197182</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.87	0.019	0.7710	0	112	49.2	155			
Toluene	0.81	0.039	0.7710	0	105	52	154			
Chlorobenzene	0.80	0.039	0.7710	0	104	53.2	150			
1,1-Dichloroethene	1.2	0.039	0.7710	0	151	34.2	163			
Trichloroethene (TCE)	0.90	0.039	0.7710	0	117	48.2	151			
Surr: Dibromofluoromethane	0.40		0.3855		104	70	130			
Surr: 1,2-Dichloroethane-d4	0.39		0.3855		101	70	130			
Surr: Toluene-d8	0.36		0.3855		92.8	70	130			
Surr: 4-Bromofluorobenzene	0.36		0.3855		94.4	70	130			

Sample ID <b>1610e23-001amsd</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8260B: Volatiles</b>							
Client ID: <b>SB-1 (9-10)</b>	Batch ID: <b>S38351</b>		RunNo: <b>38351</b>							
Prep Date:	Analysis Date: <b>10/31/2016</b>		SeqNo: <b>1197183</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.79	0.019	0.7710	0	103	49.2	155	8.97	20	
Toluene	0.79	0.039	0.7710	0	102	52	154	2.25	20	
Chlorobenzene	0.79	0.039	0.7710	0	102	53.2	150	1.93	20	
1,1-Dichloroethene	1.0	0.039	0.7710	0	131	34.2	163	13.9	20	
Trichloroethene (TCE)	0.82	0.039	0.7710	0	107	48.2	151	9.17	20	
Surr: Dibromofluoromethane	0.39		0.3855		101	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	0.39		0.3855		100	70	130	0	0	
Surr: Toluene-d8	0.36		0.3855		94.6	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.37		0.3855		95.5	70	130	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1610E23

22-Nov-16

**Client:** Intera, Inc.  
**Project:** COA Railyards

Sample ID: <b>rb1</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8260B: Volatiles</b>
Client ID: <b>PBS</b>	Batch ID: <b>T38351</b>	RunNo: <b>38351</b>
Prep Date:	Analysis Date: <b>11/1/2016</b>	SeqNo: <b>1197203</b> Units: <b>mg/Kg</b>

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Methyl tert-butyl ether (MTBE)	ND	0.050								
1,2,4-Trimethylbenzene	ND	0.050								
1,3,5-Trimethylbenzene	ND	0.050								
1,2-Dichloroethane (EDC)	ND	0.050								
1,2-Dibromoethane (EDB)	ND	0.050								
Naphthalene	ND	0.10								
1-Methylnaphthalene	ND	0.20								
2-Methylnaphthalene	ND	0.20								
Acetone	ND	0.75								
Bromobenzene	ND	0.050								
Bromodichloromethane	ND	0.050								
Bromoform	ND	0.050								
Bromomethane	ND	0.15								
2-Butanone	ND	0.50								
Carbon disulfide	ND	0.50								
Carbon tetrachloride	ND	0.050								
Chlorobenzene	ND	0.050								
Chloroethane	ND	0.10								
Chloroform	ND	0.050								
Chloromethane	ND	0.15								
2-Chlorotoluene	ND	0.050								
4-Chlorotoluene	ND	0.050								
cis-1,2-DCE	ND	0.050								
cis-1,3-Dichloropropene	ND	0.050								
1,2-Dibromo-3-chloropropane	ND	0.10								
Dibromochloromethane	ND	0.050								
Dibromomethane	ND	0.050								
1,2-Dichlorobenzene	ND	0.050								
1,3-Dichlorobenzene	ND	0.050								
1,4-Dichlorobenzene	ND	0.050								
Dichlorodifluoromethane	ND	0.050								
1,1-Dichloroethane	ND	0.050								
1,1-Dichloroethene	ND	0.050								
1,2-Dichloropropane	ND	0.050								
1,3-Dichloropropane	ND	0.050								
2,2-Dichloropropane	ND	0.10								

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1610E23

22-Nov-16

**Client:** Intera, Inc.  
**Project:** COA Railyards

Sample ID	rb1	SampType:	MBLK		TestCode:	EPA Method 8260B: Volatiles				
Client ID:	PBS	Batch ID:	T38351		RunNo:	38351				
Prep Date:		Analysis Date:	11/1/2016		SeqNo:	1197203	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.10								
Hexachlorobutadiene	ND	0.10								
2-Hexanone	ND	0.50								
Isopropylbenzene	ND	0.050								
4-Isopropyltoluene	ND	0.050								
4-Methyl-2-pentanone	ND	0.50								
Methylene chloride	0.022	0.15								J
n-Butylbenzene	ND	0.15								
n-Propylbenzene	ND	0.050								
sec-Butylbenzene	ND	0.050								
Styrene	ND	0.050								
tert-Butylbenzene	ND	0.050								
1,1,1,2-Tetrachloroethane	ND	0.050								
1,1,2,2-Tetrachloroethane	ND	0.050								
Tetrachloroethene (PCE)	ND	0.050								
trans-1,2-DCE	ND	0.050								
trans-1,3-Dichloropropene	ND	0.050								
1,2,3-Trichlorobenzene	ND	0.10								
1,2,4-Trichlorobenzene	ND	0.050								
1,1,1-Trichloroethane	ND	0.050								
1,1,2-Trichloroethane	ND	0.050								
Trichloroethene (TCE)	ND	0.050								
Trichlorofluoromethane	ND	0.050								
1,2,3-Trichloropropane	ND	0.10								
Vinyl chloride	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: Dibromofluoromethane	0.50		0.5000		101	70	130			
Surr: 1,2-Dichloroethane-d4	0.47		0.5000		94.3	70	130			
Surr: Toluene-d8	0.48		0.5000		95.1	70	130			
Surr: 4-Bromofluorobenzene	0.49		0.5000		98.5	70	130			

Sample ID	100ng lcs2	SampType:	LCS		TestCode:	EPA Method 8260B: Volatiles				
Client ID:	LCSS	Batch ID:	T38351		RunNo:	38351				
Prep Date:		Analysis Date:	11/1/2016		SeqNo:	1197204	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.1	0.025	1.000	0	107	70	130			
Toluene	1.1	0.050	1.000	0	106	70	130			
Chlorobenzene	1.0	0.050	1.000	0	103	70	130			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1610E23

22-Nov-16

**Client:** Intera, Inc.  
**Project:** COA Railyards

Sample ID <b>100ng lcs2</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8260B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>T38351</b>		RunNo: <b>38351</b>							
Prep Date:	Analysis Date: <b>11/1/2016</b>		SeqNo: <b>1197204</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	1.1	0.050	1.000	0	109	72	146			
Trichloroethene (TCE)	1.1	0.050	1.000	0	106	70	130			
Surr: Dibromofluoromethane	0.49		0.5000		98.9	70	130			
Surr: 1,2-Dichloroethane-d4	0.47		0.5000		94.8	70	130			
Surr: Toluene-d8	0.48		0.5000		95.1	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		93.7	70	130			

Sample ID <b>1610e23-021ams2</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8260B: Volatiles</b>							
Client ID: <b>SB-21 (0-5)</b>	Batch ID: <b>T38351</b>		RunNo: <b>38351</b>							
Prep Date:	Analysis Date: <b>11/1/2016</b>		SeqNo: <b>1197208</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.61	0.015	0.6068	0	101	49.2	155			
Toluene	0.67	0.030	0.6068	0	110	52	154			
Chlorobenzene	0.65	0.030	0.6068	0	107	53.2	150			
1,1-Dichloroethene	0.70	0.030	0.6068	0	115	34.2	163			
Trichloroethene (TCE)	0.65	0.030	0.6068	0	108	48.2	151			
Surr: Dibromofluoromethane	0.30		0.3034		100	70	130			
Surr: 1,2-Dichloroethane-d4	0.29		0.3034		94.1	70	130			
Surr: Toluene-d8	0.29		0.3034		96.5	70	130			
Surr: 4-Bromofluorobenzene	0.29		0.3034		96.0	70	130			

Sample ID <b>1610e23-021amsd2</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8260B: Volatiles</b>							
Client ID: <b>SB-21 (0-5)</b>	Batch ID: <b>T38351</b>		RunNo: <b>38351</b>							
Prep Date:	Analysis Date: <b>11/1/2016</b>		SeqNo: <b>1197209</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.60	0.015	0.6068	0	99.7	49.2	155	1.02	20	
Toluene	0.62	0.030	0.6068	0	101	52	154	8.30	20	
Chlorobenzene	0.61	0.030	0.6068	0	100	53.2	150	6.34	20	
1,1-Dichloroethene	0.68	0.030	0.6068	0	111	34.2	163	3.14	20	
Trichloroethene (TCE)	0.64	0.030	0.6068	0	106	48.2	151	2.17	20	
Surr: Dibromofluoromethane	0.30		0.3034		99.3	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	0.28		0.3034		92.9	70	130	0	0	
Surr: Toluene-d8	0.28		0.3034		93.5	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.29		0.3034		96.5	70	130	0	0	

**Qualifiers:**

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1610E23

22-Nov-16

**Client:** Intera, Inc.  
**Project:** COA Railyards

Sample ID	rb2	SampType:	MBLK	TestCode:	EPA Method 8260B: Volatiles					
Client ID:	PBS	Batch ID:	S38379	RunNo:	38379					
Prep Date:		Analysis Date:	11/1/2016	SeqNo:	1198239	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	0.025								
Toluene	ND	0.050								
Ethylbenzene	ND	0.050								
Methyl tert-butyl ether (MTBE)	ND	0.050								
1,2,4-Trimethylbenzene	ND	0.050								
1,3,5-Trimethylbenzene	ND	0.050								
1,2-Dichloroethane (EDC)	ND	0.050								
1,2-Dibromoethane (EDB)	ND	0.050								
Naphthalene	ND	0.10								
1-Methylnaphthalene	ND	0.20								
2-Methylnaphthalene	ND	0.20								
Acetone	ND	0.75								
Bromobenzene	ND	0.050								
Bromodichloromethane	ND	0.050								
Bromoform	ND	0.050								
Bromomethane	ND	0.15								
2-Butanone	ND	0.50								
Carbon disulfide	ND	0.50								
Carbon tetrachloride	ND	0.050								
Chlorobenzene	ND	0.050								
Chloroethane	ND	0.10								
Chloroform	ND	0.050								
Chloromethane	ND	0.15								
2-Chlorotoluene	ND	0.050								
4-Chlorotoluene	ND	0.050								
cis-1,2-DCE	ND	0.050								
cis-1,3-Dichloropropene	ND	0.050								
1,2-Dibromo-3-chloropropane	ND	0.10								
Dibromochloromethane	ND	0.050								
Dibromomethane	ND	0.050								
1,2-Dichlorobenzene	ND	0.050								
1,3-Dichlorobenzene	ND	0.050								
1,4-Dichlorobenzene	ND	0.050								
Dichlorodifluoromethane	ND	0.050								
1,1-Dichloroethane	ND	0.050								
1,1-Dichloroethene	ND	0.050								
1,2-Dichloropropane	ND	0.050								
1,3-Dichloropropane	ND	0.050								
2,2-Dichloropropane	ND	0.10								

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1610E23

22-Nov-16

**Client:** Intera, Inc.  
**Project:** COA Railyards

Sample ID	rb2	SampType:	MBLK		TestCode:	EPA Method 8260B: Volatiles				
Client ID:	PBS	Batch ID:	S38379		RunNo:	38379				
Prep Date:		Analysis Date:	11/1/2016		SeqNo:	1198239	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	0.10								
Hexachlorobutadiene	ND	0.10								
2-Hexanone	ND	0.50								
Isopropylbenzene	ND	0.050								
4-Isopropyltoluene	ND	0.050								
4-Methyl-2-pentanone	ND	0.50								
Methylene chloride	0.015	0.15								J
n-Butylbenzene	ND	0.15								
n-Propylbenzene	ND	0.050								
sec-Butylbenzene	ND	0.050								
Styrene	ND	0.050								
tert-Butylbenzene	ND	0.050								
1,1,1,2-Tetrachloroethane	ND	0.050								
1,1,2,2-Tetrachloroethane	ND	0.050								
Tetrachloroethene (PCE)	ND	0.050								
trans-1,2-DCE	ND	0.050								
trans-1,3-Dichloropropene	ND	0.050								
1,2,3-Trichlorobenzene	ND	0.10								
1,2,4-Trichlorobenzene	0.0065	0.050								J
1,1,1-Trichloroethane	ND	0.050								
1,1,2-Trichloroethane	ND	0.050								
Trichloroethene (TCE)	ND	0.050								
Trichlorofluoromethane	ND	0.050								
1,2,3-Trichloropropane	ND	0.10								
Vinyl chloride	ND	0.050								
Xylenes, Total	ND	0.10								
Surr: Dibromofluoromethane	0.49		0.5000		97.4	70	130			
Surr: 1,2-Dichloroethane-d4	0.47		0.5000		93.5	70	130			
Surr: Toluene-d8	0.47		0.5000		94.0	70	130			
Surr: 4-Bromofluorobenzene	0.48		0.5000		96.6	70	130			

Sample ID	100ng lcs2	SampType:	LCS		TestCode:	EPA Method 8260B: Volatiles				
Client ID:	LCSS	Batch ID:	S38379		RunNo:	38379				
Prep Date:		Analysis Date:	11/1/2016		SeqNo:	1198240	Units:	mg/Kg		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	1.0	0.025	1.000	0	103	70	130			
Toluene	1.1	0.050	1.000	0	107	70	130			
Chlorobenzene	1.1	0.050	1.000	0	106	70	130			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1610E23

22-Nov-16

**Client:** Intera, Inc.  
**Project:** COA Railyards

Sample ID <b>100ng lcs2</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8260B: Volatiles</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>S38379</b>		RunNo: <b>38379</b>							
Prep Date:	Analysis Date: <b>11/1/2016</b>		SeqNo: <b>1198240</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	1.0	0.050	1.000	0	104	72	146			
Trichloroethene (TCE)	1.0	0.050	1.000	0	104	70	130			
Surr: Dibromofluoromethane	0.48		0.5000		95.8	70	130			
Surr: 1,2-Dichloroethane-d4	0.46		0.5000		92.8	70	130			
Surr: Toluene-d8	0.48		0.5000		95.1	70	130			
Surr: 4-Bromofluorobenzene	0.47		0.5000		94.5	70	130			

Sample ID <b>1610e23-025ams</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8260B: Volatiles</b>							
Client ID: <b>SB-25 (0-3)</b>	Batch ID: <b>S38379</b>		RunNo: <b>38379</b>							
Prep Date:	Analysis Date: <b>11/1/2016</b>		SeqNo: <b>1198244</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.80	0.020	0.7806	0	102	49.2	155			
Toluene	0.83	0.039	0.7806	0	106	52	154			
Chlorobenzene	0.81	0.039	0.7806	0	104	53.2	150			
1,1-Dichloroethene	0.89	0.039	0.7806	0	114	34.2	163			
Trichloroethene (TCE)	0.83	0.039	0.7806	0	107	48.2	151			
Surr: Dibromofluoromethane	0.36		0.3903		92.7	70	130			
Surr: 1,2-Dichloroethane-d4	0.36		0.3903		91.7	70	130			
Surr: Toluene-d8	0.37		0.3903		94.6	70	130			
Surr: 4-Bromofluorobenzene	0.37		0.3903		94.0	70	130			

Sample ID <b>1610e23-025amsd</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8260B: Volatiles</b>							
Client ID: <b>SB-25 (0-3)</b>	Batch ID: <b>S38379</b>		RunNo: <b>38379</b>							
Prep Date:	Analysis Date: <b>11/1/2016</b>		SeqNo: <b>1198245</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	0.77	0.020	0.7806	0	98.6	49.2	155	3.39	20	
Toluene	0.83	0.039	0.7806	0	107	52	154	0.410	20	
Chlorobenzene	0.81	0.039	0.7806	0	104	53.2	150	0.587	20	
1,1-Dichloroethene	0.87	0.039	0.7806	0	112	34.2	163	1.65	20	
Trichloroethene (TCE)	0.81	0.039	0.7806	0	104	48.2	151	2.70	20	
Surr: Dibromofluoromethane	0.38		0.3903		96.3	70	130	0	0	
Surr: 1,2-Dichloroethane-d4	0.35		0.3903		90.5	70	130	0	0	
Surr: Toluene-d8	0.37		0.3903		93.6	70	130	0	0	
Surr: 4-Bromofluorobenzene	0.37		0.3903		94.9	70	130	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1610E23

22-Nov-16

**Client:** Intera, Inc.  
**Project:** COA Railyards

Sample ID	MB-28374	SampType:	MBLK	TestCode:	EPA Method 8310: PAHs					
Client ID:	PBS	Batch ID:	28374	RunNo:	38471					
Prep Date:	10/31/2016	Analysis Date:	11/6/2016	SeqNo:	1201307	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	ND	0.25								
1-Methylnaphthalene	ND	0.25								
2-Methylnaphthalene	ND	0.25								
Acenaphthylene	ND	0.25								
Acenaphthene	ND	0.25								
Fluorene	ND	0.030								
Phenanthrene	ND	0.015								
Anthracene	ND	0.015								
Fluoranthene	ND	0.020								
Pyrene	ND	0.025								
Benz(a)anthracene	ND	0.010								
Chrysene	ND	0.010								
Benzo(b)fluoranthene	0.0010	0.010								J
Benzo(k)fluoranthene	0.00075	0.010								J
Benzo(a)pyrene	ND	0.010								
Dibenz(a,h)anthracene	ND	0.010								
Benzo(g,h,i)perylene	ND	0.010								
Indeno(1,2,3-cd)pyrene	0.0015	0.010								J
Surr: Benzo(e)pyrene	0.20		0.5000		40.6	27.4	110			

Sample ID	LCS-28374	SampType:	LCS	TestCode:	EPA Method 8310: PAHs					
Client ID:	LCSS	Batch ID:	28374	RunNo:	38471					
Prep Date:	10/31/2016	Analysis Date:	11/6/2016	SeqNo:	1201308	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	1.1	0.25	2.000	0	56.5	38.1	121			
1-Methylnaphthalene	1.2	0.25	2.000	0	57.7	39.8	121			
2-Methylnaphthalene	1.1	0.25	2.000	0	57.1	38.6	119			
Acenaphthylene	1.2	0.25	2.000	0	59.4	56.9	119			
Acenaphthene	1.2	0.25	2.000	0	58.7	39.1	121			
Fluorene	0.12	0.030	0.2000	0	60.8	35.8	116			
Phenanthrene	0.064	0.015	0.1006	0	63.4	34.3	126			
Anthracene	0.057	0.015	0.1006	0	56.7	31.2	117			
Fluoranthene	0.13	0.020	0.2006	0	64.1	31.2	136			
Pyrene	0.13	0.025	0.2000	0	66.4	40.8	128			
Benz(a)anthracene	0.013	0.010	0.02000	0	63.8	25.7	136			
Chrysene	0.065	0.010	0.1006	0	64.6	34.2	129			
Benzo(b)fluoranthene	0.016	0.010	0.02500	0	63.0	33.2	121			
Benzo(k)fluoranthene	0.0082	0.010	0.01250	0	66.0	35.7	130			J

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1610E23

22-Nov-16

**Client:** Intera, Inc.  
**Project:** COA Railyards

Sample ID	<b>LCS-28374</b>		SampType:	<b>LCS</b>		TestCode:	<b>EPA Method 8310: PAHs</b>				
Client ID:	<b>LCSS</b>		Batch ID:	<b>28374</b>		RunNo:	<b>38471</b>				
Prep Date:	<b>10/31/2016</b>		Analysis Date:	<b>11/6/2016</b>		SeqNo:	<b>1201308</b>		Units: <b>mg/Kg</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Benzo(a)pyrene	0.0075	0.010	0.01250	0	60.0	27	131			J	
Dibenz(a,h)anthracene	0.016	0.010	0.02500	0	65.0	29.4	131				
Benzo(g,h,i)perylene	0.016	0.010	0.02500	0	66.0	32.9	130				
Indeno(1,2,3-cd)pyrene	0.030	0.010	0.05002	0	60.5	28.2	135				
Surr: Benzo(e)pyrene	0.28		0.5000		55.2	27.4	110				

Sample ID	<b>MB-28398</b>		SampType:	<b>MBLK</b>		TestCode:	<b>EPA Method 8310: PAHs</b>				
Client ID:	<b>PBS</b>		Batch ID:	<b>28398</b>		RunNo:	<b>38471</b>				
Prep Date:	<b>11/1/2016</b>		Analysis Date:	<b>11/6/2016</b>		SeqNo:	<b>1201309</b>		Units: <b>mg/Kg</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Naphthalene	ND	0.25									
1-Methylnaphthalene	ND	0.25									
2-Methylnaphthalene	ND	0.25									
Acenaphthylene	ND	0.25									
Acenaphthene	ND	0.25									
Fluorene	ND	0.030									
Phenanthrene	ND	0.015									
Anthracene	ND	0.015									
Fluoranthene	ND	0.020									
Pyrene	ND	0.025									
Benz(a)anthracene	ND	0.010									
Chrysene	ND	0.010									
Benzo(b)fluoranthene	ND	0.010									
Benzo(k)fluoranthene	ND	0.010									
Benzo(a)pyrene	ND	0.010									
Dibenz(a,h)anthracene	ND	0.010									
Benzo(g,h,i)perylene	ND	0.010									
Indeno(1,2,3-cd)pyrene	ND	0.010									
Surr: Benzo(e)pyrene	0.26		0.5000		51.9	27.4	110				

Sample ID	<b>LCS-28398</b>		SampType:	<b>LCS</b>		TestCode:	<b>EPA Method 8310: PAHs</b>				
Client ID:	<b>LCSS</b>		Batch ID:	<b>28398</b>		RunNo:	<b>38471</b>				
Prep Date:	<b>11/1/2016</b>		Analysis Date:	<b>11/6/2016</b>		SeqNo:	<b>1201310</b>		Units: <b>mg/Kg</b>		
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Naphthalene	1.4	0.25	2.000	0	68.4	38.1	121				
1-Methylnaphthalene	1.4	0.25	2.000	0	72.3	39.8	121				
2-Methylnaphthalene	1.4	0.25	2.000	0	71.0	38.6	119				
Acenaphthylene	1.5	0.25	2.000	0	74.4	56.9	119				

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1610E23

22-Nov-16

**Client:** Intera, Inc.  
**Project:** COA Railyards

Sample ID	LCS-28398		SampType:	LCS		TestCode:	EPA Method 8310: PAHs				
Client ID:	LCSS		Batch ID:	28398		RunNo:	38471				
Prep Date:	11/1/2016		Analysis Date:	11/6/2016		SeqNo:	1201310		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Acenaphthene	1.5	0.25	2.000	0	75.5	39.1	121				
Fluorene	0.15	0.030	0.2000	0	77.4	35.8	116				
Phenanthrene	0.082	0.015	0.1006	0	81.5	34.3	126				
Anthracene	0.074	0.015	0.1006	0	73.8	31.2	117				
Fluoranthene	0.17	0.020	0.2006	0	83.5	31.2	136				
Pyrene	0.17	0.025	0.2000	0	87.2	40.8	128				
Benz(a)anthracene	0.016	0.010	0.02000	0	82.5	25.7	136				
Chrysene	0.085	0.010	0.1006	0	84.2	34.2	129				
Benzo(b)fluoranthene	0.020	0.010	0.02500	0	81.0	33.2	121				
Benzo(k)fluoranthene	0.011	0.010	0.01250	0	84.0	35.7	130				
Benzo(a)pyrene	0.0098	0.010	0.01250	0	78.0	27	131			J	
Dibenz(a,h)anthracene	0.020	0.010	0.02500	0	82.0	29.4	131				
Benzo(g,h,i)perylene	0.021	0.010	0.02500	0	84.0	32.9	130				
Indeno(1,2,3-cd)pyrene	0.039	0.010	0.05002	0	77.5	28.2	135				
Surr: Benzo(e)pyrene	0.41		0.5000		81.5	27.4	110				

Sample ID	MB-28417		SampType:	MBLK		TestCode:	EPA Method 8310: PAHs				
Client ID:	PBS		Batch ID:	28417		RunNo:	38471				
Prep Date:	11/2/2016		Analysis Date:	11/6/2016		SeqNo:	1201315		Units:	mg/Kg	
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual	
Naphthalene	ND	0.25									
1-Methylnaphthalene	ND	0.25									
2-Methylnaphthalene	ND	0.25									
Acenaphthylene	ND	0.25									
Acenaphthene	ND	0.25									
Fluorene	ND	0.030									
Phenanthrene	0.0032	0.015								J	
Anthracene	ND	0.015									
Fluoranthene	0.0088	0.020								J	
Pyrene	0.0072	0.025								J	
Benz(a)anthracene	0.0038	0.010								J	
Chrysene	0.0060	0.010								J	
Benzo(b)fluoranthene	0.0032	0.010								J	
Benzo(k)fluoranthene	0.0018	0.010								J	
Benzo(a)pyrene	0.0032	0.010								J	
Dibenz(a,h)anthracene	0.0012	0.010								J	
Benzo(g,h,i)perylene	0.0030	0.010								J	
Indeno(1,2,3-cd)pyrene	0.0025	0.010								J	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1610E23

22-Nov-16

**Client:** Intera, Inc.  
**Project:** COA Railyards

Sample ID <b>MB-28417</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8310: PAHs</b>							
Client ID: <b>PBS</b>	Batch ID: <b>28417</b>		RunNo: <b>38471</b>							
Prep Date: <b>11/2/2016</b>	Analysis Date: <b>11/6/2016</b>		SeqNo: <b>1201315</b>	Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: Benzo(e)pyrene	0.33		0.5000		65.3	27.4	110			

Sample ID <b>LCS-28417</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8310: PAHs</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>28417</b>		RunNo: <b>38471</b>							
Prep Date: <b>11/2/2016</b>	Analysis Date: <b>11/6/2016</b>		SeqNo: <b>1201316</b>	Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	1.3	0.25	2.000	0	64.3	38.1	121			
1-Methylnaphthalene	1.4	0.25	2.000	0	69.4	39.8	121			
2-Methylnaphthalene	1.4	0.25	2.000	0	68.0	38.6	119			
Acenaphthylene	1.5	0.25	2.000	0	73.6	56.9	119			
Acenaphthene	1.5	0.25	2.000	0	75.5	39.1	121			
Fluorene	0.16	0.030	0.2000	0	78.0	35.8	116			
Phenanthrene	0.085	0.015	0.1006	0	84.5	34.3	126			
Anthracene	0.079	0.015	0.1006	0	78.3	31.2	117			
Fluoranthene	0.17	0.020	0.2006	0	85.7	31.2	136			
Pyrene	0.18	0.025	0.2000	0	90.5	40.8	128			
Benz(a)anthracene	0.017	0.010	0.02000	0	86.2	25.7	136			
Chrysene	0.089	0.010	0.1006	0	88.2	34.2	129			
Benzo(b)fluoranthene	0.020	0.010	0.02500	0	82.0	33.2	121			
Benzo(k)fluoranthene	0.011	0.010	0.01250	0	86.0	35.7	130			
Benzo(a)pyrene	0.011	0.010	0.01250	0	84.0	27	131			
Dibenz(a,h)anthracene	0.021	0.010	0.02500	0	85.0	29.4	131			
Benzo(g,h,i)perylene	0.022	0.010	0.02500	0	89.0	32.9	130			
Indeno(1,2,3-cd)pyrene	0.040	0.010	0.05002	0	80.5	28.2	135			
Surr: Benzo(e)pyrene	0.38		0.5000		75.1	27.4	110			

Sample ID <b>1610E23-010AMS</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8310: PAHs</b>							
Client ID: <b>SB-10 (5-10)</b>	Batch ID: <b>28398</b>		RunNo: <b>38471</b>							
Prep Date: <b>11/1/2016</b>	Analysis Date: <b>11/6/2016</b>		SeqNo: <b>1201341</b>	Units: <b>mg/Kg</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	1.1	0.25	1.969	0	58.4	24.8	102			
1-Methylnaphthalene	1.2	0.25	1.969	0	60.8	25.2	100			
2-Methylnaphthalene	1.2	0.25	1.969	0	60.5	23.7	98.4			
Acenaphthylene	1.2	0.25	1.969	0	59.1	29.2	112			
Acenaphthene	1.2	0.25	1.969	0	60.1	21.8	102			
Fluorene	0.12	0.030	0.1969	0	59.8	21	102			
Phenanthrene	0.062	0.015	0.09906	0	62.4	23.3	109			
Anthracene	0.060	0.015	0.09906	0	60.6	26.3	101			

**Qualifiers:**

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- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1610E23

22-Nov-16

**Client:** Intera, Inc.  
**Project:** COA Railyards

Sample ID	1610E23-010AMS	SampType:	MS	TestCode:	EPA Method 8310: PAHs					
Client ID:	SB-10 (5-10)	Batch ID:	28398	RunNo:	38471					
Prep Date:	11/1/2016	Analysis Date:	11/6/2016	SeqNo:	1201341	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Fluoranthene	0.12	0.020	0.1975	0	61.2	30.6	104			
Pyrene	0.12	0.025	0.1969	0	62.5	32.2	106			
Benz(a)anthracene	0.012	0.0098	0.01969	0	62.5	16.2	111			
Chrysene	0.061	0.0098	0.09906	0	61.1	28.6	104			
Benzo(b)fluoranthene	0.015	0.0098	0.02462	0	60.0	25.5	96.5			
Benzo(k)fluoranthene	0.0076	0.0098	0.01231	0	62.0	26.5	107			J
Benzo(a)pyrene	0.0076	0.0098	0.01231	0	62.0	26.1	105			J
Dibenz(a,h)anthracene	0.015	0.0098	0.02462	0	60.0	25.7	109			
Benzo(g,h,i)perylene	0.015	0.0098	0.02462	0	59.0	20.3	111			
Indeno(1,2,3-cd)pyrene	0.027	0.0098	0.04926	0	55.0	28.7	103			
Surr: Benzo(e)pyrene	0.24		0.4924		49.2	27.4	110			

Sample ID	1610E23-010AMSD	SampType:	MSD	TestCode:	EPA Method 8310: PAHs					
Client ID:	SB-10 (5-10)	Batch ID:	28398	RunNo:	38471					
Prep Date:	11/1/2016	Analysis Date:	11/6/2016	SeqNo:	1201342	Units:	mg/Kg			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Naphthalene	1.2	0.25	1.984	0	61.2	24.8	102	5.55	29.3	
1-Methylnaphthalene	1.2	0.25	1.984	0	62.4	25.2	100	3.38	20	
2-Methylnaphthalene	1.2	0.25	1.984	0	62.0	23.7	98.4	3.25	20	
Acenaphthylene	1.2	0.25	1.984	0	62.2	29.2	112	5.83	22.6	
Acenaphthene	1.3	0.25	1.984	0	63.6	21.8	102	6.40	20	
Fluorene	0.12	0.030	0.1984	0	62.8	21	102	5.64	20	
Phenanthrene	0.064	0.015	0.09980	0	64.6	23.3	109	4.26	27.6	
Anthracene	0.063	0.015	0.09980	0	63.4	26.3	101	5.15	29.2	
Fluoranthene	0.13	0.020	0.1990	0	63.9	30.6	104	5.12	29.2	
Pyrene	0.13	0.025	0.1984	0	64.9	32.2	106	4.47	28.6	
Benz(a)anthracene	0.013	0.0099	0.01984	0	65.0	16.2	111	4.66	26.1	
Chrysene	0.063	0.0099	0.09980	0	63.4	28.6	104	4.33	26.6	
Benzo(b)fluoranthene	0.015	0.0099	0.02480	0	60.0	25.5	96.5	0.741	27.9	
Benzo(k)fluoranthene	0.0079	0.0099	0.01240	0	64.0	26.5	107	3.92	27.7	J
Benzo(a)pyrene	0.0077	0.0099	0.01240	0	62.0	26.1	105	0.741	28.3	J
Dibenz(a,h)anthracene	0.016	0.0099	0.02480	0	63.0	25.7	109	5.62	28.8	
Benzo(g,h,i)perylene	0.015	0.0099	0.02480	0	62.0	20.3	111	5.70	28.7	
Indeno(1,2,3-cd)pyrene	0.029	0.0099	0.04962	0	58.0	28.7	103	6.05	29.3	
Surr: Benzo(e)pyrene	0.25		0.4960		50.6	27.4	110	0	20	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1610E23

22-Nov-16

**Client:** Intera, Inc.  
**Project:** COA Railyards

Sample ID	<b>MB-28363</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 6010B: Soil Metals</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>28363</b>	RunNo:	<b>38332</b>					
Prep Date:	<b>10/30/2016</b>	Analysis Date:	<b>10/31/2016</b>	SeqNo:	<b>1196518</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	2.5								
Arsenic	ND	2.5								
Chromium	ND	0.30								
Iron	0.91	2.5								J
Lead	ND	0.25								
Manganese	ND	0.10								

Sample ID	<b>LCS-28363</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 6010B: Soil Metals</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>28363</b>	RunNo:	<b>38332</b>					
Prep Date:	<b>10/30/2016</b>	Analysis Date:	<b>10/31/2016</b>	SeqNo:	<b>1196519</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	24	2.5	25.00	0	94.7	80	120			
Arsenic	25	2.5	25.00	0	99.5	80	120			
Chromium	24	0.30	25.00	0	97.7	80	120			
Iron	26	2.5	25.00	0	104	80	120			
Lead	24	0.25	25.00	0	96.7	80	120			
Manganese	25	0.10	25.00	0	98.9	80	120			

Sample ID	<b>MB-28364</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 6010B: Soil Metals</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>28364</b>	RunNo:	<b>38386</b>					
Prep Date:	<b>10/30/2016</b>	Analysis Date:	<b>11/2/2016</b>	SeqNo:	<b>1198612</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	ND	2.5								
Arsenic	ND	2.5								
Chromium	0.28	0.30								J
Iron	2.1	2.5								J
Lead	ND	0.25								
Manganese	0.079	0.10								J

Sample ID	<b>LCS-28364</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 6010B: Soil Metals</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>28364</b>	RunNo:	<b>38386</b>					
Prep Date:	<b>10/30/2016</b>	Analysis Date:	<b>11/2/2016</b>	SeqNo:	<b>1198613</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Antimony	24	2.5	25.00	0	95.2	80	120			
Arsenic	24	2.5	25.00	0	94.3	80	120			
Chromium	24	0.30	25.00	0	95.0	80	120			
Iron	26	2.5	25.00	0	103	80	120			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1610E23

22-Nov-16

**Client:** Intera, Inc.  
**Project:** COA Railyards

Sample ID	<b>LCS-28364</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 6010B: Soil Metals</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>28364</b>	RunNo:	<b>38386</b>					
Prep Date:	<b>10/30/2016</b>	Analysis Date:	<b>11/2/2016</b>	SeqNo:	<b>1198613</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Lead	23	0.25	25.00	0	91.3	80	120			
Manganese	24	0.10	25.00	0	95.0	80	120			

Sample ID	<b>MB-28363</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 6010B: Soil Metals</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>28363</b>	RunNo:	<b>38869</b>					
Prep Date:	<b>10/30/2016</b>	Analysis Date:	<b>10/31/2016</b>	SeqNo:	<b>1214605</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Thallium	ND	2.5								

Sample ID	<b>LCS-28363</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 6010B: Soil Metals</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>28363</b>	RunNo:	<b>38869</b>					
Prep Date:	<b>10/30/2016</b>	Analysis Date:	<b>10/31/2016</b>	SeqNo:	<b>1214606</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Thallium	24	2.5	25.00	0	95.9	80	120			

Sample ID	<b>MB-28364</b>	SampType:	<b>MBLK</b>	TestCode:	<b>EPA Method 6010B: Soil Metals</b>					
Client ID:	<b>PBS</b>	Batch ID:	<b>28364</b>	RunNo:	<b>38869</b>					
Prep Date:	<b>10/30/2016</b>	Analysis Date:	<b>11/2/2016</b>	SeqNo:	<b>1214958</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Thallium	ND	2.5								

Sample ID	<b>LCS-28364</b>	SampType:	<b>LCS</b>	TestCode:	<b>EPA Method 6010B: Soil Metals</b>					
Client ID:	<b>LCSS</b>	Batch ID:	<b>28364</b>	RunNo:	<b>38869</b>					
Prep Date:	<b>10/30/2016</b>	Analysis Date:	<b>11/2/2016</b>	SeqNo:	<b>1214959</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Thallium	23	2.5	25.00	0	92.5	80	120			

**Qualifiers:**

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1610E23

22-Nov-16

**Client:** Intera, Inc.  
**Project:** COA Railyards

Sample ID <b>rb</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>GS38351</b>		RunNo: <b>38351</b>							
Prep Date:	Analysis Date: <b>10/31/2016</b>		SeqNo: <b>1197228</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	500		500.0		99.8	70	130			

Sample ID <b>2.5UG GRO LCS</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>GS38351</b>		RunNo: <b>38351</b>							
Prep Date:	Analysis Date: <b>10/31/2016</b>		SeqNo: <b>1197229</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	107	62.9	123			
Surr: BFB	520		500.0		104	70	130			

Sample ID <b>1610e23-002ams</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>							
Client ID: <b>SB-2 (8.5-10)</b>	Batch ID: <b>GS38351</b>		RunNo: <b>38351</b>							
Prep Date:	Analysis Date: <b>10/31/2016</b>		SeqNo: <b>1197232</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	3.8	19.17	0	105	52.3	132			
Surr: BFB	390		383.4		102	70	130			

Sample ID <b>1610e23-002amsd</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>							
Client ID: <b>SB-2 (8.5-10)</b>	Batch ID: <b>GS38351</b>		RunNo: <b>38351</b>							
Prep Date:	Analysis Date: <b>10/31/2016</b>		SeqNo: <b>1197233</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	20	3.8	19.17	0	103	52.3	132	2.27	20	
Surr: BFB	380		383.4		99.3	70	130	0	0	

Sample ID <b>rb1</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>							
Client ID: <b>PBS</b>	Batch ID: <b>GT38351</b>		RunNo: <b>38351</b>							
Prep Date:	Analysis Date: <b>11/1/2016</b>		SeqNo: <b>1197266</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	510		500.0		101	70	130			

Sample ID <b>2.5UG GRO LCS 2</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>							
Client ID: <b>LCSS</b>	Batch ID: <b>GT38351</b>		RunNo: <b>38351</b>							
Prep Date:	Analysis Date: <b>10/31/2016</b>		SeqNo: <b>1197269</b>		Units: <b>mg/Kg</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	510		500.0		101	70	130			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1610E23

22-Nov-16

**Client:** Intera, Inc.  
**Project:** COA Railyards

Sample ID	<b>2.5UG GRO LCS 2</b>		SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>						
Client ID:	<b>LCSS</b>		Batch ID: <b>GT38351</b>	RunNo: <b>38351</b>						
Prep Date:			Analysis Date: <b>10/31/2016</b>	SeqNo: <b>1197269</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26	5.0	25.00	0	104	62.9	123			
Surr: BFB	510		500.0		102	70	130			

Sample ID	<b>1610e23-022ams2</b>		SampType: <b>MS</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>						
Client ID:	<b>SB-22 (3-6)</b>		Batch ID: <b>GT38351</b>	RunNo: <b>38351</b>						
Prep Date:			Analysis Date: <b>11/1/2016</b>	SeqNo: <b>1197272</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	18	3.6	17.96	0	101	52.3	132			
Surr: BFB	360		359.2		101	70	130			

Sample ID	<b>1610e23-022amsd2</b>		SampType: <b>MSD</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>						
Client ID:	<b>SB-22 (3-6)</b>		Batch ID: <b>GT38351</b>	RunNo: <b>38351</b>						
Prep Date:			Analysis Date: <b>11/1/2016</b>	SeqNo: <b>1197273</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	17	3.6	17.96	0	94.9	52.3	132	5.89	20	
Surr: BFB	360		359.2		99.1	70	130	0	0	

Sample ID	<b>rb</b>		SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>						
Client ID:	<b>PBS</b>		Batch ID: <b>G38379</b>	RunNo: <b>38379</b>						
Prep Date:			Analysis Date: <b>11/1/2016</b>	SeqNo: <b>1198269</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	ND	5.0								
Surr: BFB	500		500.0		99.9	70	130			

Sample ID	<b>2.5ug gro lcs</b>		SampType: <b>LCS</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>						
Client ID:	<b>LCSS</b>		Batch ID: <b>G38379</b>	RunNo: <b>38379</b>						
Prep Date:			Analysis Date: <b>11/1/2016</b>	SeqNo: <b>1198270</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	27	5.0	25.00	0	109	62.9	123			
Surr: BFB	530		500.0		106	70	130			

Sample ID	<b>1610e23-026ams</b>		SampType: <b>MS</b>	TestCode: <b>EPA Method 8015D Mod: Gasoline Range</b>						
Client ID:	<b>SB-26 (10-15)</b>		Batch ID: <b>G38379</b>	RunNo: <b>38379</b>						
Prep Date:			Analysis Date: <b>11/1/2016</b>	SeqNo: <b>1198274</b>		Units: <b>mg/Kg</b>				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual

**Qualifiers:**

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- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1610E23

22-Nov-16

**Client:** Intera, Inc.  
**Project:** COA Railyards

Sample ID	<b>1610e23-026ams</b>	SampType:	<b>MS</b>	TestCode:	<b>EPA Method 8015D Mod: Gasoline Range</b>					
Client ID:	<b>SB-26 (10-15)</b>	Batch ID:	<b>G38379</b>	RunNo:	<b>38379</b>					
Prep Date:		Analysis Date:	<b>11/1/2016</b>	SeqNo:	<b>1198274</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	15	2.9	14.26	0	102	52.3	132			
Surr: BFB	290		285.2		102	70	130			

Sample ID	<b>1610e23-026amsd</b>	SampType:	<b>MSD</b>	TestCode:	<b>EPA Method 8015D Mod: Gasoline Range</b>					
Client ID:	<b>SB-26 (10-15)</b>	Batch ID:	<b>G38379</b>	RunNo:	<b>38379</b>					
Prep Date:		Analysis Date:	<b>11/1/2016</b>	SeqNo:	<b>1198275</b>	Units:	<b>mg/Kg</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	14	2.9	14.26	0	99.4	52.3	132	2.42	20	
Surr: BFB	290		285.2		101	70	130	0	0	

**Qualifiers:**

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

**Sample Log-In Check List**

Client Name: INT

Work Order Number: 1610E23

RcptNo: 1

Received by/date: AG 10/28/16

Logged By: **Ashley Gallegos** 10/28/2016 10:11:00 AM AG

Completed By: **Ashley Gallegos** 10/28/2016 12:26:24 PM AG

Reviewed By: AG 10/28/16

**Chain of Custody**

- 1. Custody seals intact on sample bottles? Yes  No  Not Present
- 2. Is Chain of Custody complete? Yes  No  Not Present
- 3. How was the sample delivered? Client

**Log In**

- 4. Was an attempt made to cool the samples? Yes  No  NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
- 6. Sample(s) in proper container(s)? Yes  No
- 7. Sufficient sample volume for indicated test(s)? Yes  No
- 8. Are samples (except VOA and ONG) properly preserved? Yes  No
- 9. Was preservative added to bottles? Yes  No  NA
- 10. VOA vials have zero headspace? Yes  No  No VOA Vials
- 11. Were any sample containers received broken? Yes  No
- 12. Does paperwork match bottle labels? Yes  No   
(Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes  No
- 14. Is it clear what analyses were requested? Yes  No
- 15. Were all holding times able to be met? Yes  No   
(If no, notify customer for authorization.)

# of preserved bottles checked for pH: \_\_\_\_\_  
 (<2 or >12 unless noted)  
 Adjusted? \_\_\_\_\_  
 Checked by: \_\_\_\_\_

**Special Handling (if applicable)**

- 16. Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
 By Whom: \_\_\_\_\_ Via:  eMail  Phone  Fax  In Person  
 Regarding: \_\_\_\_\_  
 Client Instructions: \_\_\_\_\_

17. Additional remarks:

**Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.0	Good	Not Present			

# Chain-of-Custody Record

Client: **INTERA**

Mailing Address: **6000 Uptown Blvd NE**

City, State: **Albuquerque, NM**

Phone #: **505-246-1600**

Email or Fax#: **jtracy@intera.com**

AVQC Package: **emarcillo@intera.com**

Standard  Level 4 (Full Validation)

Accreditation: **NELAP**  Other

EDD (Type)

Turn-Around Time:  
 Standard  Rush

Project Name: **COA Railyards**

Project #: **COALB, MO05, OC95 NTP 17**

Project Manager: **Joe Tracy**

Sampler: **LP/MS**  
 On Ice:  Yes  No

Sample Temperature: **30**

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
24/16	1510	S	SB-1 (9-10)	2-4oz jars 1 Meth Kit	Methanol + ice	160123-001
1/16	1535	S	SB-2 (8.5-10)	2-4oz jars 1 Meth Kit		-002
4/16	1600	S	SB-3 (8.5-10)	2-4oz jars 1 Meth Kit		-003
24/16	1630	S	SB-4 (10-12)	2-4oz jars 1 Meth Kit		-004
25/16	0840	S	SB-5 (6-10)	2-4oz jars 1 Meth Kit		-005
5/16	1157	S	SB-6 (5-10)	2-4oz jars 1 Meth Kit		-006
5/16	1220	S	SB-7 (5-10)	2-4oz jars 1 Meth Kit		-007
5/16	1356	S	SB-8 (5-10)	2-4oz jars 1 Meth Kit		-008
25/16	1613	S	SB-9 (5-10)	2-4oz jars 1 Meth Kit		-009
25/16	1755	S	SB-10 (5-10)	2-4oz jars 1 Meth Kit		-010
4/16	0802	S	SB-11 (0-5)	2-4oz jars 1 Meth Kit		011
16/16	0852	S	SB-12 (0-5)	2-4oz jars 1 Meth Kit		-012



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

### Analysis Request

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Metals via 8015*	Air Bubbles (Y or N)
		X			X			X				
		X			X			X				
		X			X			X				
		X			X			X				
		X			X			X				
		X			X			X				
		X			X			X				
		X			X			X				
		X			X			X				
		X			X			X				
		X			X			X				
		X			X			X				

Date: 8/16 Time: 1011 Relinquished by: *[Signature]* Received by: *[Signature]* Date: 10/28/16 Time: 1011

Remarks: \*Metals = Antimony, arsenic, chromium, iron, lead, manganese, and thallium

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

# Chain-of-Custody Record

Client: **INTERA**

Mailing Address: **10000 Uptown Blvd  
SE Suite 220 Albuquerque, NM  
Phone #: 505-244-1600  
Email or Fax #: jtracy@intera.com  
emarcillo@intera.com**

VQC Package:  Standard  Level 4 (Full Validation)

Accreditation:  NELAP  Other \_\_\_\_\_

EDD (Type): \_\_\_\_\_

Turn-Around Time:  Standard  Rush \_\_\_\_\_

Project Name: **COA Railyards**

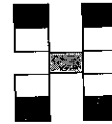
Project #: **COALB.MOOS.OCSS NTP17**

Project Manager: **Joe Tracy**

Sampler: **W/MS**

On Ice:  Yes  No

Sample Temperature: **3.0**



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

### Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Metals via 8015-A	Air Bubbles (Y or N)
4/16	0930	S	SB-13 (10-15)	2-4oz jars 1 Meth Kit	Methanol & Ice	-013			X			X				X		X	
4/16	1003	S	SB-14 (5-10)	2-4oz jars 1 Meth Kit		-014			X			X				X		X	
4/16	1035	S	SB-15 (3-6)	2-4oz jars 1 Meth Kit		-015			X			X				X		X	
24/16	1106	S	SB-16 (5-10)	2-4oz jars 1 Meth Kit		-016			X			X				X		X	
24/16	1140	S	SB-17 (3-6)	2-4oz jars 1 Meth Kit		-017			X			X				X		X	
4/16	1202	S	SB-18 (3-6)	2-4oz jars 1 Meth Kit		-018			X			X				X		X	
4/16	1217	S	SB-19 (5-10)	2-4oz jars 1 Meth Kit		-019			X			X				X		X	
6/16	1232	S	SB-20 (3-6)	2-4oz jars 1 Meth Kit		-020			X			X				X		X	
27/16	0815	S	SB-21 (0-5)	2-4oz jars 1 Meth Kit		-021			X			X				X		X	
27/16	0835	S	SB-22 (3-6)	2-4oz jars 1 Meth Kit		-022			X			X				X		X	
27/16	0858	S	SB-23 (0-5)	2-4oz jars 1 Meth Kit		-023			X			X				X		X	
27/16	0920	S	SB-24 (0-5)	2-4oz jars 1 Meth Kit		-024			X			X				X		X	

Relinquished by: *[Signature]* Date: **10/28/16** Time: **1011**

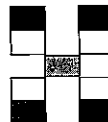
Received by: *[Signature]* Date: \_\_\_\_\_ Time: \_\_\_\_\_

Remarks: **\* See page 1 for info**

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

# Chain-of-Custody Record

Turn-Around Time:



## HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Client: **INTERA**

Standard  Rush

Mailing Address: **6000 Uptown Blvd NE**

Project Name: **CDA Railyards**

City: **Albq, NM**

Project #: **COALB.M005.OCS5 NTP 17**

Phone #: **505-246-1600**

Project Manager: **Joe Tracy**

Email or Fax#: **jtracy@intera.com**

A/QC Package: **emarcillo@intera.com**

Standard  Level 4 (Full Validation)

Accreditation:  NELAP  Other

Sampler: **LP/MS**

On Ice:  Yes  No

EDD (Type):

Sample Temperature: **3.0**

### Analysis Request

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.	BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Metals via 8015	Air Bubbles (Y or N)	
27/10	0945	S	SB-25 (0-3)	2-4oz jars 1 Meth Kit	Methanol	1610E23 -025			X			X				X		X		
27/10	1002	S	SB-26 (10-15)	2-4oz jars 1 Meth Kit		-026			X			X				X		X		
27/10	1038	S	SB-27 (0-5)	2-4oz jars 1 Meth Kit		-027			X			X				X		X		
27/10	1057	S	SB-28 (0-5)	2-4oz jars 1 Meth Kit		-028			X			X				X		X		
27/10	1122	S	SB-29 (0-5)	2-4oz jars 1 Meth Kit		-029			X			X				X		X		
27/10	1146	S	SB-30 (0-5)	2-4oz jars 1 Meth Kit		-030			X			X				X		X		
27/10	1250	S	SB-31 (0-5)	2-4oz jars 1 Meth Kit		-0031			X			X				X		X		
27/10	1305	S	SB-32 (0-3)	2-4oz jars 1 Meth Kit		-032			X			X				X		X		
			MEDH Blank	3-Blank S												X				

Relinquished by: **Lynne** Date: **10/28/10** Time: **1011**

Received by: **[Signature]** Date: **10/28/10** Time: **1011**

Remarks: **\* see page 1 for info**

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly noted on the analytical report.



## **Appendix C**

### **Laboratory Analytical Report and Maps for Soil Vapor**



**BEACON ENVIRONMENTAL**  
SERVICES, INC.

*The Leaders in Soil Gas Surveys  
and Vapor Intrusion Monitoring*

**Client: Vista GeoScience**  
**130 Capital Drive, Suite C**  
**Golden, CO 80401**  
**Attn: Mr. Mike Martin**

**Soil-Gas Samples -- Analytical Report**

**Date: December 12, 2016**  
**Beacon Project No. 3588 Rev1**

<b>Project Reference:</b>	Albuquerque Railyards, Albuquerque, NM
<b>Sampling Date:</b>	October 25 through November 3, 2016
<b>Samples Received:</b>	November 4 and 8, 2016
<b>Analyses Completed:</b>	November 10, 2016

Results for the following samples are included in this data package:

Sample ID	Matrix	Analysis
SV-03 A (HO234823)	Air	TO-17
SV-04 A (GO119804)	Air	TO-17
SV-06 A (HO234809)	Air	TO-17
SV-07 A (HO199678)	Air	TO-17
SV-08 A (1049238)	Air	TO-17
SV-09 A (GO177458)	Air	TO-17
SV-10 A (GO177407)	Air	TO-17
SV-11 A (GO164559)	Air	TO-17
SV-12 A (HO200253)	Air	TO-17
SV-14 A (GO115947)	Air	TO-17
SV-16 A (HO199673)	Air	TO-17
SV-17 A (HO232690)	Air	TO-17
SV-21 A (HO199664)	Air	TO-17
SV-23 A (HO200288)	Air	TO-17
SV-27 A (1049249)	Air	TO-17
SV-28 A (1100863)	Air	TO-17
SV-29 A (HO200227)	Air	TO-17
SV-30 A (GO167057)	Air	TO-17
SV-31 A (HO200236)	Air	TO-17
SV-32 A (GO164954)	Air	TO-17
SV-03-01 (HO234875)	Soil Gas	TO-17
SV-03-02 (GO178581)	Soil Gas	TO-17
SV-03-03 (HO234580)	Soil Gas	TO-17
SV-05-01 (1100817)	Soil Gas	TO-17
SV-05-02 (1049459)	Soil Gas	TO-17
SV-05-03 (1049520)	Soil Gas	TO-17
SV-05-04 (HO231898)	Soil Gas	TO-17
SV-05-05 (GO177980)	Soil Gas	TO-17
SV-05-06 (1101163)	Soil Gas	TO-17
SV-07-01 (HO238242)	Soil Gas	TO-17
SV-07-02 (HO234516)	Soil Gas	TO-17
SV-07-03 (GO115955)	Soil Gas	TO-17

Sample ID	Matrix	Analysis
SV-07-04 (GO115976)	Soil Gas	TO-17
SV-08-01 (GO164999)	Soil Gas	TO-17
SV-08-02 (1101399)	Soil Gas	TO-17
SV-08-03 (HO199622)	Soil Gas	TO-17
SV-08-04 (HO199658)	Soil Gas	TO-17
SV-08-05 (GO166889)	Soil Gas	TO-17
SV-08-06 (HO232630)	Soil Gas	TO-17
SV-08-07 (GO164568)	Soil Gas	TO-17
SV-08-08 (HO234589)	Soil Gas	TO-17
SV-08-09 (HO234844)	Soil Gas	TO-17
SV-08-10 (GO177969)	Soil Gas	TO-17

### Sample Collection

Beacon Environmental provided Vista GeoScience with thermally conditioned multi-bed stainless steel tubes to target a custom list of analytes. Soil gas was drawn through each tube for five (5) minutes with a flowrate of 200 mL/min and the resulting mass of target analytes captured on each sampler was reported as a concentration.

### U. S. EPA Method TO-17

All samples were analyzed for a custom target compound list following U.S. EPA Method TO-17. The analytical results are reported in **Table 1**, with results reported in  $\mu\text{g}/\text{m}^3$  and ppbv based on the measured mass and volume of gas sampled (one liter).

### Reporting Limits (RLs) for EPA Method TO-17

The lowest point in the calibration curve and the limit of quantitation (LOQ) is 10 nanograms (ng), which is the RL; however, when reporting concentration data in Table 1, the values are provided in micrograms per meter cubed ( $\mu\text{g}/\text{m}^3$ ) and ppbv. The RLs represent a baseline above which results exceed laboratory-determined limits of precision and accuracy. For 1,1,2-Tetrachloroethane; 1,2,3-Trichloropropane; and Naphthalene, estimated measurements below the LOQ but above the detection limit (DL) of 2.5 ng are reported to meet project reporting limit requirements. Furthermore, per Vista GeoScience's request, samples were reviewed for measurements of 1,1,2-Trichloroethane that are above 2.0 ng to meet project reporting requirements. Non-detects of this compound above 2.0 ng are reported with high confidence. All reported measurements below the LOQ are estimates and are qualified with a J flag.

### Calibration Verification

The initial laboratory control sample (LCS) also serves as the calibration verification and values for the analytes were all within  $\pm 30\%$  of the true values as defined by the initial five-point calibration and met the requirements specified in Beacon Environmental's Quality Manual. Both the LCS and the laboratory control duplicate (LCSD) are spiked at 50 ng and percentage of recovery is calculated and reported. Acceptance criteria for surrogate and analyte recoveries are 70 to 130 percent; all surrogates and analytes were within the acceptance criteria.

### Internal Standards and Surrogates

Internal standards and surrogates are spiked on each field and QC sample at 100 ng and 50 ng, respectively, and the percentage of recovery is calculated. Acceptance criteria for internal standards are 60 to 140 percent and surrogate recoveries are 70 to 130 percent; all internal standards and surrogates were within the acceptance criteria.

**Blank Contamination**

No targeted compounds above the limit of detection (LOD) for each compound were observed in the Laboratory Method Blanks (LB\_161108a and LB\_161109a). For comparison to field sample results, one liter was used as the volume to calculate the LOQs for the blanks.

**Discussion**

Forty (40) sorbent tubes were received on November 4, 2016, and forty-six (46) sorbent tubes were received on November 8, 2016. All samples were collected at each location following U.S. EPA Method TO-17; at the request of the client, only one (1) sample from each location was reported. Sampling start and stop times, as well as flowrates, can be found in the Chain of Custody (**Attachment 1**).

**Demonstrated Linear Range of the GC-MS Instrumentation (EPA Method TO-17)**

An initial five-point calibration is performed on the instrumentation from 10 to 200 ng per analyte.

**Attachments:**

- 1- Chain of Custody

ALL DATA MEET REQUIREMENTS AS SPECIFIED IN THE BEACON ENVIRONMENTAL SERVICES, INC. QUALITY MANUAL AND THE RESULTS RELATE ONLY TO THE SAMPLES REPORTED. BEACON ENVIRONMENTAL SERVICES IS ACCREDITED TO ISO/IEC 17025:2005, AND THE WORK PERFORMED WAS IN ACCORDANCE WITH ISO/IEC 17025 REQUIREMENTS, WITH THE EXCEPTION WITH THE EXCEPTION THAT SAMPLES WERE ANALYZED WITHIN A 24-HOUR TUNE WINDOW AND 2-METHYLNAPHTHALENE IS NOT INCLUDED IN BEACON'S SCOPE OF ACCREDITATION. THIS REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY. RELEASE OF THE DATA HAS BEEN AUTHORIZED BY THE LABORATORY DIRECTOR OR HIS SIGNEE, AS VERIFIED BY THE FOLLOWING SIGNATURES:



\_\_\_\_\_  
Steven C. Thornley  
Laboratory Director

Quality



\_\_\_\_\_  
Patti J. Riggs  
Manager

Date: December 12, 2016

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110802  
 Beacon Sample ID: LCS\_161108a  
 Client ID/Sampling Location:  
 Date Time Collected:  
 Matrix:  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received:  
 Analysis Date: 11/8/2016  
 Analysis Time: 10:30:00 AM  
 Beacon Job Number:

	Results	Units	Completed	Limits
<b>COMPOUNDS</b>				
Vinyl Chloride	82%	%REC	11/8/16 10:30	80-120
1,1-Dichloroethene	100%	%REC	11/8/16 10:30	80-120
1,1,2-Trichlorotrifluoroethane (Fr.113)	86%	%REC	11/8/16 10:30	80-120
trans-1,2-Dichloroethene	103%	%REC	11/8/16 10:30	80-120
Methyl-t-butyl ether	94%	%REC	11/8/16 10:30	80-120
1,1-Dichloroethane	100%	%REC	11/8/16 10:30	80-120
cis-1,2-Dichloroethene	102%	%REC	11/8/16 10:30	80-120
Chloroform	101%	%REC	11/8/16 10:30	80-120
1,2-Dichloroethane	98%	%REC	11/8/16 10:30	80-120
1,1,1-Trichloroethane	96%	%REC	11/8/16 10:30	80-120
Carbon Tetrachloride	96%	%REC	11/8/16 10:30	80-120
Benzene	100%	%REC	11/8/16 10:30	80-120
Trichloroethene	108%	%REC	11/8/16 10:30	80-120
1,4-Dioxane	110%	%REC	11/8/16 10:30	80-120
1,1,2-Trichloroethane	110%	%REC	11/8/16 10:30	80-120
Toluene	118%	%REC	11/8/16 10:30	80-120
1,2-Dibromoethane (EDB)	110%	%REC	11/8/16 10:30	80-120
Tetrachloroethene	94%	%REC	11/8/16 10:30	80-120
1,1,1,2-Tetrachloroethane	103%	%REC	11/8/16 10:30	80-120
Chlorobenzene	102%	%REC	11/8/16 10:30	80-120
Ethylbenzene	106%	%REC	11/8/16 10:30	80-120
p & m-Xylene	108%	%REC	11/8/16 10:30	80-120
1,1,2,2-Tetrachloroethane	99%	%REC	11/8/16 10:30	80-120
o-Xylene	101%	%REC	11/8/16 10:30	80-120
1,2,3-Trichloropropane	97%	%REC	11/8/16 10:30	80-120
Isopropylbenzene	101%	%REC	11/8/16 10:30	80-120
1,3,5-Trimethylbenzene	110%	%REC	11/8/16 10:30	80-120
1,2,4-Trimethylbenzene	102%	%REC	11/8/16 10:30	80-120
1,3-Dichlorobenzene	103%	%REC	11/8/16 10:30	80-120
1,4-Dichlorobenzene	103%	%REC	11/8/16 10:30	80-120
1,2-Dichlorobenzene	103%	%REC	11/8/16 10:30	80-120
1,2,4-Trichlorobenzene	111%	%REC	11/8/16 10:30	80-120
Naphthalene	107%	%REC	11/8/16 10:30	80-120
1,2,3-Trichlorobenzene	104%	%REC	11/8/16 10:30	80-120
2-Methylnaphthalene	102%	%REC	11/8/16 10:30	80-120
<b>SURROGATES</b>				
	Percent Recovery	Limits	Completed	Lab File ID
1,2-DCA-d4	104	70-130	11/8/16 10:30	A16110802
Toluene-d8	105	70-130	11/8/16 10:30	A16110802
Bromofluorobenzene	107	70-130	11/8/16 10:30	A16110802

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL.; E = Measurement exceeded upper calibration range of instrument.



Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110803  
 Beacon Sample ID: LB\_161108a  
 Client ID/Sampling Location:  
 Date Time Collected:  
 Matrix:  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received:  
 Analysis Date: 11/8/2016  
 Analysis Time: 10:53:00 AM  
 Beacon Job Number:

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/8/16 10:53
1,1-Dichloroethene	U	10.00	U	2.52	11/8/16 10:53
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/8/16 10:53
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 10:53
Methyl-t-butyl ether	U	10.00	U	2.77	11/8/16 10:53
1,1-Dichloroethane	U	10.00	U	2.47	11/8/16 10:53
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 10:53
Chloroform	U	10.00	U	2.05	11/8/16 10:53
1,2-Dichloroethane	U	10.00	U	2.47	11/8/16 10:53
1,1,1-Trichloroethane	U	10.00	U	1.83	11/8/16 10:53
Carbon Tetrachloride	U	10.00	U	1.59	11/8/16 10:53
Benzene	U	10.00	U	3.13	11/8/16 10:53
Trichloroethene	U	10.00	U	1.86	11/8/16 10:53
1,4-Dioxane	U	10.00	U	2.77	11/8/16 10:53
1,1,2-Trichloroethane	U	10.00	U	1.83	11/8/16 10:53
Toluene	U	10.00	U	2.65	11/8/16 10:53
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/8/16 10:53
Tetrachloroethene	U	10.00	U	1.47	11/8/16 10:53
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 10:53
Chlorobenzene	U	10.00	U	2.17	11/8/16 10:53
Ethylbenzene	U	10.00	U	2.30	11/8/16 10:53
p & m-Xylene	U	10.00	U	2.30	11/8/16 10:53
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 10:53
o-Xylene	U	10.00	U	2.30	11/8/16 10:53
1,2,3-Trichloropropane	U	10.00	U	1.66	11/8/16 10:53
Isopropylbenzene	U	10.00	U	2.03	11/8/16 10:53
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/8/16 10:53
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/8/16 10:53
1,3-Dichlorobenzene	U	10.00	U	1.66	11/8/16 10:53
1,4-Dichlorobenzene	U	10.00	U	1.66	11/8/16 10:53
1,2-Dichlorobenzene	U	10.00	U	1.66	11/8/16 10:53
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/8/16 10:53
Naphthalene	U	10.00	U	1.91	11/8/16 10:53
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/8/16 10:53
2-Methylnaphthalene	U	10.00	U	1.72	11/8/16 10:53
SURROGATES	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>102</b>	70-130	A16110803		11/8/16 10:53
Toluene-d8	<b>107</b>	70-130	A16110803		11/8/16 10:53
Bromofluorobenzene	<b>102</b>	70-130	A16110803		11/8/16 10:53

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110804  
 Beacon Sample ID: LCSD\_161108a  
 Client ID/Sampling Location:  
 Date Time Collected:  
 Matrix:  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received:  
 Analysis Date: 11/8/2016  
 Analysis Time: 11:16:00 AM  
 Beacon Job Number:

	Results	Units	Completed	Limits
<b>COMPOUNDS</b>				
Vinyl Chloride	80%	%REC	11/8/16 11:16	70-130
1,1-Dichloroethene	87%	%REC	11/8/16 11:16	70-130
1,1,2-Trichlorotrifluoroethane (Fr.113)	80%	%REC	11/8/16 11:16	70-130
trans-1,2-Dichloroethene	101%	%REC	11/8/16 11:16	70-130
Methyl-t-butyl ether	84%	%REC	11/8/16 11:16	70-130
1,1-Dichloroethane	104%	%REC	11/8/16 11:16	70-130
cis-1,2-Dichloroethene	104%	%REC	11/8/16 11:16	70-130
Chloroform	103%	%REC	11/8/16 11:16	70-130
1,2-Dichloroethane	98%	%REC	11/8/16 11:16	70-130
1,1,1-Trichloroethane	88%	%REC	11/8/16 11:16	70-130
Carbon Tetrachloride	88%	%REC	11/8/16 11:16	70-130
Benzene	100%	%REC	11/8/16 11:16	70-130
Trichloroethene	106%	%REC	11/8/16 11:16	70-130
1,4-Dioxane	108%	%REC	11/8/16 11:16	70-130
1,1,2-Trichloroethane	105%	%REC	11/8/16 11:16	70-130
Toluene	111%	%REC	11/8/16 11:16	70-130
1,2-Dibromoethane (EDB)	112%	%REC	11/8/16 11:16	70-130
Tetrachloroethene	95%	%REC	11/8/16 11:16	70-130
1,1,1,2-Tetrachloroethane	99%	%REC	11/8/16 11:16	70-130
Chlorobenzene	101%	%REC	11/8/16 11:16	70-130
Ethylbenzene	99%	%REC	11/8/16 11:16	70-130
p & m-Xylene	99%	%REC	11/8/16 11:16	70-130
1,1,2,2-Tetrachloroethane	99%	%REC	11/8/16 11:16	70-130
o-Xylene	96%	%REC	11/8/16 11:16	70-130
1,2,3-Trichloropropane	95%	%REC	11/8/16 11:16	70-130
Isopropylbenzene	98%	%REC	11/8/16 11:16	70-130
1,3,5-Trimethylbenzene	108%	%REC	11/8/16 11:16	70-130
1,2,4-Trimethylbenzene	100%	%REC	11/8/16 11:16	70-130
1,3-Dichlorobenzene	101%	%REC	11/8/16 11:16	70-130
1,4-Dichlorobenzene	103%	%REC	11/8/16 11:16	70-130
1,2-Dichlorobenzene	102%	%REC	11/8/16 11:16	70-130
1,2,4-Trichlorobenzene	111%	%REC	11/8/16 11:16	70-130
Naphthalene	108%	%REC	11/8/16 11:16	70-130
1,2,3-Trichlorobenzene	104%	%REC	11/8/16 11:16	70-130
2-Methylnaphthalene	96%	%REC	11/8/16 11:16	70-130
<b>SURROGATES</b>				
	Percent Recovery	Limits	Completed	Lab File ID
1,2-DCA-d4	99	70-130	11/8/16 11:16	A16110804
Toluene-d8	108	70-130	11/8/16 11:16	A16110804
Bromofluorobenzene	102	70-130	11/8/16 11:16	A16110804

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL.; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110806  
 Beacon Sample ID: HO234823  
 Client ID/Sampling Location: SV-03A  
 Date Time Collected: 10/26/16 3:01 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/4/2016  
 Analysis Date: 11/8/2016  
 Analysis Time: 12:26:00 PM  
 Beacon Job Number: 3588

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/8/16 12:26
1,1-Dichloroethene	U	10.00	U	2.52	11/8/16 12:26
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/8/16 12:26
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 12:26
Methyl-t-butyl ether	U	10.00	U	2.77	11/8/16 12:26
1,1-Dichloroethane	U	10.00	U	2.47	11/8/16 12:26
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 12:26
Chloroform	U	10.00	U	2.05	11/8/16 12:26
1,2-Dichloroethane	U	10.00	U	2.47	11/8/16 12:26
1,1,1-Trichloroethane	U	10.00	U	1.83	11/8/16 12:26
Carbon Tetrachloride	U	10.00	U	1.59	11/8/16 12:26
Benzene	U	10.00	U	3.13	11/8/16 12:26
Trichloroethene	U	10.00	U	1.86	11/8/16 12:26
1,4-Dioxane	U	10.00	U	2.77	11/8/16 12:26
1,1,2-Trichloroethane	U	10.00	U	1.83	11/8/16 12:26
Toluene	<b>44.57</b>	10.00	<b>11.83</b>	2.65	11/8/16 12:26
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/8/16 12:26
Tetrachloroethene	U	10.00	U	1.47	11/8/16 12:26
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 12:26
Chlorobenzene	U	10.00	U	2.17	11/8/16 12:26
Ethylbenzene	U	10.00	U	2.30	11/8/16 12:26
p & m-Xylene	<b>27.43</b>	10.00	<b>6.32</b>	2.30	11/8/16 12:26
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 12:26
o-Xylene	U	10.00	U	2.30	11/8/16 12:26
1,2,3-Trichloropropane	U	10.00	U	1.66	11/8/16 12:26
Isopropylbenzene	U	10.00	U	2.03	11/8/16 12:26
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/8/16 12:26
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/8/16 12:26
1,3-Dichlorobenzene	U	10.00	U	1.66	11/8/16 12:26
1,4-Dichlorobenzene	U	10.00	U	1.66	11/8/16 12:26
1,2-Dichlorobenzene	U	10.00	U	1.66	11/8/16 12:26
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/8/16 12:26
Naphthalene	<b>19.56</b>	10.00	<b>3.73</b>	1.91	11/8/16 12:26
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/8/16 12:26
2-Methylnaphthalene	U	10.00	U	1.72	11/8/16 12:26
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>96</b>	70-130	A16110806		11/8/16 12:26
Toluene-d8	<b>103</b>	70-130	A16110806		11/8/16 12:26
Bromofluorobenzene	<b>108</b>	70-130	A16110806		11/8/16 12:26

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110808  
 Beacon Sample ID: GO119804  
 Client ID/Sampling Location: SV-04A  
 Date Time Collected: 10/26/16 4:10 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/4/2016  
 Analysis Date: 11/8/2016  
 Analysis Time: 1:13:00 PM  
 Beacon Job Number: 3588

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/8/16 13:13
1,1-Dichloroethene	U	10.00	U	2.52	11/8/16 13:13
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/8/16 13:13
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 13:13
Methyl-t-butyl ether	U	10.00	U	2.77	11/8/16 13:13
1,1-Dichloroethane	U	10.00	U	2.47	11/8/16 13:13
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 13:13
Chloroform	U	10.00	U	2.05	11/8/16 13:13
1,2-Dichloroethane	U	10.00	U	2.47	11/8/16 13:13
1,1,1-Trichloroethane	U	10.00	U	1.83	11/8/16 13:13
Carbon Tetrachloride	U	10.00	U	1.59	11/8/16 13:13
Benzene	U	10.00	U	3.13	11/8/16 13:13
Trichloroethene	U	10.00	U	1.86	11/8/16 13:13
1,4-Dioxane	U	10.00	U	2.77	11/8/16 13:13
1,1,2-Trichloroethane	U	10.00	U	1.83	11/8/16 13:13
Toluene	<b>13.25</b>	10.00	<b>3.52</b>	2.65	11/8/16 13:13
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/8/16 13:13
Tetrachloroethene	U	10.00	U	1.47	11/8/16 13:13
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 13:13
Chlorobenzene	U	10.00	U	2.17	11/8/16 13:13
Ethylbenzene	U	10.00	U	2.30	11/8/16 13:13
p & m-Xylene	U	10.00	U	2.30	11/8/16 13:13
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 13:13
o-Xylene	U	10.00	U	2.30	11/8/16 13:13
1,2,3-Trichloropropane	U	10.00	U	1.66	11/8/16 13:13
Isopropylbenzene	U	10.00	U	2.03	11/8/16 13:13
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/8/16 13:13
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/8/16 13:13
1,3-Dichlorobenzene	U	10.00	U	1.66	11/8/16 13:13
1,4-Dichlorobenzene	U	10.00	U	1.66	11/8/16 13:13
1,2-Dichlorobenzene	U	10.00	U	1.66	11/8/16 13:13
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/8/16 13:13
Naphthalene	U	10.00	U	1.91	11/8/16 13:13
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/8/16 13:13
2-Methylnaphthalene	U	10.00	U	1.72	11/8/16 13:13
<hr/>					
SURROGATES	Percent Recovery	Limits	Lab File ID	Completed	
1,2-DCA-d4	<b>99</b>	70-130	A16110808	11/8/16 13:13	
Toluene-d8	<b>106</b>	70-130	A16110808	11/8/16 13:13	
Bromofluorobenzene	<b>105</b>	70-130	A16110808	11/8/16 13:13	

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110810  
 Beacon Sample ID: HO234809  
 Client ID/Sampling Location: SV-06A  
 Date Time Collected: 10/25/16 11:33 AM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/4/2016  
 Analysis Date: 11/8/2016  
 Analysis Time: 1:59:00 PM  
 Beacon Job Number: 3588

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/8/16 13:59
1,1-Dichloroethene	U	10.00	U	2.52	11/8/16 13:59
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/8/16 13:59
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 13:59
Methyl-t-butyl ether	U	10.00	U	2.77	11/8/16 13:59
1,1-Dichloroethane	U	10.00	U	2.47	11/8/16 13:59
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 13:59
Chloroform	U	10.00	U	2.05	11/8/16 13:59
1,2-Dichloroethane	U	10.00	U	2.47	11/8/16 13:59
1,1,1-Trichloroethane	U	10.00	U	1.83	11/8/16 13:59
Carbon Tetrachloride	U	10.00	U	1.59	11/8/16 13:59
Benzene	U	10.00	U	3.13	11/8/16 13:59
Trichloroethene	U	10.00	U	1.86	11/8/16 13:59
1,4-Dioxane	U	10.00	U	2.77	11/8/16 13:59
1,1,2-Trichloroethane	U	10.00	U	1.83	11/8/16 13:59
Toluene	U	10.00	U	2.65	11/8/16 13:59
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/8/16 13:59
Tetrachloroethene	U	10.00	U	1.47	11/8/16 13:59
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 13:59
Chlorobenzene	U	10.00	U	2.17	11/8/16 13:59
Ethylbenzene	U	10.00	U	2.30	11/8/16 13:59
p & m-Xylene	U	10.00	U	2.30	11/8/16 13:59
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 13:59
o-Xylene	U	10.00	U	2.30	11/8/16 13:59
1,2,3-Trichloropropane	U	10.00	U	1.66	11/8/16 13:59
Isopropylbenzene	U	10.00	U	2.03	11/8/16 13:59
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/8/16 13:59
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/8/16 13:59
1,3-Dichlorobenzene	U	10.00	U	1.66	11/8/16 13:59
1,4-Dichlorobenzene	U	10.00	U	1.66	11/8/16 13:59
1,2-Dichlorobenzene	U	10.00	U	1.66	11/8/16 13:59
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/8/16 13:59
Naphthalene	U	10.00	U	1.91	11/8/16 13:59
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/8/16 13:59
2-Methylnaphthalene	U	10.00	U	1.72	11/8/16 13:59
SURROGATES	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>98</b>	70-130	A16110810		11/8/16 13:59
Toluene-d8	<b>107</b>	70-130	A16110810		11/8/16 13:59
Bromofluorobenzene	<b>104</b>	70-130	A16110810		11/8/16 13:59

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110812  
 Beacon Sample ID: HO199678  
 Client ID/Sampling Location: SV-07A  
 Date Time Collected: 10/25/16 1:40 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/4/2016  
 Analysis Date: 11/8/2016  
 Analysis Time: 2:45:00 PM  
 Beacon Job Number: 3588

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/8/16 14:45
1,1-Dichloroethene	U	10.00	U	2.52	11/8/16 14:45
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/8/16 14:45
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 14:45
Methyl-t-butyl ether	U	10.00	U	2.77	11/8/16 14:45
1,1-Dichloroethane	U	10.00	U	2.47	11/8/16 14:45
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 14:45
Chloroform	U	10.00	U	2.05	11/8/16 14:45
1,2-Dichloroethane	U	10.00	U	2.47	11/8/16 14:45
1,1,1-Trichloroethane	U	10.00	U	1.83	11/8/16 14:45
Carbon Tetrachloride	U	10.00	U	1.59	11/8/16 14:45
Benzene	U	10.00	U	3.13	11/8/16 14:45
Trichloroethene	U	10.00	U	1.86	11/8/16 14:45
1,4-Dioxane	U	10.00	U	2.77	11/8/16 14:45
1,1,2-Trichloroethane	U	10.00	U	1.83	11/8/16 14:45
Toluene	U	10.00	U	2.65	11/8/16 14:45
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/8/16 14:45
Tetrachloroethene	U	10.00	U	1.47	11/8/16 14:45
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 14:45
Chlorobenzene	U	10.00	U	2.17	11/8/16 14:45
Ethylbenzene	U	10.00	U	2.30	11/8/16 14:45
p & m-Xylene	U	10.00	U	2.30	11/8/16 14:45
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 14:45
o-Xylene	U	10.00	U	2.30	11/8/16 14:45
1,2,3-Trichloropropane	U	10.00	U	1.66	11/8/16 14:45
Isopropylbenzene	U	10.00	U	2.03	11/8/16 14:45
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/8/16 14:45
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/8/16 14:45
1,3-Dichlorobenzene	U	10.00	U	1.66	11/8/16 14:45
1,4-Dichlorobenzene	U	10.00	U	1.66	11/8/16 14:45
1,2-Dichlorobenzene	U	10.00	U	1.66	11/8/16 14:45
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/8/16 14:45
Naphthalene	U	10.00	U	1.91	11/8/16 14:45
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/8/16 14:45
2-Methylnaphthalene	U	10.00	U	1.72	11/8/16 14:45
SURROGATES	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>96</b>	70-130	A16110812		11/8/16 14:45
Toluene-d8	<b>103</b>	70-130	A16110812		11/8/16 14:45
Bromofluorobenzene	<b>104</b>	70-130	A16110812		11/8/16 14:45

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.



Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110814  
 Beacon Sample ID: 1049238  
 Client ID/Sampling Location: SV-08A  
 Date Time Collected: 10/25/16 3:42 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/4/2016  
 Analysis Date: 11/8/2016  
 Analysis Time: 3:31:00 PM  
 Beacon Job Number: 3588

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/8/16 15:31
1,1-Dichloroethene	U	10.00	U	2.52	11/8/16 15:31
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/8/16 15:31
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 15:31
Methyl-t-butyl ether	U	10.00	U	2.77	11/8/16 15:31
1,1-Dichloroethane	U	10.00	U	2.47	11/8/16 15:31
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 15:31
Chloroform	U	10.00	U	2.05	11/8/16 15:31
1,2-Dichloroethane	U	10.00	U	2.47	11/8/16 15:31
1,1,1-Trichloroethane	U	10.00	U	1.83	11/8/16 15:31
Carbon Tetrachloride	U	10.00	U	1.59	11/8/16 15:31
Benzene	U	10.00	U	3.13	11/8/16 15:31
Trichloroethene	U	10.00	U	1.86	11/8/16 15:31
1,4-Dioxane	U	10.00	U	2.77	11/8/16 15:31
1,1,2-Trichloroethane	U	10.00	U	1.83	11/8/16 15:31
Toluene	U	10.00	U	2.65	11/8/16 15:31
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/8/16 15:31
Tetrachloroethene	U	10.00	U	1.47	11/8/16 15:31
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 15:31
Chlorobenzene	U	10.00	U	2.17	11/8/16 15:31
Ethylbenzene	U	10.00	U	2.30	11/8/16 15:31
p & m-Xylene	U	10.00	U	2.30	11/8/16 15:31
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 15:31
o-Xylene	U	10.00	U	2.30	11/8/16 15:31
1,2,3-Trichloropropane	U	10.00	U	1.66	11/8/16 15:31
Isopropylbenzene	U	10.00	U	2.03	11/8/16 15:31
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/8/16 15:31
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/8/16 15:31
1,3-Dichlorobenzene	U	10.00	U	1.66	11/8/16 15:31
1,4-Dichlorobenzene	U	10.00	U	1.66	11/8/16 15:31
1,2-Dichlorobenzene	U	10.00	U	1.66	11/8/16 15:31
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/8/16 15:31
Naphthalene	U	10.00	U	1.91	11/8/16 15:31
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/8/16 15:31
2-Methylnaphthalene	U	10.00	U	1.72	11/8/16 15:31
SURROGATES	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>97</b>	70-130	A16110814		11/8/16 15:31
Toluene-d8	<b>107</b>	70-130	A16110814		11/8/16 15:31
Bromofluorobenzene	<b>102</b>	70-130	A16110814		11/8/16 15:31

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110816  
 Beacon Sample ID: GO177458  
 Client ID/Sampling Location: SV-09A  
 Date Time Collected: 10/25/16 5:23 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/4/2016  
 Analysis Date: 11/8/2016  
 Analysis Time: 4:18:00 PM  
 Beacon Job Number: 3588

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/8/16 16:18
1,1-Dichloroethene	U	10.00	U	2.52	11/8/16 16:18
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/8/16 16:18
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 16:18
Methyl-t-butyl ether	U	10.00	U	2.77	11/8/16 16:18
1,1-Dichloroethane	U	10.00	U	2.47	11/8/16 16:18
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 16:18
Chloroform	U	10.00	U	2.05	11/8/16 16:18
1,2-Dichloroethane	U	10.00	U	2.47	11/8/16 16:18
1,1,1-Trichloroethane	U	10.00	U	1.83	11/8/16 16:18
Carbon Tetrachloride	U	10.00	U	1.59	11/8/16 16:18
Benzene	U	10.00	U	3.13	11/8/16 16:18
Trichloroethene	U	10.00	U	1.86	11/8/16 16:18
1,4-Dioxane	U	10.00	U	2.77	11/8/16 16:18
1,1,2-Trichloroethane	U	10.00	U	1.83	11/8/16 16:18
Toluene	U	10.00	U	2.65	11/8/16 16:18
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/8/16 16:18
Tetrachloroethene	U	10.00	U	1.47	11/8/16 16:18
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 16:18
Chlorobenzene	U	10.00	U	2.17	11/8/16 16:18
Ethylbenzene	U	10.00	U	2.30	11/8/16 16:18
p & m-Xylene	U	10.00	U	2.30	11/8/16 16:18
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 16:18
o-Xylene	U	10.00	U	2.30	11/8/16 16:18
1,2,3-Trichloropropane	U	10.00	U	1.66	11/8/16 16:18
Isopropylbenzene	U	10.00	U	2.03	11/8/16 16:18
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/8/16 16:18
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/8/16 16:18
1,3-Dichlorobenzene	U	10.00	U	1.66	11/8/16 16:18
1,4-Dichlorobenzene	U	10.00	U	1.66	11/8/16 16:18
1,2-Dichlorobenzene	U	10.00	U	1.66	11/8/16 16:18
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/8/16 16:18
Naphthalene	U	10.00	U	1.91	11/8/16 16:18
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/8/16 16:18
2-Methylnaphthalene	U	10.00	U	1.72	11/8/16 16:18
SURROGATES	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>99</b>	70-130	A16110816		11/8/16 16:18
Toluene-d8	<b>106</b>	70-130	A16110816		11/8/16 16:18
Bromofluorobenzene	<b>107</b>	70-130	A16110816		11/8/16 16:18

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110818  
 Beacon Sample ID: GO177407  
 Client ID/Sampling Location: SV-10A  
 Date Time Collected: 10/26/16 5:54 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/4/2016  
 Analysis Date: 11/8/2016  
 Analysis Time: 5:04:00 PM  
 Beacon Job Number: 3588

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/8/16 17:04
1,1-Dichloroethene	U	10.00	U	2.52	11/8/16 17:04
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/8/16 17:04
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 17:04
Methyl-t-butyl ether	U	10.00	U	2.77	11/8/16 17:04
1,1-Dichloroethane	U	10.00	U	2.47	11/8/16 17:04
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 17:04
Chloroform	U	10.00	U	2.05	11/8/16 17:04
1,2-Dichloroethane	U	10.00	U	2.47	11/8/16 17:04
1,1,1-Trichloroethane	U	10.00	U	1.83	11/8/16 17:04
Carbon Tetrachloride	U	10.00	U	1.59	11/8/16 17:04
Benzene	U	10.00	U	3.13	11/8/16 17:04
Trichloroethene	U	10.00	U	1.86	11/8/16 17:04
1,4-Dioxane	U	10.00	U	2.77	11/8/16 17:04
1,1,2-Trichloroethane	U	10.00	U	1.83	11/8/16 17:04
Toluene	<b>17.5</b>	10.00	<b>4.64</b>	2.65	11/8/16 17:04
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/8/16 17:04
Tetrachloroethene	U	10.00	U	1.47	11/8/16 17:04
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 17:04
Chlorobenzene	U	10.00	U	2.17	11/8/16 17:04
Ethylbenzene	U	10.00	U	2.30	11/8/16 17:04
p & m-Xylene	U	10.00	U	2.30	11/8/16 17:04
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 17:04
o-Xylene	U	10.00	U	2.30	11/8/16 17:04
1,2,3-Trichloropropane	U	10.00	U	1.66	11/8/16 17:04
Isopropylbenzene	U	10.00	U	2.03	11/8/16 17:04
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/8/16 17:04
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/8/16 17:04
1,3-Dichlorobenzene	U	10.00	U	1.66	11/8/16 17:04
1,4-Dichlorobenzene	U	10.00	U	1.66	11/8/16 17:04
1,2-Dichlorobenzene	U	10.00	U	1.66	11/8/16 17:04
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/8/16 17:04
Naphthalene	U	10.00	U	1.91	11/8/16 17:04
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/8/16 17:04
2-Methylnaphthalene	U	10.00	U	1.72	11/8/16 17:04
SURROGATES	Percent Recovery	Limits	Lab File ID	Completed	
1,2-DCA-d4	<b>96</b>	70-130	A16110818	11/8/16 17:04	
Toluene-d8	<b>106</b>	70-130	A16110818	11/8/16 17:04	
Bromofluorobenzene	<b>105</b>	70-130	A16110818	11/8/16 17:04	

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110820  
 Beacon Sample ID: GO164559  
 Client ID/Sampling Location: SV-11A  
 Date Time Collected: 10/26/16 5:21 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/4/2016  
 Analysis Date: 11/8/2016  
 Analysis Time: 5:51:00 PM  
 Beacon Job Number: 3588

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/8/16 17:51
1,1-Dichloroethene	U	10.00	U	2.52	11/8/16 17:51
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/8/16 17:51
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 17:51
Methyl-t-butyl ether	U	10.00	U	2.77	11/8/16 17:51
1,1-Dichloroethane	U	10.00	U	2.47	11/8/16 17:51
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 17:51
Chloroform	U	10.00	U	2.05	11/8/16 17:51
1,2-Dichloroethane	U	10.00	U	2.47	11/8/16 17:51
1,1,1-Trichloroethane	U	10.00	U	1.83	11/8/16 17:51
Carbon Tetrachloride	U	10.00	U	1.59	11/8/16 17:51
Benzene	U	10.00	U	3.13	11/8/16 17:51
Trichloroethene	U	10.00	U	1.86	11/8/16 17:51
1,4-Dioxane	U	10.00	U	2.77	11/8/16 17:51
1,1,2-Trichloroethane	U	10.00	U	1.83	11/8/16 17:51
Toluene	<b>17.44</b>	10.00	<b>4.63</b>	2.65	11/8/16 17:51
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/8/16 17:51
Tetrachloroethene	U	10.00	U	1.47	11/8/16 17:51
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 17:51
Chlorobenzene	U	10.00	U	2.17	11/8/16 17:51
Ethylbenzene	U	10.00	U	2.30	11/8/16 17:51
p & m-Xylene	U	10.00	U	2.30	11/8/16 17:51
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 17:51
o-Xylene	U	10.00	U	2.30	11/8/16 17:51
1,2,3-Trichloropropane	U	10.00	U	1.66	11/8/16 17:51
Isopropylbenzene	U	10.00	U	2.03	11/8/16 17:51
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/8/16 17:51
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/8/16 17:51
1,3-Dichlorobenzene	U	10.00	U	1.66	11/8/16 17:51
1,4-Dichlorobenzene	U	10.00	U	1.66	11/8/16 17:51
1,2-Dichlorobenzene	U	10.00	U	1.66	11/8/16 17:51
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/8/16 17:51
Naphthalene	U	10.00	U	1.91	11/8/16 17:51
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/8/16 17:51
2-Methylnaphthalene	U	10.00	U	1.72	11/8/16 17:51
SURROGATES	Percent Recovery	Limits	Lab File ID	Completed	
1,2-DCA-d4	<b>96</b>	70-130	A16110820	11/8/16 17:51	
Toluene-d8	<b>108</b>	70-130	A16110820	11/8/16 17:51	
Bromofluorobenzene	<b>107</b>	70-130	A16110820	11/8/16 17:51	

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110822  
 Beacon Sample ID: HO200253  
 Client ID/Sampling Location: SV-12A  
 Date Time Collected: 10/26/16 4:43 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/4/2016  
 Analysis Date: 11/8/2016  
 Analysis Time: 6:39:00 PM  
 Beacon Job Number: 3588

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/8/16 18:39
1,1-Dichloroethene	U	10.00	U	2.52	11/8/16 18:39
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/8/16 18:39
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 18:39
Methyl-t-butyl ether	U	10.00	U	2.77	11/8/16 18:39
1,1-Dichloroethane	U	10.00	U	2.47	11/8/16 18:39
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 18:39
Chloroform	U	10.00	U	2.05	11/8/16 18:39
1,2-Dichloroethane	U	10.00	U	2.47	11/8/16 18:39
1,1,1-Trichloroethane	U	10.00	U	1.83	11/8/16 18:39
Carbon Tetrachloride	U	10.00	U	1.59	11/8/16 18:39
Benzene	U	10.00	U	3.13	11/8/16 18:39
Trichloroethene	U	10.00	U	1.86	11/8/16 18:39
1,4-Dioxane	U	10.00	U	2.77	11/8/16 18:39
1,1,2-Trichloroethane	U	10.00	U	1.83	11/8/16 18:39
Toluene	<b>14.31</b>	10.00	<b>3.8</b>	2.65	11/8/16 18:39
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/8/16 18:39
Tetrachloroethene	U	10.00	U	1.47	11/8/16 18:39
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 18:39
Chlorobenzene	U	10.00	U	2.17	11/8/16 18:39
Ethylbenzene	U	10.00	U	2.30	11/8/16 18:39
p & m-Xylene	U	10.00	U	2.30	11/8/16 18:39
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 18:39
o-Xylene	U	10.00	U	2.30	11/8/16 18:39
1,2,3-Trichloropropane	U	10.00	U	1.66	11/8/16 18:39
Isopropylbenzene	U	10.00	U	2.03	11/8/16 18:39
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/8/16 18:39
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/8/16 18:39
1,3-Dichlorobenzene	U	10.00	U	1.66	11/8/16 18:39
1,4-Dichlorobenzene	U	10.00	U	1.66	11/8/16 18:39
1,2-Dichlorobenzene	U	10.00	U	1.66	11/8/16 18:39
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/8/16 18:39
Naphthalene	U	10.00	U	1.91	11/8/16 18:39
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/8/16 18:39
2-Methylnaphthalene	U	10.00	U	1.72	11/8/16 18:39
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>96</b>	70-130	A16110822		11/8/16 18:39
Toluene-d8	<b>103</b>	70-130	A16110822		11/8/16 18:39
Bromofluorobenzene	<b>106</b>	70-130	A16110822		11/8/16 18:39

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110824  
 Beacon Sample ID: GO115947  
 Client ID/Sampling Location: SV-14A  
 Date Time Collected: 10/26/16 3:38 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/4/2016  
 Analysis Date: 11/8/2016  
 Analysis Time: 7:25:00 PM  
 Beacon Job Number: 3588

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/8/16 19:25
1,1-Dichloroethene	U	10.00	U	2.52	11/8/16 19:25
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/8/16 19:25
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 19:25
Methyl-t-butyl ether	U	10.00	U	2.77	11/8/16 19:25
1,1-Dichloroethane	U	10.00	U	2.47	11/8/16 19:25
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 19:25
Chloroform	U	10.00	U	2.05	11/8/16 19:25
1,2-Dichloroethane	U	10.00	U	2.47	11/8/16 19:25
1,1,1-Trichloroethane	U	10.00	U	1.83	11/8/16 19:25
Carbon Tetrachloride	U	10.00	U	1.59	11/8/16 19:25
Benzene	U	10.00	U	3.13	11/8/16 19:25
Trichloroethene	U	10.00	U	1.86	11/8/16 19:25
1,4-Dioxane	U	10.00	U	2.77	11/8/16 19:25
1,1,2-Trichloroethane	U	10.00	U	1.83	11/8/16 19:25
Toluene	<b>31.71</b>	10.00	<b>8.42</b>	2.65	11/8/16 19:25
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/8/16 19:25
Tetrachloroethene	U	10.00	U	1.47	11/8/16 19:25
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 19:25
Chlorobenzene	U	10.00	U	2.17	11/8/16 19:25
Ethylbenzene	U	10.00	U	2.30	11/8/16 19:25
p & m-Xylene	<b>21.31</b>	10.00	<b>4.91</b>	2.30	11/8/16 19:25
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 19:25
o-Xylene	U	10.00	U	2.30	11/8/16 19:25
1,2,3-Trichloropropane	U	10.00	U	1.66	11/8/16 19:25
Isopropylbenzene	U	10.00	U	2.03	11/8/16 19:25
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/8/16 19:25
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/8/16 19:25
1,3-Dichlorobenzene	U	10.00	U	1.66	11/8/16 19:25
1,4-Dichlorobenzene	U	10.00	U	1.66	11/8/16 19:25
1,2-Dichlorobenzene	U	10.00	U	1.66	11/8/16 19:25
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/8/16 19:25
Naphthalene	<b>14.05</b>	10.00	<b>2.68</b>	1.91	11/8/16 19:25
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/8/16 19:25
2-Methylnaphthalene	U	10.00	U	1.72	11/8/16 19:25
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>95</b>	70-130	A16110824		11/8/16 19:25
Toluene-d8	<b>107</b>	70-130	A16110824		11/8/16 19:25
Bromofluorobenzene	<b>107</b>	70-130	A16110824		11/8/16 19:25

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.



Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110826  
 Beacon Sample ID: HO199673  
 Client ID/Sampling Location: SV-16A  
 Date Time Collected: 10/26/16 1:40 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/4/2016  
 Analysis Date: 11/8/2016  
 Analysis Time: 8:12:00 PM  
 Beacon Job Number: 3588

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/8/16 20:12
1,1-Dichloroethene	U	10.00	U	2.52	11/8/16 20:12
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/8/16 20:12
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 20:12
Methyl-t-butyl ether	U	10.00	U	2.77	11/8/16 20:12
1,1-Dichloroethane	U	10.00	U	2.47	11/8/16 20:12
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 20:12
Chloroform	U	10.00	U	2.05	11/8/16 20:12
1,2-Dichloroethane	U	10.00	U	2.47	11/8/16 20:12
1,1,1-Trichloroethane	U	10.00	U	1.83	11/8/16 20:12
Carbon Tetrachloride	U	10.00	U	1.59	11/8/16 20:12
Benzene	U	10.00	U	3.13	11/8/16 20:12
Trichloroethene	U	10.00	U	1.86	11/8/16 20:12
1,4-Dioxane	U	10.00	U	2.77	11/8/16 20:12
1,1,2-Trichloroethane	U	10.00	U	1.83	11/8/16 20:12
Toluene	<b>55.72</b>	10.00	<b>14.79</b>	2.65	11/8/16 20:12
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/8/16 20:12
Tetrachloroethene	U	10.00	U	1.47	11/8/16 20:12
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 20:12
Chlorobenzene	U	10.00	U	2.17	11/8/16 20:12
Ethylbenzene	<b>11.59</b>	10.00	<b>2.67</b>	2.30	11/8/16 20:12
p & m-Xylene	<b>39.66</b>	10.00	<b>9.13</b>	2.30	11/8/16 20:12
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 20:12
o-Xylene	<b>12.96</b>	10.00	<b>2.98</b>	2.30	11/8/16 20:12
1,2,3-Trichloropropane	U	10.00	U	1.66	11/8/16 20:12
Isopropylbenzene	U	10.00	U	2.03	11/8/16 20:12
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/8/16 20:12
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/8/16 20:12
1,3-Dichlorobenzene	U	10.00	U	1.66	11/8/16 20:12
1,4-Dichlorobenzene	U	10.00	U	1.66	11/8/16 20:12
1,2-Dichlorobenzene	U	10.00	U	1.66	11/8/16 20:12
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/8/16 20:12
Naphthalene	<b>24.05</b>	10.00	<b>4.59</b>	1.91	11/8/16 20:12
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/8/16 20:12
2-Methylnaphthalene	U	10.00	U	1.72	11/8/16 20:12
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>94</b>	70-130	A16110826		11/8/16 20:12
Toluene-d8	<b>105</b>	70-130	A16110826		11/8/16 20:12
Bromofluorobenzene	<b>109</b>	70-130	A16110826		11/8/16 20:12

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110828  
 Beacon Sample ID: HO232690  
 Client ID/Sampling Location: SV-17A  
 Date Time Collected: 10/26/16 2:23 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/4/2016  
 Analysis Date: 11/8/2016  
 Analysis Time: 8:59:00 PM  
 Beacon Job Number: 3588

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/8/16 20:59
1,1-Dichloroethene	U	10.00	U	2.52	11/8/16 20:59
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/8/16 20:59
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 20:59
Methyl-t-butyl ether	U	10.00	U	2.77	11/8/16 20:59
1,1-Dichloroethane	U	10.00	U	2.47	11/8/16 20:59
cis-1,2-Dichloroethane	U	10.00	U	2.52	11/8/16 20:59
Chloroform	U	10.00	U	2.05	11/8/16 20:59
1,2-Dichloroethane	U	10.00	U	2.47	11/8/16 20:59
1,1,1-Trichloroethane	U	10.00	U	1.83	11/8/16 20:59
Carbon Tetrachloride	U	10.00	U	1.59	11/8/16 20:59
Benzene	U	10.00	U	3.13	11/8/16 20:59
Trichloroethene	U	10.00	U	1.86	11/8/16 20:59
1,4-Dioxane	U	10.00	U	2.77	11/8/16 20:59
1,1,2-Trichloroethane	U	10.00	U	1.83	11/8/16 20:59
Toluene	<b>41.0</b>	10.00	<b>10.88</b>	2.65	11/8/16 20:59
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/8/16 20:59
Tetrachloroethene	U	10.00	U	1.47	11/8/16 20:59
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 20:59
Chlorobenzene	U	10.00	U	2.17	11/8/16 20:59
Ethylbenzene	<b>10.04</b>	10.00	<b>2.31</b>	2.30	11/8/16 20:59
p & m-Xylene	<b>34.11</b>	10.00	<b>7.86</b>	2.30	11/8/16 20:59
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 20:59
o-Xylene	<b>12.04</b>	10.00	<b>2.77</b>	2.30	11/8/16 20:59
1,2,3-Trichloropropane	U	10.00	U	1.66	11/8/16 20:59
Isopropylbenzene	U	10.00	U	2.03	11/8/16 20:59
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/8/16 20:59
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/8/16 20:59
1,3-Dichlorobenzene	U	10.00	U	1.66	11/8/16 20:59
1,4-Dichlorobenzene	U	10.00	U	1.66	11/8/16 20:59
1,2-Dichlorobenzene	U	10.00	U	1.66	11/8/16 20:59
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/8/16 20:59
Naphthalene	<b>22.73</b>	10.00	<b>4.34</b>	1.91	11/8/16 20:59
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/8/16 20:59
2-Methylnaphthalene	U	10.00	U	1.72	11/8/16 20:59
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>95</b>	70-130	A16110828		11/8/16 20:59
Toluene-d8	<b>104</b>	70-130	A16110828		11/8/16 20:59
Bromofluorobenzene	<b>107</b>	70-130	A16110828		11/8/16 20:59

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110830  
 Beacon Sample ID: HO199664  
 Client ID/Sampling Location: SV-21A  
 Date Time Collected: 10/27/16 4:24 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/4/2016  
 Analysis Date: 11/8/2016  
 Analysis Time: 9:45:00 PM  
 Beacon Job Number: 3588

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/8/16 21:45
1,1-Dichloroethene	U	10.00	U	2.52	11/8/16 21:45
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/8/16 21:45
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 21:45
Methyl-t-butyl ether	U	10.00	U	2.77	11/8/16 21:45
1,1-Dichloroethane	U	10.00	U	2.47	11/8/16 21:45
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 21:45
Chloroform	U	10.00	U	2.05	11/8/16 21:45
1,2-Dichloroethane	U	10.00	U	2.47	11/8/16 21:45
1,1,1-Trichloroethane	U	10.00	U	1.83	11/8/16 21:45
Carbon Tetrachloride	U	10.00	U	1.59	11/8/16 21:45
Benzene	U	10.00	U	3.13	11/8/16 21:45
Trichloroethene	U	10.00	U	1.86	11/8/16 21:45
1,4-Dioxane	<b>14.72</b>	10.00	<b>4.08</b>	2.77	11/8/16 21:45
1,1,2-Trichloroethane	U	10.00	U	1.83	11/8/16 21:45
Toluene	<b>36.29</b>	10.00	<b>9.63</b>	2.65	11/8/16 21:45
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/8/16 21:45
Tetrachloroethene	U	10.00	U	1.47	11/8/16 21:45
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 21:45
Chlorobenzene	U	10.00	U	2.17	11/8/16 21:45
Ethylbenzene	U	10.00	U	2.30	11/8/16 21:45
p & m-Xylene	U	10.00	U	2.30	11/8/16 21:45
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 21:45
o-Xylene	U	10.00	U	2.30	11/8/16 21:45
1,2,3-Trichloropropane	U	10.00	U	1.66	11/8/16 21:45
Isopropylbenzene	U	10.00	U	2.03	11/8/16 21:45
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/8/16 21:45
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/8/16 21:45
1,3-Dichlorobenzene	<b>949.69 E</b>	10.00	<b>157.95 E</b>	1.66	11/8/16 21:45
1,4-Dichlorobenzene	U	10.00	U	1.66	11/8/16 21:45
1,2-Dichlorobenzene	U	10.00	U	1.66	11/8/16 21:45
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/8/16 21:45
Naphthalene	U	10.00	U	1.91	11/8/16 21:45
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/8/16 21:45
2-Methylnaphthalene	U	10.00	U	1.72	11/8/16 21:45
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>94</b>	70-130	A16110830		11/8/16 21:45
Toluene-d8	<b>103</b>	70-130	A16110830		11/8/16 21:45
Bromofluorobenzene	<b>107</b>	70-130	A16110830		11/8/16 21:45

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL.; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110832  
 Beacon Sample ID: HO200288  
 Client ID/Sampling Location: SV-23A  
 Date Time Collected: 10/27/16 4:57 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/4/2016  
 Analysis Date: 11/8/2016  
 Analysis Time: 10:31:00 PM  
 Beacon Job Number: 3588

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/8/16 22:31
1,1-Dichloroethene	U	10.00	U	2.52	11/8/16 22:31
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/8/16 22:31
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 22:31
Methyl-t-butyl ether	U	10.00	U	2.77	11/8/16 22:31
1,1-Dichloroethane	U	10.00	U	2.47	11/8/16 22:31
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 22:31
Chloroform	U	10.00	U	2.05	11/8/16 22:31
1,2-Dichloroethane	U	10.00	U	2.47	11/8/16 22:31
1,1,1-Trichloroethane	U	10.00	U	1.83	11/8/16 22:31
Carbon Tetrachloride	U	10.00	U	1.59	11/8/16 22:31
Benzene	U	10.00	U	3.13	11/8/16 22:31
Trichloroethene	U	10.00	U	1.86	11/8/16 22:31
1,4-Dioxane	<b>15.2</b>	10.00	<b>4.22</b>	2.77	11/8/16 22:31
1,1,2-Trichloroethane	U	10.00	U	1.83	11/8/16 22:31
Toluene	<b>28.15</b>	10.00	<b>7.47</b>	2.65	11/8/16 22:31
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/8/16 22:31
Tetrachloroethene	U	10.00	U	1.47	11/8/16 22:31
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 22:31
Chlorobenzene	U	10.00	U	2.17	11/8/16 22:31
Ethylbenzene	U	10.00	U	2.30	11/8/16 22:31
p & m-Xylene	U	10.00	U	2.30	11/8/16 22:31
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 22:31
o-Xylene	U	10.00	U	2.30	11/8/16 22:31
1,2,3-Trichloropropane	U	10.00	U	1.66	11/8/16 22:31
Isopropylbenzene	U	10.00	U	2.03	11/8/16 22:31
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/8/16 22:31
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/8/16 22:31
1,3-Dichlorobenzene	<b>1,076.85 E</b>	10.00	<b>179.1 E</b>	1.66	11/8/16 22:31
1,4-Dichlorobenzene	U	10.00	U	1.66	11/8/16 22:31
1,2-Dichlorobenzene	U	10.00	U	1.66	11/8/16 22:31
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/8/16 22:31
Naphthalene	U	10.00	U	1.91	11/8/16 22:31
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/8/16 22:31
2-Methylnaphthalene	U	10.00	U	1.72	11/8/16 22:31
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>95</b>	70-130	A16110832		11/8/16 22:31
Toluene-d8	<b>101</b>	70-130	A16110832		11/8/16 22:31
Bromofluorobenzene	<b>107</b>	70-130	A16110832		11/8/16 22:31

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110834  
 Beacon Sample ID: 1049249  
 Client ID/Sampling Location: SV-27A  
 Date Time Collected: 10/27/16 3:55 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/4/2016  
 Analysis Date: 11/8/2016  
 Analysis Time: 11:18:00 PM  
 Beacon Job Number: 3588

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/8/16 23:18
1,1-Dichloroethene	U	10.00	U	2.52	11/8/16 23:18
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/8/16 23:18
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 23:18
Methyl-t-butyl ether	U	10.00	U	2.77	11/8/16 23:18
1,1-Dichloroethane	U	10.00	U	2.47	11/8/16 23:18
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/8/16 23:18
Chloroform	U	10.00	U	2.05	11/8/16 23:18
1,2-Dichloroethane	U	10.00	U	2.47	11/8/16 23:18
1,1,1-Trichloroethane	U	10.00	U	1.83	11/8/16 23:18
Carbon Tetrachloride	U	10.00	U	1.59	11/8/16 23:18
Benzene	U	10.00	U	3.13	11/8/16 23:18
Trichloroethene	U	10.00	U	1.86	11/8/16 23:18
1,4-Dioxane	U	10.00	U	2.77	11/8/16 23:18
1,1,2-Trichloroethane	U	10.00	U	1.83	11/8/16 23:18
Toluene	<b>45.91</b>	10.00	<b>12.18</b>	2.65	11/8/16 23:18
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/8/16 23:18
Tetrachloroethene	U	10.00	U	1.47	11/8/16 23:18
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 23:18
Chlorobenzene	U	10.00	U	2.17	11/8/16 23:18
Ethylbenzene	U	10.00	U	2.30	11/8/16 23:18
p & m-Xylene	U	10.00	U	2.30	11/8/16 23:18
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/8/16 23:18
o-Xylene	U	10.00	U	2.30	11/8/16 23:18
1,2,3-Trichloropropane	U	10.00	U	1.66	11/8/16 23:18
Isopropylbenzene	U	10.00	U	2.03	11/8/16 23:18
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/8/16 23:18
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/8/16 23:18
1,3-Dichlorobenzene	<b>876.94 E</b>	10.00	<b>145.85 E</b>	1.66	11/8/16 23:18
1,4-Dichlorobenzene	U	10.00	U	1.66	11/8/16 23:18
1,2-Dichlorobenzene	U	10.00	U	1.66	11/8/16 23:18
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/8/16 23:18
Naphthalene	U	10.00	U	1.91	11/8/16 23:18
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/8/16 23:18
2-Methylnaphthalene	U	10.00	U	1.72	11/8/16 23:18
<hr/>					
SURROGATES	Percent Recovery	Limits	Lab File ID	Completed	
1,2-DCA-d4	<b>95</b>	70-130	A16110834	11/8/16 23:18	
Toluene-d8	<b>104</b>	70-130	A16110834	11/8/16 23:18	
Bromofluorobenzene	<b>107</b>	70-130	A16110834	11/8/16 23:18	

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

## Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110836  
 Beacon Sample ID: 1100863  
 Client ID/Sampling Location: SV-28A  
 Date Time Collected: 10/27/16 3:26 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/4/2016  
 Analysis Date: 11/9/2016  
 Analysis Time: 12:07:00 AM  
 Beacon Job Number: 3588

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/9/16 0:07
1,1-Dichloroethene	U	10.00	U	2.52	11/9/16 0:07
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/9/16 0:07
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 0:07
Methyl-t-butyl ether	U	10.00	U	2.77	11/9/16 0:07
1,1-Dichloroethane	U	10.00	U	2.47	11/9/16 0:07
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 0:07
Chloroform	U	10.00	U	2.05	11/9/16 0:07
1,2-Dichloroethane	U	10.00	U	2.47	11/9/16 0:07
1,1,1-Trichloroethane	U	10.00	U	1.83	11/9/16 0:07
Carbon Tetrachloride	U	10.00	U	1.59	11/9/16 0:07
Benzene	U	10.00	U	3.13	11/9/16 0:07
Trichloroethene	U	10.00	U	1.86	11/9/16 0:07
1,4-Dioxane	U	10.00	U	2.77	11/9/16 0:07
1,1,2-Trichloroethane	U	10.00	U	1.83	11/9/16 0:07
Toluene	<b>47.19</b>	10.00	<b>12.52</b>	2.65	11/9/16 0:07
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/9/16 0:07
Tetrachloroethene	U	10.00	U	1.47	11/9/16 0:07
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 0:07
Chlorobenzene	U	10.00	U	2.17	11/9/16 0:07
Ethylbenzene	U	10.00	U	2.30	11/9/16 0:07
p & m-Xylene	U	10.00	U	2.30	11/9/16 0:07
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 0:07
o-Xylene	U	10.00	U	2.30	11/9/16 0:07
1,2,3-Trichloropropane	U	10.00	U	1.66	11/9/16 0:07
Isopropylbenzene	U	10.00	U	2.03	11/9/16 0:07
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/9/16 0:07
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/9/16 0:07
1,3-Dichlorobenzene	<b>1,179.27 E</b>	10.00	<b>196.13 E</b>	1.66	11/9/16 0:07
1,4-Dichlorobenzene	U	10.00	U	1.66	11/9/16 0:07
1,2-Dichlorobenzene	U	10.00	U	1.66	11/9/16 0:07
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/9/16 0:07
Naphthalene	U	10.00	U	1.91	11/9/16 0:07
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/9/16 0:07
2-Methylnaphthalene	U	10.00	U	1.72	11/9/16 0:07
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>93</b>	70-130	A16110836		11/9/16 0:07
Toluene-d8	<b>104</b>	70-130	A16110836		11/9/16 0:07
Bromofluorobenzene	<b>107</b>	70-130	A16110836		11/9/16 0:07

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.



Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110838  
 Beacon Sample ID: HO200227  
 Client ID/Sampling Location: SV-29A  
 Date Time Collected: 10/27/16 3:00 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/4/2016  
 Analysis Date: 11/9/2016  
 Analysis Time: 12:53:00 AM  
 Beacon Job Number: 3588

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/9/16 0:53
1,1-Dichloroethene	U	10.00	U	2.52	11/9/16 0:53
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/9/16 0:53
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 0:53
Methyl-t-butyl ether	U	10.00	U	2.77	11/9/16 0:53
1,1-Dichloroethane	U	10.00	U	2.47	11/9/16 0:53
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 0:53
Chloroform	U	10.00	U	2.05	11/9/16 0:53
1,2-Dichloroethane	U	10.00	U	2.47	11/9/16 0:53
1,1,1-Trichloroethane	U	10.00	U	1.83	11/9/16 0:53
Carbon Tetrachloride	U	10.00	U	1.59	11/9/16 0:53
Benzene	U	10.00	U	3.13	11/9/16 0:53
Trichloroethene	U	10.00	U	1.86	11/9/16 0:53
1,4-Dioxane	<b>15.66</b>	10.00	<b>4.35</b>	2.77	11/9/16 0:53
1,1,2-Trichloroethane	U	10.00	U	1.83	11/9/16 0:53
Toluene	<b>56.02</b>	10.00	<b>14.87</b>	2.65	11/9/16 0:53
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/9/16 0:53
Tetrachloroethene	U	10.00	U	1.47	11/9/16 0:53
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 0:53
Chlorobenzene	U	10.00	U	2.17	11/9/16 0:53
Ethylbenzene	U	10.00	U	2.30	11/9/16 0:53
p & m-Xylene	<b>27.0</b>	10.00	<b>6.22</b>	2.30	11/9/16 0:53
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 0:53
o-Xylene	U	10.00	U	2.30	11/9/16 0:53
1,2,3-Trichloropropane	U	10.00	U	1.66	11/9/16 0:53
Isopropylbenzene	U	10.00	U	2.03	11/9/16 0:53
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/9/16 0:53
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/9/16 0:53
1,3-Dichlorobenzene	<b>10.06</b>	10.00	<b>1.67</b>	1.66	11/9/16 0:53
1,4-Dichlorobenzene	U	10.00	U	1.66	11/9/16 0:53
1,2-Dichlorobenzene	U	10.00	U	1.66	11/9/16 0:53
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/9/16 0:53
Naphthalene	<b>19.48</b>	10.00	<b>3.72</b>	1.91	11/9/16 0:53
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/9/16 0:53
2-Methylnaphthalene	U	10.00	U	1.72	11/9/16 0:53
<hr/>					
SURROGATES	Percent Recovery	Limits	Lab File ID	Completed	
1,2-DCA-d4	<b>94</b>	70-130	A16110838	11/9/16 0:53	
Toluene-d8	<b>103</b>	70-130	A16110838	11/9/16 0:53	
Bromofluorobenzene	<b>108</b>	70-130	A16110838	11/9/16 0:53	

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110840  
 Beacon Sample ID: GO167057  
 Client ID/Sampling Location: SV-30A  
 Date Time Collected: 10/27/16 2:35 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/4/2016  
 Analysis Date: 11/9/2016  
 Analysis Time: 1:39:00 AM  
 Beacon Job Number: 3588

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/9/16 1:39
1,1-Dichloroethene	U	10.00	U	2.52	11/9/16 1:39
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/9/16 1:39
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 1:39
Methyl-t-butyl ether	U	10.00	U	2.77	11/9/16 1:39
1,1-Dichloroethane	U	10.00	U	2.47	11/9/16 1:39
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 1:39
Chloroform	U	10.00	U	2.05	11/9/16 1:39
1,2-Dichloroethane	U	10.00	U	2.47	11/9/16 1:39
1,1,1-Trichloroethane	U	10.00	U	1.83	11/9/16 1:39
Carbon Tetrachloride	U	10.00	U	1.59	11/9/16 1:39
Benzene	U	10.00	U	3.13	11/9/16 1:39
Trichloroethene	U	10.00	U	1.86	11/9/16 1:39
1,4-Dioxane	<b>11.0</b>	10.00	<b>3.05</b>	2.77	11/9/16 1:39
1,1,2-Trichloroethane	U	10.00	U	1.83	11/9/16 1:39
Toluene	<b>42.76</b>	10.00	<b>11.35</b>	2.65	11/9/16 1:39
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/9/16 1:39
Tetrachloroethene	U	10.00	U	1.47	11/9/16 1:39
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 1:39
Chlorobenzene	U	10.00	U	2.17	11/9/16 1:39
Ethylbenzene	U	10.00	U	2.30	11/9/16 1:39
p & m-Xylene	<b>23.3</b>	10.00	<b>5.37</b>	2.30	11/9/16 1:39
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 1:39
o-Xylene	U	10.00	U	2.30	11/9/16 1:39
1,2,3-Trichloropropane	U	10.00	U	1.66	11/9/16 1:39
Isopropylbenzene	U	10.00	U	2.03	11/9/16 1:39
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/9/16 1:39
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/9/16 1:39
1,3-Dichlorobenzene	U	10.00	U	1.66	11/9/16 1:39
1,4-Dichlorobenzene	U	10.00	U	1.66	11/9/16 1:39
1,2-Dichlorobenzene	U	10.00	U	1.66	11/9/16 1:39
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/9/16 1:39
Naphthalene	<b>13.26</b>	10.00	<b>2.53</b>	1.91	11/9/16 1:39
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/9/16 1:39
2-Methylnaphthalene	U	10.00	U	1.72	11/9/16 1:39
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>93</b>	70-130	A16110840		11/9/16 1:39
Toluene-d8	<b>103</b>	70-130	A16110840		11/9/16 1:39
Bromofluorobenzene	<b>107</b>	70-130	A16110840		11/9/16 1:39

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110842  
 Beacon Sample ID: HO200236  
 Client ID/Sampling Location: SV-31A  
 Date Time Collected: 10/27/16 2:03 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/4/2016  
 Analysis Date: 11/9/2016  
 Analysis Time: 2:26:00 AM  
 Beacon Job Number: 3588

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/9/16 2:26
1,1-Dichloroethene	U	10.00	U	2.52	11/9/16 2:26
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/9/16 2:26
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 2:26
Methyl-t-butyl ether	U	10.00	U	2.77	11/9/16 2:26
1,1-Dichloroethane	U	10.00	U	2.47	11/9/16 2:26
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 2:26
Chloroform	U	10.00	U	2.05	11/9/16 2:26
1,2-Dichloroethane	U	10.00	U	2.47	11/9/16 2:26
1,1,1-Trichloroethane	U	10.00	U	1.83	11/9/16 2:26
Carbon Tetrachloride	U	10.00	U	1.59	11/9/16 2:26
Benzene	U	10.00	U	3.13	11/9/16 2:26
Trichloroethene	U	10.00	U	1.86	11/9/16 2:26
1,4-Dioxane	<b>20.36</b>	10.00	<b>5.65</b>	2.77	11/9/16 2:26
1,1,2-Trichloroethane	U	10.00	U	1.83	11/9/16 2:26
Toluene	<b>40.32</b>	10.00	<b>10.7</b>	2.65	11/9/16 2:26
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/9/16 2:26
Tetrachloroethene	U	10.00	U	1.47	11/9/16 2:26
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 2:26
Chlorobenzene	U	10.00	U	2.17	11/9/16 2:26
Ethylbenzene	U	10.00	U	2.30	11/9/16 2:26
p & m-Xylene	<b>20.18</b>	10.00	<b>4.65</b>	2.30	11/9/16 2:26
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 2:26
o-Xylene	U	10.00	U	2.30	11/9/16 2:26
1,2,3-Trichloropropane	U	10.00	U	1.66	11/9/16 2:26
Isopropylbenzene	U	10.00	U	2.03	11/9/16 2:26
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/9/16 2:26
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/9/16 2:26
1,3-Dichlorobenzene	U	10.00	U	1.66	11/9/16 2:26
1,4-Dichlorobenzene	U	10.00	U	1.66	11/9/16 2:26
1,2-Dichlorobenzene	U	10.00	U	1.66	11/9/16 2:26
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/9/16 2:26
Naphthalene	<b>12.89</b>	10.00	<b>2.46</b>	1.91	11/9/16 2:26
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/9/16 2:26
2-Methylnaphthalene	U	10.00	U	1.72	11/9/16 2:26
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>92</b>	70-130	A16110842		11/9/16 2:26
Toluene-d8	<b>103</b>	70-130	A16110842		11/9/16 2:26
Bromofluorobenzene	<b>108</b>	70-130	A16110842		11/9/16 2:26

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

## Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110844  
 Beacon Sample ID: GO164954  
 Client ID/Sampling Location: SV-32A  
 Date Time Collected: 10/27/16 1:36 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/4/2016  
 Analysis Date: 11/9/2016  
 Analysis Time: 3:13:00 AM  
 Beacon Job Number: 3588

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/9/16 3:13
1,1-Dichloroethene	U	10.00	U	2.52	11/9/16 3:13
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/9/16 3:13
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 3:13
Methyl-t-butyl ether	U	10.00	U	2.77	11/9/16 3:13
1,1-Dichloroethane	U	10.00	U	2.47	11/9/16 3:13
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 3:13
Chloroform	U	10.00	U	2.05	11/9/16 3:13
1,2-Dichloroethane	U	10.00	U	2.47	11/9/16 3:13
1,1,1-Trichloroethane	U	10.00	U	1.83	11/9/16 3:13
Carbon Tetrachloride	U	10.00	U	1.59	11/9/16 3:13
Benzene	U	10.00	U	3.13	11/9/16 3:13
Trichloroethene	U	10.00	U	1.86	11/9/16 3:13
1,4-Dioxane	<b>13.64</b>	10.00	<b>3.79</b>	2.77	11/9/16 3:13
1,1,2-Trichloroethane	U	10.00	U	1.83	11/9/16 3:13
Toluene	<b>48.76</b>	10.00	<b>12.94</b>	2.65	11/9/16 3:13
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/9/16 3:13
Tetrachloroethene	U	10.00	U	1.47	11/9/16 3:13
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 3:13
Chlorobenzene	U	10.00	U	2.17	11/9/16 3:13
Ethylbenzene	U	10.00	U	2.30	11/9/16 3:13
p & m-Xylene	<b>22.89</b>	10.00	<b>5.27</b>	2.30	11/9/16 3:13
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 3:13
o-Xylene	U	10.00	U	2.30	11/9/16 3:13
1,2,3-Trichloropropane	U	10.00	U	1.66	11/9/16 3:13
Isopropylbenzene	U	10.00	U	2.03	11/9/16 3:13
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/9/16 3:13
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/9/16 3:13
1,3-Dichlorobenzene	U	10.00	U	1.66	11/9/16 3:13
1,4-Dichlorobenzene	U	10.00	U	1.66	11/9/16 3:13
1,2-Dichlorobenzene	U	10.00	U	1.66	11/9/16 3:13
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/9/16 3:13
Naphthalene	<b>12.38</b>	10.00	<b>2.36</b>	1.91	11/9/16 3:13
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/9/16 3:13
2-Methylnaphthalene	U	10.00	U	1.72	11/9/16 3:13
<hr/>					
SURROGATES	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>93</b>	70-130	A16110844		11/9/16 3:13
Toluene-d8	<b>103</b>	70-130	A16110844		11/9/16 3:13
Bromofluorobenzene	<b>108</b>	70-130	A16110844		11/9/16 3:13

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110903  
 Beacon Sample ID: LCS\_161109a  
 Client ID/Sampling Location:  
 Date Time Collected:  
 Matrix:  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received:  
 Analysis Date: 11/9/2016  
 Analysis Time: 12:07:00 PM  
 Beacon Job Number:

	Results	Units	Completed	Limits
<b>COMPOUNDS</b>				
Vinyl Chloride	92%	%REC	11/9/16 12:07	80-120
1,1-Dichloroethene	100%	%REC	11/9/16 12:07	80-120
1,1,2-Trichlorotrifluoroethane (Fr.113)	83%	%REC	11/9/16 12:07	80-120
trans-1,2-Dichloroethene	103%	%REC	11/9/16 12:07	80-120
Methyl-t-butyl ether	89%	%REC	11/9/16 12:07	80-120
1,1-Dichloroethane	102%	%REC	11/9/16 12:07	80-120
cis-1,2-Dichloroethene	104%	%REC	11/9/16 12:07	80-120
Chloroform	101%	%REC	11/9/16 12:07	80-120
1,2-Dichloroethane	98%	%REC	11/9/16 12:07	80-120
1,1,1-Trichloroethane	91%	%REC	11/9/16 12:07	80-120
Carbon Tetrachloride	93%	%REC	11/9/16 12:07	80-120
Benzene	98%	%REC	11/9/16 12:07	80-120
Trichloroethene	105%	%REC	11/9/16 12:07	80-120
1,4-Dioxane	106%	%REC	11/9/16 12:07	80-120
1,1,2-Trichloroethane	105%	%REC	11/9/16 12:07	80-120
Toluene	114%	%REC	11/9/16 12:07	80-120
1,2-Dibromoethane (EDB)	111%	%REC	11/9/16 12:07	80-120
Tetrachloroethene	94%	%REC	11/9/16 12:07	80-120
1,1,1,2-Tetrachloroethane	99%	%REC	11/9/16 12:07	80-120
Chlorobenzene	100%	%REC	11/9/16 12:07	80-120
Ethylbenzene	103%	%REC	11/9/16 12:07	80-120
p & m-Xylene	105%	%REC	11/9/16 12:07	80-120
1,1,2,2-Tetrachloroethane	97%	%REC	11/9/16 12:07	80-120
o-Xylene	99%	%REC	11/9/16 12:07	80-120
1,2,3-Trichloropropane	95%	%REC	11/9/16 12:07	80-120
Isopropylbenzene	98%	%REC	11/9/16 12:07	80-120
1,3,5-Trimethylbenzene	111%	%REC	11/9/16 12:07	80-120
1,2,4-Trimethylbenzene	102%	%REC	11/9/16 12:07	80-120
1,3-Dichlorobenzene	104%	%REC	11/9/16 12:07	80-120
1,4-Dichlorobenzene	101%	%REC	11/9/16 12:07	80-120
1,2-Dichlorobenzene	105%	%REC	11/9/16 12:07	80-120
1,2,4-Trichlorobenzene	112%	%REC	11/9/16 12:07	80-120
Naphthalene	109%	%REC	11/9/16 12:07	80-120
1,2,3-Trichlorobenzene	109%	%REC	11/9/16 12:07	80-120
2-Methylnaphthalene	99%	%REC	11/9/16 12:07	80-120
<b>SURROGATES</b>				
	Percent Recovery	Limits	Completed	Lab File ID
1,2-DCA-d4	105	70-130	11/9/16 12:07	A16110903
Toluene-d8	109	70-130	11/9/16 12:07	A16110903
Bromofluorobenzene	109	70-130	11/9/16 12:07	A16110903

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL.; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110904  
 Beacon Sample ID: LB\_161109a  
 Client ID/Sampling Location:  
 Date Time Collected:  
 Matrix:  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received:  
 Analysis Date: 11/9/2016  
 Analysis Time: 12:31:00 PM  
 Beacon Job Number:

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/9/16 12:31
1,1-Dichloroethene	U	10.00	U	2.52	11/9/16 12:31
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/9/16 12:31
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 12:31
Methyl-t-butyl ether	U	10.00	U	2.77	11/9/16 12:31
1,1-Dichloroethane	U	10.00	U	2.47	11/9/16 12:31
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 12:31
Chloroform	U	10.00	U	2.05	11/9/16 12:31
1,2-Dichloroethane	U	10.00	U	2.47	11/9/16 12:31
1,1,1-Trichloroethane	U	10.00	U	1.83	11/9/16 12:31
Carbon Tetrachloride	U	10.00	U	1.59	11/9/16 12:31
Benzene	U	10.00	U	3.13	11/9/16 12:31
Trichloroethene	U	10.00	U	1.86	11/9/16 12:31
1,4-Dioxane	U	10.00	U	2.77	11/9/16 12:31
1,1,2-Trichloroethane	U	10.00	U	1.83	11/9/16 12:31
Toluene	U	10.00	U	2.65	11/9/16 12:31
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/9/16 12:31
Tetrachloroethene	U	10.00	U	1.47	11/9/16 12:31
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 12:31
Chlorobenzene	U	10.00	U	2.17	11/9/16 12:31
Ethylbenzene	U	10.00	U	2.30	11/9/16 12:31
p & m-Xylene	U	10.00	U	2.30	11/9/16 12:31
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 12:31
o-Xylene	U	10.00	U	2.30	11/9/16 12:31
1,2,3-Trichloropropane	U	10.00	U	1.66	11/9/16 12:31
Isopropylbenzene	U	10.00	U	2.03	11/9/16 12:31
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/9/16 12:31
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/9/16 12:31
1,3-Dichlorobenzene	U	10.00	U	1.66	11/9/16 12:31
1,4-Dichlorobenzene	U	10.00	U	1.66	11/9/16 12:31
1,2-Dichlorobenzene	U	10.00	U	1.66	11/9/16 12:31
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/9/16 12:31
Naphthalene	U	10.00	U	1.91	11/9/16 12:31
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/9/16 12:31
2-Methylnaphthalene	U	10.00	U	1.72	11/9/16 12:31
SURROGATES	Percent Recovery	Limits	Lab File ID	Completed	
1,2-DCA-d4	102	70-130	A16110904	11/9/16 12:31	
Toluene-d8	106	70-130	A16110904	11/9/16 12:31	
Bromofluorobenzene	101	70-130	A16110904	11/9/16 12:31	

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.



Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110905  
 Beacon Sample ID: LCSD\_161109a  
 Client ID/Sampling Location:  
 Date Time Collected:  
 Matrix:  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received:  
 Analysis Date: 11/9/2016  
 Analysis Time: 12:54:00 PM  
 Beacon Job Number:

	Results	Units	Completed	Limits
<b>COMPOUNDS</b>				
Vinyl Chloride	89%	%REC	11/9/16 12:54	70-130
1,1-Dichloroethene	90%	%REC	11/9/16 12:54	70-130
1,1,2-Trichlorotrifluoroethane (Fr.113)	74%	%REC	11/9/16 12:54	70-130
trans-1,2-Dichloroethene	103%	%REC	11/9/16 12:54	70-130
Methyl-t-butyl ether	86%	%REC	11/9/16 12:54	70-130
1,1-Dichloroethane	106%	%REC	11/9/16 12:54	70-130
cis-1,2-Dichloroethene	104%	%REC	11/9/16 12:54	70-130
Chloroform	104%	%REC	11/9/16 12:54	70-130
1,2-Dichloroethane	97%	%REC	11/9/16 12:54	70-130
1,1,1-Trichloroethane	89%	%REC	11/9/16 12:54	70-130
Carbon Tetrachloride	89%	%REC	11/9/16 12:54	70-130
Benzene	100%	%REC	11/9/16 12:54	70-130
Trichloroethene	106%	%REC	11/9/16 12:54	70-130
1,4-Dioxane	108%	%REC	11/9/16 12:54	70-130
1,1,2-Trichloroethane	106%	%REC	11/9/16 12:54	70-130
Toluene	108%	%REC	11/9/16 12:54	70-130
1,2-Dibromoethane (EDB)	111%	%REC	11/9/16 12:54	70-130
Tetrachloroethene	97%	%REC	11/9/16 12:54	70-130
1,1,1,2-Tetrachloroethane	100%	%REC	11/9/16 12:54	70-130
Chlorobenzene	102%	%REC	11/9/16 12:54	70-130
Ethylbenzene	100%	%REC	11/9/16 12:54	70-130
p & m-Xylene	99%	%REC	11/9/16 12:54	70-130
1,1,2,2-Tetrachloroethane	100%	%REC	11/9/16 12:54	70-130
o-Xylene	97%	%REC	11/9/16 12:54	70-130
1,2,3-Trichloropropane	97%	%REC	11/9/16 12:54	70-130
Isopropylbenzene	98%	%REC	11/9/16 12:54	70-130
1,3,5-Trimethylbenzene	108%	%REC	11/9/16 12:54	70-130
1,2,4-Trimethylbenzene	99%	%REC	11/9/16 12:54	70-130
1,3-Dichlorobenzene	102%	%REC	11/9/16 12:54	70-130
1,4-Dichlorobenzene	104%	%REC	11/9/16 12:54	70-130
1,2-Dichlorobenzene	103%	%REC	11/9/16 12:54	70-130
1,2,4-Trichlorobenzene	111%	%REC	11/9/16 12:54	70-130
Naphthalene	106%	%REC	11/9/16 12:54	70-130
1,2,3-Trichlorobenzene	104%	%REC	11/9/16 12:54	70-130
2-Methylnaphthalene	98%	%REC	11/9/16 12:54	70-130
<b>SURROGATES</b>				
	Percent Recovery	Limits	Completed	Lab File ID
1,2-DCA-d4	99	70-130	11/9/16 12:54	A16110905
Toluene-d8	110	70-130	11/9/16 12:54	A16110905
Bromofluorobenzene	104	70-130	11/9/16 12:54	A16110905

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL.; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110906  
 Beacon Sample ID: H0199658  
 Client ID/Sampling Location: SV-08-04  
 Date Time Collected: 10/31/16 4:14 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/9/2016  
 Analysis Time: 1:19:00 PM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/9/16 13:19
1,1-Dichloroethene	U	10.00	U	2.52	11/9/16 13:19
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/9/16 13:19
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 13:19
Methyl-t-butyl ether	U	10.00	U	2.77	11/9/16 13:19
1,1-Dichloroethane	U	10.00	U	2.47	11/9/16 13:19
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 13:19
Chloroform	U	10.00	U	2.05	11/9/16 13:19
1,2-Dichloroethane	U	10.00	U	2.47	11/9/16 13:19
1,1,1-Trichloroethane	<b>13.15</b>	10.00	<b>2.41</b>	1.83	11/9/16 13:19
Carbon Tetrachloride	U	10.00	U	1.59	11/9/16 13:19
Benzene	<b>10.57</b>	10.00	<b>3.31</b>	3.13	11/9/16 13:19
Trichloroethene	U	10.00	U	1.86	11/9/16 13:19
1,4-Dioxane	<b>15.33</b>	10.00	<b>4.25</b>	2.77	11/9/16 13:19
1,1,2-Trichloroethane	U	10.00	U	1.83	11/9/16 13:19
Toluene	<b>57.07</b>	10.00	<b>15.15</b>	2.65	11/9/16 13:19
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/9/16 13:19
Tetrachloroethene	U	10.00	U	1.47	11/9/16 13:19
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 13:19
Chlorobenzene	U	10.00	U	2.17	11/9/16 13:19
Ethylbenzene	U	10.00	U	2.30	11/9/16 13:19
p & m-Xylene	<b>11.15</b>	10.00	<b>2.57</b>	2.30	11/9/16 13:19
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 13:19
o-Xylene	U	10.00	U	2.30	11/9/16 13:19
1,2,3-Trichloropropane	U	10.00	U	1.66	11/9/16 13:19
Isopropylbenzene	U	10.00	U	2.03	11/9/16 13:19
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/9/16 13:19
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/9/16 13:19
1,3-Dichlorobenzene	<b>108.32</b>	10.00	<b>18.02</b>	1.66	11/9/16 13:19
1,4-Dichlorobenzene	U	10.00	U	1.66	11/9/16 13:19
1,2-Dichlorobenzene	U	10.00	U	1.66	11/9/16 13:19
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/9/16 13:19
Naphthalene	U	10.00	U	1.91	11/9/16 13:19
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/9/16 13:19
2-Methylnaphthalene	U	10.00	U	1.72	11/9/16 13:19
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>99</b>	70-130	A16110906		11/9/16 13:19
Toluene-d8	<b>103</b>	70-130	A16110906		11/9/16 13:19
Bromofluorobenzene	<b>108</b>	70-130	A16110906		11/9/16 13:19

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110908  
 Beacon Sample ID: H0199622  
 Client ID/Sampling Location: SV-08-03  
 Date Time Collected: 10/31/16 4:52 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/9/2016  
 Analysis Time: 2:09:00 PM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/9/16 14:09
1,1-Dichloroethene	U	10.00	U	2.52	11/9/16 14:09
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/9/16 14:09
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 14:09
Methyl-t-butyl ether	U	10.00	U	2.77	11/9/16 14:09
1,1-Dichloroethane	U	10.00	U	2.47	11/9/16 14:09
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 14:09
Chloroform	U	10.00	U	2.05	11/9/16 14:09
1,2-Dichloroethane	U	10.00	U	2.47	11/9/16 14:09
1,1,1-Trichloroethane	<b>16.02</b>	10.00	<b>2.94</b>	1.83	11/9/16 14:09
Carbon Tetrachloride	U	10.00	U	1.59	11/9/16 14:09
Benzene	<b>10.18</b>	10.00	<b>3.19</b>	3.13	11/9/16 14:09
Trichloroethene	U	10.00	U	1.86	11/9/16 14:09
1,4-Dioxane	<b>12.82</b>	10.00	<b>3.56</b>	2.77	11/9/16 14:09
1,1,2-Trichloroethane	U	10.00	U	1.83	11/9/16 14:09
Toluene	<b>52.86</b>	10.00	<b>14.03</b>	2.65	11/9/16 14:09
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/9/16 14:09
Tetrachloroethene	U	10.00	U	1.47	11/9/16 14:09
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 14:09
Chlorobenzene	U	10.00	U	2.17	11/9/16 14:09
Ethylbenzene	U	10.00	U	2.30	11/9/16 14:09
p & m-Xylene	U	10.00	U	2.30	11/9/16 14:09
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 14:09
o-Xylene	U	10.00	U	2.30	11/9/16 14:09
1,2,3-Trichloropropane	U	10.00	U	1.66	11/9/16 14:09
Isopropylbenzene	U	10.00	U	2.03	11/9/16 14:09
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/9/16 14:09
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/9/16 14:09
1,3-Dichlorobenzene	<b>1,207.58 E</b>	10.00	<b>200.84 E</b>	1.66	11/9/16 14:09
1,4-Dichlorobenzene	U	10.00	U	1.66	11/9/16 14:09
1,2-Dichlorobenzene	U	10.00	U	1.66	11/9/16 14:09
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/9/16 14:09
Naphthalene	U	10.00	U	1.91	11/9/16 14:09
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/9/16 14:09
2-Methylnaphthalene	U	10.00	U	1.72	11/9/16 14:09
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>97</b>	70-130	A16110908		11/9/16 14:09
Toluene-d8	<b>105</b>	70-130	A16110908		11/9/16 14:09
Bromofluorobenzene	<b>105</b>	70-130	A16110908		11/9/16 14:09

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL.; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110910  
 Beacon Sample ID: H0238242  
 Client ID/Sampling Location: SV-07-01  
 Date Time Collected: 11/2/16 11:35 AM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/9/2016  
 Analysis Time: 2:56:00 PM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/9/16 14:56
1,1-Dichloroethene	U	10.00	U	2.52	11/9/16 14:56
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/9/16 14:56
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 14:56
Methyl-t-butyl ether	U	10.00	U	2.77	11/9/16 14:56
1,1-Dichloroethane	U	10.00	U	2.47	11/9/16 14:56
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 14:56
Chloroform	U	10.00	U	2.05	11/9/16 14:56
1,2-Dichloroethane	U	10.00	U	2.47	11/9/16 14:56
1,1,1-Trichloroethane	U	10.00	U	1.83	11/9/16 14:56
Carbon Tetrachloride	U	10.00	U	1.59	11/9/16 14:56
Benzene	U	10.00	U	3.13	11/9/16 14:56
Trichloroethene	U	10.00	U	1.86	11/9/16 14:56
1,4-Dioxane	U	10.00	U	2.77	11/9/16 14:56
1,1,2-Trichloroethane	U	10.00	U	1.83	11/9/16 14:56
Toluene	U	10.00	U	2.65	11/9/16 14:56
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/9/16 14:56
Tetrachloroethene	U	10.00	U	1.47	11/9/16 14:56
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 14:56
Chlorobenzene	U	10.00	U	2.17	11/9/16 14:56
Ethylbenzene	U	10.00	U	2.30	11/9/16 14:56
p & m-Xylene	U	10.00	U	2.30	11/9/16 14:56
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 14:56
o-Xylene	U	10.00	U	2.30	11/9/16 14:56
1,2,3-Trichloropropane	U	10.00	U	1.66	11/9/16 14:56
Isopropylbenzene	U	10.00	U	2.03	11/9/16 14:56
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/9/16 14:56
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/9/16 14:56
1,3-Dichlorobenzene	U	10.00	U	1.66	11/9/16 14:56
1,4-Dichlorobenzene	U	10.00	U	1.66	11/9/16 14:56
1,2-Dichlorobenzene	U	10.00	U	1.66	11/9/16 14:56
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/9/16 14:56
Naphthalene	U	10.00	U	1.91	11/9/16 14:56
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/9/16 14:56
2-Methylnaphthalene	U	10.00	U	1.72	11/9/16 14:56
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>99</b>	70-130	A16110910		11/9/16 14:56
Toluene-d8	<b>105</b>	70-130	A16110910		11/9/16 14:56
Bromofluorobenzene	<b>105</b>	70-130	A16110910		11/9/16 14:56

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110912  
 Beacon Sample ID: H0234516  
 Client ID/Sampling Location: SV-07-02  
 Date Time Collected: 11/2/16 12:32 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/9/2016  
 Analysis Time: 3:42:00 PM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/9/16 15:42
1,1-Dichloroethene	U	10.00	U	2.52	11/9/16 15:42
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/9/16 15:42
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 15:42
Methyl-t-butyl ether	U	10.00	U	2.77	11/9/16 15:42
1,1-Dichloroethane	U	10.00	U	2.47	11/9/16 15:42
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 15:42
Chloroform	U	10.00	U	2.05	11/9/16 15:42
1,2-Dichloroethane	U	10.00	U	2.47	11/9/16 15:42
1,1,1-Trichloroethane	<b>17.4</b>	10.00	<b>3.19</b>	1.83	11/9/16 15:42
Carbon Tetrachloride	U	10.00	U	1.59	11/9/16 15:42
Benzene	<b>11.89</b>	10.00	<b>3.72</b>	3.13	11/9/16 15:42
Trichloroethene	U	10.00	U	1.86	11/9/16 15:42
1,4-Dioxane	U	10.00	U	2.77	11/9/16 15:42
1,1,2-Trichloroethane	U	10.00	U	1.83	11/9/16 15:42
Toluene	<b>126.72</b>	10.00	<b>33.63</b>	2.65	11/9/16 15:42
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/9/16 15:42
Tetrachloroethene	U	10.00	U	1.47	11/9/16 15:42
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 15:42
Chlorobenzene	U	10.00	U	2.17	11/9/16 15:42
Ethylbenzene	<b>14.41</b>	10.00	<b>3.32</b>	2.30	11/9/16 15:42
p & m-Xylene	<b>39.65</b>	10.00	<b>9.13</b>	2.30	11/9/16 15:42
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 15:42
o-Xylene	U	10.00	U	2.30	11/9/16 15:42
1,2,3-Trichloropropane	U	10.00	U	1.66	11/9/16 15:42
Isopropylbenzene	U	10.00	U	2.03	11/9/16 15:42
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/9/16 15:42
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/9/16 15:42
1,3-Dichlorobenzene	<b>1,013.24 E</b>	10.00	<b>168.52 E</b>	1.66	11/9/16 15:42
1,4-Dichlorobenzene	U	10.00	U	1.66	11/9/16 15:42
1,2-Dichlorobenzene	U	10.00	U	1.66	11/9/16 15:42
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/9/16 15:42
Naphthalene	U	10.00	U	1.91	11/9/16 15:42
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/9/16 15:42
2-Methylnaphthalene	U	10.00	U	1.72	11/9/16 15:42
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>98</b>	70-130	A16110912		11/9/16 15:42
Toluene-d8	<b>105</b>	70-130	A16110912		11/9/16 15:42
Bromofluorobenzene	<b>106</b>	70-130	A16110912		11/9/16 15:42

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110914  
 Beacon Sample ID: G0115976  
 Client ID/Sampling Location: SV-07-04  
 Date Time Collected: 11/2/16 12:59 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/9/2016  
 Analysis Time: 4:29:00 PM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/9/16 16:29
1,1-Dichloroethene	U	10.00	U	2.52	11/9/16 16:29
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/9/16 16:29
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 16:29
Methyl-t-butyl ether	U	10.00	U	2.77	11/9/16 16:29
1,1-Dichloroethane	U	10.00	U	2.47	11/9/16 16:29
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 16:29
Chloroform	U	10.00	U	2.05	11/9/16 16:29
1,2-Dichloroethane	U	10.00	U	2.47	11/9/16 16:29
1,1,1-Trichloroethane	U	10.00	U	1.83	11/9/16 16:29
Carbon Tetrachloride	U	10.00	U	1.59	11/9/16 16:29
Benzene	U	10.00	U	3.13	11/9/16 16:29
Trichloroethene	U	10.00	U	1.86	11/9/16 16:29
1,4-Dioxane	U	10.00	U	2.77	11/9/16 16:29
1,1,2-Trichloroethane	U	10.00	U	1.83	11/9/16 16:29
Toluene	<b>121.69</b>	10.00	<b>32.29</b>	2.65	11/9/16 16:29
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/9/16 16:29
Tetrachloroethene	U	10.00	U	1.47	11/9/16 16:29
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 16:29
Chlorobenzene	U	10.00	U	2.17	11/9/16 16:29
Ethylbenzene	<b>16.45</b>	10.00	<b>3.79</b>	2.30	11/9/16 16:29
p & m-Xylene	<b>43.8</b>	10.00	<b>10.09</b>	2.30	11/9/16 16:29
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 16:29
o-Xylene	<b>10.91</b>	10.00	<b>2.51</b>	2.30	11/9/16 16:29
1,2,3-Trichloropropane	U	10.00	U	1.66	11/9/16 16:29
Isopropylbenzene	U	10.00	U	2.03	11/9/16 16:29
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/9/16 16:29
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/9/16 16:29
1,3-Dichlorobenzene	<b>1,109.66 E</b>	10.00	<b>184.55 E</b>	1.66	11/9/16 16:29
1,4-Dichlorobenzene	U	10.00	U	1.66	11/9/16 16:29
1,2-Dichlorobenzene	U	10.00	U	1.66	11/9/16 16:29
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/9/16 16:29
Naphthalene	U	10.00	U	1.91	11/9/16 16:29
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/9/16 16:29
2-Methylnaphthalene	U	10.00	U	1.72	11/9/16 16:29
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>99</b>	70-130	A16110914		11/9/16 16:29
Toluene-d8	<b>104</b>	70-130	A16110914		11/9/16 16:29
Bromofluorobenzene	<b>106</b>	70-130	A16110914		11/9/16 16:29

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.



Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110916  
 Beacon Sample ID: G0115955  
 Client ID/Sampling Location: SV-07-03  
 Date Time Collected: 11/2/16 1:21 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/9/2016  
 Analysis Time: 5:16:00 PM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/9/16 17:16
1,1-Dichloroethene	U	10.00	U	2.52	11/9/16 17:16
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/9/16 17:16
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 17:16
Methyl-t-butyl ether	U	10.00	U	2.77	11/9/16 17:16
1,1-Dichloroethane	U	10.00	U	2.47	11/9/16 17:16
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 17:16
Chloroform	U	10.00	U	2.05	11/9/16 17:16
1,2-Dichloroethane	U	10.00	U	2.47	11/9/16 17:16
1,1,1-Trichloroethane	U	10.00	U	1.83	11/9/16 17:16
Carbon Tetrachloride	U	10.00	U	1.59	11/9/16 17:16
Benzene	<b>10.85</b>	10.00	<b>3.4</b>	3.13	11/9/16 17:16
Trichloroethene	U	10.00	U	1.86	11/9/16 17:16
1,4-Dioxane	<b>12.68</b>	10.00	<b>3.52</b>	2.77	11/9/16 17:16
1,1,2-Trichloroethane	U	10.00	U	1.83	11/9/16 17:16
Toluene	<b>93.8</b>	10.00	<b>24.89</b>	2.65	11/9/16 17:16
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/9/16 17:16
Tetrachloroethene	U	10.00	U	1.47	11/9/16 17:16
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 17:16
Chlorobenzene	U	10.00	U	2.17	11/9/16 17:16
Ethylbenzene	<b>14.04</b>	10.00	<b>3.23</b>	2.30	11/9/16 17:16
p & m-Xylene	<b>37.35</b>	10.00	<b>8.6</b>	2.30	11/9/16 17:16
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 17:16
o-Xylene	U	10.00	U	2.30	11/9/16 17:16
1,2,3-Trichloropropane	U	10.00	U	1.66	11/9/16 17:16
Isopropylbenzene	U	10.00	U	2.03	11/9/16 17:16
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/9/16 17:16
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/9/16 17:16
1,3-Dichlorobenzene	<b>1,127.89 E</b>	10.00	<b>187.59 E</b>	1.66	11/9/16 17:16
1,4-Dichlorobenzene	U	10.00	U	1.66	11/9/16 17:16
1,2-Dichlorobenzene	U	10.00	U	1.66	11/9/16 17:16
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/9/16 17:16
Naphthalene	U	10.00	U	1.91	11/9/16 17:16
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/9/16 17:16
2-Methylnaphthalene	U	10.00	U	1.72	11/9/16 17:16
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>95</b>	70-130	A16110916		11/9/16 17:16
Toluene-d8	<b>103</b>	70-130	A16110916		11/9/16 17:16
Bromofluorobenzene	<b>105</b>	70-130	A16110916		11/9/16 17:16

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110918  
 Beacon Sample ID: G0166889  
 Client ID/Sampling Location: SV-08-05  
 Date Time Collected: 11/2/16 1:52 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/9/2016  
 Analysis Time: 6:05:00 PM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/9/16 18:05
1,1-Dichloroethene	U	10.00	U	2.52	11/9/16 18:05
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/9/16 18:05
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 18:05
Methyl-t-butyl ether	U	10.00	U	2.77	11/9/16 18:05
1,1-Dichloroethane	U	10.00	U	2.47	11/9/16 18:05
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 18:05
Chloroform	U	10.00	U	2.05	11/9/16 18:05
1,2-Dichloroethane	U	10.00	U	2.47	11/9/16 18:05
1,1,1-Trichloroethane	U	10.00	U	1.83	11/9/16 18:05
Carbon Tetrachloride	U	10.00	U	1.59	11/9/16 18:05
Benzene	U	10.00	U	3.13	11/9/16 18:05
Trichloroethene	U	10.00	U	1.86	11/9/16 18:05
1,4-Dioxane	U	10.00	U	2.77	11/9/16 18:05
1,1,2-Trichloroethane	U	10.00	U	1.83	11/9/16 18:05
Toluene	<b>65.96</b>	10.00	<b>17.5</b>	2.65	11/9/16 18:05
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/9/16 18:05
Tetrachloroethene	U	10.00	U	1.47	11/9/16 18:05
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 18:05
Chlorobenzene	U	10.00	U	2.17	11/9/16 18:05
Ethylbenzene	<b>11.07</b>	10.00	<b>2.55</b>	2.30	11/9/16 18:05
p & m-Xylene	<b>30.27</b>	10.00	<b>6.97</b>	2.30	11/9/16 18:05
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 18:05
o-Xylene	U	10.00	U	2.30	11/9/16 18:05
1,2,3-Trichloropropane	U	10.00	U	1.66	11/9/16 18:05
Isopropylbenzene	U	10.00	U	2.03	11/9/16 18:05
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/9/16 18:05
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/9/16 18:05
1,3-Dichlorobenzene	<b>904.26 E</b>	10.00	<b>150.39 E</b>	1.66	11/9/16 18:05
1,4-Dichlorobenzene	U	10.00	U	1.66	11/9/16 18:05
1,2-Dichlorobenzene	U	10.00	U	1.66	11/9/16 18:05
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/9/16 18:05
Naphthalene	<b>59.69</b>	10.00	<b>11.39</b>	1.91	11/9/16 18:05
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/9/16 18:05
2-Methylnaphthalene	<b>16.43</b>	10.00	<b>2.82</b>	1.72	11/9/16 18:05
<hr/>					
SURROGATES	Percent Recovery	Limits	Lab File ID	Completed	
1,2-DCA-d4	<b>96</b>	70-130	A16110918	11/9/16 18:05	
Toluene-d8	<b>104</b>	70-130	A16110918	11/9/16 18:05	
Bromofluorobenzene	<b>105</b>	70-130	A16110918	11/9/16 18:05	

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL.; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110920  
 Beacon Sample ID: H0232630  
 Client ID/Sampling Location: SV-08-06  
 Date Time Collected: 11/2/16 2:15 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/9/2016  
 Analysis Time: 6:51:00 PM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/9/16 18:51
1,1-Dichloroethene	U	10.00	U	2.52	11/9/16 18:51
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/9/16 18:51
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 18:51
Methyl-t-butyl ether	U	10.00	U	2.77	11/9/16 18:51
1,1-Dichloroethane	U	10.00	U	2.47	11/9/16 18:51
cis-1,2-Dichloroethane	U	10.00	U	2.52	11/9/16 18:51
Chloroform	U	10.00	U	2.05	11/9/16 18:51
1,2-Dichloroethane	U	10.00	U	2.47	11/9/16 18:51
1,1,1-Trichloroethane	<b>18.38</b>	10.00	<b>3.37</b>	1.83	11/9/16 18:51
Carbon Tetrachloride	U	10.00	U	1.59	11/9/16 18:51
Benzene	U	10.00	U	3.13	11/9/16 18:51
Trichloroethene	U	10.00	U	1.86	11/9/16 18:51
1,4-Dioxane	U	10.00	U	2.77	11/9/16 18:51
1,1,2-Trichloroethane	U	10.00	U	1.83	11/9/16 18:51
Toluene	<b>70.62</b>	10.00	<b>18.74</b>	2.65	11/9/16 18:51
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/9/16 18:51
Tetrachloroethene	U	10.00	U	1.47	11/9/16 18:51
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 18:51
Chlorobenzene	U	10.00	U	2.17	11/9/16 18:51
Ethylbenzene	<b>12.02</b>	10.00	<b>2.77</b>	2.30	11/9/16 18:51
p & m-Xylene	<b>33.56</b>	10.00	<b>7.73</b>	2.30	11/9/16 18:51
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 18:51
o-Xylene	U	10.00	U	2.30	11/9/16 18:51
1,2,3-Trichloropropane	U	10.00	U	1.66	11/9/16 18:51
Isopropylbenzene	U	10.00	U	2.03	11/9/16 18:51
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/9/16 18:51
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/9/16 18:51
1,3-Dichlorobenzene	<b>974.36 E</b>	10.00	<b>162.05 E</b>	1.66	11/9/16 18:51
1,4-Dichlorobenzene	U	10.00	U	1.66	11/9/16 18:51
1,2-Dichlorobenzene	U	10.00	U	1.66	11/9/16 18:51
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/9/16 18:51
Naphthalene	<b>12.95</b>	10.00	<b>2.47</b>	1.91	11/9/16 18:51
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/9/16 18:51
2-Methylnaphthalene	U	10.00	U	1.72	11/9/16 18:51
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>97</b>	70-130	A16110920		11/9/16 18:51
Toluene-d8	<b>104</b>	70-130	A16110920		11/9/16 18:51
Bromofluorobenzene	<b>107</b>	70-130	A16110920		11/9/16 18:51

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110922  
 Beacon Sample ID: 1101399  
 Client ID/Sampling Location: SV-08-02  
 Date Time Collected: 11/2/16 2:50 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/9/2016  
 Analysis Time: 7:38:00 PM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/9/16 19:38
1,1-Dichloroethene	U	10.00	U	2.52	11/9/16 19:38
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/9/16 19:38
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 19:38
Methyl-t-butyl ether	U	10.00	U	2.77	11/9/16 19:38
1,1-Dichloroethane	U	10.00	U	2.47	11/9/16 19:38
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 19:38
Chloroform	U	10.00	U	2.05	11/9/16 19:38
1,2-Dichloroethane	U	10.00	U	2.47	11/9/16 19:38
1,1,1-Trichloroethane	U	10.00	U	1.83	11/9/16 19:38
Carbon Tetrachloride	U	10.00	U	1.59	11/9/16 19:38
Benzene	U	10.00	U	3.13	11/9/16 19:38
Trichloroethene	U	10.00	U	1.86	11/9/16 19:38
1,4-Dioxane	U	10.00	U	2.77	11/9/16 19:38
1,1,2-Trichloroethane	U	10.00	U	1.83	11/9/16 19:38
Toluene	<b>21.02</b>	10.00	<b>5.58</b>	2.65	11/9/16 19:38
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/9/16 19:38
Tetrachloroethene	U	10.00	U	1.47	11/9/16 19:38
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 19:38
Chlorobenzene	U	10.00	U	2.17	11/9/16 19:38
Ethylbenzene	U	10.00	U	2.30	11/9/16 19:38
p & m-Xylene	U	10.00	U	2.30	11/9/16 19:38
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 19:38
o-Xylene	U	10.00	U	2.30	11/9/16 19:38
1,2,3-Trichloropropane	U	10.00	U	1.66	11/9/16 19:38
Isopropylbenzene	U	10.00	U	2.03	11/9/16 19:38
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/9/16 19:38
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/9/16 19:38
1,3-Dichlorobenzene	<b>113.95</b>	10.00	<b>18.95</b>	1.66	11/9/16 19:38
1,4-Dichlorobenzene	U	10.00	U	1.66	11/9/16 19:38
1,2-Dichlorobenzene	U	10.00	U	1.66	11/9/16 19:38
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/9/16 19:38
Naphthalene	U	10.00	U	1.91	11/9/16 19:38
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/9/16 19:38
2-Methylnaphthalene	U	10.00	U	1.72	11/9/16 19:38
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>93</b>	70-130	A16110922		11/9/16 19:38
Toluene-d8	<b>105</b>	70-130	A16110922		11/9/16 19:38
Bromofluorobenzene	<b>109</b>	70-130	A16110922		11/9/16 19:38

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110924  
 Beacon Sample ID: H0234844  
 Client ID/Sampling Location: SV-08-09  
 Date Time Collected: 11/2/16 4:36 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/9/2016  
 Analysis Time: 8:24:00 PM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/9/16 20:24
1,1-Dichloroethene	U	10.00	U	2.52	11/9/16 20:24
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/9/16 20:24
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 20:24
Methyl-t-butyl ether	U	10.00	U	2.77	11/9/16 20:24
1,1-Dichloroethane	U	10.00	U	2.47	11/9/16 20:24
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 20:24
Chloroform	U	10.00	U	2.05	11/9/16 20:24
1,2-Dichloroethane	U	10.00	U	2.47	11/9/16 20:24
1,1,1-Trichloroethane	U	10.00	U	1.83	11/9/16 20:24
Carbon Tetrachloride	U	10.00	U	1.59	11/9/16 20:24
Benzene	U	10.00	U	3.13	11/9/16 20:24
Trichloroethene	U	10.00	U	1.86	11/9/16 20:24
1,4-Dioxane	U	10.00	U	2.77	11/9/16 20:24
1,1,2-Trichloroethane	U	10.00	U	1.83	11/9/16 20:24
Toluene	<b>45.32</b>	10.00	<b>12.03</b>	2.65	11/9/16 20:24
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/9/16 20:24
Tetrachloroethene	U	10.00	U	1.47	11/9/16 20:24
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 20:24
Chlorobenzene	U	10.00	U	2.17	11/9/16 20:24
Ethylbenzene	U	10.00	U	2.30	11/9/16 20:24
p & m-Xylene	<b>23.46</b>	10.00	<b>5.4</b>	2.30	11/9/16 20:24
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 20:24
o-Xylene	U	10.00	U	2.30	11/9/16 20:24
1,2,3-Trichloropropane	U	10.00	U	1.66	11/9/16 20:24
Isopropylbenzene	U	10.00	U	2.03	11/9/16 20:24
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/9/16 20:24
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/9/16 20:24
1,3-Dichlorobenzene	<b>834.78 E</b>	10.00	<b>138.84 E</b>	1.66	11/9/16 20:24
1,4-Dichlorobenzene	U	10.00	U	1.66	11/9/16 20:24
1,2-Dichlorobenzene	U	10.00	U	1.66	11/9/16 20:24
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/9/16 20:24
Naphthalene	<b>7.38 J</b>	10.00	<b>1.41 J</b>	1.91	11/9/16 20:24
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/9/16 20:24
2-Methylnaphthalene	U	10.00	U	1.72	11/9/16 20:24
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>93</b>	70-130	A16110924		11/9/16 20:24
Toluene-d8	<b>104</b>	70-130	A16110924		11/9/16 20:24
Bromofluorobenzene	<b>109</b>	70-130	A16110924		11/9/16 20:24

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110926  
 Beacon Sample ID: G0177969  
 Client ID/Sampling Location: SV-08-10  
 Date Time Collected: 11/2/16 4:56 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/9/2016  
 Analysis Time: 9:10:00 PM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/9/16 21:10
1,1-Dichloroethene	U	10.00	U	2.52	11/9/16 21:10
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/9/16 21:10
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 21:10
Methyl-t-butyl ether	U	10.00	U	2.77	11/9/16 21:10
1,1-Dichloroethane	U	10.00	U	2.47	11/9/16 21:10
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 21:10
Chloroform	U	10.00	U	2.05	11/9/16 21:10
1,2-Dichloroethane	U	10.00	U	2.47	11/9/16 21:10
1,1,1-Trichloroethane	U	10.00	U	1.83	11/9/16 21:10
Carbon Tetrachloride	<b>11.31</b>	10.00	<b>1.8</b>	1.59	11/9/16 21:10
Benzene	U	10.00	U	3.13	11/9/16 21:10
Trichloroethene	U	10.00	U	1.86	11/9/16 21:10
1,4-Dioxane	U	10.00	U	2.77	11/9/16 21:10
1,1,2-Trichloroethane	U	10.00	U	1.83	11/9/16 21:10
Toluene	<b>47.67</b>	10.00	<b>12.65</b>	2.65	11/9/16 21:10
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/9/16 21:10
Tetrachloroethene	U	10.00	U	1.47	11/9/16 21:10
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 21:10
Chlorobenzene	U	10.00	U	2.17	11/9/16 21:10
Ethylbenzene	<b>10.95</b>	10.00	<b>2.52</b>	2.30	11/9/16 21:10
p & m-Xylene	<b>27.47</b>	10.00	<b>6.33</b>	2.30	11/9/16 21:10
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 21:10
o-Xylene	U	10.00	U	2.30	11/9/16 21:10
1,2,3-Trichloropropane	U	10.00	U	1.66	11/9/16 21:10
Isopropylbenzene	U	10.00	U	2.03	11/9/16 21:10
1,3,5-Trimethylbenzene	<b>17.41</b>	10.00	<b>3.54</b>	2.03	11/9/16 21:10
1,2,4-Trimethylbenzene	<b>46.07</b>	10.00	<b>9.37</b>	2.03	11/9/16 21:10
1,3-Dichlorobenzene	<b>626.19 E</b>	10.00	<b>104.14 E</b>	1.66	11/9/16 21:10
1,4-Dichlorobenzene	U	10.00	U	1.66	11/9/16 21:10
1,2-Dichlorobenzene	U	10.00	U	1.66	11/9/16 21:10
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/9/16 21:10
Naphthalene	<b>55.0</b>	10.00	<b>10.49</b>	1.91	11/9/16 21:10
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/9/16 21:10
2-Methylnaphthalene	<b>13.25</b>	10.00	<b>2.28</b>	1.72	11/9/16 21:10
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>93</b>	70-130	A16110926		11/9/16 21:10
Toluene-d8	<b>104</b>	70-130	A16110926		11/9/16 21:10
Bromofluorobenzene	<b>111</b>	70-130	A16110926		11/9/16 21:10

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL.; E = Measurement exceeded upper calibration range of instrument.



Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110928  
 Beacon Sample ID: H0234580  
 Client ID/Sampling Location: SV-03-03  
 Date Time Collected: 11/3/16 9:10 AM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/9/2016  
 Analysis Time: 10:00:00 PM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/9/16 22:00
1,1-Dichloroethene	U	10.00	U	2.52	11/9/16 22:00
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/9/16 22:00
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 22:00
Methyl-t-butyl ether	U	10.00	U	2.77	11/9/16 22:00
1,1-Dichloroethane	U	10.00	U	2.47	11/9/16 22:00
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 22:00
Chloroform	U	10.00	U	2.05	11/9/16 22:00
1,2-Dichloroethane	U	10.00	U	2.47	11/9/16 22:00
1,1,1-Trichloroethane	U	10.00	U	1.83	11/9/16 22:00
Carbon Tetrachloride	U	10.00	U	1.59	11/9/16 22:00
Benzene	U	10.00	U	3.13	11/9/16 22:00
Trichloroethene	U	10.00	U	1.86	11/9/16 22:00
1,4-Dioxane	U	10.00	U	2.77	11/9/16 22:00
1,1,2-Trichloroethane	U	10.00	U	1.83	11/9/16 22:00
Toluene	U	10.00	U	2.65	11/9/16 22:00
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/9/16 22:00
Tetrachloroethene	U	10.00	U	1.47	11/9/16 22:00
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 22:00
Chlorobenzene	U	10.00	U	2.17	11/9/16 22:00
Ethylbenzene	U	10.00	U	2.30	11/9/16 22:00
p & m-Xylene	U	10.00	U	2.30	11/9/16 22:00
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 22:00
o-Xylene	U	10.00	U	2.30	11/9/16 22:00
1,2,3-Trichloropropane	U	10.00	U	1.66	11/9/16 22:00
Isopropylbenzene	U	10.00	U	2.03	11/9/16 22:00
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/9/16 22:00
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/9/16 22:00
1,3-Dichlorobenzene	<b>56.82</b>	10.00	<b>9.45</b>	1.66	11/9/16 22:00
1,4-Dichlorobenzene	U	10.00	U	1.66	11/9/16 22:00
1,2-Dichlorobenzene	U	10.00	U	1.66	11/9/16 22:00
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/9/16 22:00
Naphthalene	U	10.00	U	1.91	11/9/16 22:00
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/9/16 22:00
2-Methylnaphthalene	U	10.00	U	1.72	11/9/16 22:00
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>92</b>	70-130	A16110928		11/9/16 22:00
Toluene-d8	<b>103</b>	70-130	A16110928		11/9/16 22:00
Bromofluorobenzene	<b>107</b>	70-130	A16110928		11/9/16 22:00

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110930  
 Beacon Sample ID: G0178581  
 Client ID/Sampling Location: SV-03-02  
 Date Time Collected: 11/3/16 9:26 AM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/9/2016  
 Analysis Time: 10:46:00 PM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/9/16 22:46
1,1-Dichloroethene	U	10.00	U	2.52	11/9/16 22:46
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/9/16 22:46
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 22:46
Methyl-t-butyl ether	U	10.00	U	2.77	11/9/16 22:46
1,1-Dichloroethane	U	10.00	U	2.47	11/9/16 22:46
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 22:46
Chloroform	U	10.00	U	2.05	11/9/16 22:46
1,2-Dichloroethane	U	10.00	U	2.47	11/9/16 22:46
1,1,1-Trichloroethane	U	10.00	U	1.83	11/9/16 22:46
Carbon Tetrachloride	U	10.00	U	1.59	11/9/16 22:46
Benzene	U	10.00	U	3.13	11/9/16 22:46
Trichloroethene	U	10.00	U	1.86	11/9/16 22:46
1,4-Dioxane	U	10.00	U	2.77	11/9/16 22:46
1,1,2-Trichloroethane	U	10.00	U	1.83	11/9/16 22:46
Toluene	U	10.00	U	2.65	11/9/16 22:46
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/9/16 22:46
Tetrachloroethene	<b>76.08</b>	10.00	<b>11.22</b>	1.47	11/9/16 22:46
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 22:46
Chlorobenzene	U	10.00	U	2.17	11/9/16 22:46
Ethylbenzene	U	10.00	U	2.30	11/9/16 22:46
p & m-Xylene	U	10.00	U	2.30	11/9/16 22:46
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 22:46
o-Xylene	U	10.00	U	2.30	11/9/16 22:46
1,2,3-Trichloropropane	U	10.00	U	1.66	11/9/16 22:46
Isopropylbenzene	U	10.00	U	2.03	11/9/16 22:46
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/9/16 22:46
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/9/16 22:46
1,3-Dichlorobenzene	<b>30.19</b>	10.00	<b>5.02</b>	1.66	11/9/16 22:46
1,4-Dichlorobenzene	U	10.00	U	1.66	11/9/16 22:46
1,2-Dichlorobenzene	U	10.00	U	1.66	11/9/16 22:46
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/9/16 22:46
Naphthalene	U	10.00	U	1.91	11/9/16 22:46
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/9/16 22:46
2-Methylnaphthalene	U	10.00	U	1.72	11/9/16 22:46
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>93</b>	70-130	A16110930		11/9/16 22:46
Toluene-d8	<b>104</b>	70-130	A16110930		11/9/16 22:46
Bromofluorobenzene	<b>107</b>	70-130	A16110930		11/9/16 22:46

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110932  
 Beacon Sample ID: H0234875  
 Client ID/Sampling Location: SV-03-01  
 Date Time Collected: 11/3/16 9:41 AM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/9/2016  
 Analysis Time: 11:32:00 PM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/9/16 23:32
1,1-Dichloroethene	U	10.00	U	2.52	11/9/16 23:32
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/9/16 23:32
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 23:32
Methyl-t-butyl ether	U	10.00	U	2.77	11/9/16 23:32
1,1-Dichloroethane	U	10.00	U	2.47	11/9/16 23:32
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/9/16 23:32
Chloroform	U	10.00	U	2.05	11/9/16 23:32
1,2-Dichloroethane	U	10.00	U	2.47	11/9/16 23:32
1,1,1-Trichloroethane	U	10.00	U	1.83	11/9/16 23:32
Carbon Tetrachloride	U	10.00	U	1.59	11/9/16 23:32
Benzene	U	10.00	U	3.13	11/9/16 23:32
Trichloroethene	U	10.00	U	1.86	11/9/16 23:32
1,4-Dioxane	U	10.00	U	2.77	11/9/16 23:32
1,1,2-Trichloroethane	U	10.00	U	1.83	11/9/16 23:32
Toluene	U	10.00	U	2.65	11/9/16 23:32
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/9/16 23:32
Tetrachloroethene	U	10.00	U	1.47	11/9/16 23:32
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 23:32
Chlorobenzene	U	10.00	U	2.17	11/9/16 23:32
Ethylbenzene	U	10.00	U	2.30	11/9/16 23:32
p & m-Xylene	U	10.00	U	2.30	11/9/16 23:32
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/9/16 23:32
o-Xylene	U	10.00	U	2.30	11/9/16 23:32
1,2,3-Trichloropropane	U	10.00	U	1.66	11/9/16 23:32
Isopropylbenzene	U	10.00	U	2.03	11/9/16 23:32
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/9/16 23:32
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/9/16 23:32
1,3-Dichlorobenzene	<b>67.65</b>	10.00	<b>11.25</b>	1.66	11/9/16 23:32
1,4-Dichlorobenzene	U	10.00	U	1.66	11/9/16 23:32
1,2-Dichlorobenzene	U	10.00	U	1.66	11/9/16 23:32
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/9/16 23:32
Naphthalene	U	10.00	U	1.91	11/9/16 23:32
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/9/16 23:32
2-Methylnaphthalene	U	10.00	U	1.72	11/9/16 23:32
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>94</b>	70-130	A16110932		11/9/16 23:32
Toluene-d8	<b>103</b>	70-130	A16110932		11/9/16 23:32
Bromofluorobenzene	<b>107</b>	70-130	A16110932		11/9/16 23:32

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110934  
 Beacon Sample ID: G0164568  
 Client ID/Sampling Location: SV-08-07  
 Date Time Collected: 11/3/16 10:41 AM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/10/2016  
 Analysis Time: 12:20:00 AM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/10/16 0:20
1,1-Dichloroethene	U	10.00	U	2.52	11/10/16 0:20
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/10/16 0:20
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/10/16 0:20
Methyl-t-butyl ether	U	10.00	U	2.77	11/10/16 0:20
1,1-Dichloroethane	U	10.00	U	2.47	11/10/16 0:20
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/10/16 0:20
Chloroform	U	10.00	U	2.05	11/10/16 0:20
1,2-Dichloroethane	U	10.00	U	2.47	11/10/16 0:20
1,1,1-Trichloroethane	<b>10.17</b>	10.00	<b>1.86</b>	1.83	11/10/16 0:20
Carbon Tetrachloride	U	10.00	U	1.59	11/10/16 0:20
Benzene	U	10.00	U	3.13	11/10/16 0:20
Trichloroethene	U	10.00	U	1.86	11/10/16 0:20
1,4-Dioxane	U	10.00	U	2.77	11/10/16 0:20
1,1,2-Trichloroethane	U	10.00	U	1.83	11/10/16 0:20
Toluene	<b>106.17</b>	10.00	<b>28.18</b>	2.65	11/10/16 0:20
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/10/16 0:20
Tetrachloroethene	U	10.00	U	1.47	11/10/16 0:20
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/10/16 0:20
Chlorobenzene	U	10.00	U	2.17	11/10/16 0:20
Ethylbenzene	<b>18.63</b>	10.00	<b>4.29</b>	2.30	11/10/16 0:20
p & m-Xylene	<b>46.51</b>	10.00	<b>10.71</b>	2.30	11/10/16 0:20
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/10/16 0:20
o-Xylene	<b>12.78</b>	10.00	<b>2.94</b>	2.30	11/10/16 0:20
1,2,3-Trichloropropane	U	10.00	U	1.66	11/10/16 0:20
Isopropylbenzene	U	10.00	U	2.03	11/10/16 0:20
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/10/16 0:20
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/10/16 0:20
1,3-Dichlorobenzene	<b>470.72 E</b>	10.00	<b>78.29 E</b>	1.66	11/10/16 0:20
1,4-Dichlorobenzene	U	10.00	U	1.66	11/10/16 0:20
1,2-Dichlorobenzene	U	10.00	U	1.66	11/10/16 0:20
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/10/16 0:20
Naphthalene	<b>89.4</b>	10.00	<b>17.06</b>	1.91	11/10/16 0:20
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/10/16 0:20
2-Methylnaphthalene	<b>21.28</b>	10.00	<b>3.66</b>	1.72	11/10/16 0:20
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>92</b>	70-130	A16110934		11/10/16 0:20
Toluene-d8	<b>101</b>	70-130	A16110934		11/10/16 0:20
Bromofluorobenzene	<b>106</b>	70-130	A16110934		11/10/16 0:20

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110936  
 Beacon Sample ID: H0234589  
 Client ID/Sampling Location: SV-08-08  
 Date Time Collected: 11/3/16 11:05 AM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/10/2016  
 Analysis Time: 1:07:00 AM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/10/16 1:07
1,1-Dichloroethene	U	10.00	U	2.52	11/10/16 1:07
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/10/16 1:07
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/10/16 1:07
Methyl-t-butyl ether	U	10.00	U	2.77	11/10/16 1:07
1,1-Dichloroethane	U	10.00	U	2.47	11/10/16 1:07
cis-1,2-Dichloroethane	U	10.00	U	2.52	11/10/16 1:07
Chloroform	U	10.00	U	2.05	11/10/16 1:07
1,2-Dichloroethane	U	10.00	U	2.47	11/10/16 1:07
1,1,1-Trichloroethane	U	10.00	U	1.83	11/10/16 1:07
Carbon Tetrachloride	U	10.00	U	1.59	11/10/16 1:07
Benzene	U	10.00	U	3.13	11/10/16 1:07
Trichloroethene	U	10.00	U	1.86	11/10/16 1:07
1,4-Dioxane	U	10.00	U	2.77	11/10/16 1:07
1,1,2-Trichloroethane	U	10.00	U	1.83	11/10/16 1:07
Toluene	<b>94.74</b>	10.00	<b>25.14</b>	2.65	11/10/16 1:07
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/10/16 1:07
Tetrachloroethene	U	10.00	U	1.47	11/10/16 1:07
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/10/16 1:07
Chlorobenzene	U	10.00	U	2.17	11/10/16 1:07
Ethylbenzene	<b>13.59</b>	10.00	<b>3.13</b>	2.30	11/10/16 1:07
p & m-Xylene	<b>35.28</b>	10.00	<b>8.12</b>	2.30	11/10/16 1:07
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/10/16 1:07
o-Xylene	U	10.00	U	2.30	11/10/16 1:07
1,2,3-Trichloropropane	U	10.00	U	1.66	11/10/16 1:07
Isopropylbenzene	U	10.00	U	2.03	11/10/16 1:07
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/10/16 1:07
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/10/16 1:07
1,3-Dichlorobenzene	<b>794.56 E</b>	10.00	<b>132.15 E</b>	1.66	11/10/16 1:07
1,4-Dichlorobenzene	U	10.00	U	1.66	11/10/16 1:07
1,2-Dichlorobenzene	U	10.00	U	1.66	11/10/16 1:07
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/10/16 1:07
Naphthalene	<b>4.22 J</b>	10.00	<b>0.81 J</b>	1.91	11/10/16 1:07
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/10/16 1:07
2-Methylnaphthalene	U	10.00	U	1.72	11/10/16 1:07
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>93</b>	70-130	A16110936		11/10/16 1:07
Toluene-d8	<b>103</b>	70-130	A16110936		11/10/16 1:07
Bromofluorobenzene	<b>107</b>	70-130	A16110936		11/10/16 1:07

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110938  
 Beacon Sample ID: G0164999  
 Client ID/Sampling Location: SV-08-01  
 Date Time Collected: 11/3/16 11:31 AM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/10/2016  
 Analysis Time: 1:53:00 AM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/10/16 1:53
1,1-Dichloroethene	U	10.00	U	2.52	11/10/16 1:53
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/10/16 1:53
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/10/16 1:53
Methyl-t-butyl ether	U	10.00	U	2.77	11/10/16 1:53
1,1-Dichloroethane	U	10.00	U	2.47	11/10/16 1:53
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/10/16 1:53
Chloroform	U	10.00	U	2.05	11/10/16 1:53
1,2-Dichloroethane	U	10.00	U	2.47	11/10/16 1:53
1,1,1-Trichloroethane	U	10.00	U	1.83	11/10/16 1:53
Carbon Tetrachloride	U	10.00	U	1.59	11/10/16 1:53
Benzene	U	10.00	U	3.13	11/10/16 1:53
Trichloroethene	U	10.00	U	1.86	11/10/16 1:53
1,4-Dioxane	U	10.00	U	2.77	11/10/16 1:53
1,1,2-Trichloroethane	U	10.00	U	1.83	11/10/16 1:53
Toluene	<b>29.05</b>	10.00	<b>7.71</b>	2.65	11/10/16 1:53
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/10/16 1:53
Tetrachloroethene	U	10.00	U	1.47	11/10/16 1:53
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/10/16 1:53
Chlorobenzene	U	10.00	U	2.17	11/10/16 1:53
Ethylbenzene	U	10.00	U	2.30	11/10/16 1:53
p & m-Xylene	U	10.00	U	2.30	11/10/16 1:53
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/10/16 1:53
o-Xylene	U	10.00	U	2.30	11/10/16 1:53
1,2,3-Trichloropropane	U	10.00	U	1.66	11/10/16 1:53
Isopropylbenzene	U	10.00	U	2.03	11/10/16 1:53
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/10/16 1:53
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/10/16 1:53
1,3-Dichlorobenzene	<b>130.6</b>	10.00	<b>21.72</b>	1.66	11/10/16 1:53
1,4-Dichlorobenzene	U	10.00	U	1.66	11/10/16 1:53
1,2-Dichlorobenzene	U	10.00	U	1.66	11/10/16 1:53
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/10/16 1:53
Naphthalene	U	10.00	U	1.91	11/10/16 1:53
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/10/16 1:53
2-Methylnaphthalene	U	10.00	U	1.72	11/10/16 1:53
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>95</b>	70-130	A16110938		11/10/16 1:53
Toluene-d8	<b>102</b>	70-130	A16110938		11/10/16 1:53
Bromofluorobenzene	<b>103</b>	70-130	A16110938		11/10/16 1:53

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.



Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110940  
 Beacon Sample ID: 1100817  
 Client ID/Sampling Location: SV-05-01  
 Date Time Collected: 11/3/16 1:22 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/10/2016  
 Analysis Time: 2:40:00 AM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/10/16 2:40
1,1-Dichloroethene	U	10.00	U	2.52	11/10/16 2:40
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/10/16 2:40
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/10/16 2:40
Methyl-t-butyl ether	U	10.00	U	2.77	11/10/16 2:40
1,1-Dichloroethane	U	10.00	U	2.47	11/10/16 2:40
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/10/16 2:40
Chloroform	U	10.00	U	2.05	11/10/16 2:40
1,2-Dichloroethane	U	10.00	U	2.47	11/10/16 2:40
1,1,1-Trichloroethane	U	10.00	U	1.83	11/10/16 2:40
Carbon Tetrachloride	U	10.00	U	1.59	11/10/16 2:40
Benzene	U	10.00	U	3.13	11/10/16 2:40
Trichloroethene	U	10.00	U	1.86	11/10/16 2:40
1,4-Dioxane	U	10.00	U	2.77	11/10/16 2:40
1,1,2-Trichloroethane	U	10.00	U	1.83	11/10/16 2:40
Toluene	<b>36.46</b>	10.00	<b>9.68</b>	2.65	11/10/16 2:40
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/10/16 2:40
Tetrachloroethene	U	10.00	U	1.47	11/10/16 2:40
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/10/16 2:40
Chlorobenzene	U	10.00	U	2.17	11/10/16 2:40
Ethylbenzene	U	10.00	U	2.30	11/10/16 2:40
p & m-Xylene	<b>25.08</b>	10.00	<b>5.78</b>	2.30	11/10/16 2:40
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/10/16 2:40
o-Xylene	U	10.00	U	2.30	11/10/16 2:40
1,2,3-Trichloropropane	U	10.00	U	1.66	11/10/16 2:40
Isopropylbenzene	U	10.00	U	2.03	11/10/16 2:40
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/10/16 2:40
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/10/16 2:40
1,3-Dichlorobenzene	<b>312.02 E</b>	10.00	<b>51.89 E</b>	1.66	11/10/16 2:40
1,4-Dichlorobenzene	U	10.00	U	1.66	11/10/16 2:40
1,2-Dichlorobenzene	U	10.00	U	1.66	11/10/16 2:40
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/10/16 2:40
Naphthalene	<b>6.07 J</b>	10.00	<b>1.16 J</b>	1.91	11/10/16 2:40
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/10/16 2:40
2-Methylnaphthalene	U	10.00	U	1.72	11/10/16 2:40
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>94</b>	70-130	A16110940		11/10/16 2:40
Toluene-d8	<b>102</b>	70-130	A16110940		11/10/16 2:40
Bromofluorobenzene	<b>108</b>	70-130	A16110940		11/10/16 2:40

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110942  
 Beacon Sample ID: 1049459  
 Client ID/Sampling Location: SV-05-02  
 Date Time Collected: 11/3/16 1:42 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/10/2016  
 Analysis Time: 3:26:00 AM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/10/16 3:26
1,1-Dichloroethene	U	10.00	U	2.52	11/10/16 3:26
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/10/16 3:26
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/10/16 3:26
Methyl-t-butyl ether	U	10.00	U	2.77	11/10/16 3:26
1,1-Dichloroethane	U	10.00	U	2.47	11/10/16 3:26
cis-1,2-Dichloroethane	U	10.00	U	2.52	11/10/16 3:26
Chloroform	U	10.00	U	2.05	11/10/16 3:26
1,2-Dichloroethane	U	10.00	U	2.47	11/10/16 3:26
1,1,1-Trichloroethane	U	10.00	U	1.83	11/10/16 3:26
Carbon Tetrachloride	U	10.00	U	1.59	11/10/16 3:26
Benzene	U	10.00	U	3.13	11/10/16 3:26
Trichloroethene	U	10.00	U	1.86	11/10/16 3:26
1,4-Dioxane	U	10.00	U	2.77	11/10/16 3:26
1,1,2-Trichloroethane	U	10.00	U	1.83	11/10/16 3:26
Toluene	<b>54.1</b>	10.00	<b>14.36</b>	2.65	11/10/16 3:26
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/10/16 3:26
Tetrachloroethene	U	10.00	U	1.47	11/10/16 3:26
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/10/16 3:26
Chlorobenzene	U	10.00	U	2.17	11/10/16 3:26
Ethylbenzene	<b>13.54</b>	10.00	<b>3.12</b>	2.30	11/10/16 3:26
p & m-Xylene	<b>34.33</b>	10.00	<b>7.91</b>	2.30	11/10/16 3:26
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/10/16 3:26
o-Xylene	<b>11.79</b>	10.00	<b>2.72</b>	2.30	11/10/16 3:26
1,2,3-Trichloropropane	U	10.00	U	1.66	11/10/16 3:26
Isopropylbenzene	U	10.00	U	2.03	11/10/16 3:26
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/10/16 3:26
1,2,4-Trimethylbenzene	<b>10.82</b>	10.00	<b>2.2</b>	2.03	11/10/16 3:26
1,3-Dichlorobenzene	<b>338.87 E</b>	10.00	<b>56.36 E</b>	1.66	11/10/16 3:26
1,4-Dichlorobenzene	U	10.00	U	1.66	11/10/16 3:26
1,2-Dichlorobenzene	U	10.00	U	1.66	11/10/16 3:26
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/10/16 3:26
Naphthalene	<b>3.63 J</b>	10.00	<b>0.69 J</b>	1.91	11/10/16 3:26
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/10/16 3:26
2-Methylnaphthalene	U	10.00	U	1.72	11/10/16 3:26
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>93</b>	70-130	A16110942		11/10/16 3:26
Toluene-d8	<b>102</b>	70-130	A16110942		11/10/16 3:26
Bromofluorobenzene	<b>109</b>	70-130	A16110942		11/10/16 3:26

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110944  
 Beacon Sample ID: 1049520  
 Client ID/Sampling Location: SV-05-03  
 Date Time Collected: 11/3/16 2:10 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/10/2016  
 Analysis Time: 4:12:00 AM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/10/16 4:12
1,1-Dichloroethene	U	10.00	U	2.52	11/10/16 4:12
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/10/16 4:12
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/10/16 4:12
Methyl-t-butyl ether	U	10.00	U	2.77	11/10/16 4:12
1,1-Dichloroethane	U	10.00	U	2.47	11/10/16 4:12
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/10/16 4:12
Chloroform	U	10.00	U	2.05	11/10/16 4:12
1,2-Dichloroethane	U	10.00	U	2.47	11/10/16 4:12
1,1,1-Trichloroethane	U	10.00	U	1.83	11/10/16 4:12
Carbon Tetrachloride	U	10.00	U	1.59	11/10/16 4:12
Benzene	U	10.00	U	3.13	11/10/16 4:12
Trichloroethene	U	10.00	U	1.86	11/10/16 4:12
1,4-Dioxane	U	10.00	U	2.77	11/10/16 4:12
1,1,2-Trichloroethane	U	10.00	U	1.83	11/10/16 4:12
Toluene	<b>38.06</b>	10.00	<b>10.1</b>	2.65	11/10/16 4:12
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/10/16 4:12
Tetrachloroethene	U	10.00	U	1.47	11/10/16 4:12
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/10/16 4:12
Chlorobenzene	U	10.00	U	2.17	11/10/16 4:12
Ethylbenzene	<b>10.15</b>	10.00	<b>2.34</b>	2.30	11/10/16 4:12
p & m-Xylene	<b>25.24</b>	10.00	<b>5.81</b>	2.30	11/10/16 4:12
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/10/16 4:12
o-Xylene	U	10.00	U	2.30	11/10/16 4:12
1,2,3-Trichloropropane	U	10.00	U	1.66	11/10/16 4:12
Isopropylbenzene	U	10.00	U	2.03	11/10/16 4:12
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/10/16 4:12
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/10/16 4:12
1,3-Dichlorobenzene	<b>481.16 E</b>	10.00	<b>80.02 E</b>	1.66	11/10/16 4:12
1,4-Dichlorobenzene	U	10.00	U	1.66	11/10/16 4:12
1,2-Dichlorobenzene	U	10.00	U	1.66	11/10/16 4:12
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/10/16 4:12
Naphthalene	<b>18.82</b>	10.00	<b>3.59</b>	1.91	11/10/16 4:12
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/10/16 4:12
2-Methylnaphthalene	<b>14.12</b>	10.00	<b>2.43</b>	1.72	11/10/16 4:12
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>92</b>	70-130	A16110944		11/10/16 4:12
Toluene-d8	<b>101</b>	70-130	A16110944		11/10/16 4:12
Bromofluorobenzene	<b>108</b>	70-130	A16110944		11/10/16 4:12

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110946  
 Beacon Sample ID: G0177980  
 Client ID/Sampling Location: SV-05-05  
 Date Time Collected: 11/3/16 2:42 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/10/2016  
 Analysis Time: 4:59:00 AM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/10/16 4:59
1,1-Dichloroethene	U	10.00	U	2.52	11/10/16 4:59
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/10/16 4:59
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/10/16 4:59
Methyl-t-butyl ether	U	10.00	U	2.77	11/10/16 4:59
1,1-Dichloroethane	U	10.00	U	2.47	11/10/16 4:59
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/10/16 4:59
Chloroform	U	10.00	U	2.05	11/10/16 4:59
1,2-Dichloroethane	U	10.00	U	2.47	11/10/16 4:59
1,1,1-Trichloroethane	U	10.00	U	1.83	11/10/16 4:59
Carbon Tetrachloride	U	10.00	U	1.59	11/10/16 4:59
Benzene	U	10.00	U	3.13	11/10/16 4:59
Trichloroethene	U	10.00	U	1.86	11/10/16 4:59
1,4-Dioxane	U	10.00	U	2.77	11/10/16 4:59
1,1,2-Trichloroethane	U	10.00	U	1.83	11/10/16 4:59
Toluene	<b>31.06</b>	10.00	<b>8.24</b>	2.65	11/10/16 4:59
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/10/16 4:59
Tetrachloroethene	U	10.00	U	1.47	11/10/16 4:59
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/10/16 4:59
Chlorobenzene	U	10.00	U	2.17	11/10/16 4:59
Ethylbenzene	U	10.00	U	2.30	11/10/16 4:59
p & m-Xylene	<b>19.08</b>	10.00	<b>4.39</b>	2.30	11/10/16 4:59
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/10/16 4:59
o-Xylene	U	10.00	U	2.30	11/10/16 4:59
1,2,3-Trichloropropane	U	10.00	U	1.66	11/10/16 4:59
Isopropylbenzene	U	10.00	U	2.03	11/10/16 4:59
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/10/16 4:59
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/10/16 4:59
1,3-Dichlorobenzene	<b>439.9 E</b>	10.00	<b>73.16 E</b>	1.66	11/10/16 4:59
1,4-Dichlorobenzene	U	10.00	U	1.66	11/10/16 4:59
1,2-Dichlorobenzene	U	10.00	U	1.66	11/10/16 4:59
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/10/16 4:59
Naphthalene	<b>3.08 J</b>	10.00	<b>0.59 J</b>	1.91	11/10/16 4:59
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/10/16 4:59
2-Methylnaphthalene	U	10.00	U	1.72	11/10/16 4:59
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>91</b>	70-130	A16110946		11/10/16 4:59
Toluene-d8	<b>102</b>	70-130	A16110946		11/10/16 4:59
Bromofluorobenzene	<b>108</b>	70-130	A16110946		11/10/16 4:59

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110948  
 Beacon Sample ID: H0231898  
 Client ID/Sampling Location: SV-05-04  
 Date Time Collected: 11/3/16 2:28 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/10/2016  
 Analysis Time: 5:45:00 AM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/10/16 5:45
1,1-Dichloroethene	U	10.00	U	2.52	11/10/16 5:45
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/10/16 5:45
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/10/16 5:45
Methyl-t-butyl ether	U	10.00	U	2.77	11/10/16 5:45
1,1-Dichloroethane	U	10.00	U	2.47	11/10/16 5:45
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/10/16 5:45
Chloroform	U	10.00	U	2.05	11/10/16 5:45
1,2-Dichloroethane	U	10.00	U	2.47	11/10/16 5:45
1,1,1-Trichloroethane	U	10.00	U	1.83	11/10/16 5:45
Carbon Tetrachloride	U	10.00	U	1.59	11/10/16 5:45
Benzene	U	10.00	U	3.13	11/10/16 5:45
Trichloroethene	U	10.00	U	1.86	11/10/16 5:45
1,4-Dioxane	U	10.00	U	2.77	11/10/16 5:45
1,1,2-Trichloroethane	U	10.00	U	1.83	11/10/16 5:45
Toluene	<b>41.01</b>	10.00	<b>10.88</b>	2.65	11/10/16 5:45
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/10/16 5:45
Tetrachloroethene	U	10.00	U	1.47	11/10/16 5:45
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/10/16 5:45
Chlorobenzene	U	10.00	U	2.17	11/10/16 5:45
Ethylbenzene	<b>10.35</b>	10.00	<b>2.38</b>	2.30	11/10/16 5:45
p & m-Xylene	<b>25.17</b>	10.00	<b>5.8</b>	2.30	11/10/16 5:45
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/10/16 5:45
o-Xylene	U	10.00	U	2.30	11/10/16 5:45
1,2,3-Trichloropropane	U	10.00	U	1.66	11/10/16 5:45
Isopropylbenzene	U	10.00	U	2.03	11/10/16 5:45
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/10/16 5:45
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/10/16 5:45
1,3-Dichlorobenzene	<b>396.72 E</b>	10.00	<b>65.98 E</b>	1.66	11/10/16 5:45
1,4-Dichlorobenzene	U	10.00	U	1.66	11/10/16 5:45
1,2-Dichlorobenzene	U	10.00	U	1.66	11/10/16 5:45
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/10/16 5:45
Naphthalene	<b>80.59</b>	10.00	<b>15.37</b>	1.91	11/10/16 5:45
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/10/16 5:45
2-Methylnaphthalene	<b>27.52</b>	10.00	<b>4.73</b>	1.72	11/10/16 5:45
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>92</b>	70-130	A16110948		11/10/16 5:45
Toluene-d8	<b>102</b>	70-130	A16110948		11/10/16 5:45
Bromofluorobenzene	<b>107</b>	70-130	A16110948		11/10/16 5:45

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.

Table 1

**Beacon Environmental Services, Inc.**  
**2203A Commerce Road Suite 1**  
**Forest Hill, MD 21050 USA**  
**Analysis by EPA Method TO-17**

Client:

Vista GeoScience  
 130 Capital Drive, Suite C  
 Golden, CO

Lab File ID: A16110950  
 Beacon Sample ID: 1101163  
 Client ID/Sampling Location: SV-05-06  
 Date Time Collected: 11/3/16 3:06 PM  
 Matrix: Soil Gas  
 Dilution Factor: 1.0  
 Sample Volume in Liters: 1.00  
 Date Received: 11/8/2016  
 Analysis Date: 11/10/2016  
 Analysis Time: 6:32:00 AM  
 Beacon Job Number: 3588B

COMPOUNDS	Results ug/m3	LOQ ug/m3	Results ppbv	LOQ ppbv	Completed
Vinyl Chloride	U	10.00	U	3.91	11/10/16 6:32
1,1-Dichloroethene	U	10.00	U	2.52	11/10/16 6:32
1,1,2-Trichlorotrifluoroethane (Fr.113)	U	10.00	U	1.30	11/10/16 6:32
trans-1,2-Dichloroethene	U	10.00	U	2.52	11/10/16 6:32
Methyl-t-butyl ether	U	10.00	U	2.77	11/10/16 6:32
1,1-Dichloroethane	U	10.00	U	2.47	11/10/16 6:32
cis-1,2-Dichloroethene	U	10.00	U	2.52	11/10/16 6:32
Chloroform	U	10.00	U	2.05	11/10/16 6:32
1,2-Dichloroethane	U	10.00	U	2.47	11/10/16 6:32
1,1,1-Trichloroethane	U	10.00	U	1.83	11/10/16 6:32
Carbon Tetrachloride	U	10.00	U	1.59	11/10/16 6:32
Benzene	U	10.00	U	3.13	11/10/16 6:32
Trichloroethene	U	10.00	U	1.86	11/10/16 6:32
1,4-Dioxane	U	10.00	U	2.77	11/10/16 6:32
1,1,2-Trichloroethane	U	10.00	U	1.83	11/10/16 6:32
Toluene	<b>34.42</b>	10.00	<b>9.13</b>	2.65	11/10/16 6:32
1,2-Dibromoethane (EDB)	U	10.00	U	1.30	11/10/16 6:32
Tetrachloroethene	U	10.00	U	1.47	11/10/16 6:32
1,1,1,2-Tetrachloroethane	U	10.00	U	1.46	11/10/16 6:32
Chlorobenzene	U	10.00	U	2.17	11/10/16 6:32
Ethylbenzene	<b>11.04</b>	10.00	<b>2.54</b>	2.30	11/10/16 6:32
p & m-Xylene	<b>27.78</b>	10.00	<b>6.4</b>	2.30	11/10/16 6:32
1,1,2,2-Tetrachloroethane	U	10.00	U	1.46	11/10/16 6:32
o-Xylene	U	10.00	U	2.30	11/10/16 6:32
1,2,3-Trichloropropane	U	10.00	U	1.66	11/10/16 6:32
Isopropylbenzene	U	10.00	U	2.03	11/10/16 6:32
1,3,5-Trimethylbenzene	U	10.00	U	2.03	11/10/16 6:32
1,2,4-Trimethylbenzene	U	10.00	U	2.03	11/10/16 6:32
1,3-Dichlorobenzene	<b>397.51 E</b>	10.00	<b>66.11 E</b>	1.66	11/10/16 6:32
1,4-Dichlorobenzene	U	10.00	U	1.66	11/10/16 6:32
1,2-Dichlorobenzene	U	10.00	U	1.66	11/10/16 6:32
1,2,4-Trichlorobenzene	U	10.00	U	1.35	11/10/16 6:32
Naphthalene	<b>3.63 J</b>	10.00	<b>0.69 J</b>	1.91	11/10/16 6:32
1,2,3-Trichlorobenzene	U	10.00	U	1.35	11/10/16 6:32
2-Methylnaphthalene	U	10.00	U	1.72	11/10/16 6:32
<b>SURROGATES</b>					
	Percent Recovery	Limits	Lab File ID		Completed
1,2-DCA-d4	<b>93</b>	70-130	A16110950		11/10/16 6:32
Toluene-d8	<b>102</b>	70-130	A16110950		11/10/16 6:32
Bromofluorobenzene	<b>108</b>	70-130	A16110950		11/10/16 6:32

U = Not detected or below Reporting Limit (RL); J = Estimated value below the RL; E = Measurement exceeded upper calibration range of instrument.



**Attachment 1**  
**Chain of Custody**



Beacon  
Environmental  
Services, Inc.

# CHAIN-OF-CUSTODY RECORD

2203A Commerce Road, Suite 1  
Forest Hill, MD 21050  
410-838-8780 / fax: 410-838-8740

Client Contact Information		Project Manager: Lynda Price		BEACON Project No.: 3588		Analysis		Matrix		
Company: Enteca		Phone: (512) 492-2072		Client PO No.		8260B		Indoor / Ambient Air		
Address: 6000 Uptown Blvd. NE		Project Name: COA Railway		Analysis Turnaround Time		TO-17		TICS		
City/State/Zip: Albuquerque, NM 87110		Location: 1100 2nd St. SW Albuquerque, NM		<input checked="" type="checkbox"/> Normal						
Phone: (505) 246-1600		Sampler Name(s): J. ZADDEL & T. LAWSON		<input type="checkbox"/> Rush (Specify):						
Location ID	Tube ID Number	Pump ID Number	Start Time		Stop Time		Temp. (F)	Pre-survey Measured Pump Flow Rate (mL/min)	Post-survey Measured Pump Flow Rate (mL/min)	days
			Date	Time	Date	Time				
SV-06 B	H0232665	AOA-9101-AA	10/25	11:25	10/25	11:33		200 mL/min	200 mL/min	X
SV-06 A	H0234809			11:28		11:33		200 mL/min	200 mL/min	
SV-07	H0231804			13:35		13:40		200 mL/min	200 mL/min	
SV-07	H0199678			13:35		13:40		200 mL/min	200 mL/min	
SV-08 A	1049238			15:37		15:42		200 mL/min	200 mL/min	
SV-08 B	1161336			15:37		15:42		200 mL/min	200 mL/min	
SV-09 A	G0177458			17:18		17:23		200 mL/min	200 mL/min	
SV-09 B	1101200			17:15		17:23		200 mL/min	200 mL/min	
<p><b>Ambient Conditions When Sampling</b></p> <p>Temperature (F): 65°      Barometric Pressure (mmHg): 25.22      Date: 10/25</p> <p>Start:      Stop:      Pre-Survey:      Post-Survey:</p>										
<p><b>Pump(s) Calibration and Flow Rate Check:</b></p> <p>Lab or Field:      Date:      Flow Meter Make/Serial #:      Operator name:</p>										
<p><b>Special Notes/Instructions:</b></p> <p>Relinquished by: J. ZADDEL      Date/Time: 10/31/16 12:30</p> <p>Relinquished by:      Date/Time: 10/25 11:30</p> <p>Relinquished by:      Date/Time:      Date/Time:      Date/Time:      Date/Time:</p>										
Lab Use Only		Courier Name: Fed Ex		Shipment Condition: good		Sample Delivery Group ID		Custody Seal Intact		Custody Seal No.
								Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> None <input type="checkbox"/>		0603986





**Beacon Environmental Services, Inc.**

# CHAIN-OF-CUSTODY RECORD

2203A Commerce Road, Suite 1  
Forest Hill, MD 21050  
410-838-8780 / fax: 410-838-8740

Client Contact Information		Project Manager:		BEACON Project No.: 3588		Analysis		Matrix																																																						
Company: <u>Intera</u>		Phone:		Client PO No.		82608		Indoor / Ambient Air																																																						
Address:		Project Name:		Analysis Turnaround Time		TO-17		Soil Gas																																																						
City/State/Zip:		Location:		<input checked="" type="checkbox"/> Normal																																																										
Phone:		Sampler Name(s):		<input type="checkbox"/> Rush (Specify): _____ days																																																										
Location ID	Tube ID Number	Pump ID Number	Start Time		Temp. (F)	Stop Time		Pre-survey Measured Pump Flow Rate (mL/min)	Post-survey Measured Pump Flow Rate (mL/min)																																																					
			Date	Time		Date	Time																																																							
SV-16 A	HD199673	RDA-P01-AA	10/26	13:35		10/26	13:40	200 mL/min	200 mL/min																																																					
SV-16 B	HD200229			13:35			13:40	200 mL/min	200 mL/min																																																					
SV-17 A	HD232690			14:18			14:23	200 mL/min	200 mL/min																																																					
SV-17 B	HD199665			14:18			14:23	200 mL/min	200 mL/min																																																					
SV-03 A	HD234823			14:56			15:01	200 mL/min	200 mL/min																																																					
SV-03 B	HD200222			14:56			15:01	200 mL/min	200 mL/min																																																					
SV-14 A	GO115947			15:33			15:38	200 mL/min	200 mL/min																																																					
SV-14 B	GO115903			15:33			15:38	200 mL/min	200 mL/min																																																					
SV-04 A	GO119804			16:05			16:10	200 mL/min	200 mL/min																																																					
SV-04 B	GO165246			16:05			16:10	200 mL/min	200 mL/min																																																					
<table border="1"> <thead> <tr> <th colspan="4">Ambient Conditions When Sampling</th> <th colspan="4">Pump(s) Calibration and Flow Rate Check:</th> </tr> <tr> <th>Start</th> <th>Stop</th> <th>Temperature (F)</th> <th>Barometric Pressure (mmHg)</th> <th>Cal. Tube ID:</th> <th>Lab or Field</th> <th>Date</th> <th>Flow Meter Make/Serial #</th> <th>Operator name</th> </tr> </thead> <tbody> <tr> <td></td> <td></td> <td>71° F</td> <td>25.28 mmHg</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td>75° F</td> <td>25.17 mmHg</td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>Pre-Survey</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td>Post-Survey</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>										Ambient Conditions When Sampling				Pump(s) Calibration and Flow Rate Check:				Start	Stop	Temperature (F)	Barometric Pressure (mmHg)	Cal. Tube ID:	Lab or Field	Date	Flow Meter Make/Serial #	Operator name			71° F	25.28 mmHg								75° F	25.17 mmHg										Pre-Survey									Post-Survey				
Ambient Conditions When Sampling				Pump(s) Calibration and Flow Rate Check:																																																										
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				Pre-Survey																																																										
				Post-Survey																																																										
Special Notes/Instructions:																																																														
Relinquished by: <u>JESSIE ADDEL</u>		Date/Time: 10/31/16		Received by: <u>Augusta Benson</u>		Date/Time: 11/4/2016		Custody Seal No. 0603986																																																						
Relinquished by: _____		Date/Time: 12:30		Received by: _____		Date/Time: _____																																																								
Relinquished by: _____		Date/Time: _____		Received by: _____		Date/Time: _____																																																								
Lab Use Only		Courier Name: <u>FedEx</u>		Shipment Condition: <u>good</u>		Sample Delivery Group ID		Custody Seal Intact: <u>Yes</u> No None																																																						





**Beacon Environmental Services, Inc.**

# CHAIN-OF-CUSTODY RECORD

2203A Commerce Road, Suite 1  
 Forest Hill, MD 21050  
 410-838-8780 / fax: 410-838-8740

Client Contact Information		Project Manager:		BEACON Project No.: 3588		Analysis		Matrix																																	
Company: <u>Tetra</u>		Phone:		Client PO No.		8260B		Indoor / Ambient Air																																	
Address:		Project Name:		Analysis Turnaround Time		TO-17		Soil Gas																																	
City/State/Zip:		Location:		<input checked="" type="checkbox"/> Normal																																					
Phone:		Sampler Name(s):		<input type="checkbox"/> Rush (Specify): _____ days																																					
Location ID	Tube ID Number	Pump ID Number	Start Time		Temp. (F)	Stop Time		Pre-survey Measured Pump Flow Rate (mL/min)	Post-survey Measured Pump Flow Rate (mL/min)																																
			Date	Time		Date	Time																																		
SV-12A	HO200253	ROA-P101-AA	10/26	16:38		10/26	16:43	200 mL/min	200 mL/min																																
SV-12B	GO115958			16:58			16:43	200 mL/min	200 mL/min																																
SV-11A	GO164559			17:16			17:21	200 mL/min	200 mL/min																																
SV-11B	HO199605			17:16			17:21	200 mL/min	200 mL/min																																
SV-10A	GO17407			17:49			17:54	200 mL/min	200 mL/min																																
SV-10B	HO200253			17:49			17:54	200 mL/min	200 mL/min																																
<table border="1"> <thead> <tr> <th colspan="4">Ambient Conditions When Sampling</th> <th colspan="4">Pump(s) Calibration and Flow Rate Check:</th> </tr> <tr> <th>Start</th> <th>Temperature (F)</th> <th>Barometric Pressure (mmHg)</th> <th>Date</th> <th>Lab or Field</th> <th>Date</th> <th>Flow Meter Make/Serial #</th> <th>Operator name</th> </tr> </thead> <tbody> <tr> <td></td> <td>71°F</td> <td>25.28 mmHg</td> <td>10/26</td> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td>Stop</td> <td>75°F</td> <td>25.17 mmHg</td> <td>10/26</td> <td></td> <td></td> <td></td> <td></td> </tr> </tbody> </table>										Ambient Conditions When Sampling				Pump(s) Calibration and Flow Rate Check:				Start	Temperature (F)	Barometric Pressure (mmHg)	Date	Lab or Field	Date	Flow Meter Make/Serial #	Operator name		71°F	25.28 mmHg	10/26					Stop	75°F	25.17 mmHg	10/26				
Ambient Conditions When Sampling				Pump(s) Calibration and Flow Rate Check:																																					
Start	Temperature (F)	Barometric Pressure (mmHg)	Date	Lab or Field	Date	Flow Meter Make/Serial #	Operator name																																		
	71°F	25.28 mmHg	10/26																																						
Stop	75°F	25.17 mmHg	10/26																																						
<b>Special Notes/Instructions:</b> Relinquished by: <u>2555 BAJOKL</u> Date/Time: <u>10/31/16 10:30</u> Relinquished by: <u>[Signature]</u> Date/Time: <u>10/26 10:26</u> Relinquished by: <u>[Signature]</u> Date/Time: <u>10/26 10:26</u>																																									
Lab Use Only		Courier Name: <u>FedEx</u>		Shipment Condition: <u>good</u>		Sample Delivery Group ID: <u>Yes</u> No None		Custody Seal No. <u>0603986</u>																																	





**Beacon Environmental Services, Inc.**

# CHAIN-OF-CUSTODY RECORD

2203A Commerce Road, Suite 1  
 Forest Hill, MD 21050  
 410-838-8780 / fax: 410-838-8740

Client Contact Information										BEACON Project No.: 3588														
Company: <i>Entera</i>					Project Manager:					Client PO No.					Analysis					Matrix				
Address:					Project Name:					Analysis Turnaround Time					TICs					Indoor / Ambient Air				
City/State/Zip:					Location:					Temp. (F)					8260B					TO-17				
Phone:					Sampler Name(s):					Temp. (F)					Pre-survey Measured Pump Flow Rate (mL/min)					Post-survey Measured Pump Flow Rate (mL/min)				
Location ID	Tube ID Number	Pump ID Number	Start Time		Stop Time		Temp. (F)	Temp. (F)	Date	Time	Date	Time	Pre-survey Measured Pump Flow Rate (mL/min)	Post-survey Measured Pump Flow Rate (mL/min)	Days	Soil Gas								
			Date	Time	Date	Time																		
SV-32A	GO164954	ROA-PI01-AA	10/27	13:31	10/27	13:36							200 mL/min	200 mL/min		X								
SV-32B	GO177478			13:31		13:36							200 mL/min	200 mL/min										
SV-31A	HO200236			13:58		14:03							200 mL/min	200 mL/min										
SV-31B	M;102489			13:58		14:03							200 mL/min	200 mL/min										
SV-30A	GO167857			14:30		14:35							200 mL/min	200 mL/min										
SV-30B	GO164172			14:30		14:35							200 mL/min	200 mL/min										
SV-29A	HO240227			14:55		15:00							200 mL/min	200 mL/min										
SV-29B	HO200271			14:55		15:00							200 mL/min	200 mL/min										
SV-28A	1100863			15:21		15:26							200 mL/min	200 mL/min										
SV-28B	1100880			15:21		15:26							200 mL/min	200 mL/min										

Ambient Conditions When Sampling				Pump(s) Calibration and Flow Rate Check:			
Start	Stop	Temperature (F)	Barometric Pressure (mmHg)	Cal. Tube ID:	Lab or Field	Flow Meter Make/Serial #	Operator name
		74°F	25.26 mmHg				
				Pre-Survey			
				Post-Survey			

Special Notes/Instructions:		Received by:	
Signature	Date/Time	Signature	Date/Time
<i>J. J. [Signature]</i>	10/31/10 12:30	<i>Augusto Benavides</i>	11/4/2016 13:17h

Lab Use Only	Courier Name	Shipment Condition	Sample Delivery Group ID	Custody Seal Intact	Custody Seal No.
	<i>FedEx</i>	<i>good</i>		<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> None	0603986





**Beacon**  
Environmental  
Services, Inc.

# CHAIN-OF-CUSTODY RECORD

2203A Commerce Road, Suite 1  
Forest Hill, MD 21050  
410-838-8780 / fax: 410-838-8740

Client Contact Information		Project Manager:		BEACON Project No.: 3588		Analysis		Matrix																																	
Company: <i>Entzco</i>		Phone:		Client PO No.		8260B		Indoor / Ambient Air																																	
Address:		Project Name:		Analysis Turnaround Time		TO-17		Soil Gas																																	
City/State/Zip:		Location:		<input type="checkbox"/> Normal																																					
Phone:		Sampler Name(s):		<input type="checkbox"/> Rush (Specify):		days																																			
Location ID	Tube ID Number	Pump ID Number	Start Time		Temp. (F)	Stop Time		Pre-survey Measured Pump Flow Rate (mL/min)	Post-survey Measured Pump Flow Rate (mL/min)																																
			Date	Time		Date	Time																																		
SV-27A	1049249	ROA-P101-AA	10/27	15:50		10/27	15:55	200 mL/min	200 mL/min																																
SV-27B	60168290			15:50			15:55	200 mL/min	200 mL/min																																
SV-21A	10199664			16:19			16:24	200 mL/min	200 mL/min																																
SV-21B	60163271			16:19			16:24	200 mL/min	200 mL/min																																
SV-23A	10100288			16:52			16:57	200 mL/min	200 mL/min																																
SV-23B	10199654			16:52			16:57	200 mL/min	200 mL/min																																
<table border="1"> <thead> <tr> <th colspan="4">Ambient Conditions When Sampling</th> <th colspan="4">Pump(s) Calibration and Flow Rate Check:</th> </tr> <tr> <th>Temperature (F)</th> <th>Barometric Pressure (mmHg)</th> <th>Date</th> <th>Cal. Tube ID:</th> <th>Lab or Field</th> <th>Date</th> <th>Flow Meter Make/Serial #</th> <th>Operator name</th> </tr> </thead> <tbody> <tr> <td>74°F</td> <td>25.26 mmHg</td> <td>10/27</td> <td></td> <td>Pre-Survey</td> <td></td> <td></td> <td></td> </tr> <tr> <td>71°F</td> <td>25.16 mmHg</td> <td>10/27</td> <td></td> <td>Post-Survey</td> <td></td> <td></td> <td></td> </tr> </tbody> </table>										Ambient Conditions When Sampling				Pump(s) Calibration and Flow Rate Check:				Temperature (F)	Barometric Pressure (mmHg)	Date	Cal. Tube ID:	Lab or Field	Date	Flow Meter Make/Serial #	Operator name	74°F	25.26 mmHg	10/27		Pre-Survey				71°F	25.16 mmHg	10/27		Post-Survey			
Ambient Conditions When Sampling				Pump(s) Calibration and Flow Rate Check:																																					
Temperature (F)	Barometric Pressure (mmHg)	Date	Cal. Tube ID:	Lab or Field	Date	Flow Meter Make/Serial #	Operator name																																		
74°F	25.26 mmHg	10/27		Pre-Survey																																					
71°F	25.16 mmHg	10/27		Post-Survey																																					
Special Notes/Instructions:																																									
Relinquished by: <i>JRS</i>		Date/Time: 10/31/16 12:30		Received by: <i>Augusto Benavides</i>		Date/Time: 11/4/2016 13:27h																																			
Relinquished by: <i>JRS</i>		Date/Time: 10/31/16 12:30		Received by: <i>Augusto Benavides</i>		Date/Time: 11/4/2016 13:27h																																			
Relinquished by: <i>JRS</i>		Date/Time: 10/31/16 12:30		Received by: <i>Augusto Benavides</i>		Date/Time: 11/4/2016 13:27h																																			
Lab Use Only		Courier Name: <i>FedEx</i>		Shipment Condition: <i>good</i>		Sample Delivery Group ID		Custody Seal Intact: <input checked="" type="radio"/> Yes <input type="radio"/> No <input type="radio"/> None																																	
								Custody Seal No. <i>0603986</i>																																	





# CHAIN-OF-CUSTODY RECORD

2203A Commerce Road, Suite 1  
 Forest Hill, MD 21050  
 410-838-8780 / fax: 410-838-8740

Client Contact Information				BEACON Project No.: 3588B									
Company: INTERA		Project Manager: Joe Tracy, jtracy@intera.com		Client PO No.		Analysis							
Address: 6000 Votum Blvd NE, Suite 220		Phone: 505-246-1600		Analysis Turnaround Time		Matrix							
City/State/Zip: Albuquerque, NM 87106 87110		Location: Albuquerque, NM		<input checked="" type="checkbox"/> Normal		Indoor / Ambient Air							
Phone: 505-246-1606		Sampler Name(s): M.H. Sphyr, Frank Roeder, Clint...		<input type="checkbox"/> Rush (Specify):		Soil Gas							
Location ID	Tube ID Number	Pump ID Number	Start Time		Stop Time		Temp. (F)	Pre-survey Measured Pump Flow Rate (mL/min)	Post-survey Measured Pump Flow Rate (mL/min)	TO-17	8260B	TICs	
			Date	Time	Date	Time							
SV-08-04	H0199658	INTERA-1	10/31/16	1609	10/31/16	1614		200	200	X			X
SV-08-04	H0199609	INTERA-1	10/31/16	1609	10/31/16	1614		200	200	X			X
SV-08-03	H0199622	INTERA-1	10/31/16	1647	10/31/16	1652		200	200	X			X
SV-08-03	GO177410	INTERA-1	10/31/16	1647	10/31/16	1652		200	200	X			X
SV-07-01	H0238242	INTERA-1	11/2/16	1130	11/2/16	1135		200	200	X			X
SV-07-01	H0233609	INTERA-1	11/2/16	1130	11/2/16	1135		200	200	X			X
SV-07-02	H0234514	INTERA-1	11/2/16	1227	11/2/16	1232		200	200	X			X
SV-07-02	H0234666	INTERA-1	11/2/16	1227	11/2/16	1232		200	200	X			X
SV-07-04	GO115976	INTERA-1	11/2/16	1254	11/2/16	1259		200	200	X			X
SV-07-04	GO165064	INTERA-1	11/2/16	1254	11/2/16	1259		200	200	X			X
<b>Ambient Conditions When Sampling</b> Temperature (F) _____ Barometric Pressure (mmHg) _____ Date _____ Start _____ Stop _____ Cal. Tube ID: _____ Lab or Field _____ Flow Meter Make/Serial # _____ Pre-Survey _____ Post-Survey _____													
<b>Pumps) Calibration and Flow Rate Check:</b> Date/Time: _____ Signature: _____ Date/Time: _____ Signature: _____ Date/Time: _____ Signature: _____													
<b>Special Notes/Instructions:</b> Install date is date vapor pin set. Pins sit idle for at least 24-hours before sampling. Retrieval date is sampling date. <i>Sample for</i> Relinquished by: <i>M.H. Sphyr</i> Date/Time: 11/7/2016 1137 Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____ Relinquished by: _____ Date/Time: _____													
Lab Use Only Fed Ex		Courier Name good		Shipment Condition good		Sample Delivery Group ID None		Custody Seal Intact Yes No <u>None</u>		Custody Seal No.			





# CHAIN-OF-CUSTODY RECORD

2203A Commerce Road, Suite 1  
 Forest Hill, MD 21050  
 410-838-8780 / fax: 410-838-8740

Client Contact Information		Project Manager: Joe Terry j.terry@intera.com		BEACON Project No.: 3588B					
Company:	INTERA	Phone:	505-246-1600	Client PO No.					
Address:	6000 Upton Blvd NE, St 220	Project Name:	Abj Kailiyard	Analysis					
City/State/Zip:	Albuquerque, NM 87110	Location:	Albuquerque, NM	TO-17	8260B				
Phone:	505-246-4600	Sampler Name(s):	M.H. Sully, Frank Forester, Clark Short	TICs	Indoor / Ambient Air				
				Soil Gas	Matrix				
Location ID	Tube ID Number	Pump ID Number	Start Time	Stop Time	Temp. (F)	Temp. (F)	Pre-survey Measured Pump Flow Rate (mL/min)	Post-survey Measured Pump Flow Rate (mL/min)	Analysis
SV-07-04M	G0115955	INTERA-1	11/2/16 1316	11/2/16 1321			200	200	X
SV-07-04	H0234849	INTERA-2	11/2/16 1316	11/2/16 1321			200	200	X
SV-08-05	G0166009	INTERA-1	11/2/16 1347	11/2/16 1352			200	200	X
SV-08-05	H0231058	INTERA-2	11/2/16 1347	11/2/16 1352			200	200	X
SV-08-06	H0232630	INTERA-4	11/2/16 1410	11/2/16 1415			200	200	X
SV-08-06	G0164500	INTERA-2	11/2/16 1410	11/2/16 1415			200	200	X
SV-08-02	1101399	INTERA-1	11/2/16 1445	11/2/16 1450			200	200	X
SV-08-02	G0177907	INTERA-2	11/2/16 1445	11/2/16 1450			200	200	X
SV-08-09	H0234844	INTERA-1	11/2/16 1631	11/2/16 1636			200	200	X
SV-08-09	1100861	INTERA-1	11/2/16 1631	11/2/16 1636			200	200	X
Ambient Conditions When Sampling									
Temperature (F)	Barometric Pressure (mmHg)	Date	Cal. Tube ID:	Lab or Field	Date	Flow Meter Make/Serial #			
Start			Pre-Survey						
Stop			Post-Survey						
Special Notes/Instructions:									
Install date is date vapor per set. Pins sit idle 24-hrs before sampling. Retrieve date is sampling date. Sample for 5 min @ 200cc/min									
Relinquished by: (signature)	M.H. Sully	Date/Time: 11/17/2016 1137	Received by: (signature)	Augusto Benavides	Date/Time: 11/18/2016 14:28h				
Relinquished by: (signature)		Date/Time:	Received by: (signature)		Date/Time:				
Relinquished by: (signature)		Date/Time:	Received by: (signature)		Date/Time:				
Lab Use Only	Courier Name: FedEx	Shipment Condition: good	Sample Delivery Group ID	Custody Seal Intact	Yes	No	Custody Seal No.		





# CHAIN-OF-CUSTODY RECORD

2203A Commerce Road, Suite 1  
Forest Hill, MD 21050  
410-838-8780 / fax: 410-838-8740

Client Contact Information		Project Manager: Joe Tang, <a href="mailto:JTang@interia.com">JTang@interia.com</a>		BEACON Project No.: 3588B										
Company: INTERA		Phone: 505-246-1600		Client PO No.										
Address: 6000 Optima Blvd NE, Ste 220		Project Name: Abq. Railroad		Analysis Turnaround Time										
City/State/Zip: Albuquerque, NM 87110		Location: Albuquerque, NM		<input checked="" type="checkbox"/> Normal										
Phone: 505-246-1600		Sampler Name(s): M.H. Spaly, Frank Koehler, Clark Short		<input type="checkbox"/> Rush (Specify): _____ days										
Location ID	Tube ID Number	Pump ID Number	Start Time		Temp. (F)	Stop Time	Temp. (F)	Pre-survey Measured Pump Flow Rate (mL/min)	Post-survey Measured Pump Flow Rate (mL/min)	TO-17	8260B	TICs	Indoor / Ambient Air	Matrix
			Date	Time										
SV-08-10	G0177969	INTERA 2	11/2/16	1651		11/2/16	1656	200	200	X				X
SV-08-10	H049357	INTERA 2	11/2/16	1651		11/2/16	1656	200	200	X				X
SV-03-03	H0234580	INTERA 1	11/3/16	0905		11/3/16	0910	200	200	X				X
SV-03-03	H0233696	INTERA 1	11/3/16	0905		11/3/16	0910	200	200	X				X
SV-03-02	G0178581	INTERA 2	11/3/16	0921		11/3/16	0926	200	200	X				X
SV-03-02	G0177972	INTERA 1	11/3/16	0921		11/3/16	0926	200	200	X				X
SV-03-01	H0234875	INTERA 2	11/3/16	0936		11/3/16	0941	200	200	X				X
SV-03-01	G0177464	INTERA 1	11/3/16	0936		11/3/16	0941	200	200	X				X
SV-08-07	G0164568	INTERA 1	11/3/16	1036		11/3/16	1041	200	200	X				X
SV-08-07	H0231896	INTERA 1	11/3/16	1036		11/3/16	1041	200	200	X				X

Ambient Conditions When Sampling		Pump(s) Calibration and Flow Rate Check:	
Temperature (F)	Barometric Pressure (mmHg)	Lab or Field	Flow Meter Make/Serial #
Start		Pre-Survey	
Stop		Post-Survey	

Special Notes/Instructions: Install date is date vapor in set. Pins sit idle for 24-hrs before sampling. Retrieval date is sampling date. Sample for 5 min at 200cc/min

Relinquished by: (signature)	Date/Time:	Received by: (signature)	Date/Time:
<i>M.H. Spaly</i>	11/7/2016 1137	<i>Angelo Bevan</i>	11/8/2016 14:28h

Lab Use Only	Courier Name	Shipment Condition	Sample Delivery Group ID	Custody Seal Intact	Custody Seal No.
	FedEx	good		Yes No <input checked="" type="radio"/>	





# CHAIN-OF-CUSTODY RECORD

2203A Commerce Road, Suite 1  
 Forest Hill, MD 21050  
 410-838-8780 / fax: 410-838-8740

Client Contact Information		Project Manager: Joe Terry, jterry@interm.com		BEACON Project No.: 3588B											
Company:	INTERA	Phone:	505-246-1600	Client PO No.											
Address:	6000 Upton Blvd NE St. 220	Project Name:	Abj Mail, et	Analysis Turnaround Time											
City/State/Zip:	Albuquerque, NM 87110	Location:	Albuquerque, NM	<input checked="" type="checkbox"/> Normal											
Phone:	505-246-1600	Sampler Name(s):	M.H. Saphy, Frank Meeker, Clark Stud	<input type="checkbox"/> Rush (Specify):	days										
Location ID	Tube ID Number	Pump ID Number	Start Time		Temp. (F)	Stop Time		Temp. (F)	Pre-survey Measured Pump Flow Rate (mL/min)	Post-survey Measured Pump Flow Rate (mL/min)	TO-17	8260B	TICs	Indoor / Ambient Air	Matrix
			Date	Time		Date	Time								
SV-08-08	H0234589	INTERA 1	11/3/16	1100		11/3/16	1105		200	200	X				X
SV-08-08	1101002	INTERA 1	11/3/16	1100		11/3/16	1105		200	200	X				X
SV-08-01	G0164999	INTERA 1	11/3/16	1126		11/3/16	1131		200	200	X				X
SV-08-01	H0233606	INTERA 1	11/3/16	1126		11/3/16	1131		200	200	X				X
SV-05-01	1100817	INTERA 1	11/3/16	1317		11/3/16	1322		200	200	X				X
SV-05-01	H0234865	INTERA 1	11/3/16	1317		11/3/16	1322		200	200	X				X
SV-05-02	1049459	INTERA 1	11/3/16	1337		11/3/16	1342		200	200	X				X
SV-05-02	1049361	INTERA 1	11/3/16	1337		11/3/16	1342		200	200	X				X
SV-05-03	1049520	INTERA 1	11/3/16	1405		11/3/16	1410		200	200	X				X
SV-05-03	1049196	INTERA 1	11/3/16	1405		11/3/16	1410		200	200	X				X
Ambient Conditions When Sampling															
Temperature (F)		Barometric Pressure (mmHg)		Date		Cal. Tube ID:		Lab or Field		Flow Meter Make/Serial #					
Start						Pre-Survey									
Stop						Post-Survey									
Special Notes/Instructions:															
Install date is date vapor pin set. Pin set idle for 24-hrs prior to sampling. Retention date is sampling date. Sample for 5min at 200cc/min.															
Relinquished by: (signature)		Date/Time: 11/17/2016 1137		Received by: (signature)		Date/Time: 11/17/2016 14:28h									
Relinquished by: (signature)				Received by: (signature)											
Relinquished by: (signature)				Received by: (signature)											
Lab Use Only		Courier Name: Fed Ex		Shipment Condition: good		Sample Delivery Group ID		Custody Seal Intact		Custody Seal No.					
								Yes		No		None			



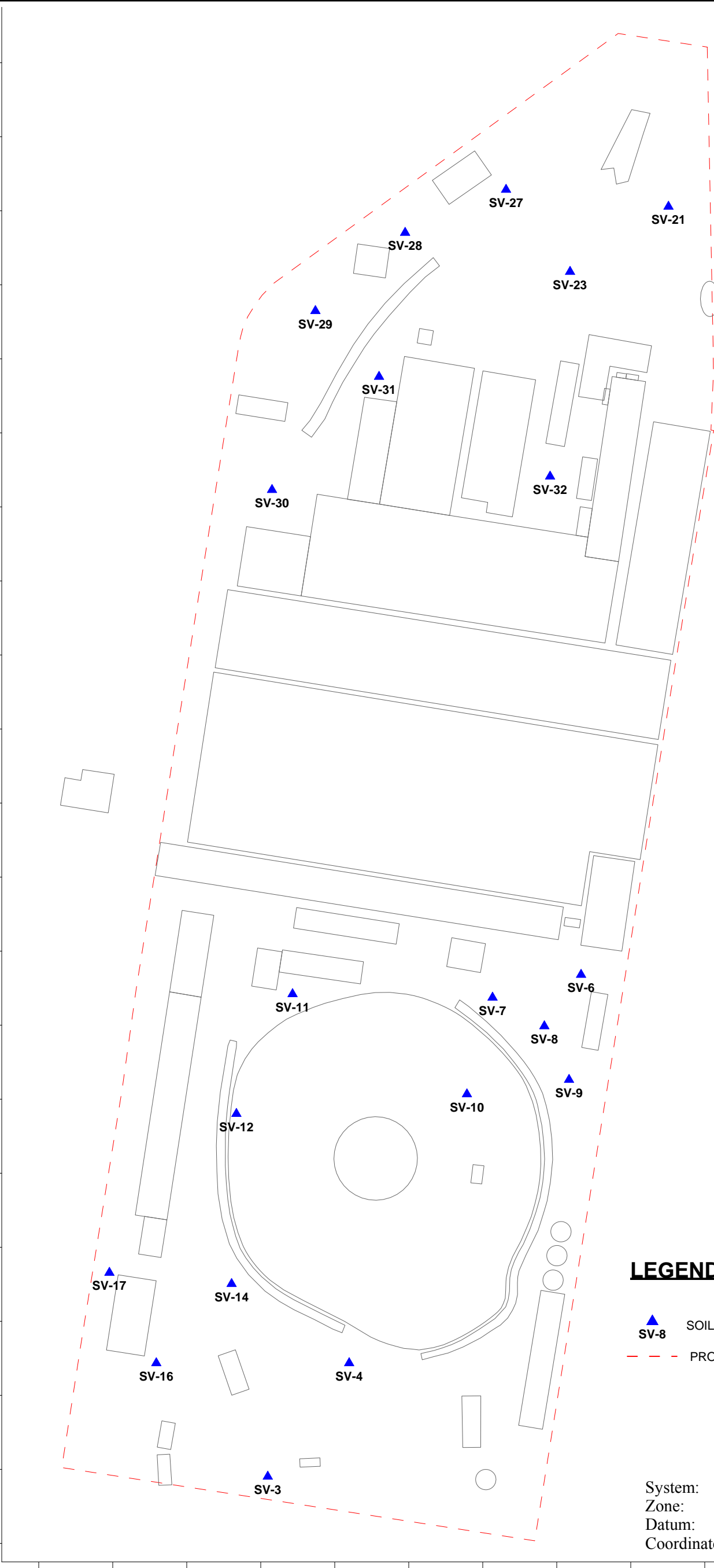


# CHAIN-OF-CUSTODY RECORD

2203A Commerce Road, Suite 1  
 Forest Hill, MD 21050  
 410-838-8780 / fax: 410-838-8740



Client Contact Information				BEACON Project No.: 3588B													
Company: INTERA		Project Manager: Joe Tracy, TracyCintela.com		Client PO No.		Analysis		Matrix									
Address: 6000 Uptown Blvd NE, S1220		Phone: 505-246-1600		Analysis Turnaround Time													
City/State/Zip: Albuquerque, NM 87110		Project Name: A by Knithead		<input checked="" type="checkbox"/> Normal													
Phone: 505-246-1600		Location: Albuquerque, NM 87110		<input type="checkbox"/> Rush (Specify):													
		Sampler Name(s): M.H. Spitz, Frank Becker, Clark Shull		days													
Location ID	Tube ID Number	Pump ID Number	Start Time		Stop Time		Temp. (F)	Pre-survey Measured Pump Flow Rate (mL/min)	Post-survey Measured Pump Flow Rate (mL/min)	TO-17	8260B	TICs	Indoor / Ambient Air	Soil Gas			
			Date	Time	Date	Time											
SV-05-05	G0177980	INTERA-1	11/3/16	1437	11/3/16	1442		200	200	X				X			
SV-05-05	G0165054	INTERA-2	11/3/16	1437	11/3/16	1442		200	200	X				X			
SV-05-04	H0231898	INTERA-4	11/3/16	1423	11/3/16	1428		200	200	X				X			
SV-05-04	H0234573	INTERA-7	11/3/16	1423	11/3/16	1428		200	200	X				X			
SV-05-06	1101163	INTERA-1	11/3/16	1501	11/3/16	1506		200	200	X				X			
SV-05-06	1100803	INTERA-7	11/3/16	1501	11/3/16	1506		200	200	X				X			
<b>Ambient Conditions When Sampling</b>																	
			Temperature (F)	Barometric Pressure (mmHg)	Date	Cal. Tube ID:	Lab or Field	Flow Meter Make/Serial #									
Start						Pre-Survey											
Stop						Post-Survey											
<b>Pump(s) Calibration and Flow Rate Check:</b>																	
Special Notes/Instructions: I still do it is done every period. PWS sit idle 24-hrs before sampling. Release date is sampling date. Sample for 5 min at 200cc/min.																	
Relinquished by: (signature)			Date/Time: 11/3/2016 1137			Received by: (signature) August Beavridis			Date/Time: 11/8/2016 14:28h								
Relinquished by: (signature)			Date/Time:			Received by: (signature)			Date/Time:								
Relinquished by: (signature)			Date/Time:			Received by: (signature)			Date/Time:								
Lab Use Only			Courier Name: Fed Ex			Shipment Condition: good			Sample Delivery Group ID			Custody Seal Intact			Custody Seal No.		
									Yes			No			None		

1483700  
1483600  
1483500  
1483400  
1483300  
1483200  
1483100  
1483000  
1482900  
1482800  
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1482200  
1482100  
1482000  
1481900  
1481800  
1481700

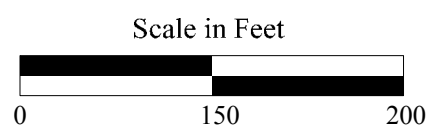


1520200 1520300 1520400 1520500 1520600 1520700 1520800 1520900 1521000 1521100 1521200

**LEGEND**

-  SOIL-GAS SAMPLE LOCATION
-  PROPERTY BOUNDARY

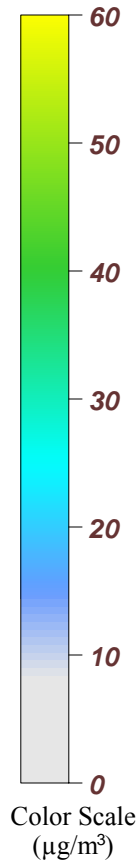
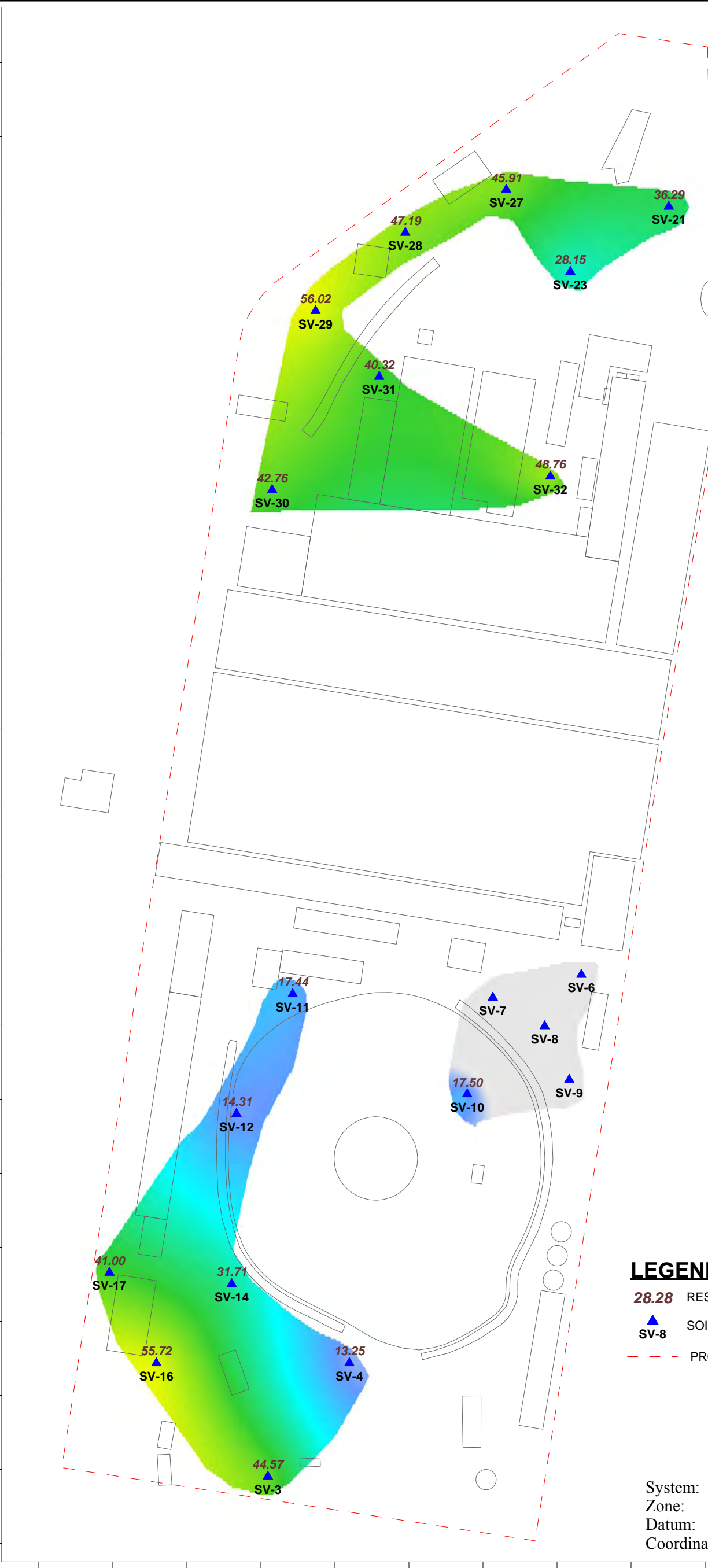
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Zone: New Mexico Central  
Datum: NAD 1983  
Coordinate Units: Feet



**Figure 1**  
**Soil-Gas Survey**  
**Soil-Vapor Sample Locations**  
**Albuquerque Railyards**  
**Albuquerque, NM**



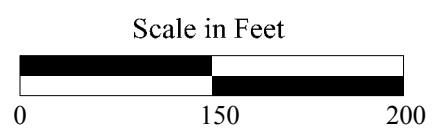
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**LEGEND**

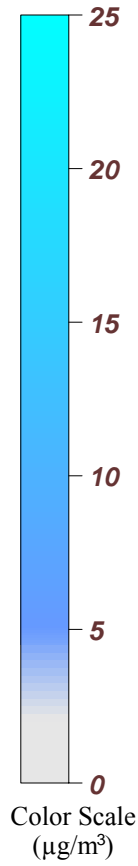
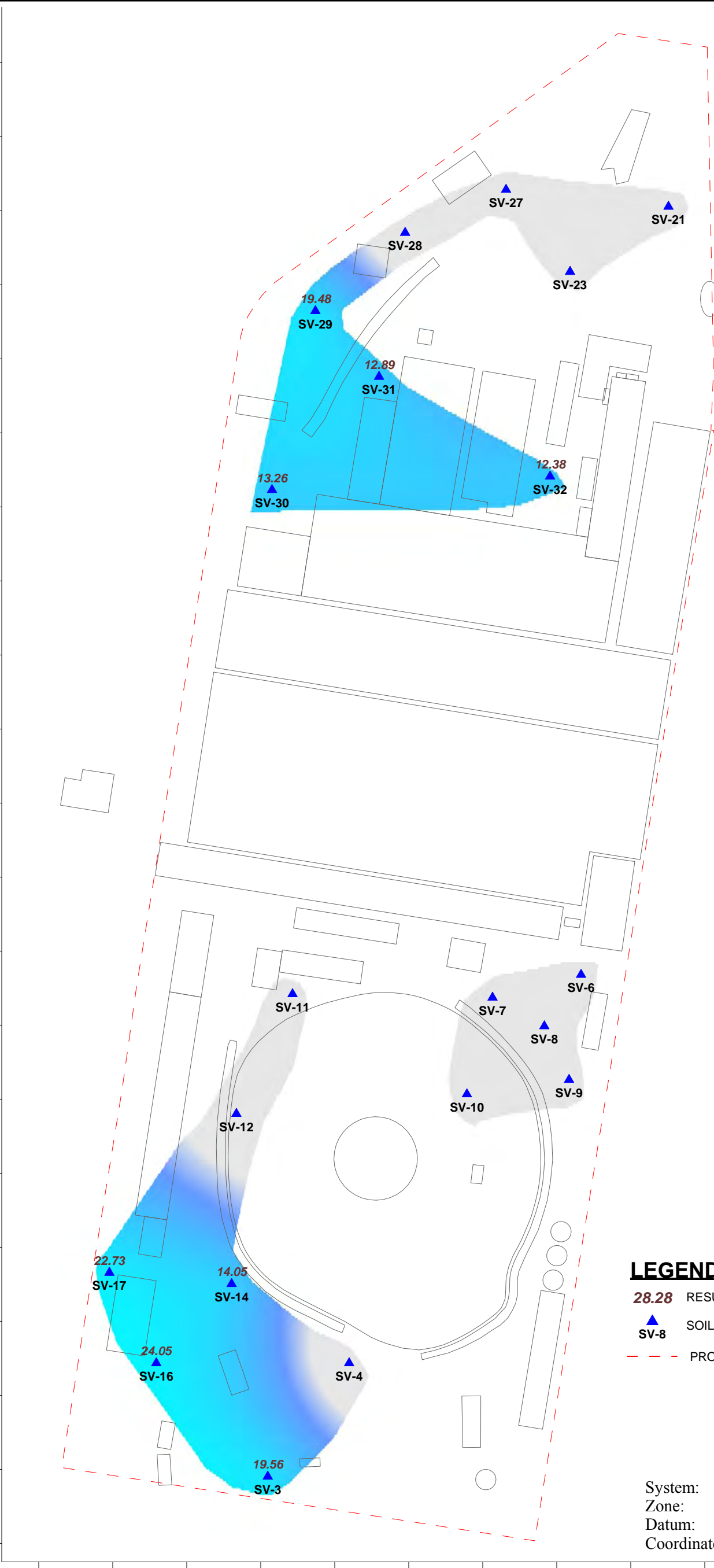
- 28.28** RESULT IN µg/m³
- ▲** SOIL-GAS SAMPLE LOCATION
- - -** PROPERTY BOUNDARY

System: US State Plane  
Zone: New Mexico Central  
Datum: NAD 1983  
Coordinate Units: Feet



**Figure 2**  
**Soil-Gas Survey**  
**Toluene**  
**Albuquerque Railyards**  
**Albuquerque, NM**

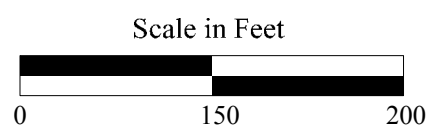
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**LEGEND**

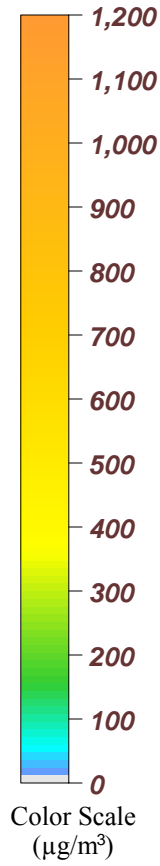
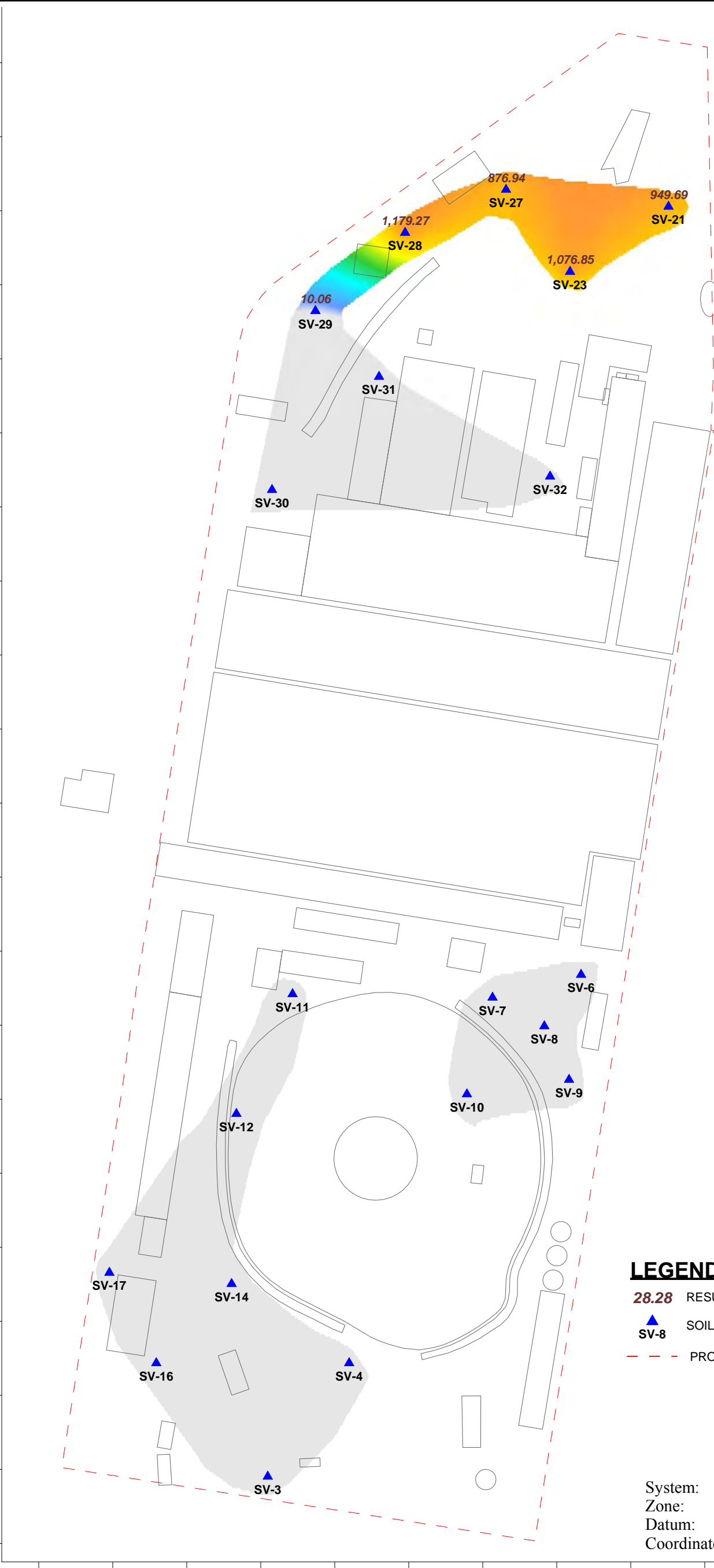
- 28.28** RESULT IN  $\mu\text{g}/\text{m}^3$
- SV-8** SOIL-GAS SAMPLE LOCATION
- - -** PROPERTY BOUNDARY

System: US State Plane  
Zone: New Mexico Central  
Datum: NAD 1983  
Coordinate Units: Feet



**Figure 3**  
**Soil-Gas Survey**  
**Naphthalene**  
**Albuquerque Railyards**  
**Albuquerque, NM**

1483700  
1483600  
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1483400  
1483300  
1483200  
1483100  
1483000  
1482900  
1482800  
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1482200  
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1481800  
1481700

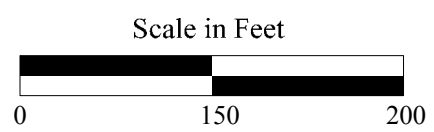


**LEGEND**

- 28.28** RESULT IN  $\mu\text{g}/\text{m}^3$
- SV-8** SOIL-GAS SAMPLE LOCATION
- - -** PROPERTY BOUNDARY

System: US State Plane  
Zone: New Mexico Central  
Datum: NAD 1983  
Coordinate Units: Feet

1520200 1520300 1520400 1520500 1520600 1520700 1520800 1520900 1521000 1521100 1521200



**Figure 4**  
**Soil-Gas Survey**  
**1,3-Dichlorobenzene**  
**Albuquerque Railyards**  
**Albuquerque, NM**

## **Appendix D**

**Calculation of Vapor Intrusion Screening Levels for Evaluation of Soil  
Gas Vapor Concerns at the City of Albuquerque Rail Yards,  
Albuquerque, Bernalillo County, New Mexico**

**CALCULATION OF VAPOR INTRUSION SCREENING LEVELS (VISLs) FOR EVALUATION OF SOIL GAS VAPOR CONCERNS AT THE CITY OF ALBUQUERQUE RAIL YARDS, ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO**

INTERA Incorporated (INTERA) calculated Vapor Intrusion Screening Levels (VISLs) using the U.S. Environmental Protection Agency (EPA) VISLs Calculator for detected constituents where the New Mexico Environmental Department (NMED) does not have established VISLs. These VISLs were calculated in order to evaluate soil vapor data collected at the City of Albuquerque (COA) Rail Yards, Albuquerque, Bernalillo County, New Mexico (Site). A list of VISLs calculated by INTERA using the EPA VISL Calculator for the Site are presented in the following table:

**Table 1**  
**EPA VISLs calculated for the COA Rail Yards, Albuquerque, New Mexico**

<b>Chemical of Potential Concern (COPC)</b>	<b>CAS Number</b>	<b>EPA VISL (<math>\mu\text{g}/\text{m}^3</math>)</b>
1,2,4-Trimethylbenzene	95-63-6	240
1,4-Dioxane	123-91-1	190

These VISLs represent target sub-slab and exterior soil gas concentrations for Site chemicals of potential concern (COPCs) and were calculated using default exposure parameters and factors altered to reflect Site-specific parameter options as provided in EPA's VISL Calculator (Version 3.5.1). The VISL Calculator incorporates basic guidance documented in EPA's VISL Calculator User's Guide (EPA, 2014) and is available for download at the following EPA website: <https://www.epa.gov/vaporintrusion/vapor-intrusion-screening-levels-visls>. A brief description of default exposure parameters and factors used to in the calculation of EPA VISLs as well as the rationale for Site-specific inputs utilized by INTERA in the VISL Calculator are discussed further below.

As documented in the EPA VISL Calculator User's Guide (EPA, 2014), VISLs are calculated using recommended approaches in existing guidance and reflect target EPA indoor air concentrations modified to incorporate empirically-based conservative "generic" attenuation factors that reflect generally reasonable worst-case conditions. Standard default (generic) VISLs are based on default exposure parameters and factors that represent Reasonable Maximum Exposure [RME] conditions for long-term/chronic exposures and incorporate the latest toxicity values in the Regional Screening Levels (RSL) tables (EPA, 2014). The EPA RSL tables were last updated in May 2016 and are available for download at the following EPA website: <http://www.epa.gov/region9/superfund/prg/>.

When using the VISL Calculator, standard default VISLs can be adjusted slightly to reflect the following Site-specific criteria: (1) applicable site exposure scenario (either residential or commercial), (2) target risk for carcinogens, (3) target hazard quotient for non-carcinogens, and (4) average in-situ ground water temperature (stabilized temperature measured during well purging prior to ground water sampling).

INTERA inputted the following site specific information to calculate site-specific VISLs for the Site.

- (1) Exposure scenario: Residential, and
- (2) Total Target Carcinogenic Risk: 10E-5

These parameters were considered most appropriate to represent Site conditions reflective of future decision-making needs: Assigning a less conservative total target carcinogenic risk of  $10E-5$  is standard practice for assessing carcinogenic risk within the State of New Mexico as described in the New Mexico Environment Department (NMED) document, Risk Assessment Guidance for Site Investigations and Remediation (NMED, 2015). All other parameters used to calculate VISLs for the Site were reflective of default values, listed for completeness, below:

- Target Hazard Quotient for Non-carcinogens: 1
- Average Ground Water Temperature: 25 (degrees C)
- Default Inhalation Pathway Exposure Parameters (RME) for the Residential Exposure Scenario:
  - Averaging time for carcinogens: 70 (yrs)
  - Averaging time for non-carcinogens: 26 (yrs)
  - Exposure duration: 26 (yrs)
  - Exposure frequency: 350 (days/yr)
  - Exposure time: 24 (hr/day)
- Generic Attenuation Factors:
  - Groundwater Source for Vapors: 0.001
  - Sub-Slab and Exterior Soil Gas Source for Vapors: 0.03
- Inhalation Unit Risk for Trichloroethylene (TCE) for the Residential Exposure Scenario:
  - Mutagenic component:  $1.00E-6$
  - Non-mutagenic component:  $3.10E-6$
- Mutagenic-mode-of-action (MMOA) adjustment factor: 72
- Exposure Durations and Age-Dependent Adjustment Factors for MMOAs:
  - 0 to 2 years: 10
  - 2 to 6 years: 3
  - 6 to 16 years: 3
  - 16-26 years: 1

These default parameters are exposure factors based on EPA's Risk Assessment Guidance for Superfund [RAGS] (EPA, 1989) or EPA vapor intrusion guidance. In general, EPA discourages the alteration of these default parameters (EPA, 2014).

Several COPCs identified for the Site were unable to have an EPA VISL calculated for the following reasons:

- (1) 1,3-Dichlorobenzene (CAS # 541-73-1): no information for this chemical is currently listed
- (2) 2-Methylnaphthalene (CAS # 91-57-6): no inhalation toxicity information for this chemical is currently available
- (3) 1,3,5-Trimethylbenzene (CAS # 108-67-8): no inhalation toxicity information for this chemical is currently available.

## REFERENCES

Environmental Protection Agency (EPA). 2014. Vapor Intrusion Screening Level (VISL) Calculator User's Guide. Office of Solid Waste and Emergency Response Office of Superfund Remediation and Technology Innovation. May.



- . 2016. EPA VISL Calculator from <https://www.epa.gov/vaporintrusion/vapor-intrusion-screening-levels-visls>. Updated May.
- . 1989. Risk Assessment Guidance for Superfund Volume I Human Health Evaluation Manual (Part A). Interim Final. Office of Emergency and Remedial Response Document EPA/540/1-89/002. December.
- New Mexico Environment Department. 2015. Risk Assessment Guidance for Site Investigations and Remediation. July 2015.

**Appendix E**  
**Contaminant Site Maps – All Parcels**

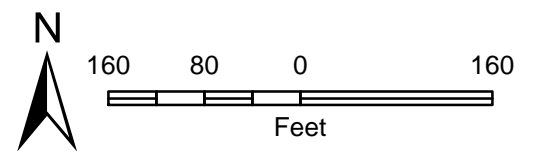




**Legend**

- |                         |  |   |
|-------------------------|--|---|
| <b>SSL Exceedance</b>   | <b>Non-Detect</b>                              | 2016 Soil Boring - Soil Sample >10 ft bgs |
| Soil Boring             | Soil Boring                                    | Parcel Boundary                           |
| Surface Soil            | Surface Soil; Subslab                          |   |
| Test Pit                | Test Pit                                       |   |
| <b>Detect below SSL</b> | <b>Non-Detect; Detection Limit exceeds SSL</b> |   |
| Soil Boring             | Soil Boring                                    |   |
| Surface Soil            | Surface Soil                                   |   |
| Test Pit                | Test Pit                                       |   |

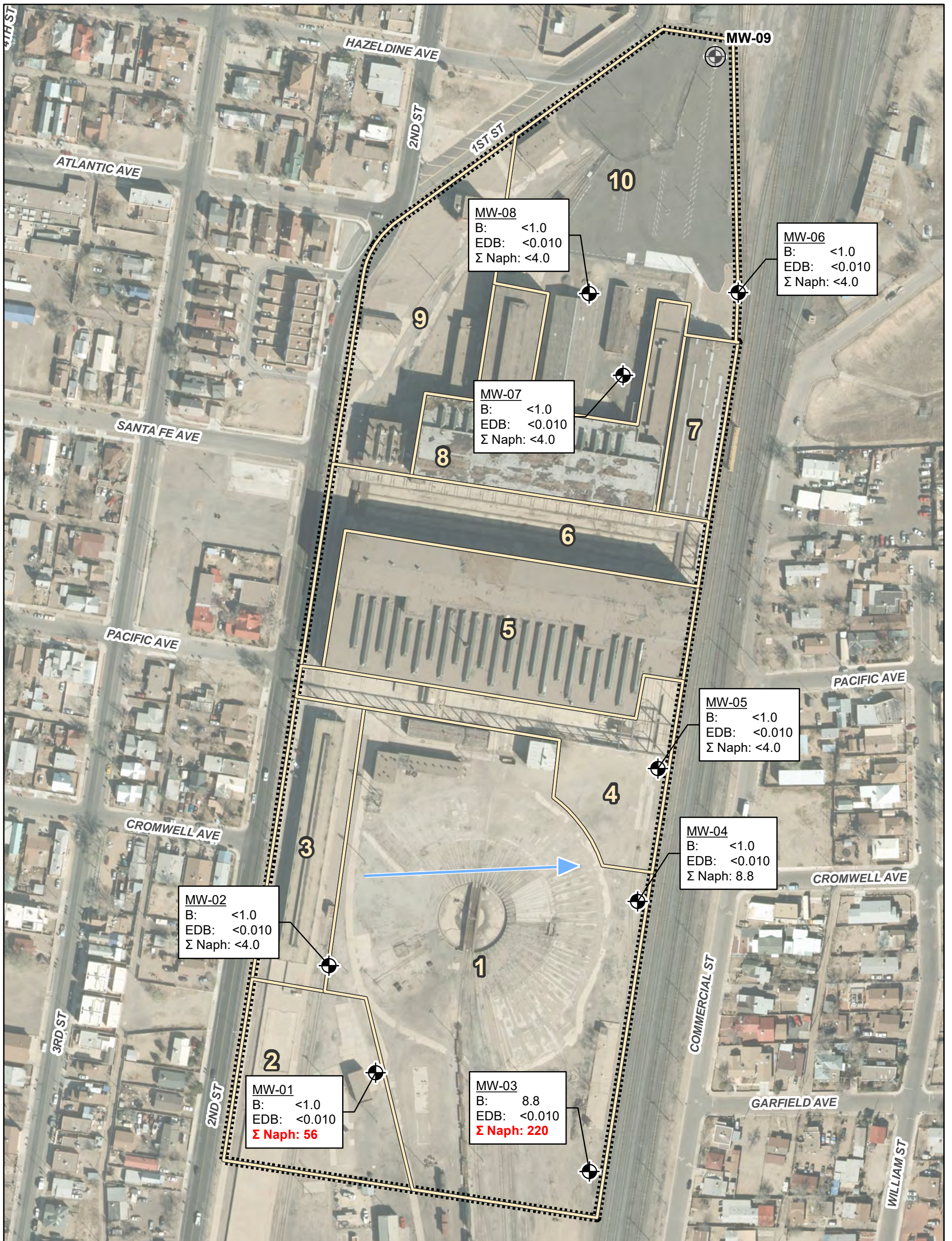
Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
 SSL: Soil Screening Levels (NMED, 2015)







**Construction Worker SSL Exceedances (0-10 ft bgs), Manganese**  
 Additional Characterization,  
 Voluntary Remediation Program Activities,  
 Albuquerque Rail Yards, Albuquerque,  
 Bernalillo County, New Mexico







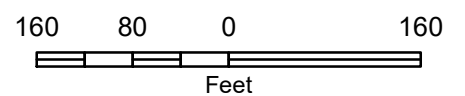
**Legend**

-  Monitoring Well; not located
-  Monitoring Well
-  Property Boundary
-  Parcel Boundary

 Estimated Groundwater Flow Direction

B= Benzene  
 EDB = 1,2-dibromoethane  
 Σ Naph = Naphthalene + 1, Methyl naphthalene + 2, Methyl naphthalene

**Well ID**  
 Analyte: Results in µg/L (micrograms per liter),  
**Red/Bold** indicates value or laboratory reporting limit in excess of the NMWQCC standards.



**Distribution of Dissolved-Phase Contaminants,  
 November 4, 2016**  
 Additional Characterization of  
 Groundwater Report, City of Albuquerque Rail Yards,  
 Albuquerque, Bernalillo County, New Mexico



Source(s): Aerial – BERNCO GIS website, dated 2014.





**Legend**

**SSL Exceedance**

- Soil Boring
- ◆ Surface Soil
- ⊕ Test Pit

**Detect below SSL**

- Soil Boring
- ◆ Surface Soil
- ⊕ Test Pit

**Non-Detect**

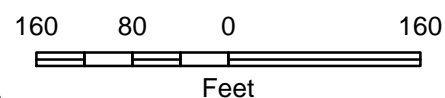
- Soil Boring
- ◆ Surface Soil; Subslab
- ⊕ Test Pit

**Non-Detect; Detection Limit exceeds SSL**

- Soil Boring
- ◆ Surface Soil
- ⊕ Test Pit

⊕ 2016 Soil Boring - Soil Sample >10 ft bgs

□ Parcel Boundary

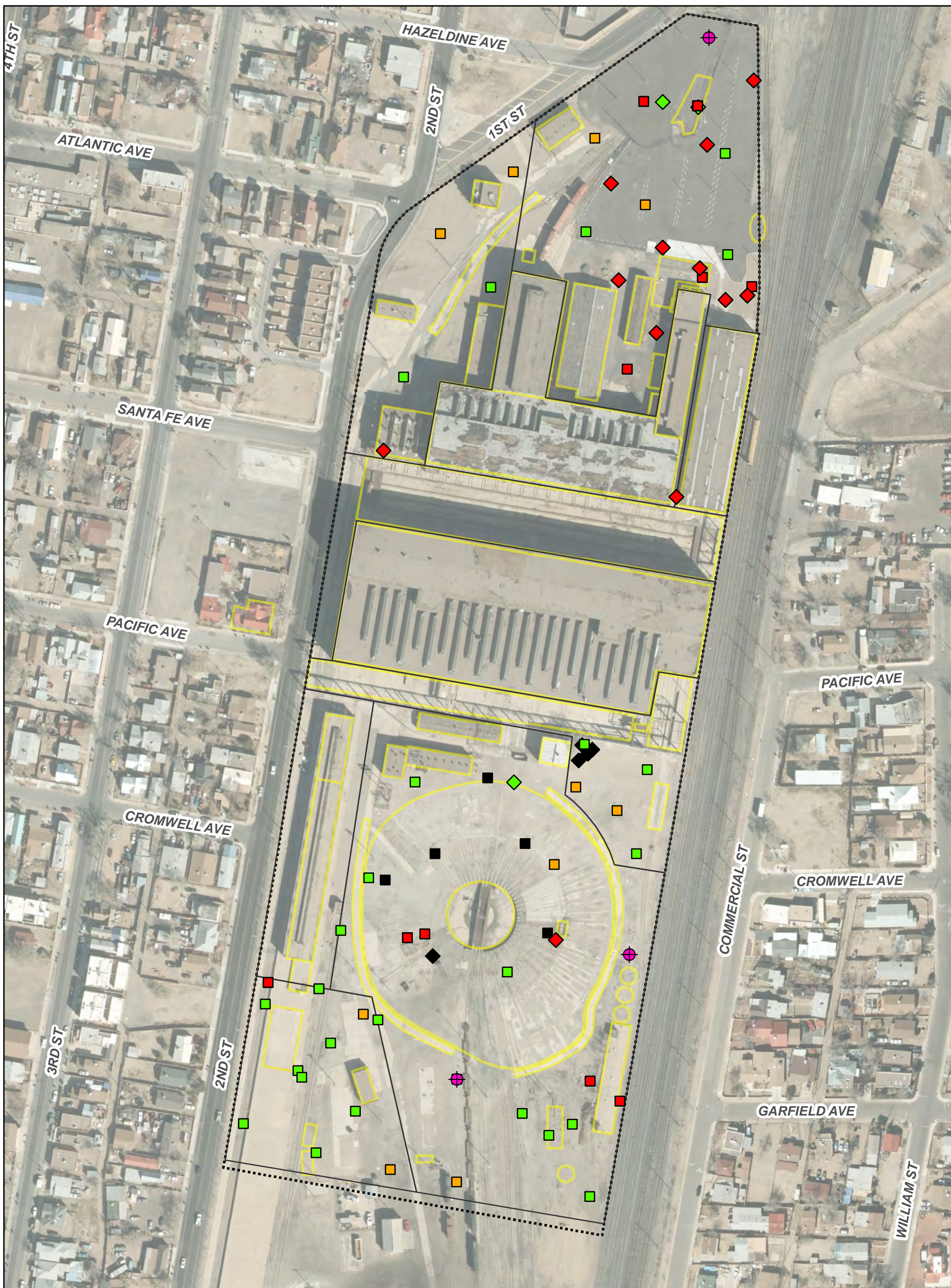


Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
SSL: Soil Screening Levels (NMED, 2015)

**Residential SSL Exceedances (0-10 ft bgs), Antimony**  
Additional Characterization, Voluntary Remediation Program Activities, Albuquerque Rail Yards, Albuquerque, Bernalillo County, New Mexico



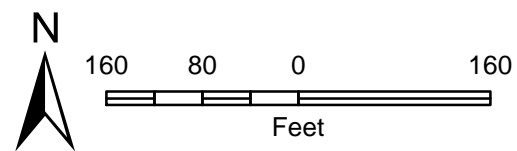




**Legend**

- |                         |  |
|-------------------------|--|
| <b>SSL Exceedance</b>   | <b>Non-Detect</b>                              |
| ■ Soil Boring           | ■ Soil Boring                                  |
| ◆ Surface Soil          | ◆ Surface Soil                                 |
| <b>Detect below SSL</b> | <b>Non-Detect; Detection Limit exceeds SSL</b> |
| ■ Soil Boring           | ■ Soil Boring                                  |
| ◆ Surface Soil          | ◆ Surface Soil                                 |

- ⊕ 2016 Soil Boring - Soil Sample >10 ft bgs
- ▭ Parcel Boundary
- ⋯ Property Boundary



Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
 SSL: Soil Screening Levels (NMED, 2015)

**Residential SSL Exceedances (0-10 ft bgs), Arsenic**  
 Additional Characterization, Voluntary Remediation Program Activities, Albuquerque Rail Yards, Albuquerque, Bernalillo County, New Mexico







Legend

SSL Exceedance

- Soil Boring
- ◆ Surface Soil
- ⊞ Test Pit

Detect below SSL

- Soil Boring
- ◆ Surface Soil
- ⊞ Test Pit

Non-Detect

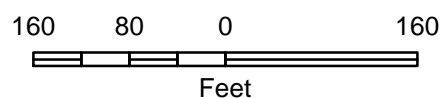
- Soil Boring
- ◆ Surface Soil; Subslab
- ⊞ Test Pit

Non-Detect; Detection Limit exceeds SSL

- Soil Boring
- ◆ Surface Soil
- ⊞ Test Pit

⊞ 2016 Soil Boring - Soil Sample >10 ft bgs

□ Parcel Boundary

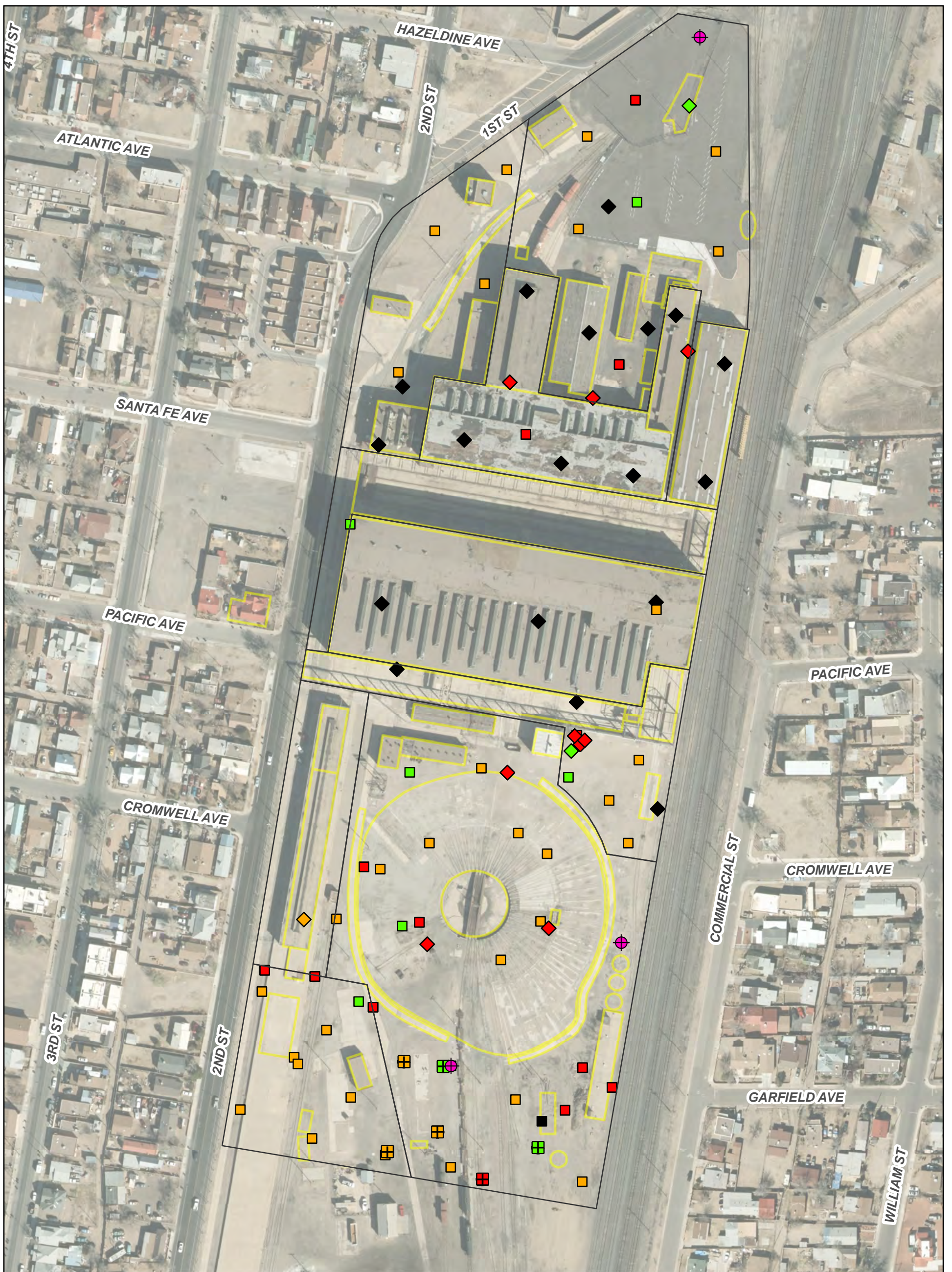


Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
SSL: Soil Screening Levels (NMED, 2015)

Residential SSL Exceedances (0-10 ft bgs), Benzo(a)anthracene Additional Characterization, Voluntary Remediation Program Activities, Albuquerque Rail Yards, Albuquerque, Bernalillo County, New Mexico

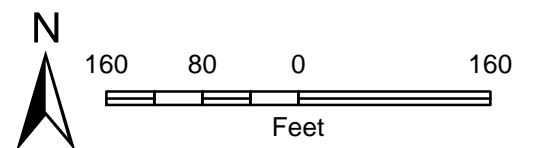






Legend

- |                         |  |   |
|-------------------------|--|---|
| <b>SSL Exceedance</b>   | <b>Non-Detect</b>                              | 2016 Soil Boring - Soil Sample >10 ft bgs |
| Soil Boring             | Soil Boring                                    | Parcel Boundary                           |
| Surface Soil            | Surface Soil; Subslab                          |   |
| Test Pit                | Test Pit                                       |   |
| <b>Detect below SSL</b> | <b>Non-Detect; Detection Limit exceeds SSL</b> |   |
| Soil Boring             | Soil Boring                                    |   |
| Surface Soil            | Surface Soil                                   |   |
| Test Pit                | Test Pit                                       |   |



Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
 SSL: Soil Screening Levels (NMED, 2015)

Residential SSL Exceedances  
 (0-10 ft bgs), Benzo(a)pyrene  
 Additional Characterization,  
 Voluntary Remediation Program Activities,  
 Albuquerque Rail Yards, Albuquerque,  
 Bernalillo County, New Mexico



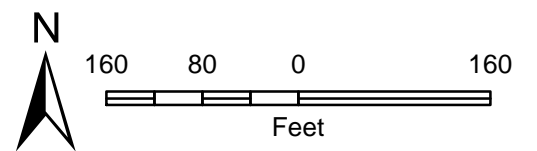




Legend

- |                         |  |   |
|-------------------------|--|---|
| <b>SSL Exceedance</b>   | <b>Non-Detect</b>                              | 2016 Soil Boring - Soil Sample >10 ft bgs |
| Soil Boring             | Soil Boring                                    | Parcel Boundary                           |
| Surface Soil            | Surface Soil; Subslab                          |   |
| Test Pit                | Test Pit                                       |   |
| <b>Detect below SSL</b> | <b>Non-Detect; Detection Limit exceeds SSL</b> |   |
| Soil Boring             | Soil Boring                                    |   |
| Surface Soil            | Surface Soil                                   |   |
| Test Pit                | Test Pit                                       |   |

Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
 SSL: Soil Screening Levels (NMED, 2015)



Residential SSL Exceedances  
 (0-10 ft bgs), Benzo(b)fluoranthene  
 Additional Characterization,  
 Voluntary Remediation Program Activities,  
 Albuquerque Rail Yards, Albuquerque,  
 Bernalillo County, New Mexico



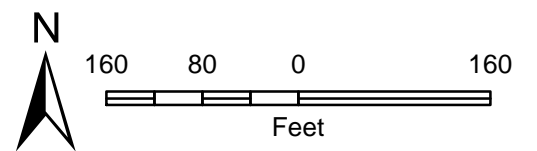




**Legend**

- |                         |  |   |
|-------------------------|--|---|
| <b>SSL Exceedance</b>   | <b>Non-Detect</b>                              | 2016 Soil Boring - Soil Sample >10 ft bgs |
| Soil Boring             | Soil Boring                                    | Parcel Boundary                           |
| Surface Soil            | Surface Soil; Subslab                          |   |
| Test Pit                | Test Pit                                       |   |
| <b>Detect below SSL</b> | <b>Non-Detect; Detection Limit exceeds SSL</b> |   |
| Soil Boring             | Soil Boring                                    |   |
| Surface Soil            | Surface Soil                                   |   |
| Test Pit                | Test Pit                                       |   |

Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
 SSL: Soil Screening Levels (NMED, 2015)



**Residential SSL Exceedances (0-10 ft bgs), Chromium**  
 Additional Characterization, Voluntary Remediation Program Activities, Albuquerque Rail Yards, Albuquerque, Bernalillo County, New Mexico



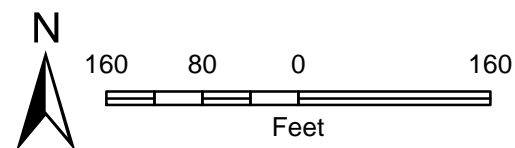




**Legend**

- |                         |  |   |
|-------------------------|--|---|
| <b>SSL Exceedance</b>   | <b>Non-Detect</b>                              | 2016 Soil Boring - Soil Sample >10 ft bgs |
| Soil Boring             | Soil Boring                                    | Parcel Boundary                           |
| Surface Soil            | Surface Soil; Subslab                          |   |
| Test Pit                | Test Pit                                       |   |
| <b>Detect below SSL</b> | <b>Non-Detect; Detection Limit exceeds SSL</b> |   |
| Soil Boring             | Soil Boring                                    |   |
| Surface Soil            | Surface Soil                                   |   |
| Test Pit                | Test Pit                                       |   |

Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
 SSL: Soil Screening Levels (NMED, 2015)



**Residential SSL Exceedances (0-10 ft bgs), Dibenzo(a,h)anthracene**  
 Additional Characterization, Voluntary Remediation Program Activities, Albuquerque Rail Yards, Albuquerque, Bernalillo County, New Mexico



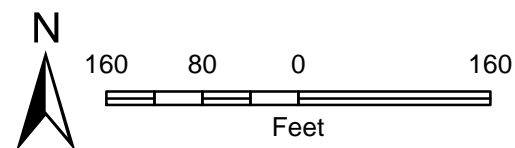




**Legend**

- |                         |  |   |
|-------------------------|--|---|
| <b>SSL Exceedance</b>   | <b>Non-Detect</b>                              | 2016 Soil Boring - Soil Sample >10 ft bgs |
| Soil Boring             | Soil Boring                                    | Parcel Boundary                           |
| Surface Soil            | Surface Soil; Subslab                          |   |
| Test Pit                | Test Pit                                       |   |
| <b>Detect below SSL</b> | <b>Non-Detect; Detection Limit exceeds SSL</b> |   |
| Soil Boring             | Soil Boring                                    |   |
| Surface Soil            | Surface Soil                                   |   |
| Test Pit                | Test Pit                                       |   |

Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
 SSL: Soil Screening Levels (NMED, 2015)



**Residential SSL Exceedances (0-10 ft bgs), Indeno(1,2,3-cd)pyrene**  
 Additional Characterization, Voluntary Remediation Program Activities, Albuquerque Rail Yards, Albuquerque, Bernalillo County, New Mexico



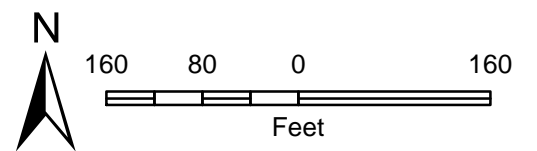




**Legend**

- |                         |  |   |
|-------------------------|--|---|
| <b>SSL Exceedance</b>   | <b>Non-Detect</b>                              | 2016 Soil Boring - Soil Sample >10 ft bgs |
| Soil Boring             | Soil Boring                                    | Parcel Boundary                           |
| Surface Soil            | Surface Soil; Subslab                          |   |
| Test Pit                | Test Pit                                       |   |
| <b>Detect below SSL</b> | <b>Non-Detect; Detection Limit exceeds SSL</b> |   |
| Soil Boring             | Soil Boring                                    |   |
| Surface Soil            | Surface Soil                                   |   |
| Test Pit                | Test Pit                                       |   |

Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
 SSL: Soil Screening Levels (NMED, 2015)



**Residential SSL Exceedances (0-10 ft bgs), Iron**  
 Additional Characterization,  
 Voluntary Remediation Program Activities,  
 Albuquerque Rail Yards, Albuquerque,  
 Bernalillo County, New Mexico







**Legend**

**SSL Exceedance**

■ Soil Boring

◆ Surface Soil

**Detect below SSL**

■ Soil Boring

◆ Surface Soil

**Non-Detect**

■ Soil Boring

◆ Surface Soil; Subslab

■ Test Pit

**Non-Detect; Detection Limit exceeds SSL**

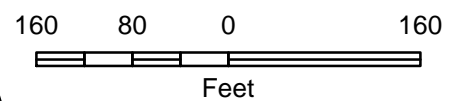
■ Soil Boring

◆ Surface Soil

■ Test Pit

● 2016 Soil Boring - Soil Sample >10 ft bgs

□ Parcel Boundary



**Residential SSL Exceedances (0-10 ft bgs), Lead**  
 Additional Characterization, Voluntary Remediation Program Activities, Albuquerque Rail Yards, Albuquerque, Bernalillo County, New Mexico

Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
 SSL: Soil Screening Levels (NMED, 2015)



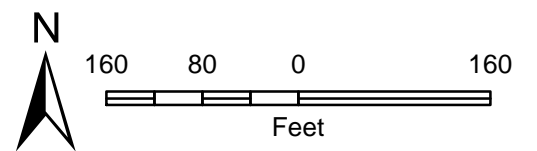




**Legend**

- |                         |  |   |
|-------------------------|--|---|
| <b>SSL Exceedance</b>   | <b>Non-Detect</b>                              | 2016 Soil Boring - Soil Sample >10 ft bgs |
| Soil Boring             | Soil Boring                                    | Parcel Boundary                           |
| Surface Soil            | Surface Soil; Subslab                          |   |
| Test Pit                | Test Pit                                       |   |
| <b>Detect below SSL</b> | <b>Non-Detect; Detection Limit exceeds SSL</b> |   |
| Soil Boring             | Soil Boring                                    |   |
| Surface Soil            | Surface Soil                                   |   |
| Test Pit                | Test Pit                                       |   |

Note: Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
 SSL: Soil Screening Levels (NMED, 2015)



**Residential SSL Exceedances (0-10 ft bgs), Thallium**  
 Additional Characterization, Voluntary Remediation Program Activities, Albuquerque Rail Yards, Albuquerque, Bernalillo County, New Mexico



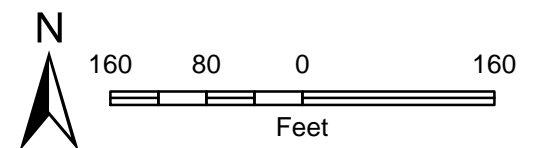




**Legend**

- |                         |  |
|-------------------------|--|
| <b>SSL Exceedance</b>   | <b>Non-Detect</b>                              |
| ■ Soil Boring           | ⊕ GMMW   |
| ◆ Surface Soil          | □ Soil Boring                                  |
| ⊠ TP                    | ◇ Surface Soil; Subslab                        |
| <b>Detect below SSL</b> | <b>Non-Detect; Detection Limit exceeds SSL</b> |
| ■ Soil Boring           | ■ Soil Boring                                  |
| ◆ Surface Soil          | ◆ Surface Soil                                 |
| ⊠ TP                    | ⊠ Test Pit                                     |

- ⊕ 2016 Soil Boring - Soil Sample >10 ft bgs
- Parcel Boundary



Note: TPH DRO + MRO is the summation of TPH DRO and TPH MRO, if non-detect than the laboratory reporting limit was used. Older TPH results from are reported as Total TPH. Some sample depths include a portion greater than 10 ft bgs (i.e., sample interval = 8 - 12 ft bgs).  
 SSL: Soil Screening Levels (NMED, 2015)

**Residential SSL Exceedances (0-10 ft bgs), TPH DRO + MRO, TPH Additional Characterization, Voluntary Remediation Program Activities, Albuquerque Rail Yards, Albuquerque, Bernalillo County, New Mexico**





**Legend**

**VISL Exceedance**

- Soil Gas Sample
- Sub-Slab Soil Vapor Sample

**Non-Detect**

- Soil Gas Sample
- Sub-Slab Soil Vapor Sample

**Detect below VISL**

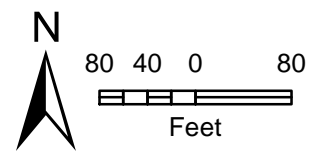
- Sub-Slab Soil Vapor Sample

Monitoring Well

Monitoring Well; not located

Parcel 1 Boundary

Property Boundary



**Naphthalene Soil Gas and Sub-Slab  
 Soil Vapor Residential VISL Exceedance**  
 Additional Characterization,  
 Voluntary Remediation Program Activities,  
 Albuquerque Rail Yards, Albuquerque,  
 Bernalillo County, New Mexico



Note: VISL: Vapor Intrusion Screening Levels (NMED, 2015)



**Appendix F**  
**Asbestos and Lead-Based Paint Report(s)**



**ASBESTOS AND LEAD BASED PAINT SURVEY**  
**City of Albuquerque**  
**Railyard North Wash Room**  
**Parcel 10**  
Albuquerque, NM



**PREPARED FOR:**  
Intera, Inc.  
6000 Uptown Blvd, Suite 220  
Albuquerque, New Mexico

**PREPARED BY:**  
DC Environmental  
PO Box 9315  
Albuquerque, New Mexico 87119

November 9, 2016  
Project No. 16-187



November 9, 2016  
Project No. 16-187

Mr. Joe Tracy  
Intera Inc.  
6000 Uptown Boulevard, NE  
Suite 200  
Albuquerque, NM 87110

Subject: Asbestos and Lead Based Paint inspection of the North Wash Room Parcel 10 – City of Albuquerque Railyard

Dear Mr. Joe Tracy;

In accordance with our proposal, DC Environmental has performed asbestos and lead based paint inspections of the above-referenced facility, located at the City of Albuquerque Railyard, 1100 2nd St SW, Albuquerque, New Mexico. The attached report presents our methodology, findings, opinions, and recommendations regarding the survey.

Lead Containing materials were identified at the North Wash Room. Asbestos-containing materials containing 1% or more of asbestos were not identified at the North Wash Room. The window putty contained <1% asbestos.

We appreciate the opportunity to be of service to you on this project. Should you have any questions regarding this report, please contact the undersigned at your convenience.

Sincerely,  
**ACME ENVIRONMENTAL INDUSTRIAL HYGIENE, INC.**  
**dba DC Environmental**

*David Charlesworth, CIH*  
Certified Industrial Hygienist  
Distribution: (2) Addressee

*Karen Dremann, BS*  
Senior Scientist

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6 RECOMMENDATIONS ..... 8

**Table**

Table 1. Asbestos Lab Results

**Appendices**

- Appendix A. Asbestos Laboratory Analysis Results
- Appendix B. XRF Lead Measurements Table
- Appendix C. Lead and Asbestos Data
- Appendix D. Lead Based Paint Laboratory Analysis
- Appendix E. Photographic Log
- Appendix F. Certifications



## EXECUTIVE SUMMARY

On October 26, 2016, DC Environmental performed an inspection of the North Wash Room located at the City of Albuquerque Railyard on 2<sup>nd</sup> street in Albuquerque, New Mexico. The inspection was conducted in a response to a request to identify materials which may be impacted during future renovation or demolition activities. The focus of our inspection was to determine the presence, location and quantity of asbestos remaining within the facility, and to establish the basis for the presence of lead containing finishes within the structure. The space is being evaluated for a confidential client and the concern is that existing materials may contain asbestos and lead in the finishes.

The inspection design was to conduct a room-by-room investigation for asbestos-containing building materials. Access the functional spaces, where appropriate; evaluate the exterior surfaces; and sample materials suspect for asbestos within the North Wash Room.

Asbestos-containing building materials are those containing greater than one percent asbestos as determined by polarized light microscopy. Asbestos was detected in the window putty at <1 percent. Materials with less than or equal to one percent asbestos should be further Characterized by Point Count Method to determine if the materials may be disposed as municipal waste and not as regulated Asbestos Waste under the New Mexico Solid Waste Regulations.

Lead-based paint is defined as coatings containing surface area lead of 1.0 milligrams per square centimeter (1.0 mg/cm<sup>2</sup>) when evaluated by X-Ray Fluorescence. Lead based paint is further defined if laboratory analysis determines the lead content to be one half (0.5 %) percent by weight or greater. The lead inspection of the facility was conducted using an X-Ray Fluorescence (XRF) handheld instrument of select components or areas. The inspector **did** identify painted surfaces with excess lead above the stated regulatory limit. Interior lead-based paint surfaces included interior; white paint on brick, white paint on wood, and exterior; red paint on wood, red paint on cast iron, and red paint on hydrant and hydrant rail.

Contractors bidding for work should be aware of the presence of lead when performing demolition and renovation activities involving these items.

### 1. INTRODUCTION

In accordance with our proposal, DC Environmental has performed an investigation of the North Wash Room located at the City of Albuquerque Railyard in Albuquerque, New Mexico.

The inspection was conducted in a response to a request to have building materials evaluated for future renovation or demolition activities. The focus of our inspection was to determine the presence, location and quantity of asbestos and lead based paint present within the facility. The building is being inspected for a confidential client and the concern is that existing materials may contain asbestos in building materials and lead in the painted finishes.

This report has been prepared in accordance with generally accepted environmental science and engineering practices. This report is based upon conditions at the subject building at the time of the sampling activities and provides documentation of our findings and recommendations.

### 2. PURPOSE AND SCOPE OF SERVICES

The inspection design was to conduct a room-by-room investigation and assess the facility for the presence of asbestos-containing building materials, and lead-based paint.

The objective of this inspection was to perform the requisite sampling and present the findings along with any recommendations. The services performed by DC Environmental are outlined below.

- A reconnaissance of the area was conducted by Mr. David Charlesworth, Mr. Michael Neiman, and Mr. Steven Gutierrez all accredited Asbestos Building Inspectors and David Charlesworth a Certified Lead Assessor (See Appendix F Certifications).
- Sampling was conducted using several different types of inspection tools and laboratory techniques including Polarized Light Microscopy and X-Ray Fluorescence.
- Report preparation summarizing our sampling methods and laboratory analysis are included. This report further details our conclusions and recommendations for the project.

### **3. SITE DESCRIPTION**

The subject site consists of one structure, the North Wash Room.

#### **The North Wash Room**

The North Wash Room consists of a single building, roof and exterior. The North Wash Room is a concrete frame and concrete siding construction. Roofing appeared to be gravel and tar over felt paper on top of concrete.

### **4. ACTIVITIES**

DC Environmental conducted a lead-based paint investigation and asbestos-containing building materials inspection on October 26, 2016 of the North Wash Room. Analysis of the Interior and exterior painted surfaces incorporated the use of an X-Ray Fluorescence Device. The Radiation Monitoring Device (RMD) LPA-1 X-Ray Fluorescence device was used to measure the lead content of surface coatings on representative homogenous components. Multiple XRF readings were recorded.

The site sampling activities are described below.

#### **4.1. Asbestos-Containing Building Materials**

Mr. David Charlesworth, Mr. Michael Nieman, and Mr. Steven Gutierrez conducted a visual inspection for asbestos-containing building materials at the above referenced building. Mr. Nieman collected a total of (2) samples that were tested for asbestos using Polarized Light Microscopy and stereomicroscopy bulk asbestos analysis. Analysis was conducted by Crisp Analytical, LLC of Carrollton, Texas. Crisp Analytical is an accredited laboratory and recognized by the National Voluntary Laboratory Accreditation Program. Based upon the samples tested, one of the materials sampled was identified as an asbestos-containing material. The window putty samples has <1 percent asbestos. Materials with less than or equal to one percent asbestos should be further Characterized by Point Count Method to determine if the materials may be disposed as municipal waste and not as regulated Asbestos Waste under the New Mexico Solid Waste Regulations.

The Environmental Protection Agency has established terminology regarding asbestos and specifically asbestos-containing building materials. Material which is friable are those materials which can be crushed, crumbled or reduced to powder by hand pressure. Non-friable materials are further characterized as Category I Non-Friable or Category II Non-Friable. Category I Non-Friable includes four specific items: Packings, Gaskets, Resilient Flooring and Asphalt Roofing. Category II Non-Friable is everything else which cannot be crumbled or pulverized by hand pressure. These items include materials of drywall systems, plasters, asbestos-containing cements (Transite<sup>®</sup>) and other materials declared non-friable by the asbestos inspector.

The EPA then clarifies that certain materials are Regulated Asbestos Containing Materials (RACM) and these include the following four designations:

- Friable materials;
- Category I Non-Friable Materials which have become friable;
- Category I Non-Friable Materials which have been subject to sanding, grinding, cutting and abrading; and
- Category II Non-friable materials which will be, or have been, subject to force during demolition or renovation.

Regulated Asbestos Containing Materials were **not** present within the structure.

#### **4.2. Lead Based Paint Inspection**

The presence of lead based paint was assessed in substantial compliance with the Housing and Urban Development guidelines. DC Environmental conducted a lead-based surface coating screening survey of the interior and exterior of the property to generally identify building components coated with lead. The survey consisted of testing the lead concentrations of each of the accessible surfaces.

To complete the survey, an X-Ray Fluorescence device was used to perform the lead based paint inspection. The Radiation Monitoring Device (RMD) LPA-1 X-Ray Fluorescence device is capable of detecting lead in lead-based paint. The determination of lead in paint is defined as a surface content of at least 1.0 milligrams per square centimeter. If the readings were between the 0.9 to 1.0 mg/cm<sup>2</sup> range, then the readings are declared as either lead-based paint or lead-containing materials and sampling is recommended.

Surfaces that were tested with the XRF device included, but were not limited to the following: doors, ceiling, painted walls, structural steel support, painted door components, roof components, ventilation duct, gates, and framing.

To determine the wall designations, the front entry off of the street or primary doorway is the A wall and interior in a clockwise direction are the B, C and D walls respectively. Exterior walls are similar in the designations.

The XRF device recorded readings did indicate lead based paint in surfaces on the interior and exterior of architectural details and finishes. Please refer to the XRF readings in the appendix to this document.

**5. ANALYSES AND RESULTS**

The results of samples and analysis are presented in the following tables. Copies of the laboratory analytical results are included in appendix A, B and D to this document.

**5.1. Table 1: Asbestos Sample Analysis**

<b>Sample #</b>	<b>North Wash Room Analyst physical description of subsample</b>	<b>Asbestos Type/calibrated/Visual estimate percent</b>
16-187-100	Window Putty North Wash Room	<1% Chrysotile
16-187-101	Red Roofing Material North Wash Room	ND

ND – None Detected

**4.2 Table 2 Lead Based Paint Chip Analysis**

<b>Sample #</b>	<b>North Wash Room Analyst physical description of subsample</b>	<b>Lead Based Paint Concentration % by weight</b>
16-187-1000	White Paint from Ceiling North wash Room	16
16-187-1001	Beige Paint from Window Sill North wash Room	0.52
16-187-1002	Red Paint Exterior Window North Wash Room	4.3
16-187-1003	Red Paint Interior Floor North Wash Room	0.62

LBP = 0.5 percent by weight or more.

**5. FINDINGS AND CONCLUSIONS**

The findings of this inspection are based on our visual observations and analysis of the measurements collected from the facility. Our findings are presented below.

**5.1 Asbestos Sampling Analysis**

The current visual inspection and sampling of building materials revealed previously undocumented sources of asbestos-containing building materials. Asbestos-containing building materials were identified in the North Wash Room. The window putty contained <1 asbestos. Materials with less than or equal to one percent asbestos should be further Characterized by Point Count Method to determine if the materials may be disposed as municipal waste and not as regulated Asbestos Waste under the New Mexico Solid Waste Regulations.

**5.2 Lead Based Paint Analysis**



DC Environmental conducted a lead-based surface coating inspection of the interior and exterior of the property to generally identify building components coated with or containing lead. The survey consisted of testing the lead concentrations of over the majority of the interior and exterior surfaces.

During the survey, testing combinations in representative room equivalents were sampled by X-Ray Fluorescence (XRF) in substantial compliance with the XRF protocols established by EPA and presented as guidance in the Housing and Urban Development (HUD) publications. Performance of this survey is consistent and in substantial compliance with the documented methodologies identified by EPA and HUD.

Based on the readings from the XRF devices materials at the North Wash Room were considered painted with Lead-based Paint (LBP).

Lead-Based Paint (LBP) is defined by HUD and the EPA as paint containing lead in amounts greater than or equal to 1.0 mg/cm<sup>2</sup> lead when analyzed by XRF or greater than 5000 parts per million or 0.5 percent by weight when analyzed by Flame Atomic Absorption.

There are materials in this building though, that are considered “lead-containing”. Those materials are listed in Appendix B, XRF Lead Measurements and Appendix D Lead Based Paint Laboratory Analysis. Contractors should follow the elements of the standard promulgated by the Occupational Safety and Health Administration. The Lead in Construction Standard 29 CFR 1926.62 applies to exposures to materials containing lead. Individuals bidding for work should be aware of the presence of lead when performing demolition and renovation activities involving these items.

## 6 RECOMMENDATIONS

Based on our visual observations and the laboratory results, DC Environmental recommends the following:

- The Lead-based Paint inspection **did** identify “lead-based paint” at the North Wash Room. Those materials are listed in Appendix B, XRF Lead Measurements and Appendix D. Lead Based Paint Laboratory Results. These materials are regulated by OSHA in regards to those individuals which could be exposed during repair, renovation or demolition. It is recommended to have trained professionals in the OSHA Lead Construction standard handle the lead-based paint and lead-containing materials during disturbance of the material. At the conclusion of the construction activities we recommend a Lead Risk Assessment to include soil testing and settled dust be performed. A Lead Risk Assessment is recommended for this property based on the age and that children **may/are** expected to be present. A Risk Assessment should be conducted at the conclusions of operations to repair, renovate or abate the lead based coating.
- Asbestos containing materials were present, window putty < 1%. Materials with less than or equal to one percent asbestos should be further Characterized by Point Count Method to determine if the materials may be disposed as municipal waste and not as regulated Asbestos Waste under the New Mexico Solid Waste Regulations.

We appreciate the opportunity to provide sampling and inspection of this area. Should you have additional questions, or if conditions change substantially, please contact us at your earliest convenience.

Sincerely,

DC Environmental  
David Charlesworth  
Certified Industrial Hygienist

## **LIMITATIONS**

The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard-of-care exercised by environmental consultants performing similar work in the project area. No warranty, expressed or implied, is made regarding the professional opinions presented in this report. Variations in site conditions may exist and conditions not observed or described in this report may be encountered during subsequent activities.

The environmental interpretations and opinions contained in this report are based on the results of instrumentation, laboratory tests and/or analyses Acme Environmental Industrial Hygiene, Inc., has no involvement in, or control over, such equipment, testing and/or analysis. Acme Environmental Industrial Hygiene, Inc, dba DC Environmental therefore, disclaims responsibility for any inaccuracy in such laboratory results.

Our conclusions, recommendations, and opinions are based on an analysis of the observed site conditions. It should be understood that the conditions of a site could change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Acme Environmental Industrial Hygiene, Inc., has no control.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Acme Environmental Industrial Hygiene, Inc., should be contacted if the reader requires any additional information, or has questions regarding content, interpretations presented, or completeness of this document.

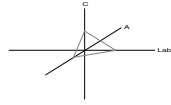
This report is intended exclusively for use by the client. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the client is undertaken at said parties' sole risk.

**Appendix A**  
**Asbestos Laboratory Results**



**CA Labs**  
Dedicated to  
Quality

**Crisp Analytical, L.L.C.**  
1929 Old Denton Road  
Carrollton, TX 75006  
Phone 972-242-2754  
Fax 972-242-2798



**CA Labs, L.L.C.**  
12232 Industriplex, Suite 32  
Baton Rouge, LA 70809  
Phone 225-751-5632  
Fax 225-751-5634

## **Materials Characterization - Bulk Asbestos Analysis**

### **Laboratory Analysis Report - Polarized Light**

#### **DC Environmental**

PO Box 9315  
Albuquerque, NM 87119

**Attn:** David Charlesworth

**Customer Project:** DCE 16-187, City Of Albuquerque (Intera), Rail Yard  
**Reference #:** CAL16117627JE **Date:** 11/14/2016

#### **Analysis and Method**

Summary of polarizing light microscopy (PLM / Stereomicroscopy bulk asbestos analysis) using the methods described in 40CFR Part 763 Appendix E to Subpart E (Interim and EPA 600 / R-93 / 116 (Improved)). The sample is first viewed with the aid of stereomicroscopy. Numerous liquid slide preparations are created for analysis under the polarized microscope where identifications and quantifications are performed. Calibrated liquid refractive oils are used as liquid mounting medium. These oils are used for identification (dispersion staining). A calibrated visual estimation is reported, should any asbestiform mineral be present. Other techniques such as acid washing are used in conjunction with refractive oils for detection of smaller quantities of asbestos. All asbestos percentages are based on calibrated visual estimation traceable to NIST standards for regulated asbestos. Traceability to measurement and calibration is achieved by using known amounts and types of asbestos from standards where analyst and laboratory accuracy are measured. As little as 0.001% asbestos can be detected in favorable samples, while detection in unfavorable samples may approach the detection limit of 0.50% (well above the laboratory definition of trace).

#### **Discussion**

Vermiculite containing samples may have trace amounts of actinolite-tremolite, where not found by PLM should be analyzed using TEM methods and / or water separation techniques. Suspected actinolite/vermiculite presence will be indicated through the sample comment section of this report.

Fibrous talc containing samples may even contain a related asbestos fiber known as anthophyllite. Under certain conditions the same fiber may actually contain both talc and anthophyllite (a phenomenon called intergrowth). Again, TEM detection methods are recommended. CA Labs PLM report comments will denote suspected amounts of asbestiform anthophyllite with talc, where further analysis is recommended.

Some samples (floor tiles, surfacings, etc.) may contain fibers too small to be detectable by PLM analysis and should be analyzed by TEM bulk protocols.

A "trace asbestos" will be reported if the analyst observes far less than 1% asbestos. CA Labs defines "trace asbestos" as a few fibers detected by the analyst in several preparations and will indicate as such under these circumstances.

Quantification of <1% will actually be reported as <=1% (allowable variance close to 1% is high). Such results are ideal for point counting, and the technique is mandatory for friable samples (NESHAP, Nov. 1990 and clarification letter 8 May 1991) under 1% percent asbestos and the "trace asbestos". **In order to make all initial PLM reports issued from CA Labs NESHAP compliant, all <1% asbestos results (except floor tiles) will be point counted at no additional charge.**

#### **Qualifications**

CA Labs is accredited by the National Voluntary Accreditation Program (NVLAP) for selected test methods for airborne fiber analysis (TEM), and for bulk asbestos fiber analysis (PLM). CA Labs is also accredited by AIHA LAP, LLC. in the PLM asbestos field of testing for Industrial Hygiene. All analysts have a college degree in a natural science (geology, biology, or environmental science) or are recognized by a state professional board in one of these disciplines. Extensive in-house training programs are used to augment education background of the analyst. The group leader of polarized light has received supplemental McCrone Research training for asbestos identification. Analysis performed at Crisp Analytical Labs, LLC 1929 Old Denton Road Carrollton, TX 75006

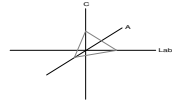
*Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235*  
**AIHA LAP, LLC Laboratory #102929**

**CA Labs**

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**Crisp Analytical, L.L.C.**

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## Overview of Project Sample Material Containing Asbestos

**Customer Project:** DCE 16-187, City Of Albuquerque (Intera), Rail Yard **CA Labs Project #:** CAL16117627JE

Sample #	Layer #	Analysts	Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affected Building Material Types
16-187-100	100-1		<b>Window Putty north Wash Room/ tan sealant</b>	<b>&lt;1% Chrysotile</b>	<b>tan sealant</b>

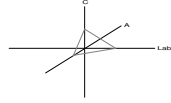
Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235

**AIHA LAP, LLC Laboratory #102929**

**Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):**

ca - carbonate	pe - perlite	fg - fiberglass	pa - palygorskite (clay)
gypsum - gypsum	qu - quartz	mw - mineral wool	
bi - binder		wo - wollastinite	
or - organic		ta - talc	
ma - matrix		sy - synthetic	
mi - mica		ce - cellulose	
ve - vermiculite		br - brucite	
ot - other		ka - kaolin (clay)	

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**CA Labs**Dedicated to  
Quality**Crisp Analytical, L.L.C.**1929 Old Denton Road  
Carrollton, TX 75006  
Phone 972-242-2754  
Fax 972-242-2798**CA Labs, L.L.C.**12232 Industriplex, Suite 32  
Baton Rouge, LA 70809  
Phone 225-751-5632  
Fax 225-751-5634**Polarized Light Asbestiform Materials Characterization****Customer Info:** Attn: David Charlesworth**DC Environmental**PO Box 9315  
Albuquerque, NM 87119

Phone # 505-869-8000

Fax # 505-869-9453

**Customer Project:**DCE 16-187, City Of  
Albuquerque (Intera), Rail  
Yard Parcel 10**Turnaround Time:**

2 Days

**CA Labs Project #:**

CAL16117627JE

**Date:** 11/14/2016**Samples Received:** 11/11/16 10:30am**Date Of Sampling:** 10/26/2016**Purchase Order #:**

Sample #	Com ment	Layer #	Analysts Subsample	Physical Description of	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
----------	-------------	------------	-----------------------	-------------------------	-------------------------------	--	--------------------------------------	-------------------------------

**Window Putty north Wash**

16-187-100 100-1 Room/ tan sealant n &lt;1% Chrysotile 100% qu,ca

**Red Roofing Material North****Wash Room/ brown roofing**

16-187-101 101-1 material n None Detected 4% ce 96% qu,bi

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235

**AIHA LAP, LLC Laboratory #102929**

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). All samples received in good condition unless noted.

Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gypsum - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot - other	wo - wollastinite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

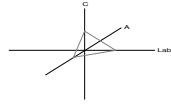
Stanley Massett  
AnalystQAC  
Leslie Crisp, P.G.Technical Manager  
Chad Lytle

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze

6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

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 Fax 225-751-5634

**Polarized Light Asbestiform Materials Point Count**  
**Laboratory Analysis Report - Point Count**

**Analysis and Method**

Point counting was performed on a polarized light microscope with a calibrated reticle according to the revised NESHAP method of November 20, 1990 (Federal Register, V.55, N.224, 11/20/90). Original asbestos content of bulk materials was determined using procedures outlined in the interim method (40 CFR part 763, Appendix E to subpart E) and AHERA method (EPA-600/R-93/116). Samples were prepared using HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion staining / becke line method.

**Qualifications**

CA Labs is accredited by the National Voluntary Accreditation Program (NVLAP) for selected test methods for airborne fiber analysis (TEM), and for bulk asbestos fiber analysis (PLM). CA Labs is also accredited by AIHA LAP, LLC. in the PLM asbestos field of testing for Industrial Hygiene. All analysts have a college degree in a natural science (geology, biology, or environmental science) or are recognized by a state professional board in one of these disciplines. Extensive in-house training programs are used to augment education background of the analyst. The group leader of polarized light has received supplemental McCrone Research training for asbestos identification. This report is not covered by the scope of NVLAP accreditation. Analysis performed at Crisp Analytical Labs, LLC 1929 Old Denton Road Carrollton, TX 75006

**Customer Info:** Attn: David Charlesworth  
**DC Environmental**  
 PO Box 9315  
 Albuquerque, NM 87119

Phone # 505-869-8000  
 Fax # 505-869-9453

**Customer Project:**  
 DCE 16-187, City Of  
 Albuquerque (Intera), Rail  
 Yard Parcel 10

**Turnaround Time:**  
 2 Days

**CA Labs Project #:**  
 CAL16117627JE

**Date:** 11/14/2016  
**Samples Received:** 11/11/16 10:30am  
**Date Of Sampling:** 10/26/2016  
**Purchase Order #:**

Sample #	Layer #	Analysts Physical Description of Subsample	Homo-geneous (Y/N)	Point Counted % / Asbestos Type
16-187-100	100-1	<b>Window Putty north Wash Room/ tan sealant</b>	n	<b>0.25% Chrysotile</b>

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235

**AIHA LAP, LLC Laboratory #102929**

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Approved Signatories:


Stanley Massett  
 Analyst

QAC  
 Leslie Crisp, P.G.

Technical Manager  
 Chad Lytle



CAZ16117627

 <p>DC Environmental Consulting and Training Services "Promoting Safety in the Workplace"</p> <p>DC Environmental PO Box 9315 Albuquerque, NM 87119</p> <p>Contact: J. David Charlesworth</p> <p>Phone: 505.869.8000</p> <p>Fax: 505.869.9453</p> <p>E-mail: JDCharlesworthcih@gmail.com</p> <p>Site: City of Albuquerque (Intera)</p> <p>Site Location: Rail Yard Parcel 10 North Wash Room</p>	PO / Job#: DCE 16-187	Date: 10/26/2016
	Turn Around Time: Same Day / 1Day / <b>2Day</b> / 3Day / 4Day / 5Day	
	<input type="checkbox"/> PCM: <input type="checkbox"/> NIOSH 7400A / <input type="checkbox"/> NIOSH 7400B <input type="checkbox"/> Rotometer	
	<input type="checkbox"/> PLM: <input type="checkbox"/> Standard / <input type="checkbox"/> Point Count 400 - 1000 / <input type="checkbox"/> CARB 435	
<input type="checkbox"/> TEM Air: <input type="checkbox"/> AHERA / <input type="checkbox"/> Yamate2 / <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> TEM Bulk: <input type="checkbox"/> Quantitative / <input type="checkbox"/> Qualitative / <input type="checkbox"/> Chatfield <input type="checkbox"/> TEM Water: <input type="checkbox"/> Potable / <input type="checkbox"/> Non-Potable / <input type="checkbox"/> Weight % <input type="checkbox"/> TEM Microvac: <input type="checkbox"/> Qual(+/-) / <input type="checkbox"/> D5755(str/area) / <input type="checkbox"/> D5756(str/mass)		
<input type="checkbox"/> IAQ Particle Identification (PLM LAB) <input type="checkbox"/> PLM Opaques/Soot <input type="checkbox"/> Particle Identification (TEM LAB) <input type="checkbox"/> Special Project		
<input type="checkbox"/> Metals Analysis: Method: _____ Matrix: _____ Analytes: _____		
Comments:		

Sample ID	Date	Sample Location / Description / Task	FOR AIR SAMPLES ONLY				Sample Area / Air Volume
			Type	Time On/Off	Avg. LPM	Total Time	
16-187-100	10/26	Window Putty North Wash Room	A P C				
16-187-101	10/26	Red Roofing Material North Wash Room	A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				

Sampled By: Steven Gutierrez		
Shipped Via: <input type="checkbox"/> Fed Ex <input type="checkbox"/> DHL <input type="checkbox"/> UPS <input type="checkbox"/> US Mail <input type="checkbox"/> Courier <input type="checkbox"/> Drop Off <input type="checkbox"/> Other:		
Relinquished By: Steven Gutierrez Date / Time: 11/10/2016 5:00PM	Relinquished By: Date / Time:	Relinquished By: Date / Time:
Received By: <i>Justin</i> Date / Time: 11/11/16 10:30	Received By: Date / Time:	Received By: Date / Time:
Condition Acceptable? <input type="checkbox"/> Yes <input type="checkbox"/> No	Condition Acceptable? <input type="checkbox"/> Yes <input type="checkbox"/> No	Condition Acceptable? <input type="checkbox"/> Yes <input type="checkbox"/> No

**Appendix B**  
**XRF Lead Measurements**

Project # 16-187 Project Name North Washroom Date 10/26/16  
 Address City of Albuquerque Railyards  
 Technician D. Charlesworth, M. Nieman and S. Gutierrez

	Time : <u>09:27</u>		Unit	1141	Results	Average
1		Cal.			1.0	
2		Cal.			1.5	
3		Cal.			1.0	1.2
4		Cal.			0.2	
5		Cal			0.0	
6		Cal.			0.2	0.1
XRF Test Number	Location / Room	Component - Designation	Component Number	Color	Substrate	Result / Reading
7	Interior	A-Wall		White	Brick	2.5
8	Interior	B-Wall		White	Brick	2.7
9	Interior	C-Wall		White	Brick	-0.0
10	Interior	D-Wall		White	Brick	2.8
11	Interior	Door Frame	A-1	White	Wood	1.8
12	Interior	Window Frame	A-7	White	Wood	2.8
13	Interior	Window Sash	A-7	White	Wood	1.7
14	Interior	Window Apron	A-7	White	Wood	1.9
15	Interior	Chair Rail	A-1	White	Wood	1.3
16	Interior	Ceiling		White	Wood	4.2
17	Interior	Bathroom Divider Wall		White	Wood	-0.1
18	Interior	Pipe		White	Metal	1.0
19	Interior	Pipe		Yellow	Metal	-0.0
20	Interior	Floor		Red	Concrete	-0.1
21	Interior	Locker		Beige	Metal	0.2
22	Interior	Door Transum		White	Wood	2.5
23	Exterior	Door Frame	C-1	Red	Wood	0.6
24	Exterior	Window	C-5	Red	Wood	1.0
25	Exterior	Gutter downspout	C-2	Red	Cast Iron	1.0
26	Exterior	C-Wall		Pink	Brick	0.0
27	Exterior	Bollard		Off White	Metal	2.9
28	Exterior	Hydrant Rail		Yellow	Metal	1.0
29	Exterior	Hydrant		Red	Metal	>9.9
30	Exterior	D-Wall		Beige	Brick	0.1
31	Exterior	A-Wall Foundation Footing		Red	Concrete	-0.1
32	Exterior	Door Header	A-1	Red	Wood	0.4

33	Exterior	Brick Window Sill	A-10	Beige	Brick	-0.3
34	Exterior	Window Trim	B-2	Red	Wood	0.6
35	Exterior	B-Wall		Red	Brick	-0.2
	Time : <u>16:30</u>		Unit		Results	Average
1		Cal.			1.0	
2		Cal.			1.0	
3		Cal.			1.1	1.0
4		Cal.			0.1	
5		Cal			-0.1	
6		Cal.			-0.1	-0.0



**Appendix C**  
**Asbestos and LBP Data**

ID	Recd No/SampleID	Lead	Units	LP	Room Number	Building	Room Name	Wall	Structure	Location	IVembe	IVode	Substrate	Color	Location_2	Source
1	7	U.1	mg/m <sup>2</sup>		1	Railyard S Amtrak Office	Office	A	Window	Hgt	Sill	QVI	Wood	Brown	Interior	Innovar, 2011
2	8	U.1	mg/m <sup>2</sup>		1	Railyard S Amtrak Office	Office	A	Window	Hgt	Sash	QVI	Wood	Brown	Interior	Innovar, 2011
3	9	U.2	mg/m <sup>2</sup>		1	Railyard S Amtrak Office	Office	A	Window	Hgt	Lit casing	QVI	Wood	Brown	Interior	Innovar, 2011
4	10	U.2	mg/m <sup>2</sup>		1	Railyard S Amtrak Office	Office	A	Wall	Lctr		QVI	Plaster	White	Interior	Innovar, 2011
5	11	U.2	mg/m <sup>2</sup>		1	Railyard S Amtrak Office	Office	B	Wall	Uctr		QVI	Plaster	White	Interior	Innovar, 2011
6	12	U	mg/m <sup>2</sup>		1	Railyard S Amtrak Office	Office	C	Door	ctr	Uctr	QVI	Steel	Brown	Interior	Innovar, 2011
7	13	U	mg/m <sup>2</sup>		1	Railyard S Amtrak Office	Office	C	Door	ctr	Lit casing	QVI	Steel	Brown	Interior	Innovar, 2011
8	14	U.2	mg/m <sup>2</sup>		1	Railyard S Amtrak Office	Office	B	Window	ctr	Sill	QVI	Wood	Brown	Interior	Innovar, 2011
9	15	U.2	mg/m <sup>2</sup>		3	Railyard S Amtrak Office	Office	B	Window	ctr	Lit casing	QVI	Wood	Brown	Interior	Innovar, 2011
10	16	U.2	mg/m <sup>2</sup>		3	Railyard S Amtrak Office	Office	B	Window	ctr	Sash	QVI	Wood	Brown	Interior	Innovar, 2011
11	17	U	mg/m <sup>2</sup>		3	Railyard S Amtrak Office	Office	A	Wall	Lctr		QVI	Plaster	White	Interior	Innovar, 2011
12	18	U.2	mg/m <sup>2</sup>		3	Railyard S Amtrak Office	Office	A	Wall	LHgt		QVI	Plaster	White	Interior	Innovar, 2011
13	19	U.2	mg/m <sup>2</sup>		3	Railyard S Amtrak Office	Office	D	Door	Hgt	URgt	QVI	Steel	Brown	Interior	Innovar, 2011
14	20	U.1	mg/m <sup>2</sup>		3	Railyard S Amtrak Office	Office	D	Door	Hgt	Lit casing	QVI	Steel	Brown	Interior	Innovar, 2011
15	21	U.7	mg/m <sup>2</sup>		4	Railyard S Amtrak Office	BreakRm	B	Chair rail	ctr		QVI	Wood	Brown	Interior	Innovar, 2011
16	22	U.2	mg/m <sup>2</sup>		4	Railyard S Amtrak Office	BreakRm	B	Window	ctr	Lit casing	QVI	Wood	Brown	Interior	Innovar, 2011
17	23	U.99	mg/m <sup>2</sup>	Yes	4	Railyard S Amtrak Office	BreakRm	B	Wall	Lctr		QVI	Plaster	White	Interior	Innovar, 2011
18	24	U.2	mg/m <sup>2</sup>		4	Railyard S Amtrak	BreakRm	C	Baseboard	ctr		QVI	Plaster	White	Interior	Innovar, 2011

						Office										
19	25	>99	mg/m <sup>2</sup>	Yes	4	Railyard S Amtrak Office	Breakrm	B	Wall	ULC		QVI	Plaster	White	Interior	Innovar ,2011
20	26	>99	mg/m <sup>2</sup>	Yes	4	Railyard S Amtrak Office	Breakrm	B	Wall	LHgt		QVI	Plaster	White	Interior	Innovar ,2011
21	27	03	mg/m <sup>2</sup>		4	Railyard S Amtrak Office	Breakrm	C	Wall	LCur		QVI	Drywall	White	Interior	Innovar ,2011
22	28	02	mg/m <sup>2</sup>		3	Railyard S Amtrak Office	Office	B	Wall	LCur		QVI	Plaster	White	Interior	Innovar ,2011
23	29	>99	mg/m <sup>2</sup>	Yes	10	Railyard S Amtrak Office	Lobby	A	Wall	LCur		QVI	Plaster	White	Interior	Innovar ,2011
24	30	03	mg/m <sup>2</sup>		10	Railyard S Amtrak Office	Lobby	D	Wall	LCur		QVI	Plaster	White	Interior	Innovar ,2011
25	31	03	mg/m <sup>2</sup>		10	Railyard S Amtrak Office	Lobby	A	Window	Cur	Sash	QVI	Wood	Brown	Interior	Innovar ,2011
26	32	>99	mg/m <sup>2</sup>	Yes	10	Railyard S Amtrak Office	Lobby	A	Column	Cur		QVI	Plaster	White	Interior	Innovar ,2011
27	33	>99	mg/m <sup>2</sup>	Yes	10	Railyard S Amtrak Office	Lobby	A	Column	Cur		QVI	Plaster	White	Interior	Innovar ,2011
28	34	11	mg/m <sup>2</sup>	Yes	12	Railyard S Amtrak Office	Halway	B	Wall	LCur		QVI	Plaster	White	Interior	Innovar ,2011
29	35	>99	mg/m <sup>2</sup>	Yes	12	Railyard S Amtrak Office	Halway	D	Wall	LCur		QVI	Plaster	White	Interior	Innovar ,2011
30	36	01	mg/m <sup>2</sup>		9	Railyard S Amtrak Office	Wms Rm	D	Wall	LCur		QVI	Plaster	White	Interior	Innovar ,2011
31	37	01	mg/m <sup>2</sup>		9	Railyard S Amtrak Office	Wms Rm	A	Wall	LCur		QVI	Plaster	White	Interior	Innovar ,2011
32	38	03	mg/m <sup>2</sup>		9	Railyard S Amtrak Office	Wms Rm	B	Door	Cur	Lit casing	QVI	Wood	Brown	Interior	Innovar ,2011
33	39	02	mg/m <sup>2</sup>		9	Railyard S Amtrak Office	Wms Rm	B	Floor			QVI	Cement	Brown	Interior	Innovar ,2011
34	40	01	mg/m <sup>2</sup>		11	Railyard S Amtrak Office	Number Only	C	Stairs	Cur	Handrails	QVI	Steel	Black	Interior	Innovar ,2011
35	41	01	mg/m <sup>2</sup>		11	Railyard S Amtrak Office	Number Only	C	Stairs	Cur	Handing cap	QVI	Steel	Black	Interior	Innovar ,2011
36	42	01	mg/m <sup>2</sup>		15	Railyard S Amtrak Office	Upstairs	C	Wall	LCur		QVI	Plaster	White	Interior	Innovar ,2011
3	43	02	mg/m		15	Railyard	Upstairs	B	Wall	LCur		QVI	Plaster	White	Interior	Innovar

7			2			S Amtrak Office											
38	44	99	mg/m <sup>2</sup>	Yes	1b	Railyard S Amtrak Office	Upstairs	A	Wall	LCtr		QVI	Plaster	White	Interior		Innovar, 2011
39	4b	6b	mg/m <sup>2</sup>	Yes	1b	Railyard S Amtrak Office	Upstairs	A	Door	Cr	UCtr	QVI	Wood	White	Interior		Innovar, 2011
40	4b	03	mg/m <sup>2</sup>		1b	Railyard S Amtrak Office	Upstairs	B	Wall	LCtr		QVI	Plaster	White	Interior		Innovar, 2011
41	4/	03	mg/m <sup>2</sup>		1b	Railyard S Amtrak Office	Upstairs	A	Wall	LCtr		QVI	Plaster	White	Interior		Innovar, 2011
42	54	02	mg/m <sup>2</sup>		1b	Railyard S Amtrak Office	IVuseum	A	Floor			QVI	Cement	Gray	Interior		Innovar, 2011
43	5b	23	mg/m <sup>2</sup>	Yes	1b	Railyard S Amtrak Office	IVuseum	A	Floor			QVI	Cement	White	Interior		Innovar, 2011
44	5b	03	mg/m <sup>2</sup>		1b	Railyard S Amtrak Office	IVuseum	A	Floor			QVI	Cement	White	Interior		Innovar, 2011
45	5/	01	mg/m <sup>2</sup>		1b	Railyard S Amtrak Office	IVuseum	D	Wall	LCtr		QVI	Cement	Gray	Interior		Innovar, 2011
46	58	02	mg/m <sup>2</sup>		1b	Railyard S Amtrak Office	IVuseum	B	Wall	LCtr		QVI	Cement	Gray	Interior		Innovar, 2011

ID	Recd No/SampleID	Lead	Units	IBP	Room Number	Building	Room Name	Wall	Structure	Location	IVent	IVol	Substrate	Color	Location_2	Source
47	59	01	mg/m <sup>2</sup>		1b	Railyard S Amtrak Office	IVuseum	A	Wall	LCtr		QVI	Cement	Gray	Interior	Innovar, 2011
48	60	63	mg/m <sup>2</sup>	Yes	1b	Railyard S Amtrak Office	IVuseum	A	Floor			QVI	Cement	Yellow	Interior	Innovar, 2011
49	61	01	mg/m <sup>2</sup>		1b	Railyard S Amtrak Office	IVuseum	A	Door	Cr	UCtr	QVI	Steel	Green	Interior	Innovar, 2011
50	62	01	mg/m <sup>2</sup>		1b	Railyard S Amtrak Office	IVuseum	A	Door	Cr	UCtr	QVI	Steel	Black	Interior	Innovar, 2011
51	63	05	mg/m <sup>2</sup>		1b	Railyard S Amtrak Office	IVuseum	A	Door	Cr	Lit casing	QVI	Steel	Black	Interior	Innovar, 2011
52	64	01	mg/m <sup>2</sup>		1b	Railyard S Amtrak Office	IVuseum	A	Floor			QVI	Cement	Red	Interior	Innovar, 2011
53	6b	18	mg/m <sup>2</sup>	Yes	1	Railyard S Amtrak Office	Facility	B	Railing	Cr	Railing	QVI	Steel	Yellow	Exterior	Innovar, 2011
54	6b	02	mg/m <sup>2</sup>		1	Railyard S Amtrak Office	Facility	B	Door	Cr	UCtr	QVI	Steel	Red	Exterior	Innovar, 2011
55	6/	01	mg/m <sup>2</sup>		1	Railyard S Amtrak Office	Facility	D	Window	Cr	Sill	QVI	Wood	Black	Exterior	Innovar, 2011
56	68	02	mg/m <sup>2</sup>		1	Railyard S Amtrak Office	Facility	D	Window	Cr	Sash	QVI	Wood	Black	Exterior	Innovar, 2011
57	69	0	mg/m <sup>2</sup>		1	Railyard S Amtrak Office	Facility	C	Window	Hgt	Sill	QVI	Wood	Black	Exterior	Innovar, 2011



/			2			Amtrak Office											Jul
58	/	5	mg/cm <sup>2</sup>	Yes	1	Ivan Machine Shop	Number Only	B	Column	Ur		QVI	Steel	Silver	Interior		Innovar, 2011
59	8	11	mg/cm <sup>2</sup>	Yes	1	Ivan Machine Shop	Number Only	C	Door	Ur	UCr	QVI	Steel	Silver	Interior		Innovar, 2011
60	9	22	mg/cm <sup>2</sup>	Yes	1	Ivan Machine Shop	Number Only	C	Column	Ur		QVI	Steel	Silver	Interior		Innovar, 2011
61	10	01	mg/cm <sup>2</sup>		1	Ivan Machine Shop	Number Only	A	Floor			QVI	Ceramic	Red	Interior		Innovar, 2011
62	11	18	mg/cm <sup>2</sup>	Yes	1	Ivan Machine Shop	Number Only	B	Int Column	Ur		QVI	Steel	Silver	Interior		Innovar, 2011
63	12	07	mg/cm <sup>2</sup>		1	Ivan Machine Shop	Number Only	B	Stairs	Ur	Ireads	QVI	Steel	Green	Interior		Innovar, 2011
64	13	19	mg/cm <sup>2</sup>	Yes	1	Ivan Machine Shop	Number Only	D	Column	Ur		QVI	Steel	Silver	Interior		Innovar, 2011
65	14	54	mg/cm <sup>2</sup>	Yes	1	Ivan Machine Shop	Number Only	D	Ceiling Beam	Beam	Ur	QVI	Steel	Silver	Interior		Innovar, 2011
66	15	42	mg/cm <sup>2</sup>	Yes	1	Ivan Machine Shop	Number Only	B	Column	Ur		QVI	Steel	Black	Exterior		Innovar, 2011
67	16	27	mg/cm <sup>2</sup>	Yes	1	Ivan Machine Shop	Number Only	B	Stairs	Ur	Ireads	QVI	Wood	White	Interior		Innovar, 2011
68	1	34	mg/cm <sup>2</sup>	Yes		Boiler Shop	Number Only	B	Int Column	Ur		QVI	Steel	Silver	Interior		Innovar, 2011
69	2	01	mg/cm <sup>2</sup>			Boiler Shop	Number Only	A	Floor			QVI	Cement	Red	Interior		Innovar, 2011
70	3	32	mg/cm <sup>2</sup>	Yes		Boiler Shop	Number Only	C	Int Column	Ur		QVI	Steel	Silver	Interior		Innovar, 2011
71	4	25	mg/cm <sup>2</sup>	Yes		Boiler Shop	Number Only	A	Column	Lit		QVI	Steel	Silver	Interior		Innovar, 2011
72	5	03	mg/cm <sup>2</sup>			Boiler Shop	Number Only	C	Door	Lit	UCr	QVI	Steel	Silver	Interior		Innovar, 2011
73	1	11	mg/cm <sup>2</sup>	Yes		Blacksmith Shop	Number Only	B	Column	Ur		QVI	Steel	Silver	Interior		Innovar, 2011
74	2	31	mg/cm <sup>2</sup>	Yes		Blacksmith Shop	Number Only	C	Column	Ur		QVI	Steel	Silver	Interior		Innovar, 2011
75	3	21	mg/cm <sup>2</sup>	Yes		Blacksmith Shop	Number Only	D	Wall	LUR		QVI	Brick	Silver	Interior		Innovar, 2011
76	4	02	mg/cm <sup>2</sup>			Blacksmith Shop	Number Only	D	Door	Ur	UCr	QVI	Steel	Silver	Interior		Innovar, 2011
77	5	01	mg/cm <sup>2</sup>			Blacksmith Shop	Number Only	D	Window	Ur	Part. Bead	QVI	Steel	Silver	Interior		Innovar, 2011
78	7	27	mg/cm <sup>2</sup>	Yes		Big North of Firehouse	Number Only	A	Big North of Firehouse	LUR		QVI	Cement	Silver	Interior		Innovar, 2011
79	8	23	mg/cm <sup>2</sup>	Yes		Big North of Firehouse	Number Only	A	Window	Ur	Lit casing	QVI	Steel	Silver	Interior		Innovar, 2011
80	9	56	mg/cm <sup>2</sup>	Yes		Big North of Firehouse	Number Only	A	Door	Ur	UCr	QVI	Steel	Silver	Interior		Innovar, 2011
81	10	11	mg/cm <sup>2</sup>	Yes		Big North of Firehouse	Number Only	A	Window	Ur	Rgt casin	QVI	Steel	Silver	Interior		Innovar, 2011
82	11	24	mg/cm <sup>2</sup>	Yes		Big North of Firehouse	Number Only	C	Frame	Ur		QVI	Steel	Silver	Interior		Innovar, 2011
83	12	11	mg/cm <sup>2</sup>	Yes		Big North of Firehouse	Number Only	C	Wall	LUR		QVI	Cement	Silver	Interior		Innovar, 2011
84	13	02	mg/cm <sup>2</sup>			Big	Number	D	Wall	LUR		QVI	Cement	Silver	Interior		Innovar,

4			2			North of Firehouse	Only										2011
85	1	LI	mg/cm <sup>2</sup>	Yes		Big South of Firehouse	Number Only	A	Wall	LCtr		QVI	Cement	White	Interior		Innovar, 2011
86	2	UI	mg/cm <sup>2</sup>			Big South of Firehouse	Number Only	B	Wall	LCtr		QVI	Cement	White	Interior		Innovar, 2011
87	3	U	mg/cm <sup>2</sup>			Big South of Firehouse	Number Only	A	Door/Unit	Ctr	Lit casing	QVI	Cement	White	Interior		Innovar, 2011
88	4	LI	mg/cm <sup>2</sup>	Yes		Big South of Firehouse	Number Only	A	Column	Ctr		QVI	Cement	Green	Interior		Innovar, 2011
89	5	LI	mg/cm <sup>2</sup>	Yes		Big South of Firehouse	Number Only	B	Wall	LCtr		QVI	Cement	Green	Interior		Innovar, 2011
90	6	U5	mg/cm <sup>2</sup>			Big South of Firehouse	Number Only	C	Door	Ctr	UCtr	QVI	Cement	Green	Interior		Innovar, 2011
91	13029029-020513-01L	150	ppm			Blacksmith Shop			Interior Walls	NW Corner			Paint	Silver			Rhoades, 2013
92	13029029-020513-02L	410	ppm			Blacksmith Shop			Interior Walls	NE Corner			Paint	Silver			Rhoades, 2013

ID	Head No/Sample ID	Lead	Units	LEP	Room Number	Building	Room Name	Wall	Structure	Location	IVember	IVode	Substrate	Color	Location_2	Source
93	13029029-020513-03L	110	ppm			Blacksmith Shop			Interior Walls	SW Corner			Paint	Silver		Rhoades, 2013
94	13029029-020513-04L	150	ppm			Blacksmith Shop			Interior Walls	SE Corner			Paint	Silver		Rhoades, 2013
95	13029029-020513-05L	250	ppm			Blacksmith Shop			Overhead Piping				Paint	Red		Rhoades, 2013
96	13029029-020513-06L	260	ppm			Blacksmith Shop			Exterior Brick Walls		1rm		Paint	Rust		Rhoades, 2013
97	13029029-020513-07L	4040	ppm			Blacksmith Shop			Interior Walls Office Shack				Paint	Cream		Rhoades, 2013
98	13029029-020513-08L	250	ppm			Blacksmith Shop			Building	NW Corner			Surface Dust			Rhoades, 2013
99	13029029-020513-09L	400	ppm			Blacksmith Shop			Building	NE Corner			Surface Dust			Rhoades, 2013
100	13029029-020513-10L	110	ppm			Blacksmith Shop			Building	Center			Surface Dust			Rhoades, 2013
101	13029029-020513-11L	710	ppm			Blacksmith Shop			Building	SW Corner			Surface Dust			Rhoades, 2013
102	13029029-020513-12L	970	ppm			Blacksmith Shop			Building	SE Corner			Surface Dust			Rhoades, 2013

ID	Sample Number	Date	Description	Location	Percent Asbestos	Asbestos Type	Classification	Source
1	577007-NB.NS.1	Sep-05	Silver glaze coating window pane	Boiler Shop, South Side	0%			Terracon, 2005
2	577007-NB.NS.2	Sep-05	Silver glaze coating window pane	Boiler Shop, South Side	0%			Terracon, 2005
3	577007-NB.NS.3	Sep-05	Silver glaze coating window pane	Boiler Shop, South Side	0%			Terracon, 2005
4	577007-NB.SS.4	Sep-05	Green painted window pane	Boiler Shop, South Side	0%			Terracon, 2005
5	577007-NB.SS.5	Sep-05	Green painted window pane	Boiler Shop, South Side	0%			Terracon, 2005
6	577007-NB.SS.6	Sep-05	Green painted window pane	Boiler Shop, North Side	0%			Terracon, 2005
7	577007-NB.NS.7	Sep-05	Silver glaze coating window pane	Boiler Shop, North Side	0%			Terracon, 2005
8	577007-NB.NS.8	Sep-05	Silver glaze coating window pane	Boiler Shop, North Side	0%			Terracon, 2005
9	577007-NB.NS.9	Sep-05	Silver glaze/black spray-on with pane	Boiler Shop, North Side	0%			Terracon, 2005
10	577007-NB.NS.10	Sep-05	Silver glaze/black spray-on with pane	Boiler Shop, North Side	0%			Terracon, 2005
11	577007-NB.NS.11	Sep-05	Silver glaze/black spray-on with pane	Boiler Shop, North Side	0%			Terracon, 2005
12	577007-SB.SS.F1.1	Sep-05	Silver glaze coating window pane	Main Machine Shop, South Side, First Floor	0%			Terracon, 2005
13	577007-SB.SS.F1.2	Sep-05	Glaze coating on window pane (silver/black)	Main Machine Shop, South Side, First Floor	0%			Terracon, 2005
14	577007-SB.SS.F1.3	Sep-05	Glaze coating on window pane (silver)	Main Machine Shop, South Side, First Floor	0%			Terracon, 2005
15	577007-SB.SS.F1.4	Sep-05	Glaze coating on window pane (silver)	Main Machine Shop, South Side, First Floor	0%			Terracon, 2005
16	577007-SB.SS.F1.5	Sep-05	Glaze coating on window pane (silver)	Main Machine Shop, South Side, First Floor	0%			Terracon, 2005
17	577007-SB.SS.F1.6	Sep-05	Glaze coating on window pane (silver)	Main Machine Shop, South Side, First Floor	0%			Terracon, 2005
18	577007-SB.SS.F1.7	Sep-05	Glaze coating on window pane (silver/green)	Main Machine Shop, South Side, First Floor	0%			Terracon, 2005
19	577007-SB.SS.F2.1	Sep-05	Glaze coating on window pane (beige/green)	Main Machine Shop, South Side, Second Floor	0%			Terracon, 2005
20	577007-SB.SS.F2.2	Sep-05	Glaze coating on window pane (tan/brown)	Main Machine Shop, South Side, Second Floor	0%			Terracon, 2005
21	577007-SB.SS.F2.3	Sep-05	Glaze coating on window pane (off-white)	Main Machine Shop, South Side, Second Floor	0%			Terracon, 2005
22	577007-SB.SS.F2.4	Sep-05	Glaze coating on window pane (grey/green)	Main Machine Shop, South Side, Second Floor	0%			Terracon, 2005
23	577007-SB.SS.F2.5	Sep-05	Glaze coating on window pane (off-white)	Main Machine Shop, South Side, Second Floor	0%			Terracon, 2005
24	577007-SB.SS.F2.6	Sep-05	Plaster over cc wall (grey with paint)	Main Machine Shop, South Side, Second Floor	0%			Terracon, 2005
25	577007-SB.SS.F2.7	Sep-05	Plaster over cc wall (grey with paint)	Main Machine Shop, South Side, Second Floor	0%			Terracon, 2005
26	577007-NB.SS.1	Sep-05	Window glazing (tan)	Boiler Shops, South Side	Trace <1%			Terracon, 2005
27	577007-NB.SS.2	Sep-05	Window glazing (tan)	Boiler Shops, South Side	2%	Chrysotile	Non-Friable	Terracon, 2005
28	577007-NB.SS.3	Sep-05	Window glazing (tan)	Boiler Shops, South Side	2%	Chrysotile	Non-Friable	Terracon, 2005
29	577007-NB.SS.01	Sep-05	Window glazing (beige)	Boiler Shops, South Side	Trace <1%	Chrysotile		Terracon, 2005
30	577007-NB.SS.02	Sep-05	Window glazing (beige)	Boiler Shops, South Side	Trace <1%	Chrysotile		Terracon, 2005
31	577007-NB.SS.03	Sep-05	Window glazing (beige)	Boiler Shops, South Side	Trace <1%	Chrysotile		Terracon, 2005
32	577007-NB.ES.01	Sep-05	Window glazing (beige)	Boiler Shops, East Side	Trace <1%	Chrysotile		Terracon, 2005
33	577007-NB.ES.02	Sep-05	Window glazing (beige)	Boiler Shops, East Side	Trace <1%	Chrysotile		Terracon, 2005

34	577007 -N.O.01	Sep-05	Outside shingle (red with granules)	Outside the Boiler Shop	0%			Terracon, 2005
35	577007-N.O.02	Sep-05	Outside shingle (red with granules)	Outside the Boiler Shop	0%			Terracon, 2005
36	577007-N.O.03	Sep-05	Outside shingle (red with granules)	Outside the Boiler Shop	0%			Terracon, 2005
37	577007-N.O.G.01	Sep-05	White insulation	100 ft North of CWE Storage Shed	NA			Terracon, 2005
38	577007-N.O.G.02	Sep-05	White insulation	100 ft North of CWE Storage Shed	NA			Terracon, 2005
39	577007-N.O.G.03	Sep-05	White insulation	100 ft North of CWE Storage Shed	NA			Terracon, 2005
40	577007 -NTE. WS-1	Sep-05	Transite pipe (grey)	Former Transformer Area, West Side	25%	Chrysotile	Friable	Terracon, 2005
41	577007 -NTE. WS-1	Sep-05	Transite pipe (grey)	Former Transformer Area, West Side	5%	Crocidolite		Terracon, 2005
42	577007 -NTE.ES-3	Sep-05	Transite pipe (grey)	Former Transformer Area	25%	Chrysotile	Friable	Terracon, 2005
43	577007 -NTE.ES-3	Sep-05	Transite pipe (grey)	Former Transformer Area	5%	Crocidolite		Terracon, 2005
44	577007-NTE.ES-1 (577007-NTE.NS-1??)	Sep-05	Transite pipe (grey)	Former Transformer Area	25%	Chrysotile	Friable	Terracon, 2005
45	577007-NTE.ES-1 (577007-NTE.NS-1??)	Sep-05	Transite pipe (grey)	Former Transformer Area	3%	Crocidolite		Terracon, 2005
46	577007-SWB.WW.01	Sep-05	Window putty/glazing (beige)	Babbit Shop, West Wall	Trace <1%	Chrysotile		Terracon, 2005
47	577007-SWB.WW.02	Sep-05	Window putty/glazing (beige)	Babbit Shop, West Wall	Trace <1%	Chrysotile		Terracon, 2005
48	577007-FH.01	Sep-05	Insulation/plaster over brick	Fire House	0%			Terracon, 2005
49	577007-FH.02	Sep-05	Insulation/plaster over brick	Fire House	0%			Terracon, 2005
50	577007-FH.03	Sep-05	Insulation/plaster over brick	Fire House	4%	Chrysotile	Friable	Terracon, 2005
51	577007-FH.04	Sep-05	Insulation/plaster over brick	Fire House	5%	Chrysotile	Friable	Terracon, 2005
52	01-DW1-1	Aug-10	off-white surfaced white compound (drywall)	Amtrack Office	none detected			Innovar, 2011
53	01-DW1-2	Aug-10	white drywall with brown paper (drywall)	Amtrack Office	none detected			Innovar, 2011
54	02-DW1-1	Aug-10	white surfaced white compound (drywall)	Amtrack Office	none detected			Innovar, 2011

ID	Sample Number	Date	Description	Location	Percent Asbestos	Asbestos Type	Classification	Source
55	03-DW1-1	Aug-10	white surfaced white compound (drywall)	Amtrack Office	none detected			Innovar, 2011
56	04-P1-1	Aug-10	white surfaced tan plaster (plaster)	Amtrack Office	none detected			Innovar, 2011
57	05-P1-1	Aug-10	white surfaced tan plaster (plaster)	Amtrack Office	none detected			Innovar, 2011
58	06-P1-1	Aug-10	white surfaced white compound (plaster)	Amtrack Office	none detected			Innovar, 2011
59	06-P1-2	Aug-10	tan plaster (plaster)	Amtrack Office	none detected			Innovar, 2011
60	07-CB1-1	Aug-10	pink cover base (cover base)	Amtrack Office	none detected			Innovar, 2011
61	07-CB1-2	Aug-10	tan mastic (cover base)	Amtrack Office	none detected			Innovar, 2011
62	07-CB1-3	Aug-10	white surfaced white compound (cover base)	Amtrack Office	none detected			Innovar, 2011
63	07-CB1-4	Aug-10	brown mastic (cover base)	Amtrack Office	<1%	Anthophyllite		Innovar, 2011
64	07-CB1-5	Aug-10	tan plaster (cover base)	Amtrack Office	none detected			Innovar, 2011
65	08-CB1-1	Aug-10	pink cover base (cover base)	Amtrack Office	none detected			Innovar, 2011
66	08-CB1-2	Aug-10	tan mastic (cover base)	Amtrack Office	none detected			Innovar, 2011



67	08-CB1-3	Aug-10	brown mastic (cover base)	Amtrack Office	<1%	Anthophyllite		Innovar, 2011
68	08-CB1-4	Aug-10	tan plaster (cover base)	Amtrack Office	none detected			Innovar, 2011
69	09-CB1-1	Aug-10	pink cover base (cover base)	Amtrack Office	none detected			Innovar, 2011
70	09-CB1-2	Aug-10	tan mastic (cover base)	Amtrack Office	none detected			Innovar, 2011
71	09-CB1-3	Aug-10	brown mastic (cover base)	Amtrack Office	<1%	Anthophyllite		Innovar, 2011
72	09-CB1-4	Aug-10	tan plaster (cover base)	Amtrack Office	none detected			Innovar, 2011
73	10-CT1-1	Aug-10	white surfacing (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
74	10-CT1-2	Aug-10	tan ceiling (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
75	10-CT1-3	Aug-10	brown mastic (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
76	11-CT1-1	Aug-10	white surfacing (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
77	11-CT1-2	Aug-10	tan ceiling tile (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
78	11-CT1-3	Aug-10	brown mastic (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
79	12-CT1-1	Aug-10	tan ceiling tile (no surfacing) (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
80	12-CT1-2	Aug-10	brown mastic (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
81	13-WC1-1	Aug-10	black surfacing white caulking (Window Caulk)	Amtrack Office	none detected			Innovar, 2011
82	14-WC1-1	Aug-10	black surfacing white caulking (Window Caulk)	Amtrack Office	none detected			Innovar, 2011
83	15-WC1-1	Aug-10	black surfacing white caulking (Window Caulk)	Museum	none detected			Innovar, 2011
84	16-CT2-1	Aug-10	white surfacing (ceiling tile)	Museum	none detected			Innovar, 2011
85	16-CT2-2	Aug-10	Gray ceiling tile (ceiling tile)	Museum	none detected			Innovar, 2011
86	17-CT2-1	Aug-10	White Surfacing (ceiling tile)	Museum	none detected			Innovar, 2011
87	17-CT2-2	Aug-10	Gray ceiling tile (ceiling tile)	Museum	none detected			Innovar, 2011
88	18-CT2-1	Aug-10	white surfacing (ceiling tile)	Museum	none detected			Innovar, 2011
89	18-CT2-2	Aug-10	Gray ceiling tile (ceiling tile)	Museum	none detected			Innovar, 2011
90	19-W1-1	Aug-10	black woven covering (Wiring)	Museum	none detected			Innovar, 2011
91	20-W1-1	Aug-10	black woven covering (Wiring)	Museum	none detected			Innovar, 2011
92	13029.029-020513-01	Feb-13	12" Spline Ceiling Tile	Office Shack, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
93	13029.029-020513-02	Feb-13	12" Spline Ceiling Tile	Office Shack, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
94	13029.029-020513-03	Feb-13	12" Spline Ceiling Tile	Office Shack, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
95	13029.029-020513-04	Feb-13	Interior Plaster - Surface Coat	Office Shack, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
96	13029.029-020513-05	Feb-13	Interior Plaster - Surface Coat	Office Shack, Blacksmith Shop	2%	Chrysotile	Poor/Friable	Roades, 2013
97	13029.029-020513-06	Feb-13	Interior Plaster - Surface Coat	Office Shack, Blacksmith Shop	2%	Chrysotile	Poor/Friable	Roades, 2013
98	13029.029-020513-07	Feb-13	Interior Plaster - Surface Coat	Office Shack, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
99	13029.029-020513-08	Feb-13	Interior Plaster - Surface Coat	Office Shack, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
100	13029.029-020513-09	Feb-13	Interior Plaster - Surface Coat	Office Shack, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
101	13029.029-020513-10	Feb-	Window Glazing	Reinforced Glass, Blacksmith Shop	none		Poor/Friable	Roades,

		13			detected			2013
102	13029.029-020513-11	Feb-13	Window Glazing	Reinforced Glass, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
103	13029.029-020513-12	Feb-13	Window Glazing	Reinforced Glass, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
104	13029.029-020513-13	Feb-13	Window Glazing	Clear Glass, Blacksmith Shop	2%	Chrysotile	Poor/Friable	Roades, 2013
105	13029.029-020513-14	Feb-13	Window Glazing	Clear Glass, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
106	13029.029-020513-15	Feb-13	Window Glazing	Clear Glass, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
107	13029.029-020513-16	Feb-13	Window Glazing	Wood Panes, Blacksmith Shop	<1%	Chrysotile	Poor/Friable	Roades, 2013
108	13029.029-020513-17	Feb-13	Window Glazing	Wood Panes, Blacksmith Shop	2%	Chrysotile	Poor/Friable	Roades, 2013

ID	Sample Number	Date	Description	Location	Percent Asbestos	Asbestos Type	Classification	Source
109	13029.029-020513-18	Feb-13	Window Glazing	Wood Panes, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
110	13029.029-020513-19	Feb-13	Gray Parapet Tar	Throughout Roof, Blacksmith Shop	10%	Chrysotile	Poor/Non-Friable	Roades, 2013
111	13029.029-020513-20	Feb-13	Gray Parapet Tar	Throughout Roof, Blacksmith Shop	10%	Chrysotile	Poor/Non-Friable	Roades, 2013
112	13029.029-020513-21	Feb-13	Gray Parapet Tar	Throughout Roof, Blacksmith Shop	10%	Chrysotile	Poor/Non-Friable	Roades, 2013
113	13029.029-020513-22	Feb-13	Black Roofing Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
114	13029.029-020513-23	Feb-13	Black Roofing Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
115	13029.029-020513-24	Feb-13	Black Roofing Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
116	13029.029-020513-25	Feb-13	Black Penetration Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
117	13029.029-020513-26	Feb-13	Black Penetration Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
118	13029.029-020513-27	Feb-13	Black Penetration Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
119	13029.029-020513-28	Feb-13	Gray Roofing Felt	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
120	13029.029-020513-29	Feb-13	Gray Roofing Felt	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
121	13029.029-020513-30	Feb-13	Gray Roofing Felt	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
122	13029.029-020513-31	Feb-13	Black Parapet Tar	Throughout Roof, Blacksmith Shop	8%	Chrysotile	Poor/Non-Friable	Roades, 2013
123	13029.029-020513-32	Feb-13	Black Parapet Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
124	13029.029-020513-33	Feb-13	Black Parapet Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
125	13029.029-020513-34	Feb-13	Black Roofing Felt - Patching	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
126	13029.029-020513-35	Feb-13	Black Roofing Felt - Patching	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
127	13029.029-020513-36	Feb-13	Black Roofing Felt - Patching	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
128	13029.029-020513-34a	Feb-13	Black Roofing Felt - Patching	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
129	13029.029-020513-35a	Feb-13	Black Roofing Felt - Patching	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
130	13029.029-020513-36a	Feb-13	Black Roofing Felt - Patching	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
131	13029.029-020513-37	Feb-13	Window Glazing	Plastic Panes, Blacksmith Shop	2%	Chrysotile	Poor/Friable	Roades, 2013
132	13029.029-020513-38	Feb-13	Window Glazing	Plastic Panes, Blacksmith Shop	3%	Chrysotile	Poor/Friable	Roades, 2013
133	13029.029-020513-39	Feb-13	Window Glazing	Plastic Panes, Blacksmith Shop	3%	Chrysotile	Poor/Friable	Roades, 2013

**Appendix D**  
**Lead Based Paint Laboratory Analysis**



CEI Labs  
730 SE Maynard Road, Cary, NC 27511  
Phone: (919) 481-1413 Fax: (919) 481-1442

# LABORATORY REPORT

## LEAD IN PAINT

**Client:** DC Environmental  
PO Box 9315  
Albuquerque , NM 87119

**CEI Lab Code:** C16-0819  
**Received:** 11-14-16  
**Analyzed:** 11-18-16  
**Reported:** 11-18-16

**Project:** Rail Yard Parcel 10 North Wash Room; DCE 16  
-187

**ANALYSIS METHOD: EPA SW846 7000B**

CLIENT ID	CEI LAB ID	PPM (µg/g)	CONCENTRATION % BY WEIGHT
16-187-1000	CA58070	160000	16
16-187-1001	CA58071	5200	0.52
16-187-1002	CA58072	43000	4.3
16-187-1003	CA58073	6200	0.62

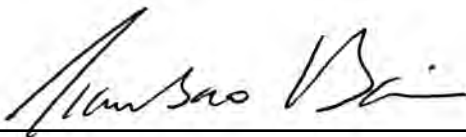


**Lab Code:** C16-0819

**ANALYSIS METHOD: EPA SW846 7000B**

CLIENT ID	CEI LAB ID	PPM (µg/g)	CONCENTRATION % BY WEIGHT
-----------	---------------	------------	------------------------------

**Reviewed By:**



Tianbao Bai, Ph.D.  
Laboratory Director

**This method has been validated for sample weights of 0.020g or greater. When samples with a weight of less than that are analyzed those results fall outside of the scope of accreditations.**

**\* The analysis of composite wipe samples as a single samples is not included under AIHA accreditation.**

Minimum reporting limit is 10 µg total lead. Sample results denoted with a "less than" (<) sign contain less than 10.0 µg total lead, based on a 40ml sample volume.

Lead samples are not analyzed by CEI Labs Lead samples are submitted to an AIHA ELLAP accredited laboratory for lead analysis of soil, dust, paint, and TCLP samples.

Laboratory results represent the analysis of samples as submitted by the client. Information regarding sample location, description, area, volume, etc., was provided by the client. Unless notified in writing to return samples, CEI Labs discards client samples after 30 days. This report shall not be reproduced, except in full, without the written consent of CEI Labs.


**REGULATORY  
LIMITS**

OSHA Standard: No safe limit.  
Consumer Products Safety Standard: Greater than 0.06% lead by weight.  
Federal Lead Standard / HUD: 0.5% lead by weight.

**LEGEND**

µg = microgram                      ppm = parts per million                      g = grams  
ml = milliliter                      Pb = lead                      wt = weight

**End of Report**

 <p>DC Environmental Consulting and Training Services "Promoting Safety in the Workplace"</p> <p>DC Environmental PO Box 9315 Albuquerque, NM 87119</p> <p>Contact: J. David Charlesworth</p> <p>Phone: 505.869.8000 Fax: 505.869.9453</p> <p>E-mail: JDCharlesworthcih@gmail.com</p> <p>Site: City of Albuquerque (Intera)</p> <p>Site Location: Rail Yard Parcel 10 North Wash Room</p>	PO / Job#: DCE 16-187	Date: 10/26/2016
	Turn Around Time: Same Day / 1Day / 2Day / 3Day / 4Day <b>5Day</b>	
	<input type="checkbox"/> PCM: <input type="checkbox"/> NIOSH 7400A / <input type="checkbox"/> NIOSH 7400B <input type="checkbox"/> Rotometer	
	<input type="checkbox"/> PLM: <input type="checkbox"/> Standard / <input type="checkbox"/> Point Count 400 - 1000 / <input type="checkbox"/> CARB 435	
<input type="checkbox"/> TEM Air: <input type="checkbox"/> AHERA / <input type="checkbox"/> Yamate2 / <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> TEM Bulk: <input type="checkbox"/> Quantitative / <input type="checkbox"/> Qualitative / <input type="checkbox"/> Chatfield <input type="checkbox"/> TEM Water: <input type="checkbox"/> Potable / <input type="checkbox"/> Non-Potable / <input type="checkbox"/> Weight % <input type="checkbox"/> TEM Microvac: <input type="checkbox"/> Qual(+/-) / <input type="checkbox"/> D5755(str/area) / <input type="checkbox"/> D5756(str/mass)		
<input type="checkbox"/> IAQ Particle Identification (PLM LAB) <input type="checkbox"/> PLM Opaques/Soot <input type="checkbox"/> Particle Identification (TEM LAB) <input checked="" type="checkbox"/> Special Project		
<input type="checkbox"/> Metals Analysis: Method: _____ Matrix: _____ Analytes: _____		

Comments: 'Paint chips to be analyzed for Lead Based Paint

Sample ID	Date	Sample Location / Description / Task	FOR AIR SAMPLES ONLY				Sample Area / Air Volume
			Type	Time On/Off	Avg. LPM	Total Time	
16-187-1000	10/26	White Paint from Ceiling North wash Room	A P C				
16-187-1001	10/26	Beige Paint from Window Sill North wash Room	A P C				
16-187-1002	10/26	Red Paint Exterior Window North Wash Room	A P C				
16-187-1003	10/26	Red Paint Interior Floor North Wash Room	A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				

Sampled By: Steven Gutierrez

Shipped Via:  Fed Ex  DHL  UPS  US Mail  Courier  Drop Off  Other:

Relinquished By: Steven Gutierrez Date / Time: 11/11/2016 5:00PM	Relinquished By: Date / Time:	Relinquished By: Date / Time:
Received By: <i>AL</i> Date / Time: 11/14/16 9:10	Received By: Date / Time:	Received By: Date / Time:
Condition Acceptable? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Condition Acceptable? <input type="checkbox"/> Yes <input type="checkbox"/> No	Condition Acceptable? <input type="checkbox"/> Yes <input type="checkbox"/> No

**Appendix E**  
**Photography Log**

Photographic Log



Figure 1 Front Exterior of North Wash Room



Figure 2 Exterior of North Wash Room



Figure 3 Window Exterior of North Wash Room



Figure 4 Interior of North Wash Room



Figure 5 Interior of North Wash Room



Figure 6 Interior of North Wash Room



**Appendix F**  
**Certificates**

# CERTIFICATE OF TRAINING

EPA/AHERA Training Program



*This is to certify that*

**MICHAEL NIEMAN**

NM. DL. 006 087 493

Has completed 4 hours of training and PASSED the test required by Section 206 of TSCA Title II and in accordance with LOUISIANA STATE ASBESTOS REGULATIONS entitled,

## ASBESTOS BUILDING INSPECTOR REFRESHER

PRESENTED BY  
Mendez Environmental™  
1005 Veterans Mem Blvd  
Suite, 101  
Kenner, LA 70062  
Tel: (504) 468-8858



IN COLLABORATION WITH

DC Environmental  
P.O. Box 9315  
Albuquerque, NM 87119  
Tel: (505) 869-8000  
www.dcenvironmental.net



Director:   
Rodolfo G. Mendez

NM Program Manager:   
David Charlesworth

Course Date: 04-12-2016  
Certificate Number: AS0416KNMPPMN17906

Test Date: 04-12-2016 Grade: PASS  
Expiration Date: 04-12-2017

# United States Environmental Protection Agency

This is to certify that



Michael Neiman

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Inspector

In the Jurisdiction of:

New Mexico

This certification is valid from the date of issuance and expires September 25, 2017

NM-I-129246-1

Certification #

September 11, 2014

issued On

Adrienne Priselac, Manager, Toxics Office

Land Division





# United States Environmental Protection Agency

This is to certify that



Steven P Gutierrez

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Inspector

## In the Jurisdiction of:

All EPA Administered Lead-based Paint Activities Program States, Tribes and Territories

This certification is valid from the date of issuance and expires April 20, 2019

LBP-I-1159998-1

Certification #

April 06, 2016

Issued On

A handwritten signature in black ink, appearing to read 'Adrienne Priselac'. The signature is written over a horizontal line.

Adrienne Priselac, Manager, Toxics Office  
Land Division





# CERTIFICATE OF TRAINING

EPA/AHERA Training Program



*This is to certify that*

**STEVEN GUTIERREZ**

NM. DL. 121 014 475

Has completed 4 hours of training and PASSED the test required by Section 206 of TSCA Title II and in accordance with LOUISIANA STATE ASBESTOS REGULATIONS entitled,

## ASBESTOS BUILDING INSPECTOR REFRESHER

PRESENTED BY  
Mendez Environmental™  
1005 Veterans Mem Blvd  
Suite, 101  
Kenner, LA 70062  
Tel: (504) 468-8858



IN COLLABORATION WITH

DC Environmental  
P.O. Box 9315  
Albuquerque, NM 87119  
Tel: (505) 869-8000  
www.dcenvironmental.net



Director:

*Josefina Mendez-Rosa*  
Josefina Mendez-Rosa

NM Program Manager: *David Charlesworth*  
David Charlesworth

Course Date: 11-08-2016

Certificate Number: AS116KNMPSG18544

Test Date: 11-08-2016 Grade: PASS

Expiration Date: 11-08-2017



# United States Environmental Protection Agency

This is to certify that

James Charlesworth



has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Risk Assessor

## In the Jurisdiction of:

New Mexico

This certification is valid from the date of issuance and expires

September 01, 2017

NM-R-3055-2

Certification #

August 18, 2014

Issued On

Adrienne Priselac, Manager, Toxics Office

Land Division





# CERTIFICATE OF TRAINING

EPA/AHERA Training Program



*This is to certify that*

**J. DAVID CHARLESWORTH**

NM. DL. 037 723 452

Has completed 4 hours of training and PASSED the test required by Section 206 of TSCA Title II and in accordance with LOUISIANA STATE ASBESTOS REGULATIONS entitled,

## ASBESTOS BUILDING INSPECTOR REFRESHER

### PRESENTED BY

Mendez Environmental™  
1005 Veterans Mem Blvd  
Suite, 101  
Kenner, LA 70062  
Tel: (504) 468-8858



### IN COLLABORATION WITH

DC Environmental  
P.O. Box 9315  
Albuquerque, NM 87119  
Tel: (505) 869-8000  
www.dcenvironmental.net



Director:

Rodolfo G. Mendez

NM Program Manager:

David Charlesworth

Course Date: 04-20-2016

Certificate Number: AS0416KNMPJC17938

Test Date: 04-20-2016 Grade: PASS

Expiration Date: 04-20-2017



**ASBESTOS AND LEAD BASED PAINT SURVEY**  
**City of Albuquerque**  
**Railyard Pattern House Parcel 10**  
Albuquerque, NM



**PREPARED FOR:**

Intera, Inc.  
6000 Uptown Blvd, Suite 220  
Albuquerque, New Mexico 87110

**PREPARED BY:**

DC Environmental  
PO Box 9315  
Albuquerque, New Mexico 87119

November 17, 2016  
Project No. 16-186





November 17, 2016  
Project No. 16-186

Mr. Joe Tracy  
Intera Inc.  
6000 Uptown Boulevard, NE  
Suite 200  
Albuquerque, NM 87110

Subject: Asbestos and Lead Based Paint inspection of the Pattern House Parcel 10 – City of Albuquerque Railyard

Dear Mr. Joe Tracy;

In accordance with our proposal, DC Environmental has performed asbestos and lead based paint inspections of the above-referenced facility, located at the City of Albuquerque Railyard, 1100 2nd St SW, Albuquerque, New Mexico. The attached report presents our methodology, findings, opinions, and recommendations regarding the survey.

Lead based paint and lead containing materials were identified at the Pattern House building. Asbestos-containing materials were also identified at the Pattern House building.

We appreciate the opportunity to be of service to you on this project. Should you have any questions regarding this report, please contact the undersigned at your convenience.

Sincerely,  
**ACME ENVIRONMENTAL INDUSTRIAL HYGIENE, INC.**  
**dba DC Environmental**

David Charlesworth, CIH  
Certified Industrial Hygienist

Karen Dremann, BS  
Senior Scientist

Distribution: (2) Addressee

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Table 1. Asbestos Lab Results

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- Appendix A. Asbestos Laboratory Analysis Results
- Appendix B. XRF Lead Measurements Table
- Appendix C. Lead and Asbestos Data
- Appendix D. Lead Based Paint Chip Laboratory Analysis
- Appendix E. Photographic Log
- Appendix F. Certifications

## EXECUTIVE SUMMARY

On October 28, 2016, DC Environmental performed an inspection of the Pattern House Building located at the City of Albuquerque Railyard on 2<sup>nd</sup> street in Albuquerque, New Mexico. The inspection was conducted in a response to a request to identify materials which may be impacted during future renovation or demolition activities. Previous sampling and analysis of building materials for lead had been conducted at the property by Innovar in 2011 and Rhoades in 2013. Previous sampling for asbestos had been conducted by Terracon in 2005, Innovar in 2011 and Rhoades in 2013 (See Appendix C). The focus of our inspection was to verify and determine the presence, location and quantity of asbestos remaining within the facility, and to establish the basis for the presence of lead containing finishes within the structure. The space is being evaluated for a confidential client and the concern is that existing materials may contain asbestos and lead in the finishes.

The inspection design was to conduct a room-by-room investigation for asbestos-containing building materials. Access the functional spaces, where appropriate; evaluate the exterior surfaces; and sample materials suspect for asbestos within the Pattern House.

Asbestos-containing building materials are those containing greater than one percent asbestos as determined by polarized light microscopy. Asbestos has been identified at the Pattern House building in the: **door frame caulking and the roof mastic.**

Lead-based paint is defined as coatings containing surface area lead of 1.0 milligrams per square centimeter (1.0 mg/cm<sup>2</sup>) when evaluated by X-Ray Fluorescence. Lead based paint is further defined if laboratory analysis determines the lead content to be one half (0.5 %) percent by weight or greater. The lead inspection of the facility was conducted using an X-Ray Fluorescence (XRF) handheld instrument of select components or areas. The inspector identified painted surfaces with excess lead above the stated regulatory limit. Interior lead-based paint surfaces included: **light green color paint on concrete and metal, teal color paint on concrete and metal, cream color paint on concrete, gray paint, and red color paint on concrete.**

Lead-containing materials are those with detectable levels of lead in the materials however not at levels above 1.0 mg/cm<sup>2</sup>. Lead containing materials **were** identified at the Storehouse Building (see Appendix B XRF Lead Measurements and Appendix D Lead Based Paint Chip Laboratory Analysis ). Individuals bidding for work should be aware of the presence of lead when performing demolition and renovation activities involving these items.

### 1. INTRODUCTION

In accordance with our proposal, DC Environmental has performed an investigation of the Pattern House Building located at the City of Albuquerque Railyard in Albuquerque, New Mexico.

The inspection was conducted in a response to a request to have building materials evaluated for future renovation or demolition activities. The focus of our inspection was to determine the presence, location and quantity of asbestos and lead based paint present within the facility. The building is being inspected for a confidential client and the concern is that existing materials may contain asbestos in building materials and lead in the painted finishes.

This report has been prepared in accordance with generally accepted environmental science and engineering practices. This report is based upon conditions at the subject building at the time of the

sampling activities and provides documentation of our findings and recommendations.

## **2. PURPOSE AND SCOPE OF SERVICES**

The inspection design was to conduct a room-by-room investigation and assess the facility for the presence of asbestos-containing building materials, and lead-based paint. The inspection included a quantitative determination of the asbestos and lead content within the structure.

The objective of this inspection was to perform the requisite sampling and present the findings along with any recommendations. The services performed by DC Environmental are outlined below.

- A reconnaissance of the area was conducted by Mr. Michael Nieman, and Mr. Nathan Lyons. Mr. Nieman is an accredited Asbestos Building Inspector, and Certified Lead Assessor and Inspector.
- Sampling was conducted using several different types of inspection tools and laboratory techniques including Polarized Light Microscopy and X-Ray Fluorescence.
- Report preparation summarizing our sampling methods and laboratory analysis are included. This report further details our conclusions and recommendations for the project.

## **3. SITE DESCRIPTION**

The subject site consists of one structure, the Pattern House Building.

### **The Pattern House Building**

The Pattern House Building consists of one building, roof and exterior. The Pattern House building is a concrete frame and concrete siding construction. Roofing appeared to be gravel and tar over felt paper on top of concrete.

## **4. ACTIVITIES**

DC Environmental conducted an asbestos-containing building materials and lead-based paint investigation on October 28, 2016 of the Pattern House Building. Analysis of the Interior and exterior painted surfaces incorporated the use of an X-Ray Fluorescence Device. The Radiation Monitoring Device (RMD) LPA-1 X-Ray Fluorescence device was used to measure the lead content of surface coatings on representative homogenous components. Multiple XRF readings were recorded.

The site sampling activities are described below.

### **4.1. Asbestos-Containing Building Materials**

Mr. Michael Nieman and Mr. Nathan Lyons conducted a visual inspection for asbestos-containing building materials at the above referenced building. Mr. Nieman collected a total of seven (7) samples that were tested for asbestos using Polarized Light Microscopy and stereomicroscopy bulk asbestos analysis. Analysis was conducted by Crisp Analytical, LLC of Carrollton, Texas. Crisp Analytical is an accredited laboratory and recognized by the National Voluntary Laboratory Accreditation Program.

Previous asbestos surveys were also conducted in 2005, 2011 and 2013 (See Appendix C). Asbestos



sample results for the Pattern House were not identified in the previous surveys. Based upon the testing performed by DC Environmental, the following materials were identified as asbestos-containing material:

Pattern House Building:

- **Door frame caulking**
- **Roof mastic**

The Environmental Protection Agency has established terminology regarding asbestos and specifically asbestos-containing building materials. Material which is friable are those materials which can be crushed, crumbled or reduced to powder by hand pressure. Non-friable materials are further characterized as Category I Non-Friable or Category II Non-Friable. Category I Non-Friable includes four specific items: Packings, Gaskets, Resilient Flooring and Asphalt Roofing. Category II Non-Friable is everything else which cannot be crumbled or pulverized by hand pressure. These items include materials of drywall systems, plasters, asbestos-containing cements (Transite<sup>®</sup>) and other materials declared non-friable by the asbestos inspector.

The EPA then clarifies that certain materials are Regulated Asbestos Containing Materials (RACM) and these include the following four designations:

- Friable materials;
- Category I Non-Friable Materials which have become friable;
- Category I Non-Friable Materials which have been subject to sanding, grinding, cutting and abrading; and
- Category II Non-friable materials which will be, or have been, subject to force during demolition or renovation.

Regulated Asbestos Containing Materials are present within the structure. Regulated materials within the Pattern House building include, but are not limited to: **door frame caulking and roof mastic.**

#### **4.2. Lead Based Paint Inspection**

The presence of lead based paint was assessed in substantial compliance with the Housing and Urban Development guidelines. DC Environmental conducted a lead-based surface coating screening survey of the interior and exterior of the property to generally identify building components coated with lead. The survey consisted of testing the lead concentrations of each of the accessible surfaces. Previous lead based paint surveys were also conducted in 2011 and 2013 (See Appendix C). Lead based paint was identified for the Pattern House or Building North of the Fire Station in the previous surveys.

To complete the survey, an X-Ray Fluorescence device was used to perform the lead based paint inspection. The Radiation Monitoring Device (RMD) LPA-1 X-Ray Fluorescence device is capable of detecting lead in lead-based paint. The determination of lead in paint is defined as a surface content of at least 1.0 milligrams per square centimeter. If the readings were between the 0.9 to 1.0 mg/cm<sup>2</sup> range, then the readings are declared as either lead-based paint or lead-containing

materials and sampling is recommended.

Surfaces that were tested with the XRF device included, but were not limited to the following: doors, ceiling, painted walls, structural steel support, painted door components, roof components, ventilation duct, gates, and framing.

To determine the wall designations, the front entry off of the street or primary doorway is the A wall and interior in a clockwise direction are the B, C and D walls respectively. Exterior walls are similar in the designations.

The XRF device recorded readings did indicate lead based paint in surfaces on the interior and exterior of architectural details and finishes. Please refer to the XRF readings in the appendix to this document.

In addition, bulk samples of paint chips were collected to verify the XRF readings. Lead based paint is further defined if laboratory analysis determines the lead content to be one half (0.5 %) percent by weight or greater.

## 5. ANALYSES AND RESULTS

The results of samples and analysis are presented in the following tables. Copies of the laboratory analytical results are included in the appendix to this document.

### 5.1. Table 1: Asbestos Sample Analysis

Sample #	Pattern House Analyst physical description of subsample	Asbestos Type/calibrated/Visual estimate percent
16-186-100	Wood window putty	ND
16-186-101	Sheetrock restroom wall	ND
16-186-102	Sheetrock restroom wall	ND
16-186-103	Sheetrock restroom wall	ND
16-186-104	Door frame caulking	3% Chrysotile
16-186-105	Roof mastic	5% Chrysotile
16-186-106	Roofing felt	ND

ND – None Detected

### 5.2 Table 2: Lead Based Paint Chip Analysis

Sample #	Pattern House Analyst physical description of subsample	Lead Based Paint Type/calibrated/Visual estimate percent (0.5%)
16-186-1000	Off-white paint from south C wall Pattern House	0.0062
16-186-1001	Gray paint B wall Pattern House	1.1

## 6. FINDINGS AND CONCLUSIONS

The findings of this inspection are based on our visual observations and analysis of the measurements collected from the facility. Our findings are presented below.

### 6.1 Asbestos Sampling Analysis

The current visual inspection and sampling of building materials revealed sources of asbestos-containing building materials. Asbestos-containing building materials **were** identified in the Pattern House Building. Asbestos was detected at the Pattern House building, in the **door frame caulking and roof mastic**.

Materials reported by Crisp Analytical Laboratory as asbestos-containing material are those materials with greater than one percent asbestos content by Polarized Light Microscopy. Materials with one percent asbestos were further characterized by the Point Count Method. The verification by Point Count Method using PLM determines if the material may be disposed as municipal waste and not as Regulated Asbestos Waste under the New Mexico Solid Waste Regulations.

Six (6) suspected asbestos samples included two (2) sample layers that were shown to contain greater than one percent asbestos. Should demolition of the structures be planned, the materials would be considered Regulated Asbestos Containing Materials and Regulated Asbestos Waste by the New Mexico Solid Waste Regulations.

### 6.2 Lead Based Paint Analysis

DC Environmental conducted a lead-based surface coating inspection of the interior and exterior of the property to generally identify building components coated with or containing lead. The survey consisted of testing the lead concentrations of over the majority of the interior and exterior surfaces.

During the survey, testing combinations in representative room equivalents were sampled by X-Ray Fluorescence (XRF) in substantial compliance with the XRF protocols established by EPA and presented as guidance in the Housing and Urban Development (HUD) publications. Performance of this survey is consistent and in substantial compliance with the documented methodologies identified by EPA and HUD.

Based on the readings from the XRF devices materials at the Pattern House Building were considered painted with Lead-based Paint (LBP).

Lead-Based Paint (LBP) is defined by HUD and the EPA as paint containing lead in amounts greater than or equal to 1.0 mg/cm<sup>2</sup> lead when analyzed by XRF or greater than 5000 parts per million or 0.5 percent by weight when analyzed by Flame Atomic Absorption.

There are materials in this building though, that **are** considered "lead-containing". Those materials are listed in Appendix B, XRF Lead Measurements and Appendix D. Lead Based Paint Chip

## Laboratory Analysis.

Contractors should follow the elements of the standard promulgated by the Occupational Safety and Health Administration (OSHA). The Lead in Construction Standard 29 CFR 1926.62 applies to exposures to materials containing lead. Lead containing materials **were** identified at the Pattern House Building (see Appendix B XRF Lead Measurements and Appendix D. Lead Based Paint Chip Laboratory Analysis ). Individuals bidding for work should be aware of the presence of lead when performing demolition and renovation activities involving these items.

## 7 RECOMMENDATIONS

Based on our visual observations and the laboratory results, DC Environmental recommends the following:

- Select materials containing asbestos have been identified in the facility. Asbestos is present in the above identified materials. The materials containing asbestos will require abatement before substantial renovation or demolition can commence.
- The Lead-based Paint inspection **did** identify “lead-based paint” at the Pattern House Building. Lead-containing items **were** identified at the Pattern House Building. Those materials are listed in Appendix B., XRF Lead Measurements and Appendix D., Lead Based Paint Chip Laboratory Analysis. These materials are regulated by OSHA in regards to those individuals which could be exposed during repair, renovation or demolition. It is recommended to have trained professionals in the OSHA Lead Construction standard handle the lead-based paint and lead-containing materials during disturbance of the material. At the conclusion of the construction activities we recommend a Lead Risk Assessment to include soil testing and settled dust be performed. A Lead Risk Assessment is recommended for this property based on the age and that children **may** be expected to be present. A Risk Assessment should be conducted at the conclusions of operations to repair, renovate or abate the lead based coating.

We appreciate the opportunity to provide sampling and inspection of this area. Should you have additional questions, or if conditions change substantially, please contact us at your earliest convenience.

Sincerely,

DC Environmental  
David Charlesworth  
Certified Industrial Hygienist



## **LIMITATIONS**

The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard-of-care exercised by environmental consultants performing similar work in the project area. No warranty, expressed or implied, is made regarding the professional opinions presented in this report. Variations in site conditions may exist and conditions not observed or described in this report may be encountered during subsequent activities.

The environmental interpretations and opinions contained in this report are based on the results of instrumentation, laboratory tests and/or analyses Acme Environmental Industrial Hygiene, Inc., has no involvement in, or control over, such equipment, testing and/or analysis. Acme Environmental Industrial Hygiene, Inc, therefore, disclaims responsibility for any inaccuracy in such laboratory results.

Our conclusions, recommendations, and opinions are based on an analysis of the observed site conditions. It should be understood that the conditions of a site could change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Acme Environmental Industrial Hygiene, Inc., has no control.

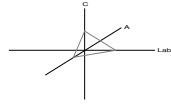
This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Acme Environmental Industrial Hygiene, Inc., should be contacted if the reader requires any additional information, or has questions regarding content, interpretations presented, or completeness of this document.

This report is intended exclusively for use by the client. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the client is undertaken at said parties' sole risk.

**Appendix A**  
**Asbestos Laboratory Results**

**CA Labs**  
Dedicated to  
Quality

**Crisp Analytical, L.L.C.**  
1929 Old Denton Road  
Carrollton, TX 75006  
Phone 972-242-2754  
Fax 972-242-2798



**CA Labs, L.L.C.**  
12232 Industriplex, Suite 32  
Baton Rouge, LA 70809  
Phone 225-751-5632  
Fax 225-751-5634

## **Materials Characterization - Bulk Asbestos Analysis**

### **Laboratory Analysis Report - Polarized Light**

#### **DC Environmental**

PO Box 9315  
Albuquerque, NM 87119

**Attn:** David Charlesworth

**Customer Project:** DCE 16-186, Rail Yard Parcel 10 Pattern House  
**Reference #:** CAL16117628CB **Date:** 11/14/2016

#### **Analysis and Method**

Summary of polarizing light microscopy (PLM / Stereomicroscopy bulk asbestos analysis) using the methods described in 40CFR Part 763 Appendix E to Subpart E (Interim and EPA 600 / R-93 / 116 (Improved). The sample is first viewed with the aid of stereomicroscopy. Numerous liquid slide preparations are created for analysis under the polarized microscope where identifications and quantifications are performed. Calibrated liquid refractive oils are used as liquid mounting medium. These oils are used for identification (dispersion staining). A calibrated visual estimation is reported, should any asbestiform mineral be present. Other techniques such as acid washing are used in conjunction with refractive oils for detection of smaller quantities of asbestos. All asbestos percentages are based on calibrated visual estimation traceable to NIST standards for regulated asbestos. Traceability to measurement and calibration is achieved by using known amounts and types of asbestos from standards where analyst and laboratory accuracy are measured. As little as 0.001% asbestos can be detected in favorable samples, while detection in unfavorable samples may approach the detection limit of 0.50% (well above the laboratory definition of trace).

#### **Discussion**

Vermiculite containing samples may have trace amounts of actinolite-tremolite, where not found by PLM should be analyzed using TEM methods and / or water separation techniques. Suspected actinolite/vermiculite presence will be indicated through the sample comment section of this report.

Fibrous talc containing samples may even contain a related asbestos fiber known as anthophyllite. Under certain conditions the same fiber may actually contain both talc and anthophyllite (a phenomenon called intergrowth). Again, TEM detection methods are recommended. CA Labs PLM report comments will denote suspected amounts of asbestiform anthophyllite with talc, where further analysis is recommended.

Some samples (floor tiles, surfacings, etc.) may contain fibers too small to be detectable by PLM analysis and should be analyzed by TEM bulk protocols.

A "trace asbestos" will be reported if the analyst observes far less than 1% asbestos. CA Labs defines "trace asbestos" as a few fibers detected by the analyst in several preparations and will indicate as such under these circumstances.

Quantification of <1% will actually be reported as <=1% (allowable variance close to 1% is high). Such results are ideal for point counting, and the technique is mandatory for friable samples (NESHAP, Nov. 1990 and clarification letter 8 May 1991) under 1% percent asbestos and the "trace asbestos". **In order to make all initial PLM reports issued from CA Labs NESHAP compliant, all <1% asbestos results (except floor tiles) will be point counted at no additional charge.**

#### **Qualifications**

CA Labs is accredited by the National Voluntary Accreditation Program (NVLAP) for selected test methods for airborne fiber analysis (TEM), and for bulk asbestos fiber analysis (PLM). CA Labs is also accredited by AIHA LAP, LLC. in the PLM asbestos field of testing for Industrial Hygiene. All analysts have a college degree in a natural science (geology, biology, or environmental science) or are recognized by a state professional board in one of these disciplines. Extensive in-house training programs are used to augment education background of the analyst. The group leader of polarized light has received supplemental McCrone Research training for asbestos identification. Analysis performed at Crisp Analytical Labs, LLC 1929 Old Denton Road Carrollton, TX 75006

*Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235*  
**AIHA LAP, LLC Laboratory #102929**

**CA Labs**Dedicated to  
Quality**Crisp Analytical, L.L.C.**1929 Old Denton Road  
Carrollton, TX 75006  
Phone 972-242-2754  
Fax 972-242-2798**CA Labs, L.L.C.**12232 Industriplex, Suite 32  
Baton Rouge, LA 70809  
Phone 225-751-5632  
Fax 225-751-5634Overview of Project Sample Material Containing Asbestos**Customer Project:** DCE 16-186, Rail Yard Parcel 10 Pattern House **CA Labs Project #:** CAL16117628CB

Sample #	Layer #	Analysts	Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affected Building Material Types
----------	---------	----------	-----------------------------------	--	--

16-186-104	104-1		<b>Door Frame Caulking/</b> gray caulking	<b>3% Chrysotile</b>	<b>gray caulking</b> <b>black weathered tar</b>
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16-186-105	105-1		<b>Roof Mastic/</b> black weathered tar	<b>5% Chrysotile</b>	
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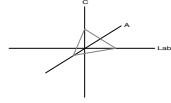
Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235

**AIHA LAP, LLC Laboratory #102929****Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):**

ca - carbonate	pe - perlite	fg - fiberglass	pa - palygorskite (clay)
gypsum - gypsum	qu - quartz	mw - mineral wool	
bi - binder		wo - wollastinite	
or - organic		ta - talc	
ma - matrix		sy - synthetic	
mi - mica		ce - cellulose	
ve - vermiculite		br - brucite	
ot - other		ka - kaolin (clay)	

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**CA Labs**Dedicated to  
Quality**Crisp Analytical, L.L.C.**1929 Old Denton Road  
Carrollton, TX 75006  
Phone 972-242-2754  
Fax 972-242-2798**CA Labs, L.L.C.**12232 Industriplex, Suite 32  
Baton Rouge, LA 70809  
Phone 225-751-5632  
Fax 225-751-5634**Polarized Light Asbestiform Materials Characterization****Customer Info:** Attn: David Charlesworth**DC Environmental**PO Box 9315  
Albuquerque, NM 87119

Phone # 505-869-8000

Fax # 505-869-9453

**Customer Project:**DCE 16-186, Rail Yard Parcel  
10 Pattern House**Turnaround Time:**

2 Days

**CA Labs Project #:**

CAL16117628CB

**Date:**

11/14/2016

**Samples Received:** 11/11/16 10:30am**Date Of Sampling:** 10/27/16**Purchase Order #:**

Sample #	Com ment	Layer #	Analysts Subsample	Physical Description of	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
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16-186-100		100-1		<b>Wood Window Putty/ gray caulking</b>	y	<b>None Detected</b>		100% qu,bi,ca
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16-186-101		101-1		<b>Sheetrock Restroom Wall/ tan surfaced white compound</b>	n	<b>None Detected</b>		100% mi,bi,ca
------------	--	-------	--	---	---	----------------------	--	---------------

16-186-102		102-1		<b>Sheetrock Restroom Wall/ tan surfaced white compound</b>	n	<b>None Detected</b>		100% mi,bi,ca
------------	--	-------	--	---	---	----------------------	--	---------------

16-186-103		103-1		<b>Sheetrock Restroom Wall/ tan surfaced white compound</b>	n	<b>None Detected</b>		100% mi,bi,ca
------------	--	-------	--	---	---	----------------------	--	---------------

16-186-104		104-1		<b>Door Frame Caulking/ gray caulking</b>	y	<b>3% Chrysotile</b>		97% qu,bi,ca
------------	--	-------	--	---	---	----------------------	--	--------------

16-186-105		105-1		<b>Roof Mastic/ black weathered tar</b>	y	<b>5% Chrysotile</b>		95% qu,bi
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16-186-106		106-1		<b>Roofing Felt/ black tar with black insulation</b>	n	<b>None Detected</b>	66% ce	34% qu,bi
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Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235

**AIHA LAP, LLC Laboratory #102929**

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). All samples received in good condition unless noted.

Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gypsum - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot - other	wo - wollastinite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:

Keith Malone  
AnalystQAC  
Leslie Crisp, P.G.Technical Manager  
Chad Lytle

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze

6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

CA 16017628



DC Environmental Consulting and Training Services

"Promoting Safety in the Workplace"

DC Environmental  
PO Box 9315  
Albuquerque, NM 87119

Contact:  
J. David Charlesworth

Phone:  
505.869.8000

Fax:  
505.869.9453

E-mail:  
JDCharlesworthcih@gmail.com

Site: City of Albuquerque (Intera)

Site Location: Rail Yard Parcel 10 Pattern House

PO / Job#: DCE 16-186

Date: 10/27/2016

Turn Around Time: Same Day / 1Day / **2Day** / 3Day / 4Day / 5Day

PCM:  NIOSH 7400A /  NIOSH 7400B  Rotometer

PLM:  Standard /  Point Count 400 - 1000 /  CARB 435

TEM Air:  AHERA /  Yamate2 /  NIOSH 7402  
 TEM Bulk:  Quantitative /  Qualitative /  Chatfield  
 TEM Water:  Potable /  Non-Potable /  Weight %  
 TEM Microvac:  Qual(+/-) /  D5755(str/area) /  D5756(str/mass)

IAQ Particle Identification (PLM LAB)  PLM Opaques/Soot  
 Particle Identification (TEM LAB)  Special Project

Metals Analysis: Method:

Matrix:

Analytes:

Comments:

Sample ID	Date	Sample Location / Description / Task	FOR AIR SAMPLES ONLY				Sample Area / Air Volume
			Type	Time On/Off	Avg. LPM	Total Time	
16-186-100	10/27	Wood window putty Pattern House	A P C				
16-186-101	10/27	Sheet rock restroom wall Pattern House	A P C				
16-186-102	10/27	Sheet rock restroom wall Pattern House	A P C				
16-186-103	10/27	Sheet rock restroom wall Pattern House	A P C				
16-186-104	10/27	Door frame caulking Pattern House	A P C				
16-186-105	10/27	Roof Mastic Pattern House	A P C				
16-186-106	10/27	Roofing Felt Pattern House	A P C				
			A P C				
			A P C				
			A P C				

Sampled By: Steven Gutierrez

Shipped Via:  Fed Ex  DHL  UPS  US Mail  Courier  Drop Off  Other:

Relinquished By: Steven Gutierrez Date / Time: 11/10/2016 5:00PM	Relinquished By: Date / Time:	Relinquished By: Date / Time:
Received By: <i>J. Charlesworth</i> Date / Time: 11/11/16 10:20am	Received By: Date / Time:	Received By: Date / Time:
Condition Acceptable? <input type="checkbox"/> Yes <input type="checkbox"/> No	Condition Acceptable? <input type="checkbox"/> Yes <input type="checkbox"/> No	Condition Acceptable? <input type="checkbox"/> Yes <input type="checkbox"/> No

**Appendix B**  
**XRF Lead Measurements**

Project # 16-186 Project Name Pattern House Date 10/28/16  
 Address Rail Yards  
 Technician Mike Nieman and Nathan Lyons

	Time : <u>15:10</u>		Units	1724	Results	Average
1		Cal.			1.0	
2		Cal.			1.0	
3		Cal.			1.0	1.0
4		Cal.			-0.1	
5		Cal			-0.1	
6		Cal.			-0.0	-0.1
XRF Test Number	Location / Room	Component - Designation	Component Number	Color	Substrate	Result / Reading mg/cm2
7	North Room	A Wall		Light Green	Concrete	1.6
8	North Room	B Wall		Light Green	Concrete	1.0
9	North Room	D Wall		Beige	Sheetrock	-0.2
10	North Room	D Wall		Light Green	Concrete	1.0
11	North Room	D Wall		Beige	Metal	-0.2
12	North Room	Door Header	A-1	Light Green	Metal	1.6
13	North Room	Door Frame	A-2	Gray	Metal	0.1
14	North Room	Mid-Point Column		Teal	Concrete	1.0
15	North Room	Window Sill	B-1	Teal	Concrete	1.0
16	North Room	Window Sash	B-2	Teal	Wood	0.5
17	South Room	Door Frame	A-1	Teal	Metal	-0.1
18	South Room	A Wall		Cream	Concrete	1.0
19	South Room	B Wall		Cream	Concrete	0.3
20	South Room	C Wall		Red	Concrete	1.0
21	South Room	D Wall		Cream	Concrete	0.4
22	South Room	Floor		Gray	Concrete	-0.1
23	Exterior	North Wall		Beige	Concrete	0.1
24	Exterior	East Wall		Beige	Concrete	0.3
25	Exterior	South Wall		Beige	Concrete	-0.0
26	Exterior	S. Wall Door Frame		Silver	Metal	0.2
27	Exterior	S. Wall Door		Silver	Metal	0.4



	Time : <u>15:56</u>				Results	Average
28	Post	Cal.			1.0	
29	Post	Cal.			1.0	
30	Post	Cal.			1.0	1.0
31	Post	Cal.			-0.1	
32	Post	Cal			-0.1	
33	Post	Cal.			-0.0	-0.1

Page 2 of 2

**Appendix C**  
**Asbestos and LBP Data**

ID	Reading/Sample ID	Lead	Units	LF	Room Number	Building	Room Name	Wall	Structure	Location	IVember	IVoce	Substrate	Color	Location_2	Source
1	7	U1	mg/cm <sup>2</sup>		1	RailYards/Amtrak Office	Office	A	Window	Hgt	Sill	QVI	Wood	Brown	Interior	Imover, 2011
2	8	U1	mg/cm <sup>2</sup>		1	RailYards/Amtrak Office	Office	A	Window	Hgt	Sash	QVI	Wood	Brown	Interior	Imover, 2011
3	9	U2	mg/cm <sup>2</sup>		1	RailYards/Amtrak Office	Office	A	Window	Hgt	Lit casing	QVI	Wood	Brown	Interior	Imover, 2011
4	10	U2	mg/cm <sup>2</sup>		1	RailYards/Amtrak Office	Office	A	Wall	Lctr		QVI	Plaster	White	Interior	Imover, 2011
5	11	-U2	mg/cm <sup>2</sup>		1	RailYards/Amtrak Office	Office	B	Wall	Uctr		QVI	Plaster	White	Interior	Imover, 2011
6	12	U	mg/cm <sup>2</sup>		1	RailYards/Amtrak Office	Office	C	Door	ctr	Uctr	QVI	Steel	Brown	Interior	Imover, 2011
7	13	U	mg/cm <sup>2</sup>		1	RailYards/Amtrak Office	Office	C	Door	ctr	Lit casing	QVI	Steel	Brown	Interior	Imover, 2011
8	14	U2	mg/cm <sup>2</sup>		1	RailYards/Amtrak Office	Office	B	Window	ctr	Sill	QVI	Wood	Brown	Interior	Imover, 2011
9	15	U2	mg/cm <sup>2</sup>		3	RailYards/Amtrak Office	Office	B	Window	ctr	Lit casing	QVI	Wood	Brown	Interior	Imover, 2011
10	16	U2	mg/cm <sup>2</sup>		3	RailYards/Amtrak Office	Office	B	Window	ctr	Sash	QVI	Wood	Brown	Interior	Imover, 2011
11	17	U	mg/cm <sup>2</sup>		3	RailYards/Amtrak Office	Office	A	Wall	Lctr		QVI	Plaster	White	Interior	Imover, 2011
12	18	-U2	mg/cm <sup>2</sup>		3	RailYards/Amtrak Office	Office	A	Wall	LHgt		QVI	Plaster	White	Interior	Imover, 2011
13	19	-U2	mg/cm <sup>2</sup>		3	RailYards/Amtrak Office	Office	D	Door	Hgt	UHgt	QVI	Steel	Brown	Interior	Imover, 2011
14	20	U1	mg/cm <sup>2</sup>		3	RailYards/Amtrak Office	Office	D	Door	Hgt	Lit casing	QVI	Steel	Brown	Interior	Imover, 2011
15	21	U/	mg/cm <sup>2</sup>		4	RailYards/Amtrak Office	BreakRm	B	Chair rail	ctr		QVI	Wood	Brown	Interior	Imover, 2011
16	22	U2	mg/cm <sup>2</sup>		4	RailYards/Amtrak Office	BreakRm	B	Window	ctr	Lit casing	QVI	Wood	Brown	Interior	Imover, 2011
17	23	>99	mg/cm <sup>2</sup>	Yes	4	RailYards/Amtrak Office	BreakRm	B	Wall	Lctr		QVI	Plaster	White	Interior	Imover, 2011
18	24	U2	mg/cm <sup>2</sup>		4	RailYards/Amtrak Office	BreakRm	C	Baseboard	ctr		QVI	Plaster	White	Interior	Imover, 2011
19	25	>99	mg/cm <sup>2</sup>	Yes	4	RailYards/Amtrak Office	BreakRm	B	Wall	ULit		QVI	Plaster	White	Interior	Imover, 2011
20	26	>99	mg/cm <sup>2</sup>	Yes	4	RailYards/Amtrak Office	BreakRm	B	Wall	LHgt		QVI	Plaster	White	Interior	Imover, 2011
21	27	U3	mg/cm <sup>2</sup>		4	RailYards/Amtrak Office	BreakRm	C	Wall	Lctr		QVI	Drywall	White	Interior	Imover, 2011
22	28	U2	mg/cm <sup>2</sup>		3	RailYards/Amtrak Office	Office	B	Wall	Lctr		QVI	Plaster	White	Interior	Imover, 2011
23	29	>99	mg/cm <sup>2</sup>	Yes	10	RailYards/Amtrak Office	Lobby	A	Wall	Lctr		QVI	Plaster	White	Interior	Imover, 2011
24	30	U3	mg/cm <sup>2</sup>		10	RailYards/Amtrak Office	Lobby	D	Wall	Lctr		QVI	Plaster	White	Interior	Imover, 2011
25	31	U3	mg/cm <sup>2</sup>		10	RailYards/Amtrak Office	Lobby	A	Window	ctr	Sash	QVI	Wood	Brown	Interior	Imover, 2011
26	32	>99	mg/cm <sup>2</sup>	Yes	10	RailYards/Amtrak Office	Lobby	A	Column	ctr		QVI	Plaster	White	Interior	Imover, 2011
27	33	>99	mg/cm <sup>2</sup>	Yes	10	RailYards/Amtrak Office	Lobby	A	Column	ctr		QVI	Plaster	White	Interior	Imover, 2011
28	34	1.1	mg/cm <sup>2</sup>	Yes	12	RailYards/Amtrak Office	Hallway	B	Wall	Lctr		QVI	Plaster	White	Interior	Imover, 2011
29	35	>99	mg/cm <sup>2</sup>	Yes	12	RailYards/Amtrak Office	Hallway	D	Wall	Lctr		QVI	Plaster	White	Interior	Imover, 2011
30	36	U1	mg/cm <sup>2</sup>		9	RailYards/Amtrak Office	WmsRm	D	Wall	Lctr		QVI	Plaster	White	Interior	Imover, 2011
31	37	U1	mg/cm <sup>2</sup>		9	RailYards/Amtrak Office	WmsRm	A	Wall	Lctr		QVI	Plaster	White	Interior	Imover, 2011
32	38	U3	mg/cm <sup>2</sup>		9	RailYards/Amtrak Office	WmsRm	B	Door	ctr	Lit casing	QVI	Wood	Brown	Interior	Imover, 2011
33	39	U2	mg/cm <sup>2</sup>		9	RailYards/Amtrak Office	WmsRm	B	Floor			QVI	Cement	Brown	Interior	Imover, 2011
34	40	-U1	mg/cm <sup>2</sup>		11	RailYards/Amtrak Office	Number Only	C	Stairs	ctr	Ireads	QVI	Steel	Black	Interior	Imover, 2011
35	41	U1	mg/cm <sup>2</sup>		11	RailYards/Amtrak Office	Number Only	C	Stairs	ctr	Halling cap	QVI	Steel	Black	Interior	Imover, 2011
36	42	-U1	mg/cm <sup>2</sup>		15	RailYards/Amtrak Office	Upstairs	C	Wall	Lctr		QVI	Plaster	White	Interior	Imover, 2011
37	43	U2	mg/cm <sup>2</sup>		15	RailYards/Amtrak Office	Upstairs	B	Wall	Lctr		QVI	Plaster	White	Interior	Imover, 2011
38	44	>99	mg/cm <sup>2</sup>	Yes	15	RailYards/Amtrak Office	Upstairs	A	Wall	Lctr		QVI	Plaster	White	Interior	Imover, 2011
39	45	66	mg/cm <sup>2</sup>	Yes	15	RailYards/Amtrak Office	Upstairs	A	Door	ctr	Uctr	QVI	Wood	White	Interior	Imover, 2011
40	46	U3	mg/cm <sup>2</sup>		15	RailYards/Amtrak Office	Upstairs	B	Wall	Lctr		QVI	Plaster	White	Interior	Imover, 2011
41	47	U3	mg/cm <sup>2</sup>		15	RailYards/Amtrak Office	Upstairs	A	Wall	Lctr		QVI	Plaster	White	Interior	Imover, 2011
42	54	U2	mg/cm <sup>2</sup>		16	RailYards/Amtrak Office	IVuseum	A	Floor			QVI	Cement	Gray	Interior	Imover, 2011
43	55	2.3	mg/cm <sup>2</sup>	Yes	16	RailYards/Amtrak Office	IVuseum	A	Floor			QVI	Cement	White	Interior	Imover, 2011
44	56	U3	mg/cm <sup>2</sup>		16	RailYards/Amtrak Office	IVuseum	A	Floor			QVI	Cement	White	Interior	Imover, 2011
45	57	U1	mg/cm <sup>2</sup>		16	RailYards/Amtrak	IVuseum	D	Wall	Lctr		QVI	Cement	Gray	Interior	Imover,

					Office											2011
46	58	0.2	mg/cm <sup>2</sup>		1b	Railyards AmtrakOffice	Museum	B	Wall	Lctr		QVI	Cement	Gray	Interior	Imovar, 2011

D	Head No/Sample D	Lead	Units	LSP	Room Number	Building	Room Name	Wall	Structure	Location	Member	IVode	Substrate	Color	Location_2	Source
47	59	0.1	mg/cm <sup>2</sup>		1b	Railyards AmtrakOffice	Museum	A	Wall	Lctr		QVI	Cement	Gray	Interior	Imovar, 2011
48	60	6.3	mg/cm <sup>2</sup>	Yes	1b	Railyards AmtrakOffice	Museum	A	Floor			QVI	Cement	Yellow	Interior	Imovar, 2011
49	61	0.1	mg/cm <sup>2</sup>		1b	Railyards AmtrakOffice	Museum	A	Door	Ctr	Uctr	QVI	Steel	Green	Interior	Imovar, 2011
50	62	0.1	mg/cm <sup>2</sup>		1b	Railyards AmtrakOffice	Museum	A	Door	Ctr	Uctr	QVI	Steel	Black	Interior	Imovar, 2011
51	63	0.5	mg/cm <sup>2</sup>		1b	Railyards AmtrakOffice	Museum	A	Door	Ctr	Lit casing	QVI	Steel	Black	Interior	Imovar, 2011
52	64	0.7	mg/cm <sup>2</sup>		1b	Railyards AmtrakOffice	Museum	A	Floor			QVI	Cement	Red	Interior	Imovar, 2011
53	65	1.8	mg/cm <sup>2</sup>	Yes	1	Railyards AmtrakOffice	Facility	B	Railing	Ctr	Railing	QVI	Steel	Yellow	Exterior	Imovar, 2011
54	66	0.2	mg/cm <sup>2</sup>		1	Railyards AmtrakOffice	Facility	B	Door	Ctr	Uctr	QVI	Steel	Red	Exterior	Imovar, 2011
55	67	0.1	mg/cm <sup>2</sup>		1	Railyards AmtrakOffice	Facility	D	Window	Ctr	Sill	QVI	Wood	Black	Exterior	Imovar, 2011
56	68	0.2	mg/cm <sup>2</sup>		1	Railyards AmtrakOffice	Facility	D	Window	Ctr	Sash	QVI	Wood	Black	Exterior	Imovar, 2011
57	69	0	mg/cm <sup>2</sup>		1	Railyards AmtrakOffice	Facility	C	Window	Hgt	Sill	QVI	Wood	Black	Exterior	Imovar, 2011
58	7	5	mg/cm <sup>2</sup>	Yes	1	IVaniVachne Shop	Number Only	B	Column	Ctr		QVI	Steel	Silver	Interior	Imovar, 2011
59	8	1.1	mg/cm <sup>2</sup>	Yes	1	IVaniVachne Shop	Number Only	C	Door	Ctr	Uctr	QVI	Steel	Silver	Interior	Imovar, 2011
60	9	2.2	mg/cm <sup>2</sup>	Yes	1	IVaniVachne Shop	Number Only	C	Column	Ctr		QVI	Steel	Silver	Interior	Imovar, 2011
61	10	0.1	mg/cm <sup>2</sup>		1	IVaniVachne Shop	Number Only	A	Floor			QVI	Ceramic	Red	Interior	Imovar, 2011
62	11	1.8	mg/cm <sup>2</sup>	Yes	1	IVaniVachne Shop	Number Only	B	IntColumn	Ctr		QVI	Steel	Silver	Interior	Imovar, 2011
63	12	0.7	mg/cm <sup>2</sup>		1	IVaniVachne Shop	Number Only	B	Stairs	Ctr	Ireads	QVI	Steel	Green	Interior	Imovar, 2011
64	13	1.9	mg/cm <sup>2</sup>	Yes	1	IVaniVachne Shop	Number Only	D	Column	Ctr		QVI	Steel	Silver	Interior	Imovar, 2011
65	14	5.4	mg/cm <sup>2</sup>	Yes	1	IVaniVachne Shop	Number Only	D	CeilingBeam	Beam	Ctr	QVI	Steel	Silver	Interior	Imovar, 2011
66	15	4.2	mg/cm <sup>2</sup>	Yes	1	IVaniVachne Shop	Number Only	B	Column	Ctr		QVI	Steel	Black	Exterior	Imovar, 2011
67	16	2.7	mg/cm <sup>2</sup>	Yes	1	IVaniVachne Shop	Number Only	B	Stairs	Ctr	Ireads	QVI	Wood	White	Interior	Imovar, 2011
68	1	3.4	mg/cm <sup>2</sup>	Yes		BoilerShop	Number Only	B	IntColumn	Ctr		QVI	Steel	Silver	Interior	Imovar, 2011
69	2	0.1	mg/cm <sup>2</sup>			BoilerShop	Number Only	A	Floor			QVI	Cement	Red	Interior	Imovar, 2011
70	3	3.2	mg/cm <sup>2</sup>	Yes		BoilerShop	Number Only	C	IntColumn	Ctr		QVI	Steel	Silver	Interior	Imovar, 2011
71	4	2.5	mg/cm <sup>2</sup>	Yes		BoilerShop	Number Only	A	Column	Lit		QVI	Steel	Silver	Interior	Imovar, 2011
72	5	0.3	mg/cm <sup>2</sup>			BoilerShop	Number Only	C	Door	Lit	Uctr	QVI	Steel	Silver	Interior	Imovar, 2011
73	1	1.1	mg/cm <sup>2</sup>	Yes		Blacksmith Shop	Number Only	B	Column	Ctr		QVI	Steel	Silver	Interior	Imovar, 2011
74	2	3.1	mg/cm <sup>2</sup>	Yes		Blacksmith Shop	Number Only	C	Column	Ctr		QVI	Steel	Silver	Interior	Imovar, 2011
75	3	2.1	mg/cm <sup>2</sup>	Yes		Blacksmith Shop	Number Only	D	Wall	Lctr		QVI	Brick	Silver	Interior	Imovar, 2011
76	4	0.2	mg/cm <sup>2</sup>			Blacksmith Shop	Number Only	D	Door	Ctr	Uctr	QVI	Steel	Silver	Interior	Imovar, 2011
77	5	0.1	mg/cm <sup>2</sup>			Blacksmith Shop	Number Only	D	Window	Ctr	Part. Bead	QVI	Steel	Silver	Interior	Imovar, 2011
78	7	2.7	mg/cm <sup>2</sup>	Yes		BigNorthof Firehouse	Number Only	A	BigNorthof Firehouse	Lctr		QVI	Cement	Silver	Interior	Imovar, 2011
79	8	2.3	mg/cm <sup>2</sup>	Yes		BigNorthof Firehouse	Number Only	A	Window	Ctr	Lit casing	QVI	Steel	Silver	Interior	Imovar, 2011
80	9	5.6	mg/cm <sup>2</sup>	Yes		BigNorthof Firehouse	Number Only	A	Door	Ctr	Uctr	QVI	Steel	Silver	Interior	Imovar, 2011
81	10	1.1	mg/cm <sup>2</sup>	Yes		BigNorthof Firehouse	Number Only	A	Window	Ctr	Hgt casin	QVI	Steel	Silver	Interior	Imovar, 2011



82	11	24	mg/m <sup>2</sup>	Yes		Big North of Firehouse	Number Only	C	Frame	Ctr		QVI	Steel	Silver	Interior	Innovar, 2011
83	12	1.1	mg/m <sup>2</sup>	Yes		Big North of Firehouse	Number Only	C	Wall	LCtr		QVI	Cement	Silver	Interior	Innovar, 2011
84	13	0.2	mg/m <sup>2</sup>			Big North of Firehouse	Number Only	D	Wall	LCtr		QVI	Cement	Silver	Interior	Innovar, 2011
85	1	1.1	mg/m <sup>2</sup>	Yes		Big South of Firehouse	Number Only	A	Wall	LCtr		QVI	Cement	White	Interior	Innovar, 2011
86	2	0.1	mg/m <sup>2</sup>			Big South of Firehouse	Number Only	B	Wall	LCtr		QVI	Cement	White	Interior	Innovar, 2011
87	3	0	mg/m <sup>2</sup>			Big South of Firehouse	Number Only	A	Door/Unit	Ctr	Lit casing	QVI	Cement	White	Interior	Innovar, 2011
88	4	1.1	mg/m <sup>2</sup>	Yes		Big South of Firehouse	Number Only	A	Column	Ctr		QVI	Cement	Green	Interior	Innovar, 2011
89	5	1.2	mg/m <sup>2</sup>	Yes		Big South of Firehouse	Number Only	B	Wall	LCtr		QVI	Cement	Green	Interior	Innovar, 2011
90	6	0.5	mg/m <sup>2</sup>			Big South of Firehouse	Number Only	C	Door	Ctr	UCtr	QVI	Cement	Green	Interior	Innovar, 2011
91	13029029-020513-01L	150	ppm			Blacksmith Shop			Interior Walls	NW Corner			Paint	Silver		Rhoades, 2013
92	13029029-020513-02L	410	ppm			Blacksmith Shop			Interior Walls	NE Corner			Paint	Silver		Rhoades, 2013

ID	Head No/Sample ID	Lead	Units	LBH	Room Number	Building	Room Name	Wall	Structure	Location	IVember	IVode	Substrate	Color	Location_2	Source
93	13029029-020513-03L	100	ppm			Blacksmith Shop			Interior Walls	SW Corner			Paint	Silver		Rhoades, 2013
94	13029029-020513-04L	150	ppm			Blacksmith Shop			Interior Walls	SE Corner			Paint	Silver		Rhoades, 2013
95	13029029-020513-05L	250	ppm			Blacksmith Shop			Overhead Piping				Paint	Red		Rhoades, 2013
96	13029029-020513-06L	2640	ppm			Blacksmith Shop			Exterior Brck Walls		1rm		Paint	Rust		Rhoades, 2013
97	13029029-020513-07L	4040	ppm			Blacksmith Shop			Interior Walls Office Shack				Paint	Cream		Rhoades, 2013
98	13029029-020513-08L	250	ppm			Blacksmith Shop			Building	NW Corner			Surface Dust			Rhoades, 2013
99	13029029-020513-09L	400	ppm			Blacksmith Shop			Building	NE Corner			Surface Dust			Rhoades, 2013
100	13029029-020513-10L	100	ppm			Blacksmith Shop			Building	Center			Surface Dust			Rhoades, 2013
101	13029029-020513-11L	710	ppm			Blacksmith Shop			Building	SW Corner			Surface Dust			Rhoades, 2013
102	13029029-020513-12L	900	ppm			Blacksmith Shop			Building	SE Corner			Surface Dust			Rhoades, 2013

ID	Sample Number	Date	Description	Location	Percent Asbestos	Asbestos Type	Classification	Source
1	577007-NB.NS.1	Sep-05	Silver glaze coating window pane	Boiler Shop, South Side	0%			Terracon, 2005
2	577007-NB.NS.2	Sep-05	Silver glaze coating window pane	Boiler Shop, South Side	0%			Terracon, 2005
3	577007-NB.NS.3	Sep-05	Silver glaze coating window pane	Boiler Shop, South Side	0%			Terracon, 2005
4	577007-NB.SS.4	Sep-05	Green painted window pane	Boiler Shop, South Side	0%			Terracon, 2005
5	577007-NB.SS.5	Sep-05	Green painted window pane	Boiler Shop, South Side	0%			Terracon, 2005
6	577007-NB.SS.6	Sep-05	Green painted window pane	Boiler Shop, North Side	0%			Terracon, 2005
7	577007-NB.NS.7	Sep-05	Silver glaze coating window pane	Boiler Shop, North Side	0%			Terracon, 2005
8	577007-NB.NS.8	Sep-05	Silver glaze coating window pane	Boiler Shop, North Side	0%			Terracon, 2005
9	577707-NB.NS.9	Sep-05	Silver glaze/black spray-on with pane	Boiler Shop, North Side	0%			Terracon, 2005
10	577007 -NB.NS.10	Sep-05	Silver glaze/black spray-on with pane	Boiler Shop, North Side	0%			Terracon, 2005
11	577007-NB.NS.11	Sep-05	Silver glaze/black spray-on with pane	Boiler Shop, North Side	0%			Terracon, 2005
12	577007-SB.SS.F1.1	Sep-05	Silver glaze coating window pane	Main Machine Shop, South Side, First Floor	0%			Terracon, 2005
13	577007 -SB.SS.F1.2	Sep-05	Glaze coating on window pane (silver/black)	Main Machine Shop, South Side, First Floor	0%			Terracon, 2005
14	577007-SB.SS.F1.3	Sep-05	Glaze coating on window pane (silver)	Main Machine Shop, South Side, First Floor	0%			Terracon, 2005
15	577007 -SB.SS.F1.4	Sep-05	Glaze coating on window pane (silver)	Main Machine Shop, South Side, First Floor	0%			Terracon, 2005
16	577007 -SB.SS.F1.5	Sep-05	Glaze coating on window pane (silver)	Main Machine Shop, South Side, First Floor	0%			Terracon, 2005
17	577007-SB.SS.F1.6	Sep-05	Glaze coating on window pane (silver)	Main Machine Shop, South Side, First Floor	0%			Terracon, 2005
18	577007 -SB.SS.F1.7	Sep-05	Glaze coating on window pane (silver/green)	Main Machine Shop, South Side, First Floor	0%			Terracon, 2005
19	577007-SB.SS.F2.1	Sep-05	Glaze coating on window pane (beige/green)	Main Machine Shop, South Side, Second Floor	0%			Terracon, 2005
20	577007-SB.SS.F2.2	Sep-05	Glaze coating on window pane (tan/brown)	Main Machine Shop, South Side, Second Floor	0%			Terracon, 2005
21	577007-SB.SS.F2.3	Sep-05	Glaze coating on window pane (off-white)	Main Machine Shop, South Side, Second Floor	0%			Terracon, 2005
22	577007-SB.SS.F2.4	Sep-05	Glaze coating on window pane (grey/green)	Main Machine Shop, South Side, Second Floor	0%			Terracon, 2005
23	577007-SB.SS.F2.5	Sep-05	Glaze coating on window pane (off-white)	Main Machine Shop, South Side, Second Floor	0%			Terracon, 2005
24	577007-SB.SS.F2.6	Sep-05	Plaster over cc wall (grey with paint)	Main Machine Shop, South Side, Second Floor	0%			Terracon, 2005
25	577007-SB.SS.F2.7	Sep-05	Plaster over cc wall (grey with paint)	Main Machine Shop, South Side, Second Floor	0%			Terracon, 2005
26	577007-NB.SS.1	Sep-05	Window glazing (tan)	Boiler Shops, South Side	Trace <1%			Terracon, 2005
27	577007-NB.SS.2	Sep-05	Window glazing (tan)	Boiler Shops, South Side	2%	Chrysotile	Non-Friable	Terracon, 2005
28	577007-NB.SS.3	Sep-	Window glazing (tan)	Boiler Shops, South Side	2%	Chrysotile	Non-Friable	Terracon,

		05						2005
29	577007-NB.SS.01	Sep-05	Window glazing (beige)	Boiler Shops, South Side	Trace <1%	Chrysotile		Terracon, 2005
30	577007-NB.SS.02	Sep-05	Window glazing (beige)	Boiler Shops, South Side	Trace <1%	Chrysotile		Terracon, 2005
31	577007-NB.SS.03	Sep-05	Window glazing (beige)	Boiler Shops, South Side	Trace <1%	Chrysotile		Terracon, 2005
32	577007 -NB.ES.01	Sep-05	Window glazing (beige)	Boiler Shops, East Side	Trace <1%	Chrysotile		Terracon, 2005
33	577007-NB.ES.02	Sep-05	Window glazing (beige)	Boiler Shops, East Side	Trace <1%	Chrysotile		Terracon, 2005
34	577007 -N.O.01	Sep-05	Outside shingle (red with granules)	Outside the Boiler Shop	0%			Terracon, 2005
35	577007-N.O.02	Sep-05	Outside shingle (red with granules)	Outside the Boiler Shop	0%			Terracon, 2005
36	577007-N.O.03	Sep-05	Outside shingle (red with granules)	Outside the Boiler Shop	0%			Terracon, 2005
37	577007-N.O.G.01	Sep-05	White insulation	100 ft North of CWE Storage Shed	NA			Terracon, 2005
38	577007-N.O.G.02	Sep-05	White insulation	100 ft North of CWE Storage Shed	NA			Terracon, 2005
39	577007-N.O.G.03	Sep-05	White insulation	100 ft North of CWE Storage Shed	NA			Terracon, 2005
40	577007 -NTE. WS-1	Sep-05	Transite pipe (grey)	Former Transformer Area, West Side	25%	Chrysotile	Friable	Terracon, 2005
41	577007 -NTE. WS-1	Sep-05	Transite pipe (grey)	Former Transformer Area, West Side	5%	Crocidolite		Terracon, 2005
42	577007 -NTE.ES-3	Sep-05	Transite pipe (grey)	Former Transformer Area	25%	Chrysotile	Friable	Terracon, 2005
43	577007 -NTE.ES-3	Sep-05	Transite pipe (grey)	Former Transformer Area	5%	Crocidolite		Terracon, 2005
44	577007-NTE.ES-1 (577007-NTE.NS-1??)	Sep-05	Transite pipe (grey)	Former Transformer Area	25%	Chrysotile	Friable	Terracon, 2005
45	577007-NTE.ES-1 (577007-NTE.NS-1??)	Sep-05	Transite pipe (grey)	Former Transformer Area	3%	Crocidolite		Terracon, 2005
46	577007-SWB.WW.01	Sep-05	Window putty/glazing (beige)	Babbit Shop, West Wall	Trace <1%	Chrysotile		Terracon, 2005
47	577007-SWB.WW.02	Sep-05	Window putty/glazing (beige)	Babbit Shop, West Wall	Trace <1%	Chrysotile		Terracon, 2005
48	577007-FH.01	Sep-05	Insulation/plaster over brick	Fire House	0%			Terracon, 2005
49	577007-FH.02	Sep-05	Insulation/plaster over brick	Fire House	0%			Terracon, 2005
50	577007-FH.03	Sep-05	Insulation/plaster over brick	Fire House	4%	Chrysotile	Friable	Terracon, 2005
51	577007-FH.04	Sep-05	Insulation/plaster over brick	Fire House	5%	Chrysotile	Friable	Terracon, 2005
52	01-DW1-1	Aug-10	off-white surfaced white compound (drywall)	Amtrack Office	none detected			Innovar, 2011
53	01-DW1-2	Aug-10	white drywall with brown paper (drywall)	Amtrack Office	none detected			Innovar, 2011
54	02-DW1-1	Aug-10	white surfaced white compound (drywall)	Amtrack Office	none detected			Innovar, 2011

ID	Sample Number	Date	Description	Location	Percent Asbestos	Asbestos Type	Classification	Source
55	03-DW1-1	Aug-10	white surfaced white compound (drywall)	Amtrack Office	none detected			Innovar, 2011
56	04-P1-1	Aug-10	white surfaced tan plaster (plaster)	Amtrack Office	none detected			Innovar, 2011
57	05-P1-1	Aug-10	white surfaced tan plaster (plaster)	Amtrack Office	none detected			Innovar, 2011

58	06-P1-1	Aug-10	white surfaced white compound (plaster)	Amtrack Office	none detected			Innovar, 2011
59	06-P1-2	Aug-10	tan plaster (plaster)	Amtrack Office	none detected			Innovar, 2011
60	07-CB1-1	Aug-10	pink cover base (cover base)	Amtrack Office	none detected			Innovar, 2011
61	07-CB1-2	Aug-10	tan mastic (cover base)	Amtrack Office	none detected			Innovar, 2011
62	07-CB1-3	Aug-10	white surfaced white compound (cover base)	Amtrack Office	none detected			Innovar, 2011
63	07-CB1-4	Aug-10	brown mastic (cover base)	Amtrack Office	<1%	Anthophyllite		Innovar, 2011
64	07-CB1-5	Aug-10	tan plaster (cover base)	Amtrack Office	none detected			Innovar, 2011
65	08-CB1-1	Aug-10	pink cover base (cover base)	Amtrack Office	none detected			Innovar, 2011
66	08-CB1-2	Aug-10	tan mastic (cover base)	Amtrack Office	none detected			Innovar, 2011
67	08-CB1-3	Aug-10	brown mastic (cover base)	Amtrack Office	<1%	Anthophyllite		Innovar, 2011
68	08-CB1-4	Aug-10	tan plaster (cover base)	Amtrack Office	none detected			Innovar, 2011
69	09-CB1-1	Aug-10	pink cover base (cover base)	Amtrack Office	none detected			Innovar, 2011
70	09-CB1-2	Aug-10	tan mastic (cover base)	Amtrack Office	none detected			Innovar, 2011
71	09-CB1-3	Aug-10	brown mastic (cover base)	Amtrack Office	<1%	Anthophyllite		Innovar, 2011
72	09-CB1-4	Aug-10	tan plaster (cover base)	Amtrack Office	none detected			Innovar, 2011
73	10-CT1-1	Aug-10	white surfacing (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
74	10-CT1-2	Aug-10	tan ceiling (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
75	10-CT1-3	Aug-10	brown mastic (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
76	11-CT1-1	Aug-10	white surfacing (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
77	11-CT1-2	Aug-10	tan ceiling tile (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
78	11-CT1-3	Aug-10	brown mastic (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
79	12-CT1-1	Aug-10	tan ceillign tile (no surfacing) (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
80	12-CT1-2	Aug-10	brown mastic (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
81	13-WC1-1	Aug-10	black surfacing white caulking (Window Caulk)	Amtrack Office	none detected			Innovar, 2011
82	14-WC1-1	Aug-10	black surfacing white caulking (Window Caulk)	Amtrack Office	none detected			Innovar, 2011
83	15-WC1-1	Aug-10	black surfacing white caulking (Window Caulk)	Museum	none detected			Innovar, 2011
84	16-CT2-1	Aug-10	white surfacing (ceiling tile)	Museum	none detected			Innovar, 2011
85	16-CT2-2	Aug-10	Gray ceiling tile (ceiling tile)	Museum	none detected			Innovar, 2011
86	17-CT2-1	Aug-10	White Surfacing (ceiling tile)	Museum	none detected			Innovar, 2011
87	17-CT2-2	Aug-10	Gray ceiling tile (ceiling tile)	Museum	none detected			Innovar, 2011
88	18-CT2-1	Aug-10	white surfacing (ceiling tile)	Museum	none detected			Innovar, 2011
89	18-CT2-2	Aug-10	Gray ceiling tile (ceiling tile)	Museum	none detected			Innovar, 2011
90	19-W1-1	Aug-10	black woven covering (Wiring)	Museum	none detected			Innovar, 2011
91	20-W1-1	Aug-10	black woven covering (Wiring)	Museum	none detected			Innovar, 2011
92	13029.029-020513-01	Feb-	12" Spline Ceiling Tile	Office Shack, Blacksmith Shop	none		Poor/Friable	Roades,



		13			detected			2013
93	13029.029-020513-02	Feb-13	12" Spline Ceiling Tile	Office Shack, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
94	13029.029-020513-03	Feb-13	12" Spline Ceiling Tile	Office Shack, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
95	13029.029-020513-04	Feb-13	Interior Plaster - Surface Coat	Office Shack, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
96	13029.029-020513-05	Feb-13	Interior Plaster - Surface Coat	Office Shack, Blacksmith Shop	2%	Chrysotile	Poor/Friable	Roades, 2013
97	13029.029-020513-06	Feb-13	Interior Plaster - Surface Coat	Office Shack, Blacksmith Shop	2%	Chrysotile	Poor/Friable	Roades, 2013
98	13029.029-020513-07	Feb-13	Interior Plaster - Surface Coat	Office Shack, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
99	13029.029-020513-08	Feb-13	Interior Plaster - Surface Coat	Office Shack, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
100	13029.029-020513-09	Feb-13	Interior Plaster - Surface Coat	Office Shack, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
101	13029.029-020513-10	Feb-13	Window Glazing	Reinforced Glass, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
102	13029.029-020513-11	Feb-13	Window Glazing	Reinforced Glass, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
103	13029.029-020513-12	Feb-13	Window Glazing	Reinforced Glass, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
104	13029.029-020513-13	Feb-13	Window Glazing	Clear Glass, Blacksmith Shop	2%	Chrysotile	Poor/Friable	Roades, 2013
105	13029.029-020513-14	Feb-13	Window Glazing	Clear Glass, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
106	13029.029-020513-15	Feb-13	Window Glazing	Clear Glass, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
107	13029.029-020513-16	Feb-13	Window Glazing	Wood Panes, Blacksmith Shop	<1%	Chrysotile	Poor/Friable	Roades, 2013
108	13029.029-020513-17	Feb-13	Window Glazing	Wood Panes, Blacksmith Shop	2%	Chrysotile	Poor/Friable	Roades, 2013

ID	Sample Number	Date	Description	Location	Percent Asbestos	Asbestos Type	Classification	Source
109	13029.029-020513-18	Feb-13	Window Glazing	Wood Panes, Blacksmith Shop	none detected		Poor/Friable	Roades, 2013
110	13029.029-020513-19	Feb-13	Gray Parapet Tar	Throughout Roof, Blacksmith Shop	10%	Chrysotile	Poor/Non-Friable	Roades, 2013
111	13029.029-020513-20	Feb-13	Gray Parapet Tar	Throughout Roof, Blacksmith Shop	10%	Chrysotile	Poor/Non-Friable	Roades, 2013
112	13029.029-020513-21	Feb-13	Gray Parapet Tar	Throughout Roof, Blacksmith Shop	10%	Chrysotile	Poor/Non-Friable	Roades, 2013
113	13029.029-020513-22	Feb-13	Black Roofing Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
114	13029.029-020513-23	Feb-13	Black Roofing Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
115	13029.029-020513-24	Feb-13	Black Roofing Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
116	13029.029-020513-25	Feb-13	Black Penetration Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
117	13029.029-020513-26	Feb-13	Black Penetration Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
118	13029.029-020513-27	Feb-13	Black Penetration Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
119	13029.029-020513-28	Feb-13	Gray Roofing Felt	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
120	13029.029-020513-29	Feb-13	Gray Roofing Felt	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
121	13029.029-020513-30	Feb-13	Gray Roofing Felt	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
122	13029.029-020513-31	Feb-13	Black Parapet Tar	Throughout Roof, Blacksmith Shop	8%	Chrysotile	Poor/Non-Friable	Roades, 2013
123	13029.029-020513-32	Feb-13	Black Parapet Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
124	13029.029-020513-33	Feb-13	Black Parapet Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013

125	13029.029-020513-34	Feb-13	Black Roofing Felt - Patching	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
126	13029.029-020513-35	Feb-13	Black Roofing Felt - Patching	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
127	13029.029-020513-36	Feb-13	Black Roofing Felt - Patching	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
128	13029.029-020513-34a	Feb-13	Black Roofing Felt - Patching	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
129	13029.029-020513-35a	Feb-13	Black Roofing Felt - Patching	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
130	13029.029-020513-36a	Feb-13	Black Roofing Felt - Patching	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Roades, 2013
131	13029.029-020513-37	Feb-13	Window Glazing	Plastic Panes, Blacksmith Shop	2%	Chrysotile	Poor/Friable	Roades, 2013
132	13029.029-020513-38	Feb-13	Window Glazing	Plastic Panes, Blacksmith Shop	3%	Chrysotile	Poor/Friable	Roades, 2013
133	13029.029-020513-39	Feb-13	Window Glazing	Plastic Panes, Blacksmith Shop	3%	Chrysotile	Poor/Friable	Roades, 2013

**Appendix D.**  
**Lead Based Paint Chip Laboratory Analysis**



CEI Labs  
730 SE Maynard Road, Cary, NC 27511  
Phone: (919) 481-1413 Fax: (919) 481-1442

# LABORATORY REPORT

## LEAD IN PAINT

**Client:** DC Environmental  
PO Box 9315  
Albuquerque , NM 87119

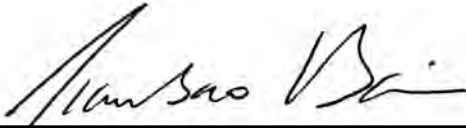
**CEI Lab Code:** C16-0815  
**Received:** 11-14-16  
**Analyzed:** 11-18-16  
**Reported:** 11-18-16

**Project:** Rail Yard Parcel 10 Pattern House; DCE 16-186

**ANALYSIS METHOD: EPA SW846 7000B**

CLIENT ID	CEI LAB ID	PPM (µg/g)	CONCENTRATION % BY WEIGHT
16-186-1000	CA58055	62	0.0062
16-186-1001	CA58056	11000	1.1

**Reviewed By:**

  
Tianbao Bai, Ph.D.  
Laboratory Director

**This method has been validated for sample weights of 0.020g or greater. When samples with a weight of less than that are analyzed those results fall outside of the scope of accreditations.**

**\* The analysis of composite wipe samples as a single samples is not included under AIHA accreditation.**

Minimum reporting limit is 10 µg total lead. Sample results denoted with a “less than” (<) sign contain less than 10.0 µg total lead, based on a 40ml sample volume.

Lead samples are not analyzed by CEI Labs Lead samples are submitted to an AIHA ELLAP accredited laboratory for lead analysis of soil, dust, paint, and TCLP samples.

Laboratory results represent the analysis of samples as submitted by the client. Information regarding sample location, description, area, volume, etc., was provided by the client. Unless notified in writing to return samples, CEI Labs discards client samples after 30 days. This report shall not be reproduced, except in full, without the written consent of CEI Labs.

**REGULATORY LIMITS**


OSHA Standard: No safe limit.  
Consumer Products Safety Standard: Greater than 0.06% lead by weight.  
Federal Lead Standard / HUD: 0.5% lead by weight.

**LEGEND**

µg = microgram  
ml = milliliter  
ppm = parts per million  
Pb = lead  
g = grams  
wt = weight

**End of Report**



 <p>DC Environmental Consulting and Training Services "Promoting Safety in the Workplace"</p> <p>DC Environmental PO Box 9315 Albuquerque, NM 87119</p>	PO / Job#: DCE 16-186		Date: 10/28/2016
	Turn Around Time: Same Day / 1Day / 2Day / 3Day / 4Day / <u>5Day</u>		
	<input type="checkbox"/> PCM: <input type="checkbox"/> NIOSH 7400A / <input type="checkbox"/> NIOSH 7400B <input type="checkbox"/> Rotometer		
	<input type="checkbox"/> PLM: <input type="checkbox"/> Standard / <input type="checkbox"/> Point Count 400 - 1000 / <input type="checkbox"/> CARB 435		
Contact: J. David Charlesworth	<input type="checkbox"/> TEM Air: <input type="checkbox"/> AHERA / <input type="checkbox"/> Yamate2 / <input type="checkbox"/> NIOSH 7402 <input type="checkbox"/> TEM Bulk: <input type="checkbox"/> Quantitative / <input type="checkbox"/> Qualitative / <input type="checkbox"/> Chatfield <input type="checkbox"/> TEM Water: <input type="checkbox"/> Potable / <input type="checkbox"/> Non-Potable / <input type="checkbox"/> Weight % <input type="checkbox"/> TEM Microvac: <input type="checkbox"/> Qual(+/-) / <input type="checkbox"/> D5755(str/area) / <input type="checkbox"/> D5756(str/mass)		
Phone: 505.869.8000	Fax: 505.869.9453	<input type="checkbox"/> IAQ Particle Identification (PLM LAB) <input type="checkbox"/> PLM Opaques/Soot <input type="checkbox"/> Particle Identification (TEM LAB) <input checked="" type="checkbox"/> Special Project	
E-mail: JDCharlesworthcih@gmail.com	<input type="checkbox"/> Metals Analysis: Method: _____ Matrix: _____ Analytes: _____		
Site: City of Albuquerque (Intera)			
Site Location: Rail Yard Parcel 10 Pattern House			

Comments: 'Paint chips to be analyzed for Lead Based Paint

Sample ID	Date	Sample Location / Description / Task	FOR AIR SAMPLES ONLY				Sample Area / Air Volume
			Type	Time On/Off	Avg. LPM	Total Time	
16-186-1000	10/28	Off White Paint from South C-Wall in Pattern Shop	A P C				
16-186-1001	10/28	Gray Paint B-Wall in Pattern House	A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				

Sampled By: Steven Gutierrez

Shipped Via:  Fed Ex  DHL  UPS  US Mail  Courier  Drop Off  Other:

Relinquished By: Steven Gutierrez Date / Time: 11/11/2016 5:00PM	Relinquished By: Date / Time:	Relinquished By: Date / Time:
Received By: <u>AC</u> Date / Time: <u>11/14/16 9:10</u>	Received By: Date / Time:	Received By: Date / Time:
Condition Acceptable? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Condition Acceptable? <input type="checkbox"/> Yes <input type="checkbox"/> No	Condition Acceptable? <input type="checkbox"/> Yes <input type="checkbox"/> No

**Appendix E**  
**Photography Log**

**Photographic Log**



**Figure 1, Pattern House, South Side**



**Figure 2, Pattern House, Southwest Side**

**Appendix F**  
**Certificates**

# CERTIFICATE OF TRAINING

EPA/AHERA Training Program



*This is to certify that*

**MICHAEL NIEMAN**

NM. DL. 006 087 493

Has completed 4 hours of training and PASSED the test required by Section 206 of TSCA Title II and in accordance with LOUISIANA STATE ASBESTOS REGULATIONS entitled,

## ASBESTOS BUILDING INSPECTOR REFRESHER

PRESENTED BY  
Mendez Environmental™  
1005 Veterans Mem Blvd  
Suite, 101  
Kenner, LA 70062  
Tel: (504) 468-8858



IN COLLABORATION WITH

DC Environmental  
P.O. Box 9315  
Albuquerque, NM 87119  
Tel: (505) 869-8000  
www.dcenvironmental.net



Director:   
Rodolfo G. Mendez

NM Program Manager:   
David Charlesworth

Course Date: 04-12-2016  
Certificate Number: AS0416KNMPPMN17906

Test Date: 04-12-2016 Grade: PASS  
Expiration Date: 04-12-2017



# United States Environmental Protection Agency

This is to certify that



Michael Neiman

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Inspector

In the Jurisdiction of:

New Mexico

This certification is valid from the date of issuance and expires September 25, 2017

NM-I-129246-1

Certification #

September 11, 2014

issued On

Adrienne Priselac, Manager, Toxics Office

Land Division





DC Environmental  
Consulting and Training Services

**ASBESTOS AND LEAD BASED PAINT SURVEY**  
**City of Albuquerque Railyard Sheet Metal House**  
**Parcel 10**  
Albuquerque, New Mexico



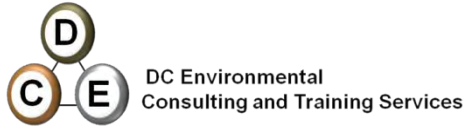
**PREPARED FOR:**

Intera, Inc.  
6000 Uptown Blvd, Suite 220

**PREPARED BY:**

DC Environmental PO Box 9315  
Albuquerque, New Mexico 87119

November 17, 2016  
Project No. 16-185



November 17, 2016  
Project No. 16-185

Mr. Joe Tracy  
Intera Inc.  
6000 Uptown Boulevard, NE  
Suite 200  
Albuquerque, NM 87110

Subject: Asbestos and Lead Based Paint inspection of the Sheet Metal House Parcel 10 – City of Albuquerque Railyard

Dear Mr. Joe Tracy;

In accordance with our proposal, DC Environmental has performed asbestos and lead based paint inspections of the above-referenced facility, located at the City of Albuquerque Railyard, 1100 2nd St SW, Albuquerque, New Mexico. The attached report presents our methodology, findings, opinions, and recommendations regarding the survey.

Lead based paint and lead containing materials were identified at the Sheet Metal House. Asbestos-containing materials were not identified at the Sheet Metal House.

We appreciate the opportunity to be of service to you on this project. Should you have any questions regarding this report, please contact the undersigned at your convenience.

Sincerely,  
**ACME ENVIRONMENTAL INDUSTRIAL HYGIENE, INC.**  
**dba DC Environmental**

J. David Charlesworth, CIH

Karen Dremann, BS  
Senior Scientist

Distribution: (2) Addressee

AEIH, INC PO BOX 9315 Albuquerque, NM 87119 tele: 505.869.8000 fax 505.869. 9453

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**Table**

Table 1. Asbestos Lab Results

**Appendices**

- Appendix A. Asbestos Laboratory Analysis Results
- Appendix B. XRF Lead Measurements Table
- Appendix C. Lead and Asbestos Data
- Appendix D. Photographic Log
- Appendix E. Certifications

## EXECUTIVE SUMMARY

On October 27, 2016, DC Environmental performed an inspection of the Sheet Metal House located at the City of Albuquerque Railyard on 2<sup>nd</sup> Street in Albuquerque, New Mexico. The inspection was conducted in a response to a request to identify materials which may be impacted during future renovation or demolition activities. Previous sampling and analysis of building materials for lead had been conducted at the property by Innovar in 2011 and Rhoades in 2013. Previous sampling for asbestos had been conducted by Terracon in 2005, Innovar in 2011 and Rhoades in 2013 (See Appendix C). The focus of our inspection was to verify and determine the presence, location and quantity of asbestos remaining within the facility, and to establish the basis for the presence of lead containing finishes within the structure. The space is being evaluated for a confidential client and the concern is that existing materials may contain asbestos and lead in the finishes.

The inspection design was to conduct a room-by-room investigation for asbestos-containing building materials. Access the functional spaces, where appropriate; evaluate the exterior surfaces; and sample materials suspect for asbestos within the Sheet Metal House.

Asbestos-containing building materials are those containing greater than one percent asbestos as determined by polarized light microscopy. Asbestos was not identified in samples taken at the Sheet Metal House.

Lead-based paint is defined as coatings containing surface area lead of 1.0 milligrams per square centimeter (1.0 mg/cm<sup>2</sup>) when evaluated by X-Ray Fluorescence. Lead based paint is further defined if laboratory analysis determines the lead content to be one half (0.5 %) percent by weight or greater. The lead inspection of the facility was conducted using an X-Ray Fluorescence (XRF) handheld instrument of select components or areas. The inspector identified painted surfaces with excess lead above the stated regulatory limit. Interior lead-based paint surfaces included: **white paint on standard wood door and red paint on wood entry door.**

Lead-containing materials are those with detectable levels of lead in the materials however not at levels above 1.0 mg/cm<sup>2</sup>. Lead containing materials **were** identified at the Sheet Metal House (see Appendix B XRF Lead Measurements).

Individuals bidding for work should be aware of the presence of lead when performing demolition and renovation activities involving these items. See attached drawing for location of room numbers.

### 1. INTRODUCTION

In accordance with our proposal, DC Environmental has performed an investigation of the Sheet Metal House located at the City of Albuquerque Railyard in Albuquerque, New Mexico.

The inspection was conducted in a response to a request to have building materials evaluated for future renovation or demolition activities. The focus of our inspection was to determine the presence, location and quantity of asbestos and lead based paint present within the facility. The building is being inspected for a confidential client and the concern is that existing materials may contain asbestos in building materials and lead in the painted finishes.

This report has been prepared in accordance with generally accepted environmental science and engineering practices. This report is based upon conditions at the subject building at the time of the sampling activities and provides documentation of our findings and recommendations.



## 2. PURPOSE AND SCOPE OF SERVICES

The inspection design was to conduct a room-by-room investigation and assess the facility for the presence of asbestos-containing building materials, and lead-based paint. The inspection included a quantitative determination of the asbestos and lead content within the structure.

The objective of this inspection was to perform the requisite sampling and present the findings along with any recommendations. The services performed by DC Environmental are outlined below.

- A reconnaissance of the area was conducted by Mr. Michael Nieman, and Mr. David Plante. Mr. Nieman is an accredited Asbestos Building Inspector, and Certified Lead Assessor and Inspector.
- Sampling was conducted using several different types of inspection tools and laboratory techniques including Polarized Light Microscopy and X-Ray Fluorescence.
- Report preparation summarizing our sampling methods and laboratory analysis are included. This report further details our conclusions and recommendations for the project.

## 3. SITE DESCRIPTION

The subject site consists of one structure, the Sheet Metal House.

### Sheet Metal House

The Sheet Metal House consists of one building, roof and exterior. The Sheet Metal House is a wood frame and wood siding construction. The building is open to the outside on the east. Roofing appeared to be black roofing shingle with white gravel on top of wood.

## 4. ACTIVITIES

DC Environmental conducted a lead-based paint investigation and asbestos-containing building materials inspection on October 27, 2016 of the Sheet Metal House. Analysis of the Interior and exterior painted surfaces incorporated the use of an X-Ray Fluorescence Device. The Radiation Monitoring Device (RMD) LPA-1 X-Ray Fluorescence device was used to measure the lead content of surface coatings on representative homogenous components. Multiple XRF readings were recorded.

The site sampling activities are described below.

### 4.1. Asbestos-Containing Building Materials

Mr. Michael Nieman and Mr. David Plante conducted a visual inspection for asbestos-containing building materials at the above referenced building. Mr. Nieman collected a total of three (3) samples that were tested for asbestos using Polarized Light Microscopy and stereomicroscopy bulk asbestos analysis. Analysis was conducted by Crisp Analytical, LLC of Carrollton, Texas. Crisp Analytical is an accredited laboratory and recognized by the National Voluntary Laboratory Accreditation Program. Based upon the samples tested, **none** of the materials sampled were identified as asbestos-containing material building materials.

Previous asbestos surveys were also conducted in 2005, 2011 and 2013 (See Appendix C).

Asbestos sample results for the Sheet Metal House were not identified in the previous surveys.

The Environmental Protection Agency has established terminology regarding asbestos and specifically asbestos-containing building materials. Material which is friable are those materials which can be crushed, crumbled or reduced to powder by hand pressure. Non-friable materials are further characterized as Category I Non-Friable or Category II Non-Friable. Category I Non-Friable includes four specific items: Packings, Gaskets, Resilient Flooring and Asphalt Roofing. Category II Non-Friable is everything else which cannot be crumbled or pulverized by hand pressure. These items include materials of drywall systems, plasters, asbestos-containing cements (Transite<sup>®</sup>) and other materials declared non-friable by the asbestos inspector.

The EPA then clarifies that certain materials are Regulated Asbestos Containing Materials (RACM) and these include the following four designations:

- Friable materials;
- Category I Non-Friable Materials which have become friable;
- Category I Non-Friable Materials which have been subject to sanding, grinding, cutting and abrading; and
- Category II Non-friable materials which will be, or have been, subject to force during demolition or renovation.

#### **4.2. Lead Based Paint Inspection**

The presence of lead based paint was assessed in substantial compliance with the Housing and Urban Development guidelines. DC Environmental conducted a lead-based surface coating screening survey of the interior and exterior of the property to generally identify building components coated with lead. The survey consisted of testing the lead concentrations of each of the accessible surfaces. Previous lead based paint surveys were also conducted in 2011 and 2013 (See Appendix C). Lead based paint survey results for the Sheet Metal House were not identified in the previous surveys.

To complete the survey, an X-Ray Fluorescence device was used to perform the lead based paint inspection. The Radiation Monitoring Device (RMD) LPA-1 X-Ray Fluorescence device is capable of detecting lead in lead-based paint. The determination of lead in paint is defined as a surface content of at least 1.0 milligrams per square centimeter. If the readings were between the 0.9 to 1.0 mg/cm<sup>2</sup> range, then the readings are declared as either lead-based paint or lead-containing materials and sampling is recommended.

Surfaces that were tested with the XRF device included, but were not limited to the following: doors, ceiling, painted walls, structural steel support, painted door components, roof components, ventilation duct, gates, and framing.

To determine the wall designations, the front entry off of the street or primary doorway is the A wall and interior in a clockwise direction are the B, C and D walls respectively. Exterior walls are similar in the designations.

The XRF device recorded readings did indicate lead based paint in surfaces on the interior and

exterior of architectural details and finishes, (see Appendix B

## 5. ANALYSES AND RESULTS

The results of samples and analysis are presented in the following tables. Copies of the laboratory analytical results are included in the appendix to this document.

### 5.1. Table 1: Asbestos Sample Analysis

Sample #	Sheet Metal House Analyst physical description of subsample	Asbestos Type/calibrated/Visual estimate percent
16-185-100	White Roofing Material	ND
16-185-101	White Roofing Material	ND
16-185-102	White Roofing Material	ND

ND – None Detected

## 6. FINDINGS AND CONCLUSIONS

The findings of this inspection are based on our visual observations and analysis of the measurements collected from the facility. Our findings are presented below.

### 6.1 Asbestos Sampling Analysis

The current visual inspection and sampling of building materials revealed sources of asbestos-containing building materials. Asbestos-containing building materials **were not** identified in the Sheet Metal Building.

Materials reported by Crisp Analytical Laboratory as asbestos-containing material are those materials with greater than one percent asbestos content by Polarized Light Microscopy. Materials with one percent asbestos were further characterized by the Point Count Method. The verification by Point Count Method using PLM determines if the material may be disposed as municipal waste and not as Regulated Asbestos Waste under the New Mexico Solid Waste Regulations.

Three (3) suspected asbestos samples **did not** identify sample layers that were shown to contain greater than one percent asbestos. Should demolition of the structures be planned, the materials would be considered Regulated Asbestos Containing Materials and Regulated Asbestos Waste by the New Mexico Solid Waste Regulations.

### 6.2 Lead Based Paint Analysis

DC Environmental conducted a lead-based surface coating inspection of the interior and exterior of the property to generally identify building components coated with or containing lead. The survey consisted of testing the lead concentrations of over the majority of the interior and exterior surfaces.

During the survey, testing combinations in representative room equivalents were sampled by X-Ray Fluorescence (XRF) in substantial compliance with the XRF protocols established by EPA and presented as guidance in the Housing and Urban Development (HUD) publications. Performance of this survey is consistent and in substantial compliance with the documented methodologies identified by EPA and HUD.

Based on the readings from the XRF device, materials at the Sheet Metal House were considered painted with Lead-based Paint (LBP). Lead-based paint surfaces included: **white paint on standard wood door and red paint on wood entry door.**

Lead-Based Paint (LBP) is defined by HUD and the EPA as paint containing lead in amounts greater than or equal to 1.0 mg/cm<sup>2</sup> lead when analyzed by XRF or greater than 5000 parts per million or 0.5 percent by weight when analyzed by Flame Atomic Absorption.

There are materials in this building though, that are considered “lead-containing”. Those materials are listed in Appendix B, XRF Lead Measurements. Contractors should follow the elements of the standard promulgated by the Occupational Safety and Health Administration. The Lead in Construction Standard 29 CFR 1926.62 applies to exposures to materials containing lead. Lead containing materials **were** identified at the Sheet Metal House (see Appendix B XRF Lead Measurements). Individuals bidding for work should be aware of the presence of lead when performing demolition and renovation activities involving these items.

## 7 RECOMMENDATIONS

Based on our visual observations and the laboratory results, DC Environmental recommends the following:

- The Lead-based Paint inspection **did** identify “lead-based paint” at the Sheet Metal House. Lead-containing items **were** identified at the Sheet Metal House. Those materials are listed in Appendix B, XRF Lead Measurements. These materials are regulated by OSHA in regards to those individuals which could be exposed during repair, renovation or demolition. It is recommended to have trained professionals in the OSHA Lead Construction standard handle the lead-based paint and lead-containing materials during disturbance of the material. At the conclusion of the construction activities we recommend a Lead Risk Assessment to include soil testing and settled dust be performed. A Lead Risk Assessment is recommended for this property based on the age and that children **may** be expected to be present. A Risk Assessment should be conducted at the conclusions of operations to repair, renovate or abate the lead based coating.

We appreciate the opportunity to provide sampling and inspection of this area. Should you have additional questions, or if conditions change substantially, please contact us at your earliest convenience.

Sincerely,

DC Environmental  
David Charlesworth  
Certified Industrial Hygienist

## **LIMITATIONS**

The environmental services described in this report have been conducted in general accordance with current regulatory guidelines and the standard-of-care exercised by environmental consultants performing similar work in the project area. No warranty, expressed or implied, is made regarding the professional opinions presented in this report. Variations in site conditions may exist and conditions not observed or described in this report may be encountered during subsequent activities.

The environmental interpretations and opinions contained in this report are based on the results of instrumentation, laboratory tests and/or analyses Acme Environmental Industrial Hygiene, Inc. dba DC Environmental, has no involvement in, or control over, such equipment, testing and/or analysis. Acme Environmental Industrial Hygiene, Inc., therefore, disclaims responsibility for any inaccuracy in such laboratory results.

Our conclusions, recommendations, and opinions are based on an analysis of the observed site conditions. It should be understood that the conditions of a site could change with time as a result of natural processes or the activities of man at the subject site or nearby sites. In addition, changes to the applicable laws, regulations, codes, and standards of practice may occur due to government action or the broadening of knowledge. The findings of this report may, therefore, be invalidated over time, in part or in whole, by changes over which Acme Environmental Industrial Hygiene, Inc., has no control.

This document is intended to be used only in its entirety. No portion of the document, by itself, is designed to completely represent any aspect of the project described herein. Acme Environmental Industrial Hygiene, Inc., should be contacted if the reader requires any additional information, or has questions regarding content, interpretations presented, or completeness of this document.

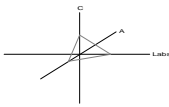
This report is intended exclusively for use by the client. Any use or reuse of the findings, conclusions, and/or recommendations of this report by parties other than the client is undertaken at said parties' sole risk.



**Appendix A**  
**Asbestos Laboratory Results**

**CA Labs**  
Dedicated to  
Quality

**Crisp Analytical, L.L.C.**  
1929 Old Denton Road  
Carrollton, TX 75006  
Phone 972-242-2754  
Fax 972-242-2798



**CA Labs, L.L.C.**  
12232 Industriplex, Suite 32  
Baton Rouge, LA 70809  
Phone 225-751-5632  
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## **Materials Characterization - Bulk Asbestos Analysis**

### **Laboratory Analysis Report - Polarized Light**

#### **DC Environmental**

PO Box 9315  
Albuquerque, NM 87119

Attn: David Charlesworth

Customer Project: DCE 16-185, Rail Yard Parcel 10 Sheet Metal House  
Reference #: CAL16117629CR Date: 11/14/2016

#### **Analysis and Method**

Summary of polarizing light microscopy (PLM / Stereomicroscopy bulk asbestos analysis) using the methods described in 40CFR Part 763 Appendix E to Subpart E (Interim and EPA 600 / R-93 / 116 (Improved)). The sample is first viewed with the aid of stereomicroscopy. Numerous liquid slide preparations are created for analysis under the polarized microscope where identifications and quantifications are performed. Calibrated liquid refractive oils are used as liquid mounting medium. These oils are used for identification (dispersion staining). A calibrated visual estimation is reported, should any asbestiform mineral be present. Other techniques such as acid washing are used in conjunction with refractive oils for detection of smaller quantities of asbestos. All asbestos percentages are based on calibrated visual estimation traceable to NIST standards for regulated asbestos. Traceability to measurement and calibration is achieved by using known amounts and types of asbestos from standards where analyst and laboratory accuracy are measured. As little as 0.001% asbestos can be detected in favorable samples, while detection in unfavorable samples may approach the detection limit of 0.50% (well above the laboratory definition of trace).

#### **Discussion**

Vermiculite containing samples may have trace amounts of actinolite-tremolite, where not found by PLM should be analyzed using TEM methods and / or water separation techniques. Suspected actinolite/vermiculite presence will be indicated through the sample comment section of this report.

Fibrous talc containing samples may even contain a related asbestos fiber known as anthophyllite. Under certain conditions the same fiber may actually contain both talc and anthophyllite (a phenomenon called intergrowth). Again, TEM detection methods are recommended. CA Labs PLM report comments will denote suspected amounts of asbestiform anthophyllite with talc, where further analysis is recommended.

Some samples (floor tiles, surfacings, etc.) may contain fibers too small to be detectable by PLM analysis and should be analyzed by TEM bulk protocols.

A "trace asbestos" will be reported if the analyst observes far less than 1% asbestos. CA Labs defines "trace asbestos" as a few fibers detected by the analyst in several preparations and will indicate as such under these circumstances.

Quantification of <1% will actually be reported as <=1% (allowable variance close to 1% is high). Such results are ideal for point counting, and the technique is mandatory for friable samples (NESHAP, Nov. 1990 and clarification letter 8 May 1991) under 1% percent asbestos and the "trace asbestos". **In order to make all initial PLM reports issued from CA Labs NESHAP compliant, all <1% asbestos results (except floor tiles) will be point counted at no additional charge.**

#### **Qualifications**

CA Labs is accredited by the National Voluntary Accreditation Program (NVLAP) for selected test methods for airborne fiber analysis (TEM), and for bulk asbestos fiber analysis (PLM). CA Labs is also accredited by AIHA LAP, LLC. in the PLM asbestos field of testing for Industrial Hygiene. All analysts have a college degree in a natural science (geology, biology, or environmental science) or are recognized by a state professional board in one of these disciplines. Extensive in-house training programs are used to augment education background of the analyst. The group leader of polarized light has received supplemental McCrone Research training for asbestos identification. Analysis performed at Crisp Analytical Labs, LLC 1929 Old Denton Road Carrollton, TX 75006

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235  
AIHA LAP, LLC Laboratory #102929

**CA Labs**  
**Dedicated to**  
**Quality**

**Crisp Analytical, L.L.C.**

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Carrollton, TX 75006  
Phone 972-242-2754  
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**Overview of Project Sample Material Containing Asbestos**

**Customer Project:** DCE 16-185, Rail Yard Parcel 10 Sheet Metal House **CA Labs Project #:** CAL16117629CR

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Sample #	Layer #	Analysts	Physical Description of Subsample	Asbestos type / calibrated visual estimate percent	List of Affected Building Material Types
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**No Asbestos Detected.**

Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235

**AIHA LAP, LLC Laboratory #102929**

**Glossary of abbreviations (non-asbestos fibers and non-fibrous minerals):**

ca - carbonate	pe - perlite	fg - fiberglass	pa - palygorskite (clay)
gypsum - gypsum	qu - quartz	mw - mineral wool	
bi - binder		wo - wollastinite	
or - organic		ta - talc	
ma - matrix		sy - synthetic	
mi - mica		ce - cellulose	
ve - vermiculite		br - brucite	
ot - other		ka - kaolin (clay)	

This report relates to the items tested. This report is not to be used by the customer to claim product certification, approval or endorsement by NVLAP, NIST, AIHA LAP, LLC, or any other agency of the federal government. This report may not be reproduced except in full without written permission from CA Labs. These results are submitted pursuant to CA Labs' current terms and sale, condition of sale, including the company's standard warranty and limitations of liability provisions and no responsibility or liability is assumed for the manner in which the results are used or interpreted. Unless notified in writing to return the samples covered by this report, CA Labs will store the samples for a period of ninety (90) days before discarding. A shipping or handling fee may be assessed for the return of any samples.

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**Polarized Light Asbestiform Materials Characterization**

**Customer Info:** Attn: David Charlesworth  
**DC Environmental**  
 PO Box 9315  
 Albuquerque, NM 87119

**Customer Project:**  
 DCE 16-185, Rail Yard Parcel  
 10 Sheet Metal House  
**Turnaround Time:**  
 2 Days

**CA Labs Project #:**  
 CAL16117629CR  
**Date:** 11/14/2016  
**Samples Received:** 11/11/16 10:30 AM  
**Date Of Sampling:** 10/28/16  
**Purchase Order #:**

Phone # 505-869-8000  
 Fax # 505-869-9453

Sample #	Com ment	Layer #	Analysts Subsample	Physical Description of	Homo- geneo us (Y/N)	Asbestos type / calibrated visual estimate percent	Non-asbestos fiber type / percent	Non-fibrous type / percent
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**White Roofing Material Sheet**

16-185-100		16-185- 100-1		<b>Metal House/ black roofing shingle with white gravel</b>	y	<b>None Detected</b>	4% ce	96% qu,bi
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**White Roofing Material Sheet**

16-185-101		16-185- 101-1		<b>Metal House/ black roofing shingle with white gravel</b>	y	<b>None Detected</b>	4% ce	96% qu,bi
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**White Roofing Material Sheet**

16-185-102		16-185- 102-1		<b>Metal House/ black roofing shingle with white gravel</b>	y	<b>None Detected</b>	4% ce	96% qu,bi
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Dallas NVLAP Lab Code 200349-0 TEM/PLM TCEQ# T104704513-15-3 TDH 30-0235

**AIHA LAP, LLC Laboratory #102929**

Analysis Method: Interim (40CFR Part 763 Appendix E to Subpart E) / Improved (EPA-600 / R-93/116). All samples received in good condition unless noted.

Preparation Method: HCL acid washing for carbonate based samples, chemical reduction for organically bound components, oil immersion for identification of asbestos types by dispersion attaining / becke line method.

ca - carbonate	mi - mica	fg - fiberglass	ce - cellulose
gypsum - gypsum	ve - vermiculite	mw - mineral wool	br - brucite
bi - binder	ot - other	wo - wollastinite	ka - kaolin (clay)
or - organic	pe - perlite	ta - talc	pa - palygorskite (clay)
ma - matrix	qu - quartz	sy - synthetic	

Approved Signatories:



Stanley Massett  
 Analyst



QAC  
 Leslie Crisp, P.G.

Technical Manager  
 Chad Lytle

1. Fire Damage significant fiber damage - reported percentages reflect unaltered fibers
2. Fire Damage no significant fiber damages effecting fibrous percentages
3. Actinolite in association with Vermiculite
4. Layer not analyzed - attached to previous positive layer and contamination is suspected
5. Not enough sample to analyze

6. Anthophyllite in association with Fibrous Talc
7. Contamination suspected from other building materials
8. Favorable scenario for water separation on vermiculite for possible analysis by another method
9. < 1% Result point counted positive
10. TEM analysis suggested

CAC/6117629



DC Environmental Consulting and Training Services

"Promoting Safety in the Workplace"

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Contact:  
J. David Charlesworth

Phone:  
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505.869.9453

E-mail:  
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Site: City of Albuquerque (Intera)

Site Location: Rail Yard Parcel 10 Sheet Metal House

Comments:

PO / Job#: DCE 16-185

Date: 10/28/2016

Turn Around Time: Same Day / 1Day / **2Day** / 3Day / 4Day / 5Day

PCM:  NIOSH 7400A /  NIOSH 7400B  Rotometer

PLM:  Standard /  Point Count 400 - 1000 /  CARB 435

TEM Air:  AHERA /  Yamate2 /  NIOSH 7402  
 TEM Bulk:  Quantitative /  Qualitative /  Chatfield  
 TEM Water:  Potable /  Non-Potable /  Weight %  
 TEM Microvac:  Qual(+/-) /  D5755(str/area) /  D5756(str/mass)

IAQ Particle Identification (PLM LAB)  PLM Opaques/Soot  
 Particle Identification (TEM LAB)  Special Project

Metals Analysis: Method:

Matrix:

Analytes:

Sample ID	Date	Sample Location / Description / Task	FOR AIR SAMPLES ONLY				Sample Area / Air Volume
			Type	Time On/Off	Avg. LPM	Total Time	
16-185-100	10/28	White roofing material Sheet Metal House	A P C				
16-185-101	10/28	White roofing material Sheet Metal House	A P C				
16-185-102	10/28	White roofing material Sheet Metal House	A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				
			A P C				

Sampled By: Steven Gutierrez

Shipped Via:  Fed Ex  DHL  UPS  US Mail  Courier  Drop Off  Other:

Relinquished By: Steven Gutierrez  
Date / Time: 11/10/2016 5:00PM

Relinquished By:

Date / Time:

Relinquished By:

Date / Time:

Received By: *John - [signature]*  
Date / Time: 11/11/16 10:30 AM

Received By:

Date / Time:

Received By:

Date / Time:

Condition Acceptable?  Yes  No

Condition Acceptable?  Yes  No

Condition Acceptable?  Yes  No



**Appendix B**  
**XRF Lead Measurements**

Project #: 16-185 Project Name: Sheet Metal House Date: 10-27-2016  
 Address: City of Albuquerque Railyard  
 Technician: M. Nieman and D. Plante

		Time : <u>3:15 pm</u>		Unit # 1731		Results	Average
1			Cal.			1.1	
2			Cal.			1.1	
3			Cal.			1.1	1.1
4			Cal.			0.0	
5			Cal			0.0	
6			Cal.			-0.1	-0.0
XRF Test Number	Location / Room	Component - Designation	Component Number	Color	Substrate	Result / Reading mg/cm2	
7	Interior	A Wall		White	Wood	-0.3	
8	Interior	B Wall		White	Wood	-0.3	
9	Interior	D Wall		White	Wood	0.0	
10	Interior	Sliding Door	A-1	White	Metal	-0.1	
11	Interior	Door Std.	A-2	White	Wood	1.6	
12	Interior	Door Frame	A-3	Red	Wood	0.2	
13	Interior	Door Header	A-4	Red	Wood	-0.0	
14	Interior	Post		Black	Wood	-0.1	
15	Exterior	West Wall		Red	Wood	-0.0	
16	Exterior	Downspout		White	Metal	0.2	
17	Exterior	Entry Door		Red	Wood	1.4	
18	Exterior	Entry Door Frame		Red	Wood	-0.1	
19	Exterior	North Wall		Red	Wood	-0.1	
		Time : <u>3:35 pm</u>				Results	Average
33			Cal.			1.0	
34			Cal.			1.0	
35			Cal.			1.0	1.0
36			Cal.			-0.0	
37			Cal			0.0	
38			Cal.			-0.2	-0.1

**Appendix C**  
**Asbestos and LBP Data**

ID	Read No/Sample ID	Lead	Units	LP	Room Number	Building	Room Name	Wall	Structure	Location	Member	Mode	Substrate	Color	Location_2	Source
1	7	0.1	mg/cm <sup>2</sup>		1	Rail yards Amtrak Office	Office	A	Window	Rgt	Sill	QM	Wood	Brown	Interior	Innovar, 2011
2	8	0.1	mg/cm <sup>2</sup>		1	Rail yards Amtrak Office	Office	A	Window	Rgt	Sash	QM	Wood	Brown	Interior	Innovar, 2011
3	9	0.2	mg/cm <sup>2</sup>		1	Rail yards Amtrak Office	Office	A	Window	Rgt	Lft casing	QM	Wood	Brown	Interior	Innovar, 2011
4	10	0.2	mg/cm <sup>2</sup>		1	Rail yards Amtrak Office	Office	A	Wall	L Ctr		QM	Plaster	White	Interior	Innovar, 2011
5	11	-0.2	mg/cm <sup>2</sup>		1	Rail yards Amtrak Office	Office	B	Wall	U Ctr		QM	Plaster	White	Interior	Innovar, 2011
6	12	0	mg/cm <sup>2</sup>		1	Rail yards Amtrak Office	Office	C	Door	Ctr	U Ctr	QM	Steel	Brown	Interior	Innovar, 2011
7	13	0	mg/cm <sup>2</sup>		1	Rail yards Amtrak Office	Office	C	Door	Ctr	Lft casing	QM	Steel	Brown	Interior	Innovar, 2011
8	14	0.2	mg/cm <sup>2</sup>		1	Rail yards Amtrak Office	Office	B	Window	Ctr	Sill	QM	Wood	Brown	Interior	Innovar, 2011
9	15	0.2	mg/cm <sup>2</sup>		3	Rail yards Amtrak	Office	B	Window	Ctr	Lft casing	QM	Wood	Brown	Interior	Innovar, 2011

						Office										
160	0.2	mg/cm <sup>2</sup>		3	Rail yards Amtrak Office	Office	B	Window	Clr	Sash	QM	Wood	Brown	Interior	Innovar, 2011	
171	0	mg/cm <sup>2</sup>		3	Rail yards Amtrak Office	Office	A	Wall	L Ctr		QM	Plaster	White	Interior	Innovar, 2011	
182	-0.2	mg/cm <sup>2</sup>		3	Rail yards Amtrak Office	Office	A	Wall	L Rgi		QM	Plaster	White	Interior	Innovar, 2011	
193	-0.2	mg/cm <sup>2</sup>		3	Rail yards Amtrak Office	Office	D	Door	Rgi	U Rgt	QM	Steel	Brown	Interior	Innovar, 2011	
1204	0.1	mg/cm <sup>2</sup>		3	Rail yards Amtrak Office	Office	D	Door	Rgt	Lit casing	QM	Steel	Brown	Interior	Innovar, 2011	
1215	0.7	mg/cm <sup>2</sup>		4	Rail yards Amtrak Office	Break Rm	B	Chair rail	Clr		QM	Wood	Brown	Interior	Innovar, 2011	
1226	0.2	mg/cm <sup>2</sup>		4	Rail yards Amtrak Office	Break Rm	B	Window	Ctr	Lft casing	QM	Wood	Brown	Interior	Innovar, 2011	
1237	>9.9	mg/cm <sup>2</sup>	Yes	4	Rail yards Amtrak Office	Break Rm	B	Wall	L Ctr		QM	Plaster	White	Interior	Innovar, 2011	
1248	0.2	mg/cm <sup>2</sup>		4	Rail yards Amtrak Office	Break Rm	C	Baseboard	Clr		QM	Plaster	White	Interior	Innovar, 2011	
1259	>9.9	mg/cm <sup>2</sup>	Yes	4	Rail yards Amtrak Office	Break Rm	B	Wall	U Lft		QM	Plaster	White	Interior	Innovar, 2011	



						ck Office										
2 0	26	>9. 9	mg/c m2	Ye s	4	Raily rds Amtra ck Office	Break Rm	B	Wall	L Rgt		QM	Plaster	Whit e	Interior	Innov ar, 2011
2 1	27	0.3	mg/c m2		4	Raily rds Amtra ck Office	Break Rm	C	Wall	L Clr		QM	Drywal l	Whit e	Interior	Innov ar, 2011
2 2	28	0.2	mg/c m2		3	Raily rds Amtra ck Office	Office	B	Wall	L Ctr		QM	Plaster	Whit e	Interior	Innov ar, 2011
2 3	29	>9. 9	mg/c m2	Ye s	10	Raily rds Amtra ck Office	Lobby	A	Wall	L Ctr		QM	Plaster	Whit e	Interior	Innov ar, 2011
2 4	30	0.3	mg/c m2		10	Raily rds Amtra ck Office	Lobby	D	Wall	L Ctr		QM	Plaster	Whit e	Interior	Innov ar, 2011
2 5	31	0.3	mg/c m2		10	Raily rds Amtra ck Office	Lobby	A	Windo w	Ctr	Sash	QM	Wood	Bro wn	Interior	Innov ar, 2011
2 6	32	>9. 9	mg/c m2	Ye s	10	Raily rds Amtra ck Office	Lobby	A	Colum n	Ctr		QM	Plaster	Whit e	Interior	Innov ar, 2011
2 7	33	>9. 9	mg/c m2	Ye s	10	Raily rds Amtra ck Office	Lobby	A	Colum n	Clr		QM	Plaster	Whit e	Interior	Innov ar, 2011
2 8	34	1.1	mg/c m2	Ye s	12	Raily rds Amtra ck Office	Hallwa y	B	Wall	L Ctr		QM	Plaster	Whit e	Interior	Innov ar, 2011
2 9	35	>9. 9	mg/c m2	Ye s	12	Raily rds	Hallwa y	D	Wall	L Ctr		QM	Plaster	Whit e	Interior	Innov ar,

						Amtrack Office										2011
3360		0.1	mg/cm <sup>2</sup>		9	Railyards Amtrack Office	Wmns Rm	D	Wall	L Ctr		QM	Plaster	White	Interior	Innovar, 2011
3371		0.1	mg/cm <sup>2</sup>		9	Railyards Amtrack Office	Wmns Rm	A	Wall	L Ctr		QM	Plaster	White	Interior	Innovar, 2011
3382		0.3	mg/cm <sup>2</sup>		9	Railyards Amtrack Office	Wmns Rm	B	Door	Ctr	Lft casing	QM	Wood	Brown	Interior	Innovar, 2011
3393		0.2	mg/cm <sup>2</sup>		9	Railyards Amtrack Office	Wmns Rm	B	Floor			QM	Cement	Brown	Interior	Innovar, 2011
3404		-0.1	mg/cm <sup>2</sup>		11	Railyards Amtrack Office	Number Only	C	Stairs	Ctr	Treads	QM	Steel	Black	Interior	Innovar, 2011
3415		0.1	mg/cm <sup>2</sup>		11	Railyards Amtrack Office	Number Only	C	Stairs	Ctr	Railing cap	QM	Steel	Black	Interior	Innovar, 2011
3426		-0.1	mg/cm <sup>2</sup>		15	Railyards Amtrack Office	Upstairs	C	Wall	L Ctr		QM	Plaster	White	Interior	Innovar, 2011
3437		0.2	mg/cm <sup>2</sup>		15	Railyards Amtrack Office	Upstairs	B	Wall	L Ctr		QM	Plaster	White	Interior	Innovar, 2011
3448		>9.9	mg/cm <sup>2</sup>	Yes	15	Railyards Amtrack Office	Upstairs	A	Wall	L Ctr		QM	Plaster	White	Interior	Innovar, 2011
345		6.6	mg/cm <sup>2</sup>	Yes	15	Railyards Amtrack Office	Upstairs	A	Door	Ctr	U Ctr	QM	Wood	White	Interior	Innovar, 2011

9			m2	s		rd Amtra ck Office	rs							e		ar, 2011
4460	0.3	mg/c m2			15	Railya rds Amtra ck Office	Upstai rs	B	Wall	L Ctr		QM	Plaster	Whit e	Interior	Innov ar, 2011
4471	0.3	mg/c m2			15	Railya rds Amtra ck Office	Upstai rs	A	Wall	L Ctr		QM	Plaster	Whit e	Interior	Innov ar, 2011
4542	0.2	mg/c m2			16	Railya rds Amtra ck Office	Museu m	A	Floor			QM	Cemen t	Gray	Interior	Innov ar, 2011
4553	2.3	mg/c m2	Ye s		16	Railya rds Amtra ck Office	Museu m	A	Floor			QM	Cemen t	Whit e	Interior	Innov ar, 2011
4564	0.3	mg/c m2			16	Railya rds Amtra ck Office	Museu m	A	Floor			QM	Cemen t	Whit e	Interior	Innov ar, 2011
4575	0.1	mg/c m2			16	Railya rds Amtra ck Office	Museu m	D	Wall	L Ctr		QM	Cemen t	Gray	Interior	Innov ar, 2011
4586	0.2	mg/c m2			16	Railya rds Amtra ck Office	Museu m	B	Wall	L Ctr		QM	Cemen t	Gray	Interior	Innov ar, 2011

I D	Read No/Sa mple ID	Le ad	Units	LB P	Ro o m N u m b e r	Bu il d i n g	Ro o m N a m e	W a l l	Str u c t u r e	Loc a t i o n	Mem b e r	Mo d e	Sub s t r a t e	Col o r	Loc a t i o n _2	Sour c e
4597	0.1	mg/c m2			16	Railya rds Amtra ck Office	Muse um	A	Wall	L Ctr		QM	Cemen t	Gray	Interior	Innov ar, 2011
460	6.3	mg/c	Ye		16	Railya rds	Muse	A	Floor			QM	Cemen	Yello	Interior	Innov

8			m2	s		ds Amtrak k Office	um						t	w		ar, 2011
49	61	0.1	mg/c m2		16	Railyar ds Amtrak k Office	Muse um	A	Door	Ctr	U Ctr	QM	Steel	Green	Interior	Innov ar, 2011
50	62	0.1	mg/c m2		16	Railyar ds Amtrak k Office	Muse um	A	Door	Ctr	U Ctr	QM	Steel	Blac k	Interior	Innov ar, 2011
51	63	0.5	mg/c m2		16	Railyar ds Amtrak k Office	Muse um	A	Door	Ctr	Lft casing	QM	Steel	Blac k	Interior	Innov ar, 2011
52	64	0.7	mg/c m2		16	Railyar ds Amtrak k Office	Muse um	A	Floor			QM	Cemen t	Red	Interior	Innov ar, 2011
53	65	1.8	mg/c m2	Yes	1	Railyar ds Amtrak k Office	Facilit y	B	Railing	Ctr	Railing	QM	Steel	Yello w	Exterior	Innov ar, 2011
54	66	0.2	mg/c m2		1	Railyar ds Amtrak k Office	Facilit y	B	Door	Ctr	U Ctr	QM	Steel	Red	Exterior	Innov ar, 2011
55	67	- 0.1	mg/c m2		1	Railyar ds Amtrak k Office	Facilit y	D	Windo w	Ctr	Sill	QM	Wood	Blac k	Exterior	Innov ar, 2011
56	68	0.2	mg/c m2		1	Railyar ds Amtrak k Office	Facilit y	D	Windo w	Ctr	Sash	QM	Wood	Blac k	Exterior	Innov ar, 2011
57	69	0	mg/c m2		1	Railyar ds Amtrak k Office	Facilit y	C	Windo w	Rgt	Sill	QM	Wood	Blac k	Exterior	Innov ar, 2011
58	7	5	mg/c m2	Yes	1	Main Machin e Shop	Numb er Only	B	Colum n	Ctr		QM	Steel	Silve r	Interior	Innov ar, 2011
59	8	1.1	mg/c m2	Yes	1	Main Machin e Shop	Numb er Only	C	Door	Ctr	U Ctr	QM	Steel	Silve r	Interior	Innov ar, 2011
60	9	2.2	mg/c m2	Yes	1	Main Machin e Shop	Numb er Only	C	Colum n	Clr		QM	Steel	Silve r	Interior	Innov ar, 2011

610	0.1	mg/c m2		1	Main Machin e Shop	Numb er Only	A	Floor			QM	Ceram ic	Red	Interior	Innov ar, 2011
611	1.8	mg/c m2	Ye s	1	Main Machin e Shop	Numb er Only	B	Cnt Colum n	Ctr		QM	Steel	Silve r	Interior	Innov ar, 2011
612	0.7	mg/c m2		1	Main Machin e Shop	Numb er Only	B	Stairs	Ctr	Treads	QM	Steel	Gree n	Interior	Innov ar, 2011
613	1.9	mg/c m2	Ye s	1	Main Machin e Shop	Numb er Only	D	Colum n	Ctr		QM	Steel	Silve r	Interior	Innov ar, 2011
614	5.4	mg/c m2	Ye s	1	Main Machin e Shop	Numb er Only	D	Ceiling Beam	Beam	Ctr	QM	Steel	Silve r	Interior	Innov ar, 2011
615	4.2	mg/c m2	Ye s	1	Main Machin e Shop	Numb er Only	B	Colum n	Ctr		QM	Steel	Blac k	Exterior	Innov ar, 2011
616	2.7	mg/c m2	Ye s	1	Main Machin e Shop	Numb er Only	B	Stairs	Ctr	Treads	QM	Wood	Whit e	Interior	Innov ar, 2011
618	3.4	mg/c m2	Ye s		Boiler Shop	Numb er Only	B	Cnt Colum n	Ctr		QM	Steel	Silve r	Interior	Innov ar, 2011
619	0.1	mg/c m2			Boiler Shop	Numb er Only	A	Floor			QM	Cemen t	Red	Interior	Innov ar, 2011
730	3.2	mg/c m2	Ye s		Boiler Shop	Numb er Only	C	Cnt Colum n	Ctr		QM	Steel	Silve r	Interior	Innov ar, 2011
741	2.5	mg/c m2	Ye s		Boiler Shop	Numb er Only	A	Colum n	Lft		QM	Steel	Silve r	Interior	Innov ar, 2011
752	- 0.3	mg/c m2			Boiler Shop	Numb er Only	C	Door	Lft	U Ctr	QM	Steel	Silve r	Interior	Innov ar, 2011
713	1.1	mg/c m2	Ye s		Blacks mith Shop	Numb er Only	B	Colum n	Ctr		QM	Steel	Silve r	Interior	Innov ar, 2011
724	3.1	mg/c m2	Ye s		Blacks mith Shop	Numb er Only	C	Colum n	Ctr		QM	Steel	Silve r	Interior	Innov ar, 2011
735	2.1	mg/c m2	Ye s		Blacks mith Shop	Numb er Only	D	Wall	L Ctr		QM	Brick	Silve r	Interior	Innov ar, 2011
746	0.2	mg/c m2			Blacks mith Shop	Numb er Only	D	Door	Ctr	U Ctr	QM	Steel	Silve r	Interior	Innov ar, 2011



7	5	0.1	mg/c m2			Blacks mith Shop	Numb er Only	D	Windo w	Ctr	Part. Bead	QM	Steel	Silve r	Interior	Innov ar, 2011
7	7	2.7	mg/c m2	Ye s		Bldg North of Firehou se	Numb er Only	A	Bldg North of Firehou se	L Ctr		QM	Cemen t	Silve r	Interior	Innov ar, 2011
7	8	2.3	mg/c m2	Ye s		Bldg North of Firehou se	Numb er Only	A	Windo w	Ctr	Lft casing	QM	Steel	Silve r	Interior	Innov ar, 2011
8	9	5.6	mg/c m2	Ye s		Bldg North of Firehou se	Numb er Only	A	Door	Ctr	U Ctr	QM	Steel	Silve r	Interior	Innov ar, 2011
8	10	1.1	mg/c m2	Ye s		Bldg North of Firehou se	Numb er Only	A	Windo w	Ctr	Rgt casin	QM	Steel	Silve r	Interior	Innov ar, 2011
8	11	2.4	mg/c m2	Ye s		Bldg North of Firehou se	Numb er Only	C	Frame	Ctr		QM	Steel	Silve r	Interior	Innov ar, 2011
8	12	1.1	mg/c m2	Ye s		Bldg North of Firehou se	Numb er Only	C	Wall	L Ctr		QM	Cemen t	Silve r	Interior	Innov ar, 2011
8	13	0.2	mg/c m2			Bldg North of Firehou se	Numb er Only	D	Wall	L Ctr		QM	Cemen t	Silve r	Interior	Innov ar, 2011
8	1	1.1	mg/c m2	Ye s		Bldg South of Firehou se	Numb er Only	A	Wall	L Ctr		QM	Cemen t	Whit e	Interior	Innov ar, 2011
8	2	0.1	mg/c m2			Bldg South of Firehou se	Numb er Only	B	Wall	L Ctr		QM	Cemen t	Whit e	Interior	Innov ar, 2011
8	3	0	mg/c			Bldg	Numb	A	Door	Ctr	Lft	QM	Cemen	Whit	Interior	Innov

7			m2			South of Firehouse	er Only		Cnt		casing		t	e		ar, 2011
848		1.1	mg/cm2	Yes		Bldg South of Firehouse	Number Only	A	Column	Ctr		QM	Cement	Green	Interior	Innovar, 2011
859		1.2	mg/cm2	Yes		Bldg South of Firehouse	Number Only	B	Wall	L Ctr		QM	Cement	Green	Interior	Innovar, 2011
960		0.5	mg/cm2			Bldg South of Firehouse	Number Only	C	Door	Ctr	U Ctr	QM	Cement	Green	Interior	Innovar, 2011
911	13029.029-020513-01L	150	ppm			Blacksmith Shop			Interior Walls	NW Corner			Paint	Silver		Rhoades, 2013
912	13029.029-020513-02L	410	ppm			Blacksmith Shop			Interior Walls	NE Corner			Paint	Silver		Rhoades, 2013

ID	Read No/Sample ID	Lead	Units	LP	Room Number	Building	Room Name	Wall	Structure	Location	Member	Mode	Substrate	Color	Location_2	Source
913	13029.029-020513-03L	100	ppm			Blacksmith Shop			Interior Walls	SW Corner			Paint	Silver		Rhoades, 2013
914	13029.029-020513-04L	150	ppm			Blacksmith Shop			Interior Walls	SE Corner			Paint	Silver		Rhoades, 2013
915	13029.029-020513-05L	2570	ppm			Blacksmith Shop			Overhead Piping				Paint	Red		Rhoades, 2013
916	13029.029-020513-06L	2640	ppm			Blacksmith Shop			Exterior Brick Walls		Trim		Paint	Rust		Rhoades, 2013

97	13029.0 29-020513-07L	404	ppm			Blacksmith Shop			Interior Walls Office Shack				Paint	Cream		Rhoades, 2013
98	13029.0 29-020513-08L	250	ppm			Blacksmith Shop			Building	NW Corner			Surface Dust			Rhoades, 2013
99	13029.0 29-020513-09L	400	ppm			Blacksmith Shop			Building	NE Corner			Surface Dust			Rhoades, 2013
100	13029.0 29-020513-10L	100	ppm			Blacksmith Shop			Building	Center			Surface Dust			Rhoades, 2013
101	13029.0 29-020513-11L	710	ppm			Blacksmith Shop			Building	SW Corner			Surface Dust			Rhoades, 2013
102	13029.0 29-020513-12L	970	ppm			Blacksmith Shop			Building	SE Corner			Surface Dust			Rhoades, 2013

ID	Sample Number	Date	Description	Location	Percent Asbestos	Asbestos Type	Classification	Source
1	577007-NB.NS.1	Sep-05	Silver glaze coating window pane	Boiler Shop, South Side	0%			Terracon, 2005
2	577007-NB.NS.2	Sep-05	Silver glaze coating window pane	Boiler Shop, South Side	0%			Terracon, 2005
3	577007-NB.NS.3	Sep-05	Silver glaze coating window pane	Boiler Shop, South Side	0%			Terracon, 2005
4	577007-NB.SS.4	Sep-05	Green painted window pane	Boiler Shop, South Side	0%			Terracon, 2005
5	577007-NB.SS.5	Sep-05	Green painted window pane	Boiler Shop, South Side	0%			Terracon, 2005
6	577007-NB.SS.6	Sep-05	Green painted window pane	Boiler Shop, North Side	0%			Terracon, 2005
7	577007-NB.NS.7	Sep-05	Silver glaze coating window pane	Boiler Shop, North Side	0%			Terracon, 2005
8	577007-NB.NS.8	Sep-05	Silver glaze coating window pane	Boiler Shop, North Side	0%			Terracon, 2005
9	577007-NB.NS.9	Sep-05	Silver glaze/black spray-on with pane	Boiler Shop, North Side	0%			Terracon, 2005
10	577007-NB.NS.10	Sep-05	Silver glaze/black spray-on with pane	Boiler Shop, North Side	0%			Terracon, 2005
11	577007-NB.NS.11	Sep-05	Silver glaze/black spray-on with pane	Boiler Shop, North Side	0%			Terracon, 2005
12	577007-SB.SS.F1.1	Sep-05	Silver glaze coating window pane	Main Machine Shop, South Side, First Floor	0%			Terracon, 2005
13	577007-SB.SS.F1.2	Sep-05	Glaze coating on window pane (silver/black)	Main Machine Shop, South Side, First Floor	0%			Terracon, 2005
14	577007-SB.SS.F1.3	Sep-05	Glaze coating on window pane (silver)	Main Machine Shop, South Side, First Floor	0%			Terracon, 2005
15	577007-SB.SS.F1.4	Sep-05	Glaze coating on window pane (silver)	Main Machine Shop, South Side, First Floor	0%			Terracon, 2005
16	577007-SB.SS.F1.5	Sep-05	Glaze coating on window pane (silver)	Main Machine Shop, South Side, First Floor	0%			Terracon, 2005
17	577007-SB.SS.F1.6	Sep-05	Glaze coating on window pane (silver)	Main Machine Shop, South Side, First Floor	0%			Terracon, 2005
18	577007-SB.SS.F1.7	Sep-05	Glaze coating on window pane (silver/green)	Main Machine Shop, South Side, First Floor	0%			Terracon, 2005
19	577007-SB.SS.F2.1	Sep-05	Glaze coating on window pane (beige/green)	Main Machine Shop, South Side, Second Floor	0%			Terracon, 2005
20	577007-SB.SS.F2.2	Sep-05	Glaze coating on window pane (tan/brown)	Main Machine Shop, South Side, Second Floor	0%			Terracon, 2005
21	577007-SB.SS.F2.3	Sep-05	Glaze coating on window pane (off-white)	Main Machine Shop, South Side, Second Floor	0%			Terracon, 2005
22	577007-SB.SS.F2.4	Sep-05	Glaze coating on window pane (grey/green)	Main Machine Shop, South Side, Second Floor	0%			Terracon, 2005
23	577007-SB.SS.F2.5	Sep-05	Glaze coating on window pane (off-white)	Main Machine Shop, South Side, Second Floor	0%			Terracon, 2005
24	577007-SB.SS.F2.6	Sep-05	Plaster over cc wall (grey with paint)	Main Machine Shop, South Side, Second Floor	0%			Terracon, 2005
25	577007-SB.SS.F2.7	Sep-05	Plaster over cc wall (grey with paint)	Main Machine Shop, South Side, Second Floor	0%			Terracon, 2005
26	577007-NB.SS.1	Sep-05	Window glazing (tan)	Boiler Shops, South Side	Trace <1%			Terracon, 2005
27	577007-NB.SS.2	Sep-05	Window glazing (tan)	Boiler Shops, South Side	2%	Chrysotile	Non-Friable	Terracon, 2005
28	577007-NB.SS.3	Sep-05	Window glazing (tan)	Boiler Shops, South Side	2%	Chrysotile	Non-Friable	Terracon, 2005
29	577007-NB.SS.01	Sep-05	Window glazing (beige)	Boiler Shops, South Side	Trace <1%	Chrysotile		Terracon, 2005
30	577007-NB.SS.02	Sep-05	Window glazing (beige)	Boiler Shops, South Side	Trace <1%	Chrysotile		Terracon, 2005
31	577007-NB.SS.03	Sep-05	Window glazing (beige)	Boiler Shops, South Side	Trace <1%	Chrysotile		Terracon, 2005
32	577007-NB.ES.01	Sep-05	Window glazing (beige)	Boiler Shops, East Side	Trace <1%	Chrysotile		Terracon, 2005
33	577007-NB.ES.02	Sep-05	Window glazing (beige)	Boiler Shops, East Side	Trace <1%	Chrysotile		Terracon, 2005

34	577007 -N.O.01	Sep-05	Outside shingle (red with granules)	Outside the Boiler Shop	0%			Terracon, 2005
35	577007-N.O.02	Sep-05	Outside shingle (red with granules)	Outside the Boiler Shop	0%			Terracon, 2005
36	577007-N.O.03	Sep-05	Outside shingle (red with granules)	Outside the Boiler Shop	0%			Terracon, 2005
37	577007-N.O.G.01	Sep-05	White insulation	100 ft North of CWE Storage Shed	NA			Terracon, 2005
38	577007-N.O.G.02	Sep-05	White insulation	100 ft North of CWE Storage Shed	NA			Terracon, 2005
39	577007-N.O.G.03	Sep-05	White insulation	100 ft North of CWE Storage Shed	NA			Terracon, 2005
40	577007 -NTE. WS-1	Sep-05	Transite pipe (grey)	Former Transformer Area, West Side	25%	Chrysotile	Friable	Terracon, 2005
41	577007 -NTE. WS-1	Sep-05	Transite pipe (grey)	Former Transformer Area, West Side	5%	Crocidolite		Terracon, 2005
42	577007 -NTE.ES-3	Sep-05	Transite pipe (grey)	Former Transformer Area	25%	Chrysotile	Friable	Terracon, 2005
43	577007 -NTE.ES-3	Sep-05	Transite pipe (grey)	Former Transformer Area	5%	Crocidolite		Terracon, 2005
44	577007-NTE.ES-1 (577007-NTE.NS-1??)	Sep-05	Transite pipe (grey)	Former Transformer Area	25%	Chrysotile	Friable	Terracon, 2005
45	577007-NTE.ES-1 (577007-NTE.NS-1??)	Sep-05	Transite pipe (grey)	Former Transformer Area	3%	Crocidolite		Terracon, 2005
46	577007-SWB.WW.01	Sep-05	Window putty/glazing (beige)	Babbit Shop, West Wall	Trace <1%	Chrysotile		Terracon, 2005
47	577007-SWB.WW.02	Sep-05	Window putty/glazing (beige)	Babbit Shop, West Wall	Trace <1%	Chrysotile		Terracon, 2005
48	577007-FH.01	Sep-05	Insulation/plaster over brick	Fire House	0%			Terracon, 2005
49	577007-FH.02	Sep-05	Insulation/plaster over brick	Fire House	0%			Terracon, 2005
50	577007-FH.03	Sep-05	Insulation/plaster over brick	Fire House	4%	Chrysotile	Friable	Terracon, 2005
51	577007-FH.04	Sep-05	Insulation/plaster over brick	Fire House	5%	Chrysotile	Friable	Terracon, 2005
52	01-DW1-1	Aug-10	off-white surfaced white compound (drywall)	Amtrack Office	none detected			Innovar, 2011
53	01-DW1-2	Aug-10	white drywall with brown paper (drywall)	Amtrack Office	none detected			Innovar, 2011
54	02-DW1-1	Aug-10	white surfaced white compound (drywall)	Amtrack Office	none detected			Innovar, 2011

ID	Sample Number	Date	Description	Location	Percent Asbestos	Asbestos Type	Classification	Source
55	03-DW1-1	Aug-10	white surfaced white compound (drywall)	Amtrack Office	none detected			Innovar, 2011
56	04-P1-1	Aug-10	white surfaced tan plaster (plaster)	Amtrack Office	none detected			Innovar, 2011
57	05-P1-1	Aug-10	white surfaced tan plaster (plaster)	Amtrack Office	none detected			Innovar, 2011
58	06-P1-1	Aug-10	white surfaced white compound (plaster)	Amtrack Office	none detected			Innovar, 2011
59	06-P1-2	Aug-10	tan plaster (plaster)	Amtrack Office	none detected			Innovar, 2011
60	07-CB1-1	Aug-10	pink cover base (cover base)	Amtrack Office	none detected			Innovar, 2011
61	07-CB1-2	Aug-10	tan mastic (cover base)	Amtrack Office	none detected			Innovar, 2011
62	07-CB1-3	Aug-10	white surfaced white compound (cover base)	Amtrack Office	none detected			Innovar, 2011
63	07-CB1-4	Aug-10	brown mastic (cover base)	Amtrack Office	<1%	Anthophyllite		Innovar, 2011
64	07-CB1-5	Aug-10	tan plaster (cover base)	Amtrack Office	none detected			Innovar, 2011
65	08-CB1-1	Aug-10	pink cover base (cover base)	Amtrack Office	none detected			Innovar, 2011
66	08-CB1-2	Aug-10	tan mastic (cover base)	Amtrack Office	none detected			Innovar, 2011



67	08-CB1-3	Aug-10	brown mastic (cover base)	Amtrack Office	<1%	Anthophyllite		Innovar, 2011
68	08-CB1-4	Aug-10	tan plaster (cover base)	Amtrack Office	none detected			Innovar, 2011
69	09-CB1-1	Aug-10	pink cover base (cover base)	Amtrack Office	none detected			Innovar, 2011
70	09-CB1-2	Aug-10	tan mastic (cover base)	Amtrack Office	none detected			Innovar, 2011
71	09-CB1-3	Aug-10	brown mastic (cover base)	Amtrack Office	<1%	Anthophyllite		Innovar, 2011
72	09-CB1-4	Aug-10	tan plaster (cover base)	Amtrack Office	none detected			Innovar, 2011
73	10-CT1-1	Aug-10	white surfacing (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
74	10-CT1-2	Aug-10	tan ceiling (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
75	10-CT1-3	Aug-10	brown mastic (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
76	11-CT1-1	Aug-10	white surfacing (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
77	11-CT1-2	Aug-10	tan ceiling tile (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
78	11-CT1-3	Aug-10	brown mastic (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
79	12-CT1-1	Aug-10	tan ceiling tile (no surfacing) (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
80	12-CT1-2	Aug-10	brown mastic (ceiling tile)	Amtrack Office	none detected			Innovar, 2011
81	13-WC1-1	Aug-10	black surfacing white caulking (Window Caulk)	Amtrack Office	none detected			Innovar, 2011
82	14-WC1-1	Aug-10	black surfacing white caulking (Window Caulk)	Amtrack Office	none detected			Innovar, 2011
83	15-WC1-1	Aug-10	black surfacing white caulking (Window Caulk)	Museum	none detected			Innovar, 2011
84	16-CT2-1	Aug-10	white surfacing (ceiling tile)	Museum	none detected			Innovar, 2011
85	16-CT2-2	Aug-10	Gray ceiling tile (ceiling tile)	Museum	none detected			Innovar, 2011
86	17-CT2-1	Aug-10	White Surfacing (ceiling tile)	Museum	none detected			Innovar, 2011
87	17-CT2-2	Aug-10	Gray ceiling tile (ceiling tile)	Museum	none detected			Innovar, 2011
88	18-CT2-1	Aug-10	white surfacing (ceiling tile)	Museum	none detected			Innovar, 2011
89	18-CT2-2	Aug-10	Gray ceiling tile (ceiling tile)	Museum	none detected			Innovar, 2011
90	19-W1-1	Aug-10	black woven covering (Wiring)	Museum	none detected			Innovar, 2011
91	20-W1-1	Aug-10	black woven covering (Wiring)	Museum	none detected			Innovar, 2011
92	13029.029-020513-01	Feb-13	12" Spline Ceiling Tile	Office Shack, Blacksmith Shop	none detected		Poor/Friable	Rhoades, 2013
93	13029.029-020513-02	Feb-13	12" Spline Ceiling Tile	Office Shack, Blacksmith Shop	none detected		Poor/Friable	Rhoades, 2013
94	13029.029-020513-03	Feb-13	12" Spline Ceiling Tile	Office Shack, Blacksmith Shop	none detected		Poor/Friable	Rhoades, 2013
95	13029.029-020513-04	Feb-13	Interior Plaster - Surface Coat	Office Shack, Blacksmith Shop	none detected		Poor/Friable	Rhoades, 2013
96	13029.029-020513-05	Feb-13	Interior Plaster - Surface Coat	Office Shack, Blacksmith Shop	2%	Chrysotile	Poor/Friable	Rhoades, 2013
97	13029.029-020513-06	Feb-13	Interior Plaster - Surface Coat	Office Shack, Blacksmith Shop	2%	Chrysotile	Poor/Friable	Rhoades, 2013
98	13029.029-020513-07	Feb-13	Interior Plaster - Surface Coat	Office Shack, Blacksmith Shop	none detected		Poor/Friable	Rhoades, 2013
99	13029.029-020513-08	Feb-13	Interior Plaster - Surface Coat	Office Shack, Blacksmith Shop	none detected		Poor/Friable	Rhoades, 2013
100	13029.029-020513-09	Feb-13	Interior Plaster - Surface Coat	Office Shack, Blacksmith Shop	none detected		Poor/Friable	Rhoades, 2013
101	13029.029-020513-10	Feb-	Window Glazing	Reinforced Glass, Blacksmith Shop	none		Poor/Friable	Rhoades,

		13			detected			2013
102	13029.029-020513-11	Feb-13	Window Glazing	Reinforced Glass, Blacksmith Shop	none detected		Poor/Friable	Rhoades, 2013
103	13029.029-020513-12	Feb-13	Window Glazing	Reinforced Glass, Blacksmith Shop	none detected		Poor/Friable	Rhoades, 2013
104	13029.029-020513-13	Feb-13	Window Glazing	Clear Glass, Blacksmith Shop	2%	Chrysotile	Poor/Friable	Rhoades, 2013
105	13029.029-020513-14	Feb-13	Window Glazing	Clear Glass, Blacksmith Shop	none detected		Poor/Friable	Rhoades, 2013
106	13029.029-020513-15	Feb-13	Window Glazing	Clear Glass, Blacksmith Shop	none detected		Poor/Friable	Rhoades, 2013
107	13029.029-020513-16	Feb-13	Window Glazing	Wood Panes, Blacksmith Shop	<1%	Chrysotile	Poor/Friable	Rhoades, 2013
108	13029.029-020513-17	Feb-13	Window Glazing	Wood Panes, Blacksmith Shop	2%	Chrysotile	Poor/Friable	Rhoades, 2013

ID	Sample Number	Date	Description	Location	Percent Asbestos	Asbestos Type	Classification	Source
109	13029.029-020513-18	Feb-13	Window Glazing	Wood Panes, Blacksmith Shop	none detected		Poor/Friable	Rhoades, 2013
110	13029.029-020513-19	Feb-13	Gray Parapet Tar	Throughout Roof, Blacksmith Shop	10%	Chrysotile	Poor/Non-Friable	Rhoades, 2013
111	13029.029-020513-20	Feb-13	Gray Parapet Tar	Throughout Roof, Blacksmith Shop	10%	Chrysotile	Poor/Non-Friable	Rhoades, 2013
112	13029.029-020513-21	Feb-13	Gray Parapet Tar	Throughout Roof, Blacksmith Shop	10%	Chrysotile	Poor/Non-Friable	Rhoades, 2013
113	13029.029-020513-22	Feb-13	Black Roofing Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Rhoades, 2013
114	13029.029-020513-23	Feb-13	Black Roofing Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Rhoades, 2013
115	13029.029-020513-24	Feb-13	Black Roofing Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Rhoades, 2013
116	13029.029-020513-25	Feb-13	Black Penetration Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Rhoades, 2013
117	13029.029-020513-26	Feb-13	Black Penetration Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Rhoades, 2013
118	13029.029-020513-27	Feb-13	Black Penetration Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Rhoades, 2013
119	13029.029-020513-28	Feb-13	Gray Roofing Felt	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Rhoades, 2013
120	13029.029-020513-29	Feb-13	Gray Roofing Felt	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Rhoades, 2013
121	13029.029-020513-30	Feb-13	Gray Roofing Felt	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Rhoades, 2013
122	13029.029-020513-31	Feb-13	Black Parapet Tar	Throughout Roof, Blacksmith Shop	8%	Chrysotile	Poor/Non-Friable	Rhoades, 2013
123	13029.029-020513-32	Feb-13	Black Parapet Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Rhoades, 2013
124	13029.029-020513-33	Feb-13	Black Parapet Tar	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Rhoades, 2013
125	13029.029-020513-34	Feb-13	Black Roofing Felt - Patching	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Rhoades, 2013
126	13029.029-020513-35	Feb-13	Black Roofing Felt - Patching	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Rhoades, 2013
127	13029.029-020513-36	Feb-13	Black Roofing Felt - Patching	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Rhoades, 2013
128	13029.029-020513-34a	Feb-13	Black Roofing Felt - Patching	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Rhoades, 2013
129	13029.029-020513-35a	Feb-13	Black Roofing Felt - Patching	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Rhoades, 2013
130	13029.029-020513-36a	Feb-13	Black Roofing Felt - Patching	Throughout Roof, Blacksmith Shop	none detected		Poor/Non-Friable	Rhoades, 2013
131	13029.029-020513-37	Feb-13	Window Glazing	Plastic Panes, Blacksmith Shop	2%	Chrysotile	Poor/Friable	Rhoades, 2013
132	13029.029-020513-38	Feb-13	Window Glazing	Plastic Panes, Blacksmith Shop	3%	Chrysotile	Poor/Friable	Rhoades, 2013
133	13029.029-020513-39	Feb-13	Window Glazing	Plastic Panes, Blacksmith Shop	3%	Chrysotile	Poor/Friable	Rhoades, 2013

**Appendix D**  
**Photography Log**

**Photographic Log**



**Figure 1, Open Side of Sheet Metal House**



**Figure 2, Sheet Metal House, East Side**



**Figure 3, Sheet Metal House, NE Corner**

## Appendix E Certificates



# CERTIFICATE OF TRAINING

EPA/AHERA Training Program



*This is to certify that*

**MICHAEL NIEMAN**

NM. DL. 006 087 493

Has completed 4 hours of training and PASSED the test required by Section 206 of TSCA Title II and in accordance with LOUISIANA STATE ASBESTOS REGULATIONS entitled,

## ASBESTOS BUILDING INSPECTOR REFRESHER

PRESENTED BY  
Mendez Environmental™  
1005 Veterans Mem Blvd  
Suite, 101  
Kenner, LA 70062  
Tel: (504) 468-8858




IN COLLABORATION WITH

DC Environmental  
P.O. Box 9315  
Albuquerque, NM 87119  
Tel: (505) 869-8000  
www.dcenvironmental.net



Director:   
Rodolfo G. Mendez

NM Program Manager:   
David Charlesworth

Course Date: 04-12-2016  
Certificate Number: AS0416KNMPPMN17906

Test Date: 04-12-2016 Grade: PASS  
Expiration Date: 04-12-2017

# United States Environmental Protection Agency

This is to certify that



Michael Neiman

has fulfilled the requirements of the Toxic Substances Control Act (TSCA) Section 402, and has received certification to conduct lead-based paint activities pursuant to 40 CFR Part 745.226 as:

Inspector

In the Jurisdiction of:

New Mexico

This certification is valid from the date of issuance and expires September 25, 2017

NM-I-129246-1

Certification #

September 11, 2014

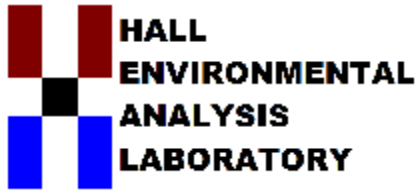
issued On



Adrienne Priselac, Manager, Toxics Office

Land Division

**Appendix G**  
**Laboratory Analytical Report for Groundwater**



Hall Environmental Analysis Laboratory  
4901 Hawkins NE  
Albuquerque, NM 87109  
TEL: 505-345-3975 FAX: 505-345-4107  
Website: [www.hallenvironmental.com](http://www.hallenvironmental.com)

November 15, 2016

Joseph Tracy  
Intera, Inc.  
6000 Uptown Boulevard, NE Suite 220  
Albuquerque, NM 87110  
TEL: (505) 246-1600  
FAX (505) 246-2600

RE: Abq Railyard

OrderNo.: 1611262

Dear Joseph Tracy:

Hall Environmental Analysis Laboratory received 9 sample(s) on 11/4/2016 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to [www.hallenvironmental.com](http://www.hallenvironmental.com) or the state specific web sites. In order to properly interpret your results it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0190

Sincerely,

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

Andy Freeman  
Laboratory Manager  
4901 Hawkins NE  
Albuquerque, NM 87109

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611262

Date Reported: 11/15/2016

CLIENT: Intera, Inc.

Client Sample ID: MW-07

Project: Abq Railyard

Collection Date: 11/4/2016 9:12:00 AM

Lab ID: 1611262-001

Matrix: AQUEOUS

Received Date: 11/4/2016 3:30:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8011/504.1: EDB</b>							Analyst: <b>JME</b>
1,2-Dibromoethane	ND	0.010		µg/L	1	11/10/2016 3:43:16 PM	28583
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>
Benzene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
Toluene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
Ethylbenzene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
Naphthalene	ND	2.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
1-Methylnaphthalene	ND	4.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
2-Methylnaphthalene	ND	4.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
Acetone	ND	10		µg/L	1	11/10/2016 5:59:40 AM	W38593
Bromobenzene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
Bromodichloromethane	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
Bromoform	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
Bromomethane	ND	3.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
2-Butanone	ND	10		µg/L	1	11/10/2016 5:59:40 AM	W38593
Carbon disulfide	ND	10		µg/L	1	11/10/2016 5:59:40 AM	W38593
Carbon Tetrachloride	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
Chlorobenzene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
Chloroethane	ND	2.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
Chloroform	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
Chloromethane	ND	3.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
2-Chlorotoluene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
4-Chlorotoluene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
cis-1,2-DCE	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
Dibromochloromethane	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
Dibromomethane	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
1,1-Dichloroethane	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
1,1-Dichloroethene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
1,2-Dichloropropane	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611262

Date Reported: 11/15/2016

CLIENT: Intera, Inc.

Client Sample ID: MW-07

Project: Abq Railyard

Collection Date: 11/4/2016 9:12:00 AM

Lab ID: 1611262-001

Matrix: AQUEOUS

Received Date: 11/4/2016 3:30:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF
1,3-Dichloropropane	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
2,2-Dichloropropane	ND	2.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
1,1-Dichloropropene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
Hexachlorobutadiene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
2-Hexanone	ND	10		µg/L	1	11/10/2016 5:59:40 AM	W38593
Isopropylbenzene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
4-Isopropyltoluene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
4-Methyl-2-pentanone	ND	10		µg/L	1	11/10/2016 5:59:40 AM	W38593
Methylene Chloride	ND	3.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
n-Butylbenzene	ND	3.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
n-Propylbenzene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
sec-Butylbenzene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
Styrene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
tert-Butylbenzene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
trans-1,2-DCE	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
Trichlorofluoromethane	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
Vinyl chloride	ND	1.0		µg/L	1	11/10/2016 5:59:40 AM	W38593
Xylenes, Total	ND	1.5		µg/L	1	11/10/2016 5:59:40 AM	W38593
Surr: 1,2-Dichloroethane-d4	93.6	70-130		%Rec	1	11/10/2016 5:59:40 AM	W38593
Surr: 4-Bromofluorobenzene	94.7	70-130		%Rec	1	11/10/2016 5:59:40 AM	W38593
Surr: Dibromofluoromethane	96.0	70-130		%Rec	1	11/10/2016 5:59:40 AM	W38593
Surr: Toluene-d8	96.2	70-130		%Rec	1	11/10/2016 5:59:40 AM	W38593

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611262

Date Reported: 11/15/2016

CLIENT: Intera, Inc.

Client Sample ID: MW-06

Project: Abq Railyard

Collection Date: 11/4/2016 9:47:00 AM

Lab ID: 1611262-002

Matrix: AQUEOUS

Received Date: 11/4/2016 3:30:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8011/504.1: EDB</b>							Analyst: <b>JME</b>
1,2-Dibromoethane	ND	0.010		µg/L	1	11/10/2016 3:58:16 PM	28583
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>
Benzene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
Toluene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
Ethylbenzene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
Naphthalene	ND	2.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
1-Methylnaphthalene	ND	4.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
2-Methylnaphthalene	ND	4.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
Acetone	ND	10		µg/L	1	11/10/2016 6:28:08 AM	W38593
Bromobenzene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
Bromodichloromethane	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
Bromoform	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
Bromomethane	ND	3.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
2-Butanone	ND	10		µg/L	1	11/10/2016 6:28:08 AM	W38593
Carbon disulfide	ND	10		µg/L	1	11/10/2016 6:28:08 AM	W38593
Carbon Tetrachloride	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
Chlorobenzene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
Chloroethane	ND	2.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
Chloroform	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
Chloromethane	ND	3.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
2-Chlorotoluene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
4-Chlorotoluene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
cis-1,2-DCE	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
Dibromochloromethane	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
Dibromomethane	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
1,1-Dichloroethane	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
1,1-Dichloroethene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
1,2-Dichloropropane	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611262

Date Reported: 11/15/2016

CLIENT: Intera, Inc.

Client Sample ID: MW-06

Project: Abq Railyard

Collection Date: 11/4/2016 9:47:00 AM

Lab ID: 1611262-002

Matrix: AQUEOUS

Received Date: 11/4/2016 3:30:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF
1,3-Dichloropropane	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
2,2-Dichloropropane	ND	2.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
1,1-Dichloropropene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
Hexachlorobutadiene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
2-Hexanone	ND	10		µg/L	1	11/10/2016 6:28:08 AM	W38593
Isopropylbenzene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
4-Isopropyltoluene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
4-Methyl-2-pentanone	ND	10		µg/L	1	11/10/2016 6:28:08 AM	W38593
Methylene Chloride	ND	3.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
n-Butylbenzene	ND	3.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
n-Propylbenzene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
sec-Butylbenzene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
Styrene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
tert-Butylbenzene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
trans-1,2-DCE	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
Trichlorofluoromethane	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
Vinyl chloride	ND	1.0		µg/L	1	11/10/2016 6:28:08 AM	W38593
Xylenes, Total	ND	1.5		µg/L	1	11/10/2016 6:28:08 AM	W38593
Surr: 1,2-Dichloroethane-d4	91.3	70-130		%Rec	1	11/10/2016 6:28:08 AM	W38593
Surr: 4-Bromofluorobenzene	94.2	70-130		%Rec	1	11/10/2016 6:28:08 AM	W38593
Surr: Dibromofluoromethane	95.4	70-130		%Rec	1	11/10/2016 6:28:08 AM	W38593
Surr: Toluene-d8	97.1	70-130		%Rec	1	11/10/2016 6:28:08 AM	W38593

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611262

Date Reported: 11/15/2016

CLIENT: Intera, Inc.

Client Sample ID: MW-08

Project: Abq Railyard

Collection Date: 11/4/2016 11:45:00 AM

Lab ID: 1611262-003

Matrix: AQUEOUS

Received Date: 11/4/2016 3:30:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8011/504.1: EDB</b>							Analyst: JME
1,2-Dibromoethane	ND	0.010		µg/L	1	11/10/2016 4:13:20 PM	28583
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF
Benzene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
Toluene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
Ethylbenzene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
Naphthalene	ND	2.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
1-Methylnaphthalene	ND	4.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
2-Methylnaphthalene	ND	4.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
Acetone	ND	10		µg/L	1	11/10/2016 6:56:36 AM	W38593
Bromobenzene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
Bromodichloromethane	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
Bromoform	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
Bromomethane	ND	3.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
2-Butanone	ND	10		µg/L	1	11/10/2016 6:56:36 AM	W38593
Carbon disulfide	ND	10		µg/L	1	11/10/2016 6:56:36 AM	W38593
Carbon Tetrachloride	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
Chlorobenzene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
Chloroethane	ND	2.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
Chloroform	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
Chloromethane	ND	3.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
2-Chlorotoluene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
4-Chlorotoluene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
cis-1,2-DCE	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
Dibromochloromethane	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
Dibromomethane	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
1,1-Dichloroethane	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
1,1-Dichloroethene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
1,2-Dichloropropane	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611262

Date Reported: 11/15/2016

CLIENT: Intera, Inc.

Client Sample ID: MW-08

Project: Abq Railyard

Collection Date: 11/4/2016 11:45:00 AM

Lab ID: 1611262-003

Matrix: AQUEOUS

Received Date: 11/4/2016 3:30:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF
1,3-Dichloropropane	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
2,2-Dichloropropane	ND	2.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
1,1-Dichloropropene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
Hexachlorobutadiene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
2-Hexanone	ND	10		µg/L	1	11/10/2016 6:56:36 AM	W38593
Isopropylbenzene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
4-Isopropyltoluene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
4-Methyl-2-pentanone	ND	10		µg/L	1	11/10/2016 6:56:36 AM	W38593
Methylene Chloride	ND	3.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
n-Butylbenzene	ND	3.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
n-Propylbenzene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
sec-Butylbenzene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
Styrene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
tert-Butylbenzene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
trans-1,2-DCE	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
Trichlorofluoromethane	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
Vinyl chloride	ND	1.0		µg/L	1	11/10/2016 6:56:36 AM	W38593
Xylenes, Total	ND	1.5		µg/L	1	11/10/2016 6:56:36 AM	W38593
Surr: 1,2-Dichloroethane-d4	91.5	70-130		%Rec	1	11/10/2016 6:56:36 AM	W38593
Surr: 4-Bromofluorobenzene	91.0	70-130		%Rec	1	11/10/2016 6:56:36 AM	W38593
Surr: Dibromofluoromethane	93.5	70-130		%Rec	1	11/10/2016 6:56:36 AM	W38593
Surr: Toluene-d8	96.1	70-130		%Rec	1	11/10/2016 6:56:36 AM	W38593

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611262

Date Reported: 11/15/2016

**CLIENT:** Intera, Inc.

**Client Sample ID:** MW-02

**Project:** Abq Railyard

**Collection Date:** 11/4/2016 1:10:00 PM

**Lab ID:** 1611262-004

**Matrix:** AQUEOUS

**Received Date:** 11/4/2016 3:30:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8011/504.1: EDB</b>							Analyst: <b>JME</b>
1,2-Dibromoethane	ND	0.010		µg/L	1	11/10/2016 4:28:21 PM	28583
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>
Benzene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
Toluene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
Ethylbenzene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
Naphthalene	ND	2.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
1-Methylnaphthalene	ND	4.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
2-Methylnaphthalene	ND	4.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
Acetone	ND	10		µg/L	1	11/10/2016 7:24:53 AM	W38593
Bromobenzene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
Bromodichloromethane	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
Bromoform	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
Bromomethane	ND	3.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
2-Butanone	ND	10		µg/L	1	11/10/2016 7:24:53 AM	W38593
Carbon disulfide	ND	10		µg/L	1	11/10/2016 7:24:53 AM	W38593
Carbon Tetrachloride	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
Chlorobenzene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
Chloroethane	ND	2.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
Chloroform	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
Chloromethane	ND	3.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
2-Chlorotoluene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
4-Chlorotoluene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
cis-1,2-DCE	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
Dibromochloromethane	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
Dibromomethane	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
1,1-Dichloroethane	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
1,1-Dichloroethene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
1,2-Dichloropropane	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611262

Date Reported: 11/15/2016

**CLIENT:** Intera, Inc.

**Client Sample ID:** MW-02

**Project:** Abq Railyard

**Collection Date:** 11/4/2016 1:10:00 PM

**Lab ID:** 1611262-004

**Matrix:** AQUEOUS

**Received Date:** 11/4/2016 3:30:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF
1,3-Dichloropropane	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
2,2-Dichloropropane	ND	2.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
1,1-Dichloropropene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
Hexachlorobutadiene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
2-Hexanone	ND	10		µg/L	1	11/10/2016 7:24:53 AM	W38593
Isopropylbenzene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
4-Isopropyltoluene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
4-Methyl-2-pentanone	ND	10		µg/L	1	11/10/2016 7:24:53 AM	W38593
Methylene Chloride	ND	3.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
n-Butylbenzene	ND	3.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
n-Propylbenzene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
sec-Butylbenzene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
Styrene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
tert-Butylbenzene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
trans-1,2-DCE	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
Trichlorofluoromethane	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
Vinyl chloride	ND	1.0		µg/L	1	11/10/2016 7:24:53 AM	W38593
Xylenes, Total	ND	1.5		µg/L	1	11/10/2016 7:24:53 AM	W38593
Surr: 1,2-Dichloroethane-d4	91.3	70-130		%Rec	1	11/10/2016 7:24:53 AM	W38593
Surr: 4-Bromofluorobenzene	94.7	70-130		%Rec	1	11/10/2016 7:24:53 AM	W38593
Surr: Dibromofluoromethane	91.4	70-130		%Rec	1	11/10/2016 7:24:53 AM	W38593
Surr: Toluene-d8	97.6	70-130		%Rec	1	11/10/2016 7:24:53 AM	W38593

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611262

Date Reported: 11/15/2016

CLIENT: Intera, Inc.

Client Sample ID: MW-01

Project: Abq Railyard

Collection Date: 11/4/2016 1:35:00 PM

Lab ID: 1611262-005

Matrix: AQUEOUS

Received Date: 11/4/2016 3:30:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8011/504.1: EDB</b>							Analyst: JME
1,2-Dibromoethane	ND	0.010		µg/L	1	11/10/2016 4:43:21 PM	28583
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF
Benzene	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
Toluene	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
Ethylbenzene	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
Naphthalene	34	2.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
1-Methylnaphthalene	11	4.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
2-Methylnaphthalene	11	4.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
Acetone	ND	10		µg/L	1	11/11/2016 11:18:08 AM	W38603
Bromobenzene	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
Bromodichloromethane	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
Bromoform	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
Bromomethane	ND	3.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
2-Butanone	ND	10		µg/L	1	11/11/2016 11:18:08 AM	W38603
Carbon disulfide	ND	10		µg/L	1	11/11/2016 11:18:08 AM	W38603
Carbon Tetrachloride	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
Chlorobenzene	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
Chloroethane	ND	2.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
Chloroform	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
Chloromethane	ND	3.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
2-Chlorotoluene	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
4-Chlorotoluene	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
cis-1,2-DCE	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
Dibromochloromethane	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
Dibromomethane	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
1,1-Dichloroethane	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
1,1-Dichloroethene	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
1,2-Dichloropropane	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611262

Date Reported: 11/15/2016

**CLIENT:** Intera, Inc.

**Client Sample ID:** MW-01

**Project:** Abq Railyard

**Collection Date:** 11/4/2016 1:35:00 PM

**Lab ID:** 1611262-005

**Matrix:** AQUEOUS

**Received Date:** 11/4/2016 3:30:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF
1,3-Dichloropropane	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
2,2-Dichloropropane	ND	2.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
1,1-Dichloropropene	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
Hexachlorobutadiene	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
2-Hexanone	ND	10		µg/L	1	11/11/2016 11:18:08 AM	W38603
Isopropylbenzene	32	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
4-Isopropyltoluene	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
4-Methyl-2-pentanone	ND	10		µg/L	1	11/11/2016 11:18:08 AM	W38603
Methylene Chloride	ND	3.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
n-Butylbenzene	8.7	3.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
n-Propylbenzene	76	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
sec-Butylbenzene	5.8	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
Styrene	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
tert-Butylbenzene	1.2	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
trans-1,2-DCE	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
Trichlorofluoromethane	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
Vinyl chloride	ND	1.0		µg/L	1	11/11/2016 11:18:08 AM	W38603
Xylenes, Total	ND	1.5		µg/L	1	11/11/2016 11:18:08 AM	W38603
Surr: 1,2-Dichloroethane-d4	103	70-130		%Rec	1	11/11/2016 11:18:08 AM	W38603
Surr: 4-Bromofluorobenzene	104	70-130		%Rec	1	11/11/2016 11:18:08 AM	W38603
Surr: Dibromofluoromethane	104	70-130		%Rec	1	11/11/2016 11:18:08 AM	W38603
Surr: Toluene-d8	96.6	70-130		%Rec	1	11/11/2016 11:18:08 AM	W38603

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611262

Date Reported: 11/15/2016

CLIENT: Intera, Inc.

Client Sample ID: MW-03

Project: Abq Railyard

Collection Date: 11/4/2016 2:02:00 PM

Lab ID: 1611262-006

Matrix: AQUEOUS

Received Date: 11/4/2016 3:30:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8011/504.1: EDB</b>							Analyst: JME
1,2-Dibromoethane	ND	0.010		µg/L	1	11/10/2016 4:58:18 PM	28583
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF
Benzene	8.8	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
Toluene	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
Ethylbenzene	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
Naphthalene	2.2	2.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
1-Methylnaphthalene	100	20		µg/L	5	11/11/2016 4:42:33 AM	W38603
2-Methylnaphthalene	120	20		µg/L	5	11/11/2016 4:42:33 AM	W38603
Acetone	ND	10		µg/L	1	11/11/2016 12:44:14 PM	W38603
Bromobenzene	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
Bromodichloromethane	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
Bromoform	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
Bromomethane	ND	3.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
2-Butanone	ND	10		µg/L	1	11/11/2016 12:44:14 PM	W38603
Carbon disulfide	ND	10		µg/L	1	11/11/2016 12:44:14 PM	W38603
Carbon Tetrachloride	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
Chlorobenzene	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
Chloroethane	ND	2.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
Chloroform	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
Chloromethane	ND	3.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
2-Chlorotoluene	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
4-Chlorotoluene	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
cis-1,2-DCE	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
Dibromochloromethane	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
Dibromomethane	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
1,1-Dichloroethane	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
1,1-Dichloroethene	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
1,2-Dichloropropane	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified



# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611262

Date Reported: 11/15/2016

CLIENT: Intera, Inc.

Client Sample ID: MW-03

Project: Abq Railyard

Collection Date: 11/4/2016 2:02:00 PM

Lab ID: 1611262-006

Matrix: AQUEOUS

Received Date: 11/4/2016 3:30:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF
1,3-Dichloropropane	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
2,2-Dichloropropane	ND	2.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
1,1-Dichloropropene	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
Hexachlorobutadiene	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
2-Hexanone	ND	10		µg/L	1	11/11/2016 12:44:14 PM	W38603
Isopropylbenzene	6.7	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
4-Isopropyltoluene	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
4-Methyl-2-pentanone	ND	10		µg/L	1	11/11/2016 12:44:14 PM	W38603
Methylene Chloride	ND	3.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
n-Butylbenzene	3.3	3.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
n-Propylbenzene	15	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
sec-Butylbenzene	2.1	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
Styrene	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
tert-Butylbenzene	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
trans-1,2-DCE	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
Trichlorofluoromethane	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
Vinyl chloride	ND	1.0		µg/L	1	11/11/2016 12:44:14 PM	W38603
Xylenes, Total	ND	1.5		µg/L	1	11/11/2016 12:44:14 PM	W38603
Surr: 1,2-Dichloroethane-d4	91.7	70-130		%Rec	1	11/11/2016 12:44:14 PM	W38603
Surr: 4-Bromofluorobenzene	97.8	70-130		%Rec	1	11/11/2016 12:44:14 PM	W38603
Surr: Dibromofluoromethane	91.2	70-130		%Rec	1	11/11/2016 12:44:14 PM	W38603
Surr: Toluene-d8	96.7	70-130		%Rec	1	11/11/2016 12:44:14 PM	W38603

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611262

Date Reported: 11/15/2016

CLIENT: Intera, Inc.

Client Sample ID: MW-04

Project: Abq Railyard

Collection Date: 11/4/2016 2:27:00 PM

Lab ID: 1611262-007

Matrix: AQUEOUS

Received Date: 11/4/2016 3:30:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8011/504.1: EDB</b>							Analyst: <b>JME</b>
1,2-Dibromoethane	ND	0.010		µg/L	1	11/10/2016 5:13:26 PM	28583
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>
Benzene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
Toluene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
Ethylbenzene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
Naphthalene	ND	2.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
1-Methylnaphthalene	4.3	4.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
2-Methylnaphthalene	4.5	4.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
Acetone	ND	10		µg/L	1	11/11/2016 1:12:59 PM	W38603
Bromobenzene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
Bromodichloromethane	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
Bromoform	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
Bromomethane	ND	3.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
2-Butanone	ND	10		µg/L	1	11/11/2016 1:12:59 PM	W38603
Carbon disulfide	ND	10		µg/L	1	11/11/2016 1:12:59 PM	W38603
Carbon Tetrachloride	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
Chlorobenzene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
Chloroethane	ND	2.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
Chloroform	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
Chloromethane	ND	3.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
2-Chlorotoluene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
4-Chlorotoluene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
cis-1,2-DCE	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
Dibromochloromethane	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
Dibromomethane	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
1,1-Dichloroethane	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
1,1-Dichloroethene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
1,2-Dichloropropane	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611262

Date Reported: 11/15/2016

**CLIENT:** Intera, Inc.  
**Project:** Abq Railyard  
**Lab ID:** 1611262-007

**Client Sample ID:** MW-04  
**Collection Date:** 11/4/2016 2:27:00 PM  
**Received Date:** 11/4/2016 3:30:00 PM

**Matrix:** AQUEOUS

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF
1,3-Dichloropropane	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
2,2-Dichloropropane	ND	2.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
1,1-Dichloropropene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
Hexachlorobutadiene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
2-Hexanone	ND	10		µg/L	1	11/11/2016 1:12:59 PM	W38603
Isopropylbenzene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
4-Isopropyltoluene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
4-Methyl-2-pentanone	ND	10		µg/L	1	11/11/2016 1:12:59 PM	W38603
Methylene Chloride	ND	3.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
n-Butylbenzene	ND	3.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
n-Propylbenzene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
sec-Butylbenzene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
Styrene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
tert-Butylbenzene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
trans-1,2-DCE	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
Trichlorofluoromethane	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
Vinyl chloride	ND	1.0		µg/L	1	11/11/2016 1:12:59 PM	W38603
Xylenes, Total	ND	1.5		µg/L	1	11/11/2016 1:12:59 PM	W38603
Surr: 1,2-Dichloroethane-d4	101	70-130		%Rec	1	11/11/2016 1:12:59 PM	W38603
Surr: 4-Bromofluorobenzene	96.9	70-130		%Rec	1	11/11/2016 1:12:59 PM	W38603
Surr: Dibromofluoromethane	105	70-130		%Rec	1	11/11/2016 1:12:59 PM	W38603
Surr: Toluene-d8	96.7	70-130		%Rec	1	11/11/2016 1:12:59 PM	W38603

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611262

Date Reported: 11/15/2016

CLIENT: Intera, Inc.

Client Sample ID: MW-05

Project: Abq Railyard

Collection Date: 11/4/2016 3:00:00 PM

Lab ID: 1611262-008

Matrix: AQUEOUS

Received Date: 11/4/2016 3:30:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8011/504.1: EDB</b>							Analyst: <b>JME</b>
1,2-Dibromoethane	ND	0.010		µg/L	1	11/10/2016 5:43:38 PM	28583
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: <b>DJF</b>
Benzene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
Toluene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
Ethylbenzene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
Naphthalene	ND	2.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
1-Methylnaphthalene	ND	4.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
2-Methylnaphthalene	ND	4.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
Acetone	ND	10		µg/L	1	11/11/2016 5:39:38 AM	W38603
Bromobenzene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
Bromodichloromethane	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
Bromoform	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
Bromomethane	ND	3.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
2-Butanone	ND	10		µg/L	1	11/11/2016 5:39:38 AM	W38603
Carbon disulfide	ND	10		µg/L	1	11/11/2016 5:39:38 AM	W38603
Carbon Tetrachloride	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
Chlorobenzene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
Chloroethane	ND	2.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
Chloroform	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
Chloromethane	ND	3.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
2-Chlorotoluene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
4-Chlorotoluene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
cis-1,2-DCE	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
Dibromochloromethane	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
Dibromomethane	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
1,1-Dichloroethane	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
1,1-Dichloroethene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
1,2-Dichloropropane	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
	D	Sample Diluted Due to Matrix	E	Value above quantitation range
	H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
	ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
	R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
	S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611262

Date Reported: 11/15/2016

CLIENT: Intera, Inc.

Client Sample ID: MW-05

Project: Abq Railyard

Collection Date: 11/4/2016 3:00:00 PM

Lab ID: 1611262-008

Matrix: AQUEOUS

Received Date: 11/4/2016 3:30:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF
1,3-Dichloropropane	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
2,2-Dichloropropane	ND	2.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
1,1-Dichloropropene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
Hexachlorobutadiene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
2-Hexanone	ND	10		µg/L	1	11/11/2016 5:39:38 AM	W38603
Isopropylbenzene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
4-Isopropyltoluene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
4-Methyl-2-pentanone	ND	10		µg/L	1	11/11/2016 5:39:38 AM	W38603
Methylene Chloride	ND	3.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
n-Butylbenzene	ND	3.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
n-Propylbenzene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
sec-Butylbenzene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
Styrene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
tert-Butylbenzene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
trans-1,2-DCE	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
Trichlorofluoromethane	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
Vinyl chloride	ND	1.0		µg/L	1	11/11/2016 5:39:38 AM	W38603
Xylenes, Total	ND	1.5		µg/L	1	11/11/2016 5:39:38 AM	W38603
Surr: 1,2-Dichloroethane-d4	92.4	70-130		%Rec	1	11/11/2016 5:39:38 AM	W38603
Surr: 4-Bromofluorobenzene	94.8	70-130		%Rec	1	11/11/2016 5:39:38 AM	W38603
Surr: Dibromofluoromethane	97.2	70-130		%Rec	1	11/11/2016 5:39:38 AM	W38603
Surr: Toluene-d8	97.1	70-130		%Rec	1	11/11/2016 5:39:38 AM	W38603

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified



# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611262

Date Reported: 11/15/2016

CLIENT: Intera, Inc.

Client Sample ID: TRIP BLANK

Project: Abq Railyard

Collection Date:

Lab ID: 1611262-009

Matrix: TRIP BLANK

Received Date: 11/4/2016 3:30:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8011/504.1: EDB</b>							Analyst: JME
1,2-Dibromoethane	ND	0.010		µg/L	1	11/10/2016 5:58:38 PM	28587
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF
Benzene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
Toluene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
Ethylbenzene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
Methyl tert-butyl ether (MTBE)	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
1,2,4-Trimethylbenzene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
1,3,5-Trimethylbenzene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
1,2-Dichloroethane (EDC)	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
1,2-Dibromoethane (EDB)	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
Naphthalene	ND	2.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
1-Methylnaphthalene	ND	4.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
2-Methylnaphthalene	ND	4.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
Acetone	ND	10		µg/L	1	11/11/2016 6:08:06 AM	W38603
Bromobenzene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
Bromodichloromethane	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
Bromoform	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
Bromomethane	ND	3.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
2-Butanone	ND	10		µg/L	1	11/11/2016 6:08:06 AM	W38603
Carbon disulfide	ND	10		µg/L	1	11/11/2016 6:08:06 AM	W38603
Carbon Tetrachloride	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
Chlorobenzene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
Chloroethane	ND	2.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
Chloroform	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
Chloromethane	ND	3.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
2-Chlorotoluene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
4-Chlorotoluene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
cis-1,2-DCE	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
cis-1,3-Dichloropropene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
1,2-Dibromo-3-chloropropane	ND	2.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
Dibromochloromethane	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
Dibromomethane	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
1,2-Dichlorobenzene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
1,3-Dichlorobenzene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
1,4-Dichlorobenzene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
Dichlorodifluoromethane	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
1,1-Dichloroethane	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
1,1-Dichloroethene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
1,2-Dichloropropane	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

<b>Qualifiers:</b>	* Value exceeds Maximum Contaminant Level.	B Analyte detected in the associated Method Blank
	D Sample Diluted Due to Matrix	E Value above quantitation range
	H Holding times for preparation or analysis exceeded	J Analyte detected below quantitation limits
	ND Not Detected at the Reporting Limit	P Sample pH Not In Range
	R RPD outside accepted recovery limits	RL Reporting Detection Limit
	S % Recovery outside of range due to dilution or matrix	W Sample container temperature is out of limit as specified

# Hall Environmental Analysis Laboratory, Inc.

Analytical Report

Lab Order 1611262

Date Reported: 11/15/2016

CLIENT: Intera, Inc.

Client Sample ID: TRIP BLANK

Project: Abq Railyard

Collection Date:

Lab ID: 1611262-009

Matrix: TRIP BLANK

Received Date: 11/4/2016 3:30:00 PM

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed	Batch
<b>EPA METHOD 8260B: VOLATILES</b>							Analyst: DJF
1,3-Dichloropropane	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
2,2-Dichloropropane	ND	2.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
1,1-Dichloropropene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
Hexachlorobutadiene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
2-Hexanone	ND	10		µg/L	1	11/11/2016 6:08:06 AM	W38603
Isopropylbenzene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
4-Isopropyltoluene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
4-Methyl-2-pentanone	ND	10		µg/L	1	11/11/2016 6:08:06 AM	W38603
Methylene Chloride	ND	3.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
n-Butylbenzene	ND	3.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
n-Propylbenzene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
sec-Butylbenzene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
Styrene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
tert-Butylbenzene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
1,1,1,2-Tetrachloroethane	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
1,1,2,2-Tetrachloroethane	ND	2.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
Tetrachloroethene (PCE)	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
trans-1,2-DCE	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
trans-1,3-Dichloropropene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
1,2,3-Trichlorobenzene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
1,2,4-Trichlorobenzene	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
1,1,1-Trichloroethane	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
1,1,2-Trichloroethane	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
Trichloroethene (TCE)	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
Trichlorofluoromethane	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
1,2,3-Trichloropropane	ND	2.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
Vinyl chloride	ND	1.0		µg/L	1	11/11/2016 6:08:06 AM	W38603
Xylenes, Total	ND	1.5		µg/L	1	11/11/2016 6:08:06 AM	W38603
Surr: 1,2-Dichloroethane-d4	94.8	70-130		%Rec	1	11/11/2016 6:08:06 AM	W38603
Surr: 4-Bromofluorobenzene	93.9	70-130		%Rec	1	11/11/2016 6:08:06 AM	W38603
Surr: Dibromofluoromethane	98.9	70-130		%Rec	1	11/11/2016 6:08:06 AM	W38603
Surr: Toluene-d8	100	70-130		%Rec	1	11/11/2016 6:08:06 AM	W38603

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:			
*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
R	RPD outside accepted recovery limits	RL	Reporting Detection Limit
S	% Recovery outside of range due to dilution or matrix	W	Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1611262

15-Nov-16

**Client:** Intera, Inc.  
**Project:** Abq Railyard

Sample ID <b>MB-28587</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8011/504.1: EDB</b>							
Client ID: <b>PBW</b>	Batch ID: <b>28587</b>		RunNo: <b>38602</b>							
Prep Date: <b>11/10/2016</b>	Analysis Date: <b>11/10/2016</b>		SeqNo: <b>1205730</b>	Units: <b>µg/L</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID <b>MB-28583</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8011/504.1: EDB</b>							
Client ID: <b>PBW</b>	Batch ID: <b>28583</b>		RunNo: <b>38602</b>							
Prep Date: <b>11/10/2016</b>	Analysis Date: <b>11/10/2016</b>		SeqNo: <b>1205731</b>	Units: <b>µg/L</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	ND	0.010								

Sample ID <b>LCS-28583</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8011/504.1: EDB</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>28583</b>		RunNo: <b>38602</b>							
Prep Date: <b>11/10/2016</b>	Analysis Date: <b>11/10/2016</b>		SeqNo: <b>1205732</b>	Units: <b>µg/L</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.092	0.010	0.1000	0	91.9	70	130			

Sample ID <b>LCS-28587</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8011/504.1: EDB</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>28587</b>		RunNo: <b>38602</b>							
Prep Date: <b>11/10/2016</b>	Analysis Date: <b>11/10/2016</b>		SeqNo: <b>1205733</b>	Units: <b>µg/L</b>						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromoethane	0.097	0.010	0.1000	0	97.4	70	130			

**Qualifiers:**

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1611262

15-Nov-16

**Client:** Intera, Inc.  
**Project:** Abq Railyard

Sample ID: <b>rb</b>	SampType: <b>MBLK</b>	TestCode: <b>EPA Method 8260B: VOLATILES</b>
Client ID: <b>PBW</b>	Batch ID: <b>W38593</b>	RunNo: <b>38593</b>
Prep Date:	Analysis Date: <b>11/9/2016</b>	SeqNo: <b>1205422</b> Units: <b>µg/L</b>

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								

**Qualifiers:**

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1611262

15-Nov-16

**Client:** Intera, Inc.  
**Project:** Abq Railyard

Sample ID	rb	SampType: <b>MBLK</b>			TestCode: <b>EPA Method 8260B: VOLATILES</b>					
Client ID:	<b>PBW</b>	Batch ID: <b>W38593</b>			RunNo: <b>38593</b>					
Prep Date:		Analysis Date: <b>11/9/2016</b>			SeqNo: <b>1205422</b>		Units: <b>µg/L</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.1	70	130			
Surr: 4-Bromofluorobenzene	9.8		10.00		97.7	70	130			
Surr: Dibromofluoromethane	9.5		10.00		94.6	70	130			
Surr: Toluene-d8	9.8		10.00		98.1	70	130			

Sample ID	100ng lcs	SampType: <b>LCS</b>			TestCode: <b>EPA Method 8260B: VOLATILES</b>					
Client ID:	<b>LCSW</b>	Batch ID: <b>W38593</b>			RunNo: <b>38593</b>					
Prep Date:		Analysis Date: <b>11/9/2016</b>			SeqNo: <b>1205423</b>		Units: <b>µg/L</b>			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	19	1.0	20.00	0	95.7	70	130			
Toluene	21	1.0	20.00	0	105	70	130			
Chlorobenzene	21	1.0	20.00	0	103	70	130			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified



# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1611262

15-Nov-16

**Client:** Intera, Inc.  
**Project:** Abq Railyard

Sample ID <b>100ng lcs</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8260B: VOLATILES</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>W38593</b>		RunNo: <b>38593</b>							
Prep Date:	Analysis Date: <b>11/9/2016</b>		SeqNo: <b>1205423</b>		Units: <b>µg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,1-Dichloroethene	21	1.0	20.00	0	106	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	98.4	70	130			
Surr: 1,2-Dichloroethane-d4	9.3		10.00		93.1	70	130			
Surr: 4-Bromofluorobenzene	9.4		10.00		93.9	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.5	70	130			
Surr: Toluene-d8	9.8		10.00		97.9	70	130			

Sample ID <b>rb</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8260B: VOLATILES</b>							
Client ID: <b>PBW</b>	Batch ID: <b>W38603</b>		RunNo: <b>38603</b>							
Prep Date:	Analysis Date: <b>11/10/2016</b>		SeqNo: <b>1206487</b>		Units: <b>µg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	ND	1.0								
Toluene	ND	1.0								
Ethylbenzene	ND	1.0								
Methyl tert-butyl ether (MTBE)	ND	1.0								
1,2,4-Trimethylbenzene	ND	1.0								
1,3,5-Trimethylbenzene	ND	1.0								
1,2-Dichloroethane (EDC)	ND	1.0								
1,2-Dibromoethane (EDB)	ND	1.0								
Naphthalene	ND	2.0								
1-Methylnaphthalene	ND	4.0								
2-Methylnaphthalene	ND	4.0								
Acetone	ND	10								
Bromobenzene	ND	1.0								
Bromodichloromethane	ND	1.0								
Bromoform	ND	1.0								
Bromomethane	ND	3.0								
2-Butanone	ND	10								
Carbon disulfide	ND	10								
Carbon Tetrachloride	ND	1.0								
Chlorobenzene	ND	1.0								
Chloroethane	ND	2.0								
Chloroform	ND	1.0								
Chloromethane	ND	3.0								
2-Chlorotoluene	ND	1.0								
4-Chlorotoluene	ND	1.0								
cis-1,2-DCE	ND	1.0								
cis-1,3-Dichloropropene	ND	1.0								

**Qualifiers:**

- |   |   |
|---|---|
| * Value exceeds Maximum Contaminant Level.              | B Analyte detected in the associated Method Blank           |
| D Sample Diluted Due to Matrix                          | E Value above quantitation range                            |
| H Holding times for preparation or analysis exceeded    | J Analyte detected below quantitation limits                |
| ND Not Detected at the Reporting Limit                  | P Sample pH Not In Range                                    |
| R RPD outside accepted recovery limits                  | RL Reporting Detection Limit                                |
| S % Recovery outside of range due to dilution or matrix | W Sample container temperature is out of limit as specified |

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1611262

15-Nov-16

**Client:** Intera, Inc.  
**Project:** Abq Railyard

Sample ID	rb	SampType:	MBLK	TestCode:	EPA Method 8260B: VOLATILES					
Client ID:	PBW	Batch ID:	W38603	RunNo:	38603					
Prep Date:		Analysis Date:	11/10/2016	SeqNo:	1206487	Units:	µg/L			
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
1,2-Dibromo-3-chloropropane	ND	2.0								
Dibromochloromethane	ND	1.0								
Dibromomethane	ND	1.0								
1,2-Dichlorobenzene	ND	1.0								
1,3-Dichlorobenzene	ND	1.0								
1,4-Dichlorobenzene	ND	1.0								
Dichlorodifluoromethane	ND	1.0								
1,1-Dichloroethane	ND	1.0								
1,1-Dichloroethene	ND	1.0								
1,2-Dichloropropane	ND	1.0								
1,3-Dichloropropane	ND	1.0								
2,2-Dichloropropane	ND	2.0								
1,1-Dichloropropene	ND	1.0								
Hexachlorobutadiene	ND	1.0								
2-Hexanone	ND	10								
Isopropylbenzene	ND	1.0								
4-Isopropyltoluene	ND	1.0								
4-Methyl-2-pentanone	ND	10								
Methylene Chloride	ND	3.0								
n-Butylbenzene	ND	3.0								
n-Propylbenzene	ND	1.0								
sec-Butylbenzene	ND	1.0								
Styrene	ND	1.0								
tert-Butylbenzene	ND	1.0								
1,1,1,2-Tetrachloroethane	ND	1.0								
1,1,2,2-Tetrachloroethane	ND	2.0								
Tetrachloroethene (PCE)	ND	1.0								
trans-1,2-DCE	ND	1.0								
trans-1,3-Dichloropropene	ND	1.0								
1,2,3-Trichlorobenzene	ND	1.0								
1,2,4-Trichlorobenzene	ND	1.0								
1,1,1-Trichloroethane	ND	1.0								
1,1,2-Trichloroethane	ND	1.0								
Trichloroethene (TCE)	ND	1.0								
Trichlorofluoromethane	ND	1.0								
1,2,3-Trichloropropane	ND	2.0								
Vinyl chloride	ND	1.0								
Xylenes, Total	ND	1.5								
Surr: 1,2-Dichloroethane-d4	10		10.00		105	70	130			

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1611262

15-Nov-16

**Client:** Intera, Inc.  
**Project:** Abq Railyard

Sample ID <b>rb</b>	SampType: <b>MBLK</b>		TestCode: <b>EPA Method 8260B: VOLATILES</b>							
Client ID: <b>PBW</b>	Batch ID: <b>W38603</b>		RunNo: <b>38603</b>							
Prep Date:	Analysis Date: <b>11/10/2016</b>		SeqNo: <b>1206487</b>		Units: <b>µg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Surr: 4-Bromofluorobenzene	9.6		10.00		95.9	70	130			
Surr: Dibromofluoromethane	11		10.00		108	70	130			
Surr: Toluene-d8	9.8		10.00		98.2	70	130			

Sample ID <b>100ng lcs</b>	SampType: <b>LCS</b>		TestCode: <b>EPA Method 8260B: VOLATILES</b>							
Client ID: <b>LCSW</b>	Batch ID: <b>W38603</b>		RunNo: <b>38603</b>							
Prep Date:	Analysis Date: <b>11/10/2016</b>		SeqNo: <b>1206488</b>		Units: <b>µg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0	102	70	130			
Toluene	20	1.0	20.00	0	101	70	130			
Chlorobenzene	20	1.0	20.00	0	101	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	108	70	130			
Trichloroethene (TCE)	20	1.0	20.00	0	101	70	130			
Surr: 1,2-Dichloroethane-d4	9.6		10.00		95.7	70	130			
Surr: 4-Bromofluorobenzene	9.6		10.00		95.7	70	130			
Surr: Dibromofluoromethane	9.6		10.00		95.8	70	130			
Surr: Toluene-d8	9.3		10.00		93.3	70	130			

Sample ID <b>1611262-005a ms</b>	SampType: <b>MS</b>		TestCode: <b>EPA Method 8260B: VOLATILES</b>							
Client ID: <b>MW-01</b>	Batch ID: <b>W38603</b>		RunNo: <b>38603</b>							
Prep Date:	Analysis Date: <b>11/11/2016</b>		SeqNo: <b>1206491</b>		Units: <b>µg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	100	5.0	100.0	0	103	70	130			
Toluene	100	5.0	100.0	0	104	70	130			
Chlorobenzene	100	5.0	100.0	0	101	70	130			
1,1-Dichloroethene	110	5.0	100.0	0	107	70	130			
Trichloroethene (TCE)	99	5.0	100.0	0	99.0	70	130			
Surr: 1,2-Dichloroethane-d4	46		50.00		92.6	70	130			
Surr: 4-Bromofluorobenzene	47		50.00		94.8	70	130			
Surr: Dibromofluoromethane	47		50.00		94.5	70	130			
Surr: Toluene-d8	47		50.00		93.6	70	130			

Sample ID <b>1611262-005a msd</b>	SampType: <b>MSD</b>		TestCode: <b>EPA Method 8260B: VOLATILES</b>							
Client ID: <b>MW-01</b>	Batch ID: <b>W38603</b>		RunNo: <b>38603</b>							
Prep Date:	Analysis Date: <b>11/11/2016</b>		SeqNo: <b>1206492</b>		Units: <b>µg/L</b>					
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	100	5.0	100.0	0	102	70	130	1.80	20	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

# QC SUMMARY REPORT

## Hall Environmental Analysis Laboratory, Inc.

WO#: 1611262

15-Nov-16

**Client:** Intera, Inc.  
**Project:** Abq Railyard

Sample ID 1611262-005a msd		SampType: MSD		TestCode: EPA Method 8260B: VOLATILES						
Client ID: MW-01		Batch ID: W38603		RunNo: 38603						
Prep Date:		Analysis Date: 11/11/2016		SeqNo: 1206492		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Toluene	100	5.0	100.0	0	102	70	130	1.76	20	
Chlorobenzene	98	5.0	100.0	0	98.4	70	130	2.58	20	
1,1-Dichloroethene	100	5.0	100.0	0	102	70	130	4.58	20	
Trichloroethene (TCE)	99	5.0	100.0	0	99.4	70	130	0.446	20	
Surr: 1,2-Dichloroethane-d4	48		50.00		96.0	70	130	0	0	
Surr: 4-Bromofluorobenzene	48		50.00		95.7	70	130	0	0	
Surr: Dibromofluoromethane	48		50.00		95.7	70	130	0	0	
Surr: Toluene-d8	48		50.00		95.9	70	130	0	0	

Sample ID 1611262-005a ms		SampType: MS		TestCode: EPA Method 8260B: VOLATILES						
Client ID: MW-01		Batch ID: W38603		RunNo: 38633						
Prep Date:		Analysis Date: 11/11/2016		SeqNo: 1207711		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	22	1.0	20.00	0.4404	108	70	130			
Toluene	21	1.0	20.00	0	104	70	130			
Chlorobenzene	21	1.0	20.00	0	104	70	130			
1,1-Dichloroethene	22	1.0	20.00	0	108	70	130			
Trichloroethene (TCE)	21	1.0	20.00	0	107	70	130			
Surr: 1,2-Dichloroethane-d4	10		10.00		103	70	130			
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130			
Surr: Dibromofluoromethane	10		10.00		102	70	130			
Surr: Toluene-d8	9.7		10.00		97.2	70	130			

Sample ID 1611262-005a msd		SampType: MSD		TestCode: EPA Method 8260B: VOLATILES						
Client ID: MW-01		Batch ID: W38603		RunNo: 38633						
Prep Date:		Analysis Date: 11/11/2016		SeqNo: 1207712		Units: µg/L				
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Benzene	20	1.0	20.00	0.4404	99.3	70	130	7.98	20	
Toluene	20	1.0	20.00	0	101	70	130	2.55	20	
Chlorobenzene	21	1.0	20.00	0	103	70	130	1.77	20	
1,1-Dichloroethene	20	1.0	20.00	0	100	70	130	7.30	20	
Trichloroethene (TCE)	20	1.0	20.00	0	99.1	70	130	8.00	20	
Surr: 1,2-Dichloroethane-d4	10		10.00		99.7	70	130	0	0	
Surr: 4-Bromofluorobenzene	10		10.00		103	70	130	0	0	
Surr: Dibromofluoromethane	9.6		10.00		96.3	70	130	0	0	
Surr: Toluene-d8	9.8		10.00		98.1	70	130	0	0	

**Qualifiers:**

- \* Value exceeds Maximum Contaminant Level.
- D Sample Diluted Due to Matrix
- H Holding times for preparation or analysis exceeded
- ND Not Detected at the Reporting Limit
- R RPD outside accepted recovery limits
- S % Recovery outside of range due to dilution or matrix
- B Analyte detected in the associated Method Blank
- E Value above quantitation range
- J Analyte detected below quantitation limits
- P Sample pH Not In Range
- RL Reporting Detection Limit
- W Sample container temperature is out of limit as specified

**Sample Log-In Check List**

Client Name: INT Work Order Number: 1611262 RcptNo: 1

Received by/date: *AGM* 11/04/16

Logged By: Ashley Gallegos 11/4/2016 3:30:00 PM *AG*

Completed By: Ashley Gallegos 11/4/2016 6:14:39 PM *AG*

Reviewed By: *JC* 11/07/16

**Chain of Custody**

- 1. Custody seals intact on sample bottles? Yes  No  Not Present
- 2. Is Chain of Custody complete? Yes  No  Not Present
- 3. How was the sample delivered? Client

**Log In**

- 4. Was an attempt made to cool the samples? Yes  No  NA
- 5. Were all samples received at a temperature of >0° C to 6.0°C Yes  No  NA
- 6. Sample(s) in proper container(s)? Yes  No
- 7. Sufficient sample volume for indicated test(s)? Yes  No
- 8. Are samples (except VOA and ONG) properly preserved? Yes  No
- 9. Was preservative added to bottles? Yes  No  NA
- 10. VOA vials have zero headspace? Yes  No  No VOA Vials
- 11. Were any sample containers received broken? Yes  No
- 12. Does paperwork match bottle labels? Yes  No   
(Note discrepancies on chain of custody)
- 13. Are matrices correctly identified on Chain of Custody? Yes  No
- 14. Is it clear what analyses were requested? Yes  No
- 15. Were all holding times able to be met? Yes  No   
(If no, notify customer for authorization.)

# of preserved bottles checked for pH: \_\_\_\_\_  
 (<2 or >12 unless noted)  
 Adjusted? \_\_\_\_\_  
 Checked by: \_\_\_\_\_

**Special Handling (if applicable)**

- 16. Was client notified of all discrepancies with this order? Yes  No  NA

Person Notified: \_\_\_\_\_ Date: \_\_\_\_\_  
 By Whom: \_\_\_\_\_ Via:  eMail  Phone  Fax  In Person  
 Regarding: \_\_\_\_\_  
 Client Instructions: \_\_\_\_\_

17. Additional remarks:

**18. Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.3	Good	Not Present			



# Chain-of-Custody Record

Client: Intere

mailing Address: 6000 Upper Blaine #220

Phone #: 505-246-1600

mail or Fax#: jtrocyc@inter.com

A/QC Package:  Standard  Other \_\_\_\_\_

Level:  Level 4 (Full Validation)

Accreditation:  NELAP  Other \_\_\_\_\_

EDD (Type): Excel

Turn-Around Time:

Standard  Rush

Project Name:

Air Rail yard

Project #:

COA.0C55.#17

Project Manager:

Joe Tracy / Erika Marcella

Sampler: M.H. Sephy, Frank Goecker

On Ice:  Yes  No

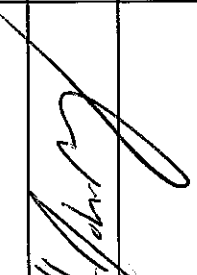
Sample Temperature: 1.3

Date	Time	Matrix	Sample Request ID	Container Type and #	Preservative Type	HEAL No.
14/16	0912	AQ	MW-07	VOA 3x VOD 7x	HCl SO <sub>2</sub> H	11011202
14/16	0947	AQ	MW-06	VOA 3x VOD 7x	HCl SO <sub>2</sub> H	-002
14/16	1145	AQ	MW-08	VOA 3x VOD 7x	HCl SO <sub>2</sub> H	-003
14/16	1310	AQ	MW-02	VOA 3x VOD 7x	HCl SO <sub>2</sub> H	-004
14/16	1335	AQ	MW-01	VOA 3x VOD 7x	HCl SO <sub>2</sub> H	-005
14/16	1402	AQ	MW-03	VOA 3x VOD 7x	HCl SO <sub>2</sub> H	-006
14/16	1427	AQ	MW-04	VOA 3x VOD 7x	HCl SO <sub>2</sub> H	-007
14/16	1500	AQ	MW-05	VOA 3x VOD 7x	HCl SO <sub>2</sub> H	-008
			Trip Blank			-009

Received by: 

Date: 11/04/16  
Time: 1530

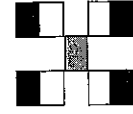
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Remarks:

cc results to emarcella@inter.com



# HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

## Analysis Request

BTEX + MTBE + TMBs (8021)	BTEX + MTBE + TPH (Gas only)	TPH 8015B (GRO / DRO / MRO)	TPH (Method 418.1)	EDB (Method 504.1)	PAH's (8310 or 8270 SIMS)	RCRA 8 Metals	Anions (F, Cl, NO <sub>3</sub> , NO <sub>2</sub> , PO <sub>4</sub> , SO <sub>4</sub> )	8081 Pesticides / 8082 PCB's	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles (Y or N)
				X					X		
				X					X		
				X					X		
				X					X		
				X					X		
				X					X		
				X					X		
				X					X		

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.