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By Alameda County Environmental Health 9:10 am, Dec 19, 2016

# TANK REMOVAL REPORT

**Warehouse Property  
1647 International Boulevard  
Oakland, Alameda County, California**



**Prepared for:**

**Alameda County Environmental Health  
Attn: Ms. Barbara J. Jakub, PG  
1131 Harbor Bay Parkway  
Alameda, CA 94502**

**Alameda County Environmental Health  
Attn: Mr. Keith E. Nowell, PG, CHG  
1131 Harbor Bay Parkway  
Alameda, CA 94502**

**Ms. Irene Trimble  
6360 Beach Drive SW  
Seattle, WA 98136**

**Mr. Alan Dimen  
2907 Pine Avenue  
Berkeley, CA 94705**

**Prepared by:**

**SCHUTZE & Associates, Inc.  
44358 South Grimmer Boulevard  
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**SCS557.2-3  
October 26, 2016**



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Project No. SCS557.2-3  
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**Reference: Warehouse Property**  
**1647 International Boulevard**  
**Oakland, Alameda County, California**

**Subject: Report:**

- **Removal of Three Underground Storage Tanks (USTs);**
- **Removal of Associated Piping System; and**
- **Exploratory Excavations**

Dear Ms. Jakub, Mr. Nowell, Ms. Trimble and Mr. Dimen:

SCHUTZE & Associates, Inc. is pleased to submit this Report regarding environmental field activities performed at 1647 International Boulevard, Oakland, California (subject site). The third, fourth and fifth on-site underground storage tanks (USTs) along with the associated piping system were removed from the subject property in August and September of 2016 under work plans approved by Alameda County Environmental Health (ACEH) and the City of Oakland Fire Prevention Bureau. Exploratory test pits were also excavated in order to determine if additional USTs existed on-site. SCHUTZE & Associates, Inc. previously removed the first and second USTs in March and April of 2016.

The field activities were performed under the supervision of Mr. Jan Schutze, a California Professional Geologist (PG).

## A. SITE DESCRIPTION

The subject site consists of the following parcel:

Address	APN <sup>1</sup>	Approximate Parcel Size	Location
1647 International Boulevard, Oakland, Alameda County, California	20-113-8	6,705 sq ft	On the western corner of the intersection of International Boulevard and 17th Avenue.

The subject site is currently developed with one warehouse building. Adjacent to the property are: a car dealership to the northwest; International Boulevard to the northeast; an apartment complex to the southeast (across 17th Avenue); and an auto body shop to the southwest (across Solano Way). The property is approximately 1,050 feet northeast of the Oakland Estuary. The subject site and vicinity are depicted on the attached Figure 1.

The subject property was occupied by Roto-Rooter, a plumbing company, until 1974. Since then, a metal fabricating company has occupied the site.

## B. BACKGROUND

### B.1 Removal of Two USTs

On March 2-4 and April 6-7, 2016, SCHUTZE & Associates, Inc. supervised the removal of one 1,000-gallon gasoline UST and one 1,400-gallon fuel/heating oil UST from the subject property.

The 1,000-gallon gasoline UST was found to be in good condition with no visible holes. The 1,400-gallon fuel/heating oil UST was found to be in poor condition with visible holes.

Based on the laboratory results for the soil samples collected in the tank pits, it was determined that soil at the site has been impacted by petroleum hydrocarbons. Contaminant concentrations increased with depth, with the highest hydrocarbon concentrations (TPH-d at 3,900 mg/kg and TPH-ho at 3,000 mg/kg)<sup>2</sup> detected at the greatest depth sampled (11.5 feet below ground surface [ft bgs]).

### B.2 Discovery and Removal of Additional USTs

During backfill operations after the removal of the second on-site tank, a SCHUTZE & Associates, Inc. field geologist observed a UST fill pipe on the public sidewalk southeast of the tank pit area, leading to the discovery of a third UST at the site. Two additional, similar utility boxes in the sidewalk southwest of the location of this UST fill pipe indicated the potential presence of other USTs beneath the sidewalk. Thus, SCHUTZE

<sup>1</sup> Assessor's Parcel Number

<sup>2</sup> Total petroleum hydrocarbons as diesel and heating oil

& Associates, Inc. recommended the removal of the three potential USTs along with exploratory test pitting to determine if additional USTs existed.

## **C. REMOVAL OF THIRD AND FOURTH USTs (AUGUST 2016)**

### **C.1 Pre-Field Activities**

SCHUTZE & Associates, Inc. received approval of the UST Closure Plan for up to three USTs from the ACEH on July 27, 2016 and was issued Permit No. SR0030545. The Operational Fire Permit (Ref. No. FP16SKIS-00002) that was issued by the City of Oakland Fire Prevention Bureau on February 25, 2016 for the initial UST removals was approved for the removal of three additional USTs under an addendum. An excavation permit (No. X1601494) was obtained on July 18, 2016 from the City of Oakland Public Works department. SCHUTZE & Associates, Inc. also submitted a Notification Form for the UST removal to the Bay Area Air Quality Management District (BAAQMD) Compliance and Enforcement Division prior to the work. Copies of all permits are presented in Appendix A.

Prior to the field work, SCHUTZE & Associates, Inc. marked the proposed excavation area with white spray paint. Subsequently, Underground Services Alert (USA) was contacted to clear the location for utilities (USA ticket #W619701054). Prior to the commencement of removal activities, all field personnel participated in a health and safety meeting.

### **C.2 UST Excavation / Removal of Residual Product**

The removal of the third and fourth USTs at 1647 International Boulevard, Oakland was conducted August 1-2, 2016 by Western Abatement, Inc. of Ignacio, California<sup>3</sup> (Western Abatement). SCHUTZE & Associates, Inc. observed the removal activities and performed confirmation sampling. Ms. Barbara Jakub, PG with ACEH and Ms. Sheryl Skillern with the City of Oakland Fire Prevention Bureau also observed the UST removals. The approximate locations of the USTs are depicted on the attached Figure 2.

The concrete slab above both USTs was saw-cut and removed to expose the surface soil. The concrete debris was stockpiled at the site pending disposal. Western Abatement excavated the soil overlying the two USTs and stockpiled the soil on 6-MIL<sup>4</sup> polyethylene liners. The first 2.5 ft of excavated material consisted of brown sandy clay fill with ballast. From 2.5 to 10 ft bgs was olive green clay with fine sand and hydrocarbon odors.

Multiple pipelines running parallel to the sidewalk were observed during the excavation process. This piping system, which connected to both of the USTs and also apparently connects to a fifth UST further to the southwest, also makes a 90-degree turn and extends to the northwest, back into the interior of the subject site property. It was decided to leave the piping system in place until it could be further explored during the

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<sup>3</sup> California Contractor's License #591839; California Department of Occupational Safety and Health (DOSH) Registration #191

<sup>4</sup> 1 MIL = one thousandth of an inch

later removal of the fifth on-site UST. The approximate piping locations are depicted in Figure 2.

During the soil removal activities, soil samples were collected for visual observation and were screened with a Photo Ionization Detector (PID) for detection of volatile organic compounds (VOCs). The maximum PID reading was 2,454 parts per million (ppm) at 5 ft bgs just above the fourth UST.

The third UST was a cylindrical tank on its side and was 300 gallons in capacity. It contained approximately 100 gallons of a clear unknown fluid and a label that read "Underground Storage Tank for Hazardous Fluid." The tank contents were placed into 55-gallon Department of Transportation (DOT)-approved drums pending waste characterization.

The fourth UST was an upright, conical tank and was 350 gallons in capacity. It contained approximately 150 gallons of an unknown black, non-oily fluid. The tank contents were placed into a 300-gallon tote pending waste characterization.

### **C.3 UST Removals**

Under the supervision of the ACEH inspector, dry ice (50 pounds) was inserted into each of the tanks to expel remaining residual gases before removal. A SCHUTZE & Associates, Inc. field geologist measured the oxygen and Lower Explosive Limits (LELs) within the tanks using a PID MultiRAE meter and observed that the oxygen levels were below 19.5% and the LELs were below 10%. The tanks were certified "safe" by the Oakland Fire Prevention Bureau inspector and were removed from the pit and placed on a plastic liner where the interior of the tanks were triple-rinsed. The rinse water was pumped into 55-gallon drums pending waste characterization.

Dry ice was again inserted into the tanks to expel remaining residual gases. When the oxygen and LEL values were low enough, a hole was cut into the tanks. The tanks were hauled to a scrap metal recycling facility (see Section J, Waste Disposal).

Green-stained soil and hydrocarbon odors were observed in the tank pit on all sides of the USTs' former locations. Soil directly beneath the tanks was saturated. However, this saturation was most likely leakage from the third UST, because deeper subsequent scoops of soil were not saturated and groundwater was not encountered. Under the ACEH inspector, two base samples were collected from the tank pit, one from beneath each tank, for laboratory analysis. Sample locations are depicted in Figure 3. The contents of each tank were collected along with one four-point composite sample from the stockpiled soil for waste characterization.

### **C.4 Tank Conditions**

The third tank was found in poor condition with visible holes. The fourth tank appeared to be in good condition with no visible holes.

### **C.5 Backfilling UST Pit**

On August 2, 2016, the tank pit was backfilled with the stockpiled soil, upon approval by the ACEH inspector, to be later removed during an over-excavation. Clean imported fill

was also used as backfill to make up for the volume of the USTs. The soil was then compacted (compaction testing was not performed) using a compacter wheel and plate before being temporarily paved with asphalt.

## **D. REMOVAL OF FIFTH UST AND ASSOCIATE PIPING SYSTEM AND EXPLORATORY TEST PITS (AUGUST-SEPTEMBER 2016)**

### **D.1 Pre-Field Activities**

SCHUTZE & Associates, Inc. removed the fifth UST under the same permits discussed in Section C.1. As previously, a Notification Form for the fifth UST removal was submitted to the BAAQMD. Copies of all permits are presented in Appendix A.

Prior to the field work, SCHUTZE & Associates, Inc. contacted USA and renewed the utility clearance ticket for the removal of the fifth UST (USA ticket # W623700852). Prior to the commencement of the removal activities, all field personnel participated in a health and safety meeting.

### **D.2 UST Excavation / Removal of Residual Product**

Western Abatement conducted the removal of the fifth on-site UST on August 30 and 31, 2016. SCHUTZE & Associates, Inc. observed the removal activities and performed confirmation sampling. Ms. Barbara Jakub, PG with ACEH and Ms. Sheryl Skillern with the City of Oakland Fire Prevention Bureau also observed the UST removal. The approximate location of the UST is depicted on Figure 2.

The concrete slab above the UST was saw-cut and removed to expose the surface soil. The concrete debris was stockpiled at the site pending disposal. Western Abatement excavated the soil overlying the two USTs and stockpiled the soil on 6-MIL polyethylene liners. The first 1.5 feet of excavated material consisted of dark brown sandy clay fill with ballast and brick debris. From 1.5 to 2.5 ft bgs was light brown clay with some oxidation staining. From 2.5 to 14 ft bgs was olive green clay with fine sand and hydrocarbon odors.

The piping system that was discovered during the removal of the third and fourth USTs was also observed above the fifth UST, where four pipes were connected to the fifth UST and another four made a 90-degree turn to the northwest, back into the interior of the subject site property. The approximate piping locations are depicted in Figure 2.

During the soil removal activities, soil samples were collected for visual observation and were screened with a PID for detection of VOCs. The maximum PID reading was 5,000 ppm at 5 ft bgs directly above the fifth UST, where piping appeared to have leaked.

The fifth tank was found to have a capacity of 1,100 gallons. The tank consisted of approximately 160 gallons of a clear, yellow unknown fluid with a hydrocarbon odor, which was removed and placed into 55-gallon DOT-approved drums pending waste characterization.

### **D.3 UST Removal**

Under the supervision of the ACEH inspector, dry ice (100 pounds) was inserted into the tank to expel remaining residual gases before removal. A SCHUTZE & Associates, Inc. field geologist measured the oxygen and LELs within the tank with a PID MultiRAE meter and observed that the oxygen levels were at 0.8% and the LELs were at 0%. The tank was certified "safe" by the Oakland Fire Prevention Bureau inspector and was removed from the pit and placed on a plastic liner where the interior of the tank was triple-rinsed. The rinse water was pumped into a 300-gallon tote pending waste characterization.

Dry ice was again inserted into the tank to expel remaining residual gases. When the oxygen and LEL values were low enough, a hole was cut into the tank. The tank was then hauled to a scrap metal recycling facility (see Section J, Waste Disposal).

As with the third and fourth USTs, stained soil and hydrocarbon odors were observed in the pit at the UST's former location. Under the supervision of the ACEH inspector, one sample was collected from the base of the tank pit at a depth of 14 ft bgs. The sample location is depicted in Figure 3. Only one base sample was collected due to the sidewalls caving in.

SCHUTZE & Associates, Inc. also collected a sample of the tank contents for waste characterization and a four-point composite sample from the stockpiled soil.

### **D.4 Tank Condition**

The fifth tank was found in good condition with no visible holes.

### **D.5 Backfilling UST Pit**

On August 31, 2016, the tank pit was lined with a 6-MIL polyethylene liner and was backfilled with the stockpiled soil, upon approval by the ACEH inspector, to be later removed during an over-excavation. The soil was then compacted (compaction testing was not performed) with a compacter wheel.

### **D.6 Removal of Associated Piping System**

On August 31 - September 1, 2016, Western Abatement trenched along the piping system where it entered the property in two separate locations, which are depicted in Figure 2. SCHUTZE & Associates, Inc. observed the trenching and performed confirmation sampling. The trenches were approximately 2 ft wide and 1 ft deep. A total length of approximately 40 ft was trenched.

Green staining was observed around the majority of the piping. The ends of the pipes that were not connected to the removed USTs were open and contained residual fluids that were also found in the soils around the openings. One pipeline was found to continue beneath the subject site warehouse. This pipe was cut and abandoned in place to avoid damage to the structure and an adjacent sewer line.

All piping was left in place until soil sample locations were determined by the ACEH inspector. Four samples were collected from 1 ft beneath the piping at joints and/or

every 20 linear ft. Sample locations are depicted in Figure 4. Once samples were collected, a total of approximately 200 ft of piping was removed and placed on a 6-MIL polyethylene liner until it was hauled to a scrap metal recycling facility (see Section J, Waste Disposal).

Subsequent to the piping removal and sampling, the trenches were backfilled using the stockpiled soil. The soil was then compacted using a compactor wheel (compaction testing was not performed).

## **D.7 Exploratory Excavations**

On August 31 and September 1, 2016, three exploratory test pits were excavated at the subject site in order to determine if other potential on-site USTs exist. Test Pits 1 and 3 were explored to a maximum depth of 5 ft and Test Pit 2 was explored to a depth of 4 ft due to the presence of a water line. The test pit locations are depicted in Figure 2. The excavated soil was temporarily placed on a 6-MIL polyethylene liner.

Two different soil layers were observed in the side walls of the test pits. From 0 - 1.5 ft bgs was a light brown, sandy clay fill with ballast. From 1.5 - 5 ft bgs was clay with fine sand. The deeper clay layer in Test Pits 2 and 3 was dark brown with no visible staining and no odor. The deeper clay layer in Test Pit 1 was olive green in color with a strong hydrocarbon odor.

During the soil removal activities, soil samples were collected for visual observation and were screened with a PID for detection of VOCs. The maximum PID reading was 961 ppm at 5 ft bgs in Test Pit 1. The PID did not detect VOCs in Test Pits 2 and 3.

Soil samples were collected from the base of each test pit and are depicted in Figure 3. No groundwater or additional USTs were encountered during the exploratory excavation activities.

Subsequent to sampling, the test pits were backfilled using the stockpiled soil. The soil was then compacted using a compactor wheel (compaction testing was not performed). Once compaction was completed, Western Abatement asphalted over all areas where asphalt and/or sidewalk had been removed for all five UST removals, pipe trenching and the exploratory test pits. (The public sidewalk that has been disturbed during tank removal activities at the site will be permanently replaced following the conclusion of investigations at the site.)

## **E. SAMPLING METHODOLOGY**

### **E.1 Soil Sampling**

SCHUTZE & Associates, Inc. collected ten soil samples in total during the activities described in Section D.

- Three samples were collected from the bases of the UST pits: one from the base of the third UST pit at 9.5 ft bgs (B-M-9.5); one from the base of the fourth UST pit at 10.5 ft bgs (B2-M-10.5); and one from the base of the fifth UST pit at 14 ft bgs (B3-M-14).



- Four samples were collected from below the piping, all of which were from 2 ft bgs; three of the four samples were collected from beneath pipe joints (PJ-1-2, PJ-2-2 and PJ-3-2); the other sample was collected from beneath a leaky pipe that continued beneath the subject site warehouse (P-4-2).
- Three samples were collected from the bases of each of the exploratory test pits: one at 5 ft bgs in Test Pit 1 (TP-1-5); one at 4 ft bgs in Test Pit 2 (TP-2-4); and one at 5 ft bgs in Test Pit 3 (TP-3-5).

The UST and test pit sample locations are depicted on Figure 3. The piping sample locations are depicted on Figure 4.

Samples were also collected from the stockpiled excavated soil from the UST pits for waste characterization in order to determine an appropriate disposal facility for the soil during a later over-excavation.

The soil samples were collected in stainless steel tubes with Teflon-sealed caps. Nitrile gloves were worn during sample collection and changed between samples to prevent cross-contamination. The samples were stored on ice in a cooler and transported to McCampbell Analytical, Inc. (CDPH ELAP<sup>5</sup> #1644) following chain-of-custody procedures.

## **E.2 Sampling of Tank Contents**

The contents of the third, fourth and fifth tanks were collected for waste characterization. The samples were collected using new disposable bailers and were placed into 40-mL volatile organic analysis (VOA) containers pre-preserved with hydrochloric acid (HCl), 1-Liter amber glass jars (one pre-preserved with HCl and another un-preserved) and 250 mL plastic containers pre-preserved with nitric acid. No observable air was present in the VOA containers subsequent to sample collection.

Nitrile gloves were worn during sample collection and changed between samples to prevent cross-contamination. The samples were stored on ice in a cooler and transported to McCampbell Analytical, Inc. following chain-of-custody procedures.

## **F. LABORATORY ANALYTICAL RESULTS**

Selected analytical results are presented in the attached Tables 1 through 3 and are shown on the attached Figures 3 and 4. The laboratory reports are included as Appendix B. The analytical results were compared to San Francisco Bay Regional Water Quality Control Board (Water Board) Tier 1 Environmental Screening Levels (ESLs).

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<sup>5</sup> California Department of Public Health Environmental Laboratory Accreditation Program

## F.1 Analytical Results for Soil

### TPHs

The UST pit, test pit and pipe trench samples were analyzed for TPH-g, -ss, -d, -mo, -bo and -ho.<sup>6</sup> using EPA Method 8015.

- TPH-g was detected above the Tier 1 ESL of 100 milligrams per kilogram (mg/kg) in samples B2-M-10.5 (1,300 mg/kg), B3-M-14 (4,800 mg/kg), PJ-1-2 (1,500 mg/kg), PJ-2-2 (120 mg/kg), PJ-3-2 (1,000 mg/kg) and TP-1-5 (260 mg/kg). TPH-g was either not detected above the laboratory reporting limit (RL) of 1.0 mg/kg or was detected below the Tier 1 ESL in other soil samples.
- TPH-ss was detected above the Tier 1 ESL of 100 mg/kg in all UST pit base samples and two of four pipe trench samples with a maximum concentration of 5,900 mg/kg in sample B2-M-10.5. TPH-ss was either not detected above the laboratory RL of 1.0 mg/kg or was detected below the Tier 1 ESL in other soil samples.
- TPH-d was detected above the Tier 1 ESL of 230 mg/kg in samples B2-M-10.5, B3-M-14 and PJ-2-2 with concentrations of 2,100 mg/kg, 1,200 mg/kg and 840 mg/kg, respectively. TPH-d was detected below the Tier 1 ESL in all other soil samples with the exception of sample TP-3-5, which did not have detections of TPH-d above the laboratory RL of 1.0 mg/kg.
- TPH-mo was detected below the Tier 1 ESL of 5,100 mg/kg in all soil samples with the exception of sample TP-3-5, which did not have detections of TPH-mo above the laboratory RL of 5.0 mg/kg. The maximum concentration of 540 mg/kg was detected in sample PJ-2-2.
- TPH-bo was detected in all soil samples with the exception of sample TP-3-5, which did not have detections of TPH-bo above the laboratory RL of 5.0 mg/kg. The maximum concentration of 2,100 mg/kg was detected in B2-M-10.5 (there is currently no corresponding Tier 1 ESL for TPH-bo).
- TPH-ho was detected in all soil samples with the exception of sample TP-3-5, which did not have detections of TPH-ho above the laboratory RL of 1.0 mg/kg. The maximum concentration of 2,300 mg/kg was detected in B2-M-10.5 (there is currently no corresponding Tier 1 ESL for TPH-ho).

The laboratory commented on the patterns of the hydrocarbon chromatograms, stating that the patterns resembled that of Stoddard solvent range hydrocarbons (carbon range C7 to C12) and diesel range hydrocarbons (C10 to C24). A hydrocarbon chromatogram review by SCHUTZE & Associates, Inc. also revealed that patterns were mostly indicative of TPH-ss and TPH-d.

### VOCs

The UST pit, test pit and pipe trench samples were analyzed for VOCs using EPA Method 8260.

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<sup>6</sup> Total petroleum hydrocarbons as gasoline, Stoddard solvent, diesel, motor oil, bunker oil and heating oil

- VOCs including MTBE<sup>7</sup>, benzene, toluene and ethylbenzene were not detected in the UST pit, test pit and pipe trench samples above the laboratory RLs; however some of the RLs for MTBE and benzene, which ranged from 0.10 to 1.0 mg/kg, are above the ESLs.
- Xylenes (total) were detected below the Tier 1 ESL of 2.3 mg/kg in sample PJ-3-2 with a concentration of 0.20 mg/kg. Xylenes (total) were not detected in the other UST pit, test pit and pipe trench samples above the laboratory RLs.
- Naphthalene was detected above the Tier 1 ESL of 0.033 mg/kg in sample B2-M-10.5 with a concentration of 1.1 mg/kg. Naphthalene was not detected above the laboratory RLs in the other UST pit, test pit and pipe trench samples; however some of the RLs, which ranged from 0.10 to 1.0 mg/kg, were above the ESL. Also, Naphthalene was detected in all three UST pit samples using EPA Method 8270, which contained lower RLs and is discussed in the next section (Semi-Volatile Organic Compounds).

The maximum concentrations of other VOCs detected in soil samples are as follows:

- Isopropylbenzene (2.7 mg/kg in B2-M-10.5);
- 4-Isopropyl toluene (1.6 mg/kg in B3-M-14);
- n-Butyl benzene (3.3 mg/kg in B2-M-10.5);
- n-Propyl benzene (3.9 mg/kg in B2-M-10.5);
- sec-Butyl benzene (11 mg/kg in B2-M-10.5);
- 1,2,4-Trimethylbenzene (1.4 mg/kg in PJ-3-2); and
- 1,3,5-Trimethylbenzene (0.33 mg/kg in PJ-3-2).

Most of these detected VOCs are not currently regulated.

### **Semi-Volatile Organic Compounds (SVOCs) / Polynuclear Aromatic Hydrocarbons (PAHs)**

The UST pit samples were analyzed for SVOCs, including PAHs, using EPA Method 8270.

- Benzo (a) pyrene was detected above the Tier 1 ESL of 0.016 mg/kg in sample B3-M-14 with a concentration of 0.096 mg/kg. Benzo (a) pyrene was not detected above the laboratory RL of 0.010 mg/kg in samples B-M-9.5 and B2-M-10.5.
- 2-methylnaphthalene was detected above the Tier 1 ESL of 0.25 mg/kg in sample B-M-9.5 with a concentration of 0.29 mg/kg. 2-methylbenzene was detected below the Tier 1 ESL in samples B2-M-10.5 and B3-M-14.
- Naphthalene was detected above the Tier 1 ESL of 0.033 mg/kg in samples B-M-9.5, B2-M-10.5 and B3-M-14 with concentrations of 0.098 mg/kg, 0.60 mg/kg and 0.29 mg/kg, respectively.

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<sup>7</sup> Methyl-tert-butyl ether

- Other SVOCs were either not detected above the laboratory RLs or were detected below the Tier 1 ESLs.

### **Polychlorinated Biphenyls (PCBs)**

The UST pit samples were analyzed for PCBs using EPA Method 8082.

- PCBs were not detected above the laboratory RLs in samples B-M-9.5, B2-M-10.5, and B3-M-14. Other soil samples were not analyzed for PCBs.

### **Metals**

The UST pit, test pit and pipe trench samples were analyzed for Metals using EPA Method 6020.

- Cadmium was either not detected above the laboratory RL of 0.25 mg/kg or was detected below the Tier 1 ESL of 39 mg/kg in soil samples.
- Chromium (total) was detected in all soil samples, with a maximum concentration of 61 mg/kg in P-4-2 (there is currently no corresponding ESL for total chromium in soil). Samples PJ-1-2 and TP-3-5 were re-analyzed for chromium VI, which was not detected above the RL of 4.0 mg/kg in the sample; however the RL of 4.0 mg/kg is above the chromium VI Tier 1 ESL of 0.30 mg/kg.
- Lead was detected above the Tier 1 ESL of 80 mg/kg in samples PJ-2-2 and TP-2-4 with concentrations of 99 mg/kg and 89 mg/kg, respectively. Lead was detected below the ESL in the other soil samples.
- Nickel was detected above the Tier 1 ESL of 86 mg/kg in sample TP-1-5 with a concentration of 120 mg/kg. Nickel was detected below the ESL in the other soil samples.
- Zinc was detected below the Tier 1 ESL of 23,000 mg/kg in the UST pit, test pit and pipe trench samples with a maximum concentration of 1,300 mg/kg in sample B-M-9.5.

## **F.2 Summary of Analytical Results**

Based on the analytical results for the soil samples collected from the UST pits, pipe trenches and test pits, soil has been impacted by hydrocarbons, with contaminant concentrations appearing to increase with depth. Detections of naphthalene at levels above Tier 1 ESLs were found in all three samples collected at the bases of the UST pits with the maximum concentration in B2-M-10.5. Lead was also detected above the Tier 1 ESL in samples PJ-2-2 and TP-2-4.

The laboratory commented on the patterns of the hydrocarbon chromatograms, stating that the patterns resembled that of Stoddard solvent range hydrocarbons (carbon range C7 to C12) and diesel range hydrocarbons (C10 to C24). A hydrocarbon chromatogram review by SCHUTZE & Associates, Inc. also revealed that patterns were mostly indicative of TPH-ss and TPH-d.

The high hydrocarbon content in the soil samples may have affected laboratory RLs, resulting in RLs that were higher than the ESLs for some analyses (laboratory analytical

qualifiers indicated that some samples were diluted due to high organic content and/or matrix interference).

## **G. WASTE CHARACTERIZATION**

### **Stockpiled Soil**

The stockpiled soil from both UST removal events was used as temporary backfill in the UST pits and will be removed during later over-excavation activities at the subject site.

Four-point composite samples (sample SP-1,2,3,4 from the third and fourth UST pits and sample SP-1.2,2.2,3.2,4.2 from the fifth UST pit) were collected from the excavated soil stockpiles in order to characterize the waste that is to be removed at a later time. The results for these samples are included in the laboratory analytical report attached as Appendix B.

The analytical results for SP-1,2,3,4 for hydrocarbons, VOCs and metals were below the Tier 1 ESLs and/or below the laboratory RLs with the exception of Arsenic (9.7 mg/kg) and TPH-g (150 mg/kg).

The analytical results for SP-1.2,2.2,3.2,4.2 for hydrocarbons, VOCs and metals were below the Tier 1 ESLs and/or below the laboratory RLs with the exception of Arsenic (4.0 mg/kg), TPH-g (530 mg/kg) and TPH-ss (410 mg/kg).

A 2011 study conducted by San Francisco State University and the Water Board that analyzed soil arsenic measurements in the urbanized Bay Area found an upper estimate of background soil arsenic of 11 mg/kg.<sup>8</sup> The arsenic concentrations detected in the stockpiled soil are below the Bay Area's estimated background level for arsenic in soil.

### **Tank Contents**

The contents of all three USTs, consisting of a total of approximately 410 gallons of fluid, were removed and placed into 55-gallon DOT-approved drums and 300-gallon totes pending waste characterization.

Samples of the tank contents from each UST were collected for waste characterization. The results for these samples are included in Tables 1 through 3 and Appendix B.

The soil and groundwater Tier 1 ESLs are not applicable to the tank content samples. The analytical results for samples (TC-3, TC-4 and TC-5) indicated high concentrations of hydrocarbons, as would be expected for UST contents. A chromatogram review of various carbon range patterns indicates TPH-ss and TPH-d as the dominant hydrocarbons detected. VOCs, including toluene, ethylbenzene, xylenes and naphthalene were detected at high concentrations in sample TC-3. These VOCs were either not detected above the laboratory RLs or were detected at low concentrations in samples TC-4 and TC-5. Metals including lead and zinc were at relatively moderate levels in samples TC-3 and TC-4. Arsenic, lead and chromium (total) were at relatively high concentrations in TC-5. Sample TC-5 was re-analyzed for chromium VI, which was not detected above the RL of 2.0 mg/kg.

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<sup>8</sup> Duvergé, D.J., Establishing Background Arsenic in Soil of the Urbanized San Francisco Bay Region, December 2011.

The corrosivity and flash point for samples TC-3, TC-4 and TC-5 were also analyzed. The corrosivity of all three tank content samples contained a pH of 6.80 to 6.83, which is not corrosive. The Flash Point for samples TC-3 and TC-5 is >100° Celsius, which is not ignitable at room temperature. The Flash Point for sample TC-4 is 36° Celsius, which is also not ignitable at room temperature.

The drummed tank contents and rinsate water will be hauled and disposed of as non-hazardous waste (see Section J, Waste Disposal).

## **H. QUALITY CONTROL AND CHAIN-OF-CUSTODY**

SCHUTZE & Associates, Inc. performed QA procedures to ensure that data precision, accuracy, completeness and comparability would meet standard data-quality goals.

All field procedures were appropriate to minimize external sample contamination. Nitrile gloves were worn throughout the sampling process and were changed for each sample to minimize cross-contamination. The soil samples were collected using new stainless steel tubes with Teflon-sealed caps. The tank content samples were collected using new disposable bailers and were placed into 40-mL VOA containers pre-preserved with HCl, 1-Liter amber glass jars (one pre-preserved with HCl and another un-preserved) and 250 mL plastic containers pre-preserved with nitric acid. No observable air was present in the VOA containers subsequent to sample collection. The sample containers were provided by McCampbell Analytical, Inc. in good condition. Subsequent to collection, the samples were placed on ice and then delivered to McCampbell Analytical, Inc. in accordance with chain of custody procedures. Holding times were observed; however samples TC-3 and TC-5 were analyzed out of holding time for corrosivity.

McCampbell Analytical, Inc. performed "Level II" Quality Control Data Reporting, which consisted of Laboratory Control Samples (LCS) and surrogate recoveries. These recoveries were checked to ensure that they were within the proper control limits. According to the laboratory quality control report (Appendix B), the surrogate recoveries for samples TC-4, TC-5, B3-M-14 and PJ-2-2 were out of their control limits due to matrix interference. All other QC samples were found to be within the proper control limits.

## **I. UST SITE UNAUTHORIZED RELEASE/CONTAMINATION REPORTS**

On September 16, 2016, SCHUTZE & Associates, Inc. submitted an Underground Storage Tank Unauthorized Release (Leak)/Contamination Site Report to Ms. Barbara Jakub, PG with ACEH for each of the three USTs.

The report for the third UST noted the discovery of a diesel/Stoddard solvent release from the tank on August 1, 2016 during the removal of a UST from the subject property. The reports for the fourth and fifth USTs noted the discovery of Stoddard solvent/diesel release from the piping on August 31, 2016 during the removal of the piping system and fifth UST from the subject site. Copies of the reports are presented as Appendix C.

## **J. WASTE DISPOSAL**

Hazardous Waste Tank Closure Certification forms for all three USTs removed from the subject site were completed by Western Abatement. Copies of the certification forms are attached as Appendix D.

All USTs, along with associated piping, were hauled to Alco Iron & Metal Co., a scrap metal recycling facility in San Leandro, California, for disposal. Copies of the documentation for receipt of the tanks at that facility are attached as Appendix E.

The liquid waste from the UST removals (tank contents and rinsate) will be disposed of at Demeno Kherson in Compton, California. Copies of the liquid waste disposal manifests will be provided as an Addendum to this Report when available.

## **K. CONCLUSIONS AND RECOMMENDATIONS**

On August 1-2 and August 30-31, 2016, SCHUTZE & Associates, Inc. supervised the removal of, respectively, one 300-gallon Stoddard solvent/diesel UST, one 350-gallon Stoddard solvent/diesel UST and one 1,100-gallon Stoddard solvent/diesel UST from 1647 International Boulevard in Oakland, California. The associated piping system, which consisted of approximately 200 ft of piping, was removed on September 1, 2016.

The fourth and fifth UST appeared to be in good condition with no visible holes. However, piping from these tanks showed evidence of leakage in the vicinity of the USTs. The third UST was found in poor condition with visible holes. Based on these observations along with observations from previous on-site UST removals, petroleum products that have been detected in soil in the tank pits most likely originated from the third UST that previously contained TPH-ss and TPH-d and/or the second UST, which was removed on April 7, 2016 and previously contained TPH-ho.

Based on the laboratory results for the soil samples collected in the tank pits, piping trenches and test pits, soil at the site has been impacted by hydrocarbons. TPH concentrations are greatest from 10.5 to 14 ft bgs. However, shallow soil samples collected from beneath the UST piping in various areas at 2 ft bgs, show that shallow soils have also been impacted by hydrocarbons.

The laboratory commented on the patterns of the hydrocarbon chromatograms, stating that the patterns resembled that of Stoddard solvent range hydrocarbons (carbon range C7 to C12) and diesel range hydrocarbons (C10 to C24). A hydrocarbon chromatogram review by SCHUTZE & Associates, Inc. also revealed that patterns were mostly indicative of TPH-ss and TPH-d. Based on information provided by Mr. Alan Dimen, historical Sanborn fire insurance maps from 1929 and 1951 depicted the building at the subject site as a "Dyeing & Cleaning" facility. Three small structures which existed at that time behind the main building (southwest portion of the property) were labeled "Dry Cleaning" on the maps. The historical use of Stoddard solvent by dry-cleaning facilities is consistent with the apparent operational time frame of the former on-site laundry. Thus, the third, fourth and fifth USTs along with the complex piping system, was likely originally installed for dry cleaning purposes. The upright conical fourth and fifth USTs are also indicative of dry cleaning UST set ups. However, due to high concentrations of diesel in the contents of all three tanks and the soil samples from beneath the USTs, it

is likely that the USTs were later used for storing diesel and/or other hydrocarbons. The fill pipes for the fourth and fifth USTs were cemented in place, whereas the fill pipe for the third UST was still accessible. It is likely that the third UST was more recently in use as a diesel UST. It is unlikely that the use of the diesel in these USTs was related to the dry-cleaning operations. It is possible that a later tenant (e.g., Roto-Rooter) used the diesel to fuel their truck fleet. The removed piping system, which was initially abandoned in place, may have also been reused to access diesel fuel from the USTs.

Due to the lack of evidence for additional USTs during the extensive trenching along the UST piping system and during the exploratory test pitting, it is unlikely that other USTs are present beneath the southwest portion of the subject site.

Based on the results from this round of work and previous environmental activities at the subject site, SCHUTZE & Associates, Inc. recommends the following:

- Continue the California UST Cleanup Fund application process;
- Collect a shallow soil sample from beneath the former pump dispenser (removed during the first UST removal activities) during the next phase of work as requested by ACEH;
- Perform a Phase I Environmental Site Assessment (ESA) to further explore the site history as requested by ACEH;
- Develop a conceptual site model (CSM) as a living document, which will be refined as more information becomes available. At this early stage, it is recommended to explore theoretical maximum contaminant plume sizes that may have originated from leaking USTs beneath the subject site as requested by ACEH to be included in the CSM; and
- Work closely with the ACEH to determine the next phases of work for the subject property.

We have enjoyed working on this project and appreciate the opportunity to be of service. Please call SCHUTZE & Associates, Inc. at (510) 226-9944 with questions or comments about this report.

Respectfully submitted:

**SCHUTZE & ASSOCIATES, INC.**



The image shows a handwritten signature in black ink, which appears to be 'Jan H. Schutze'. To the right of the signature is a circular professional seal. The seal has a double-line border. The outer ring contains the text 'REGISTERED GEOLOGIST' at the top and 'STATE OF CALIFORNIA' at the bottom. Inside the ring, the text reads 'Jan H. Schutze, M. Sc.' and 'License No. 5771'.

Jan H. Schutze, PG, M.Sc.  
President



### Attachments

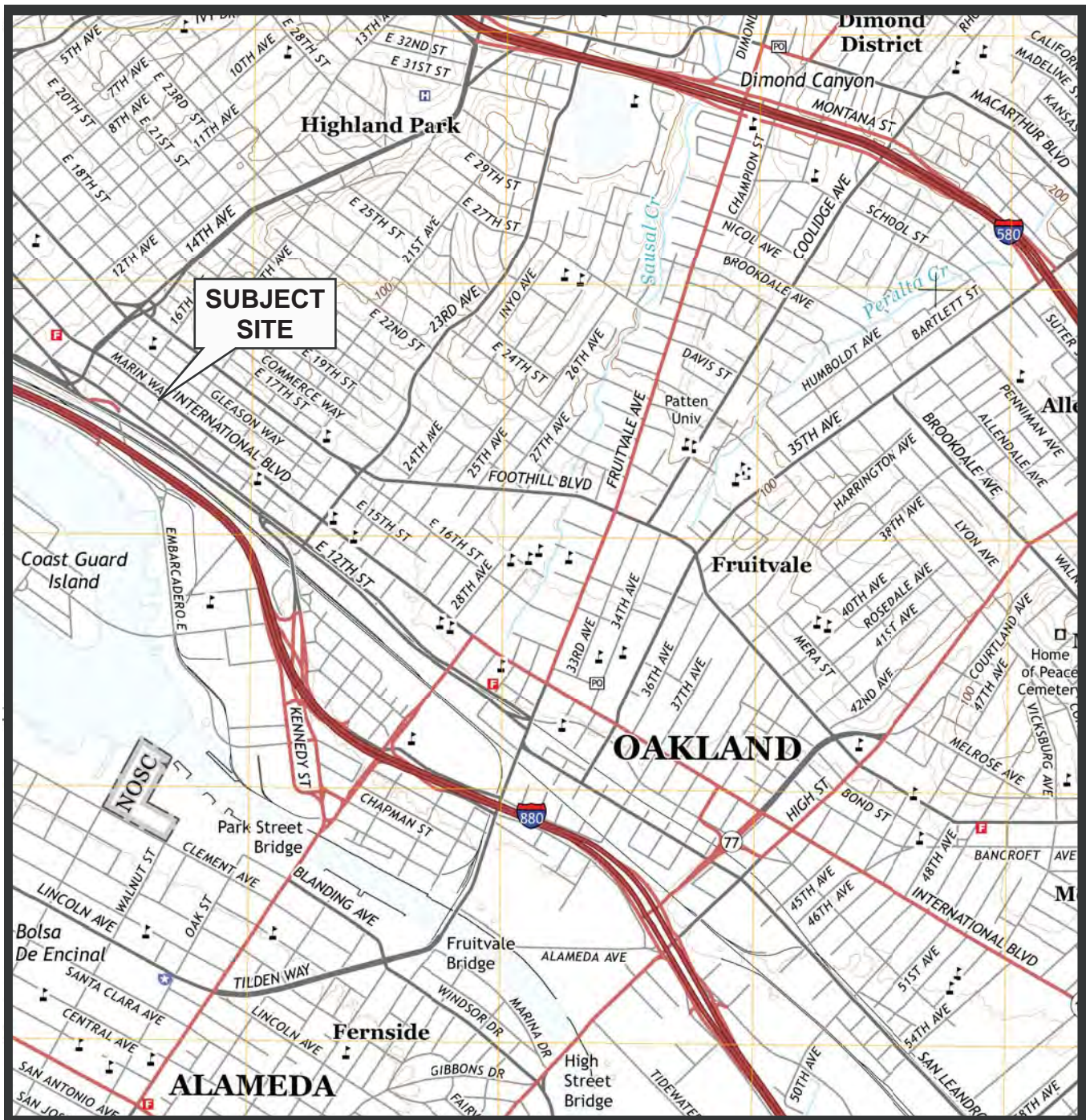
- Figure 1 Site Vicinity Map
  - Figure 2 Site Map with Test Pit, Former UST and Piping Locations
  - Figure 3 Site Map with Selected Analytical Results from UST Pits and Test Pits
  - Figure 4 Site Map with Selected Analytical Results from Pipe System Trenches
- 
- Table 1 Selected Analytical Results for TPH
  - Table 2 Selected Analytical Results for VOCs
  - Table 3 Selected Analytical Results for Metals

### Site Photographs

### Appendices

- Appendix A: Permits
- Appendix B: Laboratory Reports and Chain-of-Custody Forms
- Appendix C: UST Unauthorized Release Reports
- Appendix D: Hazardous Waste Tank Closure Certification Forms
- Appendix E: Waste Disposal Documentation

# FIGURES



**SITE VICINITY MAP**  
**1647 International Boulevard**  
**Oakland, California**



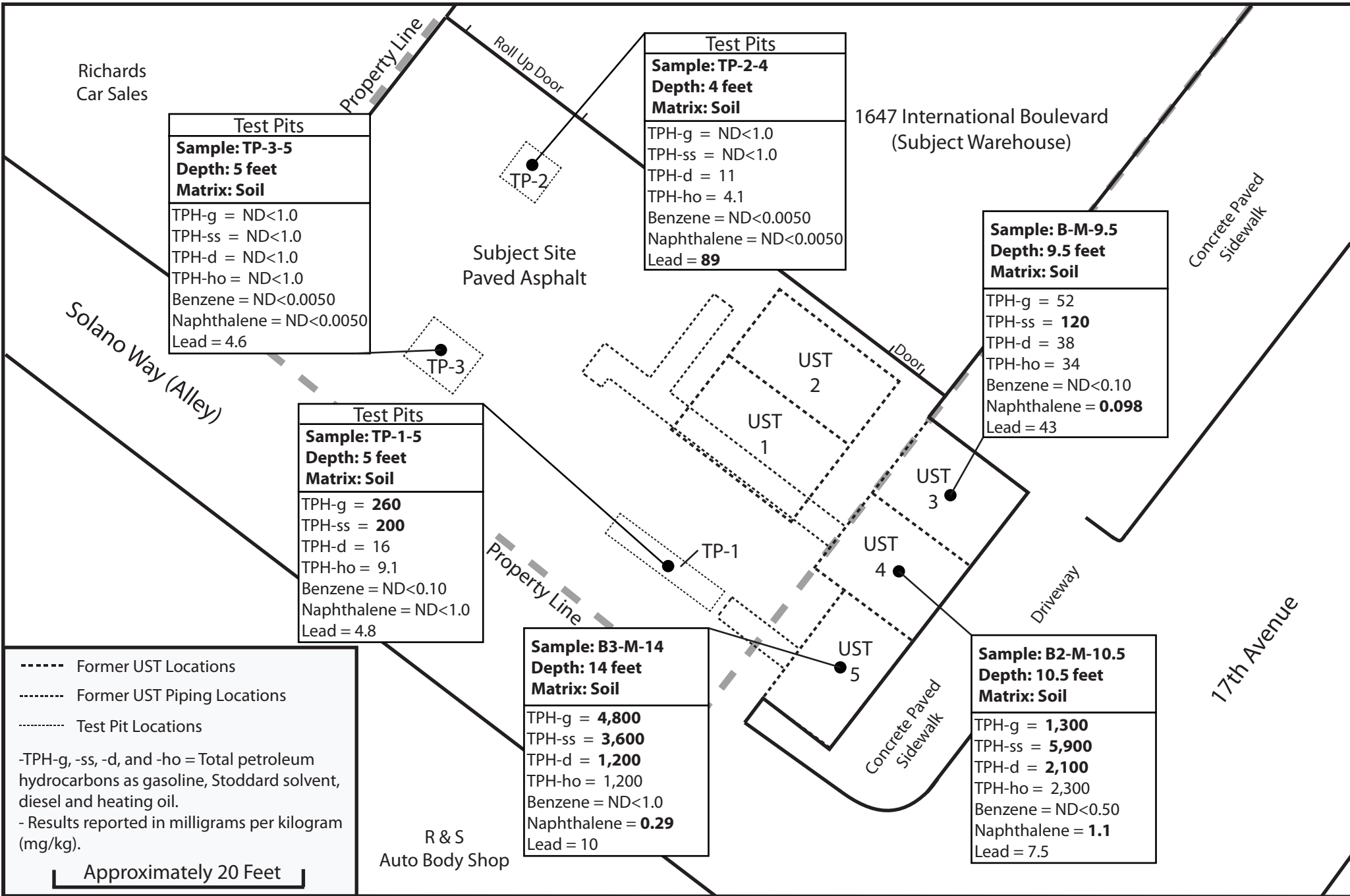
SCHUTZE & Associates, Inc.  
 Project: SCS557.2-3  
 October 2016

Source: USGS  
 Oakland East 7.5 Quad  
 2015 (scale 1:24,000)

Figure 1



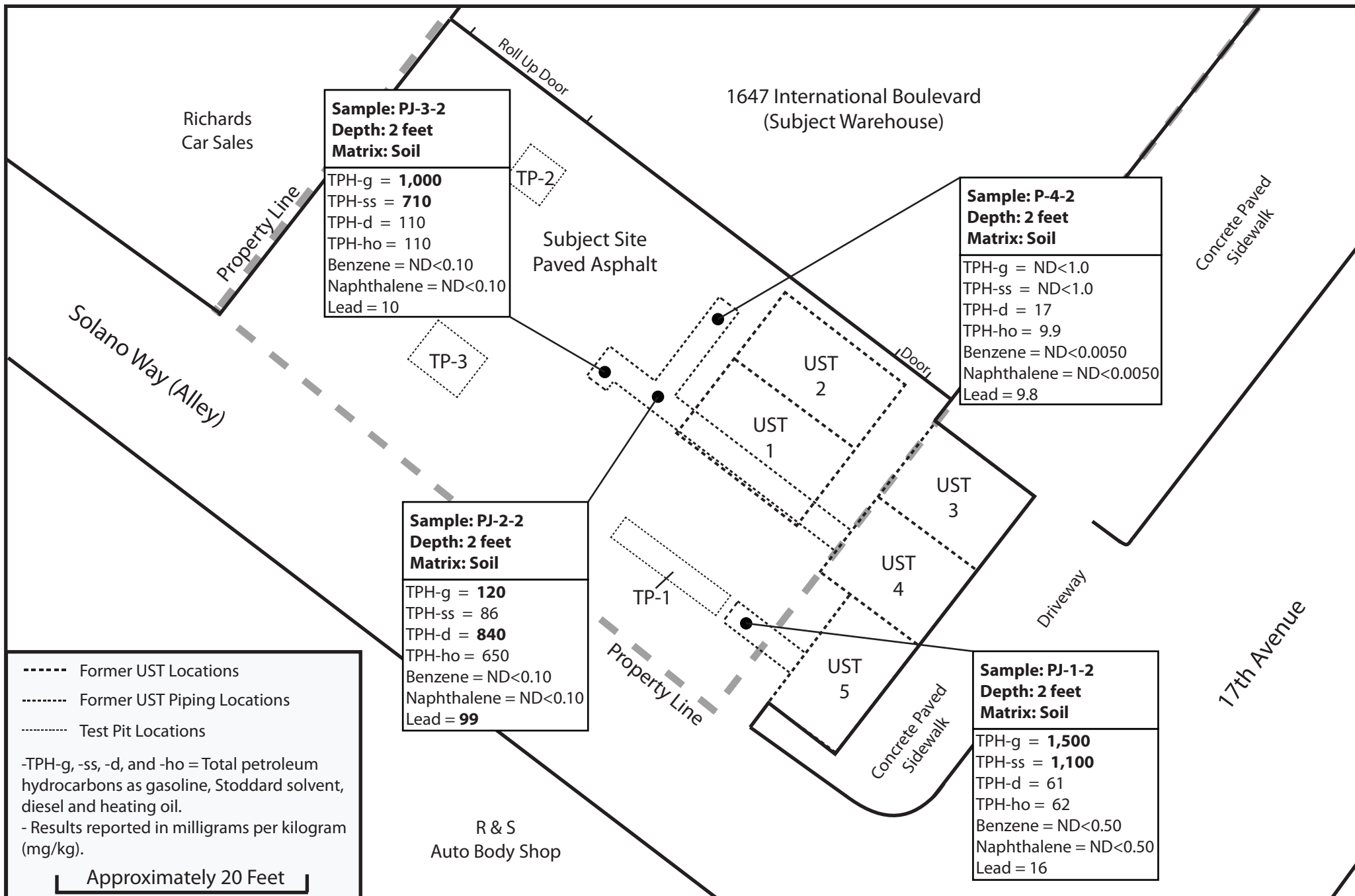




**SITE MAP WITH SELECTED ANALYTICAL RESULTS FROM UST PITS & TEST PITS**  
**1647 INTERNATIONAL BOULEVARD**  
**OAKLAND, CALIFORNIA**

**SCHUTZE & Associates, Inc.**  
 Project No. SCS557.2-3

**FIGURE 3**  
 October 2016



**SITE MAP WITH SELECTED ANALYTICAL RESULTS FROM PIPE SYSTEM TRENCHES**

**1647 INTERNATIONAL BOULEVARD  
 OAKLAND, CALIFORNIA**

# **TABLES**

**TABLE 1**  
**Selected Analytical Results for TPH**  
**1647 International Boulevard, Oakland, CA**

Type of Sample	Date Sampled	Sampling Location	Sample ID	Matrix	Unit	TPH					
						TPH-g	TPH-ss	TPH-d	TPH-mo	TPH-bo	TPH-ho
Tank Removal	8/1/2016	3rd UST Pit (base)	B-M-9.5 <sup>(1)(2)</sup>	Soil	mg/kg	52	<b>120</b>	38	16	49	34
	8/2/2016	4th UST Pit (base)	B2-M-10.5 <sup>(1)(2)</sup>	Soil	mg/kg	<b>1,300</b>	<b>5,900</b>	<b>2,100</b>	26	2,100	2,300
	8/31/2016	5th UST Pit (base)	B3-M-14 <sup>(1)(2)</sup>	Soil	mg/kg,	<b>4,800</b>	<b>3,600</b>	<b>1,200</b>	37	1,300	1,200
Waste Characterization	8/1/2016	3rd UST (tank contents)	TC-3 <sup>(1)(3)</sup>	Water	µg/L	30,000	21,000	21,000	2,500	24,000	23,000
	8/2/2016	4th UST (tank contents)	TC-4 <sup>(1)(2)(3)</sup>	Sludge	mg/kg	890	6,000	340,000	9,500	350,000	340,000
	8/30/2016	5th UST (tank contents)	TC-5 <sup>(1)(3)</sup>	Water	µg/L	9,400	7,200	55,000	ND<3,800	55,000	56,000
Piping Removal	8/31/2016	Beneath Pipe Joint	PJ-1-2 <sup>(1)(2)</sup>	Soil	mg/kg	<b>1,500</b>	<b>1,100</b>	61	19	77	62
	9/1/2016	Beneath Pipe Joint	PJ-2-2	Soil	mg/kg	<b>120</b>	86	<b>840</b>	540	1,100	650
	9/1/2016	Beneath Pipe Joint	PJ-3-2 <sup>(1)(2)</sup>	Soil	mg/kg	<b>1,000</b>	<b>710</b>	110	19	120	110
	9/1/2016	Beneath Piping	P-4-2 <sup>(1)</sup>	Soil	mg/kg	ND<1.0	ND<1.0	17	86	89	9.9
Test Pits	8/31/2016	Test Pit Base	TP-1-5 <sup>(1)(2)</sup>	Soil	mg/kg	<b>260</b>	<b>200</b>	16	16	26	9.1
	8/31/2016	Test Pit Base	TP-2-4 <sup>(1)</sup>	Soil	mg/kg	ND<1.0	ND<1.0	11	62	69	4.1
	9/1/2016	Test Pit Base	TP-3-5	Soil	mg/kg	ND<1.0	ND<1.0	ND<1.0	ND<5.0	ND<5.0	ND<1.0
<b>Tier 1 ESLs for Soil</b>						<b>100</b>	<b>100</b>	<b>230</b>	<b>5,100</b>	<b>N/A</b>	<b>N/A</b>

Matrix / Unit = soil and sludge reported in milligrams per kilogram (mg/kg); water reported in micrograms per liter (µg/L).

TPH = total petroleum hydrocarbons specified as gasoline range (-g), Stoddard solvent range (-ss), diesel range (-d), motor oil range (-mo), bunker oil range (-bo) and heating oil range (-ho).

ESLs = San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels for Soil (February 2016 [rev. 3]); Tier 1 ESLs based on: groundwater is a current or potential drinking water resource.

N/A = not applicable (no ESL listed); ND<1.0 = Non detected below a reporting limit of 1.0. **BOLD** indicates concentrations above the ESL.

(1) Flagged by laboratory as "diesel range compounds are significant; no recognizable pattern."

(2) Flagged by laboratory as "Stoddard solvent/mineral spirit?"

(3) Soil ESLs listed are not applicable to tank content samples. These samples are discussed in Section G.



**TABLE 2**  
**Selected Analytical Results for VOCs**  
**1647 International Boulevard, Oakland, CA**

Type of Sample	Date Sampled	Sampling Location	Sample ID	Matrix	Unit	VOCs					
						MTBE	Benzene	Toluene	Ethylbenzene	Xylenes (total)	Naphthalene
Tank Removal	8/1/2016	3rd UST Pit (base)	B-M-9.5	Soil	mg/kg	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<0.10	<b>0.098</b>
	8/2/2016	4th UST Pit (base)	B2-M-10.5	Soil	mg/kg	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	<b>1.1</b>
	8/31/2016	5th UST Pit (base)	B3-M-14	Soil	mg/kg	ND<1.0	ND<1.0	ND<1.0	ND<1.0	ND<1.0	<b>0.29</b>
Waste Characterization	8/1/2016	3rd UST (tank contents)	TC-3 <sup>(1)</sup>	Water	µg/L	ND<50	ND<50	880	130	6,700	700
	8/2/2016	4th UST (tank contents)	TC-4 <sup>(1)</sup>	Sludge	mg/kg	ND<1.0	ND<1.0	ND<1.0	1.6	14	2.2
	8/30/2016	5th UST (tank contents)	TC-5 <sup>(1)</sup>	Water	µg/L	ND<25	ND<25	ND<25	ND<25	26	ND<25
Piping Removal	8/31/2016	Beneath Pipe Joint	PJ-1-2	Soil	mg/kg	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
	9/1/2016	Beneath Pipe Joint	PJ-2-2	Soil	mg/kg	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<0.10
	9/1/2016	Beneath Pipe Joint	PJ-3-2	Soil	mg/kg	ND<0.10	ND<0.10	ND<0.10	ND<0.10	0.20	ND<0.10
	9/1/2016	Beneath Piping	P-4-2	Soil	mg/kg	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
Test Pits	8/31/2016	Test Pit Base	TP-1-5	Soil	mg/kg	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<0.10
	8/31/2016	Test Pit Base	TP-2-4	Soil	mg/kg	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
	9/1/2016	Test Pit Base	TP-3-5	Soil	mg/kg	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
<b>Tier 1 ESLs for Soil</b>						<b>0.023</b>	<b>0.044</b>	<b>2.9</b>	<b>1.4</b>	<b>2.3</b>	<b>0.033</b>
<p>Matrix / Unit = soil and solids reported in milligrams per kilogram (mg/kg); water reported in micrograms per liter (µg/L).  VOCs = Volatile organic compounds; MTBE = Methyl tert-butyl ether.  ESLs = San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels for Soil (February 2016 [rev. 3]); Tier 1 ESLs based on: groundwater is a current or potential drinking water resource.  ND&lt;1.0 = Non detected below a reporting limit of 1.0. <b>BOLD</b> indicates concentrations above the ESL.  (1) Soil ESLs listed are not applicable to tank content samples. These samples are discussed in Section G.</p>											

**TABLE 3**  
**Selected Analytical Results for Metals**  
**1647 International Boulevard, Oakland, CA**

Type of Sample	Date Sampled	Sampling Location	Sample ID	Matrix	Unit	Metals					
						Cadmium	Chromium (total)	Chromium VI	Lead	Nickel	Zinc
Tank Removal	8/1/2016	3rd UST Pit (base)	B-M-9.5	Soil	mg/kg	1.3	47	--	43	64	1,300
	8/2/2016	4th UST Pit (base)	B2-M-10.5	Soil	mg/kg	0.25	47	--	7.5	48	38
	8/31/2016	5th UST Pit (base)	B3-M-14	Soil	mg/kg	ND<0.25	39	--	10	51	33
Waste Characterization	8/1/2016	3rd UST (tank contents)	TC-3 <sup>(1)</sup>	Water	µg/L	16	11	--	110	30	7,400
	8/2/2016	4th UST (tank contents)	TC-4 <sup>(1)</sup>	Sludge	mg/kg	4.6	28	--	150	9.8	370
	8/30/2016	5th UST (tank contents)	TC-5 <sup>(1)</sup>	Water	µg/L	12	73	ND<2.0	500	79	3,600
Piping Removal	8/31/2016	Beneath Pipe Joint	PJ-1-2	Soil	mg/kg	ND<0.25	57	ND<4.0	16	59	69
	9/1/2016	Beneath Pipe Joint	PJ-2-2	Soil	mg/kg	0.35	44	--	<b>99</b>	39	150
	9/1/2016	Beneath Pipe Joint	PJ-3-2	Soil	mg/kg	ND<0.25	52	--	10	41	30
	9/1/2016	Beneath Piping	P-4-2	Soil	mg/kg	1.6	61	--	9.8	55	440
Test Pits	8/31/2016	Test Pit Base	TP-1-5	Soil	mg/kg	ND<0.25	51	--	4.8	<b>120</b>	30
	8/31/2016	Test Pit Base	TP-2-4	Soil	mg/kg	ND<0.25	56	--	<b>89</b>	52	52
	9/1/2016	Test Pit Base	TP-3-5	Soil	mg/kg	ND<0.25	58	ND<4.0	4.6	64	30
<b>Tier 1 ESLs for Soil</b>						<b>39</b>	<b>N/A</b>	<b>0.30</b>	<b>80</b>	<b>86</b>	<b>23,000</b>

Matrix / Unit = soil and solids reported in milligrams per kilogram (mg/kg); water reported in micrograms per liter (µg/L).

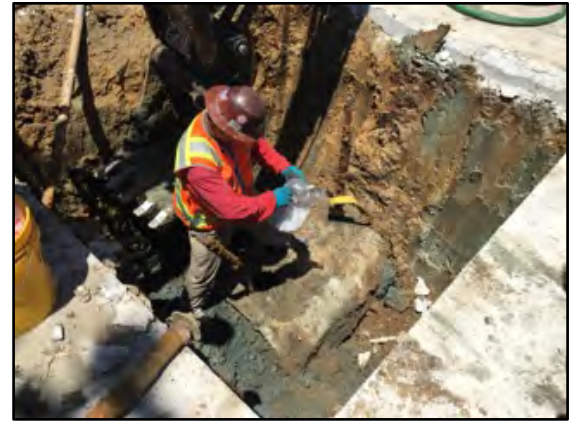
ESLs = San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels for Soil (February 2016 [rev. 3]); Tier 1 ESLs based on: groundwater is a current or potential drinking water resource. -- = not analyzed; N/A = not applicable (no ESL listed); ND<1.0 = Non detected below a reporting limit of 1.0. **BOLD** indicates concentrations above the ESL.

(1) Soil ESLs listed are not applicable to tank content samples. These samples are discussed in Section G.

# **SITE PHOTOGRAPHS**



**Photograph 1:** A saw was used to cut the concrete slab above the third and fourth USTs. The excavation area had previously been cleared for utilities by USA.



**Photograph 2:** Dry ice was added to the tank to lower the oxygen level and Lower Explosive Levels (LELs).



**Photograph 3:** Excavated soil was stockpiled on a 6-MIL polyethylene liner. Green hydrocarbon staining is visible in the stockpiled soil.



**Photograph 4:** Residual soil was scraped off of the third UST using a shovel to observe its condition.



**Photograph 5:** The third UST was found in poor condition with a 4-inch diameter hole.



**Photograph 6:** Green staining was observed in the base and sidewalls of the third UST pit. Pipe lines were found running southwest towards the fourth UST (arrow).





**Photograph 7:** Trench plates were placed over the open pits for safety until they were backfilled.



**Photograph 8:** An excavator was used to expose the fourth UST.



**Photograph 9:** Multiple pipes were found running northwest (arrow) into the subject property and southwest towards the fifth UST.



**Photograph 10:** Dry ice was added to the fourth UST to lower the oxygen level and Lower Explosive Levels (LELs).



**Photograph 11:** The fourth UST was removed using the excavator bucket and was found to be an upright, conical tank.



**Photograph 12:** The fourth UST was found in good condition with no visible holes.





**Photograph 13:** A hole was cut into the fourth UST and was then triple rinsed by Western Abatement personnel.



**Photograph 14:** Green staining was observed in the base and sidewalls of the fourth UST pit. Pipe lines were found running southwest towards the fifth UST and northwest into the subject property (arrows).



**Photograph 15:** The third and fourth UST pit was temporarily backfilled using the stockpile soil, which will later be removed during over-excavation.



**Photograph 16:** Clean imported fill was also added to the UST pit to make up for the volume of the USTs.



**Photograph 17:** The backfill was then compacted using a compactor wheel. Water was added to the soil during compaction for dust control.



**Photograph 18:** The area above the third and fourth UST pit was temporarily asphalted over to match the existing grade.

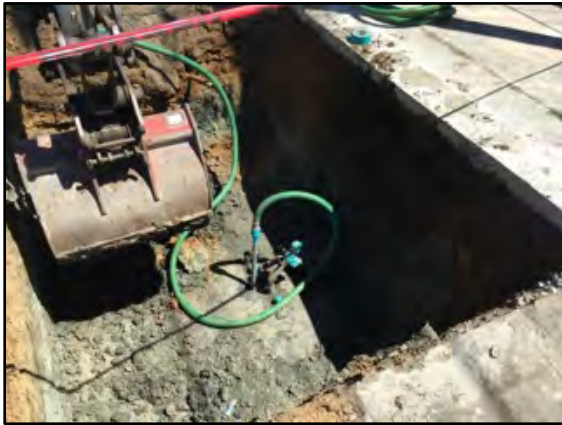




**Photograph 19:** A saw was used to cut the concrete slab above the fifth UST. The excavation area had previously been cleared for utilities by USA.



**Photograph 20:** Additional pipe lines were found running northwest into the subject property from the fifth UST.



**Photograph 21:** The tank contents were pumped just before adding dry ice to the fifth UST.



**Photograph 22:** The fifth UST was removed using the excavator arm.



**Photograph 23:** The fifth UST was found in good condition with no visible holes.



**Photograph 24:** The fifth UST pit was lined with a 6-MIL polyethylene liner before being temporarily backfilled with the stockpiled soil.





**Photograph 25:** Tank contents and rinsate were stored on site in DOT-approved 55-gallon drums and 300-gallon totes before being hauled and disposed.



**Photograph 26:** Trenches were excavated along the piping system for sampling and removal of the piping. Note the shallow olive green soil staining.



**Photograph 27:** Trenches running northwest into the property where the pipelines were located.



**Photograph 28:** Approximately 200 ft of piping was removed and stored on a plastic liner before disposal.



**Photograph 29:** Test pits were excavated to determine if other USTs existed on site. Test pit number 2 is shown at the bottom left corner and test pit number 3 is shown being excavated on the right.



**Photograph 30:** No green staining was observed in test pit number 3.



# **APPENDIX A**

## **Permits**



Oakland Fire Department, Fire Prevention Bureau  
 250 Frank H. Ogawa Plaza, Ste. 3341  
 Oakland, CA 94612-2032



(510) 238-3851  
 TTY (510) 238-6884

# Operational Fire Permit

Post Permit in Conspicuous Location

<u>Occupancy Mailing Address</u>	
Schutze & Associates	
44358 S. Grimmer Blvd.	
Fremont, CA	94538

Effective 2/25/2016 Expires  
 Inspection Ref # 2016-28815  
 Permit Ref # FP16SKIS-00002

Facility Address

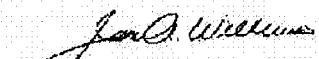
1647 INTERNATIONAL BLVD OAKLAND CA 94606

This operational **Underground Tank Removal** permit is hereby granted and is effective 2/25/2016. The holder of this permit agrees to maintain the **site** compliant with City, State, and Federal standards associated with the business operations. Failure to do so will result in the termination of this fire permit. At the time this permit was issued, the facility was in compliance with the City of Oakland Fire Code.

Not Valid If Permit Fees Not Paid

<u>Code</u>	<u>Requirements</u>
	<u>Specifics</u>

  
 Skillern, Sheryl Haz-Mat Inspector  
 Oakland Fire Prevention Bureau

  
 James A. Williams, Deputy Chief Fire Marshal  
 Office of the Fire Marshal



CITY OF OAKLAND  
FIRE PREVENTION BUREAU  
250 Frank Ogawa Plaza, Suite 3341  
Oakland, California 94612-2032  
(510) 238-3851

REVIEWED AND APPROVED  
OAKLAND FIRE DEPARTMENT  
BY: [Signature]  
TITLE: 4772 MAINT ENSP  
DATE: 2/25/16  
ALL INTERSECTIONS REQUIRE  
48 HOURS NOTICE

APPLICATION for PERMIT to INSTALL, REMOVE or REPAIR TANKS  
In the CITY OF OAKLAND

Request Submittal Date: 2/3/2016

PLEASE CIRCLE APPROPRIATE ACTIONS: Application is hereby made for permit to:

- (a) Remove (b) Install (c) Repair (d) Modify (e) Abandon/Close in Place A  
(a) Gasoline (b) Fuel oil (c) Diesel (d) \_\_\_\_\_ tank(s) and excavate, commencing:

(a) four feet inside the curb line\*; (b) inside the property line; (c) aboveground; (d) underground tank(s)  
\*inside curb line, please attach copy of sidewalk/excavation permit from PLANNING AND BUILDING

on the Northwest side of 17th Avenue St.Ave. \_\_\_\_\_ feet of \_\_\_\_\_ St./Ave.

Site Address: 1647 International Blvd. Present storage \_\_\_\_\_

Owner: Irene Trimble & Alan Dimen Address 2101 Sunset Dr. west University Place, WA Phone 253-404-0241

Applicant: Schutze & Associates, Inc Address 44358 S. Grimmer Blvd. Fremont Phone 510-226-9944

Sidewalk surface to be disturbed No  Number of Tanks One Capacity 1,200 Gallons ea.

Remarks \_\_\_\_\_

Signature [Signature]

PLEASE ATTACH/SUBMIT: (All applicants must have a City Business License Permit)

- (2) Copies of Closure Plans for underground tank removal (s)
- (2) Sets of plans and (1) copy of specifications for above ground tank removal
- (2) Sets of plans and (2) sets of application packets for underground tank installation/modifications
- (2) Sets of plans for aboveground tank installation and specifications
- copy or prepare to show Planning and Building approval for aboveground tank removal and tank repair

NOTE: FOR TANK INSTALLATION PLEASE SUBMIT THIS APPLICATION FORM ALONG WITH A APPLICATION FOR PERMIT TO OPERATE, MAINTAIN OR STORE

FOR OFFICE USE ONLY

Permit No. \_\_\_\_\_ Amt. Recv'd \_\_\_\_\_ Date Issued: \_\_\_\_\_

Copies to: Electrical Inspection ck# \_\_\_\_\_ Cash \_\_\_\_\_

Receipt# \_\_\_\_\_ Recv'd by: \_\_\_\_\_



REVIEWED AND APPROVED OAKLAND FIRE DEPARTMENT BY: <i>[Signature]</i> TITLE: <i>HAZ MAT FWS</i> DATE: <i>2/25/16</i> ALL INSPECTIONS REQUIRE 48 HOURS NOTICE
---

44358 S. GRIMMER BOULEVARD, FREMONT, CA 94538 ◊ TELEPHONE: (510) 226-9944 ◊ FAX: (510) 226-9946

February 25, 2016  
Project No. SCS557R

**City of Oakland Fire Prevention Bureau**  
**Attn: Ms. Sheryl S. Skillern, Senior Hazardous Material Inspector**  
**Hazardous Materials Unit**  
250 Frank H. Ogawa Plaza, Suite 3341  
Oakland, CA 94612

**Reference: Warehouse Property**  
**1647 International Boulevard**  
**Oakland, Alameda County, California**

**Subject: Work Plan for:**  
• **Underground Storage Tank (UST) Removal**

Dear Ms. Skillern:

SCHUTZE & Associates, Inc. is pleased to submit this Work Plan regarding environmental services at the property located at 1647 International Boulevard, Oakland, California (subject site). The purpose of the work is to remove an approximately 1,200-gallon gasoline UST according to existing regulations.

The work will be supervised by Mr. Jan Schutze, a California Professional Geologist (P.G. #5771).

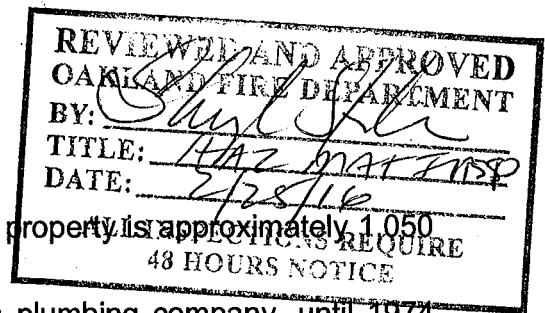
#### **A. BACKGROUND**

The subject site consists of the following parcel:

Address	APN <sup>1</sup>	Approximate Parcel Size	Location
1647 International Boulevard, Oakland, Alameda County, California	20-113-8	6,705 sq ft	On the western corner of the intersection of International Boulevard and 17th Avenue.

The subject site is currently developed with one warehouse building. Adjacent to the property are: a small car dealership to the northwest; International Boulevard to the northeast; an apartment complex to the southeast, across 17th Avenue; and an auto

<sup>1</sup> Assessor's Parcel Number



body shop to the southwest, across Solano Way. The property is approximately 1,050 feet northeast of the Oakland estuary.

The subject property was occupied by Roto-Rooter, a plumbing company, until 1974 when it was purchased by Mr. Don Kent Trimble. In 1985, Mr. Alan Dimen acquired 50% ownership of the property. A metal fabricating company occupied the site after Roto-Rooter.

Roto-Rooter had operated a private single-tank gasoline fueling station at the site, with an approximately 1,200-gallon gasoline UST that still exists. According to Mr. Alan Dimen, the tank has not been in use for at least 40 years.

## B. SCOPE OF SERVICES

SCHUTZE & Associates, Inc. will remove an approximately 1,200-gallon gasoline UST from the subject site according to existing regulations. Confirmation soil testing based on agency requirements will be conducted to determine if the tank may have impacted the surrounding soil. The UST location is depicted on the attached Figure 1.

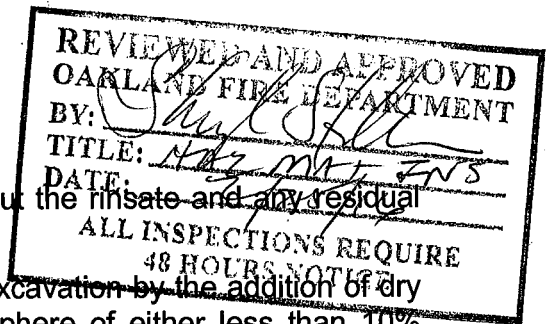
SCHUTZE & Associates, Inc. will perform the following:

### B.1 Permitting

1. Submit documents as required to the City of Oakland Fire Prevention Bureau, Alameda County Department of Environmental Health (ACDEH) and Bay Area Air Quality Management District (BAAQMD) to obtain permits and agency oversight for the UST removal.

### B.2 Removal of Gasoline UST

1. Provide notification of the scheduled field work as required to the City of Oakland Fire Prevention Bureau, ACDEH and BAAQMD.
2. Mark the proposed UST excavation area. Contact Underground Services Alert (USA) to clear the location for underground utilities.
3. Remove the UST, as follows:
  - Saw cut and remove the cement slab above the UST. The concrete will be cut with a circular diamond saw; during the cutting, the blade is cooled with water to eliminate sparks. The UST will also still be covered with a layer of dirt underneath the slab, which prevents sparks from reaching the tank.
  - Excavate soil from around the tank, the associated product piping and the footing of the former gasoline pump.
  - Stockpile the excavated soil on 6mm polyethylene liners with berms. The stockpiles will be covered. One four-point composite sample will be collected from the stockpiled soil for waste characterization.



- Triple-rinse the inside of the tank; pump out the rinsate and any residual product remaining in the tank.
  - Make the tank safe for removal from the excavation by the addition of dry ice (carbon dioxide) to achieve an atmosphere of either less than 10% oxygen or less than 10% LEL<sup>2</sup>.
  - Remove the tank when (1) measured vapor and oxygen levels are at acceptable levels and (2) approval for removal has been given by the agency inspector. Remove the associated piping and the former gasoline pump footing.
  - Haul and dispose of the tank/piping and other waste materials (rinsate; concrete waste; stockpiled soil) at appropriate facilities following applicable regulations. Waste manifesting procedures will be followed to properly document the disposal all waste materials.
    - The tank shall be manifested and hauled by a licensed hazardous waste transporter to a permitted facility, unless cleaned in accordance with Title 22 CCR<sup>3</sup>, Division 4.5, Chapter 32.
    - The stockpiled soil will remain on-site (covered and on bermed plastic) until waste characterization has been completed.
4. Collect soil samples as required by the agency inspector from the bottom and sidewalls of the tank pit and from under the piping. Should groundwater be encountered in the tank pit during the removal activities, a water sample will also be collected.
5. Field-screen the soil samples for VOCs using a portable photo ionization detector (PID). Additional soil samples may be collected based on the PID readings, the condition of the tank and/or field observations (such as hydrocarbon odors or visible soil staining).
6. Store the samples in an ice-filled cooler to be transported following chain-of-custody procedures.
7. Submit the samples to McCampbell Analytical, Inc. of Pittsburg, California (CDPH ELAP<sup>4</sup> #1644) to be analyzed. Based on waste characterization requirements and agency tank closure requirements, the analyses requested may include the following:
- VOCs with TPH-g<sup>5</sup>, including BTEX, MTBE, TBA, EDB, EDC<sup>6</sup>, naphthalene and ethanol (EPA<sup>7</sup> analytical method 8260B);
  - Lead (EPA analytical method 6010C);

<sup>2</sup> Lower explosive limit

<sup>3</sup> California Code of Regulations

<sup>4</sup> California Department of Public Health Environmental Laboratory Accreditation Program

<sup>5</sup> Total petroleum hydrocarbons as gasoline

<sup>6</sup> BTEX = Benzene, toluene, ethylbenzene and xylenes; MTBE = Methyl tert-butyl ether; TBA = Tert-butyl alcohol; EDB = Ethylene dibromide; EDC = Ethylene dichloride

<sup>7</sup> U.S. Environmental Protection Agency

- TPH-d and TPH-mo<sup>8</sup> (EPA analytical method 8015B);
- SVOCs (EPA analytical method 8270C);
- PAHs (EPA analytical method 8270C) and
- LUFT 5 metals<sup>9</sup> (EPA analytical methods 200.8/6020A).

Sample selection and analyses requested will be based on field conditions and on the requirements of the agency inspector. Any samples not submitted will be placed on hold for future analyses, if needed.

8. Backfill the tank pit with clean, imported fill material (no compaction certificate). Replace the former concrete slab with asphalt to match the existing grade.

### B.3 Reporting

SCHUTZE & Associates, Inc. will prepare a Tank Closure Report, to include: descriptions of the work performed; a site map showing sampling locations and results; analytical results presented in table form; copies of all laboratory reports and chain-of-custody forms; and copies of all waste disposal manifests.

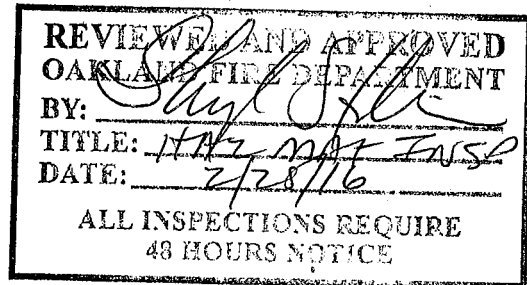
We look forward to working with you on this project.

Cordially,

**SCHUTZE & ASSOCIATES, INC.**



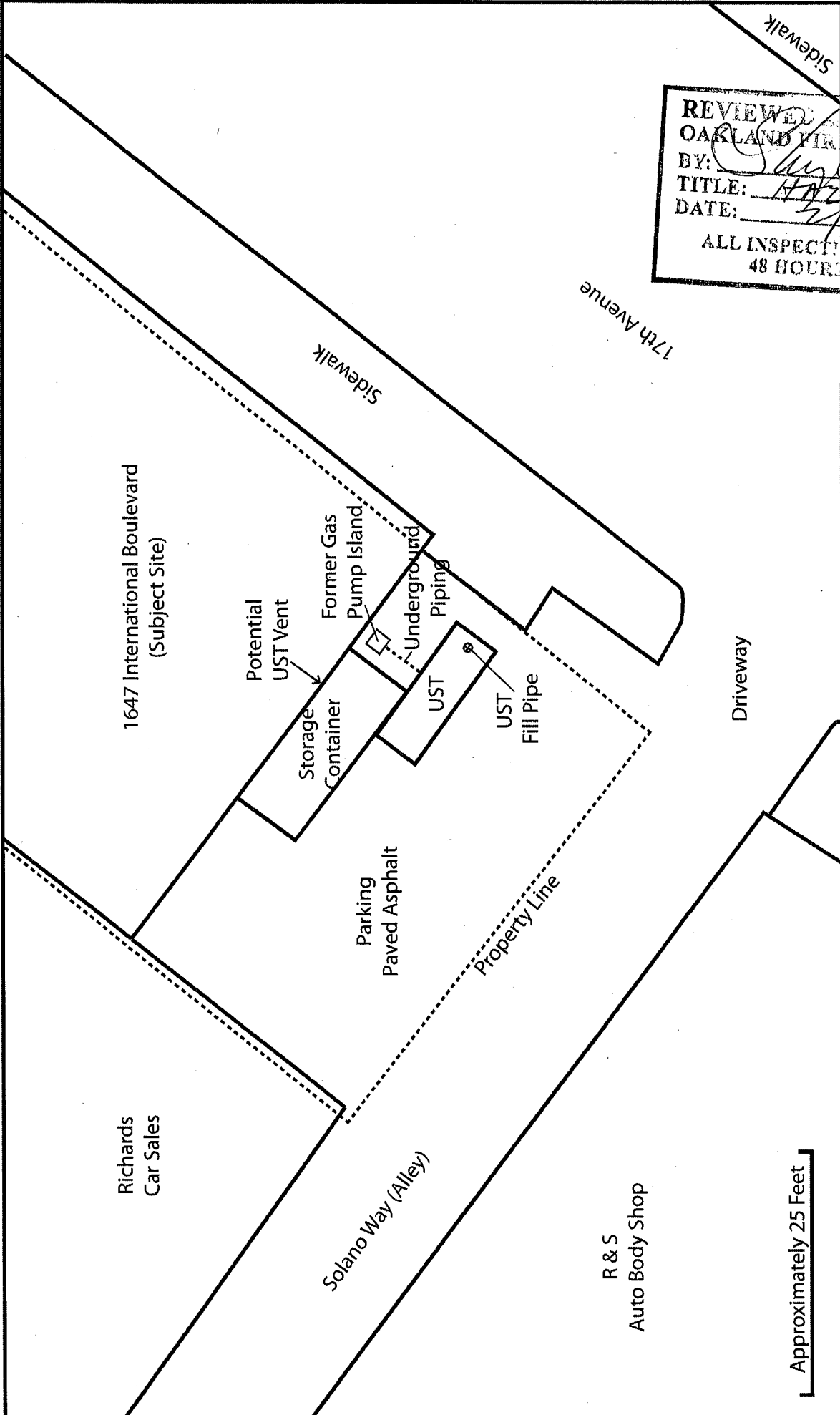
Jan H. Schutze, P.G., M.Sc.  
President



Attachment: Figure 1 – Site Map with UST Location

<sup>8</sup> Total petroleum hydrocarbons as diesel and motor oil

<sup>9</sup> Leaking Underground Fuel Tank 5 metals (Cd, Cr, Ni, Pb, Zn)



**REVIEWED AND APPROVED**  
**OAKLAND FIRE DEPARTMENT**  
 BY: *[Signature]*  
 TITLE: *HAZ MAT FWS*  
 DATE: *2/28/16*  
**ALL INSPECTIONS REQUIRE 48 HOURS NOTICE**

**SITE MAP WITH UST LOCATION**  
**1647 INTERNATIONAL BOULEVARD**  
**OAKLAND, CALIFORNIA**



Approximately 25 Feet

**SCHUTZE & Associates, Inc.**  
 Project No. SCS557

**FIGURE 1**  
 January 2016





REVIEWED AND APPROVED  
 OAKLAND FIRE DEPARTMENT  
 BY: [Signature]  
 TITLE: 1647 Int'l Blvd  
 DATE: 2/28/16  
 ALL INSPECTIONS REQUIRE  
 48 HOURS OF PRE-INSPECTION

44358 S. GRIMMER BOULEVARD, FREMONT, CA 94538 ♦ TELEPHONE: (510) 226-9944 ♦ FAX: (510) 226-9948

## SITE HEALTH AND SAFETY PLAN

### I. GENERAL SITE INFORMATION

Site Name: Trimble  
 Site Address: 1647 International Blvd, Oakland, CA 94606  
 Contact Person: Mr. Jan Schutze Phone: 510-226 9944  
 Site Identification No.: SCS557 Proposed Date of Work: February 3, 2016

### II. DESCRIPTION OF ACTIVITY

- | <u>Purpose of Activity</u>                              | <u>Type of Site</u>                            |
|---|--|
| <input type="checkbox"/> Monitoring Well Installation   | <input checked="" type="checkbox"/> Industrial |
| <input type="checkbox"/> Geoprobe Drilling              | <input type="checkbox"/> Gas Station           |
| <input type="checkbox"/> Domestic Well Installation     | <input type="checkbox"/> Dry-Cleaners          |
| <input type="checkbox"/> Agricultural Well Installation | <input type="checkbox"/> Landfill              |
| <input checked="" type="checkbox"/> Other               | <input type="checkbox"/> Other                 |

**Provide a brief description of the proposed activities:**  
Remove 1,200 gallon UST and backfill.

**Investigation-derived material disposal:**  
 Soil: Excavated soil will be stored on site and hauled after lab analyses are completed.  
 Water: \_\_\_\_\_  
 Other: UST will be hauled as hazardous waste.

### III. POTENTIAL HEALTH AND SAFETY HAZARDS

- Anticipated Physical Hazards:**
- |   |  |
|---|--|
| <input type="checkbox"/> Heat (high ambient temperature)  | <input checked="" type="checkbox"/> Heavy equipment  |
| <input type="checkbox"/> Cold                             | <input checked="" type="checkbox"/> Physical injury / trauma resulting from moving machinery |
| <input checked="" type="checkbox"/> Noise                 | <input checked="" type="checkbox"/> General construction                                     |
| <input type="checkbox"/> Oxygen depletion                 | <input checked="" type="checkbox"/> Physical injury / trauma                                 |
| <input type="checkbox"/> Asphyxiation                     | <input type="checkbox"/> Electrical hazards  |
| <input checked="" type="checkbox"/> Excavation            | <input checked="" type="checkbox"/> Falls, trip, slipping                                    |
| <input checked="" type="checkbox"/> Cave-ins              | <input checked="" type="checkbox"/> Potential fire or explosion                              |
| <input checked="" type="checkbox"/> Falls, trip, slipping |  |
| <input type="checkbox"/> Other (specify): _____           |  |

Permits for which no major inspection has been approved within 180 days shall expire by limitation. No refund more than 180 days after expiration or final.



# CITY OF OAKLAND

**FIELD COPY**

250 FRANK H. OGAWA PLAZA ■ 2ND FLOOR ■ OAKLAND, CA 94612

Planning and Building Department  
www.oaklandnet.com

PH: 510-238-3891  
FAX: 510-238-2263  
TDD: 510-238-3254

**Permit No:** X1601494      OPW - Excavation      **Filed Date:** 7/18/2016  
**Job Site:** 1647 INTERNATIONAL BLVD      **Schedule Inspection by calling:** 510-238-3444  
**Parcel No:** 020 011300800

**District:**

**Project Description:** Remove entire UG storage tank in SIDEWALK AREA ONLY. FIRE MARSHAL review per FP16SKIS-00002. Do Not Cut Into Pavement Unless And Until Ready To Complete Project. If working within 25' feet of a monument you must comply with State Law 8771, contact the Inspector prior to starting excavation: minimum \$5,800.00 fine for non-compliance. Ensure that environmental controls are in place to prevent dust/debris/waste water from contaminating environment. Comply with all terms of City of Oakland Public Works Standards, Street Excavation Rules, Revised March 2015 and City Council Ordinance No. 13300 C.M.S. Five day prior notice required for work lasting five days or less in business/commercial districts; 72 hour notice in residential districts. Ten day prior notice required for work lasting six days or more in all districts. USA # and date must be provided in order to have a permit issued. Permit valid 30 days. Call PWA INSPECTION prior to start: 510-238-3651. 4th FLOOR. USA #W619701054

**Related Permits:**

	<u>Name</u>	<u>Applicant</u>	<u>Address</u>	<u>Phone</u>	<u>License #</u>
<b>Owner:</b>	TRIMBLE DON K & DIMEN ALAN C		2907 PINE AVE BERKELEY, CA		
<b>Contractor- Employee:</b>	KEVIN LOEB	X	4480 IGNACIO BLVD #234 IGNACIO, CA	(925) 485-3660	
<b>Contractor:</b>	WESTERN ABATEMENT INC		4480 IGNACIO BLVD #234 IGNACIO, CA	(925) 485-3660	591839

**PERMIT DETAILS:** Building/Public Infrastructure/Excavation/NA

**General Information**

Excavation Type: Private Party	Special Paving Detail Required:	Tree Removal Involved:
Date Street Last Resurfaced:		Holiday Restriction (Nov 1 - Jan 1):
Worker's Compensation Company Name:		Limited Operation Area (7AM-9AM) And (4PM-6PM):
Worker's Compensation Policy #:		

**Key Dates**

Approximate Start Date:

Approximate End Date:

<b>TOTAL FEES TO BE PAID AT FILING: \$449.09</b>					
Application Fee	\$70.00	Excavation - Private Party Type	\$321.36	Records Management Fee	\$37.18
Technology Enhancement Fee	\$20.55				

Permits for which no major inspection has been approved within 180 days shall expire by limitation. No refund more than 180 days after expiration or final.



Permit No: X1601494

Parcel No: 020 011300800

Job Site: 1647 INTERNATIONAL BLVD

Page 2 of 3

Plans Checked By \_\_\_\_\_ Date \_\_\_\_\_

Permit Issued By [Signature]

Date 7/18/16

Finalized By \_\_\_\_\_

Date \_\_\_\_\_

ALAMEDA COUNTY  
 DEPARTMENT OF ENVIRONMENTAL HEALTH  
 1131 HARBOR BAY PARKWAY  
 ALAMEDA, CA 94502-6577  
 PHONE (510) 567-6700

**ACCEPTED**

Underground Storage Tank Closure Permit Application  
 Alameda County Division of Hazardous Materials  
 1131 Harbor Bay Parkway, Suite 280  
 Alameda, CA 94502-4377

These closure/removal plans have been received and found to be acceptable and essentially meet the requirements of State and Local Health Laws. Changes to your closure plans indicated by this Department are to assure compliance with State's and local laws. The project proposed herein is now released for issuance of any required building permits for construction/destruction.

One copy of the accepted plans must be on the job and available to all contractors and craftsmen involved with the removal.

Any changes or alterations of these plans and specifications must be submitted to this Department and to the Fire and Building Inspections Department to determine if such changes meet the requirements of State and local laws. Notify this Department at least 72 hours prior to the following required inspections:

-  Removal of Tank(s) and Piping
-  Sampling
-  Final Inspection

Issuance of a permit to operate, by permanent site closure, is dependent on compliance with accepted plans and all applicable laws and regulations.

**THERE IS A FINANCIAL PENALTY FOR NOT OBTAINING THESE INSPECTIONS**

Contact Specialist

  
 Barbara Jakub  
 barbara.jakub@acgov.org  
 510-567-6737

Approved 7/27/2016

**UNDERGROUND STORAGE TANK CLOSURE PLAN**

\*\*\* Complete closure plan according to instructions \*\*\*

1. Name of Business Warehouse  
 Business Owner or Contact Person (PRINT) Alan Dimen
2. Site Address 1647 International Boulevard  
 City, State Oakland, CA Zip 94606 Phone 510-536-1500
3. Mailing Address 1647 International Boulevard  
 City, State Oakland, CA Zip 94606 Phone 510-536-1500
4. Property Owner (1) Irene Trimble  
 Business Name (if applicable) N/A  
 Address 2101 Sunset Drive West  
 City, State University Place, WA Zip 98466 Phone 253-404-0241  
 Property Owner (2) Alan Dimen  
 Business Name (if applicable) N/A  
 Address 2907 Pine Avenue

City, State Berkeley, CA Zip 94705 Phone 510-206-0075

5. Generator name under which tank will be manifested

Warehouse at 1647 International Boulevard

EPA I.D. No. under which tank(s) will be manifested CAC002859804

6. Contractor Western Abatement

Address 448 Ignacio Boulevard, #234

City, State Ignacio, CA Zip 94949 Phone 707-795-9770

License Type ASB, A, C21, HAZ, C22 ID# 591839

7. Consultant (if applicable) Schutze & Associates, Inc.

Address 44358 South Grimmer Boulevard

City, State Fremont, CA Zip 94538 Phone 510-226-9944

8. Main Contact Person for Investigation (if applicable)

Name Jan Schutze Title President / P.G.

Company Schutze & Associates, Inc.

Phone 510-226-9944

9. Number of underground tanks being closed with this plan 1 (possibly up to 3)

Length of piping being removed under this plan Unknown

Total number underground tanks at this facility (\*\*confirmed with owner or operator)  
Unknown

10. State Registered Hazardous Waste Transporters/Facilities (See Instructions).

- a) Product/Residual Sludge/Rinsate Transporter

Name ECI EPA I.D. No. CAD 982030173

Hauler License No. 0293 License Exp. Date N/A

Address 255 Parr Boulevard

City, State Richmond, CA Zip 94801

- b) Product/Residual Sludge/Rinsate Disposal Site

Name ECI EPA I.D. No. CAD 982030173

Address 255 Parr Boulevard

City, State Richmond, CA Zip 94801

c) Tank and Piping Transporter

Name ECI EPA I.D. No. CAD 982030173

Hauler License No. 0293 License Exp. Date N/A

d) Tank and Piping Disposal Site

Name ECI EPA I.D. No. CAD 982030173

Address 255 Parr Blvd

City, State Richmond, CA Zip \_\_\_\_\_

11. Sample Collector

Name Kevin Loeb

Company Schutze & Associates, Inc

Address 44358 South Grimmer Boulevard

City, State Fremont, CA Zip 94538 Phone 510-226-9944

12. Laboratory

Name McCampbell Analytical, Inc.

Company same

Address 1534 Willow Pass Road

City, State Pittsburg, CA Zip 94565

State Certification No. 1644

13. Have tank(s) or piping leaked in the past? Yes [ ] No [ ] Unknown [ x ]

If yes, describe: N/A

\_\_\_\_\_

\_\_\_\_\_

14. Describe method(s) to be used for rendering tank(s) inert:

Any material remaining in the tank will be removed. The tank will then be triple-rinsed to remove residual material. Dry ice will be added to the tank to achieve either less than 10% oxygen or less than 20% LEL.

**Before tank(s) are pumped out and inerted, all associated piping must be flushed back into the tank(s). All accessible piping must then be removed. Inaccessible piping must be permanently plugged using grout.**

The Bay Area Air Quality Management District, (415) 771-6000, along with local Fire and Building Departments, must also be contacted for tank removal permits. Fire departments typically require the use of a combustible gas indicator to verify tank inertness. **It is the contractor's responsibility to have a functional combustible gas indicator on-site to verify that the tank(s) is inerted.**

**15. Tank History and Sampling Information <sup>\*\*\*</sup>(See Instructions)<sup>\*\*\*</sup>**

Tank		Material to be sampled (tank contents, soil, groundwater)	Location and Depth of Sample(s)
Capacity (gallons)	Use History include date last used (estimated)		
Unknown.	Unknown: Last used before 1974 (tank pre-dated current owners purchase of property; tank was never used by current owners).	Tank contents; soil; groundwater if present.	Samples will be collected from the following: -At each end of the tank (at a depth of 2 feet into native soil). -From the side walls (as required: depth based on field observations). -Under the piping (as required: length of piping at site is unknown).

**One soil sample must be collected for every 20 linear feet of underground piping that is removed. A groundwater sample must be collected if any groundwater is present in the excavation.**

Excavated/Stockpiled Soil	
Stockpiled Soil Volume (estimated)	Sampling Plan
Approximately 17 cubic yards.	A four-point composite sample will be collected from the stockpile.

**Stockpiled soil must be placed on bermed plastic and must be completely covered by plastic sheeting.**

Will the excavated soil be returned to the excavation immediately after tank removal?  
 yes    no    unknown

If yes, explain reasoning \_\_\_\_\_  
 \_\_\_\_\_

**If unknown at this point in time, please be aware that excavated soil may not be returned to the excavation without prior approval from this office. This means that the contractor, consultant, or responsible party must communicate with the Specialist IN ADVANCE of backfilling activities.**



16. Chemical methods and associated detection limits to be used for analyzing sample(s):

**The Tri-Regional Board recommended minimum verification analyses and practical quantitation reporting limits shall be followed.**

See Table 2, Recommended Minimum Verification Analyses for Underground Tank Leaks.

Contaminant Sought	EPA or Other Sample Preparation Method Number	EPA or Other Analysis Method Number	Method Detection Limit
TPH-g, -d, -mo	SW5030B	8015B	0.74-50
VOCs	SW5030B	8260B	0.0008-0.005
SVOCs	SW3550B	8270C	0.12-0.64
Lead	SW3050B	6010C	1.4
Luft 5 Metals	SW3050B	200.8/6020A	0.005-1.4 (units = mg/kg)

See Attached Required minimum verification analyses.

17. Submit Site Health and Safety Plan (See Instructions)

18. Submit Worker's Compensation Certificate copy

Name of Insurer RJM Specialty Insurance SV, LLC

19. Submit Plot Plan **\*\*\* (See Instructions) \*\*\***

20. Enclose Deposit (See Instructions)

21. **Report all leaks or contamination to this office within 5 days of discovery.**  
The written report shall be made on an Underground Storage Tank Unauthorized Leak/Contamination Site Report (URL) form.

22. **Submit a closure report to this office within 60 days of the tank removal. The closure report must contain all information listed in item 22 of the instructions.**

23. Submit State (Underground Storage Tank Permit Application) Forms A and B (one-B form for each UST to be removed) (mark box 8 for "tank removed" in the upper right hand corner). I declare that to the best of my knowledge and belief that the statements and information provided above are correct and true.

## MINIMUM VERIFICATION ANALYSES FOR UNDERGROUND STORAGE TANK SITES

### Alameda County Environmental Health

#### Certified Unified Program Agency (CUPA) and Local Oversight Program (LOP)

1131 Harbor Bay Parkway, Suite 250

Alameda, CA 94502-6577

(510) 567-6700

<http://www.acgov.org/aceh/>

This document describes required laboratory analyses for soil and groundwater samples collected for underground storage tank (UST) sites. These requirements replace those previously described in the Unidocs guidance document entitled, "Recommended Minimum Verification Analyses for Underground Storage Tank Leaks" (UN-078). Analytes may be added or deleted during site characterization and remediation with approval from ACEH.

Material Stored	Analytes	Analytical Method	
		Soil	Groundwater
Gasoline Leaded or Unleaded	TPH as gasoline C5-C12	EPA 8260B/C	EPA 8260B/C
	BTEX, MTBE, TBA, naphthalene, EDB, EDC, and ethanol <sup>2</sup>	EPA 8260B/C	EPA 8260B/C
	Lead <sup>3</sup>	EPA 6010	No analysis <sup>4</sup>
Unknown Fuel	Same analytes as for gasoline	As above	As above
	TPH as diesel C12-C22	EPA 8015	EPA 8015
Diesel, Jet Fuel, Kerosene, or Fuel Oil	TPH specific to fuel (e.g. TPH as kerosene)	EPA 8015	EPA 8015
	BTEX, MTBE, and naphthalene	EPA 8260B/C	EPA 8260B/C
Chlorinated Solvents	Volatile Organic Compounds (full scan including BTEX, naphthalene, and chlorinated hydrocarbons)	EPA 8260B/C full scan	EPA 8260B/C full scan
	TPH as Stoddard Solvent C7-C12	EPA 8015	EPA 8015
Waste Oil, Used Oil, Unknown Oil, or Bunker Fuel	TPH as gasoline C5-C12	EPA 8260B/C	EPA 8260B/C
	TPH as diesel C12-C22	EPA 8015	EPA 8015
	TPH as motor oil C23-C32 <sup>5</sup>	EPA 8015	No analysis <sup>4</sup>
	Volatile Organic Compounds (full scan including BTEX, MTBE, TBA, naphthalene, and chlorinated hydrocarbons)	EPA 8260B/C full scan	EPA 8260B/C full scan
	Metals: Cd, Cr, Pb, Ni, Zn	EPA 6010	No analysis <sup>4</sup>
	PCBs	EPA 8082A	EPA 8082A
	Semi Volatile Organic Compounds (including PAHs <sup>6</sup> , pentachlorophenol, and creosote)	EPA 8270	EPA 8270

**Notes:**

- Silica gel cleanup is not to be performed for any of the above analyses.
- Benzene, Toluene, Ethylbenzene, Xylenes (BTEX), Methyl tertiary Butyl Ether (MTBE), Tert Butyl Alcohol (TBA), lead scavengers Ethylene Dibromide (EDB) and Ethylene Dichloride (EDC), and ethanol. Additional fuel oxygenates Tert amyl ether (TAME), di-isopropyl ether (DIPE), and Ethyl t-butyl ether (ETBE) may be added as optional analytes.
- Organic lead may be added as an optional analyte at fuel leak sites where lead is an analyte.
- No groundwater sample for metals or TPH as motor oil is required unless requested by ACEH.
- For USTs that potentially contained oils that are not petroleum-based, analysis for hexane extractable materials using EPA Method 9071B for soil and EPA Method 1664 for water is required.
- Polycyclic aromatic hydrocarbon (PAH) analysis must include naphthalene, acenaphthene, acenaphthylene, anthracene, chrysene, fluorine, fluoranthene, phenanthrene, pyrene, benzo(b)fluoranthene, benzo(a)pyrene, benzo(k)fluoranthene, benzo(a)anthracene, indeno(1,2,3-c,d)pyrene, dibenz(a,b)anthracene, and benzo(g,h,i)perylene.

I understand that information, in addition to that provided above, may be needed in order to obtain approval from the Environmental Protection Division and that no work is to begin on this project until this plan has been approved.

I understand that any changes in design, materials, or equipment will void this plan if prior approval is not obtained.

I understand that all work performed during this project will be done in compliance with all applicable OSHA (Occupational Safety and Health Administration) requirements concerning personnel health and safety. I understand that site and worker safety are solely the responsibility of the property owner or his agent and that this responsibility is not shared nor assumed by the County of Alameda.

Once I have received my stamped, accepted closure plan, I will contact the project Hazardous Materials Specialist at least three working days in advance of site work to schedule the required inspections.

CONTRACTOR INFORMATION

Name of Business Western Abatement

Name of Individual Todd Hurley

Signature \_\_\_\_\_ Date \_\_\_\_\_

Original  
Sent to ACOEH  
misplaced.

PROPERTY OWNERS OR  MOST RECENT TANK OPERATOR

Name of Business Warehouse

Name of Individuals Alan Dimen and Irene Trimble

Signature [Signature] -Agent for the owners Date 6/29/16



## **Subject: Conditions for Approval of Closure Plan**

### **The following items are included in the Conditions of Approval by Item #:**

14. Since tanks are likely heating oil and not gasoline, do not introduce liquid into the tank while the tank is in the ground. Remove the tank, place it on bermed plastic sheeting before introducing liquids and cleaning the tank. Ensure that all liquids are captured within the bermed area and appropriately disposed.
15. Tank size is not known. If tank is less than 1,000 gallons only one soil sample need be collected from the fill or pump end of the tank.
16. Tank was reported as an unknown contents, use the recommended minimum verification analysis for unknown oil (see attached).







44358 S. GRIMMER BOULEVARD, FREMONT, CA 94538 ♦ TELEPHONE: (510) 226-9944 ♦ FAX (510) 226-9948

## SITE HEALTH AND SAFETY PLAN

### I. GENERAL SITE INFORMATION

Site Name: 1647 International Boulevard  
 Site Address: 1647 International Blvd, Oakland, CA 94606  
 Contact Person: Mr. Jan Schutze Phone: 510-226 9944  
 Site Identification No.: SCS557 Proposed Date of Work: July 25, 2016

### II. DESCRIPTION OF ACTIVITY

- | <u>Purpose of Activity</u>                              | <u>Type of Site</u>                            |
|---|--|
| <input type="checkbox"/> Monitoring Well Installation   | <input checked="" type="checkbox"/> Industrial |
| <input type="checkbox"/> Geoprobe Drilling              | <input type="checkbox"/> Gas Station           |
| <input type="checkbox"/> Domestic Well Installation     | <input type="checkbox"/> Dry-Cleaners          |
| <input type="checkbox"/> Agricultural Well Installation | <input type="checkbox"/> Landfill              |
| <input checked="" type="checkbox"/> Other               | <input type="checkbox"/> Other                 |

**Provide a brief description of the proposed activities:**  
Removal of one UST and backfill.

**Investigation-derived material disposal:**

Soil: Excavated soil will be stored on site and hauled after lab analyses are completed.

Water: \_\_\_\_\_

Other: UST will be hauled as hazardous waste.

### III. POTENTIAL HEALTH AND SAFETY HAZARDS

**Anticipated Physical Hazards:**

- |   |  |
|---|--|
| <input type="checkbox"/> Heat (high ambient temperature)  | <input checked="" type="checkbox"/> Heavy equipment  |
| <input type="checkbox"/> Cold                             | <input checked="" type="checkbox"/> Physical injury / trauma resulting from moving machinery |
| <input checked="" type="checkbox"/> Noise                 | <input checked="" type="checkbox"/> General construction                                     |
| <input type="checkbox"/> Oxygen depletion                 | <input checked="" type="checkbox"/> Physical injury / trauma                                 |
| <input type="checkbox"/> Asphyxiation                     | <input type="checkbox"/> Electrical hazards  |
| <input checked="" type="checkbox"/> Excavation            | <input checked="" type="checkbox"/> Falls, trip, slipping                                    |
| <input checked="" type="checkbox"/> Cave-ins              | <input checked="" type="checkbox"/> Potential fire or explosion                              |
| <input checked="" type="checkbox"/> Falls, trip, slipping |  |
| <input type="checkbox"/> Other (specify): _____           |  |



44358 S. GRIMMER BOULEVARD, FREMONT, CA 94538 ◊ TELEPHONE: (510) 226-9944 ◊ FAX (510) 226-9948

**Surveillance equipment and materials:**

Instrument:   PID   Action level:   35 ppm  

**First Aid:**

  First aid kit available in Schutze & Associate, Inc. vehicle.  

**Team Composition:**

Team Leader:   Jan Schutze (consultant)  

Team Members:   Western Abatement personnel (Excavators) and Kevin Loeb (Staff Geologist).  

**VI. EMERGENCY INFORMATION**

**Local resources:**

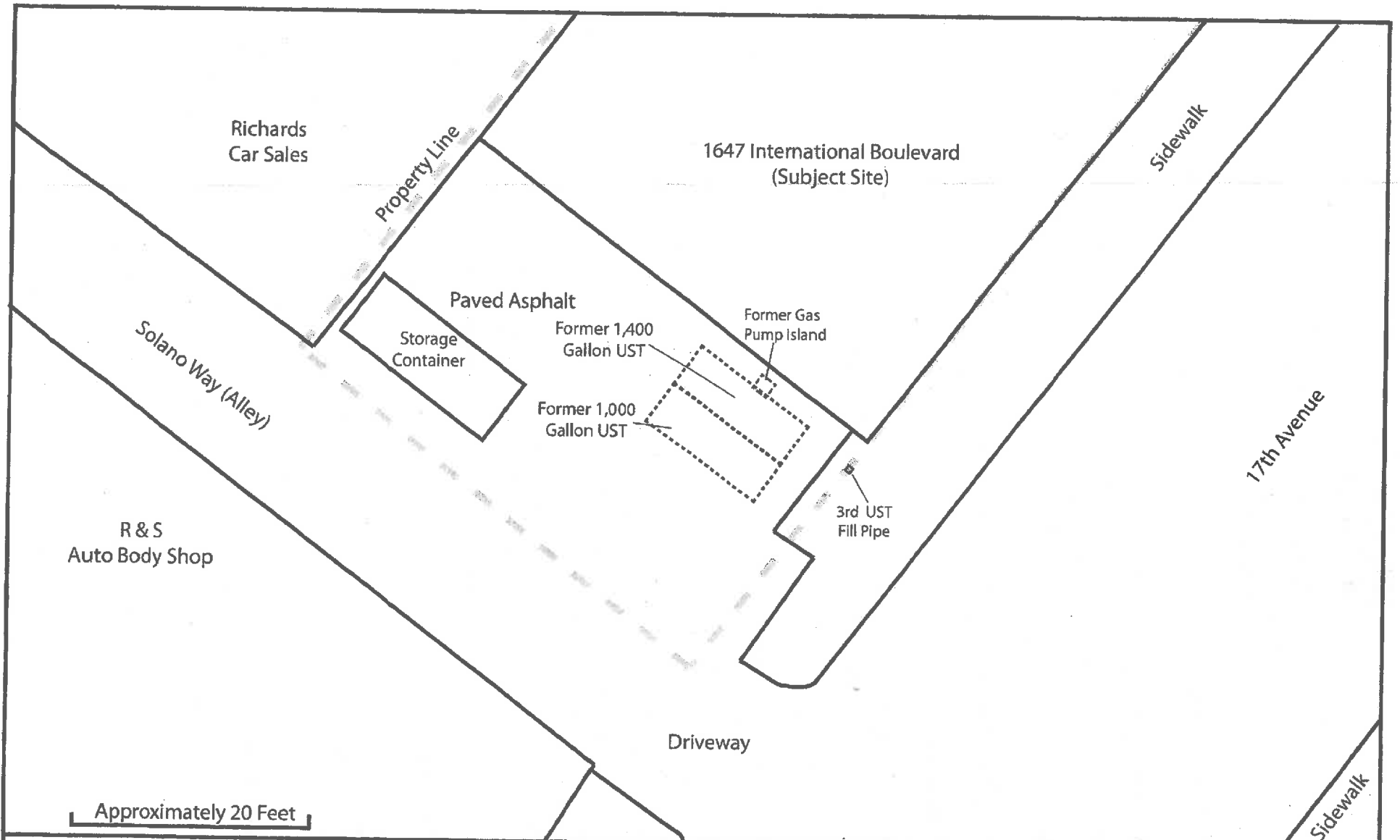
Ambulance	<u>  911  </u>
Hospital emergency room	<u>  510-752-1190  </u>
Poison control center	<u>  800-222-1222  </u>
Police	<u>  911  </u>
Fire department	<u>  911  </u>
Explosives unit	<u>  911  </u>
Agency contact	<u>  Barbara Jakub 510-567-6737  </u>
	<u>  Alameda County Environmental Health  </u>

**Site resources**

Water supply	<u>  on-site  </u>
Telephone	<u>  on-site  </u>
Radio	<u>          </u>
Other	<u>          </u>

**Emergency Contact**

Name:   Jan Schutze   Phone:   415-517-8100



**SITE MAP WITH THIRD UST LOCATION  
1647 INTERNATIONAL BOULEVARD  
OAKLAND, CALIFORNIA**



SCS 557



IN0208579

**Alameda County  
Department of Environmental Health**

1131 Harbor Bay Parkway - Alameda, CA 94502 - (510) 567-6858  
Website: [www.acgov.org/aceh](http://www.acgov.org/aceh)

**PAYMENT RECEIPT**

Invoice No.: IN0208579  
Account No.: AR0349810

**RECEIPT #:** RP0068941  
**Print Date:** 06/29/2016  
**Payment Type:** CHECK

Invoice Date	Program/Element	Description	Amount
06/29/16	4124	UST SYSTEM CLOSURE	\$ 1,678.00
06/29/16	9999	PAYMENT (CREDIT)	\$ -1,678.00
<b>INVOICE BALANCE DUE:</b>			<b>\$ 0.00</b>

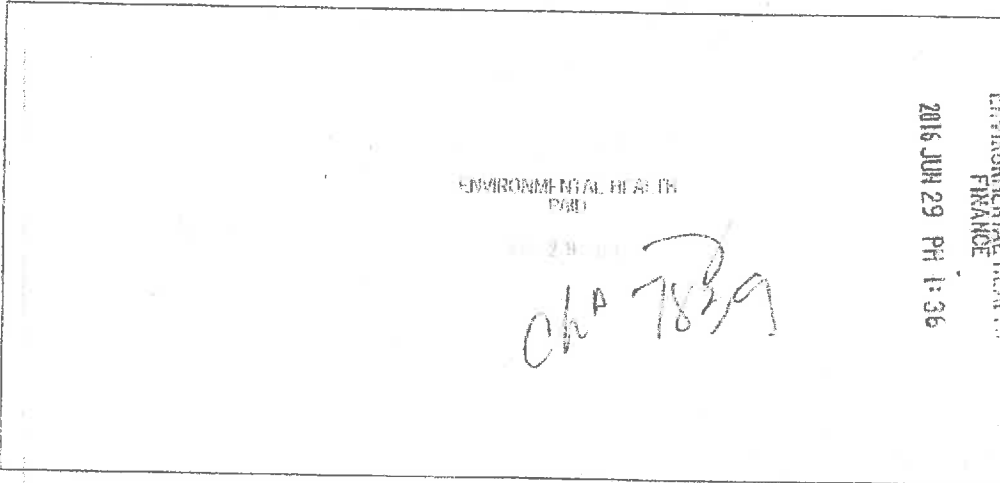
To insure an available fund balance, a 14-calendar-day hold will be placed on all checks prior to issuing a permit.

Health permit fees are non-refundable and are non-transferrable to new owners or new locations. In addition, there will be no proration of health permit fees.

**Payer's Name:** CK #7839  
**Receipt Issued By:** GARABILES, MILA

**Issued Date:** 6/29/2016

ALAMEDA COUNTY  
DEPARTMENT OF ENVIRONMENTAL HEALTH  
1131 HARBOR BAY PARKWAY  
ALAMEDA, CA 94502-6577  
PHONE (510) 567-6700



**UNDERGROUND STORAGE TANK CLOSURE PLAN**  
\*\*\* Complete closure plan according to instructions \*\*\*

1. Name of Business Warehouse  
Business Owner or Contact Person (PRINT) Alan Dimen
2. Site Address 1647 International Boulevard  
City, State Oakland, CA Zip 94806 Phone 510-536-1500
3. Mailing Address 1647 International Boulevard  
City, State Oakland, CA Zip 94606 Phone 510-536-1500
4. Property Owner (1) Irene Trimble  
Business Name (if applicable) N/A  
Address 2101 Sunset Drive West  
City, State University Place, WA Zip 98466 Phone 253-404-0241  
Property Owner (2) Alan Dimen  
Business Name (if applicable) N/A  
Address 2907 Pine Avenue



44358 S. GRIMMER BOULEVARD, FREMONT, CA 94538 ♦ TELEPHONE: (510) 226-9944 ♦ FAX (510) 226-9948

HAZARD EVALUATION				
Parameter	TLV (ppm)	IDLH (ppm)	LEL (% skin eyes)	Health
TPH				
VOCs				
Metals				

**IV. DECONTAMINATION PROCEDURES**

All existing material in the tank will be removed. The tank will then be triple rinsed to remove residual material. Then dry ice will be added to the tank to achieve less than 19.5% oxygen and less than 10% LEL.

**V. PERSONAL PROTECTIVE EQUIPMENT**

- Hardhat
- Safety glasses / goggles
- Steel-toed / shank shoes or boots
- Clothing protection / safety vest
- Hearing protection
- Other (specify): \_\_\_\_\_

**Personal protection:**

Level of Protection:  A  B  C  D

Modifications: \_\_\_\_\_

**Safety Measures After Work Hours:**

- Fencing
- Caution Tape
- Trench
- Plastic Sheeting





**44358 S. GRIMMER BOULEVARD, FREMONT, CA 94538 ♦ TELEPHONE: (510) 226-9944 ♦ FAX (510) 226-9948**

**Emergency Route (list roads or other directions and/or attach map)**

**Hospital: Kaiser Oakland Emergency Room Piedmont Ave, Oakland, California 94611 (Take 15th Ave to E 24th ST, then take 13th Ave to Chatham Rd, and take I-580 W to Piedmont Ave ) Contact: (510)-752-1190**

**SIGNATURES:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**DATE:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**NOTE: A copy of this plan must be kept on-site at all times.**



BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

# COMPLIANCE & ENFORCEMENT DIVISION

Notification Form

Regulation 8  
Rule 40

## REMOVAL OF UNDERGROUND STORAGE TANKS OR TREATMENT OF CONTAMINATED SOIL

### SITE OF ACTIVITY

<b>Site Address:</b> 1647 International Blvd	<b>City &amp; Zip:</b> Oakland, 94606	<b>Site#:</b>
<b>Specific Location of Project within Address:</b> Parking lot behind warehouse		
<b>Owner/Operator:</b> Irene Trimble & Alan Dimen		

**Check any that apply (400 numbers refer to regulation section requiring reporting):**

- Tank Removal or Replacement (401)                       Contaminated Soil Excavation and Removal (402)
- Aeration of Soil < 50 ppmw organic content, but does not meet Section 118 Exemption (403)
- Section 114 Exempt; Date Pipeline Leak **Started:** \_\_\_\_\_ Vol. Of Soil: \_\_\_\_\_ (403)
- Section 115 Exempt; Date Contamination Unrelated to UST Activities **Discovered:** \_\_\_\_\_ (405)

**If only Tank Removal is selected, attach results showing soil is not contaminated**

### CONTRACTOR INFORMATION

<b>Name:</b> Western Abatement	<b>Site Contact:</b> Todd Hurley	<b>Phone:</b> 925-727-9413
<b>Address:</b> 448 Ignacio Blvd #234		

### TANK REMOVAL (Section 401)

<b>Scheduled Start Date:</b> 07/25/2016	<b>Number and Size of Tank(s):</b> One (unknown size, estimated 1,400 gal).
---	---

**Explain Methods of:**

Piping drainage or flushing (310.1) A rinse truck will be used for rinsing and storing water.

Liquid and sludge removal (310.2) Pump and triple rinse the tank

**Vapor removal (310.3) [Check One]  Water Displacement     Vapor Freeing\*     Ventilation\***

\* Emission controls required for vapor freeing or ventilation if tank size greater than 250 gallons.

**COMPLETE INFORMATION BELOW OR ATTACH SAMPLE RESULTS SHOWING SOIL IS UNCONTAMINATED (310.4)**

### CONTAMINATED SOIL EXCAVATION AND REMOVAL (Section 402)

<b>Scheduled Start Date:</b>	<b>Scheduled Completion Date:</b>
------------------------------	-----------------------------------

**Purpose of Excavation:** \_\_\_\_\_

**Quantity of Soil:** \_\_\_\_\_ **Organic Content & Type:** \_\_\_\_\_

**Methods used to quantify and analyze soil:** \_\_\_\_\_

**Method of Stockpile Control (304-306)**

- Water Spray     Covered     Vapor Suppressant (List Material Used): \_\_\_\_\_

**Method of Site Closure (306)**

- Backfilled     Contaminated Soil Removed
- Onsite Treatment (Describe): \_\_\_\_\_ A/C or P/O #: \_\_\_\_\_

**Loaded Trucks Covered? (306.2)     Yes     No**

### AERATION OF SOIL < 50 PPMW ORGANIC CONTENT (Section 403)

You must submit a Permit Application and Risk Screening Analysis (Forms will be sent to you)

### FOR BAAQMD USE ONLY

Fax/PM Date:	By:	Disp to I#:	Area:	Date:	By:
Inv Req Date:	By:	Fwd to Supv.		Date:	By:

See Page Two to Complete This Form

[Press to clear form](#)

Approved 7/8/03

**OTHER PUBLIC AGENCY CONTACTED (Fire District, Hazardous Materials, City or County)?**

Agency Name: ACEH

Contact Name: Barbara Jakub

Address: 1131 Harbor Bay Parkway, Alameda, CA 94502

Phone: 510-567-6737

**EMERGENCY REMOVAL ORDER APPLICABLE?**

Agency Name:

Contact Name:

Address:

Phone:

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**GENERAL INFORMATION**

- This notification form shall be used to notify the BAAQMD of any projects subject to the reporting requirements in Regulation 8, Rule 40, Sections 401 through 405. Notifications may be faxed to (415) 928-0338 or mailed to the address listed at the bottom of this form.
- An invoice for payment will be sent to the person listed under "Contractor Information" as the person responsible, unless the project is exempt from fee payment (see next item).
- See "Frequently Asked Questions" (FAQ) for definition of projects, change procedures, permit requirements, emergency conditions, project exemptions, and fee exemptions. For any questions not answered in the FAQ, contact the Compliance Assistance Counselor at (415) 749-4999.

**INSTRUCTIONS**

- **SITE OF ACTIVITY:** Give the site street address and indicate if it has any existing BAAQMD site number, for either a plant or GDF. Identify the specific project location if the site contains more than one building. Indicate all applicable activity types by checking appropriate boxes. For reporting requirements under Sections 401 through 403, additional information is required, as below.
- **CONTRACTOR INFORMATION:** Identify the contractor that is responsible for performing the work at the site location listed. This contractor is also responsible for payment of the applicable notification fee, if the project is not exempt.
- **SECTION 401 - TANK REMOVAL/REPLACEMENT:** All soils disturbed and/or excavated as part of the tank removal shall be subject to the requirements of Sections 304 through 306, unless the soil has been determined not to be contaminated by measurement of organic content using the procedures in Sections 601 and 602. Complete requirements for Section 402 or submit sample results showing that the soil is not contaminated.
- **SECTION 402 - CONTAMINATED SOIL EXCAVATION AND REMOVAL:**
  - Be as accurate as possible for the Scheduled Start and Completion Dates. Specific requirements apply for excavation projects triggered within either 45 or 90 days (Reg. 8-40-306.4) and Authority to Construct requirements for projects lasting longer than three months (Reg. 2-1-128.16).
  - If a vapor suppressant is used, attach a product data sheet or MSDS.
  - If Method of Site Closure used is Onsite Treatment, describe specific method, (e.g., bioremediation, vapor extraction, air sparging, thermal desorption, etc.).
  - If Onsite Treatment is used, indicate whether an Authority to Construct was obtained by providing the Application No. or attach copy of BAAQMD Certification of Exemption.
- **SECTION 403 – AERATION OF SOIL < 50 PPMW ORGANIC CONTENT:** Section 301 exempts from control the aeration of soil containing less than 50 ppmw of organic compounds, but Section 403 still requires reporting of **ANY** soil aeration. If such a project does not meet the exemption criteria of Section 118, then a Permit Application and Risk Screening Analysis must be submitted.
- **EMERGENCY REMOVAL INFORMATION (IF APPLICABLE):** The rule defines an emergency tank removal or excavation of contaminated soil as "carried out pursuant to an order of a state or local government agency issued because the contaminated soil poses an imminent threat to public health and safety." If the project(s) meet this definition, then identify the agency that issued the order. Under Section 402 requirements, on line two, identify the purpose as indicated in the order.



BAY AREA  
AIR QUALITY  
MANAGEMENT  
DISTRICT

# COMPLIANCE & ENFORCEMENT DIVISION

Notification Form

Regulation 8  
Rule 40

## REMOVAL OF UNDERGROUND STORAGE TANKS OR TREATMENT OF CONTAMINATED SOIL

### SITE OF ACTIVITY

<b>Site Address:</b> 1647 International Blvd	<b>City &amp; Zip:</b> Oakland, 94606	<b>Site#:</b>
<b>Specific Location of Project within Address:</b> Parking lot behind warehouse		
<b>Owner/Operator:</b> Irene Trimble & Alan Dimen		

**Check any that apply (400 numbers refer to regulation section requiring reporting):**

Tank Removal or Replacement (401)       Contaminated Soil Excavation and Removal (402)

Aeration of Soil < 50 ppmw organic content, but does not meet Section 118 Exemption (403)

Section 114 Exempt; Date Pipeline Leak **Started:** \_\_\_\_\_ Vol. Of Soil: \_\_\_\_\_ (403)

Section 115 Exempt; Date Contamination Unrelated to UST Activities **Discovered:** \_\_\_\_\_ (405)

**If only Tank Removal is selected, attach results showing soil is not contaminated**

### CONTRACTOR INFORMATION

<b>Name:</b> Western Abatement	<b>Site Contact:</b> Todd Hurley	<b>Phone:</b> 925-727-9413
<b>Address:</b> 448 Ignacio Blvd #234		

### TANK REMOVAL (Section 401)

<b>Scheduled Start Date:</b> 08/30/2016	<b>Number and Size of Tank(s):</b> One (unknown size).
---	--

**Explain Methods of:**

Piping drainage or flushing (310.1) A rinse truck will be used for rinsing and storing water.

Liquid and sludge removal (310.2) Pump and triple rinse the tank

**Vapor removal (310.3) [Check One]**  Water Displacement     Vapor Freeing\*     Ventilation\*

\* Emission controls required for vapor freeing or ventilation if tank size greater than 250 gallons.

**COMPLETE INFORMATION BELOW OR ATTACH SAMPLE RESULTS SHOWING SOIL IS UNCONTAMINATED (310.4)**

### CONTAMINATED SOIL EXCAVATION AND REMOVAL (Section 402)

<b>Scheduled Start Date:</b>	<b>Scheduled Completion Date:</b>
------------------------------	-----------------------------------

**Purpose of Excavation:** \_\_\_\_\_

**Quantity of Soil:** \_\_\_\_\_ **Organic Content & Type:** \_\_\_\_\_

**Methods used to quantify and analyze soil:** \_\_\_\_\_

**Method of Stockpile Control (304-306)**

Water Spray     Covered     Vapor Suppressant (List Material Used): \_\_\_\_\_

**Method of Site Closure (306)**

Backfilled     Contaminated Soil Removed

Onsite Treatment (Describe): \_\_\_\_\_ A/C or P/O #: \_\_\_\_\_

**Loaded Trucks Covered? (306.2)**     Yes     No

### AERATION OF SOIL < 50 PPMW ORGANIC CONTENT (Section 403)

You must submit a Permit Application and Risk Screening Analysis (Forms will be sent to you)

### FOR BAAQMD USE ONLY

Fax/PM Date:	By:	Disp to I#:	Area:	Date:	By:
Inv Req Date:	By:	Fwd to Supv.		Date:	By:

See Page Two to Complete This Form

[Press to clear form](#)

Approved 7/8/03

**OTHER PUBLIC AGENCY CONTACTED (Fire District, Hazardous Materials, City or County)?**

Agency Name: ACEH

Contact Name: Barbara Jakub

Address: 1131 Harbor Bay Parkway, Alameda, CA 94502

Phone: 510-567-6737

**EMERGENCY REMOVAL ORDER APPLICABLE?**

Agency Name:

Contact Name:

Address:

Phone:

*H:\Pub\_data\Janet\Reg 8-40\forms\notifdraft3.doc*

**GENERAL INFORMATION**

- This notification form shall be used to notify the BAAQMD of any projects subject to the reporting requirements in Regulation 8, Rule 40, Sections 401 through 405. Notifications may be faxed to (415) 928-0338 or mailed to the address listed at the bottom of this form.
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**INSTRUCTIONS**

- **SITE OF ACTIVITY:** Give the site street address and indicate if it has any existing BAAQMD site number, for either a plant or GDF. Identify the specific project location if the site contains more than one building. Indicate all applicable activity types by checking appropriate boxes. For reporting requirements under Sections 401 through 403, additional information is required, as below.
- **CONTRACTOR INFORMATION:** Identify the contractor that is responsible for performing the work at the site location listed. This contractor is also responsible for payment of the applicable notification fee, if the project is not exempt.
- **SECTION 401 - TANK REMOVAL/REPLACEMENT:** All soils disturbed and/or excavated as part of the tank removal shall be subject to the requirements of Sections 304 through 306, unless the soil has been determined not to be contaminated by measurement of organic content using the procedures in Sections 601 and 602. Complete requirements for Section 402 or submit sample results showing that the soil is not contaminated.
- **SECTION 402 - CONTAMINATED SOIL EXCAVATION AND REMOVAL:**
  - Be as accurate as possible for the Scheduled Start and Completion Dates. Specific requirements apply for excavation projects triggered within either 45 or 90 days (Reg. 8-40-306.4) and Authority to Construct requirements for projects lasting longer than three months (Reg. 2-1-128.16).
  - If a vapor suppressant is used, attach a product data sheet or MSDS.
  - If Method of Site Closure used is Onsite Treatment, describe specific method, (e.g., bioremediation, vapor extraction, air sparging, thermal desorption, etc.).
  - If Onsite Treatment is used, indicate whether an Authority to Construct was obtained by providing the Application No. or attach copy of BAAQMD Certification of Exemption.
- **SECTION 403 – AERATION OF SOIL < 50 PPMW ORGANIC CONTENT:** Section 301 exempts from control the aeration of soil containing less than 50 ppmw of organic compounds, but Section 403 still requires reporting of **ANY** soil aeration. If such a project does not meet the exemption criteria of Section 118, then a Permit Application and Risk Screening Analysis must be submitted.
- **EMERGENCY REMOVAL INFORMATION (IF APPLICABLE):** The rule defines an emergency tank removal or excavation of contaminated soil as "carried out pursuant to an order of a state or local government agency issued because the contaminated soil poses an imminent threat to public health and safety." If the project(s) meet this definition, then identify the agency that issued the order. Under Section 402 requirements, on line two, identify the purpose as indicated in the order.

# **APPENDIX B**

## **Laboratory Reports**

**(August and September 2016)**



**August 2016**



# McC Campbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1608260

**Report Created for:** Schutze & Associates, Inc.  
44358 South Grimmer Blvd  
Fremont, CA 94538

**Project Contact:** Kevin Loeb  
**Project P.O.:**  
**Project Name:** SCS557; 1647 International

**Project Received:** 08/04/2016

Analytical Report reviewed & approved for release on 08/11/2016 by:

Angela Rydelius,  
Laboratory Manager

*The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.*





## Glossary of Terms & Qualifier Definitions

**Client:** Schutze & Associates, Inc.  
**Project:** SCS557; 1647 International  
**WorkOrder:** 1608260

### Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



## Glossary of Terms & Qualifier Definitions

**Client:** Schutze & Associates, Inc.  
**Project:** SCS557; 1647 International  
**WorkOrder:** 1608260

### Analytical Qualifiers

H samples were analyzed out of holding time  
S Surrogate spike recovery outside accepted recovery limits  
c1 surrogate recovery outside of the control limits due to the dilution of the sample.  
c2 surrogate recovery outside of the control limits due to matrix interference.  
d1 weakly modified or unmodified gasoline is significant  
d5 TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?)  
e2 diesel range compounds are significant; no recognizable pattern  
e4 gasoline range compounds are significant.  
e7 oil range compounds are significant  
e11 stoddard solvent/mineral spirit (?)  
h4 sulfuric acid permanganate (EPA 3665) cleanup

### Quality Control Qualifiers

F1 MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validated the prep batch.  
F10 MS/MSD outside control limits. Physical or chemical interferences exist due to sample matrix.



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8082  
**Unit:** mg/kg

## Polychlorinated Biphenyls (PCBs) Aroclors

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-M-9.5	1608260-001A	Soil	08/01/2016 14:00	GC23	124774

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	0.050	1	08/06/2016 03:17
Aroclor1221	ND	0.050	1	08/06/2016 03:17
Aroclor1232	ND	0.050	1	08/06/2016 03:17
Aroclor1242	ND	0.050	1	08/06/2016 03:17
Aroclor1248	ND	0.050	1	08/06/2016 03:17
Aroclor1254	ND	0.050	1	08/06/2016 03:17
Aroclor1260	ND	0.050	1	08/06/2016 03:17
PCBs, total	ND	0.050	1	08/06/2016 03:17

Surrogates	REC (%)	Limits	Date Analyzed
Decachlorobiphenyl	111	70-130	08/06/2016 03:17

Analyst(s): SS Analytical Comments: h4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-M-10.5	1608260-002A	Soil	08/02/2016 11:30	GC23	124774

Analytes	Result	RL	DF	Date Analyzed
Aroclor1016	ND	0.050	1	08/06/2016 02:02
Aroclor1221	ND	0.050	1	08/06/2016 02:02
Aroclor1232	ND	0.050	1	08/06/2016 02:02
Aroclor1242	ND	0.050	1	08/06/2016 02:02
Aroclor1248	ND	0.050	1	08/06/2016 02:02
Aroclor1254	ND	0.050	1	08/06/2016 02:02
Aroclor1260	ND	0.050	1	08/06/2016 02:02
PCBs, total	ND	0.050	1	08/06/2016 02:02

Surrogates	REC (%)	Limits	Date Analyzed
Decachlorobiphenyl	129	70-130	08/06/2016 02:02

Analyst(s): SS Analytical Comments: h4



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-M-9.5	1608260-001A	Soil	08/01/2016 14:00	GC10	124757

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	2.0	20	08/08/2016 15:07
tert-Amyl methyl ether (TAME)	ND	0.10	20	08/08/2016 15:07
Benzene	ND	0.10	20	08/08/2016 15:07
Bromobenzene	ND	0.10	20	08/08/2016 15:07
Bromochloromethane	ND	0.10	20	08/08/2016 15:07
Bromodichloromethane	ND	0.10	20	08/08/2016 15:07
Bromoform	ND	0.10	20	08/08/2016 15:07
Bromomethane	ND	0.10	20	08/08/2016 15:07
2-Butanone (MEK)	ND	0.40	20	08/08/2016 15:07
t-Butyl alcohol (TBA)	ND	1.0	20	08/08/2016 15:07
n-Butyl benzene	0.20	0.10	20	08/08/2016 15:07
sec-Butyl benzene	ND	0.10	20	08/08/2016 15:07
tert-Butyl benzene	ND	0.10	20	08/08/2016 15:07
Carbon Disulfide	ND	0.10	20	08/08/2016 15:07
Carbon Tetrachloride	ND	0.10	20	08/08/2016 15:07
Chlorobenzene	ND	0.10	20	08/08/2016 15:07
Chloroethane	ND	0.10	20	08/08/2016 15:07
Chloroform	ND	0.10	20	08/08/2016 15:07
Chloromethane	ND	0.10	20	08/08/2016 15:07
2-Chlorotoluene	ND	0.10	20	08/08/2016 15:07
4-Chlorotoluene	ND	0.10	20	08/08/2016 15:07
Dibromochloromethane	ND	0.10	20	08/08/2016 15:07
1,2-Dibromo-3-chloropropane	ND	0.080	20	08/08/2016 15:07
1,2-Dibromoethane (EDB)	ND	0.080	20	08/08/2016 15:07
Dibromomethane	ND	0.10	20	08/08/2016 15:07
1,2-Dichlorobenzene	ND	0.10	20	08/08/2016 15:07
1,3-Dichlorobenzene	ND	0.10	20	08/08/2016 15:07
1,4-Dichlorobenzene	ND	0.10	20	08/08/2016 15:07
Dichlorodifluoromethane	ND	0.10	20	08/08/2016 15:07
1,1-Dichloroethane	ND	0.10	20	08/08/2016 15:07
1,2-Dichloroethane (1,2-DCA)	ND	0.080	20	08/08/2016 15:07
1,1-Dichloroethene	ND	0.10	20	08/08/2016 15:07
cis-1,2-Dichloroethene	ND	0.10	20	08/08/2016 15:07
trans-1,2-Dichloroethene	ND	0.10	20	08/08/2016 15:07
1,2-Dichloropropane	ND	0.10	20	08/08/2016 15:07
1,3-Dichloropropane	ND	0.10	20	08/08/2016 15:07
2,2-Dichloropropane	ND	0.10	20	08/08/2016 15:07

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## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-M-9.5	1608260-001A	Soil	08/01/2016 14:00	GC10	124757
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.10	20	08/08/2016 15:07
cis-1,3-Dichloropropene	ND		0.10	20	08/08/2016 15:07
trans-1,3-Dichloropropene	ND		0.10	20	08/08/2016 15:07
Diisopropyl ether (DIPE)	ND		0.10	20	08/08/2016 15:07
Ethylbenzene	ND		0.10	20	08/08/2016 15:07
Ethyl tert-butyl ether (ETBE)	ND		0.10	20	08/08/2016 15:07
Freon 113	ND		0.10	20	08/08/2016 15:07
Hexachlorobutadiene	ND		0.10	20	08/08/2016 15:07
Hexachloroethane	ND		0.10	20	08/08/2016 15:07
2-Hexanone	ND		0.10	20	08/08/2016 15:07
Isopropylbenzene	ND		0.10	20	08/08/2016 15:07
4-Isopropyl toluene	ND		0.10	20	08/08/2016 15:07
Methyl-t-butyl ether (MTBE)	ND		0.10	20	08/08/2016 15:07
Methylene chloride	ND		0.10	20	08/08/2016 15:07
4-Methyl-2-pentanone (MIBK)	ND		0.10	20	08/08/2016 15:07
Naphthalene	ND		0.10	20	08/08/2016 15:07
n-Propyl benzene	<b>0.16</b>		0.10	20	08/08/2016 15:07
Styrene	ND		0.10	20	08/08/2016 15:07
1,1,1,2-Tetrachloroethane	ND		0.10	20	08/08/2016 15:07
1,1,2,2-Tetrachloroethane	ND		0.10	20	08/08/2016 15:07
Tetrachloroethene	ND		0.10	20	08/08/2016 15:07
Toluene	ND		0.10	20	08/08/2016 15:07
1,2,3-Trichlorobenzene	ND		0.10	20	08/08/2016 15:07
1,2,4-Trichlorobenzene	ND		0.10	20	08/08/2016 15:07
1,1,1-Trichloroethane	ND		0.10	20	08/08/2016 15:07
1,1,2-Trichloroethane	ND		0.10	20	08/08/2016 15:07
Trichloroethene	ND		0.10	20	08/08/2016 15:07
Trichlorofluoromethane	ND		0.10	20	08/08/2016 15:07
1,2,3-Trichloropropane	ND		0.10	20	08/08/2016 15:07
1,2,4-Trimethylbenzene	ND		0.10	20	08/08/2016 15:07
1,3,5-Trimethylbenzene	ND		0.10	20	08/08/2016 15:07
Vinyl Chloride	ND		0.10	20	08/08/2016 15:07
Xylenes, Total	ND		0.10	20	08/08/2016 15:07

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager





# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-M-9.5	1608260-001A	Soil	08/01/2016 14:00	GC10	124757

Analytes	Result		RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	105		70-130		08/08/2016 15:07
Toluene-d8	101		70-130		08/08/2016 15:07
4-BFB	132	S	70-130		08/08/2016 15:07
Benzene-d6	92		60-140		08/08/2016 15:07
Ethylbenzene-d10	111		60-140		08/08/2016 15:07
1,2-DCB-d4	139		60-140		08/08/2016 15:07

Analyst(s): MW

Analytical Comments: c2



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-M-10.5	1608260-002A	Soil	08/02/2016 11:30	GC16	124757

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	100	08/09/2016 20:44
tert-Amyl methyl ether (TAME)	ND	0.50	100	08/09/2016 20:44
Benzene	ND	0.50	100	08/09/2016 20:44
Bromobenzene	ND	0.50	100	08/09/2016 20:44
Bromochloromethane	ND	0.50	100	08/09/2016 20:44
Bromodichloromethane	ND	0.50	100	08/09/2016 20:44
Bromoform	ND	0.50	100	08/09/2016 20:44
Bromomethane	ND	0.50	100	08/09/2016 20:44
2-Butanone (MEK)	ND	2.0	100	08/09/2016 20:44
t-Butyl alcohol (TBA)	ND	5.0	100	08/09/2016 20:44
n-Butyl benzene	3.3	0.50	100	08/09/2016 20:44
sec-Butyl benzene	11	0.50	100	08/09/2016 20:44
tert-Butyl benzene	ND	0.50	100	08/09/2016 20:44
Carbon Disulfide	ND	0.50	100	08/09/2016 20:44
Carbon Tetrachloride	ND	0.50	100	08/09/2016 20:44
Chlorobenzene	ND	0.50	100	08/09/2016 20:44
Chloroethane	ND	0.50	100	08/09/2016 20:44
Chloroform	ND	0.50	100	08/09/2016 20:44
Chloromethane	ND	0.50	100	08/09/2016 20:44
2-Chlorotoluene	ND	0.50	100	08/09/2016 20:44
4-Chlorotoluene	ND	0.50	100	08/09/2016 20:44
Dibromochloromethane	ND	0.50	100	08/09/2016 20:44
1,2-Dibromo-3-chloropropane	ND	0.40	100	08/09/2016 20:44
1,2-Dibromoethane (EDB)	ND	0.40	100	08/09/2016 20:44
Dibromomethane	ND	0.50	100	08/09/2016 20:44
1,2-Dichlorobenzene	ND	0.50	100	08/09/2016 20:44
1,3-Dichlorobenzene	ND	0.50	100	08/09/2016 20:44
1,4-Dichlorobenzene	ND	0.50	100	08/09/2016 20:44
Dichlorodifluoromethane	ND	0.50	100	08/09/2016 20:44
1,1-Dichloroethane	ND	0.50	100	08/09/2016 20:44
1,2-Dichloroethane (1,2-DCA)	ND	0.40	100	08/09/2016 20:44
1,1-Dichloroethene	ND	0.50	100	08/09/2016 20:44
cis-1,2-Dichloroethene	ND	0.50	100	08/09/2016 20:44
trans-1,2-Dichloroethene	ND	0.50	100	08/09/2016 20:44
1,2-Dichloropropane	ND	0.50	100	08/09/2016 20:44
1,3-Dichloropropane	ND	0.50	100	08/09/2016 20:44
2,2-Dichloropropane	ND	0.50	100	08/09/2016 20:44

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# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-M-10.5	1608260-002A	Soil	08/02/2016 11:30	GC16	124757

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	100	08/09/2016 20:44
cis-1,3-Dichloropropene	ND	0.50	100	08/09/2016 20:44
trans-1,3-Dichloropropene	ND	0.50	100	08/09/2016 20:44
Diisopropyl ether (DIPE)	ND	0.50	100	08/09/2016 20:44
Ethylbenzene	ND	0.50	100	08/09/2016 20:44
Ethyl tert-butyl ether (ETBE)	ND	0.50	100	08/09/2016 20:44
Freon 113	ND	0.50	100	08/09/2016 20:44
Hexachlorobutadiene	ND	0.50	100	08/09/2016 20:44
Hexachloroethane	ND	0.50	100	08/09/2016 20:44
2-Hexanone	ND	0.50	100	08/09/2016 20:44
Isopropylbenzene	2.7	0.50	100	08/09/2016 20:44
4-Isopropyl toluene	1.5	0.50	100	08/09/2016 20:44
Methyl-t-butyl ether (MTBE)	ND	0.50	100	08/09/2016 20:44
Methylene chloride	ND	0.50	100	08/09/2016 20:44
4-Methyl-2-pentanone (MIBK)	ND	0.50	100	08/09/2016 20:44
Naphthalene	1.1	0.50	100	08/09/2016 20:44
n-Propyl benzene	3.9	0.50	100	08/09/2016 20:44
Styrene	ND	0.50	100	08/09/2016 20:44
1,1,1,2-Tetrachloroethane	ND	0.50	100	08/09/2016 20:44
1,1,2,2-Tetrachloroethane	ND	0.50	100	08/09/2016 20:44
Tetrachloroethene	ND	0.50	100	08/09/2016 20:44
Toluene	ND	0.50	100	08/09/2016 20:44
1,2,3-Trichlorobenzene	ND	0.50	100	08/09/2016 20:44
1,2,4-Trichlorobenzene	ND	0.50	100	08/09/2016 20:44
1,1,1-Trichloroethane	ND	0.50	100	08/09/2016 20:44
1,1,2-Trichloroethane	ND	0.50	100	08/09/2016 20:44
Trichloroethene	ND	0.50	100	08/09/2016 20:44
Trichlorofluoromethane	ND	0.50	100	08/09/2016 20:44
1,2,3-Trichloropropane	ND	0.50	100	08/09/2016 20:44
1,2,4-Trimethylbenzene	ND	0.50	100	08/09/2016 20:44
1,3,5-Trimethylbenzene	ND	0.50	100	08/09/2016 20:44
Vinyl Chloride	ND	0.50	100	08/09/2016 20:44
Xylenes, Total	ND	0.50	100	08/09/2016 20:44

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NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-M-10.5	1608260-002A	Soil	08/02/2016 11:30	GC16	124757

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	101		70-130	08/09/2016 20:44
Toluene-d8	94		70-130	08/09/2016 20:44
4-BFB	86		70-130	08/09/2016 20:44
Benzene-d6	80		60-140	08/09/2016 20:44
Ethylbenzene-d10	139		60-140	08/09/2016 20:44
1,2-DCB-d4	89		60-140	08/09/2016 20:44

Analyst(s): KF



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-4	1608260-004A	Sludge	08/02/2016 10:00	GC10	124757
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		20	200	08/08/2016 17:20
tert-Amyl methyl ether (TAME)	ND		1.0	200	08/08/2016 17:20
Benzene	ND		1.0	200	08/08/2016 17:20
Bromobenzene	ND		1.0	200	08/08/2016 17:20
Bromochloromethane	ND		1.0	200	08/08/2016 17:20
Bromodichloromethane	ND		1.0	200	08/08/2016 17:20
Bromoform	ND		1.0	200	08/08/2016 17:20
Bromomethane	ND		1.0	200	08/08/2016 17:20
2-Butanone (MEK)	ND		4.0	200	08/08/2016 17:20
t-Butyl alcohol (TBA)	ND		10	200	08/08/2016 17:20
n-Butyl benzene	3.5		1.0	200	08/08/2016 17:20
sec-Butyl benzene	4.4		1.0	200	08/08/2016 17:20
tert-Butyl benzene	ND		1.0	200	08/08/2016 17:20
Carbon Disulfide	ND		1.0	200	08/08/2016 17:20
Carbon Tetrachloride	ND		1.0	200	08/08/2016 17:20
Chlorobenzene	ND		1.0	200	08/08/2016 17:20
Chloroethane	ND		1.0	200	08/08/2016 17:20
Chloroform	ND		1.0	200	08/08/2016 17:20
Chloromethane	ND		1.0	200	08/08/2016 17:20
2-Chlorotoluene	ND		1.0	200	08/08/2016 17:20
4-Chlorotoluene	ND		1.0	200	08/08/2016 17:20
Dibromochloromethane	ND		1.0	200	08/08/2016 17:20
1,2-Dibromo-3-chloropropane	ND		0.80	200	08/08/2016 17:20
1,2-Dibromoethane (EDB)	ND		0.80	200	08/08/2016 17:20
Dibromomethane	ND		1.0	200	08/08/2016 17:20
1,2-Dichlorobenzene	ND		1.0	200	08/08/2016 17:20
1,3-Dichlorobenzene	ND		1.0	200	08/08/2016 17:20
1,4-Dichlorobenzene	ND		1.0	200	08/08/2016 17:20
Dichlorodifluoromethane	ND		1.0	200	08/08/2016 17:20
1,1-Dichloroethane	ND		1.0	200	08/08/2016 17:20
1,2-Dichloroethane (1,2-DCA)	ND		0.80	200	08/08/2016 17:20
1,1-Dichloroethene	ND		1.0	200	08/08/2016 17:20
cis-1,2-Dichloroethene	ND		1.0	200	08/08/2016 17:20
trans-1,2-Dichloroethene	ND		1.0	200	08/08/2016 17:20
1,2-Dichloropropane	ND		1.0	200	08/08/2016 17:20
1,3-Dichloropropane	ND		1.0	200	08/08/2016 17:20
2,2-Dichloropropane	ND		1.0	200	08/08/2016 17:20

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# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-4	1608260-004A	Sludge	08/02/2016 10:00	GC10	124757

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	1.0	200	08/08/2016 17:20
cis-1,3-Dichloropropene	ND	1.0	200	08/08/2016 17:20
trans-1,3-Dichloropropene	ND	1.0	200	08/08/2016 17:20
Diisopropyl ether (DIPE)	ND	1.0	200	08/08/2016 17:20
Ethylbenzene	1.6	1.0	200	08/08/2016 17:20
Ethyl tert-butyl ether (ETBE)	ND	1.0	200	08/08/2016 17:20
Freon 113	ND	1.0	200	08/08/2016 17:20
Hexachlorobutadiene	ND	1.0	200	08/08/2016 17:20
Hexachloroethane	ND	1.0	200	08/08/2016 17:20
2-Hexanone	ND	1.0	200	08/08/2016 17:20
Isopropylbenzene	2.3	1.0	200	08/08/2016 17:20
4-Isopropyl toluene	4.2	1.0	200	08/08/2016 17:20
Methyl-t-butyl ether (MTBE)	ND	1.0	200	08/08/2016 17:20
Methylene chloride	ND	1.0	200	08/08/2016 17:20
4-Methyl-2-pentanone (MIBK)	ND	1.0	200	08/08/2016 17:20
Naphthalene	2.2	1.0	200	08/08/2016 17:20
n-Propyl benzene	6.8	1.0	200	08/08/2016 17:20
Styrene	ND	1.0	200	08/08/2016 17:20
1,1,1,2-Tetrachloroethane	ND	1.0	200	08/08/2016 17:20
1,1,2,2-Tetrachloroethane	ND	1.0	200	08/08/2016 17:20
Tetrachloroethene	ND	1.0	200	08/08/2016 17:20
Toluene	ND	1.0	200	08/08/2016 17:20
1,2,3-Trichlorobenzene	ND	1.0	200	08/08/2016 17:20
1,2,4-Trichlorobenzene	ND	1.0	200	08/08/2016 17:20
1,1,1-Trichloroethane	ND	1.0	200	08/08/2016 17:20
1,1,2-Trichloroethane	ND	1.0	200	08/08/2016 17:20
Trichloroethene	ND	1.0	200	08/08/2016 17:20
Trichlorofluoromethane	ND	1.0	200	08/08/2016 17:20
1,2,3-Trichloropropane	ND	1.0	200	08/08/2016 17:20
1,2,4-Trimethylbenzene	31	1.0	200	08/08/2016 17:20
1,3,5-Trimethylbenzene	14	1.0	200	08/08/2016 17:20
Vinyl Chloride	ND	1.0	200	08/08/2016 17:20
Xylenes, Total	14	1.0	200	08/08/2016 17:20

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-4	1608260-004A	Sludge	08/02/2016 10:00	GC10	124757

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>	
Dibromofluoromethane	104		70-130	08/08/2016 17:20
Toluene-d8	98		70-130	08/08/2016 17:20
4-BFB	233	S	70-130	08/08/2016 17:20
Benzene-d6	20	S	60-140	08/08/2016 17:20
Ethylbenzene-d10	67		60-140	08/08/2016 17:20
1,2-DCB-d4	39	S	60-140	08/08/2016 17:20

Analyst(s): MW

Analytical Comments: c2





# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-1,2,3,4	1608260-005A	Soil	08/01/2016 14:00	GC10	124757

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	2.0	20	08/08/2016 16:40
tert-Amyl methyl ether (TAME)	ND	0.10	20	08/08/2016 16:40
Benzene	ND	0.10	20	08/08/2016 16:40
Bromobenzene	ND	0.10	20	08/08/2016 16:40
Bromochloromethane	ND	0.10	20	08/08/2016 16:40
Bromodichloromethane	ND	0.10	20	08/08/2016 16:40
Bromoform	ND	0.10	20	08/08/2016 16:40
Bromomethane	ND	0.10	20	08/08/2016 16:40
2-Butanone (MEK)	ND	0.40	20	08/08/2016 16:40
t-Butyl alcohol (TBA)	ND	1.0	20	08/08/2016 16:40
n-Butyl benzene	ND	0.10	20	08/08/2016 16:40
sec-Butyl benzene	0.20	0.10	20	08/08/2016 16:40
tert-Butyl benzene	ND	0.10	20	08/08/2016 16:40
Carbon Disulfide	ND	0.10	20	08/08/2016 16:40
Carbon Tetrachloride	ND	0.10	20	08/08/2016 16:40
Chlorobenzene	ND	0.10	20	08/08/2016 16:40
Chloroethane	ND	0.10	20	08/08/2016 16:40
Chloroform	ND	0.10	20	08/08/2016 16:40
Chloromethane	ND	0.10	20	08/08/2016 16:40
2-Chlorotoluene	ND	0.10	20	08/08/2016 16:40
4-Chlorotoluene	ND	0.10	20	08/08/2016 16:40
Dibromochloromethane	ND	0.10	20	08/08/2016 16:40
1,2-Dibromo-3-chloropropane	ND	0.080	20	08/08/2016 16:40
1,2-Dibromoethane (EDB)	ND	0.080	20	08/08/2016 16:40
Dibromomethane	ND	0.10	20	08/08/2016 16:40
1,2-Dichlorobenzene	ND	0.10	20	08/08/2016 16:40
1,3-Dichlorobenzene	ND	0.10	20	08/08/2016 16:40
1,4-Dichlorobenzene	ND	0.10	20	08/08/2016 16:40
Dichlorodifluoromethane	ND	0.10	20	08/08/2016 16:40
1,1-Dichloroethane	ND	0.10	20	08/08/2016 16:40
1,2-Dichloroethane (1,2-DCA)	ND	0.080	20	08/08/2016 16:40
1,1-Dichloroethene	ND	0.10	20	08/08/2016 16:40
cis-1,2-Dichloroethene	ND	0.10	20	08/08/2016 16:40
trans-1,2-Dichloroethene	ND	0.10	20	08/08/2016 16:40
1,2-Dichloropropane	ND	0.10	20	08/08/2016 16:40
1,3-Dichloropropane	ND	0.10	20	08/08/2016 16:40
2,2-Dichloropropane	ND	0.10	20	08/08/2016 16:40

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## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-1,2,3,4	1608260-005A	Soil	08/01/2016 14:00	GC10	124757
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		0.10	20	08/08/2016 16:40
cis-1,3-Dichloropropene	ND		0.10	20	08/08/2016 16:40
trans-1,3-Dichloropropene	ND		0.10	20	08/08/2016 16:40
Diisopropyl ether (DIPE)	ND		0.10	20	08/08/2016 16:40
Ethylbenzene	ND		0.10	20	08/08/2016 16:40
Ethyl tert-butyl ether (ETBE)	ND		0.10	20	08/08/2016 16:40
Freon 113	ND		0.10	20	08/08/2016 16:40
Hexachlorobutadiene	ND		0.10	20	08/08/2016 16:40
Hexachloroethane	ND		0.10	20	08/08/2016 16:40
2-Hexanone	ND		0.10	20	08/08/2016 16:40
Isopropylbenzene	ND		0.10	20	08/08/2016 16:40
4-Isopropyl toluene	ND		0.10	20	08/08/2016 16:40
Methyl-t-butyl ether (MTBE)	ND		0.10	20	08/08/2016 16:40
Methylene chloride	ND		0.10	20	08/08/2016 16:40
4-Methyl-2-pentanone (MIBK)	ND		0.10	20	08/08/2016 16:40
Naphthalene	ND		0.10	20	08/08/2016 16:40
n-Propyl benzene	<b>0.11</b>		0.10	20	08/08/2016 16:40
Styrene	ND		0.10	20	08/08/2016 16:40
1,1,1,2-Tetrachloroethane	ND		0.10	20	08/08/2016 16:40
1,1,2,2-Tetrachloroethane	ND		0.10	20	08/08/2016 16:40
Tetrachloroethene	ND		0.10	20	08/08/2016 16:40
Toluene	ND		0.10	20	08/08/2016 16:40
1,2,3-Trichlorobenzene	ND		0.10	20	08/08/2016 16:40
1,2,4-Trichlorobenzene	ND		0.10	20	08/08/2016 16:40
1,1,1-Trichloroethane	ND		0.10	20	08/08/2016 16:40
1,1,2-Trichloroethane	ND		0.10	20	08/08/2016 16:40
Trichloroethene	ND		0.10	20	08/08/2016 16:40
Trichlorofluoromethane	ND		0.10	20	08/08/2016 16:40
1,2,3-Trichloropropane	ND		0.10	20	08/08/2016 16:40
1,2,4-Trimethylbenzene	<b>0.41</b>		0.10	20	08/08/2016 16:40
1,3,5-Trimethylbenzene	<b>0.18</b>		0.10	20	08/08/2016 16:40
Vinyl Chloride	ND		0.10	20	08/08/2016 16:40
Xylenes, Total	ND		0.10	20	08/08/2016 16:40

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# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-1,2,3,4	1608260-005A	Soil	08/01/2016 14:00	GC10	124757

Analytes	Result		RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	104		70-130		08/08/2016 16:40
Toluene-d8	99		70-130		08/08/2016 16:40
4-BFB	236	S	70-130		08/08/2016 16:40
Benzene-d6	117		60-140		08/08/2016 16:40
Ethylbenzene-d10	124		60-140		08/08/2016 16:40
1,2-DCB-d4	132		60-140		08/08/2016 16:40

Analyst(s): MW

Analytical Comments: c2



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/8/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

## Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-3	1608260-003B	Water	08/01/2016 11:00	GC16	124940
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		1000	100	08/08/2016 14:23
tert-Amyl methyl ether (TAME)	ND		50	100	08/08/2016 14:23
Benzene	ND		50	100	08/08/2016 14:23
Bromobenzene	ND		50	100	08/08/2016 14:23
Bromochloromethane	ND		50	100	08/08/2016 14:23
Bromodichloromethane	ND		50	100	08/08/2016 14:23
Bromoform	ND		50	100	08/08/2016 14:23
Bromomethane	ND		50	100	08/08/2016 14:23
2-Butanone (MEK)	ND		200	100	08/08/2016 14:23
t-Butyl alcohol (TBA)	ND		200	100	08/08/2016 14:23
n-Butyl benzene	<b>140</b>		50	100	08/08/2016 14:23
sec-Butyl benzene	ND		50	100	08/08/2016 14:23
tert-Butyl benzene	ND		50	100	08/08/2016 14:23
Carbon Disulfide	ND		50	100	08/08/2016 14:23
Carbon Tetrachloride	ND		50	100	08/08/2016 14:23
Chlorobenzene	ND		50	100	08/08/2016 14:23
Chloroethane	ND		50	100	08/08/2016 14:23
Chloroform	ND		50	100	08/08/2016 14:23
Chloromethane	ND		50	100	08/08/2016 14:23
2-Chlorotoluene	ND		50	100	08/08/2016 14:23
4-Chlorotoluene	ND		50	100	08/08/2016 14:23
Dibromochloromethane	ND		50	100	08/08/2016 14:23
1,2-Dibromo-3-chloropropane	ND		20	100	08/08/2016 14:23
1,2-Dibromoethane (EDB)	ND		50	100	08/08/2016 14:23
Dibromomethane	ND		50	100	08/08/2016 14:23
1,2-Dichlorobenzene	ND		50	100	08/08/2016 14:23
1,3-Dichlorobenzene	ND		50	100	08/08/2016 14:23
1,4-Dichlorobenzene	ND		50	100	08/08/2016 14:23
Dichlorodifluoromethane	ND		50	100	08/08/2016 14:23
1,1-Dichloroethane	ND		50	100	08/08/2016 14:23
1,2-Dichloroethane (1,2-DCA)	ND		50	100	08/08/2016 14:23
1,1-Dichloroethene	ND		50	100	08/08/2016 14:23
cis-1,2-Dichloroethene	ND		50	100	08/08/2016 14:23
trans-1,2-Dichloroethene	ND		50	100	08/08/2016 14:23
1,2-Dichloropropane	ND		50	100	08/08/2016 14:23
1,3-Dichloropropane	ND		50	100	08/08/2016 14:23
2,2-Dichloropropane	ND		50	100	08/08/2016 14:23

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## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/8/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-3	1608260-003B	Water	08/01/2016 11:00	GC16	124940
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		50	100	08/08/2016 14:23
cis-1,3-Dichloropropene	ND		50	100	08/08/2016 14:23
trans-1,3-Dichloropropene	ND		50	100	08/08/2016 14:23
Diisopropyl ether (DIPE)	ND		50	100	08/08/2016 14:23
Ethylbenzene	<b>130</b>		50	100	08/08/2016 14:23
Ethyl tert-butyl ether (ETBE)	ND		50	100	08/08/2016 14:23
Freon 113	ND		50	100	08/08/2016 14:23
Hexachlorobutadiene	ND		50	100	08/08/2016 14:23
Hexachloroethane	ND		50	100	08/08/2016 14:23
2-Hexanone	ND		50	100	08/08/2016 14:23
Isopropylbenzene	<b>57</b>		50	100	08/08/2016 14:23
4-Isopropyl toluene	<b>78</b>		50	100	08/08/2016 14:23
Methyl-t-butyl ether (MTBE)	ND		50	100	08/08/2016 14:23
Methylene chloride	ND		50	100	08/08/2016 14:23
4-Methyl-2-pentanone (MIBK)	ND		50	100	08/08/2016 14:23
Naphthalene	<b>700</b>		50	100	08/08/2016 14:23
n-Propyl benzene	<b>150</b>		50	100	08/08/2016 14:23
Styrene	ND		50	100	08/08/2016 14:23
1,1,1,2-Tetrachloroethane	ND		50	100	08/08/2016 14:23
1,1,2,2-Tetrachloroethane	ND		50	100	08/08/2016 14:23
Tetrachloroethene	ND		50	100	08/08/2016 14:23
Toluene	<b>880</b>		50	100	08/08/2016 14:23
1,2,3-Trichlorobenzene	ND		50	100	08/08/2016 14:23
1,2,4-Trichlorobenzene	ND		50	100	08/08/2016 14:23
1,1,1-Trichloroethane	ND		50	100	08/08/2016 14:23
1,1,2-Trichloroethane	ND		50	100	08/08/2016 14:23
Trichloroethene	ND		50	100	08/08/2016 14:23
Trichlorofluoromethane	ND		50	100	08/08/2016 14:23
1,2,3-Trichloropropane	ND		50	100	08/08/2016 14:23
1,2,4-Trimethylbenzene	<b>2000</b>		50	100	08/08/2016 14:23
1,3,5-Trimethylbenzene	<b>570</b>		50	100	08/08/2016 14:23
Vinyl Chloride	ND		50	100	08/08/2016 14:23
Xylenes, Total	<b>6700</b>		50	100	08/08/2016 14:23

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/8/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

## Volatile Organics by P&T and GC/MS (Basic Target List)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-3	1608260-003B	Water	08/01/2016 11:00	GC16	124940

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	103	70-130		08/08/2016 14:23
Toluene-d8	95	70-130		08/08/2016 14:23
4-BFB	87	70-130		08/08/2016 14:23

Analyst(s): KF



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## TPH(g)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-M-9.5	1608260-001A	Soil	08/01/2016 14:00	GC10	124757

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	52	5.0	20	08/08/2016 15:07
Surrogates	REC (%)	Limits		
Dibromofluoromethane	81	70-130		08/08/2016 15:07
Benzene-D6	74	60-140		08/08/2016 15:07

Analyst(s): MW

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-M-10.5	1608260-002A	Soil	08/02/2016 11:30	GC10	124757

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	1300	100	400	08/11/2016 15:26
Surrogates	REC (%)	Limits		
Dibromofluoromethane	86	70-130		08/11/2016 15:26
Benzene-D6	108	60-140		08/11/2016 15:26

Analyst(s): AK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-4	1608260-004A	Sludge	08/02/2016 10:00	GC10	124757

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	890	50	200	08/08/2016 17:20
Surrogates	REC (%)	Qualifiers	Limits	
Dibromofluoromethane	81		70-130	08/08/2016 17:20
Benzene-D6	16	S	60-140	08/08/2016 17:20

Analyst(s): MW

Analytical Comments: c2





# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## TPH(g)

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-1,2,3,4	1608260-005A	Soil	08/01/2016 14:00	GC10	124757

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	150	5.0	20	08/08/2016 16:40

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	80	70-130	08/08/2016 16:40
Benzene-D6	92	60-140	08/08/2016 16:40

Analyst(s): MW



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/8/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

## TPH(g) by Purge & Trap and GC/MS

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-3	1608260-003B	Water	08/01/2016 11:00	GC16	124940

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	30,000	5000	100	08/08/2016 14:23

Surrogates	REC (%)	Limits	Date Analyzed
Dibromofluoromethane	105	70-130	08/08/2016 14:23

Analyst(s): KF



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/8/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C-SIM  
**Unit:** mg/kg

## Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-M-9.5	1608260-001A	Soil	08/01/2016 14:00	GC35	124931

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.010	1	08/10/2016 18:42
Acenaphthylene	ND	0.010	1	08/10/2016 18:42
Anthracene	ND	0.010	1	08/10/2016 18:42
Benzo (a) anthracene	ND	0.010	1	08/10/2016 18:42
Benzo (a) pyrene	ND	0.010	1	08/10/2016 18:42
Benzo (b) fluoranthene	ND	0.010	1	08/10/2016 18:42
Benzo (g,h,i) perylene	ND	0.010	1	08/10/2016 18:42
Benzo (k) fluoranthene	ND	0.010	1	08/10/2016 18:42
Chrysene	ND	0.010	1	08/10/2016 18:42
Dibenzo (a,h) anthracene	ND	0.010	1	08/10/2016 18:42
Fluoranthene	ND	0.010	1	08/10/2016 18:42
Fluorene	ND	0.010	1	08/10/2016 18:42
Indeno (1,2,3-cd) pyrene	ND	0.010	1	08/10/2016 18:42
1-Methylnaphthalene	<b>0.15</b>	0.010	1	08/10/2016 18:42
2-Methylnaphthalene	<b>0.29</b>	0.010	1	08/10/2016 18:42
Naphthalene	<b>0.098</b>	0.010	1	08/10/2016 18:42
Phenanthrene	ND	0.010	1	08/10/2016 18:42
Pyrene	ND	0.010	1	08/10/2016 18:42
Surrogates	REC (%)	Limits		
1-Fluoronaphthalene	83	30-130		08/10/2016 18:42
2-Fluorobiphenyl	69	30-130		08/10/2016 18:42

Analyst(s): HD



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/8/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C-SIM  
**Unit:** mg/kg

## Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-M-10.5	1608260-002A	Soil	08/02/2016 11:30	GC35	124931

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.050	5	08/11/2016 13:09
Acenaphthylene	ND	0.050	5	08/11/2016 13:09
Anthracene	ND	0.050	5	08/11/2016 13:09
Benzo (a) anthracene	ND	0.050	5	08/11/2016 13:09
Benzo (a) pyrene	ND	0.050	5	08/11/2016 13:09
Benzo (b) fluoranthene	ND	0.050	5	08/11/2016 13:09
Benzo (g,h,i) perylene	ND	0.050	5	08/11/2016 13:09
Benzo (k) fluoranthene	ND	0.050	5	08/11/2016 13:09
Chrysene	ND	0.050	5	08/11/2016 13:09
Dibenzo (a,h) anthracene	ND	0.050	5	08/11/2016 13:09
Fluoranthene	ND	0.050	5	08/11/2016 13:09
Fluorene	ND	0.050	5	08/11/2016 13:09
Indeno (1,2,3-cd) pyrene	ND	0.050	5	08/11/2016 13:09
1-Methylnaphthalene	<b>0.12</b>	0.050	5	08/11/2016 13:09
2-Methylnaphthalene	<b>0.17</b>	0.050	5	08/11/2016 13:09
Naphthalene	<b>0.60</b>	0.050	5	08/11/2016 13:09
Phenanthrene	ND	0.050	5	08/11/2016 13:09
Pyrene	ND	0.050	5	08/11/2016 13:09

Surrogates	REC (%)	Limits	Date Analyzed
1-Fluoronaphthalene	95	30-130	08/11/2016 13:09
2-Fluorobiphenyl	47	30-130	08/11/2016 13:09

Analyst(s): HD

Analytical Comments: c1



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/5/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:**  
**Analytical Method:** SW9045C\_Corr  
**Unit:** pH units @ °C

## Corrosivity

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-4	1608260-004A	Sludge	08/02/2016 10:00	WetChem	124842

Analytes	Result	Accuracy	DF	Date Analyzed
Corrosivity	6.8	±0.1	1	08/05/2016 18:30

Analyst(s): AL



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW9045C  
**Analytical Method:** SW9045C\_Corr  
**Unit:** pH units

## Corrosivity

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-3	1608260-003D	Water	08/01/2016 11:00	WetChem	124769

Analytes	Result	Qualifiers	Accuracy	DF	Date Analyzed
Corrosivity	6.8	H	±0.05	1	08/04/2016 20:55

Analyst(s): AL



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/10/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW1010  
**Analytical Method:** SW1010  
**Unit:** °C

## Flash Point b y SW1010

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-4	1608260-004A	Sludge	08/02/2016 10:00	WetChem	125076

Analytes	Result	Accuracy	DF	Date Analyzed
Flash Point	36 °C	±2	1	08/10/2016 20:20

Analyst(s): AL



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/10/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW1010  
**Analytical Method:** SW1010  
**Unit:** °C

## Flash Point by SW1010

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-3	1608260-003D	Water	08/01/2016 11:00	WetChem	125075

Analytes	Result	Accuracy	DF	Date Analyzed
Flash Point	>100 °C	±2	1	08/10/2016 20:15

Analyst(s): AL





## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12), Stoddard Solvent Range (C9-C12) Volatile Hydrocarbons with BTEX & MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-M-9.5	1608260-001A	Soil	08/01/2016 14:00	GC19	124760

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	---	33	33	08/10/2016 18:16
MTBE	---	1.7	33	08/10/2016 18:16
Benzene	---	0.17	33	08/10/2016 18:16
Toluene	---	0.17	33	08/10/2016 18:16
Ethylbenzene	---	0.17	33	08/10/2016 18:16
TPH(ss)	120	33	33	08/10/2016 18:16
Xylenes	---	0.50	33	08/10/2016 18:16

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	92	70-130	08/10/2016 18:16

Analyst(s): IA

Analytical Comments: d5

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-M-10.5	1608260-002A	Soil	08/02/2016 11:30	GC3	124760

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	---	200	200	08/10/2016 12:30
MTBE	---	10	200	08/10/2016 12:30
Benzene	---	1.0	200	08/10/2016 12:30
Toluene	---	1.0	200	08/10/2016 12:30
Ethylbenzene	---	1.0	200	08/10/2016 12:30
TPH(ss)	5900	200	200	08/10/2016 12:30
Xylenes	---	3.0	200	08/10/2016 12:30

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	122	70-130	08/10/2016 12:30

Analyst(s): IA

Analytical Comments: d5

(Cont.)

NELAP 4033ORELAP

 Angela Rydelius, Lab Manager



## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12), Stoddard Solvent Range (C9-C12) Volatile Hydrocarbons with BTEX & MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-4	1608260-004A	Sludge	08/02/2016 10:00	GC3	124760

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	---	200	200	08/10/2016 13:01
MTBE	---	10	200	08/10/2016 13:01
Benzene	---	1.0	200	08/10/2016 13:01
Toluene	---	1.0	200	08/10/2016 13:01
Ethylbenzene	---	1.0	200	08/10/2016 13:01
TPH(ss)	<b>6000</b>	200	200	08/10/2016 13:01
Xylenes	---	3.0	200	08/10/2016 13:01

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
aaa-TFT	19271	S	70-130	08/10/2016 13:01

**Analyst(s):** IA **Analytical Comments:** d5

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-1,2,3,4	1608260-005A	Soil	08/01/2016 14:00	GC3	124760

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	---	20	20	08/11/2016 03:08
MTBE	---	1.0	20	08/11/2016 03:08
Benzene	---	0.10	20	08/11/2016 03:08
Toluene	---	0.10	20	08/11/2016 03:08
Ethylbenzene	---	0.10	20	08/11/2016 03:08
TPH(ss)	<b>74</b>	20	20	08/11/2016 03:08
Xylenes	---	0.30	20	08/11/2016 03:08

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	85	70-130	08/11/2016 03:08

**Analyst(s):** IA **Analytical Comments:** d5



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/11/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** µg/L

## Gasoline Range (C6-C12), Stoddard Solvent Range (C9-C12) Volatile Hydrocarbons with BTEX & MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-3	1608260-003A	Water	08/01/2016 11:00	GC3	125022

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	---	500	10	08/11/2016 10:15
MTBE	---	50	10	08/11/2016 10:15
Benzene	---	5.0	10	08/11/2016 10:15
Toluene	---	5.0	10	08/11/2016 10:15
Ethylbenzene	---	5.0	10	08/11/2016 10:15
TPH(ss)	<b>21,000</b>	500	10	08/11/2016 10:15
Xylenes	---	15	10	08/11/2016 10:15

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	117	70-130	08/11/2016 10:15

Analyst(s): IA

Analytical Comments: d1



## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-M-9.5	1608260-001A	Soil	08/01/2016 14:00	ICP-MS3	124761

Analytes	Result	RL	DF	Date Analyzed
Cadmium	1.3	0.25	1	08/08/2016 15:33
Chromium	47	0.50	1	08/08/2016 15:33
Lead	43	0.50	1	08/08/2016 15:33
Nickel	64	0.50	1	08/08/2016 15:33
Zinc	1300	5.0	1	08/08/2016 15:33

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	103	70-130	08/08/2016 15:33

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-M-10.5	1608260-002A	Soil	08/02/2016 11:30	ICP-MS3	124761

Analytes	Result	RL	DF	Date Analyzed
Cadmium	0.25	0.25	1	08/08/2016 15:40
Chromium	47	0.50	1	08/08/2016 15:40
Lead	7.5	0.50	1	08/08/2016 15:40
Nickel	48	0.50	1	08/08/2016 15:40
Zinc	38	5.0	1	08/08/2016 15:40

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	111	70-130	08/08/2016 15:40

Analyst(s): DVH



## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/kg

### Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-4	1608260-004A	Sludge	08/02/2016 10:00	ICP-MS3	124761

Analytes	Result	RL	DF	Date Analyzed
Arsenic	1.8	0.50	1	08/08/2016 15:46
Barium	190	5.0	1	08/08/2016 15:46
Cadmium	4.6	0.25	1	08/08/2016 15:46
Chromium	28	0.50	1	08/08/2016 15:46
Lead	150	0.50	1	08/08/2016 15:46
Mercury	6.1	0.050	1	08/08/2016 15:46
Nickel	9.8	0.50	1	08/08/2016 15:46
Selenium	ND	0.50	1	08/08/2016 15:46
Silver	8.8	0.50	1	08/08/2016 15:46
Zinc	370	5.0	1	08/08/2016 15:46

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	94	70-130	08/08/2016 15:46

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-1,2,3,4	1608260-005A	Soil	08/01/2016 14:00	ICP-MS3	124761

Analytes	Result	RL	DF	Date Analyzed
Arsenic	9.7	0.50	1	08/08/2016 15:52
Barium	150	5.0	1	08/08/2016 15:52
Cadmium	0.49	0.25	1	08/08/2016 15:52
Chromium	49	0.50	1	08/08/2016 15:52
Lead	15	0.50	1	08/08/2016 15:52
Mercury	0.14	0.050	1	08/08/2016 15:52
Nickel	48	0.50	1	08/08/2016 15:52
Selenium	ND	0.50	1	08/08/2016 15:52
Silver	ND	0.50	1	08/08/2016 15:52
Zinc	280	5.0	1	08/08/2016 15:52

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	101	70-130	08/08/2016 15:52

Analyst(s): DVH



## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** E200.8  
**Analytical Method:** E200.8  
**Unit:** µg/L

### Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-3	1608260-003C	Water	08/01/2016 11:00	ICP-MS2	124759

<u>Analytes</u>	<u>Result</u>	<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Arsenic	1.5	0.50	1	08/08/2016 12:33
Barium	160	5.0	1	08/08/2016 12:33
Cadmium	16	0.25	1	08/08/2016 12:33
Chromium	11	0.50	1	08/08/2016 12:33
Lead	110	0.50	1	08/08/2016 12:33
Mercury	0.14	0.050	1	08/08/2016 12:33
Nickel	30	0.50	1	08/08/2016 12:33
Selenium	ND	0.50	1	08/08/2016 12:33
Silver	ND	0.19	1	08/08/2016 12:33
Zinc	7400	150	10	08/08/2016 18:14

<u>Surrogates</u>	<u>REC (%)</u>	<u>Limits</u>	<u>Date Analyzed</u>
Terbium	106	70-130	08/08/2016 12:33

**Analyst(s):** DVH



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/5/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW9045C  
**Analytical Method:** SW9045C  
**Unit:** pH units @ 25°C

## pH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-4	1608260-004A	Sludge	08/02/2016 10:00	WetChem	124842

Analytes	Result	Accuracy	DF	Date Analyzed
pH	6.78	±0.1	1	08/05/2016 18:43

Analyst(s): RB



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SM4500H+B-2000  
**Analytical Method:** SM4500H+B-2000  
**Unit:** pH units @ 25°C

## pH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-3	1608260-003D	Water	08/01/2016 11:00	WetChem	124769

Analytes	Result	Qualifiers	Accuracy	DF	Date Analyzed
pH	6.75	H	±0.05	1	08/04/2016 20:52

Analyst(s): AL





## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16-8/8/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-M-9.5	1608260-001A	Soil	08/01/2016 14:00	GC6B	124884

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	38	1.0	1	08/08/2016 12:44
TPH-Motor Oil (C18-C36)	16	5.0	1	08/08/2016 12:44
TPH-Bunker Oil (C10-C36)	49	5.0	1	08/08/2016 12:44
TPH-Heating Oil (C9-C18)	34	1.0	1	08/08/2016 12:44

Surrogates	REC (%)	Limits	Date Analyzed
C9	101	70-130	08/08/2016 12:44

Analyst(s): TK Analytical Comments: e11,e7,e2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B2-M-10.5	1608260-002A	Soil	08/02/2016 11:30	GC6B	124758

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	2100	50	50	08/05/2016 23:46
TPH-Motor Oil (C18-C36)	26	5.0	1	08/08/2016 12:44
TPH-Bunker Oil (C10-C36)	2100	250	50	08/05/2016 23:46
TPH-Heating Oil (C9-C18)	2300	50	50	08/05/2016 23:46

Surrogates	REC (%)	Limits	Date Analyzed
C9	79	70-130	08/05/2016 23:46

Analyst(s): TK Analytical Comments: e11,e7,e2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-4	1608260-004A	Sludge	08/02/2016 10:00	GC6B	124758

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	340,000	500	50	08/06/2016 01:43
TPH-Motor Oil (C18-C36)	9500	2500	50	08/06/2016 01:43
TPH-Bunker Oil (C10-C36)	350,000	2500	50	08/06/2016 01:43
TPH-Heating Oil (C9-C18)	340,000	500	50	08/06/2016 01:43

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
C9	22810	S	70-130	08/06/2016 01:43

Analyst(s): TK Analytical Comments: e11,e2,e7,c2

(Cont.)



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16-8/8/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

## Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-1,2,3,4	1608260-005A	Soil	08/01/2016 14:00	GC6A	124758

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	56	1.0	1	08/08/2016 14:40
TPH-Motor Oil (C18-C36)	11	5.0	1	08/08/2016 14:40
TPH-Bunker Oil (C10-C36)	64	5.0	1	08/08/2016 14:40
TPH-Heating Oil (C9-C18)	69	1.0	1	08/08/2016 14:40

Surrogates	REC (%)	Limits	Date Analyzed
C9	112	70-130	08/08/2016 14:40

Analyst(s): TK

Analytical Comments: e11,e7,e2



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 8/4/16 17:20  
**Date Prepared:** 8/4/16  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**Extraction Method:** SW3510C  
**Analytical Method:** SW8015B  
**Unit:** µg/L

## Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-3	1608260-003A	Water	08/01/2016 11:00	GC6B	124781

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	21,000	50	1	08/08/2016 14:40
TPH-Motor Oil (C18-C36)	2500	250	1	08/08/2016 14:40
TPH-Bunker Oil (C10-C36)	24,000	250	1	08/08/2016 14:40
TPH-Heating Oil (C9-C18)	23,000	50	1	08/08/2016 14:40

Surrogates	REC (%)	Limits	Date Analyzed
C9	116	70-130	08/08/2016 14:40

Analyst(s): TK

Analytical Comments: e4,e7,e2



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 8/4/16  
**Date Analyzed:** 8/5/16  
**Instrument:** GC23  
**Matrix:** Soil  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**BatchID:** 124774  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8082  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-124774  
 1608256-001AMS/MSD

### QC Summary Report for SW8082

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aroclor1016	ND	-	0.050	-	-	-	-
Aroclor1221	ND	-	0.050	-	-	-	-
Aroclor1232	ND	-	0.050	-	-	-	-
Aroclor1242	ND	-	0.050	-	-	-	-
Aroclor1248	ND	-	0.050	-	-	-	-
Aroclor1254	ND	-	0.050	-	-	-	-
Aroclor1260	ND	0.191	0.050	0.15	-	127	70-130
PCBs, total	ND	-	0.050	-	-	-	-
<b>Surrogate Recovery</b>							
Decachlorobiphenyl	0.0372	0.0377		0.050	74	75	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Aroclor1260	0.173	0.192	0.15	ND	115	128	70-130	10.5	20
<b>Surrogate Recovery</b>									
Decachlorobiphenyl	0.0415	0.0399	0.050		83	80	70-130	3.86	20



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 8/4/16  
**Date Analyzed:** 8/5/16  
**Instrument:** GC10, GC16  
**Matrix:** Soil  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**BatchID:** 124757  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-124757  
 1608222-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0366	0.0050	0.050	-	73	53-116
Benzene	ND	0.0457	0.0050	0.050	-	91	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.120	0.050	0.20	-	60	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0490	0.0050	0.050	-	98	77-121
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0421	0.0040	0.050	-	84	67-119
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0434	0.0040	0.050	-	87	58-135
1,1-Dichloroethene	ND	0.0312	0.0050	0.050	-	62	42-145
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-

(Cont.)

NELAP 4033ORELAP

 QA/QC Officer



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 8/4/16  
**Date Analyzed:** 8/5/16  
**Instrument:** GC10, GC16  
**Matrix:** Soil  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**BatchID:** 124757  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-124757  
 1608222-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0377	0.0050	0.050	-	75	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0377	0.0050	0.050	-	75	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0369	0.0050	0.050	-	74	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0524	0.0050	0.050	-	105	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0500	0.0050	0.050	-	100	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-

(Cont.)

NELAP 4033ORELAP

 QA/QC Officer



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 8/4/16  
**Date Analyzed:** 8/5/16  
**Instrument:** GC10, GC16  
**Matrix:** Soil  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**BatchID:** 124757  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-124757  
 1608222-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
<b>Surrogate Recovery</b>							
Dibromofluoromethane	0.120	0.127		0.12	96	102	70-130
Toluene-d8	0.140	0.134		0.12	112	107	70-130
4-BFB	0.0111	0.0112		0.012	89	89	70-130
Benzene-d6	0.102	0.107		0.10	102	107	60-140
Ethylbenzene-d10	0.125	0.126		0.10	125	126	60-140
1,2-DCB-d4	0.0870	0.0940		0.10	87	94	60-140

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0388	0.0402	0.050	ND	78	80	53-116	3.71	20
Benzene	0.0456	0.0470	0.050	ND	91	94	63-137	3.16	20
t-Butyl alcohol (TBA)	0.155	0.158	0.20	ND	78	79	41-135	1.97	20
Chlorobenzene	0.0445	0.0456	0.050	ND	89	91	77-121	2.45	20
1,2-Dibromoethane (EDB)	0.0413	0.0428	0.050	ND	83	86	67-119	3.55	20
1,2-Dichloroethane (1,2-DCA)	0.0436	0.0438	0.050	ND	87	88	58-135	0.577	20
1,1-Dichloroethene	0.0436	0.0448	0.050	ND	87	90	42-145	2.68	20
Diisopropyl ether (DIPE)	0.0431	0.0442	0.050	ND	86	88	52-129	2.55	20
Ethyl tert-butyl ether (ETBE)	0.0416	0.0430	0.050	ND	83	86	53-125	3.37	20
Methyl-t-butyl ether (MTBE)	0.0405	0.0423	0.050	ND	81	85	58-122	4.41	20
Toluene	0.0476	0.0503	0.050	ND	95	101	76-130	5.45	20
Trichloroethene	0.0443	0.0463	0.050	ND	89	93	72-132	4.40	20

<b>Surrogate Recovery</b>									
Dibromofluoromethane	0.122	0.124	0.12		98	99	70-130	1.15	20
Toluene-d8	0.131	0.134	0.12		104	108	70-130	2.92	20
4-BFB	0.0107	0.0117	0.012		86	94	70-130	8.70	20
Benzene-d6	0.0850	0.0876	0.10		85	88	60-140	3.03	20
Ethylbenzene-d10	0.105	0.102	0.10		105	102	60-140	2.22	20
1,2-DCB-d4	0.0765	0.0818	0.10		76	82	60-140	6.76	20



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 8/8/16  
**Date Analyzed:** 8/8/16  
**Instrument:** GC16  
**Matrix:** Water  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**BatchID:** 124940  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L  
**Sample ID:** MB/LCS-124940  
 1608291-001CMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	11.1	0.50	10	-	111	54-140
Benzene	ND	11.5	0.50	10	-	115	47-158
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	39.7	2.0	40	-	99	42-140
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	11.2	0.50	10	-	112	43-157
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	11.0	0.50	10	-	110	44-155
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	10.6	0.50	10	-	107	66-125
1,1-Dichloroethene	ND	10.6	0.50	10	-	106	47-149
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-

(Cont.)

NELAP 4033ORELAP

 QA/QC Officer





## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 8/8/16  
**Date Analyzed:** 8/8/16  
**Instrument:** GC16  
**Matrix:** Water  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**BatchID:** 124940  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L  
**Sample ID:** MB/LCS-124940  
 1608291-001CMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
Diisopropyl ether (DIPE)	ND	10.8	0.50	10	-	108	57-136
Ethanol	ND	-	50	-	-	-	-
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	11.0	0.50	10	-	110	55-137
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	10.6	0.50	10	-	106	53-139
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	11.6	0.50	10	-	116	52-137
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	12.0	0.50	10	-	120	43-157
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-

(Cont.)

NELAP 4033ORELAP

 QA/QC Officer



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 8/8/16  
**Date Analyzed:** 8/8/16  
**Instrument:** GC16  
**Matrix:** Water  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**BatchID:** 124940  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L  
**Sample ID:** MB/LCS-124940  
 1608291-001CMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
<b>Surrogate Recovery</b>							
Dibromofluoromethane	25.7	25.7		25	103	103	70-130
Toluene-d8	24.2	24.6		25	97	99	70-130
4-BFB	2.21	2.29		2.5	88	91	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	10.3	10.3	10	ND	103	103	69-139	0	20
Benzene	9.52	9.49	10	ND	95	95	69-141	0	20
t-Butyl alcohol (TBA)	42.3	41.2	40	ND	106	103	41-152	2.49	20
Chlorobenzene	9.50	9.43	10	ND	95	94	77-120	0.730	20
1,2-Dibromoethane (EDB)	9.80	9.92	10	ND	98	99	76-135	1.27	20
1,2-Dichloroethane (1,2-DCA)	9.36	9.34	10	ND	94	93	73-139	0.272	20
1,1-Dichloroethene	9.58	9.52	10	ND	96	95	59-140	0.617	20
Diisopropyl ether (DIPE)	9.41	9.26	10	ND	94	93	72-140	1.64	20
Ethyl tert-butyl ether (ETBE)	9.82	9.72	10	ND	98	97	71-140	1.03	20
Methyl-t-butyl ether (MTBE)	10.0	10.0	10	ND	100	100	73-139	0	20
Toluene	9.57	9.50	10	ND	95	94	71-128	0.780	20
Trichloroethene	9.62	9.62	10	ND	96	96	64-132	0	20
<b>Surrogate Recovery</b>									
Dibromofluoromethane	25.7	25.7	25		103	103	73-131	0	20
Toluene-d8	24.4	24.2	25		98	97	72-117	0.912	20
4-BFB	2.27	2.20	2.5		91	88	74-116	2.79	20

CLIENT: Schutze & Associates, Inc.  
 Work Order: 1608260  
 Project: SCS557; 1647 International

**ANALYTICAL QC SUMMARY REPORT**

BatchID: 124757

SampleID <b>MB-124757</b>	TestCode: <b>8260gas_s</b>	Units: <b>mg/kg</b>	Prep Date: <b>8/4/2016</b>
Batch ID: <b>124757</b>	TestNo: <b>SW8260B</b>	Run ID: <b>GC16_160811F</b>	Analysis Date: <b>8/5/2016</b>
Analyte	Result	PQL SPKValue SPKRefVal %REC	Limits RPDPRefVal %RPD RPDLimit Qual
TPH(g)	ND	0.25	-

**Surrogate Recovery**

Dibromofluoromethane	0.122	0.125	98	70 - 130
Benzene-D6	0.0923	0.1	92	70 - 130

**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

**CLIENT:** Schutze & Associates, Inc.  
**Work Order:** 1608260  
**Project:** SCS557; 1647 International

## ANALYTICAL QC SUMMARY REPORT

**BatchID: 124757**

SampleID <b>LCS-124757</b>	TestCode: <b>8260gas_s</b>	Units: <b>mg/kg</b>	Prep Date: <b>8/4/2016</b>
Batch ID: <b>124757</b>	TestNo: <b>SW8260B</b>	Run ID: <b>GC16_160811F</b>	Analysis Date: <b>8/5/2016</b>

Analyte	Result	PQL	SPKValue	SPKRefVal	%REC	Limits	RPDRefVal	%RPD	RPDLimit	Qual
VOC (C6-C12)	2.64	0.25	3.2	0	82	74 - 142				
<b>Surrogate Recovery</b>										
Dibromofluoromethane	0.123		0.125		99	70 - 130				
Benzene-D6	0.0878		0.1		88	60 - 140				

<b>Qualifiers:</b> ND - Not Detected at the Reporting Limit J - Analyte detected below quantitation limits B - Analyte detected in the associated Method Blank	S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits E - Value above quantitation range
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**CLIENT:** Schutze & Associates, Inc.  
**Work Order:** 1608260  
**Project:** SCS557; 1647 International

## ANALYTICAL QC SUMMARY REPORT

**BatchID: 124940**

SampleID <b>MB-124940</b>	TestCode: <b>8260GAS_W</b>	Units: <b>µg/L</b>	Prep Date: <b>8/8/2016</b>
Batch ID: <b>124940</b>	TestNo: <b>SW8260B</b>	Run ID: <b>GC16_160809B</b>	Analysis Date: <b>8/8/2016</b>

Analyte	Result	PQL	SPKValue	SPKRefVal	%REC	Limits	RPDRefVal	%RPD	RPDLimit	Qual
TPH(g)	ND		50			-				
<b>Surrogate Recovery</b>										
Dibromofluoromethane	26.2			25	105	70 - 130				

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<b>Qualifiers:</b> ND - Not Detected at the Reporting Limit J - Analyte detected below quantitation limits B - Analyte detected in the associated Method Blank	S - Spike Recovery outside accepted recovery limits R - RPD outside accepted recovery limits E - Value above quantitation range
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**CLIENT:** Schutze & Associates, Inc.  
**Work Order:** 1608260  
**Project:** SCS557; 1647 International

## ANALYTICAL QC SUMMARY REPORT

**BatchID: 124940**

SampleID <b>LCS-124940</b>	TestCode: <b>8260GAS_W</b>	Units: <b>µg/L</b>	Prep Date: <b>8/8/2016</b>
Batch ID: <b>124940</b>	TestNo: <b>SW8260B</b>	Run ID: <b>GC16_160809B</b>	Analysis Date: <b>8/8/2016</b>

Analyte	Result	PQL	SPKValue	SPKRefVal	%REC	Limits	RPDRefVal	%RPD	RPDLimit	Qual
VOC (C6-C12)	549	50	644	0	85	70 - 130				

**Surrogate Recovery**

Dibromofluoromethane	26.3		25		105	70 - 130				
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**Qualifiers:** ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 8/8/16  
**Date Analyzed:** 8/10/16  
**Instrument:** GC35  
**Matrix:** Soil  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**BatchID:** 124931  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C-SIM  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-124931  
 1608260-002AMS/MSD

### QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	-	0.010	-	-	-	-
Acenaphthylene	ND	-	0.010	-	-	-	-
Anthracene	ND	-	0.010	-	-	-	-
Benzo (a) anthracene	ND	-	0.010	-	-	-	-
Benzo (a) pyrene	ND	0.112	0.010	0.20	-	56	23-129
Benzo (b) fluoranthene	ND	-	0.010	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.010	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.010	-	-	-	-
Chrysene	ND	0.150	0.010	0.20	-	75	38-104
Dibenzo (a,h) anthracene	ND	-	0.010	-	-	-	-
Fluoranthene	ND	-	0.010	-	-	-	-
Fluorene	ND	-	0.010	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.010	-	-	-	-
1-Methylnaphthalene	ND	0.183	0.010	0.20	-	91	59-106
2-Methylnaphthalene	ND	0.167	0.010	0.20	-	84	54-108
Naphthalene	ND	-	0.010	-	-	-	-
Phenanthrene	ND	0.163	0.010	0.20	-	82	48-107
Pyrene	ND	0.127	0.010	0.20	-	64	40-104
<b>Surrogate Recovery</b>							
1-Fluoronaphthalene	0.322	0.363		0.50	64	73	30-130
2-Fluorobiphenyl	0.312	0.344		0.50	62	69	30-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Benzo (a) pyrene	NR	NR		ND<0.05	NR	NR	-	NR	
Chrysene	NR	NR		ND<0.05	NR	NR	-	NR	
1-Methylnaphthalene	NR	NR		0.12	NR	NR	-	NR	
2-Methylnaphthalene	NR	NR		0.17	NR	NR	-	NR	
Phenanthrene	NR	NR		ND<0.05	NR	NR	-	NR	
Pyrene	NR	NR		ND<0.05	NR	NR	-	NR	
<b>Surrogate Recovery</b>									
1-Fluoronaphthalene	NR	NR			NR	NR	-	NR	
2-Fluorobiphenyl	NR	NR			NR	NR	-	NR	



# Quality Control Report

**Client:** Schutze & Associates, Inc.

**WorkOrder:** 1608260

**Date Prepared:** 8/5/16

**BatchID:** 124842

**Date Analyzed:** 8/5/16

**Extraction Method:**

**Instrument:** WetChem

**Analytical Method:** SW9045C\_Corr

**Matrix:** Soil

**Unit:** pH units @ °C

**Project:** SCS557; 1647 International

## QC Summary Report for SW9045C\_Corr

SampleID	Sample Result	Sample DF	Dup / Serial Dilution Result	Dup / Serial Dilution DF	Precision	Acceptance Criteria
1608260-004A	6.8	1	6.8	1	0	0.1





# Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 8/4/16  
**Date Analyzed:** 8/4/16  
**Instrument:** WetChem  
**Matrix:** Water  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**BatchID:** 124769  
**Extraction Method:** SW9045C  
**Analytical Method:** SW9045C\_Corr  
**Unit:** pH units

## QC Summary Report for Corrosivity

SampleID	Sample Result	Sample DF	Dup / Serial Dilution Result	Dup / Serial Dilution DF	Precision	Acceptance Criteria
1608216-001C	5.8	1	5.8	1	0	0.1



### Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 8/10/16  
**Date Analyzed:** 8/10/16  
**Instrument:** WetChem  
**Matrix:** Sludge  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**BatchID:** 125076  
**Extraction Method:** SW1010  
**Analytical Method:** SW1010  
**Unit:** ± °C

#### QC Summary Report for Flash Point

SampleID	Sample Result	Sample DF	Dup / Serial Dilution Result	Dup / Serial Dilution DF	Precision	Acceptance Criteria
1608260-004A	36 °C	1	36 °C	1	0	2

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 8/10/16  
**Date Analyzed:** 8/10/16  
**Instrument:** WetChem  
**Matrix:** Oil  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**BatchID:** 125075  
**Extraction Method:** SW1010  
**Analytical Method:** SW1010  
**Unit:** ± °C

#### QC Summary Report for Flash Point

SampleID	Sample Result	Sample DF	Dup / Serial Dilution Result	Dup / Serial Dilution DF	Precision	Acceptance Criteria
1608292-001A	>100 °C	1	>100 °C	1	N/A	2



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 8/4/16  
**Date Analyzed:** 8/5/16  
**Instrument:** GC7  
**Matrix:** Soil  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**BatchID:** 124760  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-124760  
 1608233-001AMS/MSD

### QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.539	0.40	0.60	-	90	70-130
MTBE	ND	0.0933	0.050	0.10	-	93	70-130
Benzene	ND	0.0996	0.0050	0.10	-	100	70-130
Toluene	ND	0.0890	0.0050	0.10	-	89	70-130
Ethylbenzene	ND	0.0988	0.0050	0.10	-	99	70-130
Xylenes	ND	0.298	0.015	0.30	-	99	70-130
<b>Surrogate Recovery</b>							
2-Fluorotoluene	0.101	0.105		0.10	101	105	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.507	0.500	0.60	ND	85	83	70-130	1.46	20
MTBE	0.0788	0.0723	0.10	ND	76	69,F1	70-130	8.61	20
Benzene	0.0782	0.0725	0.10	ND	78	73	70-130	7.48	20
Toluene	0.0821	0.0806	0.10	ND	82	81	70-130	1.94	20
Ethylbenzene	0.0845	0.0855	0.10	ND	84	86	70-130	1.25	20
Xylenes	0.255	0.260	0.30	ND	85	87	70-130	1.83	20
<b>Surrogate Recovery</b>									
2-Fluorotoluene	0.0844	0.0831	0.10		84	83	70-130	1.51	20



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 8/10/16  
**Date Analyzed:** 8/10/16  
**Instrument:** GC7  
**Matrix:** Water  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**BatchID:** 125022  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** µg/L  
**Sample ID:** MB/LCS-125022  
 1608379-022AMS/MSD

### QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	59.5	40	60	-	99	70-130
MTBE	ND	10.7	5.0	10	-	107	70-130
Benzene	ND	10.4	0.50	10	-	104	70-130
Toluene	ND	9.73	0.50	10	-	97	70-130
Ethylbenzene	ND	10.1	0.50	10	-	101	70-130
Xylenes	ND	30.7	1.5	30	-	102	70-130
<b>Surrogate Recovery</b>							
aaa-TFT	10.2	10.2		10	102	102	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	50.0	65.9	60	ND	83	110	70-130	27.4,F1	20
MTBE	9.38	9.68	10	ND	94	97	70-130	3.21	20
Benzene	9.37	10.2	10	ND	94	102	70-130	8.78	20
Toluene	8.65	9.14	10	ND	86	91	70-130	5.54	20
Ethylbenzene	8.96	8.63	10	ND	90	86	70-130	3.78	20
Xylenes	26.6	24.9	30	ND	89	83	70-130	6.86	20
<b>Surrogate Recovery</b>									
aaa-TFT	10.0	8.71	10		100	87	70-130	13.9	20



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 8/4/16  
**Date Analyzed:** 8/5/16  
**Instrument:** ICP-MS1  
**Matrix:** Soil  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**BatchID:** 124761  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-124761  
 1608232-001AMS/MSD  
 1608232-001APDS

### QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Arsenic	ND	50.6	0.50	50	-	101	75-125
Barium	ND	506	5.0	500	-	101	75-125
Cadmium	ND	47.4	0.25	50	-	95	75-125
Chromium	ND	48.6	0.50	50	-	97	75-125
Lead	ND	45.1	0.50	50	-	90	75-125
Mercury	ND	1.18	0.050	1.25	-	95	75-125
Nickel	ND	49.6	0.50	50	-	99	75-125
Selenium	ND	46.8	0.50	50	-	94	75-125
Silver	ND	45.9	0.50	50	-	92	75-125
Zinc	ND	496	5.0	500	-	99	75-125
<b>Surrogate Recovery</b>							
Terbium	527	509		500	105	102	70-130



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 8/4/16  
**Date Analyzed:** 8/5/16  
**Instrument:** ICP-MS1  
**Matrix:** Soil  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**BatchID:** 124761  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-124761  
 1608232-001AMS/MSD  
 1608232-001APDS

### QC Summary Report for Metals

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Arsenic	44.3	48.8	50	2.529	84	92	75-125	9.58	20
Barium	491	575	500	57.44	87	103	75-125	15.7	20
Cadmium	40.0	45.2	50	ND	80	90	75-125	12.2	20
Chromium	62.1	87.4	50	27.45	69,F10	120	75-125	33.8,F10	20
Lead	45.4	53.5	50	7.984	75	91	75-125	16.4	20
Mercury	0.993	1.14	1.25	ND	77	89	75-125	14.2	20
Nickel	65.8	82.3	50	26.10	79	112	75-125	22.4,F10	20
Selenium	41.1	40.9	50	ND	82	82	75-125	0	20
Silver	38.5	44.3	50	ND	77	89	75-125	14.1	20
Zinc	444	504	500	30.14	83	95	75-125	12.6	20

**Surrogate Recovery**

Terbium	435	500	500		87	100	70-130	14.0	20
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Analyte	PDS Result	SPK Val	SPKRef Val	PDS %REC	PDS Limits
Chromium	75.9	50	27.45	97	75-125
Nickel	77.4	50	26.10	103	75-125

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Arsenic	ND<2.5	2.529	-	-
Barium	55.2	57.44	3.90	-
Cadmium	ND<1.2	ND	-	-
Chromium	28.0	27.45	2.00	20
Lead	7.54	7.984	5.56	-
Mercury	ND<0.25	ND	-	-
Nickel	26.2	26.10	0.383	20
Selenium	ND<2.5	ND	-	-
Silver	ND<2.5	ND	-	-
Zinc	42.0	30.14	39.3	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 8/4/16  
**Date Analyzed:** 8/5/16  
**Instrument:** ICP-MS1  
**Matrix:** Water  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**BatchID:** 124759  
**Extraction Method:** E200.8  
**Analytical Method:** E200.8  
**Unit:** µg/L  
**Sample ID:** MB/LCS-124759  
 1608234-001AMS/MSD

### QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Arsenic	ND	52.7	0.50	50	-	105	85-115
Barium	ND	545	5.0	500	-	109	85-115
Cadmium	ND	52.3	0.25	50	-	105	85-115
Chromium	ND	52.8	0.50	50	-	106	85-115
Lead	ND	49.9	0.50	50	-	100	85-115
Mercury	ND	1.28	0.050	1.25	-	102	85-115
Nickel	ND	52.0	0.50	50	-	104	85-115
Selenium	ND	49.3	0.50	50	-	99	85-115
Silver	ND	51.7	0.19	50	-	103	85-115
Zinc	ND	523	15	500	-	105	85-115
<b>Surrogate Recovery</b>							
Terbium	793	801		750	106	107	70-130



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 8/4/16  
**Date Analyzed:** 8/5/16  
**Instrument:** ICP-MS1  
**Matrix:** Water  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**BatchID:** 124759  
**Extraction Method:** E200.8  
**Analytical Method:** E200.8  
**Unit:** µg/L  
**Sample ID:** MB/LCS-124759  
 1608234-001AMS/MSD

### QC Summary Report for Metals

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Arsenic	55.9	57.0	50	0.6682	110	113	75-125	1.95	20
Barium	619	623	500	53.31	113	114	75-125	0.660	20
Cadmium	51.7	52.7	50	ND	103	105	75-125	1.80	20
Chromium	54.7	55.0	50	1.849	106	106	75-125	0	20
Lead	52.1	52.4	50	1.652	101	101	75-125	0	20
Mercury	1.29	1.31	1.25	ND	102	104	75-125	1.92	20
Nickel	56.8	58.4	50	3.194	107	110	75-125	2.66	20
Selenium	51.4	50.8	50	ND	102	101	75-125	1.12	20
Silver	50.5	50.6	50	ND	101	101	75-125	0	20
Zinc	551	564	500	21.99	106	108	75-125	2.35	20
<b>Surrogate Recovery</b>									
Terbium	839	855	750		112	114	70-130	1.94	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Arsenic	ND<2.5	0.6682	-	-
Barium	54.6	53.31	2.42	-
Cadmium	ND<1.2	ND	-	-
Chromium	ND<2.5	1.849	-	-
Lead	ND<2.5	1.652	-	-
Mercury	ND<0.25	ND	-	-
Nickel	3.53	3.194	10.5	-
Selenium	ND<2.5	ND	-	-
Silver	ND<0.95	ND	-	-
Zinc	ND<75	21.99	-	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.





# Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 8/5/16  
**Date Analyzed:** 8/5/16  
**Instrument:** WetChem  
**Matrix:** Soil  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**BatchID:** 124842  
**Extraction Method:** SW9045C  
**Analytical Method:** SW9045C  
**Unit:** pH units @ 25°C

## QC Summary Report for pH

SampleID	Sample Result	Sample DF	Dup / Serial Dilution Result	Dup / Serial Dilution DF	Precision	Acceptance Criteria
1608213-001A	6.66	1	6.67	1	0.01	0.1

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 8/4/16  
**Date Analyzed:** 8/4/16  
**Instrument:** WetChem  
**Matrix:** Water  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**BatchID:** 124769  
**Extraction Method:** SM4500H+B-2000  
**Analytical Method:** SM4500H+B-2000  
**Unit:** pH units @ 25°C

## QC Summary Report for pH

SampleID	Sample Result	Sample DF	Dup / Serial Dilution Result	Dup / Serial Dilution DF	Precision	Acceptance Criteria
1608216-001C	5.76	1	5.76	1	0	0.1



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 8/4/16  
**Date Analyzed:** 8/5/16  
**Instrument:** GC11A  
**Matrix:** Soil  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**BatchID:** 124758  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-124758  
 1608240-001AMS/MSD

### QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	45.5	1.0	40	-	114	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
<b>Surrogate Recovery</b>							
C9	22.5	22.9		25	90	91	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	NR	NR		3.5	NR	NR	-	NR	
<b>Surrogate Recovery</b>									
C9	NR	NR			NR	NR	-	NR	



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 8/8/16  
**Date Analyzed:** 8/9/16  
**Instrument:** GC39A  
**Matrix:** Soil  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**BatchID:** 124884  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-124884  
 1608329-001AMS/MSD

### QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	44.7	1.0	40	-	112	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
<b>Surrogate Recovery</b>							
C9	21.5	21.9		25	86	88	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	45.8	46.3	40	1.143	112	113	70-130	0.940	30
<b>Surrogate Recovery</b>									
C9	21.9	23.9	25		88	96	70-130	8.76	30



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 8/4/16  
**Date Analyzed:** 8/5/16  
**Instrument:** GC11B, GC9a  
**Matrix:** Water  
**Project:** SCS557; 1647 International

**WorkOrder:** 1608260  
**BatchID:** 124781  
**Extraction Method:** SW3510C  
**Analytical Method:** SW8015B  
**Unit:** µg/L  
**Sample ID:** MB/LCS/LCSD-124781

### QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
TPH-Diesel (C10-C23)	ND	50	-	-	-
TPH-Motor Oil (C18-C36)	ND	250	-	-	-

**Surrogate Recovery**

C9	588		625	94	65-122
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Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	1140	1280	1000	114	128	61-157	11.2	30

**Surrogate Recovery**

C9	579	590	625	93	94	65-122	1.93	30
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1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1608260

ClientCode: SCO

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  EQUS   
  Email   
  HardCopy   
  ThirdParty   
  J-flag

**Report to:**

Kevin Loeb  
Schutze & Associates, Inc.  
44358 South Grimmer Blvd  
Fremont, CA 94538  
(510) 226-9944    FAX: (510) 625-8176

Email: kevin@schutze-inc.com; js@schutze-inc.co  
cc/3rd Party:  
PO:  
ProjectNo: SCS557; 1647 International

**Bill to:**

Accounts Payable  
Schutze & Associates, Inc.  
44358 South Grimmer Blvd  
Fremont, CA 94538  
priscillajazz@yahoo.com

**Requested TAT: 5 days;**

**Date Received: 08/04/2016**

**Date Logged: 08/04/2016**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1608260-001	B-M-9.5	Soil	8/1/2016 14:00	<input type="checkbox"/>	A	A		A		A					A	
1608260-002	B2-M-10.5	Soil	8/2/2016 11:30	<input type="checkbox"/>	A	A		A		A					A	
1608260-003	TC-3	Water	8/1/2016 11:00	<input type="checkbox"/>			B		B			D		D		A
1608260-004	TC-4	Sludge	8/2/2016 10:00	<input type="checkbox"/>		A		A			A		A		A	
1608260-005	SP-1,2,3,4	Soil	8/1/2016 14:00	<input type="checkbox"/>		A		A							A	

**Test Legend:**

1	8082_PCB_S	2	8260B_S	3	8260B_W	4	8260GAS_S
5	8260GAS_W	6	8270_PNA_S	7	CORR_S	8	CORR_W
9	FLASH_Sludge	10	FLASH_W	11	G-MBTX_S	12	G-MBTX_W

**Prepared by: Briana Cutino**

The following SamplIDs: 001A, 002A, 003A, 003B, 004A, 005A contain testgroup.

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.

1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1608260

ClientCode: SCO

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  EQUIS   
 Email   
 HardCopy   
 ThirdParty   
 J-flag

**Report to:**

Kevin Loeb  
Schutze & Associates, Inc.  
44358 South Grimmer Blvd  
Fremont, CA 94538  
(510) 226-9944    FAX: (510) 625-8176

Email: kevin@schutze-inc.com; js@schutze-inc.co  
cc/3rd Party:  
PO:  
ProjectNo: SCS557; 1647 International

**Bill to:**

Accounts Payable  
Schutze & Associates, Inc.  
44358 South Grimmer Blvd  
Fremont, CA 94538  
priscillajazz@yahoo.com

**Requested TAT: 5 days;**

**Date Received: 08/04/2016**

**Date Logged: 08/04/2016**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					13	14	15	16	17	18	19	20	21	22	23	24
1608260-001	B-M-9.5	Soil	8/1/2016 14:00	<input type="checkbox"/>	A						A					
1608260-002	B2-M-10.5	Soil	8/2/2016 11:30	<input type="checkbox"/>	A						A					
1608260-003	TC-3	Water	8/1/2016 11:00	<input type="checkbox"/>			C		D		A					
1608260-004	TC-4	Sludge	8/2/2016 10:00	<input type="checkbox"/>		A		A		A						
1608260-005	SP-1,2,3,4	Soil	8/1/2016 14:00	<input type="checkbox"/>		A				A						

**Test Legend:**

13	LUFTMS_6020_TTLC_S	14	METALSMS_TTLC_S	15	METALSMS_TTLC_W	16	PH_S
17	PH_W	18	TPH_S	19	TPH_W	20	
21		22		23		24	

**Prepared by: Briana Cutino**

The following SamplIDs: 001A, 002A, 003A, 003B, 004A, 005A contain testgroup.

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days). Hazardous samples will be returned to client or disposed of at client expense.



## WORK ORDER SUMMARY

**Client Name:** SCHUTZE & ASSOCIATES, INC.

**QC Level:** LEVEL 2

**Work Order:** 1608260

**Project:** SCS557; 1647 International

**Client Contact:** Kevin Loeb

**Date Logged:** 8/4/2016

**Comments:**

**Contact's Email:** kevin@schutze-inc.com; js@schutze-inc.com;  
 Mari@schutze-inc.com; claudine@schutze-inc.com

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  Fax   
 Email   
 HardCopy   
 ThirdParty   
 J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut	
1608260-001A	B-M-9.5	Soil	SW6020 (LUFT)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/>	8/1/2016 14:00	5 days			<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>					5 days	<input type="checkbox"/>
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>					5 days	<input type="checkbox"/>
			TPH(g) & 8260 (Basic List) by P&T GCMS			<input type="checkbox"/>					5 days	<input type="checkbox"/>
			SW8082 (PCBs Only)			<input type="checkbox"/>					5 days	<input type="checkbox"/>
1608260-002A	B2-M-10.5	Soil	SW6020 (LUFT)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/>	8/2/2016 11:30	5 days			<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>					5 days	<input type="checkbox"/>
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>					5 days	<input type="checkbox"/>
			TPH(g) & 8260 (Basic List) by P&T GCMS			<input type="checkbox"/>					5 days	<input type="checkbox"/>
			SW8082 (PCBs Only)			<input type="checkbox"/>					5 days	<input type="checkbox"/>
1608260-003A	TC-3	Water	Multi-Range TPH(g,d,mo) by EPA 8015Bm	2	VOA w/ HCl	<input type="checkbox"/>	8/1/2016 11:00	5 days	Present		<input type="checkbox"/>	
1608260-003B	TC-3	Water	TPH(g) & 8260 (Basic List) by P&T GCMS	2	VOA w/ HCl	<input type="checkbox"/>	8/1/2016 11:00	5 days	Present		<input type="checkbox"/>	
1608260-003C	TC-3	Water	E200.8 (Metals) <Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Nickel, Selenium, Silver, Zinc>	1	250mL HDPE w/ HNO3	<input type="checkbox"/>	8/1/2016 11:00	5 days	Present		<input type="checkbox"/>	
1608260-003D	TC-3	Water	SM4500H+B (pH)	1	250mL HDPE w/ HNO3	<input type="checkbox"/>	8/1/2016 11:00	5 days	Present		<input type="checkbox"/>	

**NOTES:** - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



## WORK ORDER SUMMARY

**Client Name:** SCHUTZE & ASSOCIATES, INC.

**QC Level:** LEVEL 2

**Work Order:** 1608260

**Project:** SCS557; 1647 International

**Client Contact:** Kevin Loeb

**Date Logged:** 8/4/2016

**Comments:**

**Contact's Email:** kevin@schutze-inc.com; js@schutze-inc.com;  
 Mari@schutze-inc.com; claudine@schutze-inc.com

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1608260-003D	TC-3	Water	SW1010 (Flash Point)	1	250mL HDPE w/ HNO3	<input type="checkbox"/>	8/1/2016 11:00	5 days	Present	<input type="checkbox"/>	
			SW9045C (Corrosivity)			<input type="checkbox"/>		5 days	Present	<input type="checkbox"/>	
1608260-004A	TC-4	Sludge	SW9045C (pH)	1	1LA	<input type="checkbox"/>	8/2/2016 10:00	5 days		<input type="checkbox"/>	
			SW6020 (Metals) <Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Nickel, Selenium, Silver, Zinc>			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW1010 (Flash Point)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			SW9045C (Corrosivity)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			TPH(g) & 8260 (Basic List) by P&T GCMS			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
1608260-005A	SP-1,2,3,4	Soil	SW6020 (Metals) <Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Nickel, Selenium, Silver, Zinc>	4 / (4:1)	Stainless Steel tube 2"x6"	<input type="checkbox"/>	8/1/2016 14:00	5 days		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	
			TPH(g) & 8260 (Basic List) by P&T GCMS			<input type="checkbox"/>		5 days		<input type="checkbox"/>	

**NOTES:** - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.











### Sample Receipt Checklist

Client Name:	<b>Schutze &amp; Associates, Inc.</b>	Date and Time Received:	<b>8/4/2016 17:20</b>
Project Name:	<b>SCS557; 1647 International</b>	Date Logged:	<b>8/4/2016</b>
WorkOrder No:	<b>1608260</b>	Matrix:	<u>Sludge/Soil/Water</u>
Carrier:	<u>Benjamin Yslas (MAI Courier)</u>	Received by:	Briana Cutino
		Logged by:	Briana Cutino

#### Chain of Custody (COC) Information

Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sample IDs noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Date and Time of collection noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sampler's name noted on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

#### Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper containers/bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

#### Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Sample/Temp Blank temperature		Temp: 3°C	NA <input type="checkbox"/>
Water - VOA vials have zero headspace / no bubbles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Sample labels checked for correct preservation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Samples Received on Ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

(Ice Type: WET ICE )

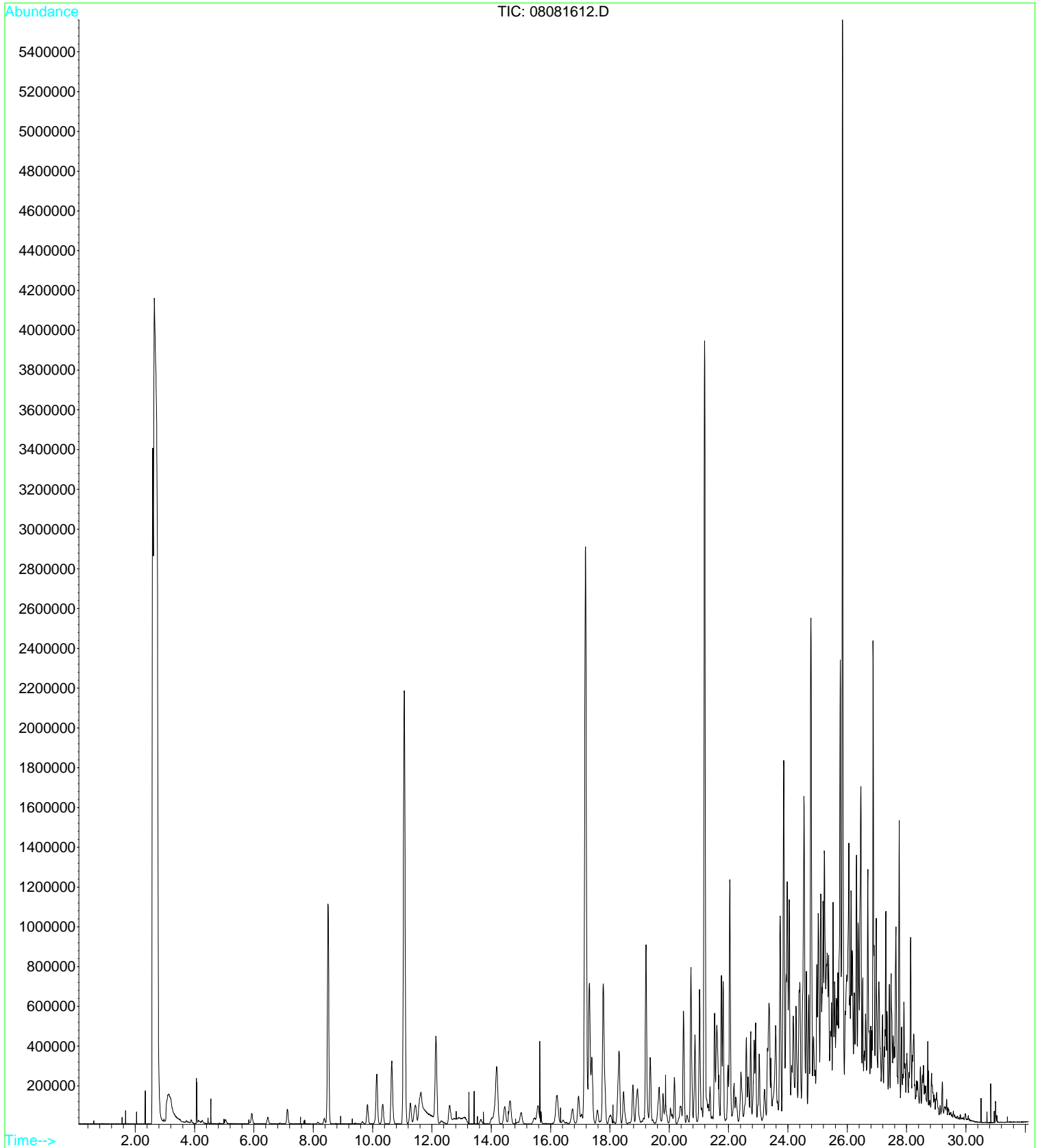
#### UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

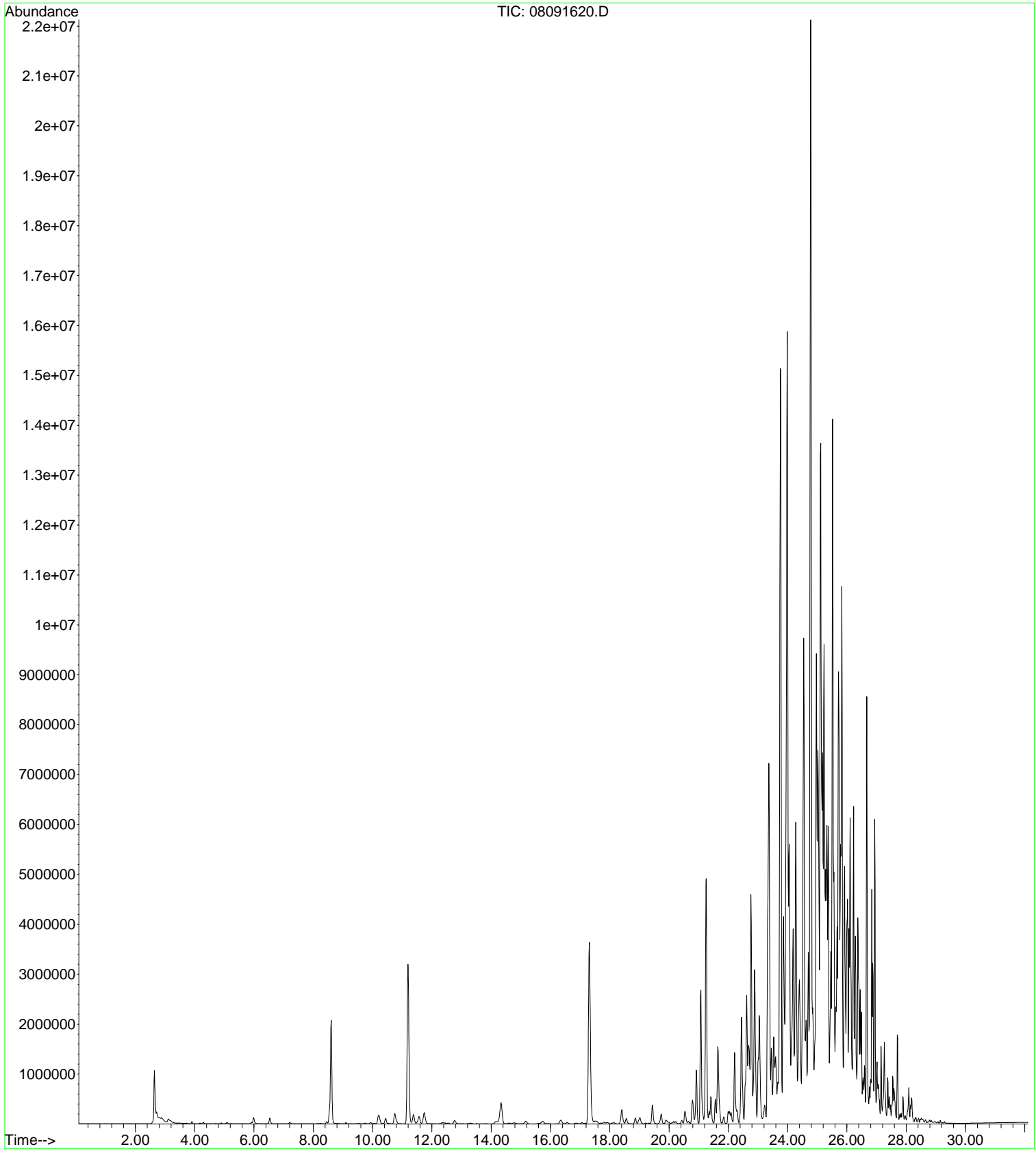
Comments: Method SM4500H+B (pH) was received passed its 0.01-day holding time. Method SW9045C (Corrosivity) was received passed its 0.25-day holding time.



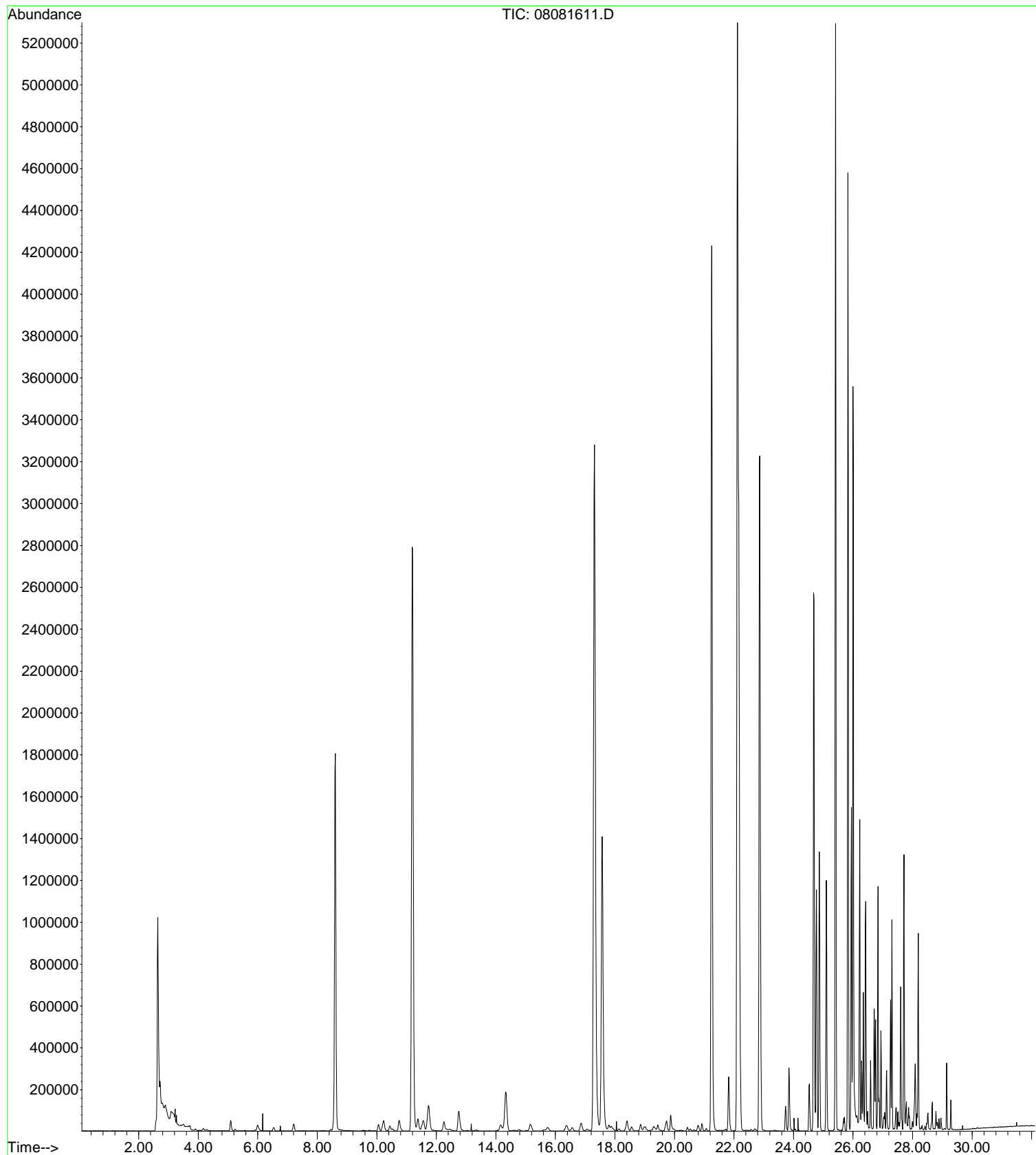
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Operator :  
Acquired : 8 Aug 2016 3:07 pm using AcqMethod 8260B  
Instrument : GC-10  
Sample Name: 1608260-001A S GAS PDF RR  
Misc Info : 8260B\_S  
Vial Number: 12



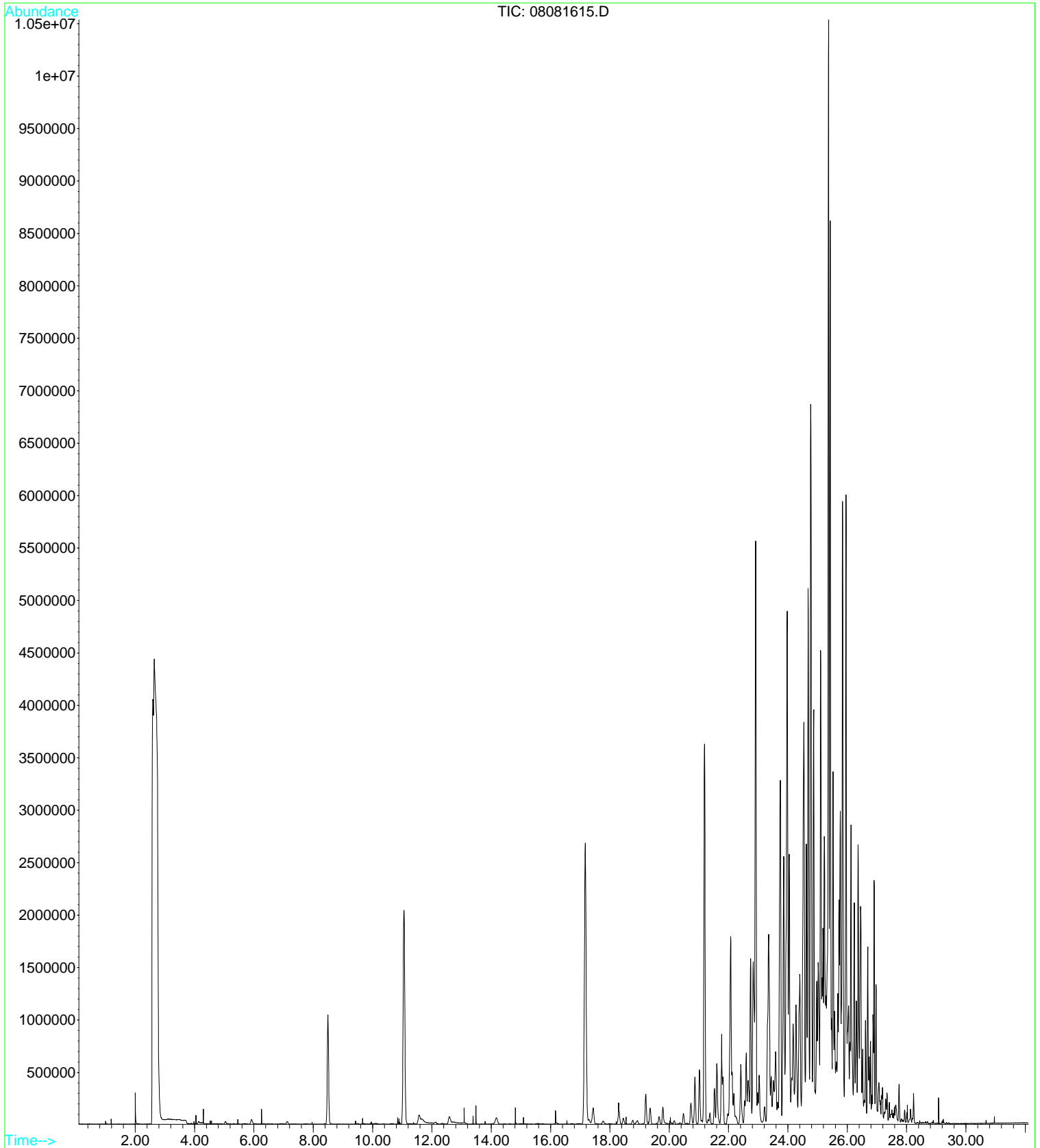
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Operator :  
Acquired : 9 Aug 2016 8:44 pm using AcqMethod 8260B  
Instrument : GC-16  
Sample Name: 1608260-002A S RR +GAS  
Misc Info : 8260B\_S  
Vial Number: 20



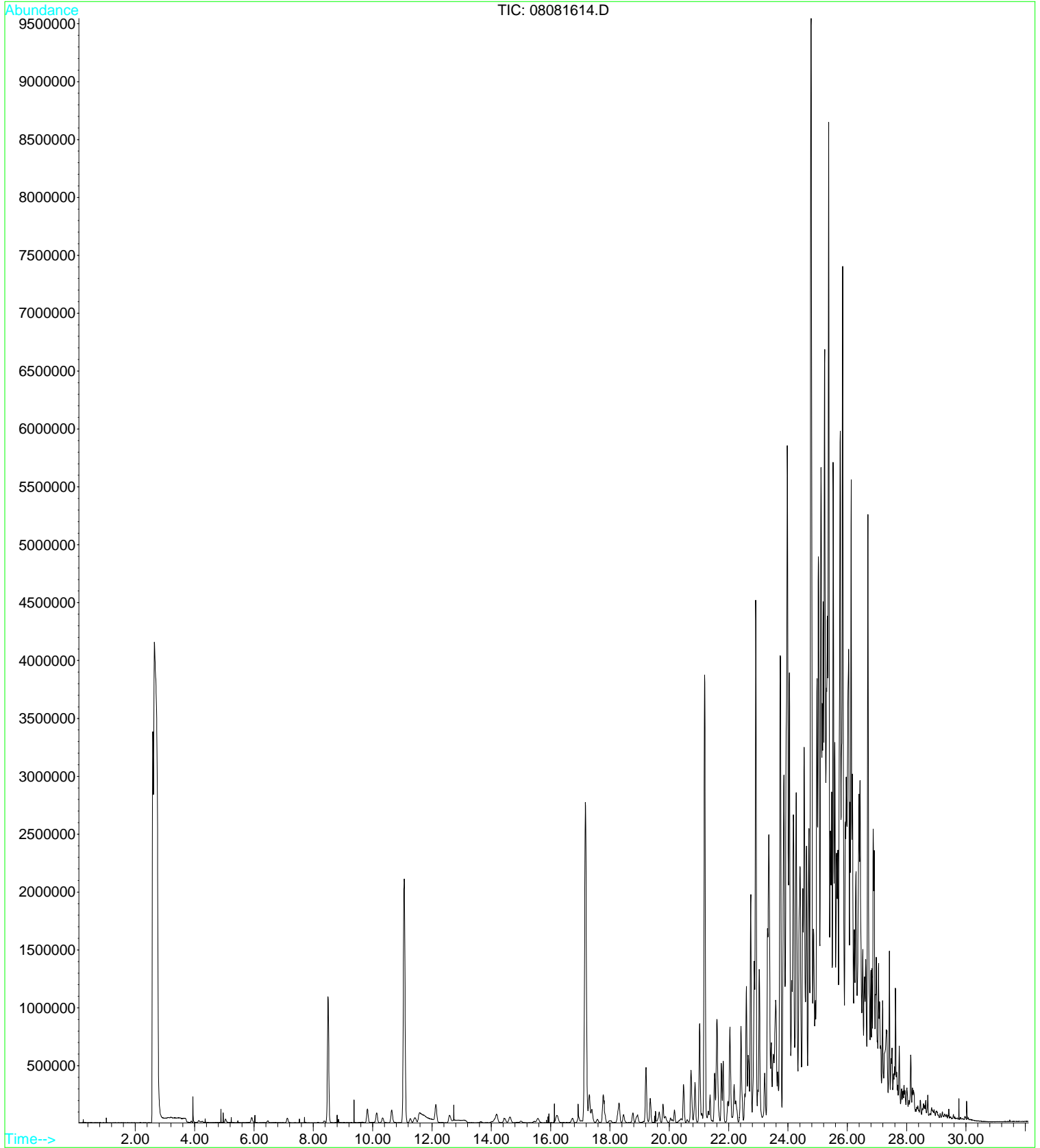
File : D:\HPCHEM\GC16\DATA\08081611.D  
Operator :  
Acquired : 8 Aug 2016 2:23 pm using AcqMethod 8260B  
Instrument : GC-16  
Sample Name: 1608260-003B W GAS ASAP  
Misc Info : 8260B\_\_W  
Vial Number: 11



File : D:\HPCHEM\GC10\DATA\08081615.D  
Operator :  
Acquired : 8 Aug 2016 5:20 pm using AcqMethod 8260B  
Instrument : GC-10  
Sample Name: 1608260-004A S GAS PDF  
Misc Info : 8260B\_S  
Vial Number: 15

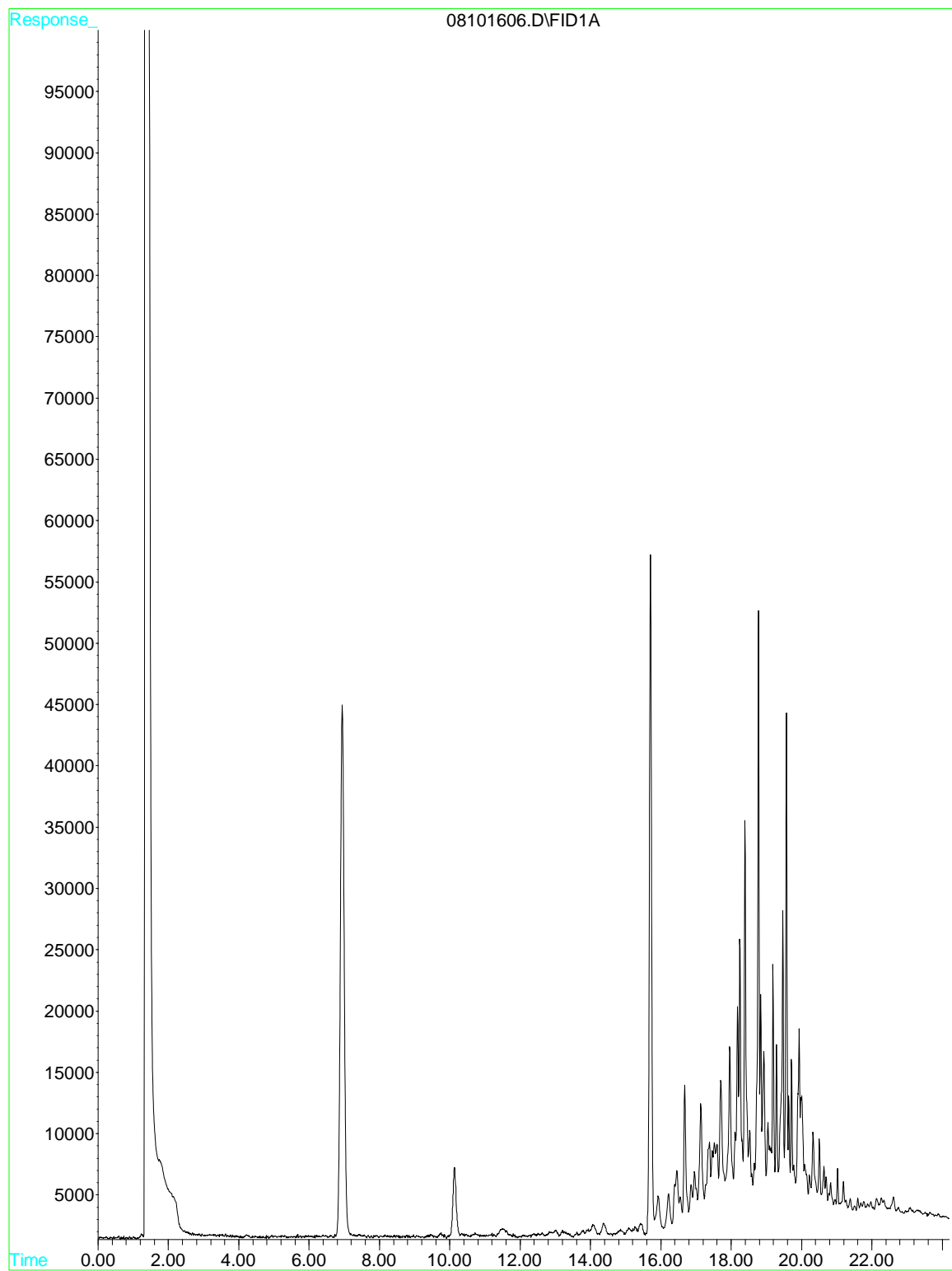


File : D:\HPCHEM\GC10\DATA\08081614.D  
Operator :  
Acquired : 8 Aug 2016 4:40 pm using AcqMethod 8260B  
Instrument : GC-10  
Sample Name: 1608260-005A S GAS PDF  
Misc Info : 8260B\_S  
Vial Number: 14

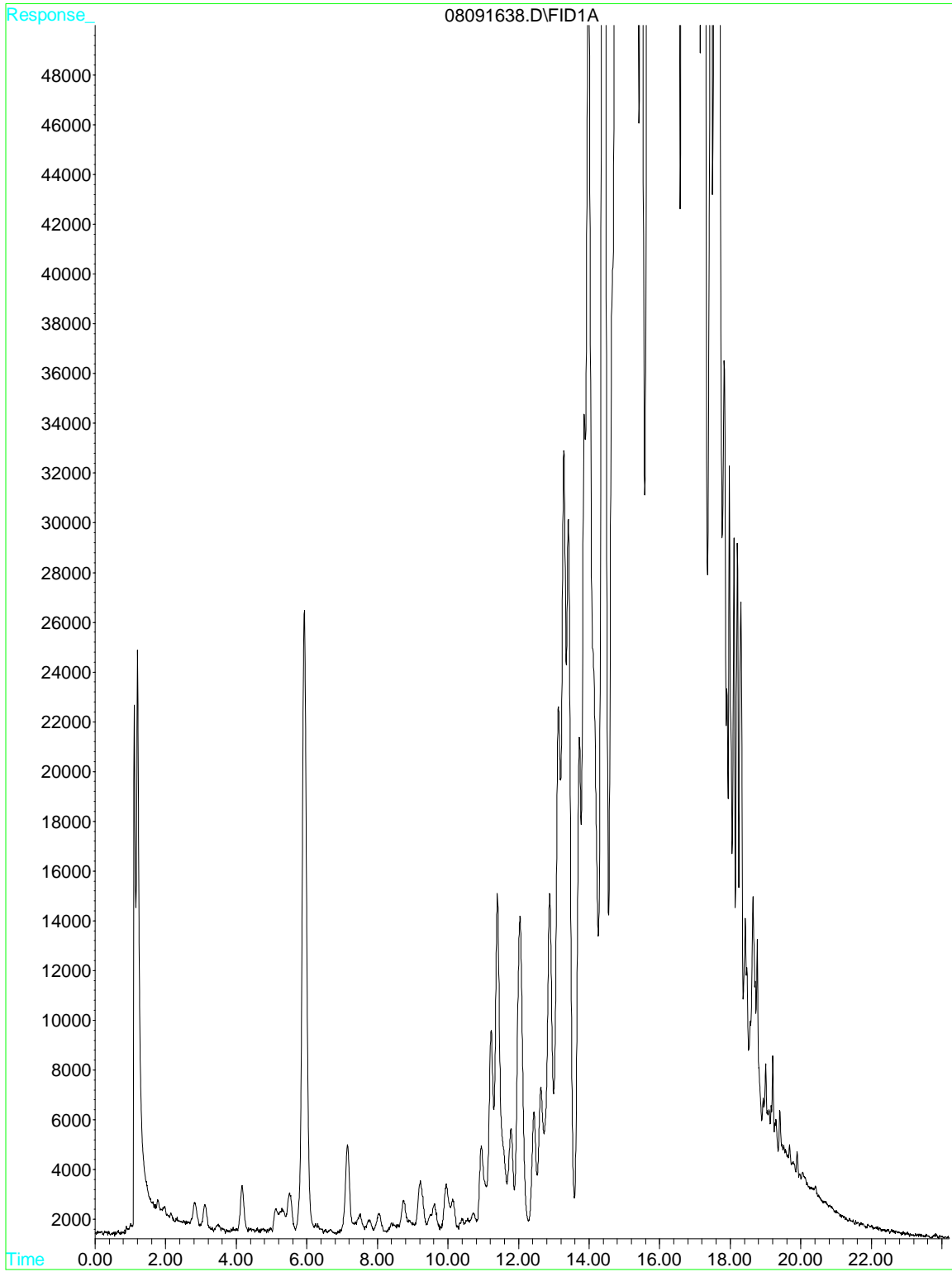




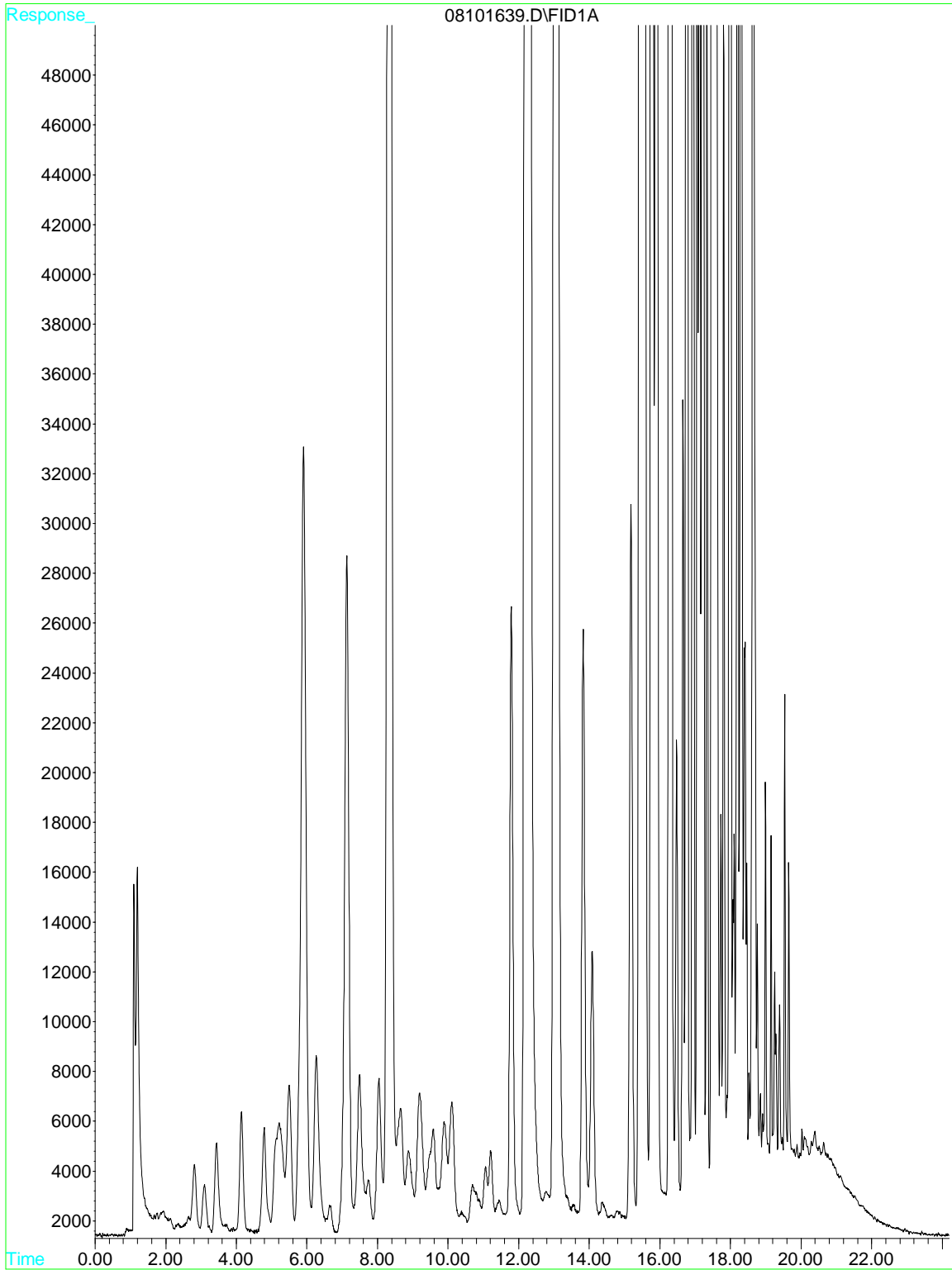
File : D:\HPCHEM\GC19\DATA\08101606.D  
Operator : IRINA  
Acquired : 10 Aug 2016 6:16 pm using AcqMethod GC19Q5.M  
Instrument : GC-19  
Sample Name: 1608260-001A S rr  
Misc Info : G-MBTX\_S  
Vial Number: 6



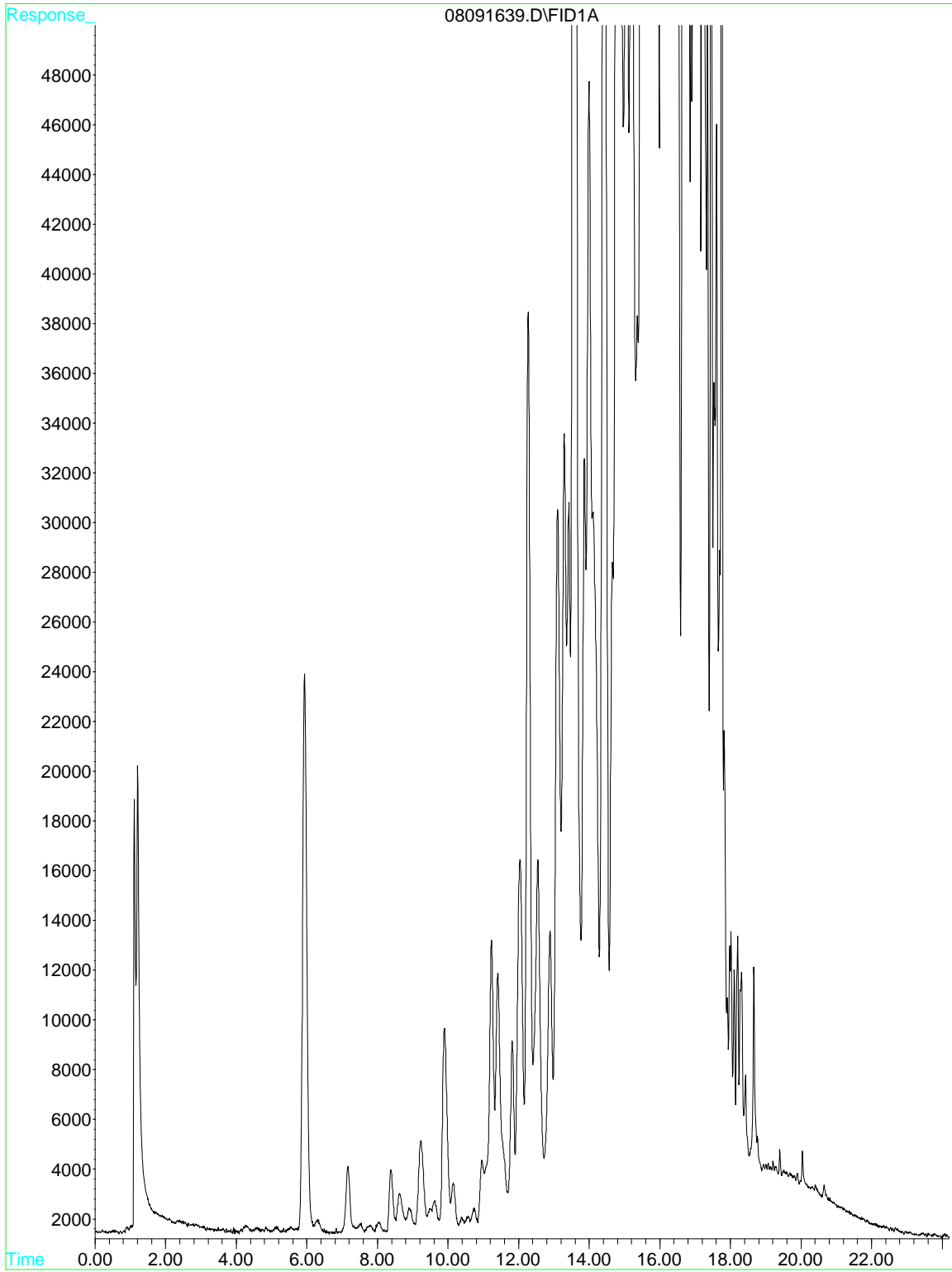
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Operator : IRINA  
Acquired : 10 Aug 2016 12:30 pm using AcqMethod GC3S2.M  
Instrument : GC-3  
Sample Name: 1608260-002A S  
Misc Info : G-MBTX\_S  
Vial Number: 38



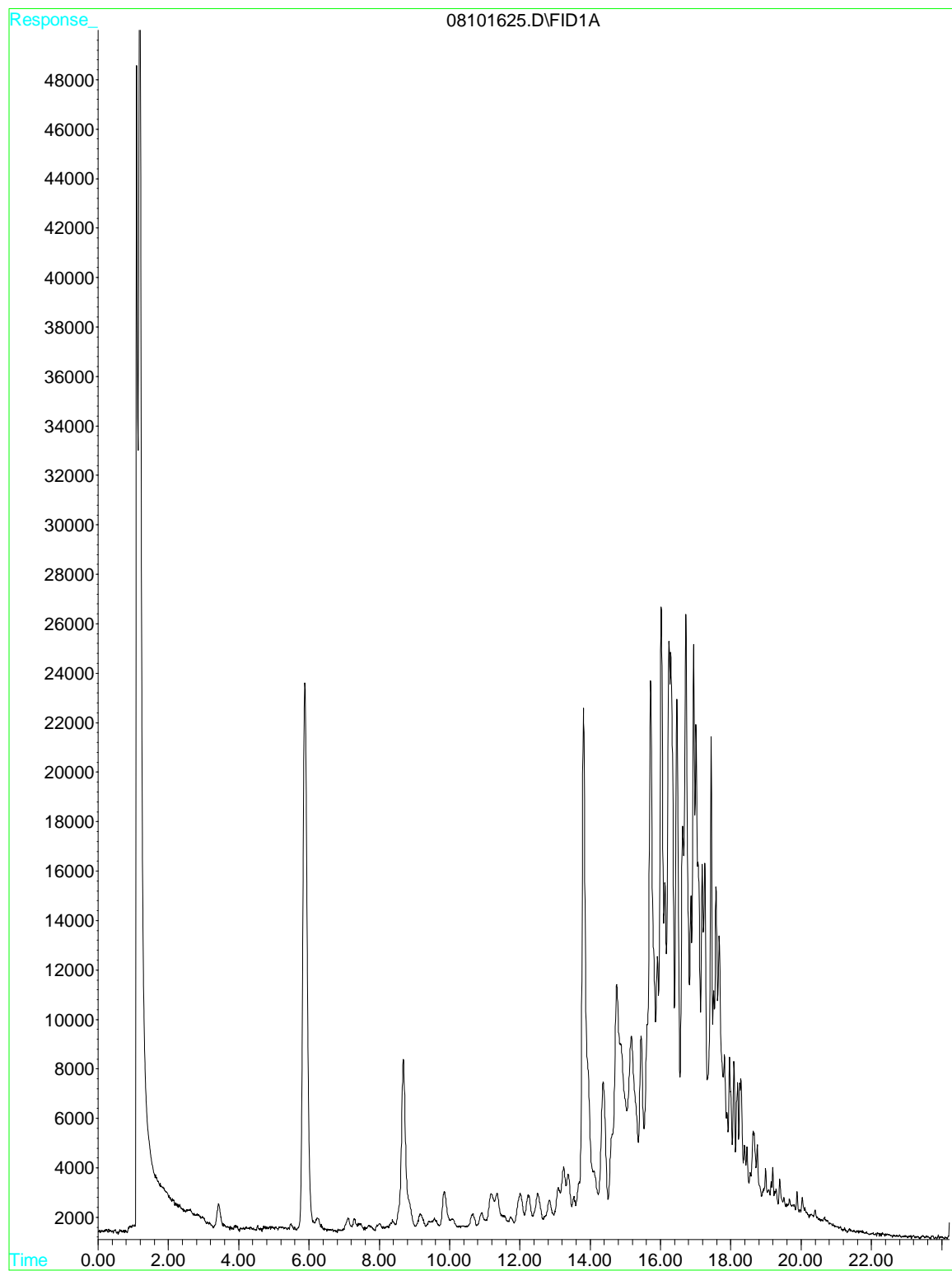
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Operator : IRINA  
Acquired : 11 Aug 2016 10:15 am using AcqMethod GC3S2.M  
Instrument : GC-3  
Sample Name: 1608260-003A W RR  
Misc Info : G-MBTX\_W  
Vial Number: 39



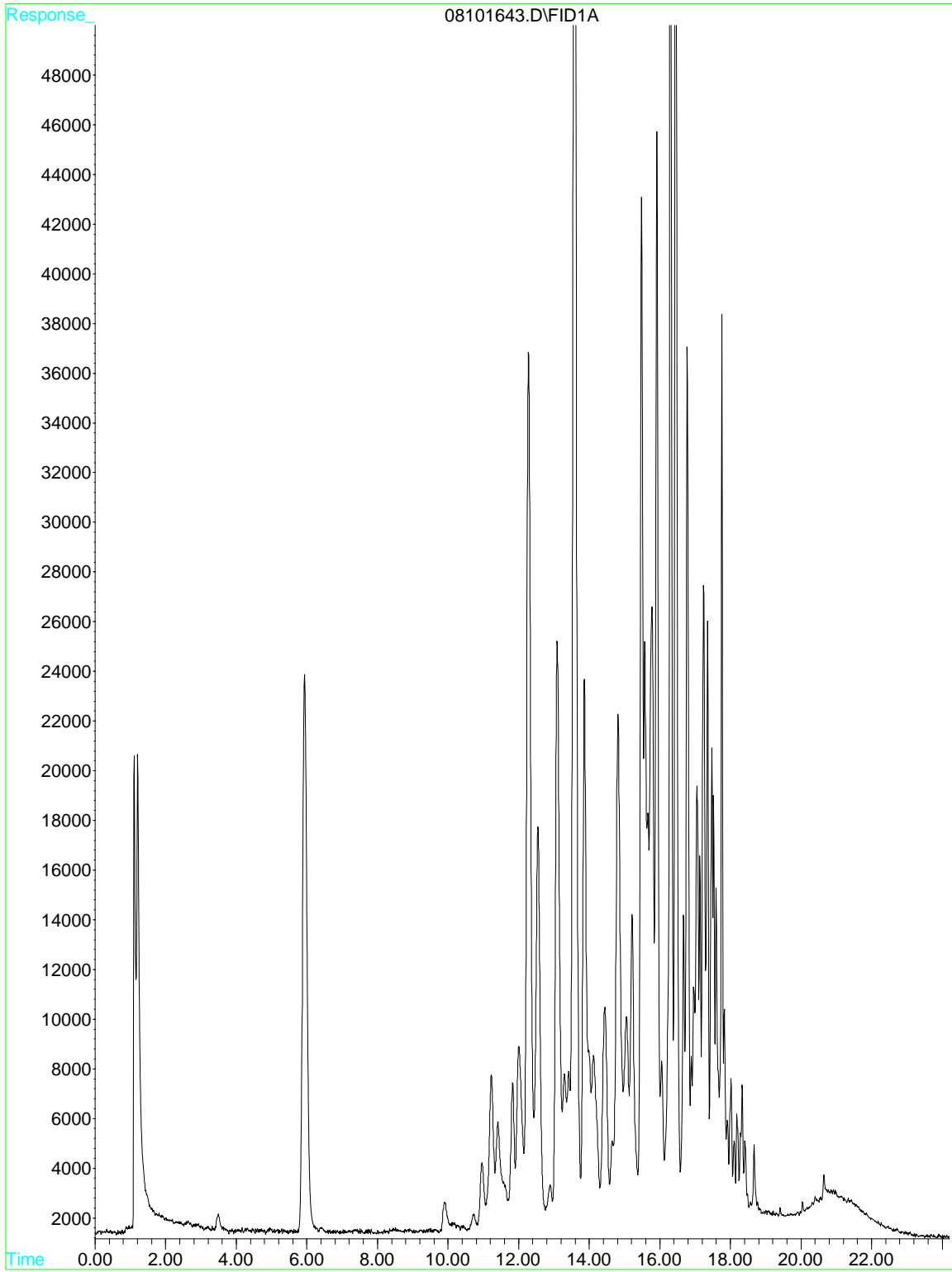
File : D:\HPCHEM\GC3\DATA\08091639.D  
Operator : IRINA  
Acquired : 10 Aug 2016 1:01 pm using AcqMethod GC3S2.M  
Instrument : GC-3  
Sample Name: 1608260-004A S  
Misc Info : G-MBTX\_S  
Vial Number: 39



File : D:\HPCHEM\GC3\DATA\08101625.D  
Operator : IRINA  
Acquired : 11 Aug 2016 3:08 am using AcqMethod GC3S2.M  
Instrument : GC-3  
Sample Name: 1608260-005A S rr  
Misc Info : G-MBTX\_S  
Vial Number: 25



File : D:\HPCHEM\GC3\DATA\08101643.D  
Operator : IRINA  
Acquired : 11 Aug 2016 12:21 pm using AcqMethod GC3S2.M  
Instrument : GC-3  
Sample Name: 1608260-SS STD  
Misc Info : G-MBTX\_W  
Vial Number: 43



Area Percent Report

Data File : D:\HPCHEM\GC16\DATA\08111606.D

Vial: 6

Acq On : 11 Aug 2016 10:35 am

Operator:

Sample : MB-16 W

Inst : GC-16

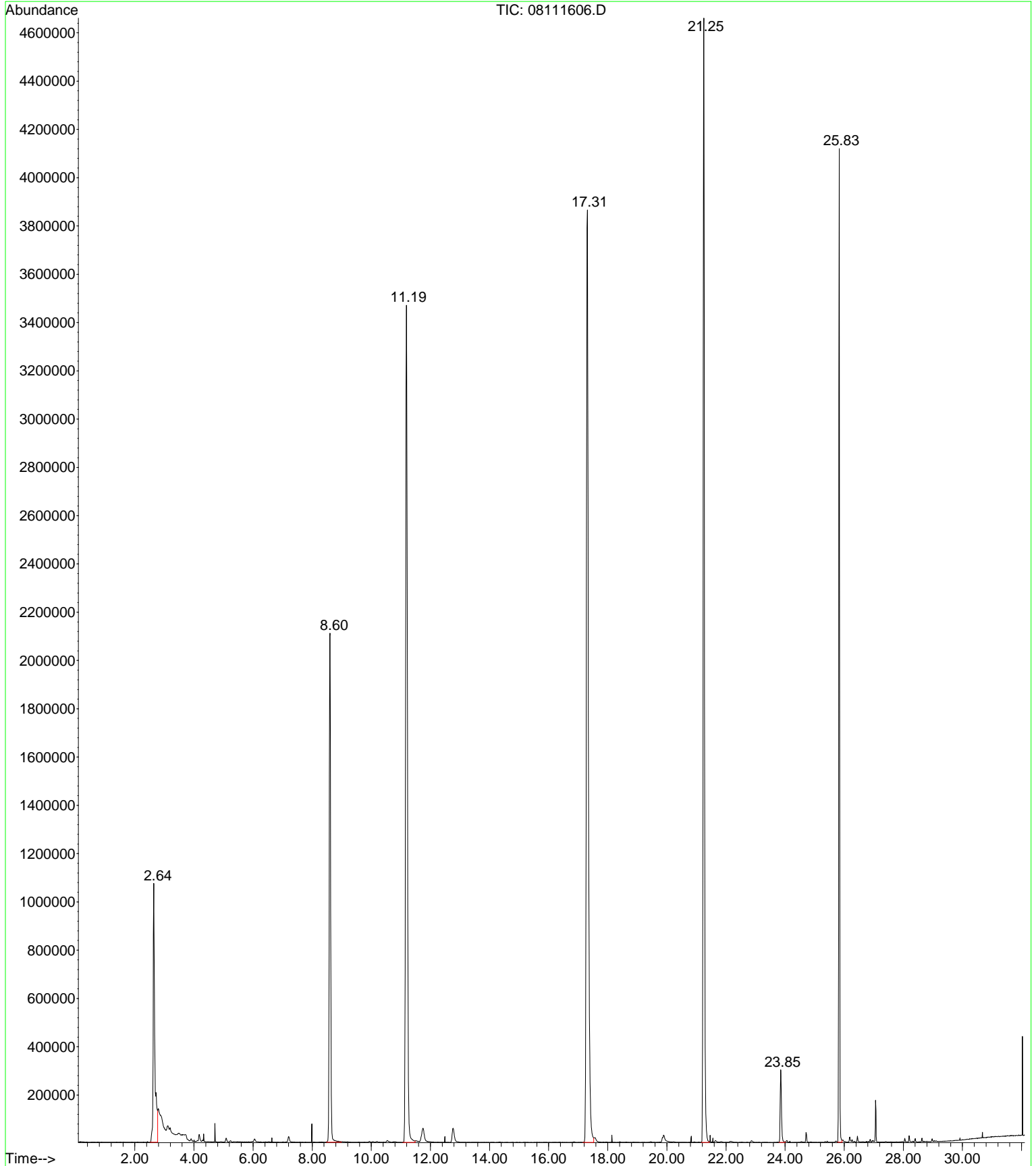
Misc : 8260B\_W

Multiplr: 10.00

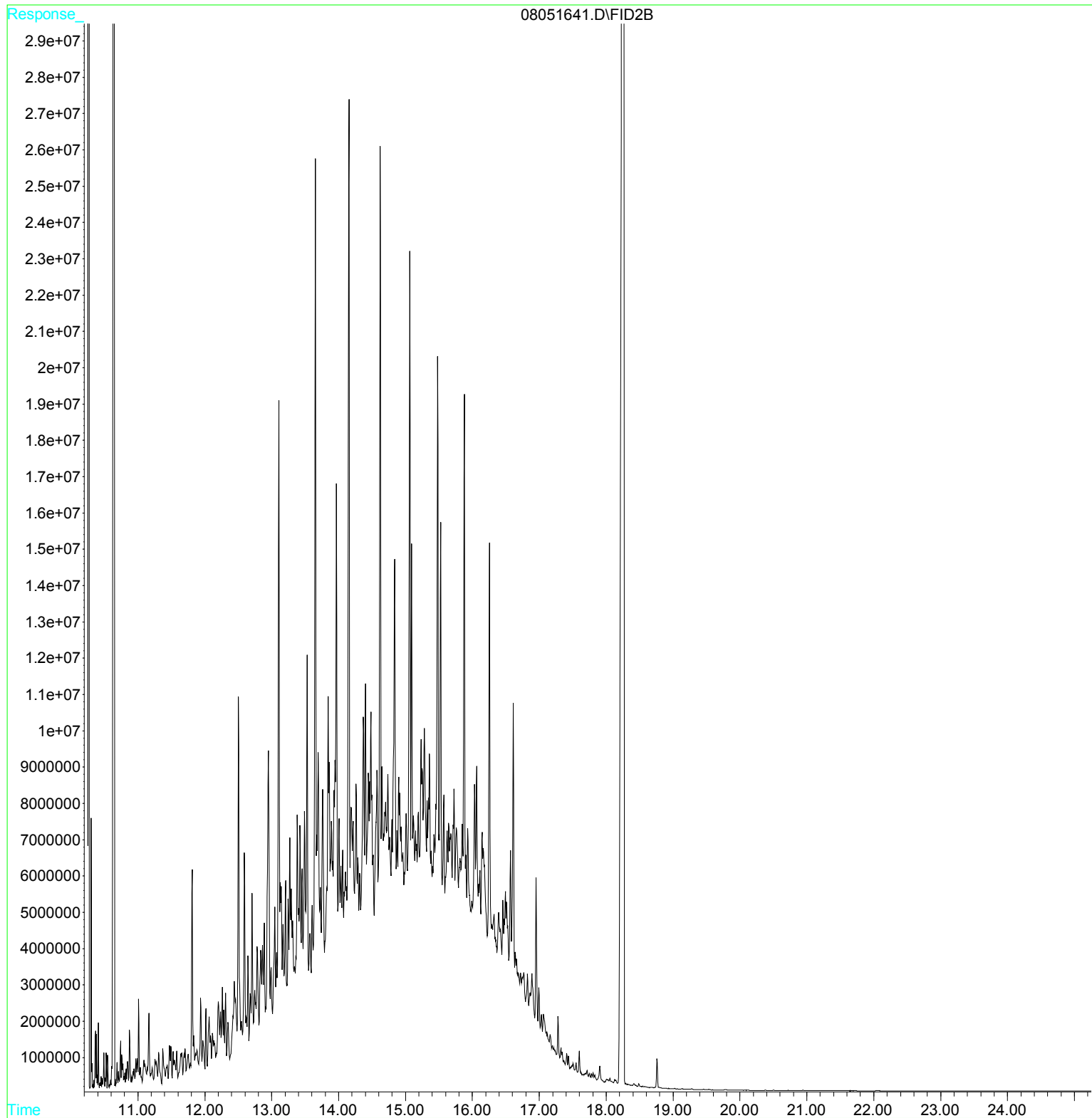
MS Integration Params: rteint.p

Method : D:\HPCHEM\GC16\METHODS\8260B.M (RTE Integrator)

Title : 8240 calibration table

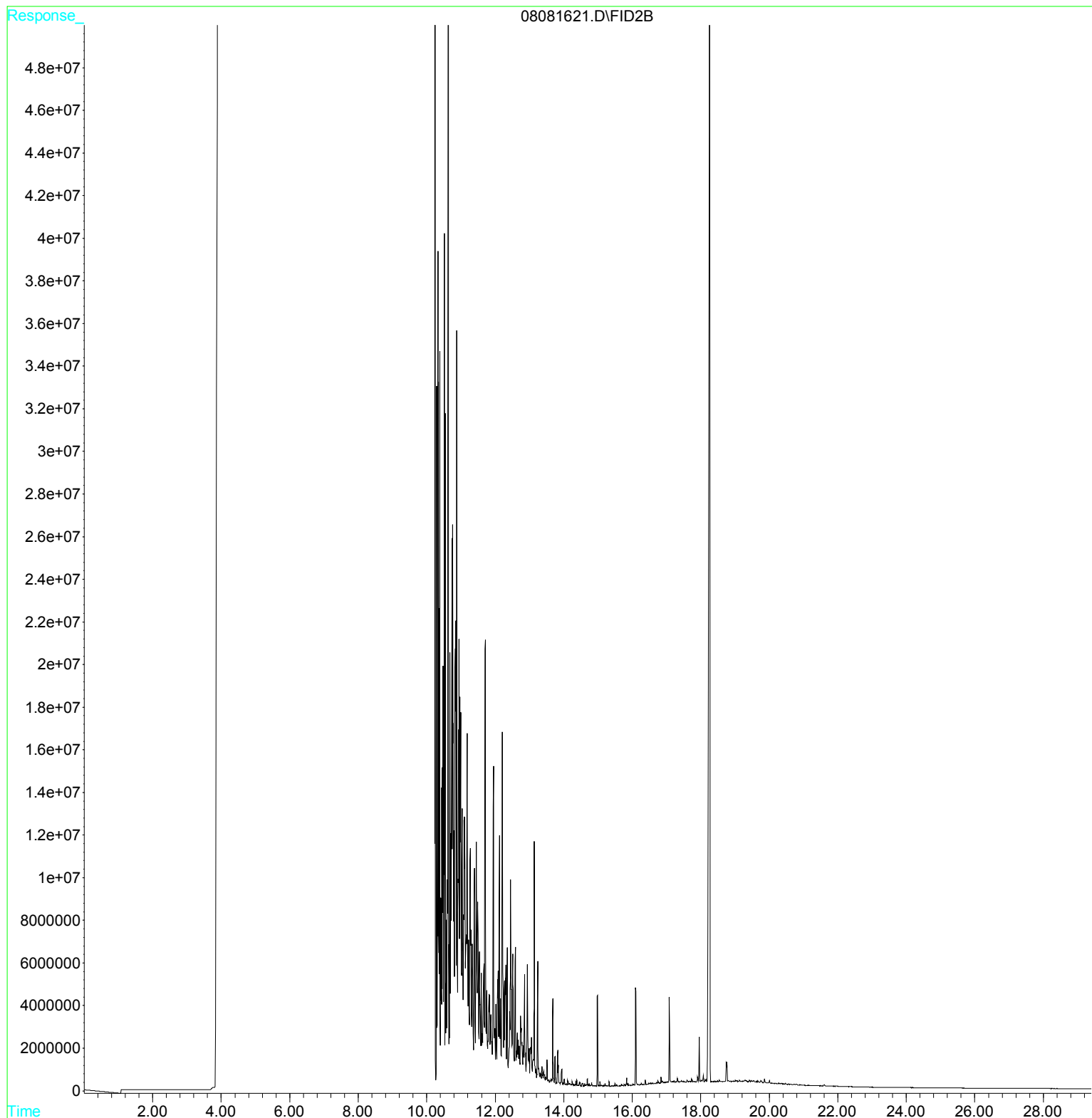


File : D:\HPCHEM\GC6\DATAB\08051641.D  
Operator : Toshiko  
Acquired : 6 Aug 2016 4:18 am using AcqMethod GC6A\_A1.M  
Instrument : GC-6  
Sample Name: CCV 7-19  
Misc Info :  
Vial Number: 71

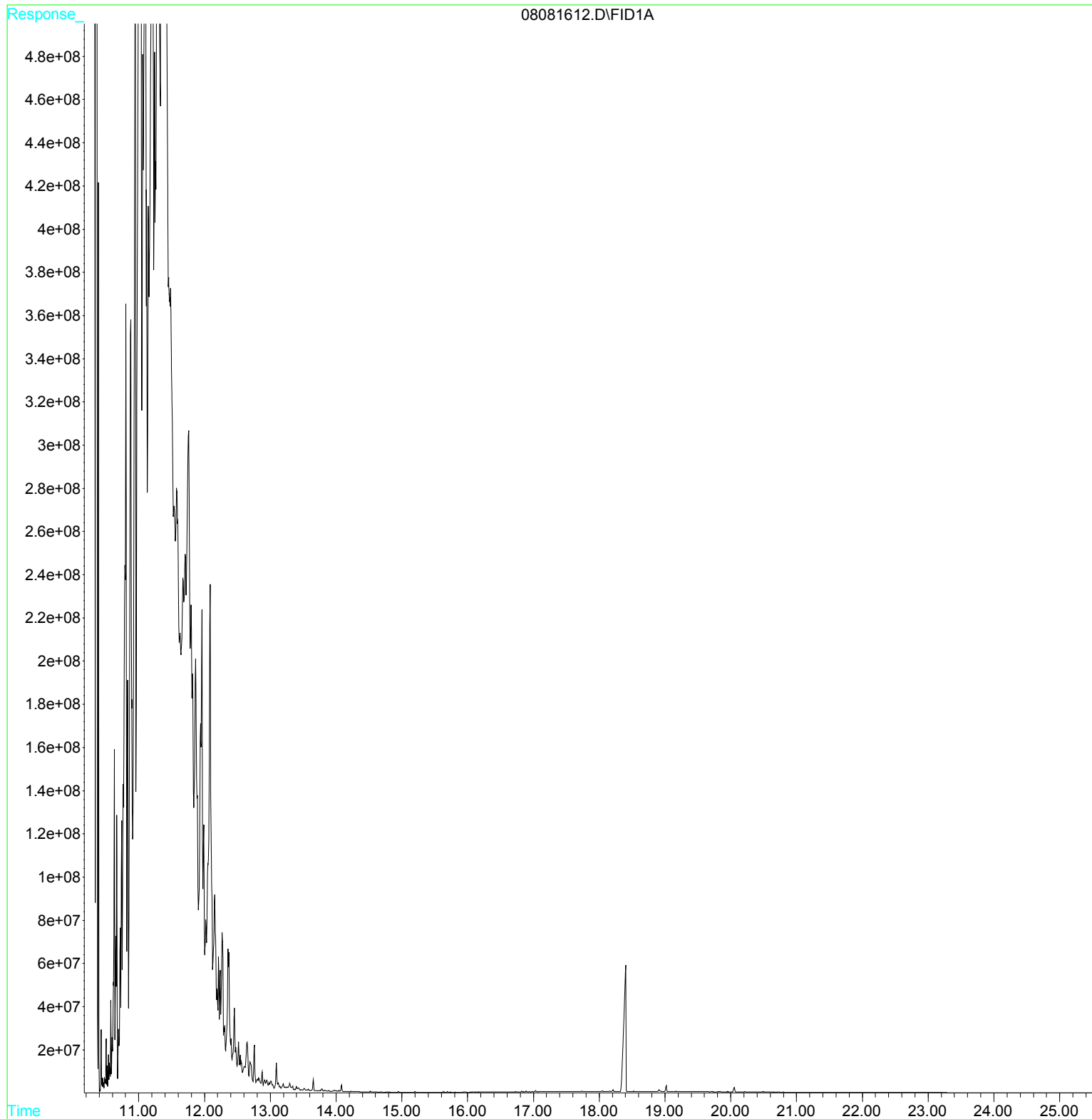




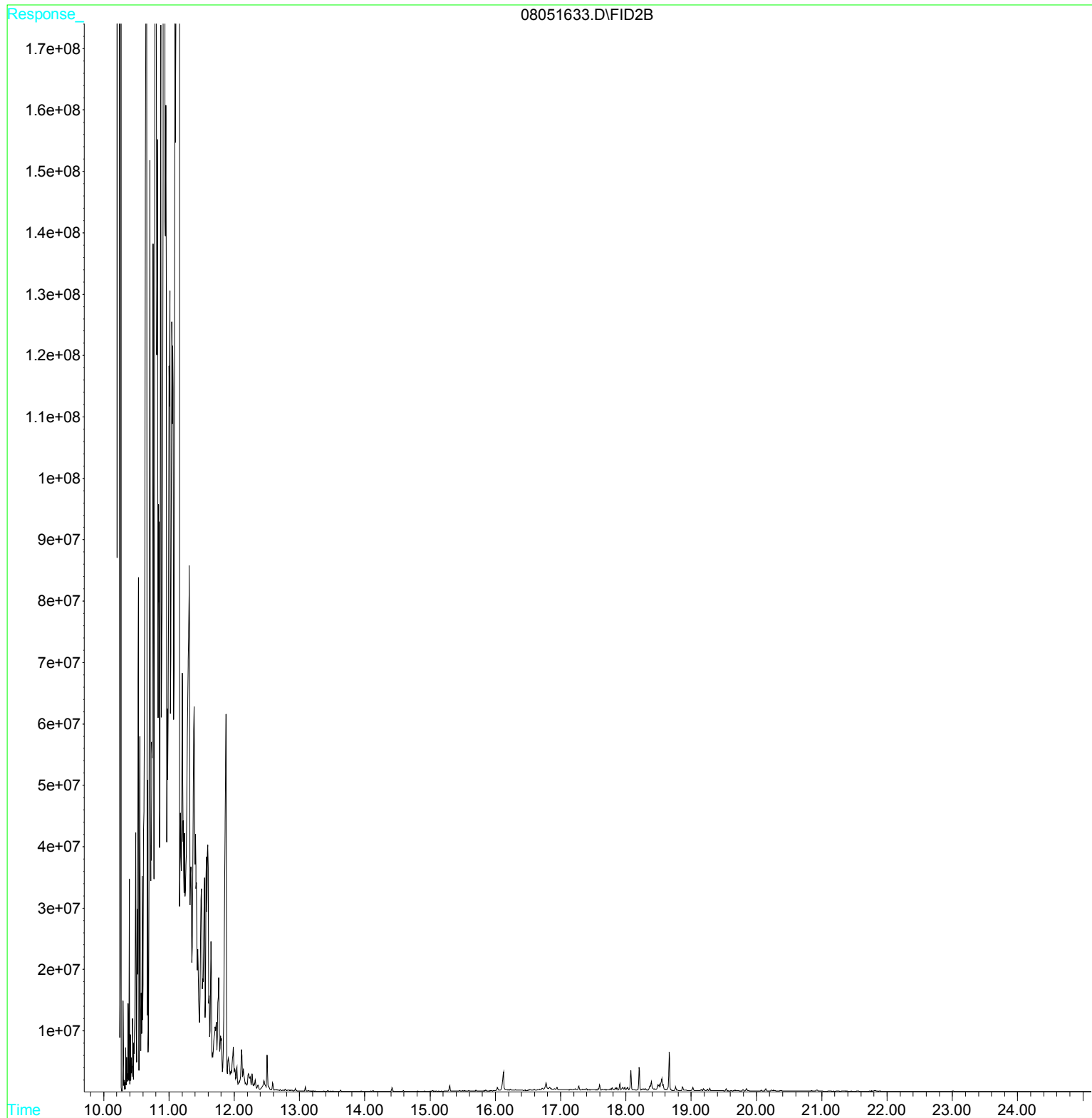
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Operator : Toshiko  
Acquired : 8 Aug 2016 3:58 pm using AcqMethod GC6A\_A1.M  
Instrument : GC-6  
Sample Name: 1608260-001A S +BO,HO,CG RE  
Misc Info :  
Vial Number: 61



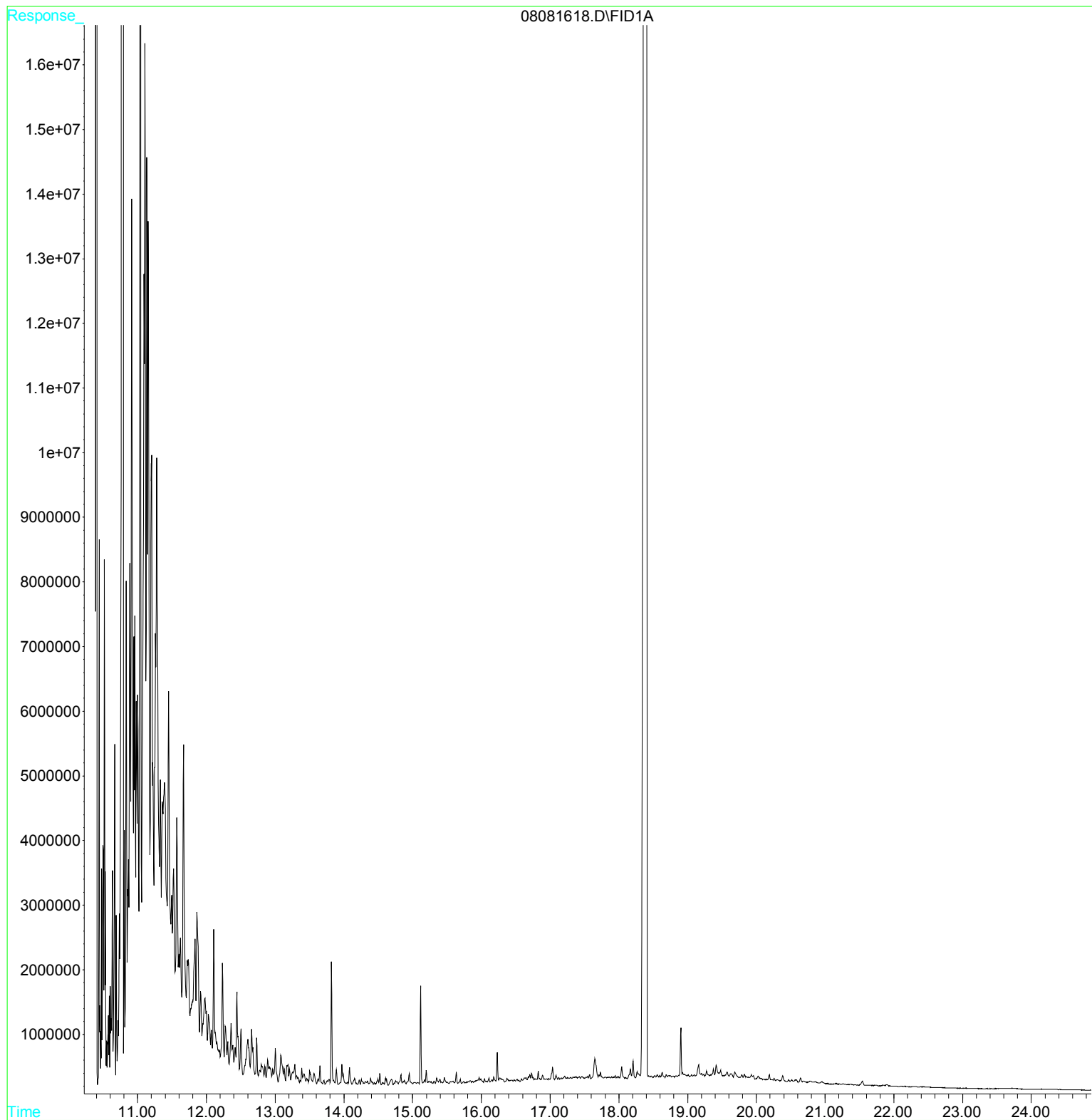
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Operator : Toshiko  
Acquired : 8 Aug 2016 12:44 pm using AcqMethod GC6A\_A1.M  
Instrument : GC-6  
Sample Name: 1608260-002A S +BO,HO,CG RR  
Misc Info : TPH  
Vial Number: 6



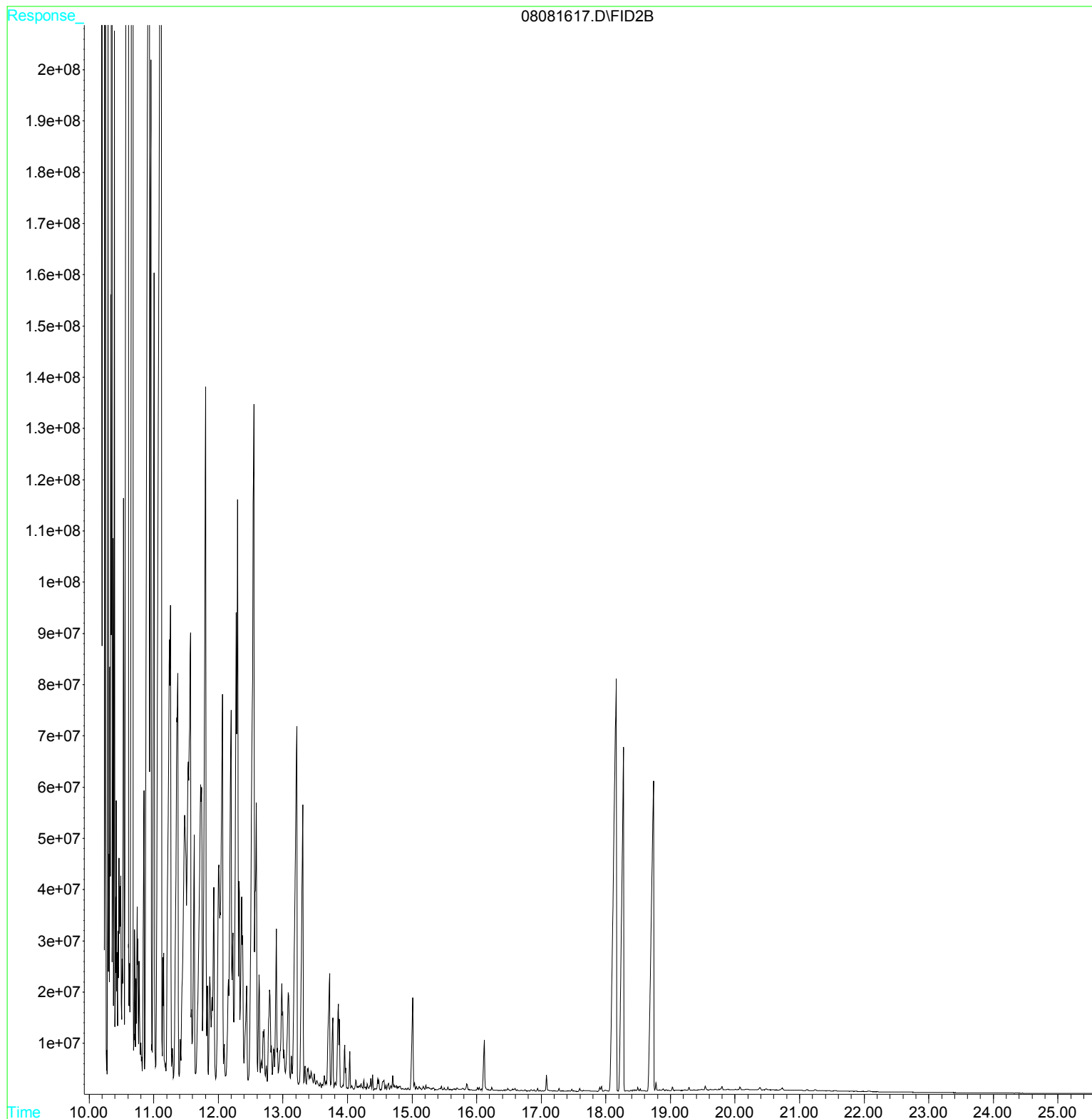
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Operator : Toshiko  
Acquired : 6 Aug 2016 1:43 am using AcqMethod GC6A\_A1.M  
Instrument : GC-6  
Sample Name: 1608260-004A S +BO, HO, CG 1G  
Misc Info : TPH  
Vial Number: 67



File : D:\HPCHEM\GC6\DATAA\08081618.D  
Operator : Toshiko  
Acquired : 8 Aug 2016 2:40 pm using AcqMethod GC6A\_A1.M  
Instrument : GC-6  
Sample Name: 1608260-005A S +BO,HO,CG RR  
Misc Info : TPH  
Vial Number: 9



File : D:\HPCHEM\GC6\DATAB\08081617.D  
Operator : Toshiko  
Acquired : 8 Aug 2016 2:40 pm using AcqMethod GC6A\_A1.M  
Instrument : GC-6  
Sample Name: 1608260-003A W +BO,HO,CG RR  
Misc Info : TPH  
Vial Number: 59



**September 2016**



# McC Campbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1609118 **Amended:** 10/21/2016

**Report Created for:** Schutze & Associates, Inc.

44358 South Grimmer Blvd  
Fremont, CA 94538

**Project Contact:** Kevin Loeb

**Project P.O.:**

**Project Name:** SCS557; 1647 International (UST5)

**Project Received:** 09/02/2016

Analytical Report reviewed & approved for release on 09/12/2016 by:

Angela Rydelius,  
Laboratory Manager

*The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.*





## Glossary of Terms & Qualifier Definitions

**Client:** Schutze & Associates, Inc.  
**Project:** SCS557; 1647 International (UST5)  
**WorkOrder:** 1609118

### Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)





## Glossary of Terms & Qualifier Definitions

**Client:** Schutze & Associates, Inc.  
**Project:** SCS557; 1647 International (UST5)  
**WorkOrder:** 1609118

### Analytical Qualifiers

H	samples were analyzed out of holding time
S	Surrogate spike recovery outside accepted recovery limits
a1	sample diluted due to matrix interference
a2	sample diluted due to cluttered chromatogram
a3	sample diluted due to high organic content.
b6	lighter than water immiscible sheen/product is present
c2	surrogate recovery outside of the control limits due to matrix interference.
c4	surrogate recovery outside of the control limits due to coelution with another peak(s) / cluttered chromatogram.
c7	Surrogate value diluted out of range
d5	TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?)
d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e2	diesel range compounds are significant; no recognizable pattern
e4	gasoline range compounds are significant.
e7	oil range compounds are significant
e8	kerosene/kerosene range/jet fuel range
e11	stoddard solvent/mineral spirit (?)
h4	sulfuric acid permanganate (EPA 3665) cleanup

### Quality Control Qualifiers

F1	MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validated the prep batch.
F10	MS/MSD outside control limits. Physical or chemical interferences exist due to sample matrix.
F13	Indigenous sample results too high for a representative matrix spike analysis.





# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B3-M-14	1609118-001A	Soil	08/31/2016 10:00	GC10	126109

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	20	200	09/08/2016 04:09
tert-Amyl methyl ether (TAME)	ND	1.0	200	09/08/2016 04:09
Benzene	ND	1.0	200	09/08/2016 04:09
Bromobenzene	ND	1.0	200	09/08/2016 04:09
Bromochloromethane	ND	1.0	200	09/08/2016 04:09
Bromodichloromethane	ND	1.0	200	09/08/2016 04:09
Bromoform	ND	1.0	200	09/08/2016 04:09
Bromomethane	ND	1.0	200	09/08/2016 04:09
2-Butanone (MEK)	ND	4.0	200	09/08/2016 04:09
t-Butyl alcohol (TBA)	ND	10	200	09/08/2016 04:09
n-Butyl benzene	ND	1.0	200	09/08/2016 04:09
sec-Butyl benzene	4.5	1.0	200	09/08/2016 04:09
tert-Butyl benzene	ND	1.0	200	09/08/2016 04:09
Carbon Disulfide	ND	1.0	200	09/08/2016 04:09
Carbon Tetrachloride	ND	1.0	200	09/08/2016 04:09
Chlorobenzene	ND	1.0	200	09/08/2016 04:09
Chloroethane	ND	1.0	200	09/08/2016 04:09
Chloroform	ND	1.0	200	09/08/2016 04:09
Chloromethane	ND	1.0	200	09/08/2016 04:09
2-Chlorotoluene	ND	1.0	200	09/08/2016 04:09
4-Chlorotoluene	ND	1.0	200	09/08/2016 04:09
Dibromochloromethane	ND	1.0	200	09/08/2016 04:09
1,2-Dibromo-3-chloropropane	ND	0.80	200	09/08/2016 04:09
1,2-Dibromoethane (EDB)	ND	0.80	200	09/08/2016 04:09
Dibromomethane	ND	1.0	200	09/08/2016 04:09
1,2-Dichlorobenzene	ND	1.0	200	09/08/2016 04:09
1,3-Dichlorobenzene	ND	1.0	200	09/08/2016 04:09
1,4-Dichlorobenzene	ND	1.0	200	09/08/2016 04:09
Dichlorodifluoromethane	ND	1.0	200	09/08/2016 04:09
1,1-Dichloroethane	ND	1.0	200	09/08/2016 04:09
1,2-Dichloroethane (1,2-DCA)	ND	0.80	200	09/08/2016 04:09
1,1-Dichloroethene	ND	1.0	200	09/08/2016 04:09
cis-1,2-Dichloroethene	ND	1.0	200	09/08/2016 04:09
trans-1,2-Dichloroethene	ND	1.0	200	09/08/2016 04:09
1,2-Dichloropropane	ND	1.0	200	09/08/2016 04:09
1,3-Dichloropropane	ND	1.0	200	09/08/2016 04:09
2,2-Dichloropropane	ND	1.0	200	09/08/2016 04:09

(Cont.)



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B3-M-14	1609118-001A	Soil	08/31/2016 10:00	GC10	126109

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	1.0	200	09/08/2016 04:09
cis-1,3-Dichloropropene	ND	1.0	200	09/08/2016 04:09
trans-1,3-Dichloropropene	ND	1.0	200	09/08/2016 04:09
Diisopropyl ether (DIPE)	ND	1.0	200	09/08/2016 04:09
Ethylbenzene	ND	1.0	200	09/08/2016 04:09
Ethyl tert-butyl ether (ETBE)	ND	1.0	200	09/08/2016 04:09
Freon 113	ND	1.0	200	09/08/2016 04:09
Hexachlorobutadiene	ND	1.0	200	09/08/2016 04:09
Hexachloroethane	ND	1.0	200	09/08/2016 04:09
2-Hexanone	ND	1.0	200	09/08/2016 04:09
Isopropylbenzene	ND	1.0	200	09/08/2016 04:09
4-Isopropyl toluene	1.6	1.0	200	09/08/2016 04:09
Methyl-t-butyl ether (MTBE)	ND	1.0	200	09/08/2016 04:09
Methylene chloride	ND	1.0	200	09/08/2016 04:09
4-Methyl-2-pentanone (MIBK)	ND	1.0	200	09/08/2016 04:09
Naphthalene	ND	1.0	200	09/08/2016 04:09
n-Propyl benzene	ND	1.0	200	09/08/2016 04:09
Styrene	ND	1.0	200	09/08/2016 04:09
1,1,1,2-Tetrachloroethane	ND	1.0	200	09/08/2016 04:09
1,1,2,2-Tetrachloroethane	ND	1.0	200	09/08/2016 04:09
Tetrachloroethene	ND	1.0	200	09/08/2016 04:09
Toluene	ND	1.0	200	09/08/2016 04:09
1,2,3-Trichlorobenzene	ND	1.0	200	09/08/2016 04:09
1,2,4-Trichlorobenzene	ND	1.0	200	09/08/2016 04:09
1,1,1-Trichloroethane	ND	1.0	200	09/08/2016 04:09
1,1,2-Trichloroethane	ND	1.0	200	09/08/2016 04:09
Trichloroethene	ND	1.0	200	09/08/2016 04:09
Trichlorofluoromethane	ND	1.0	200	09/08/2016 04:09
1,2,3-Trichloropropane	ND	1.0	200	09/08/2016 04:09
1,2,4-Trimethylbenzene	ND	1.0	200	09/08/2016 04:09
1,3,5-Trimethylbenzene	ND	1.0	200	09/08/2016 04:09
Vinyl Chloride	ND	1.0	200	09/08/2016 04:09
Xylenes, Total	ND	1.0	200	09/08/2016 04:09

(Cont.)



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B3-M-14	1609118-001A	Soil	08/31/2016 10:00	GC10	126109

Analytes	Result		RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	106		70-130		09/08/2016 04:09
Toluene-d8	103		70-130		09/08/2016 04:09
4-BFB	100		70-130		09/08/2016 04:09
Benzene-d6	102		60-140		09/08/2016 04:09
Ethylbenzene-d10	0	S	60-140		09/08/2016 04:09
1,2-DCB-d4	89		60-140		09/08/2016 04:09

Analyst(s): KF

Analytical Comments: c7



## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TP-1-5	1609118-002A	Soil	08/31/2016 14:00	GC10	126109
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		2.0	20	09/08/2016 04:50
tert-Amyl methyl ether (TAME)	ND		0.10	20	09/08/2016 04:50
Benzene	ND		0.10	20	09/08/2016 04:50
Bromobenzene	ND		0.10	20	09/08/2016 04:50
Bromochloromethane	ND		0.10	20	09/08/2016 04:50
Bromodichloromethane	ND		0.10	20	09/08/2016 04:50
Bromoform	ND		0.10	20	09/08/2016 04:50
Bromomethane	ND		0.10	20	09/08/2016 04:50
2-Butanone (MEK)	ND		0.40	20	09/08/2016 04:50
t-Butyl alcohol (TBA)	ND		1.0	20	09/08/2016 04:50
n-Butyl benzene	ND		0.10	20	09/08/2016 04:50
sec-Butyl benzene	ND		0.10	20	09/08/2016 04:50
tert-Butyl benzene	ND		0.10	20	09/08/2016 04:50
Carbon Disulfide	ND		0.10	20	09/08/2016 04:50
Carbon Tetrachloride	ND		0.10	20	09/08/2016 04:50
Chlorobenzene	ND		0.10	20	09/08/2016 04:50
Chloroethane	ND		0.10	20	09/08/2016 04:50
Chloroform	ND		0.10	20	09/08/2016 04:50
Chloromethane	ND		0.10	20	09/08/2016 04:50
2-Chlorotoluene	ND		0.10	20	09/08/2016 04:50
4-Chlorotoluene	ND		0.10	20	09/08/2016 04:50
Dibromochloromethane	ND		0.10	20	09/08/2016 04:50
1,2-Dibromo-3-chloropropane	ND		0.080	20	09/08/2016 04:50
1,2-Dibromoethane (EDB)	ND		0.080	20	09/08/2016 04:50
Dibromomethane	ND		0.10	20	09/08/2016 04:50
1,2-Dichlorobenzene	ND		0.10	20	09/08/2016 04:50
1,3-Dichlorobenzene	ND		0.10	20	09/08/2016 04:50
1,4-Dichlorobenzene	ND		0.10	20	09/08/2016 04:50
Dichlorodifluoromethane	ND		0.10	20	09/08/2016 04:50
1,1-Dichloroethane	ND		0.10	20	09/08/2016 04:50
1,2-Dichloroethane (1,2-DCA)	ND		0.080	20	09/08/2016 04:50
1,1-Dichloroethene	ND		0.10	20	09/08/2016 04:50
cis-1,2-Dichloroethene	ND		0.10	20	09/08/2016 04:50
trans-1,2-Dichloroethene	ND		0.10	20	09/08/2016 04:50
1,2-Dichloropropane	ND		0.10	20	09/08/2016 04:50
1,3-Dichloropropane	ND		0.10	20	09/08/2016 04:50
2,2-Dichloropropane	ND		0.10	20	09/08/2016 04:50

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## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TP-1-5	1609118-002A	Soil	08/31/2016 14:00	GC10	126109

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.10	20	09/08/2016 04:50
cis-1,3-Dichloropropene	ND	0.10	20	09/08/2016 04:50
trans-1,3-Dichloropropene	ND	0.10	20	09/08/2016 04:50
Diisopropyl ether (DIPE)	ND	0.10	20	09/08/2016 04:50
Ethylbenzene	ND	0.10	20	09/08/2016 04:50
Ethyl tert-butyl ether (ETBE)	ND	0.10	20	09/08/2016 04:50
Freon 113	ND	0.10	20	09/08/2016 04:50
Hexachlorobutadiene	ND	0.10	20	09/08/2016 04:50
Hexachloroethane	ND	0.10	20	09/08/2016 04:50
2-Hexanone	ND	0.10	20	09/08/2016 04:50
Isopropylbenzene	ND	0.10	20	09/08/2016 04:50
4-Isopropyl toluene	ND	0.10	20	09/08/2016 04:50
Methyl-t-butyl ether (MTBE)	ND	0.10	20	09/08/2016 04:50
Methylene chloride	ND	0.10	20	09/08/2016 04:50
4-Methyl-2-pentanone (MIBK)	ND	0.10	20	09/08/2016 04:50
Naphthalene	ND	0.10	20	09/08/2016 04:50
n-Propyl benzene	ND	0.10	20	09/08/2016 04:50
Styrene	ND	0.10	20	09/08/2016 04:50
1,1,1,2-Tetrachloroethane	ND	0.10	20	09/08/2016 04:50
1,1,2,2-Tetrachloroethane	ND	0.10	20	09/08/2016 04:50
Tetrachloroethene	ND	0.10	20	09/08/2016 04:50
Toluene	ND	0.10	20	09/08/2016 04:50
1,2,3-Trichlorobenzene	ND	0.10	20	09/08/2016 04:50
1,2,4-Trichlorobenzene	ND	0.10	20	09/08/2016 04:50
1,1,1-Trichloroethane	ND	0.10	20	09/08/2016 04:50
1,1,2-Trichloroethane	ND	0.10	20	09/08/2016 04:50
Trichloroethene	ND	0.10	20	09/08/2016 04:50
Trichlorofluoromethane	ND	0.10	20	09/08/2016 04:50
1,2,3-Trichloropropane	ND	0.10	20	09/08/2016 04:50
1,2,4-Trimethylbenzene	ND	0.10	20	09/08/2016 04:50
1,3,5-Trimethylbenzene	ND	0.10	20	09/08/2016 04:50
Vinyl Chloride	ND	0.10	20	09/08/2016 04:50
Xylenes, Total	ND	0.10	20	09/08/2016 04:50

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# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TP-1-5	1609118-002A	Soil	08/31/2016 14:00	GC10	126109

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	107		70-130	09/08/2016 04:50
Toluene-d8	100		70-130	09/08/2016 04:50
4-BFB	108		70-130	09/08/2016 04:50
Benzene-d6	90		60-140	09/08/2016 04:50
Ethylbenzene-d10	68		60-140	09/08/2016 04:50
1,2-DCB-d4	126		60-140	09/08/2016 04:50

Analyst(s): KF

Analytical Comments: a3





## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TP-2-4	1609118-003A	Soil	08/31/2016 14:00	GC10	126109

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	09/06/2016 10:02
tert-Amyl methyl ether (TAME)	ND	0.0050	1	09/06/2016 10:02
Benzene	ND	0.0050	1	09/06/2016 10:02
Bromobenzene	ND	0.0050	1	09/06/2016 10:02
Bromochloromethane	ND	0.0050	1	09/06/2016 10:02
Bromodichloromethane	ND	0.0050	1	09/06/2016 10:02
Bromoform	ND	0.0050	1	09/06/2016 10:02
Bromomethane	ND	0.0050	1	09/06/2016 10:02
2-Butanone (MEK)	ND	0.020	1	09/06/2016 10:02
t-Butyl alcohol (TBA)	ND	0.050	1	09/06/2016 10:02
n-Butyl benzene	ND	0.0050	1	09/06/2016 10:02
sec-Butyl benzene	ND	0.0050	1	09/06/2016 10:02
tert-Butyl benzene	ND	0.0050	1	09/06/2016 10:02
Carbon Disulfide	ND	0.0050	1	09/06/2016 10:02
Carbon Tetrachloride	ND	0.0050	1	09/06/2016 10:02
Chlorobenzene	ND	0.0050	1	09/06/2016 10:02
Chloroethane	ND	0.0050	1	09/06/2016 10:02
Chloroform	ND	0.0050	1	09/06/2016 10:02
Chloromethane	ND	0.0050	1	09/06/2016 10:02
2-Chlorotoluene	ND	0.0050	1	09/06/2016 10:02
4-Chlorotoluene	ND	0.0050	1	09/06/2016 10:02
Dibromochloromethane	ND	0.0050	1	09/06/2016 10:02
1,2-Dibromo-3-chloropropane	ND	0.0040	1	09/06/2016 10:02
1,2-Dibromoethane (EDB)	ND	0.0040	1	09/06/2016 10:02
Dibromomethane	ND	0.0050	1	09/06/2016 10:02
1,2-Dichlorobenzene	ND	0.0050	1	09/06/2016 10:02
1,3-Dichlorobenzene	ND	0.0050	1	09/06/2016 10:02
1,4-Dichlorobenzene	ND	0.0050	1	09/06/2016 10:02
Dichlorodifluoromethane	ND	0.0050	1	09/06/2016 10:02
1,1-Dichloroethane	ND	0.0050	1	09/06/2016 10:02
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	09/06/2016 10:02
1,1-Dichloroethene	ND	0.0050	1	09/06/2016 10:02
cis-1,2-Dichloroethene	ND	0.0050	1	09/06/2016 10:02
trans-1,2-Dichloroethene	ND	0.0050	1	09/06/2016 10:02
1,2-Dichloropropane	ND	0.0050	1	09/06/2016 10:02
1,3-Dichloropropane	ND	0.0050	1	09/06/2016 10:02
2,2-Dichloropropane	ND	0.0050	1	09/06/2016 10:02

(Cont.)



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TP-2-4	1609118-003A	Soil	08/31/2016 14:00	GC10	126109

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	09/06/2016 10:02
cis-1,3-Dichloropropene	ND	0.0050	1	09/06/2016 10:02
trans-1,3-Dichloropropene	ND	0.0050	1	09/06/2016 10:02
Diisopropyl ether (DIPE)	ND	0.0050	1	09/06/2016 10:02
Ethylbenzene	ND	0.0050	1	09/06/2016 10:02
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	09/06/2016 10:02
Freon 113	ND	0.0050	1	09/06/2016 10:02
Hexachlorobutadiene	ND	0.0050	1	09/06/2016 10:02
Hexachloroethane	ND	0.0050	1	09/06/2016 10:02
2-Hexanone	ND	0.0050	1	09/06/2016 10:02
Isopropylbenzene	ND	0.0050	1	09/06/2016 10:02
4-Isopropyl toluene	ND	0.0050	1	09/06/2016 10:02
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	09/06/2016 10:02
Methylene chloride	ND	0.0050	1	09/06/2016 10:02
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	09/06/2016 10:02
Naphthalene	ND	0.0050	1	09/06/2016 10:02
n-Propyl benzene	ND	0.0050	1	09/06/2016 10:02
Styrene	ND	0.0050	1	09/06/2016 10:02
1,1,1,2-Tetrachloroethane	ND	0.0050	1	09/06/2016 10:02
1,1,2,2-Tetrachloroethane	ND	0.0050	1	09/06/2016 10:02
Tetrachloroethene	ND	0.0050	1	09/06/2016 10:02
Toluene	ND	0.0050	1	09/06/2016 10:02
1,2,3-Trichlorobenzene	ND	0.0050	1	09/06/2016 10:02
1,2,4-Trichlorobenzene	ND	0.0050	1	09/06/2016 10:02
1,1,1-Trichloroethane	ND	0.0050	1	09/06/2016 10:02
1,1,2-Trichloroethane	ND	0.0050	1	09/06/2016 10:02
Trichloroethene	ND	0.0050	1	09/06/2016 10:02
Trichlorofluoromethane	ND	0.0050	1	09/06/2016 10:02
1,2,3-Trichloropropane	ND	0.0050	1	09/06/2016 10:02
1,2,4-Trimethylbenzene	ND	0.0050	1	09/06/2016 10:02
1,3,5-Trimethylbenzene	ND	0.0050	1	09/06/2016 10:02
Vinyl Chloride	ND	0.0050	1	09/06/2016 10:02
Xylenes, Total	ND	0.0050	1	09/06/2016 10:02

(Cont.)



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TP-2-4	1609118-003A	Soil	08/31/2016 14:00	GC10	126109

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	99		70-130	09/06/2016 10:02
Toluene-d8	108		70-130	09/06/2016 10:02
4-BFB	118		70-130	09/06/2016 10:02
Benzene-d6	92		60-140	09/06/2016 10:02
Ethylbenzene-d10	109		60-140	09/06/2016 10:02
1,2-DCB-d4	82		60-140	09/06/2016 10:02

Analyst(s): KF



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TP-3-5	1609118-004A	Soil	09/01/2016 09:00	GC10	126109

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	09/06/2016 10:48
tert-Amyl methyl ether (TAME)	ND	0.0050	1	09/06/2016 10:48
Benzene	ND	0.0050	1	09/06/2016 10:48
Bromobenzene	ND	0.0050	1	09/06/2016 10:48
Bromochloromethane	ND	0.0050	1	09/06/2016 10:48
Bromodichloromethane	ND	0.0050	1	09/06/2016 10:48
Bromoform	ND	0.0050	1	09/06/2016 10:48
Bromomethane	ND	0.0050	1	09/06/2016 10:48
2-Butanone (MEK)	ND	0.020	1	09/06/2016 10:48
t-Butyl alcohol (TBA)	ND	0.050	1	09/06/2016 10:48
n-Butyl benzene	ND	0.0050	1	09/06/2016 10:48
sec-Butyl benzene	ND	0.0050	1	09/06/2016 10:48
tert-Butyl benzene	ND	0.0050	1	09/06/2016 10:48
Carbon Disulfide	ND	0.0050	1	09/06/2016 10:48
Carbon Tetrachloride	ND	0.0050	1	09/06/2016 10:48
Chlorobenzene	ND	0.0050	1	09/06/2016 10:48
Chloroethane	ND	0.0050	1	09/06/2016 10:48
Chloroform	ND	0.0050	1	09/06/2016 10:48
Chloromethane	ND	0.0050	1	09/06/2016 10:48
2-Chlorotoluene	ND	0.0050	1	09/06/2016 10:48
4-Chlorotoluene	ND	0.0050	1	09/06/2016 10:48
Dibromochloromethane	ND	0.0050	1	09/06/2016 10:48
1,2-Dibromo-3-chloropropane	ND	0.0040	1	09/06/2016 10:48
1,2-Dibromoethane (EDB)	ND	0.0040	1	09/06/2016 10:48
Dibromomethane	ND	0.0050	1	09/06/2016 10:48
1,2-Dichlorobenzene	ND	0.0050	1	09/06/2016 10:48
1,3-Dichlorobenzene	ND	0.0050	1	09/06/2016 10:48
1,4-Dichlorobenzene	ND	0.0050	1	09/06/2016 10:48
Dichlorodifluoromethane	ND	0.0050	1	09/06/2016 10:48
1,1-Dichloroethane	ND	0.0050	1	09/06/2016 10:48
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	09/06/2016 10:48
1,1-Dichloroethene	ND	0.0050	1	09/06/2016 10:48
cis-1,2-Dichloroethene	ND	0.0050	1	09/06/2016 10:48
trans-1,2-Dichloroethene	ND	0.0050	1	09/06/2016 10:48
1,2-Dichloropropane	ND	0.0050	1	09/06/2016 10:48
1,3-Dichloropropane	ND	0.0050	1	09/06/2016 10:48
2,2-Dichloropropane	ND	0.0050	1	09/06/2016 10:48

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## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TP-3-5	1609118-004A	Soil	09/01/2016 09:00	GC10	126109

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	09/06/2016 10:48
cis-1,3-Dichloropropene	ND	0.0050	1	09/06/2016 10:48
trans-1,3-Dichloropropene	ND	0.0050	1	09/06/2016 10:48
Diisopropyl ether (DIPE)	ND	0.0050	1	09/06/2016 10:48
Ethylbenzene	ND	0.0050	1	09/06/2016 10:48
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	09/06/2016 10:48
Freon 113	ND	0.0050	1	09/06/2016 10:48
Hexachlorobutadiene	ND	0.0050	1	09/06/2016 10:48
Hexachloroethane	ND	0.0050	1	09/06/2016 10:48
2-Hexanone	ND	0.0050	1	09/06/2016 10:48
Isopropylbenzene	ND	0.0050	1	09/06/2016 10:48
4-Isopropyl toluene	ND	0.0050	1	09/06/2016 10:48
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	09/06/2016 10:48
Methylene chloride	ND	0.0050	1	09/06/2016 10:48
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	09/06/2016 10:48
Naphthalene	ND	0.0050	1	09/06/2016 10:48
n-Propyl benzene	ND	0.0050	1	09/06/2016 10:48
Styrene	ND	0.0050	1	09/06/2016 10:48
1,1,1,2-Tetrachloroethane	ND	0.0050	1	09/06/2016 10:48
1,1,2,2-Tetrachloroethane	ND	0.0050	1	09/06/2016 10:48
Tetrachloroethene	ND	0.0050	1	09/06/2016 10:48
Toluene	ND	0.0050	1	09/06/2016 10:48
1,2,3-Trichlorobenzene	ND	0.0050	1	09/06/2016 10:48
1,2,4-Trichlorobenzene	ND	0.0050	1	09/06/2016 10:48
1,1,1-Trichloroethane	ND	0.0050	1	09/06/2016 10:48
1,1,2-Trichloroethane	ND	0.0050	1	09/06/2016 10:48
Trichloroethene	ND	0.0050	1	09/06/2016 10:48
Trichlorofluoromethane	ND	0.0050	1	09/06/2016 10:48
1,2,3-Trichloropropane	ND	0.0050	1	09/06/2016 10:48
1,2,4-Trimethylbenzene	ND	0.0050	1	09/06/2016 10:48
1,3,5-Trimethylbenzene	ND	0.0050	1	09/06/2016 10:48
Vinyl Chloride	ND	0.0050	1	09/06/2016 10:48
Xylenes, Total	ND	0.0050	1	09/06/2016 10:48

(Cont.)



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TP-3-5	1609118-004A	Soil	09/01/2016 09:00	GC10	126109

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	99		70-130	09/06/2016 10:48
Toluene-d8	110		70-130	09/06/2016 10:48
4-BFB	114		70-130	09/06/2016 10:48
Benzene-d6	96		60-140	09/06/2016 10:48
Ethylbenzene-d10	113		60-140	09/06/2016 10:48
1,2-DCB-d4	85		60-140	09/06/2016 10:48

Analyst(s): KF



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PJ-1-2	1609118-005A	Soil	08/31/2016 14:00	GC10	126109

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	100	09/08/2016 05:30
tert-Amyl methyl ether (TAME)	ND	0.50	100	09/08/2016 05:30
Benzene	ND	0.50	100	09/08/2016 05:30
Bromobenzene	ND	0.50	100	09/08/2016 05:30
Bromochloromethane	ND	0.50	100	09/08/2016 05:30
Bromodichloromethane	ND	0.50	100	09/08/2016 05:30
Bromoform	ND	0.50	100	09/08/2016 05:30
Bromomethane	ND	0.50	100	09/08/2016 05:30
2-Butanone (MEK)	ND	2.0	100	09/08/2016 05:30
t-Butyl alcohol (TBA)	ND	5.0	100	09/08/2016 05:30
n-Butyl benzene	ND	0.50	100	09/08/2016 05:30
sec-Butyl benzene	<b>0.94</b>	0.50	100	09/08/2016 05:30
tert-Butyl benzene	ND	0.50	100	09/08/2016 05:30
Carbon Disulfide	ND	0.50	100	09/08/2016 05:30
Carbon Tetrachloride	ND	0.50	100	09/08/2016 05:30
Chlorobenzene	ND	0.50	100	09/08/2016 05:30
Chloroethane	ND	0.50	100	09/08/2016 05:30
Chloroform	ND	0.50	100	09/08/2016 05:30
Chloromethane	ND	0.50	100	09/08/2016 05:30
2-Chlorotoluene	ND	0.50	100	09/08/2016 05:30
4-Chlorotoluene	ND	0.50	100	09/08/2016 05:30
Dibromochloromethane	ND	0.50	100	09/08/2016 05:30
1,2-Dibromo-3-chloropropane	ND	0.40	100	09/08/2016 05:30
1,2-Dibromoethane (EDB)	ND	0.40	100	09/08/2016 05:30
Dibromomethane	ND	0.50	100	09/08/2016 05:30
1,2-Dichlorobenzene	ND	0.50	100	09/08/2016 05:30
1,3-Dichlorobenzene	ND	0.50	100	09/08/2016 05:30
1,4-Dichlorobenzene	ND	0.50	100	09/08/2016 05:30
Dichlorodifluoromethane	ND	0.50	100	09/08/2016 05:30
1,1-Dichloroethane	ND	0.50	100	09/08/2016 05:30
1,2-Dichloroethane (1,2-DCA)	ND	0.40	100	09/08/2016 05:30
1,1-Dichloroethene	ND	0.50	100	09/08/2016 05:30
cis-1,2-Dichloroethene	ND	0.50	100	09/08/2016 05:30
trans-1,2-Dichloroethene	ND	0.50	100	09/08/2016 05:30
1,2-Dichloropropane	ND	0.50	100	09/08/2016 05:30
1,3-Dichloropropane	ND	0.50	100	09/08/2016 05:30
2,2-Dichloropropane	ND	0.50	100	09/08/2016 05:30

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## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PJ-1-2	1609118-005A	Soil	08/31/2016 14:00	GC10	126109

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	100	09/08/2016 05:30
cis-1,3-Dichloropropene	ND	0.50	100	09/08/2016 05:30
trans-1,3-Dichloropropene	ND	0.50	100	09/08/2016 05:30
Diisopropyl ether (DIPE)	ND	0.50	100	09/08/2016 05:30
Ethylbenzene	ND	0.50	100	09/08/2016 05:30
Ethyl tert-butyl ether (ETBE)	ND	0.50	100	09/08/2016 05:30
Freon 113	ND	0.50	100	09/08/2016 05:30
Hexachlorobutadiene	ND	0.50	100	09/08/2016 05:30
Hexachloroethane	ND	0.50	100	09/08/2016 05:30
2-Hexanone	ND	0.50	100	09/08/2016 05:30
Isopropylbenzene	ND	0.50	100	09/08/2016 05:30
4-Isopropyl toluene	ND	0.50	100	09/08/2016 05:30
Methyl-t-butyl ether (MTBE)	ND	0.50	100	09/08/2016 05:30
Methylene chloride	ND	0.50	100	09/08/2016 05:30
4-Methyl-2-pentanone (MIBK)	ND	0.50	100	09/08/2016 05:30
Naphthalene	ND	0.50	100	09/08/2016 05:30
n-Propyl benzene	ND	0.50	100	09/08/2016 05:30
Styrene	ND	0.50	100	09/08/2016 05:30
1,1,1,2-Tetrachloroethane	ND	0.50	100	09/08/2016 05:30
1,1,2,2-Tetrachloroethane	ND	0.50	100	09/08/2016 05:30
Tetrachloroethene	ND	0.50	100	09/08/2016 05:30
Toluene	ND	0.50	100	09/08/2016 05:30
1,2,3-Trichlorobenzene	ND	0.50	100	09/08/2016 05:30
1,2,4-Trichlorobenzene	ND	0.50	100	09/08/2016 05:30
1,1,1-Trichloroethane	ND	0.50	100	09/08/2016 05:30
1,1,2-Trichloroethane	ND	0.50	100	09/08/2016 05:30
Trichloroethene	ND	0.50	100	09/08/2016 05:30
Trichlorofluoromethane	ND	0.50	100	09/08/2016 05:30
1,2,3-Trichloropropane	ND	0.50	100	09/08/2016 05:30
1,2,4-Trimethylbenzene	ND	0.50	100	09/08/2016 05:30
1,3,5-Trimethylbenzene	ND	0.50	100	09/08/2016 05:30
Vinyl Chloride	ND	0.50	100	09/08/2016 05:30
Xylenes, Total	ND	0.50	100	09/08/2016 05:30

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# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PJ-1-2	1609118-005A	Soil	08/31/2016 14:00	GC10	126109

Analytes	Result		RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	105		70-130		09/08/2016 05:30
Toluene-d8	103		70-130		09/08/2016 05:30
4-BFB	108		70-130		09/08/2016 05:30
Benzene-d6	103		60-140		09/08/2016 05:30
Ethylbenzene-d10	1	S	60-140		09/08/2016 05:30
1,2-DCB-d4	83		60-140		09/08/2016 05:30

Analyst(s): KF

Analytical Comments: c7



## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PJ-2-2	1609118-006A	Soil	09/01/2016 09:00	GC10	126109

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	2.0	20	09/06/2016 12:09
tert-Amyl methyl ether (TAME)	ND	0.10	20	09/06/2016 12:09
Benzene	ND	0.10	20	09/06/2016 12:09
Bromobenzene	ND	0.10	20	09/06/2016 12:09
Bromochloromethane	ND	0.10	20	09/06/2016 12:09
Bromodichloromethane	ND	0.10	20	09/06/2016 12:09
Bromoform	ND	0.10	20	09/06/2016 12:09
Bromomethane	ND	0.10	20	09/06/2016 12:09
2-Butanone (MEK)	ND	0.40	20	09/06/2016 12:09
t-Butyl alcohol (TBA)	ND	1.0	20	09/06/2016 12:09
n-Butyl benzene	ND	0.10	20	09/06/2016 12:09
sec-Butyl benzene	ND	0.10	20	09/06/2016 12:09
tert-Butyl benzene	ND	0.10	20	09/06/2016 12:09
Carbon Disulfide	ND	0.10	20	09/06/2016 12:09
Carbon Tetrachloride	ND	0.10	20	09/06/2016 12:09
Chlorobenzene	ND	0.10	20	09/06/2016 12:09
Chloroethane	ND	0.10	20	09/06/2016 12:09
Chloroform	ND	0.10	20	09/06/2016 12:09
Chloromethane	ND	0.10	20	09/06/2016 12:09
2-Chlorotoluene	ND	0.10	20	09/06/2016 12:09
4-Chlorotoluene	ND	0.10	20	09/06/2016 12:09
Dibromochloromethane	ND	0.10	20	09/06/2016 12:09
1,2-Dibromo-3-chloropropane	ND	0.080	20	09/06/2016 12:09
1,2-Dibromoethane (EDB)	ND	0.080	20	09/06/2016 12:09
Dibromomethane	ND	0.10	20	09/06/2016 12:09
1,2-Dichlorobenzene	ND	0.10	20	09/06/2016 12:09
1,3-Dichlorobenzene	ND	0.10	20	09/06/2016 12:09
1,4-Dichlorobenzene	ND	0.10	20	09/06/2016 12:09
Dichlorodifluoromethane	ND	0.10	20	09/06/2016 12:09
1,1-Dichloroethane	ND	0.10	20	09/06/2016 12:09
1,2-Dichloroethane (1,2-DCA)	ND	0.080	20	09/06/2016 12:09
1,1-Dichloroethene	ND	0.10	20	09/06/2016 12:09
cis-1,2-Dichloroethene	ND	0.10	20	09/06/2016 12:09
trans-1,2-Dichloroethene	ND	0.10	20	09/06/2016 12:09
1,2-Dichloropropane	ND	0.10	20	09/06/2016 12:09
1,3-Dichloropropane	ND	0.10	20	09/06/2016 12:09
2,2-Dichloropropane	ND	0.10	20	09/06/2016 12:09

(Cont.)



## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PJ-2-2	1609118-006A	Soil	09/01/2016 09:00	GC10	126109

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.10	20	09/06/2016 12:09
cis-1,3-Dichloropropene	ND	0.10	20	09/06/2016 12:09
trans-1,3-Dichloropropene	ND	0.10	20	09/06/2016 12:09
Diisopropyl ether (DIPE)	ND	0.10	20	09/06/2016 12:09
Ethylbenzene	ND	0.10	20	09/06/2016 12:09
Ethyl tert-butyl ether (ETBE)	ND	0.10	20	09/06/2016 12:09
Freon 113	ND	0.10	20	09/06/2016 12:09
Hexachlorobutadiene	ND	0.10	20	09/06/2016 12:09
Hexachloroethane	ND	0.10	20	09/06/2016 12:09
2-Hexanone	ND	0.10	20	09/06/2016 12:09
Isopropylbenzene	ND	0.10	20	09/06/2016 12:09
4-Isopropyl toluene	ND	0.10	20	09/06/2016 12:09
Methyl-t-butyl ether (MTBE)	ND	0.10	20	09/06/2016 12:09
Methylene chloride	ND	0.10	20	09/06/2016 12:09
4-Methyl-2-pentanone (MIBK)	ND	0.10	20	09/06/2016 12:09
Naphthalene	ND	0.10	20	09/06/2016 12:09
n-Propyl benzene	ND	0.10	20	09/06/2016 12:09
Styrene	ND	0.10	20	09/06/2016 12:09
1,1,1,2-Tetrachloroethane	ND	0.10	20	09/06/2016 12:09
1,1,2,2-Tetrachloroethane	ND	0.10	20	09/06/2016 12:09
Tetrachloroethene	ND	0.10	20	09/06/2016 12:09
Toluene	ND	0.10	20	09/06/2016 12:09
1,2,3-Trichlorobenzene	ND	0.10	20	09/06/2016 12:09
1,2,4-Trichlorobenzene	ND	0.10	20	09/06/2016 12:09
1,1,1-Trichloroethane	ND	0.10	20	09/06/2016 12:09
1,1,2-Trichloroethane	ND	0.10	20	09/06/2016 12:09
Trichloroethene	ND	0.10	20	09/06/2016 12:09
Trichlorofluoromethane	ND	0.10	20	09/06/2016 12:09
1,2,3-Trichloropropane	ND	0.10	20	09/06/2016 12:09
1,2,4-Trimethylbenzene	<b>0.27</b>	0.10	20	09/06/2016 12:09
1,3,5-Trimethylbenzene	ND	0.10	20	09/06/2016 12:09
Vinyl Chloride	ND	0.10	20	09/06/2016 12:09
Xylenes, Total	ND	0.10	20	09/06/2016 12:09

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# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PJ-2-2	1609118-006A	Soil	09/01/2016 09:00	GC10	126109

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	101		70-130	09/06/2016 12:09
Toluene-d8	102		70-130	09/06/2016 12:09
4-BFB	120		70-130	09/06/2016 12:09
Benzene-d6	123		60-140	09/06/2016 12:09
Ethylbenzene-d10	101		60-140	09/06/2016 12:09
1,2-DCB-d4	130		60-140	09/06/2016 12:09

Analyst(s): KF



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PJ-3-2	1609118-007A	Soil	09/01/2016 09:00	GC10	126109

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	2.0	20	09/06/2016 15:46
tert-Amyl methyl ether (TAME)	ND	0.10	20	09/06/2016 15:46
Benzene	ND	0.10	20	09/06/2016 15:46
Bromobenzene	ND	0.10	20	09/06/2016 15:46
Bromochloromethane	ND	0.10	20	09/06/2016 15:46
Bromodichloromethane	ND	0.10	20	09/06/2016 15:46
Bromoform	ND	0.10	20	09/06/2016 15:46
Bromomethane	ND	0.10	20	09/06/2016 15:46
2-Butanone (MEK)	ND	0.40	20	09/06/2016 15:46
t-Butyl alcohol (TBA)	ND	1.0	20	09/06/2016 15:46
n-Butyl benzene	0.15	0.10	20	09/06/2016 15:46
sec-Butyl benzene	0.20	0.10	20	09/06/2016 15:46
tert-Butyl benzene	ND	0.10	20	09/06/2016 15:46
Carbon Disulfide	ND	0.10	20	09/06/2016 15:46
Carbon Tetrachloride	ND	0.10	20	09/06/2016 15:46
Chlorobenzene	ND	0.10	20	09/06/2016 15:46
Chloroethane	ND	0.10	20	09/06/2016 15:46
Chloroform	ND	0.10	20	09/06/2016 15:46
Chloromethane	ND	0.10	20	09/06/2016 15:46
2-Chlorotoluene	ND	0.10	20	09/06/2016 15:46
4-Chlorotoluene	ND	0.10	20	09/06/2016 15:46
Dibromochloromethane	ND	0.10	20	09/06/2016 15:46
1,2-Dibromo-3-chloropropane	ND	0.080	20	09/06/2016 15:46
1,2-Dibromoethane (EDB)	ND	0.080	20	09/06/2016 15:46
Dibromomethane	ND	0.10	20	09/06/2016 15:46
1,2-Dichlorobenzene	ND	0.10	20	09/06/2016 15:46
1,3-Dichlorobenzene	ND	0.10	20	09/06/2016 15:46
1,4-Dichlorobenzene	ND	0.10	20	09/06/2016 15:46
Dichlorodifluoromethane	ND	0.10	20	09/06/2016 15:46
1,1-Dichloroethane	ND	0.10	20	09/06/2016 15:46
1,2-Dichloroethane (1,2-DCA)	ND	0.080	20	09/06/2016 15:46
1,1-Dichloroethene	ND	0.10	20	09/06/2016 15:46
cis-1,2-Dichloroethene	ND	0.10	20	09/06/2016 15:46
trans-1,2-Dichloroethene	ND	0.10	20	09/06/2016 15:46
1,2-Dichloropropane	ND	0.10	20	09/06/2016 15:46
1,3-Dichloropropane	ND	0.10	20	09/06/2016 15:46
2,2-Dichloropropane	ND	0.10	20	09/06/2016 15:46

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## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PJ-3-2	1609118-007A	Soil	09/01/2016 09:00	GC10	126109

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.10	20	09/06/2016 15:46
cis-1,3-Dichloropropene	ND	0.10	20	09/06/2016 15:46
trans-1,3-Dichloropropene	ND	0.10	20	09/06/2016 15:46
Diisopropyl ether (DIPE)	ND	0.10	20	09/06/2016 15:46
Ethylbenzene	ND	0.10	20	09/06/2016 15:46
Ethyl tert-butyl ether (ETBE)	ND	0.10	20	09/06/2016 15:46
Freon 113	ND	0.10	20	09/06/2016 15:46
Hexachlorobutadiene	ND	0.10	20	09/06/2016 15:46
Hexachloroethane	ND	0.10	20	09/06/2016 15:46
2-Hexanone	ND	0.10	20	09/06/2016 15:46
Isopropylbenzene	ND	0.10	20	09/06/2016 15:46
4-Isopropyl toluene	<b>0.27</b>	0.10	20	09/06/2016 15:46
Methyl-t-butyl ether (MTBE)	ND	0.10	20	09/06/2016 15:46
Methylene chloride	ND	0.10	20	09/06/2016 15:46
4-Methyl-2-pentanone (MIBK)	ND	0.10	20	09/06/2016 15:46
Naphthalene	ND	0.10	20	09/06/2016 15:46
n-Propyl benzene	<b>0.22</b>	0.10	20	09/06/2016 15:46
Styrene	ND	0.10	20	09/06/2016 15:46
1,1,1,2-Tetrachloroethane	ND	0.10	20	09/06/2016 15:46
1,1,2,2-Tetrachloroethane	ND	0.10	20	09/06/2016 15:46
Tetrachloroethene	ND	0.10	20	09/06/2016 15:46
Toluene	ND	0.10	20	09/06/2016 15:46
1,2,3-Trichlorobenzene	ND	0.10	20	09/06/2016 15:46
1,2,4-Trichlorobenzene	ND	0.10	20	09/06/2016 15:46
1,1,1-Trichloroethane	ND	0.10	20	09/06/2016 15:46
1,1,2-Trichloroethane	ND	0.10	20	09/06/2016 15:46
Trichloroethene	ND	0.10	20	09/06/2016 15:46
Trichlorofluoromethane	ND	0.10	20	09/06/2016 15:46
1,2,3-Trichloropropane	ND	0.10	20	09/06/2016 15:46
1,2,4-Trimethylbenzene	<b>1.4</b>	0.10	20	09/06/2016 15:46
1,3,5-Trimethylbenzene	<b>0.33</b>	0.10	20	09/06/2016 15:46
Vinyl Chloride	ND	0.10	20	09/06/2016 15:46
Xylenes, Total	<b>0.20</b>	0.10	20	09/06/2016 15:46

(Cont.)



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PJ-3-2	1609118-007A	Soil	09/01/2016 09:00	GC10	126109

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	102		70-130	09/06/2016 15:46
Toluene-d8	102		70-130	09/06/2016 15:46
4-BFB	118		70-130	09/06/2016 15:46
Benzene-d6	109		60-140	09/06/2016 15:46
Ethylbenzene-d10	89		60-140	09/06/2016 15:46
1,2-DCB-d4	127		60-140	09/06/2016 15:46

Analyst(s): KF



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P-4-2	1609118-008A	Soil	09/01/2016 09:00	GC10	126109

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	09/06/2016 13:32
tert-Amyl methyl ether (TAME)	ND	0.0050	1	09/06/2016 13:32
Benzene	ND	0.0050	1	09/06/2016 13:32
Bromobenzene	ND	0.0050	1	09/06/2016 13:32
Bromochloromethane	ND	0.0050	1	09/06/2016 13:32
Bromodichloromethane	ND	0.0050	1	09/06/2016 13:32
Bromoform	ND	0.0050	1	09/06/2016 13:32
Bromomethane	ND	0.0050	1	09/06/2016 13:32
2-Butanone (MEK)	ND	0.020	1	09/06/2016 13:32
t-Butyl alcohol (TBA)	ND	0.050	1	09/06/2016 13:32
n-Butyl benzene	ND	0.0050	1	09/06/2016 13:32
sec-Butyl benzene	ND	0.0050	1	09/06/2016 13:32
tert-Butyl benzene	ND	0.0050	1	09/06/2016 13:32
Carbon Disulfide	ND	0.0050	1	09/06/2016 13:32
Carbon Tetrachloride	ND	0.0050	1	09/06/2016 13:32
Chlorobenzene	ND	0.0050	1	09/06/2016 13:32
Chloroethane	ND	0.0050	1	09/06/2016 13:32
Chloroform	ND	0.0050	1	09/06/2016 13:32
Chloromethane	ND	0.0050	1	09/06/2016 13:32
2-Chlorotoluene	ND	0.0050	1	09/06/2016 13:32
4-Chlorotoluene	ND	0.0050	1	09/06/2016 13:32
Dibromochloromethane	ND	0.0050	1	09/06/2016 13:32
1,2-Dibromo-3-chloropropane	ND	0.0040	1	09/06/2016 13:32
1,2-Dibromoethane (EDB)	ND	0.0040	1	09/06/2016 13:32
Dibromomethane	ND	0.0050	1	09/06/2016 13:32
1,2-Dichlorobenzene	ND	0.0050	1	09/06/2016 13:32
1,3-Dichlorobenzene	ND	0.0050	1	09/06/2016 13:32
1,4-Dichlorobenzene	ND	0.0050	1	09/06/2016 13:32
Dichlorodifluoromethane	ND	0.0050	1	09/06/2016 13:32
1,1-Dichloroethane	ND	0.0050	1	09/06/2016 13:32
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	09/06/2016 13:32
1,1-Dichloroethene	ND	0.0050	1	09/06/2016 13:32
cis-1,2-Dichloroethene	ND	0.0050	1	09/06/2016 13:32
trans-1,2-Dichloroethene	ND	0.0050	1	09/06/2016 13:32
1,2-Dichloropropane	ND	0.0050	1	09/06/2016 13:32
1,3-Dichloropropane	ND	0.0050	1	09/06/2016 13:32
2,2-Dichloropropane	ND	0.0050	1	09/06/2016 13:32

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# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P-4-2	1609118-008A	Soil	09/01/2016 09:00	GC10	126109

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	09/06/2016 13:32
cis-1,3-Dichloropropene	ND	0.0050	1	09/06/2016 13:32
trans-1,3-Dichloropropene	ND	0.0050	1	09/06/2016 13:32
Diisopropyl ether (DIPE)	ND	0.0050	1	09/06/2016 13:32
Ethylbenzene	ND	0.0050	1	09/06/2016 13:32
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	09/06/2016 13:32
Freon 113	ND	0.0050	1	09/06/2016 13:32
Hexachlorobutadiene	ND	0.0050	1	09/06/2016 13:32
Hexachloroethane	ND	0.0050	1	09/06/2016 13:32
2-Hexanone	ND	0.0050	1	09/06/2016 13:32
Isopropylbenzene	ND	0.0050	1	09/06/2016 13:32
4-Isopropyl toluene	ND	0.0050	1	09/06/2016 13:32
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	09/06/2016 13:32
Methylene chloride	ND	0.0050	1	09/06/2016 13:32
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	09/06/2016 13:32
Naphthalene	ND	0.0050	1	09/06/2016 13:32
n-Propyl benzene	ND	0.0050	1	09/06/2016 13:32
Styrene	ND	0.0050	1	09/06/2016 13:32
1,1,1,2-Tetrachloroethane	ND	0.0050	1	09/06/2016 13:32
1,1,2,2-Tetrachloroethane	ND	0.0050	1	09/06/2016 13:32
Tetrachloroethene	ND	0.0050	1	09/06/2016 13:32
Toluene	ND	0.0050	1	09/06/2016 13:32
1,2,3-Trichlorobenzene	ND	0.0050	1	09/06/2016 13:32
1,2,4-Trichlorobenzene	ND	0.0050	1	09/06/2016 13:32
1,1,1-Trichloroethane	ND	0.0050	1	09/06/2016 13:32
1,1,2-Trichloroethane	ND	0.0050	1	09/06/2016 13:32
Trichloroethene	ND	0.0050	1	09/06/2016 13:32
Trichlorofluoromethane	ND	0.0050	1	09/06/2016 13:32
1,2,3-Trichloropropane	ND	0.0050	1	09/06/2016 13:32
1,2,4-Trimethylbenzene	ND	0.0050	1	09/06/2016 13:32
1,3,5-Trimethylbenzene	ND	0.0050	1	09/06/2016 13:32
Vinyl Chloride	ND	0.0050	1	09/06/2016 13:32
Xylenes, Total	ND	0.0050	1	09/06/2016 13:32

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# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P-4-2	1609118-008A	Soil	09/01/2016 09:00	GC10	126109

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	98		70-130	09/06/2016 13:32
Toluene-d8	109		70-130	09/06/2016 13:32
4-BFB	115		70-130	09/06/2016 13:32
Benzene-d6	95		60-140	09/06/2016 13:32
Ethylbenzene-d10	112		60-140	09/06/2016 13:32
1,2-DCB-d4	87		60-140	09/06/2016 13:32

Analyst(s): KF



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-1,2,2,2,3,2,4,2	1609118-010A	Soil	<Not Provided>	GC18	126120

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Acetone	ND	H	2.0	20	09/08/2016 03:49
tert-Amyl methyl ether (TAME)	ND	H	0.10	20	09/08/2016 03:49
Benzene	ND	H	0.10	20	09/08/2016 03:49
Bromobenzene	ND	H	0.10	20	09/08/2016 03:49
Bromochloromethane	ND	H	0.10	20	09/08/2016 03:49
Bromodichloromethane	ND	H	0.10	20	09/08/2016 03:49
Bromoform	ND	H	0.10	20	09/08/2016 03:49
Bromomethane	ND	H	0.10	20	09/08/2016 03:49
2-Butanone (MEK)	ND	H	0.40	20	09/08/2016 03:49
t-Butyl alcohol (TBA)	ND	H	1.0	20	09/08/2016 03:49
n-Butyl benzene	ND	H	0.10	20	09/08/2016 03:49
sec-Butyl benzene	0.66	H	0.10	20	09/08/2016 03:49
tert-Butyl benzene	ND	H	0.10	20	09/08/2016 03:49
Carbon Disulfide	ND	H	0.10	20	09/08/2016 03:49
Carbon Tetrachloride	ND	H	0.10	20	09/08/2016 03:49
Chlorobenzene	ND	H	0.10	20	09/08/2016 03:49
Chloroethane	ND	H	0.10	20	09/08/2016 03:49
Chloroform	ND	H	0.10	20	09/08/2016 03:49
Chloromethane	ND	H	0.10	20	09/08/2016 03:49
2-Chlorotoluene	ND	H	0.10	20	09/08/2016 03:49
4-Chlorotoluene	ND	H	0.10	20	09/08/2016 03:49
Dibromochloromethane	ND	H	0.10	20	09/08/2016 03:49
1,2-Dibromo-3-chloropropane	ND	H	0.080	20	09/08/2016 03:49
1,2-Dibromoethane (EDB)	ND	H	0.080	20	09/08/2016 03:49
Dibromomethane	ND	H	0.10	20	09/08/2016 03:49
1,2-Dichlorobenzene	ND	H	0.10	20	09/08/2016 03:49
1,3-Dichlorobenzene	ND	H	0.10	20	09/08/2016 03:49
1,4-Dichlorobenzene	ND	H	0.10	20	09/08/2016 03:49
Dichlorodifluoromethane	ND	H	0.10	20	09/08/2016 03:49
1,1-Dichloroethane	ND	H	0.10	20	09/08/2016 03:49
1,2-Dichloroethane (1,2-DCA)	ND	H	0.080	20	09/08/2016 03:49
1,1-Dichloroethene	ND	H	0.10	20	09/08/2016 03:49
cis-1,2-Dichloroethene	ND	H	0.10	20	09/08/2016 03:49
trans-1,2-Dichloroethene	ND	H	0.10	20	09/08/2016 03:49
1,2-Dichloropropane	ND	H	0.10	20	09/08/2016 03:49
1,3-Dichloropropane	ND	H	0.10	20	09/08/2016 03:49
2,2-Dichloropropane	ND	H	0.10	20	09/08/2016 03:49

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# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-1,2,2,2,3,2,4,2	1609118-010A	Soil	<Not Provided>	GC18	126120

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	H	0.10	20	09/08/2016 03:49
cis-1,3-Dichloropropene	ND	H	0.10	20	09/08/2016 03:49
trans-1,3-Dichloropropene	ND	H	0.10	20	09/08/2016 03:49
Diisopropyl ether (DIPE)	ND	H	0.10	20	09/08/2016 03:49
Ethylbenzene	ND	H	0.10	20	09/08/2016 03:49
Ethyl tert-butyl ether (ETBE)	ND	H	0.10	20	09/08/2016 03:49
Freon 113	ND	H	0.10	20	09/08/2016 03:49
Hexachlorobutadiene	ND	H	0.10	20	09/08/2016 03:49
Hexachloroethane	ND	H	0.10	20	09/08/2016 03:49
2-Hexanone	ND	H	0.10	20	09/08/2016 03:49
Isopropylbenzene	ND	H	0.10	20	09/08/2016 03:49
4-Isopropyl toluene	ND	H	0.10	20	09/08/2016 03:49
Methyl-t-butyl ether (MTBE)	ND	H	0.10	20	09/08/2016 03:49
Methylene chloride	ND	H	0.10	20	09/08/2016 03:49
4-Methyl-2-pentanone (MIBK)	ND	H	0.10	20	09/08/2016 03:49
Naphthalene	ND	H	0.10	20	09/08/2016 03:49
n-Propyl benzene	ND	H	0.10	20	09/08/2016 03:49
Styrene	ND	H	0.10	20	09/08/2016 03:49
1,1,1,2-Tetrachloroethane	ND	H	0.10	20	09/08/2016 03:49
1,1,2,2-Tetrachloroethane	ND	H	0.10	20	09/08/2016 03:49
Tetrachloroethene	ND	H	0.10	20	09/08/2016 03:49
Toluene	ND	H	0.10	20	09/08/2016 03:49
1,2,3-Trichlorobenzene	ND	H	0.10	20	09/08/2016 03:49
1,2,4-Trichlorobenzene	ND	H	0.10	20	09/08/2016 03:49
1,1,1-Trichloroethane	ND	H	0.10	20	09/08/2016 03:49
1,1,2-Trichloroethane	ND	H	0.10	20	09/08/2016 03:49
Trichloroethene	ND	H	0.10	20	09/08/2016 03:49
Trichlorofluoromethane	ND	H	0.10	20	09/08/2016 03:49
1,2,3-Trichloropropane	ND	H	0.10	20	09/08/2016 03:49
1,2,4-Trimethylbenzene	ND	H	0.10	20	09/08/2016 03:49
1,3,5-Trimethylbenzene	ND	H	0.10	20	09/08/2016 03:49
Vinyl Chloride	ND	H	0.10	20	09/08/2016 03:49
Xylenes, Total	ND	H	0.10	20	09/08/2016 03:49

(Cont.)



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-1,2,2,2,3,2,4,2	1609118-010A	Soil	<Not Provided>	GC18	126120

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>	<u>Qualifiers</u>	<u>Limits</u>		
Dibromofluoromethane	101	H	70-130		09/08/2016 03:49
Toluene-d8	123	H	70-130		09/08/2016 03:49
4-BFB	81	H	70-130		09/08/2016 03:49
Benzene-d6	91	H	60-140		09/08/2016 03:49
Ethylbenzene-d10	120	H	60-140		09/08/2016 03:49
1,2-DCB-d4	106	H	60-140		09/08/2016 03:49

Analyst(s): KF



## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/8/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-5	1609118-009B	Water	08/30/2016 11:00	GC16	126282
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Acetone	ND		500	50	09/08/2016 17:26
tert-Amyl methyl ether (TAME)	ND		25	50	09/08/2016 17:26
Benzene	ND		25	50	09/08/2016 17:26
Bromobenzene	ND		25	50	09/08/2016 17:26
Bromochloromethane	ND		25	50	09/08/2016 17:26
Bromodichloromethane	ND		25	50	09/08/2016 17:26
Bromoform	ND		25	50	09/08/2016 17:26
Bromomethane	ND		25	50	09/08/2016 17:26
2-Butanone (MEK)	ND		100	50	09/08/2016 17:26
t-Butyl alcohol (TBA)	ND		100	50	09/08/2016 17:26
n-Butyl benzene	ND		25	50	09/08/2016 17:26
sec-Butyl benzene	41		25	50	09/08/2016 17:26
tert-Butyl benzene	ND		25	50	09/08/2016 17:26
Carbon Disulfide	ND		25	50	09/08/2016 17:26
Carbon Tetrachloride	ND		25	50	09/08/2016 17:26
Chlorobenzene	ND		25	50	09/08/2016 17:26
Chloroethane	ND		25	50	09/08/2016 17:26
Chloroform	ND		25	50	09/08/2016 17:26
Chloromethane	ND		25	50	09/08/2016 17:26
2-Chlorotoluene	ND		25	50	09/08/2016 17:26
4-Chlorotoluene	ND		25	50	09/08/2016 17:26
Dibromochloromethane	ND		25	50	09/08/2016 17:26
1,2-Dibromo-3-chloropropane	ND		10	50	09/08/2016 17:26
1,2-Dibromoethane (EDB)	ND		25	50	09/08/2016 17:26
Dibromomethane	ND		25	50	09/08/2016 17:26
1,2-Dichlorobenzene	ND		25	50	09/08/2016 17:26
1,3-Dichlorobenzene	ND		25	50	09/08/2016 17:26
1,4-Dichlorobenzene	ND		25	50	09/08/2016 17:26
Dichlorodifluoromethane	ND		25	50	09/08/2016 17:26
1,1-Dichloroethane	ND		25	50	09/08/2016 17:26
1,2-Dichloroethane (1,2-DCA)	ND		25	50	09/08/2016 17:26
1,1-Dichloroethene	ND		25	50	09/08/2016 17:26
cis-1,2-Dichloroethene	ND		25	50	09/08/2016 17:26
trans-1,2-Dichloroethene	ND		25	50	09/08/2016 17:26
1,2-Dichloropropane	ND		25	50	09/08/2016 17:26
1,3-Dichloropropane	ND		25	50	09/08/2016 17:26
2,2-Dichloropropane	ND		25	50	09/08/2016 17:26

(Cont.)



## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/8/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

### Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-5	1609118-009B	Water	08/30/2016 11:00	GC16	126282
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
1,1-Dichloropropene	ND		25	50	09/08/2016 17:26
cis-1,3-Dichloropropene	ND		25	50	09/08/2016 17:26
trans-1,3-Dichloropropene	ND		25	50	09/08/2016 17:26
Diisopropyl ether (DIPE)	ND		25	50	09/08/2016 17:26
Ethylbenzene	ND		25	50	09/08/2016 17:26
Ethyl tert-butyl ether (ETBE)	ND		25	50	09/08/2016 17:26
Freon 113	ND		25	50	09/08/2016 17:26
Hexachlorobutadiene	ND		25	50	09/08/2016 17:26
Hexachloroethane	ND		25	50	09/08/2016 17:26
2-Hexanone	ND		25	50	09/08/2016 17:26
Isopropylbenzene	ND		25	50	09/08/2016 17:26
4-Isopropyl toluene	ND		25	50	09/08/2016 17:26
Methyl-t-butyl ether (MTBE)	ND		25	50	09/08/2016 17:26
Methylene chloride	ND		25	50	09/08/2016 17:26
4-Methyl-2-pentanone (MIBK)	ND		25	50	09/08/2016 17:26
Naphthalene	ND		25	50	09/08/2016 17:26
n-Propyl benzene	<b>45</b>		25	50	09/08/2016 17:26
Styrene	ND		25	50	09/08/2016 17:26
1,1,1,2-Tetrachloroethane	ND		25	50	09/08/2016 17:26
1,1,2,2-Tetrachloroethane	ND		25	50	09/08/2016 17:26
Tetrachloroethene	ND		25	50	09/08/2016 17:26
Toluene	ND		25	50	09/08/2016 17:26
1,2,3-Trichlorobenzene	ND		25	50	09/08/2016 17:26
1,2,4-Trichlorobenzene	ND		25	50	09/08/2016 17:26
1,1,1-Trichloroethane	ND		25	50	09/08/2016 17:26
1,1,2-Trichloroethane	ND		25	50	09/08/2016 17:26
Trichloroethene	ND		25	50	09/08/2016 17:26
Trichlorofluoromethane	ND		25	50	09/08/2016 17:26
1,2,3-Trichloropropane	ND		25	50	09/08/2016 17:26
1,2,4-Trimethylbenzene	<b>670</b>		25	50	09/08/2016 17:26
1,3,5-Trimethylbenzene	ND		25	50	09/08/2016 17:26
Vinyl Chloride	ND		25	50	09/08/2016 17:26
Xylenes, Total	<b>26</b>		25	50	09/08/2016 17:26

(Cont.)



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/8/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L

## Volatile Organics

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-5	1609118-009B	Water	08/30/2016 11:00	GC16	126282

Analytes	Result	RL	DF	Date Analyzed
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>	
Dibromofluoromethane	106	70-130		09/08/2016 17:26
Toluene-d8	106	70-130		09/08/2016 17:26
4-BFB	94	70-130		09/08/2016 17:26

Analyst(s): HK





## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/6/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C-SIM  
**Unit:** mg/kg

### Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) using SIM Mode

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B3-M-14	1609118-001A	Soil	08/31/2016 10:00	GC35	126196

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	0.050	0.010	1	09/06/2016 14:21
Acenaphthylene	0.020	0.010	1	09/06/2016 14:21
Anthracene	0.069	0.010	1	09/06/2016 14:21
Benzo (a) anthracene	0.10	0.010	1	09/06/2016 14:21
Benzo (a) pyrene	0.096	0.010	1	09/06/2016 14:21
Benzo (b) fluoranthene	0.094	0.010	1	09/06/2016 14:21
Benzo (g,h,i) perylene	0.074	0.010	1	09/06/2016 14:21
Benzo (k) fluoranthene	0.037	0.010	1	09/06/2016 14:21
Chrysene	0.082	0.010	1	09/06/2016 14:21
Dibenzo (a,h) anthracene	ND	0.010	1	09/06/2016 14:21
Fluoranthene	0.36	0.010	1	09/06/2016 14:21
Fluorene	0.070	0.010	1	09/06/2016 14:21
Indeno (1,2,3-cd) pyrene	0.037	0.010	1	09/06/2016 14:21
1-Methylnaphthalene	0.12	0.010	1	09/06/2016 14:21
2-Methylnaphthalene	0.17	0.010	1	09/06/2016 14:21
Naphthalene	0.29	0.010	1	09/06/2016 14:21
Phenanthrene	0.30	0.010	1	09/06/2016 14:21
Pyrene	0.28	0.010	1	09/06/2016 14:21

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
1-Fluoronaphthalene	141	S	30-130	09/06/2016 14:21
2-Fluorobiphenyl	79		30-130	09/06/2016 14:21

**Analyst(s):** REB

**Analytical Comments:** c4



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW9045C  
**Analytical Method:** SW9045C\_Corr  
**Unit:** pH units

## Corrosivity

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-5	1609118-009D	Water	08/30/2016 11:00	WetChem	126134

Analytes	Result	Qualifiers	Accuracy	DF	Date Analyzed
Corrosivity	6.8	H	±0.05	1	09/02/2016 21:33

Analyst(s): RB



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/8/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW1010  
**Analytical Method:** SW1010  
**Unit:** °C

## Flash Point by SW1010

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-5	1609118-009D	Water	08/30/2016 11:00	WetChem	126343

Analytes	Result	Accuracy	DF	Date Analyzed
Flash Point	>100 °C	±2	1	09/08/2016 18:35

Analyst(s): AL



## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B3-M-14	1609118-001A	Soil	08/31/2016 10:00	GC7	126118

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	4800	100	100	09/04/2016 19:27
MTBE	---	5.0	100	09/04/2016 19:27
Benzene	---	0.50	100	09/04/2016 19:27
Toluene	---	0.50	100	09/04/2016 19:27
Ethylbenzene	---	0.50	100	09/04/2016 19:27
TPH(ss)	3600	100	100	09/04/2016 19:27
Xylenes	---	1.5	100	09/04/2016 19:27

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	83	70-130	09/04/2016 19:27

Analyst(s): IA Analytical Comments: d5

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TP-1-5	1609118-002A	Soil	08/31/2016 14:00	GC7	126118

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	260	10	10	09/04/2016 19:57
MTBE	---	0.50	10	09/04/2016 19:57
Benzene	---	0.050	10	09/04/2016 19:57
Toluene	---	0.050	10	09/04/2016 19:57
Ethylbenzene	---	0.050	10	09/04/2016 19:57
TPH(ss)	200	10	10	09/04/2016 19:57
Xylenes	---	0.15	10	09/04/2016 19:57

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	90	70-130	09/04/2016 19:57

Analyst(s): IA Analytical Comments: d5



## Analytical Report

<b>Client:</b> Schutze & Associates, Inc.	<b>WorkOrder:</b> 1609118
<b>Date Received:</b> 9/2/16 18:10	<b>Extraction Method:</b> SW5030B
<b>Date Prepared:</b> 9/2/16	<b>Analytical Method:</b> SW8021B/8015Bm
<b>Project:</b> SCS557; 1647 International (UST5)	<b>Unit:</b> mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TP-2-4	1609118-003A	Soil	08/31/2016 14:00	GC7	126118

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	09/04/2016 15:26
MTBE	---	0.050	1	09/04/2016 15:26
Benzene	---	0.0050	1	09/04/2016 15:26
Toluene	---	0.0050	1	09/04/2016 15:26
Ethylbenzene	---	0.0050	1	09/04/2016 15:26
TPH(ss)	ND	1.0	1	09/04/2016 15:26
Xylenes	---	0.015	1	09/04/2016 15:26
<b>Surrogates</b>	<b>REC (%)</b>	<b>Limits</b>		
2-Fluorotoluene	100	70-130		09/04/2016 15:26

Analyst(s): IA

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TP-3-5	1609118-004A	Soil	09/01/2016 09:00	GC7	126118

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	09/04/2016 13:56
MTBE	---	0.050	1	09/04/2016 13:56
Benzene	---	0.0050	1	09/04/2016 13:56
Toluene	---	0.0050	1	09/04/2016 13:56
Ethylbenzene	---	0.0050	1	09/04/2016 13:56
TPH(ss)	ND	1.0	1	09/04/2016 13:56
Xylenes	---	0.015	1	09/04/2016 13:56
<b>Surrogates</b>	<b>REC (%)</b>	<b>Limits</b>		
2-Fluorotoluene	99	70-130		09/04/2016 13:56

Analyst(s): IA



## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PJ-1-2	1609118-005A	Soil	08/31/2016 14:00	GC7	126118

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	1500	50	50	09/04/2016 20:27
MTBE	---	2.5	50	09/04/2016 20:27
Benzene	---	0.25	50	09/04/2016 20:27
Toluene	---	0.25	50	09/04/2016 20:27
Ethylbenzene	---	0.25	50	09/04/2016 20:27
TPH(ss)	1100	50	50	09/04/2016 20:27
Xylenes	---	0.75	50	09/04/2016 20:27

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	90	70-130	09/04/2016 20:27

Analyst(s): IA

Analytical Comments: d5

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PJ-2-2	1609118-006A	Soil	09/01/2016 09:00	GC7	126118

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	120	20	20	09/09/2016 20:40
MTBE	---	1.0	20	09/09/2016 20:40
Benzene	---	0.10	20	09/09/2016 20:40
Toluene	---	0.10	20	09/09/2016 20:40
Ethylbenzene	---	0.10	20	09/09/2016 20:40
TPH(ss)	86	20	20	09/09/2016 20:40
Xylenes	---	0.30	20	09/09/2016 20:40

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
2-Fluorotoluene	67	S	70-130	09/09/2016 20:40

Analyst(s): LT

Analytical Comments: d7,c2



## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PJ-3-2	1609118-007A	Soil	09/01/2016 09:00	GC7	126118

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	1000	50	50	09/04/2016 22:57
MTBE	---	2.5	50	09/04/2016 22:57
Benzene	---	0.25	50	09/04/2016 22:57
Toluene	---	0.25	50	09/04/2016 22:57
Ethylbenzene	---	0.25	50	09/04/2016 22:57
TPH(ss)	710	50	50	09/04/2016 22:57
Xylenes	---	0.75	50	09/04/2016 22:57

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	102	70-130	09/04/2016 22:57

**Analyst(s):** IA **Analytical Comments:** d5

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P-4-2	1609118-008A	Soil	09/01/2016 09:00	GC7	126118

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	1.0	1	09/04/2016 14:26
MTBE	---	0.050	1	09/04/2016 14:26
Benzene	---	0.0050	1	09/04/2016 14:26
Toluene	---	0.0050	1	09/04/2016 14:26
Ethylbenzene	---	0.0050	1	09/04/2016 14:26
TPH(ss)	ND	1.0	1	09/04/2016 14:26
Xylenes	---	0.015	1	09/04/2016 14:26

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	100	70-130	09/04/2016 14:26

**Analyst(s):** IA



## Analytical Report

**Client:** Schutze & Associates, Inc. **WorkOrder:** 1609118  
**Date Received:** 9/2/16 18:10 **Extraction Method:** SW5030B  
**Date Prepared:** 9/2/16 **Analytical Method:** SW8021B/8015Bm  
**Project:** SCS557; 1647 International (UST5) **Unit:** mg/Kg

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-1,2,2,2,3,2,4,2	1609118-010A	Soil	08/31/2016 10:00	GC7	126118

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	530	20	20	09/04/2016 14:56
MTBE	---	1.0	20	09/04/2016 14:56
Benzene	---	0.10	20	09/04/2016 14:56
Toluene	---	0.10	20	09/04/2016 14:56
Ethylbenzene	---	0.10	20	09/04/2016 14:56
TPH(ss)	410	20	20	09/04/2016 14:56
Xylenes	---	0.30	20	09/04/2016 14:56

Surrogates	REC (%)	Limits	Date Analyzed
2-Fluorotoluene	122	70-130	09/04/2016 14:56

**Analyst(s):** IA **Analytical Comments:** d5





## Analytical Report

**Client:** Schutze & Associates, Inc. **WorkOrder:** 1609118  
**Date Received:** 9/2/16 18:10 **Extraction Method:** SW5030B  
**Date Prepared:** 9/9/16 **Analytical Method:** SW8021B/8015Bm  
**Project:** SCS557; 1647 International (UST5) **Unit:** µg/L

### Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-5	1609118-009A	Water	08/30/2016 11:00	GC7	126367

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	9400	250	5	09/09/2016 03:20
MTBE	---	25	5	09/09/2016 03:20
Benzene	---	2.5	5	09/09/2016 03:20
Toluene	---	2.5	5	09/09/2016 03:20
Ethylbenzene	---	2.5	5	09/09/2016 03:20
TPH(ss)	7200	250	5	09/09/2016 03:20
Xylenes	---	7.5	5	09/09/2016 03:20

Surrogates	REC (%)	Limits	Date Analyzed
aaa-TFT	111	70-130	09/09/2016 03:20

**Analyst(s):** IA **Analytical Comments:** d5



## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B3-M-14	1609118-001A	Soil	08/31/2016 10:00	ICP-MS1	126110

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	09/06/2016 18:16
Chromium	<b>39</b>	0.50	1	09/06/2016 18:16
Lead	<b>10</b>	0.50	1	09/06/2016 18:16
Nickel	<b>51</b>	0.50	1	09/06/2016 18:16
Zinc	<b>33</b>	5.0	1	09/06/2016 18:16

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	112	70-130	09/06/2016 18:16

Analyst(s): MIG

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TP-1-5	1609118-002A	Soil	08/31/2016 14:00	ICP-MS1	126110

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	09/06/2016 18:22
Chromium	<b>51</b>	0.50	1	09/06/2016 18:22
Lead	<b>4.8</b>	0.50	1	09/06/2016 18:22
Nickel	<b>120</b>	0.50	1	09/06/2016 18:22
Zinc	<b>30</b>	5.0	1	09/06/2016 18:22

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	113	70-130	09/06/2016 18:22

Analyst(s): MIG

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TP-2-4	1609118-003A	Soil	08/31/2016 14:00	ICP-MS1	126121

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	09/06/2016 13:50
Chromium	<b>56</b>	0.50	1	09/06/2016 13:50
Lead	<b>89</b>	0.50	1	09/06/2016 13:50
Nickel	<b>52</b>	0.50	1	09/06/2016 13:50
Zinc	<b>52</b>	5.0	1	09/06/2016 13:50

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	108	70-130	09/06/2016 13:50

Analyst(s): DVH

(Cont.)



## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TP-3-5	1609118-004A	Soil	09/01/2016 09:00	ICP-MS1	126121
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	09/06/2016 18:28
Chromium	58		0.50	1	09/06/2016 18:28
Lead	4.6		0.50	1	09/06/2016 18:28
Nickel	64		0.50	1	09/06/2016 18:28
Zinc	30		5.0	1	09/06/2016 18:28
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	111		70-130		09/06/2016 18:28

Analyst(s): MIG

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PJ-1-2	1609118-005A	Soil	08/31/2016 14:00	ICP-MS1	126121
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	ND		0.25	1	09/06/2016 18:35
Chromium	57		0.50	1	09/06/2016 18:35
Lead	16		0.50	1	09/06/2016 18:35
Nickel	59		0.50	1	09/06/2016 18:35
Zinc	69		5.0	1	09/06/2016 18:35
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	112		70-130		09/06/2016 18:35

Analyst(s): MIG

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PJ-2-2	1609118-006A	Soil	09/01/2016 09:00	ICP-MS1	126121
<u>Analytes</u>	<u>Result</u>		<u>RL</u>	<u>DF</u>	<u>Date Analyzed</u>
Cadmium	0.35		0.25	1	09/06/2016 18:59
Chromium	44		0.50	1	09/06/2016 18:59
Lead	99		0.50	1	09/06/2016 18:59
Nickel	39		0.50	1	09/06/2016 18:59
Zinc	150		5.0	1	09/06/2016 18:59
<u>Surrogates</u>	<u>REC (%)</u>		<u>Limits</u>		
Terbium	114		70-130		09/06/2016 18:59

Analyst(s): DVH

(Cont.)



## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg

### LUFT 5 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PJ-3-2	1609118-007A	Soil	09/01/2016 09:00	ICP-MS1	126121

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	09/06/2016 19:05
Chromium	<b>52</b>	0.50	1	09/06/2016 19:05
Lead	<b>10</b>	0.50	1	09/06/2016 19:05
Nickel	<b>41</b>	0.50	1	09/06/2016 19:05
Zinc	<b>30</b>	5.0	1	09/06/2016 19:05

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	109	70-130	09/06/2016 19:05

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P-4-2	1609118-008A	Soil	09/01/2016 09:00	ICP-MS1	126121

Analytes	Result	RL	DF	Date Analyzed
Cadmium	<b>1.6</b>	0.25	1	09/06/2016 19:12
Chromium	<b>61</b>	0.50	1	09/06/2016 19:12
Lead	<b>9.8</b>	0.50	1	09/06/2016 19:12
Nickel	<b>55</b>	0.50	1	09/06/2016 19:12
Zinc	<b>440</b>	5.0	1	09/06/2016 19:12

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	110	70-130	09/06/2016 19:12

Analyst(s): DVH



## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/kg

### Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-1,2,2,2,3,2,4,2	1609118-010A	Soil	<Not Provided>	ICP-MS1	126121

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
Arsenic	4.0	H	0.50	1	09/06/2016 19:18
Barium	140	H	5.0	1	09/06/2016 19:18
Cadmium	ND	H	0.25	1	09/06/2016 19:18
Chromium	47	H	0.50	1	09/06/2016 19:18
Lead	27	H	0.50	1	09/06/2016 19:18
Mercury	ND	H	0.050	1	09/06/2016 19:18
Nickel	50	H	0.50	1	09/06/2016 19:18
Selenium	ND	H	0.50	1	09/06/2016 19:18
Silver	ND	H	0.50	1	09/06/2016 19:18
Zinc	50	H	5.0	1	09/06/2016 19:18

Surrogates	REC (%)	Qualifiers	Limits	
Terbium	109	H	70-130	09/06/2016 19:18

**Analyst(s):** DVH



## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/6/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** E200.8  
**Analytical Method:** E200.8  
**Unit:** µg/L

### Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-5	1609118-009C	Water	08/30/2016 11:00	ICP-MS1	126210

Analytes	Result	RL	DF	Date Analyzed
Arsenic	38	5.0	10	09/07/2016 10:25
Barium	610	50	10	09/07/2016 10:25
Cadmium	12	2.5	10	09/07/2016 10:25
Chromium	73	5.0	10	09/07/2016 10:25
Lead	500	5.0	10	09/07/2016 10:25
Mercury	4.4	0.50	10	09/07/2016 10:25
Nickel	79	5.0	10	09/07/2016 10:25
Selenium	ND	5.0	10	09/07/2016 10:25
Silver	6.9	1.9	10	09/07/2016 10:25
Zinc	3600	150	10	09/07/2016 10:25

Surrogates	REC (%)	Limits	Date Analyzed
Terbium	114	70-130	09/07/2016 10:25

**Analyst(s):** BBO

**Analytical Comments:** a1



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SM4500H+B-2000  
**Analytical Method:** SM4500H+B-2000  
**Unit:** pH units @ 25°C

## pH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-5	1609118-009D	Water	08/30/2016 11:00	WetChem	126134

Analytes	Result	Qualifiers	Accuracy	DF	Date Analyzed
pH	6.83	H	±0.05	1	09/02/2016 21:27

Analyst(s): RB



## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/6/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW3510C  
**Analytical Method:** SW8015B  
**Unit:** µg/L

### Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-5	1609118-009A	Water	08/30/2016 11:00	GC6A	126151

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	<b>55,000</b>	1800	50	09/06/2016 16:59
TPH-Motor Oil (C18-C36)	ND	3800	50	09/06/2016 16:59
TPH-Bunker Oil (C10-C36)	<b>55,000</b>	3800	50	09/06/2016 16:59
TPH-Heating Oil (C9-C18)	<b>56,000</b>	2500	50	09/06/2016 16:59

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
C26	264	S	70-130	09/06/2016 16:59

Analyst(s): TK

Analytical Comments: e2,e11,a3,b6,c2





## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B3-M-14	1609118-001A	Soil	08/31/2016 10:00	GC11A	126108

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	1200	100	100	09/06/2016 14:35
TPH-Motor Oil (C18-C36)	37	5.0	1	09/05/2016 03:10
TPH-Bunker Oil (C10-C36)	1300	500	100	09/06/2016 14:35
TPH-Heating Oil (C9-C18)	1200	100	100	09/06/2016 14:35

Surrogates	REC (%)	Limits	Date Analyzed
C9	96	70-130	09/06/2016 14:35

Analyst(s): TK Analytical Comments: e11,e11,e7,e2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TP-1-5	1609118-002A	Soil	08/31/2016 14:00	GC11A	126108

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	16	1.0	1	09/05/2016 00:34
TPH-Motor Oil (C18-C36)	16	5.0	1	09/05/2016 00:34
TPH-Bunker Oil (C10-C36)	26	5.0	1	09/05/2016 00:34
TPH-Heating Oil (C9-C18)	9.1	1.0	1	09/05/2016 00:34

Surrogates	REC (%)	Limits	Date Analyzed
C9	79	70-130	09/05/2016 00:34

Analyst(s): TK Analytical Comments: e7,e2,e11

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TP-2-4	1609118-003A	Soil	08/31/2016 14:00	GC6A	126108

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	11	2.0	2	09/03/2016 20:43
TPH-Motor Oil (C18-C36)	62	10	2	09/03/2016 20:43
TPH-Bunker Oil (C10-C36)	69	10	2	09/03/2016 20:43
TPH-Heating Oil (C9-C18)	4.1	2.0	2	09/03/2016 20:43

Surrogates	REC (%)	Limits	Date Analyzed
C9	93	70-130	09/03/2016 20:43

Analyst(s): TK Analytical Comments: e7,e2

(Cont.)



# Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

## Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TP-3-5	1609118-004A	Soil	09/01/2016 09:00	GC11A	126108

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	09/06/2016 13:56
TPH-Motor Oil (C18-C36)	ND	5.0	1	09/06/2016 13:56
TPH-Bunker Oil (C10-C36)	ND	5.0	1	09/06/2016 13:56
TPH-Heating Oil (C9-C18)	ND	1.0	1	09/06/2016 13:56

Surrogates	REC (%)	Limits	Date Analyzed
C9	79	70-130	09/06/2016 13:56

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PJ-1-2	1609118-005A	Soil	08/31/2016 14:00	GC11A	126108

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	61	1.0	1	09/05/2016 01:13
TPH-Motor Oil (C18-C36)	19	5.0	1	09/05/2016 01:13
TPH-Bunker Oil (C10-C36)	77	5.0	1	09/05/2016 01:13
TPH-Heating Oil (C9-C18)	62	1.0	1	09/05/2016 01:13

Surrogates	REC (%)	Limits	Date Analyzed
C9	83	70-130	09/05/2016 01:13

Analyst(s): TK

Analytical Comments: e11,e7,e2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PJ-2-2	1609118-006A	Soil	09/01/2016 09:00	GC6B	126108

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	840	50	50	09/03/2016 11:01
TPH-Motor Oil (C18-C36)	540	250	50	09/03/2016 11:01
TPH-Bunker Oil (C10-C36)	1100	250	50	09/03/2016 11:01
TPH-Heating Oil (C9-C18)	650	50	50	09/03/2016 11:01

Surrogates	REC (%)	Limits	Date Analyzed
C9	95	70-130	09/03/2016 11:01

Analyst(s): TK

Analytical Comments: e8,e7

(Cont.)



## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/2/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg

### Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PJ-3-2	1609118-007A	Soil	09/01/2016 09:00	GC11A	126108

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	110	1.0	1	09/05/2016 02:31
TPH-Motor Oil (C18-C36)	19	5.0	1	09/05/2016 02:31
TPH-Bunker Oil (C10-C36)	120	5.0	1	09/05/2016 02:31
TPH-Heating Oil (C9-C18)	110	1.0	1	09/05/2016 02:31

Surrogates	REC (%)	Limits	Date Analyzed
C9	90	70-130	09/05/2016 02:31

Analyst(s): TK Analytical Comments: e11,e7,e2

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
P-4-2	1609118-008A	Soil	09/01/2016 09:00	GC6B	126108

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	17	5.0	5	09/03/2016 13:37
TPH-Motor Oil (C18-C36)	86	25	5	09/03/2016 13:37
TPH-Bunker Oil (C10-C36)	89	25	5	09/03/2016 13:37
TPH-Heating Oil (C9-C18)	9.9	5.0	5	09/03/2016 13:37

Surrogates	REC (%)	Limits	Date Analyzed
C9	95	70-130	09/03/2016 13:37

Analyst(s): TK Analytical Comments: e7,e2,e4

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
SP-1,2,2,2,3,2,4,2	1609118-010A	Soil	<Not Provided>	GC6B	126108

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	160	H	10	10	09/03/2016 20:43
TPH-Motor Oil (C18-C36)	260	H	50	10	09/03/2016 20:43
TPH-Bunker Oil (C10-C36)	350	H	50	10	09/03/2016 20:43
TPH-Heating Oil (C9-C18)	120	H	10	10	09/03/2016 20:43

Surrogates	REC (%)	Qualifiers	Limits	Date Analyzed
C9	97	H	70-130	09/03/2016 20:43

Analyst(s): TK Analytical Comments: e7,e2,e11



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/6/16  
**Date Analyzed:** 9/6/16  
**Instrument:** GC23  
**Matrix:** Soil  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126152  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8082  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-126152  
 1609166-005AMS/MSD

### QC Summary Report for SW8082

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Aroclor1016	ND	-	0.050	-	-	-	-
Aroclor1221	ND	-	0.050	-	-	-	-
Aroclor1232	ND	-	0.050	-	-	-	-
Aroclor1242	ND	-	0.050	-	-	-	-
Aroclor1248	ND	-	0.050	-	-	-	-
Aroclor1254	ND	-	0.050	-	-	-	-
Aroclor1260	ND	0.149	0.050	0.15	-	99	70-130
PCBs, total	ND	-	0.050	-	-	-	-
<b>Surrogate Recovery</b>							
Decachlorobiphenyl	0.0418	0.0503		0.050	84	101	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Aroclor1260	0.163	0.139	0.15	ND	109	92	70-130	16.3	20
<b>Surrogate Recovery</b>									
Decachlorobiphenyl	0.0503	0.0503	0.050		101	101	70-130	0	20



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/2/16  
**Date Analyzed:** 9/2/16 - 9/6/16  
**Instrument:** GC10, GC18  
**Matrix:** Soil  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126109  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-126109  
 1609100-017AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0430	0.0050	0.050	-	86	53-116
Benzene	ND	0.0461	0.0050	0.050	-	92	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.196	0.050	0.20	-	98	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0485	0.0050	0.050	-	97	77-121
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0476	0.0040	0.050	-	95	67-119
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0450	0.0040	0.050	-	90	58-135
1,1-Dichloroethene	ND	0.0449	0.0050	0.050	-	90	42-145
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/2/16  
**Date Analyzed:** 9/2/16 - 9/6/16  
**Instrument:** GC10, GC18  
**Matrix:** Soil  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126109  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-126109  
 1609100-017AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0442	0.0050	0.050	-	88	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0447	0.0050	0.050	-	89	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0444	0.0050	0.050	-	89	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0513	0.0050	0.050	-	103	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0485	0.0050	0.050	-	97	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/2/16  
**Date Analyzed:** 9/2/16 - 9/6/16  
**Instrument:** GC10, GC18  
**Matrix:** Soil  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126109  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-126109  
 1609100-017AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
<b>Surrogate Recovery</b>							
Dibromofluoromethane	0.125	0.124		0.12	100	99	70-130
Toluene-d8	0.131	0.133		0.12	105	106	70-130
4-BFB	0.0124	0.0124		0.012	99	99	70-130
Benzene-d6	0.0957	0.102		0.10	96	102	60-140
Ethylbenzene-d10	0.116	0.125		0.10	115	125	60-140
1,2-DCB-d4	0.0870	0.0910		0.10	87	91	60-140

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	0.0383	0.0425	0.050	ND	77	85	53-116	10.4	20
Benzene	0.0726	0.0693	0.050	0.04144	62,F1	56,F1	63-137	4.76	20
t-Butyl alcohol (TBA)	0.177	0.177	0.20	ND	82	82	41-135	0	20
Chlorobenzene	0.0439	0.0440	0.050	ND	88	88	77-121	0	20
1,2-Dibromoethane (EDB)	0.0433	0.0434	0.050	ND	87	87	67-119	0	20
1,2-Dichloroethane (1,2-DCA)	0.0399	0.0425	0.050	ND	80	85	58-135	6.20	20
1,1-Dichloroethene	0.0312	0.0405	0.050	ND	62	81	42-145	25.9,F1	20
Diisopropyl ether (DIPE)	0.0375	0.0400	0.050	ND	75	80	52-129	6.52	20
Ethyl tert-butyl ether (ETBE)	0.0390	0.0414	0.050	ND	78	83	53-125	5.84	20
Methyl-t-butyl ether (MTBE)	0.0389	0.0408	0.050	ND	78	82	58-122	4.82	20
Toluene	0.0440	0.0456	0.050	ND	88	91	76-130	3.62	20
Trichloroethene	0.0414	0.0444	0.050	ND	83	89	72-132	6.95	20

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
<b>Surrogate Recovery</b>									
Dibromofluoromethane	0.127	0.126	0.12		101	101	70-130	0	20
Toluene-d8	0.131	0.129	0.12		105	103	70-130	1.80	20
4-BFB	0.0126	0.0131	0.012		101	105	70-130	3.55	20
Benzene-d6	0.0908	0.0884	0.10		91	88	60-140	2.73	20
Ethylbenzene-d10	0.107	0.105	0.10		107	105	60-140	2.31	20
1,2-DCB-d4	0.0862	0.0832	0.10		86	83	60-140	3.51	20



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/2/16  
**Date Analyzed:** 9/6/16  
**Instrument:** GC18  
**Matrix:** Soil  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126120  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-126120  
 1609118-010AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	0.10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	0.0376	0.0050	0.050	-	75	53-116
Benzene	ND	0.0408	0.0050	0.050	-	82	63-137
Bromobenzene	ND	-	0.0050	-	-	-	-
Bromochloromethane	ND	-	0.0050	-	-	-	-
Bromodichloromethane	ND	-	0.0050	-	-	-	-
Bromoform	ND	-	0.0050	-	-	-	-
Bromomethane	ND	-	0.0050	-	-	-	-
2-Butanone (MEK)	ND	-	0.020	-	-	-	-
t-Butyl alcohol (TBA)	ND	0.155	0.050	0.20	-	78	41-135
n-Butyl benzene	ND	-	0.0050	-	-	-	-
sec-Butyl benzene	ND	-	0.0050	-	-	-	-
tert-Butyl benzene	ND	-	0.0050	-	-	-	-
Carbon Disulfide	ND	-	0.0050	-	-	-	-
Carbon Tetrachloride	ND	-	0.0050	-	-	-	-
Chlorobenzene	ND	0.0468	0.0050	0.050	-	94	77-121
Chloroethane	ND	-	0.0050	-	-	-	-
Chloroform	ND	-	0.0050	-	-	-	-
Chloromethane	ND	-	0.0050	-	-	-	-
2-Chlorotoluene	ND	-	0.0050	-	-	-	-
4-Chlorotoluene	ND	-	0.0050	-	-	-	-
Dibromochloromethane	ND	-	0.0050	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.0040	-	-	-	-
1,2-Dibromoethane (EDB)	ND	0.0461	0.0040	0.050	-	92	67-119
Dibromomethane	ND	-	0.0050	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.0050	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.0050	-	-	-	-
Dichlorodifluoromethane	ND	-	0.0050	-	-	-	-
1,1-Dichloroethane	ND	-	0.0050	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	0.0398	0.0040	0.050	-	80	58-135
1,1-Dichloroethene	ND	0.0459	0.0050	0.050	-	92	42-145
cis-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.0050	-	-	-	-
1,2-Dichloropropane	ND	-	0.0050	-	-	-	-
1,3-Dichloropropane	ND	-	0.0050	-	-	-	-
2,2-Dichloropropane	ND	-	0.0050	-	-	-	-

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NELAP 4033ORELAP

QA/QC Officer





## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/2/16  
**Date Analyzed:** 9/6/16  
**Instrument:** GC18  
**Matrix:** Soil  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126120  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-126120  
 1609118-010AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.0050	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.0050	-	-	-	-
Diisopropyl ether (DIPE)	ND	0.0416	0.0050	0.050	-	83	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0388	0.0050	0.050	-	78	53-125
Freon 113	ND	-	0.0050	-	-	-	-
Hexachlorobutadiene	ND	-	0.0050	-	-	-	-
Hexachloroethane	ND	-	0.0050	-	-	-	-
2-Hexanone	ND	-	0.0050	-	-	-	-
Isopropylbenzene	ND	-	0.0050	-	-	-	-
4-Isopropyl toluene	ND	-	0.0050	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	0.0393	0.0050	0.050	-	79	58-122
Methylene chloride	ND	-	0.0050	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.0050	-	-	-	-
Naphthalene	ND	-	0.0050	-	-	-	-
n-Propyl benzene	ND	-	0.0050	-	-	-	-
Styrene	ND	-	0.0050	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.0050	-	-	-	-
Tetrachloroethene	ND	-	0.0050	-	-	-	-
Toluene	ND	0.0519	0.0050	0.050	-	104	76-130
1,2,3-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.0050	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.0050	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.0050	-	-	-	-
Trichloroethene	ND	0.0469	0.0050	0.050	-	94	72-132
Trichlorofluoromethane	ND	-	0.0050	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.0050	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.0050	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.0050	-	-	-	-
Vinyl Chloride	ND	-	0.0050	-	-	-	-
Xylenes, Total	ND	-	0.0050	-	-	-	-



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/2/16  
**Date Analyzed:** 9/6/16  
**Instrument:** GC18  
**Matrix:** Soil  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126120  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-126120  
 1609118-010AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
<b>Surrogate Recovery</b>							
Dibromofluoromethane	0.123	0.125		0.12	98	100	70-130
Toluene-d8	0.149	0.150		0.12	119	120	70-130
4-BFB	0.0129	0.0135		0.012	103	108	70-130
Benzene-d6	0.0959	0.0999		0.10	96	100	60-140
Ethylbenzene-d10	0.109	0.117		0.10	109	117	60-140
1,2-DCB-d4	0.0837	0.0922		0.10	84	92	60-140

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	NR	NR	0.050	ND<0.1	NR	NR	53-116	NR	20
Benzene	NR	NR	0.050	ND<0.1	NR	NR	63-137	NR	20
t-Butyl alcohol (TBA)	NR	NR	0.20	ND<1	NR	NR	41-135	NR	20
Chlorobenzene	NR	NR	0.050	ND<0.1	NR	NR	77-121	NR	20
1,2-Dibromoethane (EDB)	NR	NR	0.050	ND<0.08	NR	NR	67-119	NR	20
1,2-Dichloroethane (1,2-DCA)	NR	NR	0.050	ND<0.08	NR	NR	58-135	NR	20
1,1-Dichloroethene	NR	NR	0.050	ND<0.1	NR	NR	42-145	NR	20
Diisopropyl ether (DIPE)	NR	NR	0.050	ND<0.1	NR	NR	52-129	NR	20
Ethyl tert-butyl ether (ETBE)	NR	NR	0.050	ND<0.1	NR	NR	53-125	NR	20
Methyl-t-butyl ether (MTBE)	NR	NR	0.050	ND<0.1	NR	NR	58-122	NR	20
Toluene	NR	NR	0.050	ND<0.1	NR	NR	76-130	NR	20
Trichloroethene	NR	NR	0.050	ND<0.1	NR	NR	72-132	NR	20
<b>Surrogate Recovery</b>									
Dibromofluoromethane	NR	NR	0.12		NR	NR	70-130	NR	20
Toluene-d8	NR	NR	0.12		NR	NR	70-130	NR	20
4-BFB	NR	NR	0.012		NR	NR	70-130	NR	20
Benzene-d6	NR	NR	0.10		NR	NR	60-140	NR	20
Ethylbenzene-d10	NR	NR	0.10		NR	NR	60-140	NR	20
1,2-DCB-d4	NR	NR	0.10		NR	NR	60-140	NR	20



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/7/16  
**Date Analyzed:** 9/7/16  
**Instrument:** GC16  
**Matrix:** Water  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126282  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L  
**Sample ID:** MB/LCS-126282  
 1609136-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	6.97	0.50	10	-	70	54-140
Benzene	ND	8.82	0.50	10	-	88	47-158
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	19.5	2.0	40	-	49	42-140
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	8.78	0.50	10	-	88	43-157
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	7.70	0.50	10	-	77	44-155
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	7.23	0.50	10	-	72	66-125
1,1-Dichloroethene	ND	9.17	0.50	10	-	92	47-149
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-

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NELAP 4033ORELAP

QA/QC Officer



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/7/16  
**Date Analyzed:** 9/7/16  
**Instrument:** GC16  
**Matrix:** Water  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126282  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L  
**Sample ID:** MB/LCS-126282  
 1609136-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
Diisopropyl ether (DIPE)	ND	8.21	0.50	10	-	82	57-136
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	7.47	0.50	10	-	75	55-137
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	6.96	0.50	10	-	70	53-139
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	8.67	0.50	10	-	87	52-137
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	8.46	0.50	10	-	85	43-157
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/7/16  
**Date Analyzed:** 9/7/16  
**Instrument:** GC16  
**Matrix:** Water  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126282  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8260B  
**Unit:** µg/L  
**Sample ID:** MB/LCS-126282  
 1609136-001AMS/MSD

### QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
<b>Surrogate Recovery</b>							
Dibromofluoromethane	26.1	25.7		25	105	103	70-130
Toluene-d8	26.8	26.6		25	107	107	70-130
4-BFB	2.47	2.69		2.5	99	108	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	9.77	9.45	10	ND	98	94	69-139	3.38	20
Benzene	10.8	10.0	10	ND	108	100	69-141	7.44	20
t-Butyl alcohol (TBA)	36.6	37.1	40	ND	92	93	41-152	1.23	20
Chlorobenzene	10.6	9.93	10	ND	107	99	77-120	6.96	20
1,2-Dibromoethane (EDB)	10.5	10.3	10	ND	105	103	76-135	1.95	20
1,2-Dichloroethane (1,2-DCA)	9.54	9.29	10	ND	95	93	73-139	2.65	20
1,1-Dichloroethene	11.5	10.7	10	ND	115	107	59-140	7.81	20
Diisopropyl ether (DIPE)	10.6	10.1	10	ND	106	101	72-140	5.11	20
Ethyl tert-butyl ether (ETBE)	10.1	9.76	10	ND	101	98	71-140	2.97	20
Methyl-t-butyl ether (MTBE)	9.97	9.75	10	ND	100	97	73-139	2.25	20
Toluene	10.4	9.59	10	ND	103	95	71-128	7.84	20
Trichloroethene	10.4	9.70	10	ND	104	97	64-132	6.82	20
<b>Surrogate Recovery</b>									
Dibromofluoromethane	26.5	26.7	25		106	107	73-131	0.733	20
Toluene-d8	26.3	26.3	25		105	105	72-117	0	20
4-BFB	2.42	2.69	2.5		97	107	74-116	10.6	20



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/6/16  
**Date Analyzed:** 9/6/16  
**Instrument:** GC35  
**Matrix:** Soil  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126196  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8270C-SIM  
**Unit:** mg/kg  
**Sample ID:** MB/LCS-126196

### QC Summary Report for SW8270C

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	-	0.010	-	-	-	-
Acenaphthylene	ND	-	0.010	-	-	-	-
Anthracene	ND	-	0.010	-	-	-	-
Benzo (a) anthracene	ND	-	0.010	-	-	-	-
Benzo (a) pyrene	ND	0.0895	0.010	0.20	-	45	23-129
Benzo (b) fluoranthene	ND	-	0.010	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.010	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.010	-	-	-	-
Chrysene	ND	0.0968	0.010	0.20	-	48	38-104
Dibenzo (a,h) anthracene	ND	-	0.010	-	-	-	-
Fluoranthene	ND	-	0.010	-	-	-	-
Fluorene	ND	-	0.010	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.010	-	-	-	-
1-Methylnaphthalene	ND	0.138	0.010	0.20	-	69	59-106
2-Methylnaphthalene	ND	0.128	0.010	0.20	-	64	54-108
Naphthalene	ND	-	0.010	-	-	-	-
Phenanthrene	ND	0.108	0.010	0.20	-	54	48-107
Pyrene	ND	0.0946	0.010	0.20	-	47	40-104
<b>Surrogate Recovery</b>							
1-Fluoronaphthalene	0.294	0.322		0.50	59	65	63-123
2-Fluorobiphenyl	0.281	0.286		0.50	56	57	55-127



### Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/2/16  
**Date Analyzed:** 9/2/16  
**Instrument:** WetChem  
**Matrix:** Water  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126134  
**Extraction Method:** SW9045C  
**Analytical Method:** SW9045C\_Corr  
**Unit:** pH units

#### QC Summary Report for Corrosivity

SampleID	Sample Result	Sample DF	Dup / Serial Dilution Result	Dup / Serial Dilution DF	Precision	Acceptance Criteria
1609118-009D	6.8	1	6.8	1	0	10

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/8/16  
**Date Analyzed:** 9/8/16  
**Instrument:** WetChem  
**Matrix:** Water  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126343  
**Extraction Method:** SW1010  
**Analytical Method:** SW1010  
**Unit:** ± °C

#### QC Summary Report for Flash Point

SampleID	Sample Result	Sample DF	Dup / Serial Dilution Result	Dup / Serial Dilution DF	Precision	Acceptance Criteria
1609118-009D	>100 °C	1	>100 °C	1	N/A	2



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/2/16  
**Date Analyzed:** 9/3/16  
**Instrument:** GC19  
**Matrix:** Soil  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126118  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-126118  
 1609113-004AMS/MSD

### QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	0.603	0.40	0.60	-	100	70-130
MTBE	ND	0.0944	0.050	0.10	-	94	70-130
Benzene	ND	0.103	0.0050	0.10	-	103	70-130
Toluene	ND	0.105	0.0050	0.10	-	105	70-130
Ethylbenzene	ND	0.107	0.0050	0.10	-	107	70-130
Xylenes	ND	0.322	0.015	0.30	-	107	70-130
<b>Surrogate Recovery</b>							
2-Fluorotoluene	0.105	0.115		0.10	105	115	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	0.619	0.679	0.60	ND	103	113	70-130	9.23	20
MTBE	0.100	0.0946	0.10	ND	90	84	70-130	5.82	20
Benzene	0.115	0.106	0.10	ND	115	106	70-130	7.99	20
Toluene	0.118	0.111	0.10	ND	116	109	70-130	5.98	20
Ethylbenzene	0.119	0.113	0.10	ND	119	113	70-130	4.66	20
Xylenes	0.355	0.353	0.30	ND	117	117	70-130	0	20
<b>Surrogate Recovery</b>									
2-Fluorotoluene	0.117	0.110	0.10		117	110	70-130	6.17	20





## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/8/16  
**Date Analyzed:** 9/8/16  
**Instrument:** GC7  
**Matrix:** Water  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126367  
**Extraction Method:** SW5030B  
**Analytical Method:** SW8021B/8015Bm  
**Unit:** µg/L  
**Sample ID:** MB/LCS-126367  
 1609163-011AMS/MSD

### QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	58.7	40	60	-	98	70-130
MTBE	ND	10.6	5.0	10	-	106	70-130
Benzene	ND	11.2	0.50	10	-	112	70-130
Toluene	ND	12.1	0.50	10	-	121	70-130
Ethylbenzene	ND	11.6	0.50	10	-	116	70-130
Xylenes	ND	36.4	1.5	30	-	121	70-130
<b>Surrogate Recovery</b>							
aaa-TFT	10.0	10.4		10	100	104	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	60.7	57.6	60	ND	101	96	70-130	5.12	20
MTBE	11.6	9.43	10	ND	116	94	70-130	20.5,F1	20
Benzene	11.5	10.8	10	ND	113	105	70-130	6.40	20
Toluene	12.2	11.3	10	ND	121	111	70-130	7.84	20
Ethylbenzene	11.9	11.2	10	ND	119	112	70-130	5.93	20
Xylenes	37.5	34.7	30	ND	125	116	70-130	7.76	20
<b>Surrogate Recovery</b>									
aaa-TFT	10.5	10.1	10		105	101	70-130	3.52	20



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/2/16  
**Date Analyzed:** 9/6/16  
**Instrument:** ICP-MS2  
**Matrix:** Soil  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126110  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-126110  
 1609102-001AMS/MSD

### QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	51.5	0.25	50	-	103	75-125
Chromium	ND	51.8	0.50	50	-	104	75-125
Lead	ND	50.4	0.50	50	-	101	75-125
Nickel	ND	52.9	0.50	50	-	106	75-125
Zinc	ND	528	5.0	500	-	106	75-125
<b>Surrogate Recovery</b>							
Terbium	526	541		500	105	108	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Cadmium	52.3	52.2	50	ND	104	104	75-125	0	20
Chromium	126	128	50	102.4	48,F10	51,F10	75-125	1.26	20
Lead	61.6	58.6	50	8.414	106	100	75-125	5.01	20
Nickel	182	160	50	143.4	77	34,F10	75-125	12.7	20
Zinc	652	632	500	127.5	105	101	75-125	3.16	20
<b>Surrogate Recovery</b>									
Terbium	560	541	500		112	108	70-130	3.43	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Cadmium	ND<1.2	ND	-	-
Chromium	116	102.4	13.3	20
Lead	8.48	8.414	0.784	-
Nickel	144	143.4	0.418	20
Zinc	129	127.5	1.18	20

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.

(Cont.)



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/2/16  
**Date Analyzed:** 9/6/16  
**Instrument:** ICP-MS2  
**Matrix:** Soil  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126121  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-126121  
 1609118-003AMS/MSD

### QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	51.9	0.25	50	-	104	75-125
Chromium	ND	51.8	0.50	50	-	104	75-125
Lead	ND	50.9	0.50	50	-	102	75-125
Nickel	ND	53.0	0.50	50	-	106	75-125
Zinc	ND	538	5.0	500	-	108	75-125
<b>Surrogate Recovery</b>							
Terbium	535	539		500	107	108	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Cadmium	50.8	50.5	50	ND	101	101	75-125	0	20
Chromium	121	110	50	56.27	129,F10	107	75-125	9.64	20
Lead	103	69.5	50	88.80	28,F10	0,F10	75-125	NA	20
Nickel	108	104	50	52.25	112	103	75-125	4.25	20
Zinc	550	539	500	52.16	100	97	75-125	2.02	20
<b>Surrogate Recovery</b>									
Terbium	549	554	500		110	111	70-130	0.871	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Cadmium	ND<1.2	ND	-	-
Chromium	54.4	56.27	3.32	20
Lead	76.9	88.80	13.4	20
Nickel	47.4	52.25	9.28	20
Zinc	51.5	52.16	1.27	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/2/16  
**Date Analyzed:** 9/6/16  
**Instrument:** ICP-MS2  
**Matrix:** Soil  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126121  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-126121  
 1609118-003AMS/MSD

### QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Arsenic	ND	53.7	0.50	50	-	107	75-125
Barium	ND	540	5.0	500	-	108	75-125
Cadmium	ND	51.9	0.25	50	-	104	75-125
Chromium	ND	51.8	0.50	50	-	104	75-125
Lead	ND	50.9	0.50	50	-	102	75-125
Mercury	ND	1.29	0.050	1.25	-	103	75-125
Nickel	ND	53.0	0.50	50	-	106	75-125
Selenium	ND	53.2	0.50	50	-	106	75-125
Silver	ND	53.2	0.50	50	-	106	75-125
Zinc	ND	538	5.0	500	-	108	75-125
<b>Surrogate Recovery</b>							
Terbium	535	539		500	107	108	70-130



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/2/16  
**Date Analyzed:** 9/6/16  
**Instrument:** ICP-MS2  
**Matrix:** Soil  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126121  
**Extraction Method:** SW3050B  
**Analytical Method:** SW6020  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-126121  
 1609118-003AMS/MSD

### QC Summary Report for Metals

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Arsenic	54.6	56.3	50	5.4	98	102	75-125	3.16	20
Barium	756	664	500	220	108	90	75-125	13.0	20
Cadmium	50.8	50.5	50	ND	101	101	75-125	0	20
Chromium	121	110	50	56.27	129,F10	107	75-125	9.64	20
Lead	103	69.5	50	88.80	28,F10	0,F10	75-125	NA	20
Mercury	1.35	1.28	1.25	0.092	101	95	75-125	5.24	20
Nickel	108	104	50	52.25	112	103	75-125	4.25	20
Selenium	51.5	51.2	50	ND	103	102	75-125	0.624	20
Silver	50.3	50.6	50	ND	101	101	75-125	0	20
Zinc	550	539	500	52.16	100	97	75-125	2.02	20
<b>Surrogate Recovery</b>									
Terbium	549	554	500		110	111	70-130	0.871	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Arsenic	5.16	5.4	4.44	-
Barium	190	220	13.6	20
Cadmium	ND<1.2	ND	-	-
Chromium	54.4	56.27	3.32	20
Lead	76.9	88.80	13.4	20
Mercury	ND<0.25	0.092	-	-
Nickel	47.4	52.25	9.28	20
Selenium	ND<2.5	ND	-	-
Silver	ND<2.5	ND	-	-
Zinc	51.5	52.16	1.27	-

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/6/16  
**Date Analyzed:** 9/7/16  
**Instrument:** ICP-MS1  
**Matrix:** Water  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126210  
**Extraction Method:** E200.8  
**Analytical Method:** E200.8  
**Unit:** µg/L  
**Sample ID:** MB/LCS-126210  
 1609118-009CMS/MSD

### QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Arsenic	ND	55.5	0.50	50	-	111	85-115
Barium	ND	544	5.0	500	-	109	85-115
Cadmium	ND	53.3	0.25	50	-	107	85-115
Chromium	ND	55.0	0.50	50	-	110	85-115
Lead	ND	51.9	0.50	50	-	104	85-115
Mercury	ND	1.34	0.050	1.25	-	108	85-115
Nickel	ND	53.9	0.50	50	-	108	85-115
Selenium	ND	54.1	0.50	50	-	108	85-115
Silver	ND	52.4	0.19	50	-	105	85-115
Zinc	ND	540	15	500	-	108	85-115
<b>Surrogate Recovery</b>							
Terbium	848	856		750	113	114	70-130

(Cont.)



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/6/16  
**Date Analyzed:** 9/7/16  
**Instrument:** ICP-MS1  
**Matrix:** Water  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126210  
**Extraction Method:** E200.8  
**Analytical Method:** E200.8  
**Unit:** µg/L  
**Sample ID:** MB/LCS-126210  
 1609118-009CMS/MSD

### QC Summary Report for Metals

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Arsenic	92.6	93.1	50	38.29	109	110	75-125	0.463	20
Barium	1110	1100	500	608.1	101	98	75-125	1.27	20
Cadmium	63.8	64.1	50	12.13	103	104	75-125	0.563	20
Chromium	127	136	50	72.71	109	126,F10	75-125	6.46	20
Lead	553	556	50	501.5	103	109	75-125	0.505	20
Mercury	5.76	6.72	1.25	4.400	109	185,F10	75-125	15.4	20
Nickel	134	136	50	79.03	109	115	75-125	2.00	20
Selenium	52.8	51.3	50	ND<5.0	106	103	75-125	2.94	20
Silver	57.6	57.8	50	6.878	101	102	75-125	0.364	20
Zinc	4180	4230	500	3581	119	130,F13	75-125	1.28	20
<b>Surrogate Recovery</b>									
Terbium	846	840	750		113	112	70-130	0.712	20

Analyte	DLT Result	DLTRef Val	%D	%D Limit
Arsenic	40.6	38.29	6.03	20
Barium	580	608.1	4.62	20
Cadmium	13.5	12.13	11.3	20
Chromium	77.2	72.71	6.18	20
Lead	496	501.5	1.10	20
Mercury	4.82	4.400	9.55	20
Nickel	85.0	79.03	7.55	20
Selenium	ND<25	ND<5.0	-	-
Silver	ND<9.5	6.878	-	-
Zinc	3760	3581	5.00	20

%D Control Limit applied to analytes with concentrations greater than 25 times the reporting limits.



# Quality Control Report

<b>Client:</b>	Schutze & Associates, Inc.	<b>WorkOrder:</b>	1609118
<b>Date Prepared:</b>	9/2/16	<b>BatchID:</b>	126134
<b>Date Analyzed:</b>	9/2/16	<b>Extraction Method:</b>	SM4500H+B-2000
<b>Instrument:</b>	WetChem	<b>Analytical Method:</b>	SM4500H+B-2000
<b>Matrix:</b>	Water	<b>Unit:</b>	pH units @ 25°C
<b>Project:</b>	SCS557; 1647 International (UST5)		

## QC Summary Report for pH

SampleID	Sample Result	Sample DF	Dup / Serial Dilution Result	Dup / Serial Dilution DF	Precision	Acceptance Criteria
1609095-001A	7.01	1	7.01	1	0	0.1
1609118-009D	6.83	1	6.83	1	0	0.1





## Quality Control Report

<b>Client:</b> Schutze & Associates, Inc.	<b>WorkOrder:</b> 1609118
<b>Date Prepared:</b> 9/6/16	<b>BatchID:</b> 126151
<b>Date Analyzed:</b> 9/6/16	<b>Extraction Method:</b> SW3510C
<b>Instrument:</b> GC6A	<b>Analytical Method:</b> SW8015B
<b>Matrix:</b> Water	<b>Unit:</b> µg/L
<b>Project:</b> SCS557; 1647 International (UST5)	<b>Sample ID:</b> MB/LCS/LCSD-126151

### QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	RL	SPK Val	MB SS %REC	MB SS Limits
TPH-Diesel (C10-C23)	ND	35	-	-	-
TPH-Motor Oil (C18-C36)	ND	75	-	-	-
<b>Surrogate Recovery</b>					
C26	111		125	89	70-130

Analyte	LCS Result	LCSD Result	SPK Val	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	211	224	200	106	112	70-130	6.11	30
<b>Surrogate Recovery</b>								
C26	115	113	125	92	90	70-130	1.48	30



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/2/16  
**Date Analyzed:** 9/3/16  
**Instrument:** GC6A  
**Matrix:** Soil  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126108  
**Extraction Method:** SW3550B  
**Analytical Method:** SW8015B  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-126108  
 1609100-018AMS/MSD

### QC Report for SW8015B w/out SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	44.5	1.0	40	-	111	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
<b>Surrogate Recovery</b>							
C9	24.3	24.4		25	97	97	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH-Diesel (C10-C23)	52.2	50.5	40	1.497	127	123	70-130	3.15	30
<b>Surrogate Recovery</b>									
C9	24.3	24.8	25		97	99	70-130	2.09	30



1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1609118

ClientCode: SCO

WaterTrax    WriteOn    EDF    Excel    EQUIS    Email    HardCopy    ThirdParty    J-flag

**Report to:**

Kevin Loeb  
Schutze & Associates, Inc.  
44358 South Grimmer Blvd  
Fremont, CA 94538  
(510) 226-9944   FAX: (510) 625-8176

Email: kevin@schutze-inc.com; js@schutze-inc.co  
cc/3rd Party:  
PO:  
ProjectNo: SCS557; 1647 International (UST5)

**Bill to:**

Accounts Payable  
Schutze & Associates, Inc.  
44358 South Grimmer Blvd  
Fremont, CA 94538  
priscillajazz@yahoo.com

**Requested TAT: 5 days;**

**Date Received: 09/02/2016**

**Date Logged: 09/02/2016**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1609118-001	B3-M-14	Soil	8/31/2016 10:00	<input type="checkbox"/>	A	A		A	A				A		A		
1609118-002	TP-1-5	Soil	8/31/2016 14:00	<input type="checkbox"/>		A		A					A		A		
1609118-003	TP-2-4	Soil	8/31/2016 14:00	<input type="checkbox"/>		A		A					A		A		
1609118-004	TP-3-5	Soil	9/1/2016 9:00	<input type="checkbox"/>		A		A					A		A		
1609118-005	PJ-1-2	Soil	8/31/2016 14:00	<input type="checkbox"/>		A		A					A		A		
1609118-006	PJ-2-2	Soil	9/1/2016 9:00	<input type="checkbox"/>		A		A					A		A		
1609118-007	PJ-3-2	Soil	9/1/2016 9:00	<input type="checkbox"/>		A		A					A		A		
1609118-008	P-4-2	Soil	9/1/2016 9:00	<input type="checkbox"/>		A		A					A		A		
1609118-009	TC-5	Water	8/30/2016 11:00	<input type="checkbox"/>			B			D	D			A			C
1609118-010	SP-1.2,2.2,3.2,4.2	Soil	<Not Provided>	<input type="checkbox"/>		A							A			A	

**Test Legend:**

1	8082_PCB_S	2	8260B_S	3	8260B_W	4	8260GAS_S
5	8270_PNA_S	6	CORR_W	7	FLASH_W	8	G-MBTEX_S
9	G-MBTEX_W	10	LUFTMS_6020_TTLC_S	11	METALSMS_TTLC_S	12	METALSMS_TTLC_W

**Prepared by: Briana Cutino**

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A contain testgroup Gas8260\_S.; The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 010A contain testgroup Multi Range\_S.; The following SampID: 009A contains testgroup Multi RangeLV\_W.

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
Hazardous samples will be returned to client or disposed of at client expense.



1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD

WorkOrder: 1609118

ClientCode: SCO

WaterTrax    WriteOn    EDF    Excel    EQUIS    Email    HardCopy    ThirdParty    J-flag

**Report to:**

Kevin Loeb  
Schutze & Associates, Inc.  
44358 South Grimmer Blvd  
Fremont, CA 94538  
(510) 226-9944   FAX: (510) 625-8176

Email: kevin@schutze-inc.com; js@schutze-inc.co  
cc/3rd Party:  
PO:  
ProjectNo: SCS557; 1647 International (UST5)

**Bill to:**

Accounts Payable  
Schutze & Associates, Inc.  
44358 South Grimmer Blvd  
Fremont, CA 94538  
priscillajazz@yahoo.com

**Requested TAT: 5 days;**

**Date Received: 09/02/2016**

**Date Logged: 09/02/2016**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					13	14	15	16	17	18	19	20	21	22	23	24	
1609118-001	B3-M-14	Soil	8/31/2016 10:00	<input type="checkbox"/>		A		A									
1609118-002	TP-1-5	Soil	8/31/2016 14:00	<input type="checkbox"/>				A									
1609118-003	TP-2-4	Soil	8/31/2016 14:00	<input type="checkbox"/>				A									
1609118-004	TP-3-5	Soil	9/1/2016 9:00	<input type="checkbox"/>				A									
1609118-005	PJ-1-2	Soil	8/31/2016 14:00	<input type="checkbox"/>				A									
1609118-006	PJ-2-2	Soil	9/1/2016 9:00	<input type="checkbox"/>				A									
1609118-007	PJ-3-2	Soil	9/1/2016 9:00	<input type="checkbox"/>				A									
1609118-008	P-4-2	Soil	9/1/2016 9:00	<input type="checkbox"/>				A									
1609118-009	TC-5	Water	8/30/2016 11:00	<input type="checkbox"/>	D		A										
1609118-010	SP-1.2,2.2,3.2,4.2	Soil	<Not Provided>	<input type="checkbox"/>				A									

**Test Legend:**

13	PH_W	14	PREFD REPORT	15	TPH(DMO)LV_W	16	TPH_S
17		18		19		20	
21		22		23		24	

**Prepared by: Briana Cutino**

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A contain testgroup Gas8260\_S.; The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A, 008A, 010A contain testgroup Multi Range\_S.; The following SampID: 009A contains testgroup Multi RangeLV\_W.

**Comments:**

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
Hazardous samples will be returned to client or disposed of at client expense.



## WORK ORDER SUMMARY

**Client Name:** SCHUTZE & ASSOCIATES, INC.  
**Project:** SCS557; 1647 International (UST5)  
**Comments:**

**QC Level:** LEVEL 2  
**Client Contact:** Kevin Loeb  
**Contact's Email:** kevin@schutze-inc.com; js@schutze-inc.com;  
 Mari@schutze-inc.com; claudine@schutze-inc.com

**Work Order:** 1609118  
**Date Logged:** 9/2/2016

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  Fax   
 Email   
 HardCopy   
 ThirdParty   
 J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De- chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1609118-001A	B3-M-14	Soil	SW6020 (LUFT)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/>	8/31/2016 10:00	5 days		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>	5 days		<input type="checkbox"/>		
			SW8270C (PAHs/PNAs)			<input type="checkbox"/>	5 days		<input type="checkbox"/>		
			TPH(g) & 8260 (Basic List) by P&T GCMS			<input type="checkbox"/>	5 days		<input type="checkbox"/>		
			SW8082 (PCBs Only)			<input type="checkbox"/>	5 days		<input type="checkbox"/>		
1609118-002A	TP-1-5	Soil	SW6020 (LUFT)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/>	8/31/2016 14:00	5 days		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>	5 days		<input type="checkbox"/>		
			TPH(g) & 8260 (Basic List) by P&T GCMS			<input type="checkbox"/>	5 days		<input type="checkbox"/>		
1609118-003A	TP-2-4	Soil	SW6020 (LUFT)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/>	8/31/2016 14:00	5 days		<input type="checkbox"/>	
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>	5 days		<input type="checkbox"/>		
			TPH(g) & 8260 (Basic List) by P&T GCMS			<input type="checkbox"/>	5 days		<input type="checkbox"/>		
1609118-004A	TP-3-5	Soil	SW8015B (TEPHs) <TPH-Bunker Oil (C10-C36), TPH-Diesel (C10-C23), TPH-Heating Oil (C9-C18), TPH-Motor Oil (C18-C36)>	1	Stainless Steel tube 2"x6"	<input type="checkbox"/>	9/1/2016 9:00	5 days		<input type="checkbox"/>	
			SW6020 (LUFT)			<input type="checkbox"/>	5 days		<input type="checkbox"/>		

**NOTES:** - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).  
 - MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



## WORK ORDER SUMMARY

**Client Name:** SCHUTZE & ASSOCIATES, INC.

**QC Level:** LEVEL 2

**Work Order:** 1609118

**Project:** SCS557; 1647 International (UST5)

**Client Contact:** Kevin Loeb

**Date Logged:** 9/2/2016

**Comments:**

**Contact's Email:** kevin@schutze-inc.com; js@schutze-inc.com;  
 Mari@schutze-inc.com; claudine@schutze-inc.com

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut		
1609118-004A	TP-3-5	Soil	SW8021B/8015Bm (G/MBTEX)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/>	9/1/2016 9:00	5 days		<input type="checkbox"/>			
			<Benzene_2, Ethylbenzene_2, MTBE_2, Toluene_2, TPH(g)_1, TPH(ss)_1, Xylenes_2>										
			SW8260B (TPH(g))			<input type="checkbox"/>						5 days	<input type="checkbox"/>
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>			
1609118-005A	PJ-1-2	Soil	SW8015B (TEPHs) <TPH-Bunker Oil (C10-C36), TPH-Diesel (C10-C23), TPH-Heating Oil (C9-C18), TPH-Motor Oil (C18-C36)>	1	Stainless Steel tube 2"x6"	<input type="checkbox"/>	8/31/2016 14:00	5 days		<input type="checkbox"/>			
			SW6020 (LUFT)			<input type="checkbox"/>						5 days	<input type="checkbox"/>
			SW8021B/8015Bm (G/MBTEX)			<input type="checkbox"/>						5 days	<input type="checkbox"/>
			<Benzene_2, Ethylbenzene_2, MTBE_2, Toluene_2, TPH(g)_1, TPH(ss)_1, Xylenes_2>										
			SW8260B (TPH(g))			<input type="checkbox"/>						5 days	<input type="checkbox"/>
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>			
1609118-006A	PJ-2-2	Soil	SW6020 (LUFT)	1	Stainless Steel tube 2"x6"	<input type="checkbox"/>	9/1/2016 9:00	5 days		<input type="checkbox"/>			
			Multi-Range TPH(g,d,mo)			<input type="checkbox"/>						5 days	<input type="checkbox"/>
			TPH(g) & 8260 (Basic List) by P&T GCMS			<input type="checkbox"/>						5 days	<input type="checkbox"/>

**NOTES:** - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).  
 - MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



## WORK ORDER SUMMARY

**Client Name:** SCHUTZE & ASSOCIATES, INC.  
**Project:** SCS557; 1647 International (UST5)  
**Comments:**

**QC Level:** LEVEL 2  
**Client Contact:** Kevin Loeb  
**Contact's Email:** kevin@schutze-inc.com; js@schutze-inc.com;  
 Mari@schutze-inc.com; claudine@schutze-inc.com

**Work Order:** 1609118  
**Date Logged:** 9/2/2016

WaterTrax   
  WriteOn   
  EDF   
  Excel   
  Fax   
 Email   
 HardCopy   
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 J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1609118-007A	PJ-3-2	Soil	SW6020 (LUFT) Multi-Range TPH(g,d,mo) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Stainless Steel tube 2"x6"	<input type="checkbox"/>	9/1/2016 9:00	5 days		<input type="checkbox"/>	
1609118-008A	P-4-2	Soil	SW6020 (LUFT) Multi-Range TPH(g,d,mo) TPH(g) & 8260 (Basic List) by P&T GCMS	1	Stainless Steel tube 2"x6"	<input type="checkbox"/>	9/1/2016 9:00	5 days		<input type="checkbox"/>	
1609118-009A	TC-5	Water	Multi-Range (Large Volume) TPH(g,d,mo)	4	2 VOAs w/HCL + 2-aVOAs (multi-range)	<input type="checkbox"/>	8/30/2016 11:00	5 days	Trace	<input type="checkbox"/>	
1609118-009B	TC-5	Water	SW8260B (VOCs)	2	2 VOAs w/HCL	<input type="checkbox"/>	8/30/2016 11:00	5 days	Trace	<input type="checkbox"/>	
1609118-009C	TC-5	Water	E200.8 (Metals) <Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Nickel, Selenium, Silver, Zinc>	1	250mL HDPE w/ HNO3	<input type="checkbox"/>	8/30/2016 11:00	5 days	Trace	<input type="checkbox"/>	
1609118-009D	TC-5	Water	SM4500H+B (pH) SW1010 (Flash Point) SW9045C (Corrosivity)	1	500mL HDPE, unprsv.	<input type="checkbox"/>	8/30/2016 11:00	5 days	Trace	<input type="checkbox"/>	
1609118-010A	SP-1,2,2.2,3,2,4.2	Soil	SW6020 (Metals) <Arsenic, Barium, Cadmium, Chromium, Lead, Mercury, Nickel, Selenium, Silver, Zinc>	4 / (4:1)	Stainless Steel tube 2"x6"	<input type="checkbox"/>	<Not Provided>	5 days		<input type="checkbox"/>	

**NOTES:** - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).  
 - MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.



## WORK ORDER SUMMARY

**Client Name:** SCHUTZE & ASSOCIATES, INC.

**QC Level:** LEVEL 2

**Work Order:** 1609118

**Project:** SCS557; 1647 International (UST5)

**Client Contact:** Kevin Loeb

**Date Logged:** 9/2/2016

**Comments:**

**Contact's Email:** kevin@schutze-inc.com; js@schutze-inc.com;  
 Mari@schutze-inc.com; claudine@schutze-inc.com

WaterTrax     WriteOn     EDF     Excel     Fax     Email     HardCopy     ThirdParty     J-flag

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1609118-010A	SP-1.2,2.2,3.2,4.2	Soil	Multi-Range TPH(g,d,mo)	4 / (4:1)	Stainless Steel tube 2"x6"	<input type="checkbox"/>	<Not Provided>	5 days		<input type="checkbox"/>	
			SW8260B (VOCs)			<input type="checkbox"/>		5 days		<input type="checkbox"/>	

**NOTES:** - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).  
 - MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.











### Sample Receipt Checklist

Client Name:	<b>Schutze &amp; Associates, Inc.</b>	Date and Time Received:	<b>9/2/2016 18:10</b>
Project Name:	<b>SCS557; 1647 International (UST5)</b>	Date Logged:	<b>9/2/2016</b>
WorkOrder №:	<b>1609118</b> Matrix: <u>Soil/Water</u>	Received by:	Briana Cutino
Carrier:	<u>Benjamin Yslas (MAI Courier)</u>	Logged by:	Briana Cutino

#### Chain of Custody (COC) Information

Chain of custody present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody signed when relinquished and received?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Chain of custody agrees with sample labels?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sample IDs noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Date and Time of collection noted by Client on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Sampler's name noted on COC?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>

#### Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Shipping container/cooler in good condition?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Samples in proper containers/bottles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sample containers intact?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
Sufficient sample volume for indicated test?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

#### Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Sample/Temp Blank temperature	Temp: 3.7°C		NA <input type="checkbox"/>
Water - VOA vials have zero headspace / no bubbles?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	NA <input type="checkbox"/>
Sample labels checked for correct preservation?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	NA <input type="checkbox"/>
Samples Received on Ice?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>	

(Ice Type: WET ICE )

#### UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes <input type="checkbox"/>	No <input type="checkbox"/>	NA <input checked="" type="checkbox"/>

Comments: Method SW9045C (Corrosivity) was received passed its 0.25-day holding time. Method SM4500H+B (pH) was received passed its 0.01-day holding time. pH adjusted in Lab.



# McC Campbell Analytical, Inc.

"When Quality Counts"

## Analytical Report

**WorkOrder:** 1609118 A

**Report Created for:** Schutze & Associates, Inc.

44358 South Grimmer Blvd  
Fremont, CA 94538

**Project Contact:** Kevin Loeb

**Project P.O.:**

**Project Name:** SCS557; 1647 International (UST5)

**Project Received:** 09/02/2016

Analytical Report reviewed & approved for release on 09/21/2016 by:

Angela Rydelius,  
Laboratory Manager

*The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.*







## Glossary of Terms & Qualifier Definitions

**Client:** Schutze & Associates, Inc.  
**Project:** SCS557; 1647 International (UST5)  
**WorkOrder:** 1609118

### Glossary Abbreviation

%D	Serial Dilution Percent Difference
95% Interval	95% Confident Interval
DF	Dilution Factor
DI WET	(DISTLC) Waste Extraction Test using DI water
DISS	Dissolved (direct analysis of 0.45 µm filtered and acidified water sample)
DLT	Dilution Test (Serial Dilution)
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
N/A	Not Applicable
ND	Not detected at or above the indicated MDL or RL
NR	Data Not Reported due to matrix interference or insufficient sample amount.
PDS	Post Digestion Spike
PDSD	Post Digestion Spike Duplicate
PF	Prep Factor
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
SPLP	Synthetic Precipitation Leachate Procedure
ST	Sorbent Tube
TCLP	Toxicity Characteristic Leachate Procedure
TEQ	Toxicity Equivalents
WET (STLC)	Waste Extraction Test (Soluble Threshold Limit Concentration)



## Glossary of Terms & Qualifier Definitions

**Client:** Schutze & Associates, Inc.  
**Project:** SCS557; 1647 International (UST5)  
**WorkOrder:** 1609118

### Analytical Qualifiers

H	samples were analyzed out of holding time
S	Surrogate spike recovery outside accepted recovery limits
a1	sample diluted due to matrix interference
a2	sample diluted due to cluttered chromatogram
a3	sample diluted due to high organic content.
b6	lighter than water immiscible sheen/product is present
c2	surrogate recovery outside of the control limits due to matrix interference.
c4	surrogate recovery outside of the control limits due to coelution with another peak(s) / cluttered chromatogram.
c7	Surrogate value diluted out of range
d5	TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?)
d7	strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
e2	diesel range compounds are significant; no recognizable pattern
e4	gasoline range compounds are significant.
e7	oil range compounds are significant
e8	kerosene/kerosene range/jet fuel range
e11	stoddard solvent/mineral spirit (?)
h4	sulfuric acid permanganate (EPA 3665) cleanup

### Quality Control Qualifiers

F1	MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validated the prep batch.
F10	MS/MSD outside control limits. Physical or chemical interferences exist due to sample matrix.
F13	Indigenous sample results too high for a representative matrix spike analysis.



## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/16/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** E218.6  
**Analytical Method:** E218.6  
**Unit:** µg/L

### Hexachrome by IC

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TC-5	1609118-009E	Water	08/30/2016 11:00	IC2	126739

Analytes	Result	RL	DF	Date Analyzed
Hexachrome	ND	2.0	10	09/16/2016 23:07

Analyst(s): AO

Analytical Comments: a2



## Analytical Report

**Client:** Schutze & Associates, Inc.  
**Date Received:** 9/2/16 18:10  
**Date Prepared:** 9/20/16  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**Extraction Method:** SW3060A  
**Analytical Method:** SW7199  
**Unit:** mg/Kg

### Hexachrome by Alkaline Digestion and IC Analysis

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
TP-3-5	1609118-004A	Soil	09/01/2016 09:00	IC2	126870

Analytes	Result	RL	DF	Date Analyzed
Hexachrome	ND	4.0	1	09/20/2016 23:22

Analyst(s): AO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
PJ-1-2	1609118-005A	Soil	08/31/2016 14:00	IC2	126870

Analytes	Result	RL	DF	Date Analyzed
Hexachrome	ND	4.0	1	09/20/2016 23:41

Analyst(s): AO





## Quality Control Report

<b>Client:</b> Schutze & Associates, Inc.	<b>WorkOrder:</b> 1609118
<b>Date Prepared:</b> 9/16/16	<b>BatchID:</b> 126739
<b>Date Analyzed:</b> 9/16/16	<b>Extraction Method:</b> E218.6
<b>Instrument:</b> IC2	<b>Analytical Method:</b> E218.6
<b>Matrix:</b> Water	<b>Unit:</b> µg/L
<b>Project:</b> SCS557; 1647 International (UST5)	<b>Sample ID:</b> MB/LCS-126739 1609721-001AMS/MSD

### QC Summary Report for E218.6

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Hexachrome	ND	25.5	0.20	25	-	102	90-110

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Hexachrome	43.4	43.4	25	16.46	108	108	90-110	0	10



## Quality Control Report

**Client:** Schutze & Associates, Inc.  
**Date Prepared:** 9/20/16  
**Date Analyzed:** 9/20/16  
**Instrument:** IC2  
**Matrix:** Soil  
**Project:** SCS557; 1647 International (UST5)

**WorkOrder:** 1609118  
**BatchID:** 126870  
**Extraction Method:** SW3060A  
**Analytical Method:** SW7199  
**Unit:** mg/Kg  
**Sample ID:** MB/LCS-126870  
 1609118-005AMS/MSD

### QC Summary Report for SW7199 (Hexachrome)

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Hexachrome	ND	222	4.0	200	-	111	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Hexachrome	207	206	200	ND	104	103	70-130	0.678	20



1534 Willow Pass Rd  
Pittsburg, CA 94565-1701  
(925) 252-9262

# CHAIN-OF-CUSTODY RECORD

**WorkOrder: 1609118 A ClientCode: SCO**

WaterTrax  
  WriteOn  
  EDF  
  Excel  
  Fax  
 Email  
  HardCopy  
  ThirdParty  
  J-flag

**Report to:**  
Kevin Loeb  
Schutze & Associates, Inc.  
44358 South Grimmer Blvd  
Fremont, CA 94538  
(510) 226-9944    FAX: (510) 625-8176

**Email:** kevin@schutze-inc.com; js@schutze-inc.co  
cc/3rd Party:  
**PO:**  
ProjectNo: SCS557; 1647 International (UST5)

**Bill to:**  
Accounts Payable  
Schutze & Associates, Inc.  
44358 South Grimmer Blvd  
Fremont, CA 94538  
priscillajazz@yahoo.com

**Requested TAT: 5 days;**  
  
**Date Received: 09/02/2016**  
**Date Logged: 09/02/2016**  
**Date Add-On: 09/16/2016**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)												
					1	2	3	4	5	6	7	8	9	10	11	12	
1609118-004	TP-3-5	Soil	9/1/2016 09:00	<input type="checkbox"/>		A											
1609118-005	PJ-1-2	Soil	8/31/2016 14:00	<input type="checkbox"/>		A											
1609118-009	TC-5	Water	8/30/2016 11:00	<input type="checkbox"/>	E												

**Test Legend:**

1	218_6_W	2	7199_TTLC_S	3		4	
5		6		7		8	
9		10		11		12	

**Prepared by: Briana Cutino**  
**Add-On Prepared By: Agustina Venegas**

**Comments:** 7199 TTLC added to 004,005,009 9/16/16 STAT

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).  
Hazardous samples will be returned to client or disposed of at client expense.



### WORK ORDER SUMMARY

**Client Name:** SCHUTZE & ASSOCIATES, INC.

**Project:** SCS557; 1647 International (UST5)

**Work Order:** 1609118

**Client Contact:** Kevin Loeb

**QC Level:** LEVEL 2

**Contact's Email** kevin@schutze-inc.com; js@schutze-inc.com;  
Mari@schutze-inc.com; claudine@schutze-inc.com

**Comments:** 7199 TTLC added to 004,005,009 9/16/16 STAT

**Date Logged:** 9/2/2016

**Date Add-On:** 9/16/2016

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1609118-004A	TP-3-5	Soil	SW7199 (Hexachrome)	1	Stainless Steel tube 2"x6"	9/1/2016 9:00	5 days		<input type="checkbox"/>	
1609118-005A	PJ-1-2	Soil	SW7199 (Hexachrome)	1	Stainless Steel tube 2"x6"	8/31/2016 14:00	5 days		<input type="checkbox"/>	
1609118-009E	TC-5	Water	E218.6 (Hexachrome)	1	1LA	8/30/2016 11:00	5 days	Trace	<input type="checkbox"/>	

**NOTES:** - STLC and TCLP extractions require 2 days to complete; therefore, all TATs begin after the extraction is completed (i.e., One-day TAT yields results in 3 days from sample submission).

- MAI assumes that all material present in the provided sampling container is considered part of the sample - MAI does not exclude any material from the sample prior to sample preparation unless requested in writing by the client.

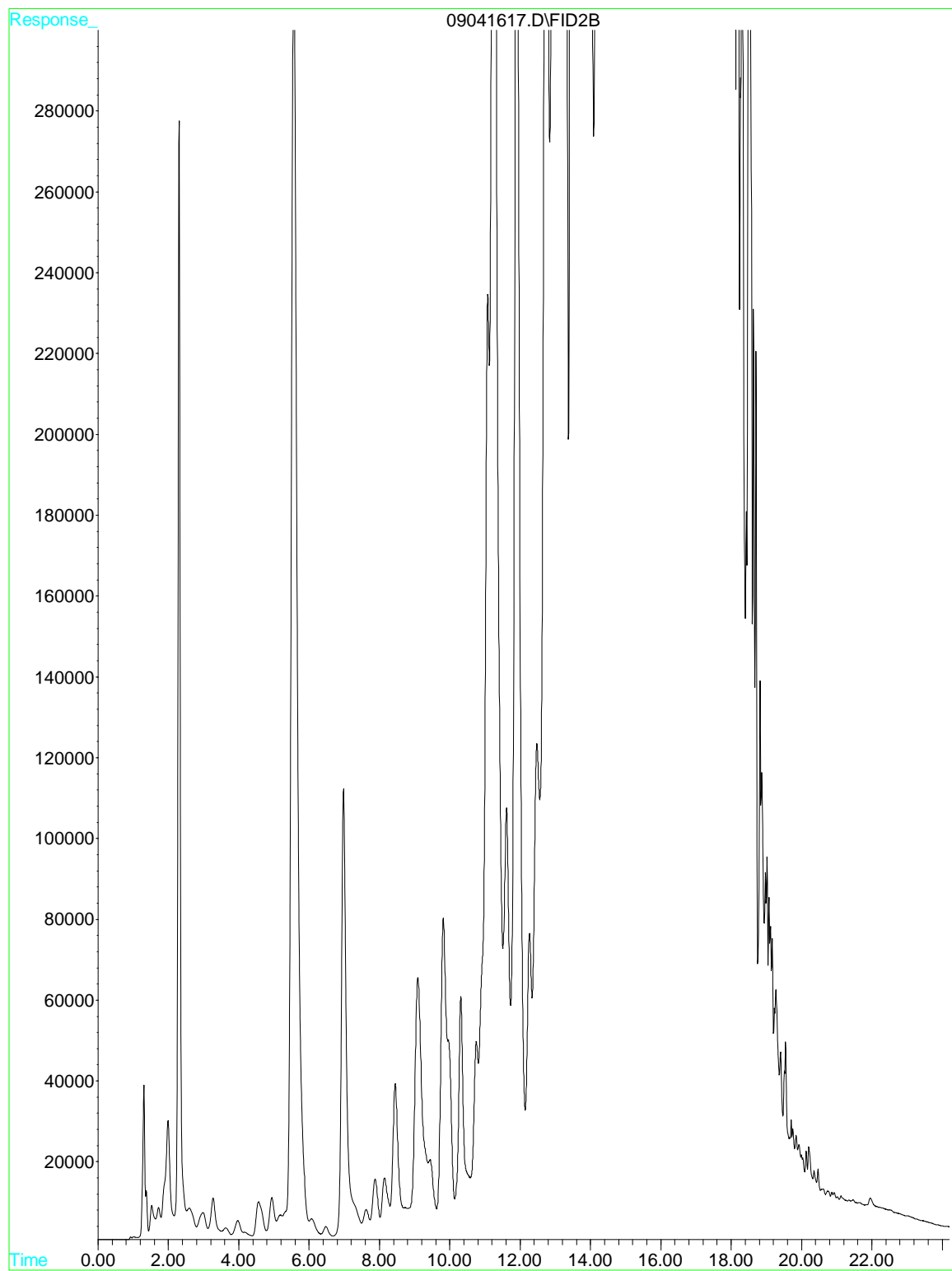




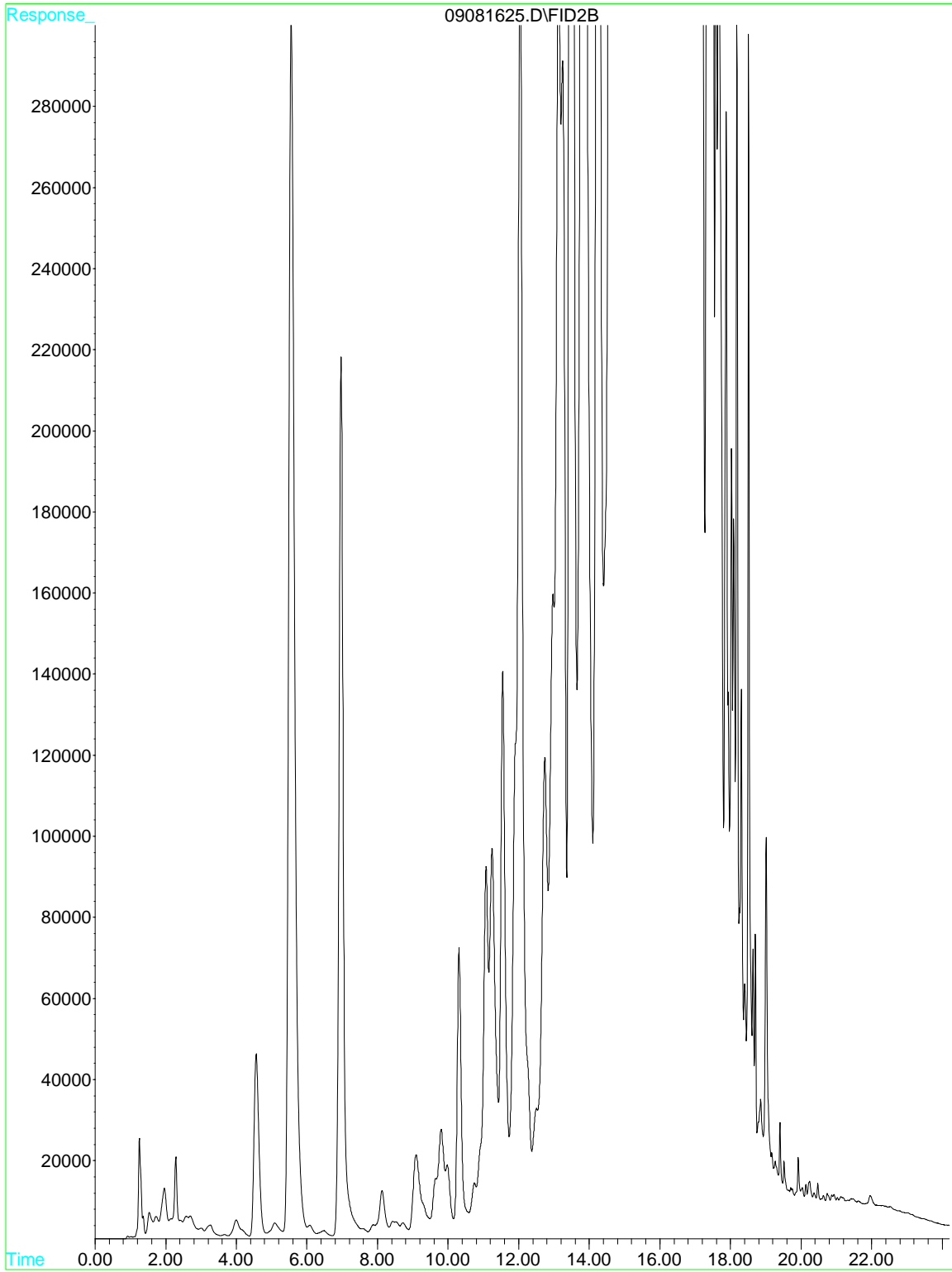




File : D:\HPCHEM\GC7\DATA\09041617.D  
Operator : IRINA  
Acquired : 4 Sep 2016 7:27 pm using AcqMethod GC7V2.M  
Instrument : GC-7  
Sample Name: 1609118-001A S  
Misc Info : G-MBTX\_S  
Vial Number: 17

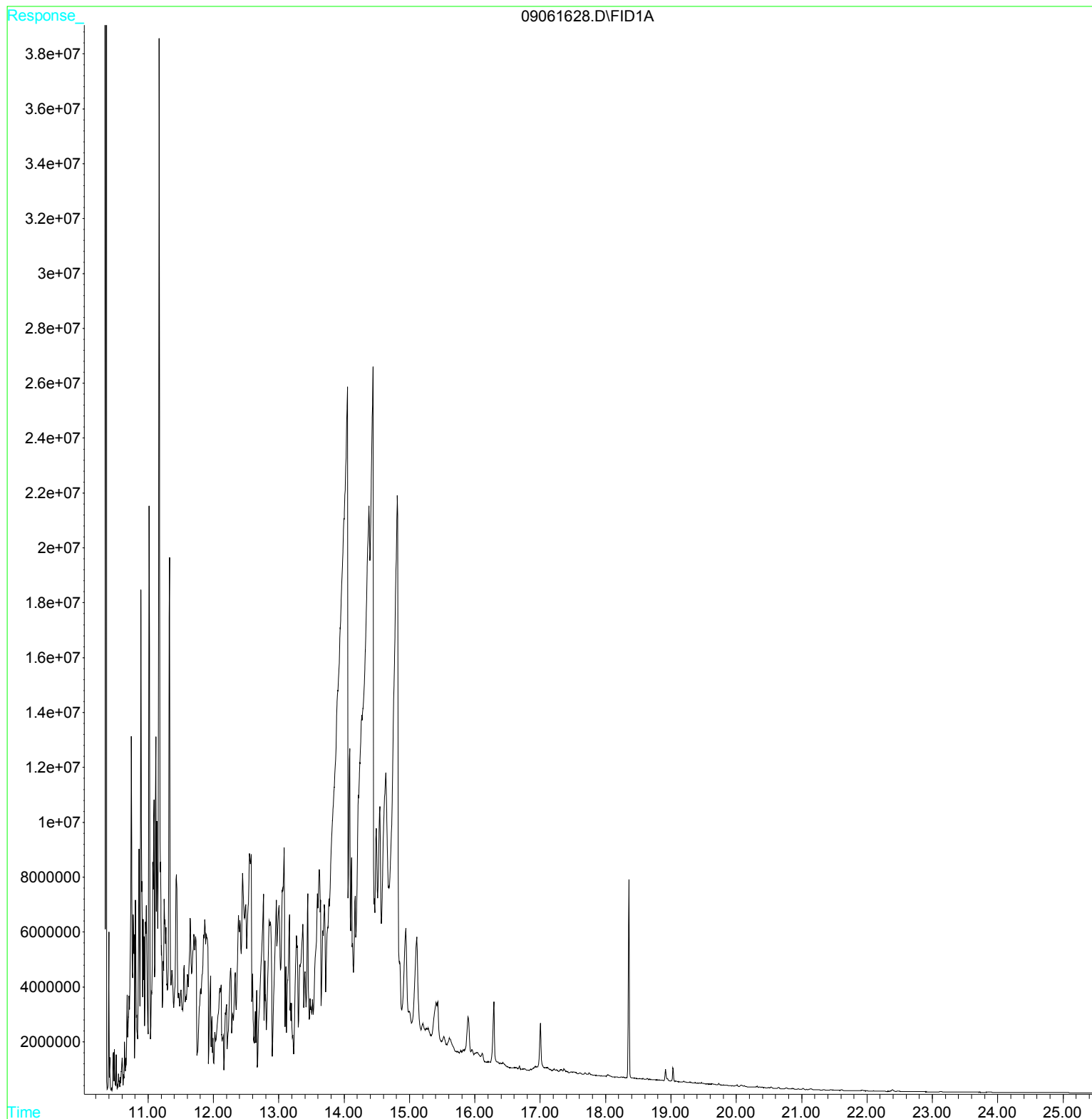


File : D:\HPCHEM\GC7\DATA\09081625.D  
Operator : IRINA  
Acquired : 9 Sep 2016 3:20 am using AcqMethod GMBTEXAA.M  
Instrument : GC-7  
Sample Name: 1609118-009A W  
Misc Info : G-MBTX\_W  
Vial Number: 25

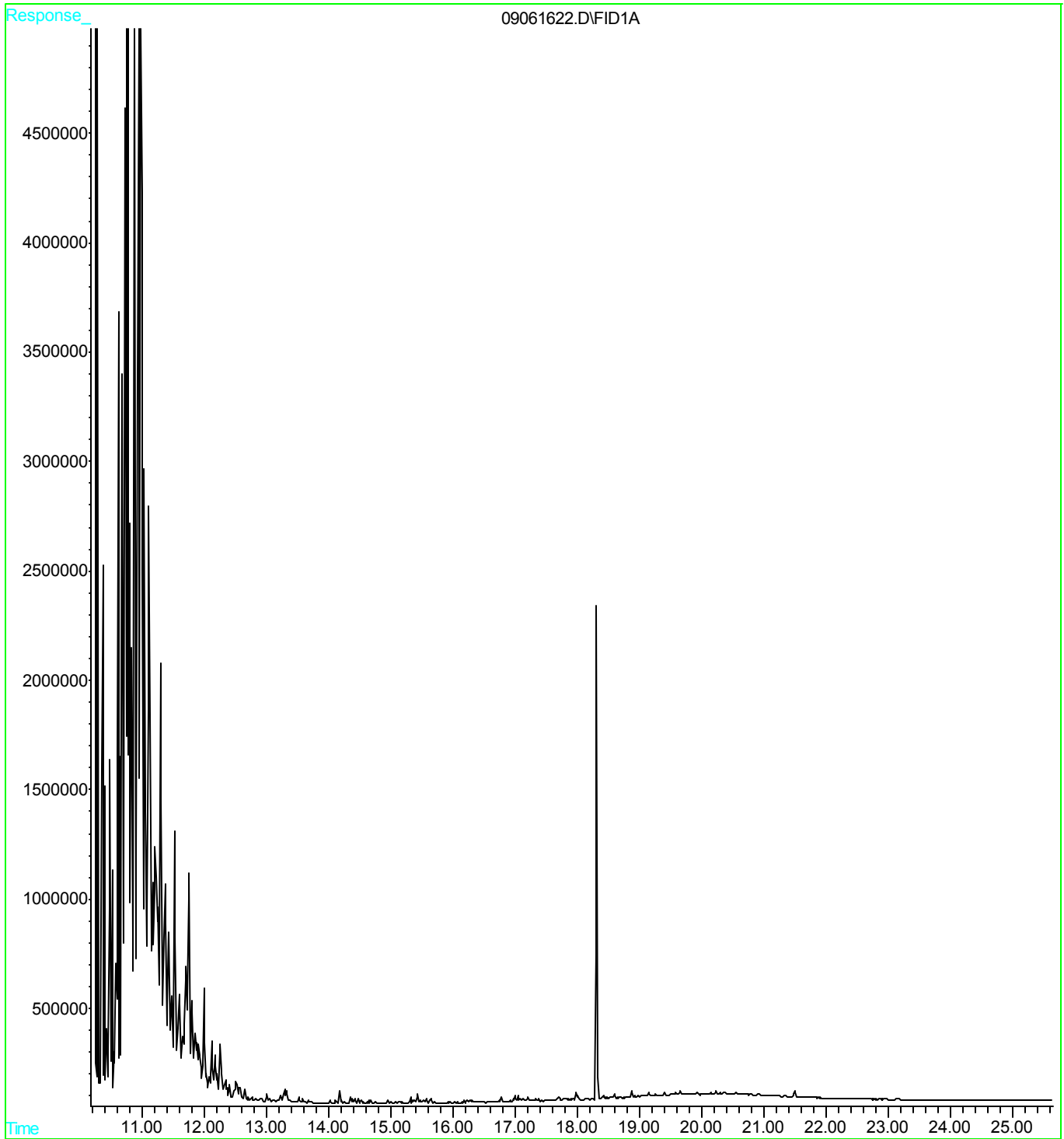




File : D:\HPCHEM\GC6\DATAA\09061628.D  
Operator : Toshiko  
Acquired : 6 Sep 2016 4:59 pm using AcqMethod GC6A\_A1.M  
Instrument : GC-6  
Sample Name: 1609118-009A W LV SHEEN  
Misc Info : TPH(DMO)LV\_W  
Vial Number: 14



File : D:\HPCHEM\GC11\DATAA\09061622.D  
Operator : Toshiko  
Acquired : 6 Sep 2016 2:35 pm using AcqMethod GC11A\_B1.M  
Instrument : GC-11  
Sample Name: 1609118-001A S +BO,HTO RR  
Misc Info : TPH  
Vial Number: 11




# **APPENDIX C**

## **UST Unauthorized Release Reports**

**(September 16, 2016)**

## UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE (LEAK) / CONTAMINATION SITE REPORT

EMERGENCY <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		HAS STATE OFFICE OF EMERGENCY SERVICES REPORT BEEN FILED? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		<b>FOR LOCAL AGENCY USE ONLY</b> I HEREBY CERTIFY THAT I AM A DESIGNATED GOVERNMENT EMPLOYEE AND THAT I HAVE REPORTED THIS INFORMATION TO LOCAL OFFICIALS PURSUANT TO SECTION 25180.7 OF THE HEALTH AND SAFETY CODE.	
REPORT DATE 9/16/2016		CASE #		SIGNED _____ DATE _____	
REPORTED BY	NAME OF INDIVIDUAL FILING REPORT Kevin Loeb		PHONE (510) 226-9944		SIGNATURE 
	REPRESENTING <input type="checkbox"/> LOCAL AGENCY <input type="checkbox"/> REGIONAL BOARD <input type="checkbox"/> OWNER/OPERATOR <input checked="" type="checkbox"/> OTHER (Consultant)		COMPANY OR AGENCY NAME Schutze & Associates, Inc.		
	ADDRESS 44358 S. Grimmer Blvd. Fremont CA 94538 <small>STREET CITY STATE ZIP</small>				
RESPONSIBLE PARTY	NAME Irene Trimble & Alan Dimen <input type="checkbox"/> Unknown		CONTACT PERSON Irene Trimble		PHONE (253) 252-8569
	ADDRESS 1647 International Blvd. Oakland CA 94606 <small>STREET CITY STATE ZIP</small>				
SITE LOCATION	FACILITY NAME (IF APPLICABLE) Warehouse		OPERATOR Alan Dimen (Owner)		PHONE (510) 206-0075
	ADDRESS 1647 International Blvd. Oakland Alameda 94606 <small>STREET CITY COUNTY ZIP</small>				
	CROSS STREET International Blvd and 17th Ave.				
IMPLEMENTING AGENCIES	LOCAL AGENCY AGENCY NAME Alameda County Department of Environmental Health			PHONE (510) 567-6737	
	REGIONAL BOARD			PHONE ( )	
SUBSTANCES INVOLVED	(1) NAME Stoddard solvent/gasoline		QUANTITY LOST (GALLONS) <input checked="" type="checkbox"/> Unknown		
	(2)		<input type="checkbox"/> Unknown		
DISCOVERY/ABATEMENT	DATE DISCOVERED 08/01/2016	HOW DISCOVERED <input type="checkbox"/> Tank Test <input checked="" type="checkbox"/> Tank Removal <input type="checkbox"/> Nuisance Conditions <input type="checkbox"/> Inventory Control <input type="checkbox"/> Subsurface Monitoring <input type="checkbox"/> Other			
	DATE DISCHARGE BEGAN <input checked="" type="checkbox"/> UNKNOWN		METHOD USED TO STOP DISCHARGE (CHECK ALL THAT APPLY) <input checked="" type="checkbox"/> Remove Contents <input type="checkbox"/> Close Tank <input type="checkbox"/> Repair Tank <input type="checkbox"/> Change Procedure <input type="checkbox"/> Replace Tank <input type="checkbox"/> Other <input type="checkbox"/> Repair Piping		
	HAS DISCHARGE BEEN STOPPED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, DATE 08/01/2016				
SOURCE/ CAUSE	SOURCE OF DISCHARGE <input checked="" type="checkbox"/> Tank Leak <input type="checkbox"/> Piping Leak <input type="checkbox"/> Unknown <input type="checkbox"/> Other		CAUSE(S) <input type="checkbox"/> Overfill <input checked="" type="checkbox"/> Corrosion <input checked="" type="checkbox"/> Rupture/Failure <input type="checkbox"/> Unknown <input type="checkbox"/> Spill <input type="checkbox"/> Other		
	CHECK ONE ONLY <input checked="" type="checkbox"/> Undetermined <input type="checkbox"/> Soil Only <input type="checkbox"/> Groundwater <input type="checkbox"/> Drinking Water – (CHECK ONLY IF WATER WELLS HAVE ACTUALLY BEEN AFFECTED)				
CURRENT STATUS	CHECK ONE ONLY <input type="checkbox"/> No Action Taken <input type="checkbox"/> Case Closed (Cleanup Completed or Unnecessary) <input type="checkbox"/> Leak Being Confirmed <input type="checkbox"/> Pollution Characterization <input type="checkbox"/> Remediation Plan <input type="checkbox"/> Post Cleanup Monitoring in Progress <input type="checkbox"/> Preliminary Site Assessment Workplan Submitted <input type="checkbox"/> Cleanup Underway <input type="checkbox"/> Preliminary Site Assessment Underway				
	CHECK APPROPRIATE ACTION(S) <input type="checkbox"/> Cap Site (CD) <input type="checkbox"/> Excavate & Treat (ET) <input type="checkbox"/> Treatment At Hookup (HU) <input type="checkbox"/> Other <input type="checkbox"/> Contamination Barrier (CB) <input type="checkbox"/> No Action Required (NA) <input type="checkbox"/> Enhanced Bio Degradation (IT) <input type="checkbox"/> Vacuum Extract (VE) <input type="checkbox"/> Remove Free Product (FP) <input type="checkbox"/> Replace Supply (RS) <input type="checkbox"/> Excavate & Dispose (ED) <input type="checkbox"/> Pump & Treat Groundwater (GT) <input type="checkbox"/> Vent Soil (VS)				
COMMENTS	Remedial actions will be determined once a case is opened.				
	(Empty space for additional comments)				



## UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE (LEAK) / CONTAMINATION SITE REPORT

EMERGENCY <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	HAS STATE OFFICE OF EMERGENCY SERVICES REPORT BEEN FILED? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>FOR LOCAL AGENCY USE ONLY</b> I HEREBY CERTIFY THAT I AM A DESIGNATED GOVERNMENT EMPLOYEE AND THAT I HAVE REPORTED THIS INFORMATION TO LOCAL OFFICIALS PURSUANT TO SECTION 25180.7 OF THE HEALTH AND SAFETY CODE.
REPORT DATE 9/16/2016	CASE #	SIGNED _____ DATE _____

REPORTED BY	NAME OF INDIVIDUAL FILING REPORT Kevin Loeb	PHONE (510) 226-9944	SIGNATURE 	
	REPRESENTING <input type="checkbox"/> LOCAL AGENCY <input type="checkbox"/> REGIONAL BOARD <input type="checkbox"/> OWNER/OPERATOR <input checked="" type="checkbox"/> OTHER (Consultant)	COMPANY OR AGENCY NAME Schutze & Associates, Inc.		
	ADDRESS 44358 S. Grimmer Blvd. Fremont CA 94538 <small style="display: flex; justify-content: space-between;">STREET CITY STATE ZIP</small>			

RESPONSIBLE PARTY	NAME Irene Trimble & Alan Dimen <input type="checkbox"/> Unknown	CONTACT PERSON Irene Trimble	PHONE (253) 252-8569
	ADDRESS 1647 International Blvd. Oakland CA 94606 <small style="display: flex; justify-content: space-between;">STREET CITY STATE ZIP</small>		

SITE LOCATION	FACILITY NAME (IF APPLICABLE) Warehouse	OPERATOR Alan Dimen (Owner)	PHONE (510) 206-0075	
	ADDRESS 1647 International Blvd. Oakland Alameda 94606 <small style="display: flex; justify-content: space-between;">STREET CITY COUNTY ZIP</small>			
	CROSS STREET International Blvd and 17th Ave.			

IMPLEMENTING AGENCIES	LOCAL AGENCY AGENCY NAME Alameda County Department of Environmental Health	PHONE (510) 567-6737
	REGIONAL BOARD	PHONE ( )

SUBSTANCES INVOLVED	(1) NAME QUANTITY LOST (GALLONS) Stoddard solvent/gasoline/diesel? <input checked="" type="checkbox"/> Unknown
	(2) <input type="checkbox"/> Unknown

DISCOVERY/ABATEMENT	DATE DISCOVERED 8/31/2016	HOW DISCOVERED <input type="checkbox"/> Tank Test <input type="checkbox"/> Tank Removal <input type="checkbox"/> Nuisance Conditions <input type="checkbox"/> Inventory Control <input type="checkbox"/> Subsurface Monitoring <input checked="" type="checkbox"/> Other (Test Pits)		
	DATE DISCHARGE BEGAN <input checked="" type="checkbox"/> UNKNOWN	METHOD USED TO STOP DISCHARGE (CHECK ALL THAT APPLY) <input checked="" type="checkbox"/> Remove Contents <input type="checkbox"/> Close Tank <input type="checkbox"/> Repair Tank <input type="checkbox"/> Change Procedure <input type="checkbox"/> Replace Tank <input checked="" type="checkbox"/> Other (Removed Piping) <input type="checkbox"/> Repair Piping		
	HAS DISCHARGE BEEN STOPPED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, DATE 8/31/2016			

SOURCE/ CAUSE	SOURCE OF DISCHARGE <input type="checkbox"/> Tank Leak <input checked="" type="checkbox"/> Piping Leak <input type="checkbox"/> Unknown <input type="checkbox"/> Other	CAUSE(S) <input type="checkbox"/> Overfill <input type="checkbox"/> Corrosion <input checked="" type="checkbox"/> Rupture/Failure <input type="checkbox"/> Unknown <input type="checkbox"/> Spill <input type="checkbox"/> Other
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CASE TYPE	CHECK ONE ONLY <input checked="" type="checkbox"/> Undetermined <input type="checkbox"/> Soil Only <input type="checkbox"/> Groundwater <input type="checkbox"/> Drinking Water – (CHECK ONLY IF WATER WELLS HAVE ACTUALLY BEEN AFFECTED)
-----------	--

CURRENT STATUS	CHECK ONE ONLY <input type="checkbox"/> No Action Taken <input type="checkbox"/> Case Closed (Cleanup Completed or Unnecessary) <input type="checkbox"/> Leak Being Confirmed <input type="checkbox"/> Pollution Characterization <input type="checkbox"/> Remediation Plan <input type="checkbox"/> Post Cleanup Monitoring in Progress <input type="checkbox"/> Preliminary Site Assessment Workplan Submitted <input type="checkbox"/> Cleanup Underway <input type="checkbox"/> Preliminary Site Assessment Underway
----------------	---

REMEDIAL ACTION	CHECK APPROPRIATE ACTION(S) <input type="checkbox"/> Cap Site (CD) <input type="checkbox"/> Excavate & Treat (ET) <input type="checkbox"/> Treatment At Hookup (HU) <input type="checkbox"/> Other <input type="checkbox"/> Contamination Barrier (CB) <input type="checkbox"/> No Action Required (NA) <input type="checkbox"/> Enhanced Bio Degradation (IT) <input type="checkbox"/> Vacuum Extract (VE) <input type="checkbox"/> Remove Free Product (FP) <input type="checkbox"/> Replace Supply (RS) <input type="checkbox"/> Excavate & Dispose (ED) <input type="checkbox"/> Pump & Treat Groundwater (GT) <input type="checkbox"/> Vent Soil (VS)
-----------------	--

COMMENTS	Remedial actions will be determined once a case is opened.
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## UNDERGROUND STORAGE TANK UNAUTHORIZED RELEASE (LEAK) / CONTAMINATION SITE REPORT

EMERGENCY <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	HAS STATE OFFICE OF EMERGENCY SERVICES REPORT BEEN FILED? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<b>FOR LOCAL AGENCY USE ONLY</b> I HEREBY CERTIFY THAT I AM A DESIGNATED GOVERNMENT EMPLOYEE AND THAT I HAVE REPORTED THIS INFORMATION TO LOCAL OFFICIALS PURSUANT TO SECTION 25180.7 OF THE HEALTH AND SAFETY CODE.
REPORT DATE 9/16/2016	CASE #	SIGNED _____ DATE _____

REPORTED BY	NAME OF INDIVIDUAL FILING REPORT Kevin Loeb	PHONE (510) 226-9944	SIGNATURE 	
	REPRESENTING <input type="checkbox"/> LOCAL AGENCY <input type="checkbox"/> REGIONAL BOARD <input type="checkbox"/> OWNER/OPERATOR <input checked="" type="checkbox"/> OTHER (Consultant)	COMPANY OR AGENCY NAME Schutze & Associates, Inc.		
	ADDRESS 44358 S. Grimmer Blvd. Fremont CA 94538 <small style="display: flex; justify-content: space-between;"><span>STREET</span><span>CITY</span><span>STATE</span><span>ZIP</span></small>			

RESPONSIBLE PARTY	NAME Irene Trimble & Alan Dimen <input type="checkbox"/> Unknown	CONTACT PERSON Irene Trimble	PHONE (253) 252-8569
	ADDRESS 1647 International Blvd. Oakland CA 94606 <small style="display: flex; justify-content: space-between;"><span>STREET</span><span>CITY</span><span>STATE</span><span>ZIP</span></small>		

SITE LOCATION	FACILITY NAME (IF APPLICABLE) Warehouse	OPERATOR Alan Dimen (Owner)	PHONE (510) 206-0075	
	ADDRESS 1647 International Blvd. Oakland Alameda 94606 <small style="display: flex; justify-content: space-between;"><span>STREET</span><span>CITY</span><span>COUNTY</span><span>ZIP</span></small>			
	CROSS STREET International Blvd and 17th Ave.			

IMPLEMENTING AGENCIES	LOCAL AGENCY AGENCY NAME Alameda County Department of Environmental Health	PHONE (510) 567-6737
	REGIONAL BOARD	PHONE ( )

SUBSTANCES INVOLVED	(1) NAME Stoddard solvent/gasoline/diesel	QUANTITY LOST (GALLONS) <input checked="" type="checkbox"/> Unknown
	(2)	<input type="checkbox"/> Unknown

DISCOVERY/ABATEMENT	DATE DISCOVERED 8/31/2016	HOW DISCOVERED <input type="checkbox"/> Tank Test <input checked="" type="checkbox"/> Tank Removal <input type="checkbox"/> Nuisance Conditions <input type="checkbox"/> Inventory Control <input type="checkbox"/> Subsurface Monitoring <input checked="" type="checkbox"/> Other (Test Pits)		
	DATE DISCHARGE BEGAN <input checked="" type="checkbox"/> UNKNOWN	METHOD USED TO STOP DISCHARGE (CHECK ALL THAT APPLY) <input checked="" type="checkbox"/> Remove Contents <input type="checkbox"/> Close Tank <input type="checkbox"/> Repair Tank <input type="checkbox"/> Change Procedure <input type="checkbox"/> Replace Tank <input checked="" type="checkbox"/> Other (Removed Piping) <input type="checkbox"/> Repair Piping		
	HAS DISCHARGE BEEN STOPPED? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO IF YES, DATE 8/31/2016			

SOURCE/ CAUSE	SOURCE OF DISCHARGE <input type="checkbox"/> Tank Leak <input checked="" type="checkbox"/> Piping Leak <input type="checkbox"/> Unknown <input type="checkbox"/> Other	CAUSE(S) <input type="checkbox"/> Overfill <input type="checkbox"/> Corrosion <input checked="" type="checkbox"/> Rupture/Failure <input type="checkbox"/> Unknown <input type="checkbox"/> Spill <input type="checkbox"/> Other
---------------	---	---

CASE TYPE	CHECK ONE ONLY <input checked="" type="checkbox"/> Undetermined <input type="checkbox"/> Soil Only <input type="checkbox"/> Groundwater <input type="checkbox"/> Drinking Water – (CHECK ONLY IF WATER WELLS HAVE ACTUALLY BEEN AFFECTED)
-----------	--

CURRENT STATUS	CHECK ONE ONLY <input type="checkbox"/> No Action Taken <input type="checkbox"/> Case Closed (Cleanup Completed or Unnecessary) <input type="checkbox"/> Leak Being Confirmed <input type="checkbox"/> Pollution Characterization <input type="checkbox"/> Remediation Plan <input type="checkbox"/> Post Cleanup Monitoring in Progress <input type="checkbox"/> Preliminary Site Assessment Workplan Submitted <input type="checkbox"/> Cleanup Underway <input type="checkbox"/> Preliminary Site Assessment Underway
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REMEDIAL ACTION	CHECK APPROPRIATE ACTION(S) <input type="checkbox"/> Cap Site (CD) <input type="checkbox"/> Excavate & Treat (ET) <input type="checkbox"/> Treatment At Hookup (HU) <input type="checkbox"/> Other <input type="checkbox"/> Contamination Barrier (CB) <input type="checkbox"/> No Action Required (NA) <input type="checkbox"/> Enhanced Bio Degradation (IT) <input type="checkbox"/> Vacuum Extract (VE) <input type="checkbox"/> Remove Free Product (FP) <input type="checkbox"/> Replace Supply (RS) <input type="checkbox"/> Excavate & Dispose (ED) <input type="checkbox"/> Pump & Treat Groundwater (GT) <input type="checkbox"/> Vent Soil (VS)
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COMMENTS	Remedial actions will be determined once a case is opened.
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# **APPENDIX D**

## **Hazardous Waste Tank Closure Certification Forms**

**UNIFIED PROGRAM CONSOLIDATED FORM  
HAZARDOUS WASTE  
HAZARDOUS WASTE TANK CLOSURE CERTIFICATION**

Page \_\_\_\_\_ of \_\_\_\_\_

**I. FACILITY IDENTIFICATION**

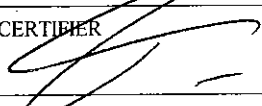
BUSINESS NAME (Same as FACILITY NAME or DBA - Doing Business As) <span style="float:right">3.</span> Warehouse	FACILITY ID# <span style="float:right">1.</span> _____
TANK OWNER NAME <span style="float:right">740.</span> Alan Dimer and Irene Trimble	
TANK OWNER ADDRESS <span style="float:right">741.</span> 1647 International Blvd	
TANK OWNER CITY <span style="float:right">742.</span> Oakland	STATE <span style="float:right">743.</span> CA
ZIP CODE <span style="float:right">744.</span> 94606	

**II. TANK CLOSURE INFORMATION**

TANK INTERIOR ATMOSPHERE READINGS	Tank ID # (Attach additional copies of this page for more than three tanks)	Concentration of Flammable Vapor			Concentration of Oxygen		
		Top	Center	Bottom	Top	Center	Bottom
1	745.	746a.	N/A 746b.	746c.	747a.	0.5% 747b.	747c.
2	748.	749a.	749b.	749c.	750a.	750b.	750c.
3	751.	752a.	752b.	752c.	753a.	753b.	753c.

**III. CERTIFICATION**

On examination of the tank, I certify the tank is visually free from product, sludge, scale (thin, flaky residual of tank contents), rinseate and debris. I further certify that the information provided herein is true and accurate to the best of my knowledge.

SIGNATURE OF CERTIFIER <span style="float:right">754.</span> 	STATUS OR AFFILIATION OF CERTIFYING PERSON <span style="float:right">760.</span> Certifier is a representative of the CUPA, authorized agency, or LIA: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
NAME OF CERTIFIER (Print) <span style="float:right">755.</span> Todd Hurley	Name of CUPA, authorized agency, or LIA: <span style="float:right">761.</span> N/A
TITLE OF CERTIFIER <span style="float:right">756.</span> V.P.	If certifier is other than CUPA / LIA check appropriate box below: <span style="float:right">762.</span>
ADDRESS <span style="float:right">757.</span> 5300 Boulder CA #106	<input type="checkbox"/> a. Certified Industrial Hygienist (CIH) <input type="checkbox"/> b. Certified Safety Professional (CSP) <input type="checkbox"/> c. Certified Marine Chemist (CMC) <input type="checkbox"/> d. Registered Environmental Health Specialist (REHS) <input type="checkbox"/> e. Professional Engineer (PE) <input type="checkbox"/> f. Class II Registered Environmental Assessor <input type="checkbox"/> g. Contractors' State License Board licensed contractor (with hazardous substance removal certification)
CITY <span style="float:right">758.</span> Pleasanton CA 94566	
PHONE <span style="float:right">759.</span> 925-727-9413	CERTIFICATION TIME 3pm

TANK PREVIOUSLY HELD FLAMMABLE OR COMBUSTIBLE MATERIALS 763.  
 (If yes, the tank interior atmosphere shall be re-checked with a combustible gas indicator prior to work being conducted on the tank.)  Yes     No

CERTIFIER'S TANK MANAGEMENT INSTRUCTIONS FOR SCRAP DEALER, DISPOSAL FACILITY, ETC: 764.

A copy of this certificate shall accompany the tank to the recycling/disposal facility and be provided to the agency overseeing tank closure (i.e. CUPA or other authorized local agency); the owner and/or operator of the tank system; and the tank removal contractor.



**UNIFIED PROGRAM CONSOLIDATED FORM  
HAZARDOUS WASTE  
HAZARDOUS WASTE TANK CLOSURE CERTIFICATION**

Page \_\_\_\_\_ of \_\_\_\_\_

**I. FACILITY IDENTIFICATION**

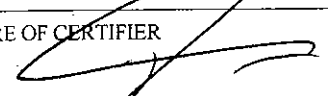
BUSINESS NAME (Same as FACILITY NAME or DBA - Doing Business As) <sup>3.</sup>	FACILITY ID# <sup>1.</sup>
Warehouse	
TANK OWNER NAME <sup>740.</sup>	
Alan Dimes and Irene Trimble	
TANK OWNER ADDRESS <sup>741.</sup>	
1647 International Blvd	
TANK OWNER CITY <sup>742.</sup>	STATE <sup>743.</sup> ZIP CODE <sup>744.</sup>
Oakland	CA 94606

**II. TANK CLOSURE INFORMATION**

TANK INTERIOR ATMOSPHERE READINGS	Tank ID # (Attach additional copies of this page for more than three tanks)	Concentration of Flammable Vapor			Concentration of Oxygen		
		Top	Center	Bottom	Top	Center	Bottom
1	745.	746a.	N/A 746b.	746c.	747a.	0.5% 747b.	747c.
2	748.	749a.	749b.	749c.	750a.	750b.	750c.
3	751.	752a.	752b.	752c.	753a.	753b.	753c.

**III. CERTIFICATION**

On examination of the tank, I certify the tank is visually free from product, sludge, scale (thin, flaky residual of tank contents), rinseate and debris. I further certify that the information provided herein is true and accurate to the best of my knowledge.

SIGNATURE OF CERTIFIER <sup>754.</sup>	STATUS OR AFFILIATION OF CERTIFYING PERSON <sup>760.</sup>
	Certifier is a representative of the CUPA, authorized agency, or LIA: <sup>761.</sup>
NAME OF CERTIFIER (Print)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
TITLE OF CERTIFIER <sup>755.</sup>	Name of CUPA, authorized agency, or LIA: <sup>762.</sup>
V.P.	N/A
ADDRESS <sup>756.</sup>	If certifier is other than CUPA / LIA check appropriate box below:
530 Boulder Ct #106	<input type="checkbox"/> a. Certified Industrial Hygienist (CIH)
CITY <sup>757.</sup>	<input type="checkbox"/> b. Certified Safety Professional (CSP)
Pleasanton CA 94566	<input type="checkbox"/> c. Certified Marine Chemist (CMC)
PHONE <sup>758.</sup>	<input type="checkbox"/> d. Registered Environmental Health Specialist (REHS)
	<input type="checkbox"/> e. Professional Engineer (PE)
DATE <sup>759.</sup>	<input type="checkbox"/> f. Class II Registered Environmental Assessor
8/17/16	<input type="checkbox"/> g. Contractors' State License Board licensed contractor (with hazardous substance removal certification)
CERTIFICATION TIME	
3pm	

TANK PREVIOUSLY HELD FLAMMABLE OR COMBUSTIBLE MATERIALS <sup>763.</sup>

(If yes, the tank interior atmosphere shall be re-checked with a combustible gas indicator prior to work being conducted on the tank.)  Yes  No

CERTIFIER'S TANK MANAGEMENT INSTRUCTIONS FOR SCRAP DEALER, DISPOSAL FACILITY, ETC: <sup>764.</sup>

A copy of this certificate shall accompany the tank to the recycling/disposal facility and be provided to the agency overseeing tank closure (i.e. CUPA or other authorized local agency); the owner and/or operator of the tank system; and the tank removal contractor.

Tank #5

# UNIFIED PROGRAM CONSOLIDATED FORM HAZARDOUS WASTE HAZARDOUS WASTE TANK CLOSURE CERTIFICATION

Page 1 of 1

## I. FACILITY IDENTIFICATION

BUSINESS NAME (Same as FACILITY NAME or DBA - Doing Business As) <sup>3</sup> Warehouse FACILITY ID#

TANK OWNER NAME  
Alan Dima & Irene Trimble

TANK OWNER ADDRESS  
1647 International Blvd

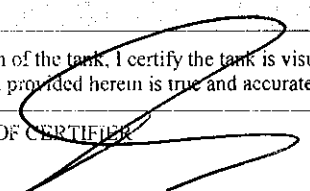
TANK OWNER CITY Oakland <sup>742</sup> STATE CA <sup>743</sup> ZIP CODE 94606 <sup>744</sup>

## II. TANK CLOSURE INFORMATION

TANK INTERIOR ATMOSPHERE READINGS	Tank ID # (Attach additional copies of this page for more than three tanks)	Concentration of Flammable Vapor			Concentration of Oxygen		
		Top	Center	Bottom	Top	Center	Bottom
1	745.	746a.	LEL=0.0% <sup>746b.</sup>	746c.	747a.	0.8% <sup>747b.</sup>	747c.
2	748.	749a.	749b.	749c.	750a.	Ins. &	750c.
3	751.	752a.	752b.	752c.	753a.	753b.	753c.

## III. CERTIFICATION

On examination of the tank, I certify the tank is visually free from product, sludge, scale (thin, flaky residual of tank contents), rinseate and debris. I further certify that the information provided herein is true and accurate to the best of my knowledge.

SIGNATURE OF CERTIFIER  STATUS OR AFFILIATION OF CERTIFYING PERSON  
Certifier is a representative of the CUPA, authorized agency, or LIA: <sup>760</sup>

NAME OF CERTIFIER (Print) <sup>754</sup> Todd Hurley  Yes  No

TITLE OF CERTIFIER <sup>755</sup> U.P. Name of CUPA, authorized agency, or LIA: <sup>761</sup>

ADDRESS <sup>756</sup> 530 Boulder Ct #106 N/A <sup>762</sup>

CITY <sup>757</sup> Pleasanton CA 94566 If certifier is other than CUPA / LIA check appropriate box below:

PHONE <sup>758</sup> 925-727-9413  a. Certified Industrial Hygienist (CIH)

DATE <sup>759</sup> 9/2/16 CERTIFICATION TIME 2:30 pm  b. Certified Safety Professional (CSP)

c. Certified Marine Chemist (CMC)

d. Registered Environmental Health Specialist (REHS)

e. Professional Engineer (PE)

f. Class II Registered Environmental Assessor

g. Contractors' State License Board licensed contractor (with hazardous substance removal certification)

TANK PREVIOUSLY HELD FLAMMABLE OR COMBUSTIBLE MATERIALS <sup>763</sup>

(If yes, the tank interior atmosphere shall be re-checked with a combustible gas indicator prior to work being conducted on the tank.)  Yes  No

CERTIFIER'S TANK MANAGEMENT INSTRUCTIONS FOR SCRAP DEALER, DISPOSAL FACILITY, ETC.: <sup>764</sup>

A copy of this certificate shall accompany the tank to the recycling/disposal facility and be provided to the agency overseeing tank closure (i.e. CUPA or other authorized local agency); the owner and/or operator of the tank system; and the tank removal contractor.

# **APPENDIX E**

## **Waste Disposal Documentation**

WEIGHMASTER CERTIFICATE Number E-321845 Original

Date/Time: 08/02/16 02:46:22 PM



Dealers in Ferrous and Non-Ferrous Metals

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

WEIGHMASTER:  
Alco Iron & Metal Co.  
1091 Doolittle Dr.  
San Leandro, CA 94577

Delivered To: (Buyer)  
Alco Iron & Metal Co

Carrier: SELLER  
Truck ID:  
License: WT-T6  
Trailers: N\A N\A

Weighed For: (Seller)  
WESTERN ABATEMENT / PLEASAN  
530 BOULDER CT # 106  
PLEASANTON, CA 94566

Commodity: 1-UNPREP

8,880 LB Gross E 08/02/16 02:31:12 PM  
7,960 LB Tare E 08/02/16 02:46:22 PM  
920 LB Net

Jose Hernandez

Deputy SIGNATURE

Driver SELLER 1

STEEL RECEIVED  
ON ACCOUNT  
2016

WA-16-029-004 TANK # 3

BILL OF SALE

I hereby state that I am the lawful owner of the material described herein, that have a right to sell same and that for payment received in full, hereby acknowledge I sell and convey title of same to Alco Iron & Metal Co.

HOLD HARMLESS AGREEMENT:

Seller will indemnify and hold buyer harmless from damages, demands, and liabilities, including reasonable attorney's fees resulting from the breach of any warranty hereunder and driver agrees to be responsible for damage to vehicle during unloading.  
I represent and warrant that this material does not contain a hazardous substance as defined by Federal or State Law, and I agree to indemnify Alco Iron & Metal Co. against all claims

WEIGHMASTER CERTIFICATE Number E-321845 Customer

Date/Time: 08/02/16 02:46:22 PM



Dealers in Ferrous and Non-Ferrous Metals

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

WEIGHMASTER:  
Alco Iron & Metal Co.  
1491 Doolittle Dr.  
San Leandro, CA 94577

Delivered To: (Buyer)  
Alco Iron & Metal Co

Weight: SELLER  
Tare ID:  
License: WT-T6  
Trailers: N\A N\A

Weighed For: (Seller)  
WESTERN ABATEMENT / PLEASAN  
530 BOULDER CT # 106  
PLEASANTON, CA 94566

8,880 LB Gross E 08/02/16 02:31:12 PM  
7,960 LB Tare E 08/02/16 02:46:22 PM  
920 LB Net

Jose Hernandez

Deputy SIGNATURE

Driver SELLER 1

STEEL RECEIVED  
ON ACCOUNT  
2016

WA-16-029-001

Tank # 4

BILL OF SALE

I hereby state that I am the lawful owner of the material described herein, that have a right to sell same and that for payment received in full, hereby acknowledge I sell and convey title of same to Alco Iron & Metal Co.

HOLD HARMLESS AGREEMENT:

Seller will indemnify and hold buyer harmless from damages, demands, and liabilities, including reasonable attorney's fees resulting from the breach of any warranty hereunder and driver agrees to be responsible for damage to vehicle during unloading. I represent and warrant that this material does not contain a hazardous substance as defined by Federal or State Law, and I agree to indemnify Alco Iron & Metal Co. against all claims



**WEIGHMASTER CERTIFICATE Number E-325677 Original**

Date/Time: 09/02/16 03:42:37 PM



Dealers in Ferrous and Non-Ferrous Metals

THIS IS TO CERTIFY that the following described commodity was weighed, measured, or counted by a weighmaster, whose signature is on this certificate, who is a recognized authority of accuracy, as prescribed by Chapter 7 (commencing with Section 12700) of Division 5 of the California Business and Professions Code, administered by the Division of Measurement Standards of the California Department of Food and Agriculture.

**WEIGHMASTER:**

Alco Iron & Metal Co.  
1091 Doolittle Dr.  
San Leandro, CA 94577

Delivered To: (Buyer)  
**Alco Iron & Metal Co**

Carrier: **SELLER**  
Truck ID:  
License: **5Y46442**  
Trailers: **N\A N\A**

Weighed For: (Seller)  
**WESTERN ABATEMENT / PLEASAN**  
**530 BOULDER CT # 106**  
**PLEASANTON, CA 94566**

Commodity: **1-UNPREP**

8,480 LB Gross E 09/02/16 03:29:58 PM  
8,140 LB Tare E 09/02/16 03:42:25 PM  
340 LB Net

**STEEL RECEIVED**  
**ON ACCOUNT**  
**2016**

**Jose Hernandez**

Deputy SIGNATURE

Driver SELLER 1

Notes:

[Empty box for notes]

**BILL OF SALE**

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