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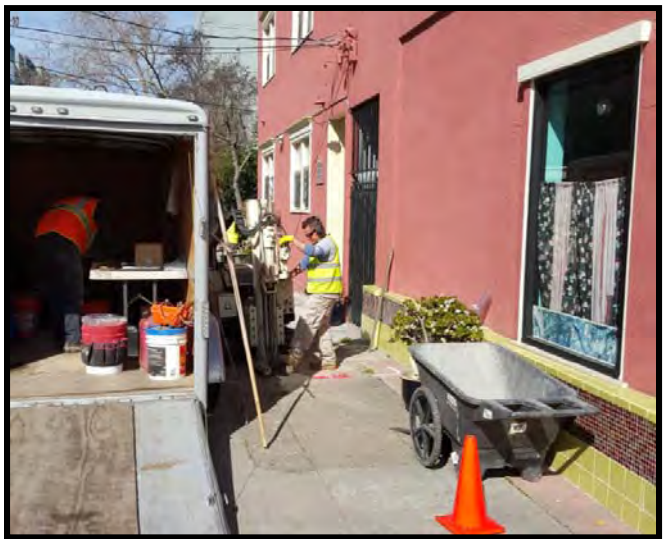
SOIL AND GROUNDWATER INVESTIGATION REPORT and EVALUATION FOR LOW-THREAT UST CASE CLOSURE

Former Heating Oil Tank Site
1607 2nd Avenue
Oakland, Alameda County, California



Prepared for:

1607 2nd Avenue, LLC
Attn: Mr. Harry T. Tung
4096 Piedmont Avenue, #150
Oakland, CA 94611

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

Prepared by:

SCHUTZE & Associates, Inc.
44358 South Grimmer Boulevard
Fremont, CA 94538

SCS539.1
March 9, 2016

SCHUTZE & ASSOCIATES, INC

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

March 9, 2016
Project No. SCS539.1

GeoTracker Global ID T10000006756
ACEH Fuel Leak Case No. RO0003170

1607 2nd Avenue, LLC
Attn: Mr. Harry Tung

Reference: **Former Heating Oil Tank Site**
1607 2nd Avenue
Oakland, Alameda County, California

Subject: **Perjury Statement for Subsurface Investigation Report**

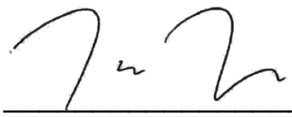
To Alameda County Environmental Health:

PERJURY STATEMENT

I declare, under penalty of perjury, that I have read the below-referenced document and the information and/or recommendations contained in this document is true and correct to the best of my knowledge:

- SCHUTZE & Associates, Inc., *Soil and Groundwater Investigation Report and Evaluation for Low-Threat Underground Storage Tank Case Closure, Former Heating Oil Tank Site, 1607 2nd Avenue, Oakland, Alameda County, California*, dated March 1, 2016.

Signed,



RP Signature

Harry T. Tung

RP Printed Name

3/9/2016

Date

SCHUTZE & ASSOCIATES, INC

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Reference: Former Heating Oil Tank Site
1607 2nd Avenue
Oakland, Alameda County, California

Subject: Soil and Groundwater Investigation Report and
Evaluation for Low-Threat Underground Storage Tank Case Closure

Dear Mr. Tung and Mr. Nowell:

SCHUTZE & Associates, Inc. has completed a Soil and Groundwater Investigation at the above-referenced property (subject site). The purpose of the work was to further delineate the horizontal and vertical extent of potential hydrocarbon contamination in the soil and groundwater beneath the subject site, with the goal of achieving low-threat case closure for the site.

The following Work Plan for the project was submitted to Alameda County Environmental Health (ACEH) by SCHUTZE & Associates, Inc.:

- *Work Plan for Subsurface Investigation, Apartment Building and Former Heating Oil Tank Site, 1607 2nd Avenue, Oakland, Alameda County, California*, dated August 27, 2015.

The August 27, 2015 Work Plan was approved by the ACEH, with technical comments, in a communication dated September 25, 2015.[1] The work was supervised by Mr. Jan

[1] Alameda County Environmental Health, *Work Plan Authorization; Fuel Leak Case No. RO0003170 and GeoTracker Global ID T10000006756, Second Avenue UST, 1607 2nd Avenue, Oakland, CA 95606*, September 25, 2015

Schutze, a California Professional Geologist (P.G.), and was conducted in accordance with the scope and limitations of ASTM[2] Practice E1903-97 (re-approved 2002).

A. BACKGROUND

A.1 Property Description

The subject site consists of an occupied apartment building on the northern corner of the intersection of 2nd Avenue and East 16th Street in Oakland, California. An underground storage tank (UST) containing heating oil was formerly located beneath the sidewalk along East 16th Street, approximately 3.5 ft southwest of the current apartment building. According to a UST Closure Report by Golden Gate Tank Removal, Inc. (GGTR), the tank had a capacity of approximately 1,500 gallons, measured approximately 10 ft in length by 5 ft in diameter and was constructed of single-wall bare steel.[3] The age of the tank is unknown. The subject site location is depicted on the attached Figure 1 and the approximate location of the former tank is shown on the attached Figures 2 and 3.

A.2 Tank Removal (November 2014)

The approximately 1,500-gallon UST and associated product piping were removed by GGTR on November 17-18, 2014 under the supervision of the Oakland Fire Department (OFD). The tank was found to be in poor condition with visible holes. Soil discoloration and hydrocarbon odors were observed in the tank overburden soil and in the soil beneath the tank (the bottom of the tank was measured at approximately 9 feet below ground surface [ft bgs]). GGTR performed remedial over-excavation of soil from the tank pit. The soil observed during the tank removal was predominantly clay. No groundwater was observed in the excavation during the removal activities (GGTR, 2014).

Under the direction of the OFD, one four-point composite soil sample was collected from the stockpiled overburden soil and two discrete soil samples were collected at two feet below the respective ends of the tank (approximately 11 ft bgs). All samples were analyzed for TPH[4] (C10-C28), BTEX[5] and naphthalene. The stockpile composite sample was also analyzed for lead. The laboratory results indicated that concentrations of up to 307 milligrams per kilogram (mg/kg) extractable-range petroleum hydrocarbons and 345 micrograms per kilogram (µg/kg) naphthalene were present in the stockpiled soil removed from the excavation.

Nearly 22 tons of impacted soil from the excavation were disposed of at the Keller Canyon Landfill Facility located in Pittsburg, California. According to the GGTR UST Closure Report, “The analytical results from the State Certified Laboratory following the tank removal and remedial activities were non-detect to insignificant and acceptable by the OFD; therefore, GGTR recommended no further action at the site.”

[2] American Society for Testing and Materials
[3] Golden Gate Tank Removal, Inc., *Underground Storage Tank Closure Report, 1607 2nd Avenue, Oakland, CA 94606*, December 11, 2014
[4] Total petroleum hydrocarbons
[5] Benzene, toluene, ethylbenzene and xylenes

An Underground Storage Tank Unauthorized Release (Leak)/Contamination Site Report was submitted on November 19, 2014, as required by the OFD Fire Prevention Bureau due to the holes observed in the tank. The subject site property was designated as a LUST[6] Cleanup Site (GeoTracker Global ID T10000006756) with the ACEH as the lead agency for the site (Fuel Leak Case No. RO0003170).

A.3 Review of Criteria for Low-Threat Closure (June 2015)

SCHUTZE & Associates, Inc. reviewed a Low-Threat Closure Policy (LTCP) Checklist for the subject site which is available on the GeoTracker website.[7] The June 26, 2015 Checklist, which compares the site with the State Water Board's LTCP criteria, concludes the following:

1) General Criteria: A conceptual site model (CSM) has not been developed; the CSM should include a potential receptor survey and a determination of the vertical and lateral extent of contamination.
2) Media Specific Criteria – Groundwater: Groundwater has not been tested and therefore these criteria are not met.
3) Media Specific Criteria – Petroleum Vapor Intrusion to Indoor Air: Soil vapors have not been tested and the presence and characteristics of a bioattenuation zone have not been established.
4) Media Specific Criteria – Direct Contact and Outdoor Air Exposure: Soil contamination in the upper ten ft bgs at the site has not been investigated.

SCHUTZE & Associates, Inc. took these criteria into consideration when conducting the current soil and groundwater investigation. The results of the investigation are discussed in relation to the LTCP media-specific criteria in Section D of this report.

B. SUBSURFACE CONDITIONS

B.1 Geology

The City of Oakland is located in California's Central Coast Ranges Geomorphic Province. This region is characterized by a series of parallel, northwesterly trending mountain chains and valleys consisting primarily of Mesozoic and Cenozoic sedimentary rocks.

A depression containing the San Francisco Bay separates the Peninsular Ranges from the East Bay Ranges and most of Oakland lies in this depression. The area of Oakland surrounding Lake Merritt is underlain by Pleistocene marine terrace deposits, dune sands (Merritt Sand) and artificial fill that have been laid down over estuarine mud (Bay Mud). The thickness of the Pleistocene sediments is estimated to be to approximately 50 ft bgs.

[6] Leaking underground storage tank
[7] http://geotracker.waterboards.ca.gov/profile_report.asp?global_id=T10000006756&cmd=ptcpreport&ltcp_id=131533

B.2 Soils

During the current drilling activities, the majority of soils observed between 0.5 and 22 ft bgs (maximum boring depth) consisted of moist, stiff sands, silts and clays. Laterally discontinuous gravelly and sandy horizons were observed at 0.5 to 8 ft bgs, 12 to 14 ft bgs and 19 to 21 ft bgs (see Appendix A, Boring Logs and Schematic Cross Section).

B.3 Surface Waters / Groundwater

Lake Merritt is located approximately 320 ft northwest and down-gradient from the former on-site UST location. Based on the location of Lake Merritt to the northwest, and the general site topography, groundwater is expected to flow to the northwest.

During the current investigation, groundwater was encountered in all borings except B2 between 12 and 21 ft bgs. Groundwater likely occurs in gravelly and sandy horizons, sometimes in confined conditions (Appendix A). The potentiometric water level was approximately 11.5 ft bgs.

Based on the overlying clay layer and semi-confined aquifer conditions observed at the property, it is unlikely that leakage from the former UST would have significantly impacted groundwater.

C. SOIL AND GROUNDWATER INVESTIGATION

*S*CHUTZE & Associates, Inc. performed a soil and groundwater investigation at the subject property on February 12, 2016. The work was conducted in accordance with the scope and limitations of ASTM Practice E1903-97 (re-approved 2002).

C.1 Pre-Field Activities

A drilling permit (#W2016-0061) was obtained from the Alameda County Public Works Agency (ACPWA). An excavation permit (#X1600253) and a sidewalk obstruction permit (#OB1600132) were obtained from the City of Oakland. Copies of all permits are included in Appendix B.

Prior to the work, SCHUTZE & Associates, Inc. marked the proposed boring locations with white spray paint. Subsequently, Underground Services Alert (USA) was contacted to clear the marked areas for subsurface utilities. The ticket number provided by USA for this procedure was # 0048751.

A site-specific Health and Safety Plan (H&SP) was prepared and implemented. A health and safety meeting was held before commencing fieldwork.

C.2 Drilling Methodology

Drilling was conducted on February 12, 2016 using a Geoprobe 54LT track-mounted direct-push rig. The first 2.5 ft of drilling at each boring location was hand-augered as a precaution. An Alameda County inspector was present during part of the field work.

Four 1.5-inch-diameter exploratory soil borings were advanced and soil and groundwater samples were collected from each boring except B2 (a groundwater

sample was not collected from B2 due to bore hole cave in). Boring B2 was intended to be advanced in native soil between the former tank pit and the street, but the boring was found to be located in backfilled material within the former UST pit. This made the planned drilling location of boring B1 (intended to be advanced within the tank pit) redundant. Boring B3 was advanced in native soil between the former UST pit and the concrete exterior basement wall of the apartment building. Borings B4 and B5 were advanced up-gradient and down-gradient, respectively, from the former UST pit. Boring depths were as follows: B2 was advanced to approximately 14 ft bgs; B3 was advanced to approximately 21.5 ft bgs; B4 was advanced to approximately 22 ft bgs (the maximum depth explored); and boring B5 was advanced to approximately 15 ft bgs.

The soil borings were backfilled to ground surface with Portland neat cement grout and the surface was finished to match the existing grade.

The boring locations are depicted on Figures 2 and 3; the soil boring logs and a schematic cross section are attached as Appendix A.

C.3 Photo Ionization Detector (PID) Readings

A hand-held PID was used during the investigation in order to screen for potential VOCs[8] in soil and ambient air at the site. Prior to entering the field, the PID was calibrated in a clean environment using isobutylene gas. Readings were collected by placing soil samples and the PID sensor in a plastic bag, disturbing the soil within the bag and waiting a minimum of 30 seconds. The PID readings are tabulated in Table 1.

The highest PID reading collected during the investigation was 103 parts per million (ppm) at 7.5 ft bgs in boring B3. A soil sample collected from this location contained the greatest concentrations detected of TPH-d, -mo and -ho[9], with values of 2,700 mg/kg, 1,300 mg/kg and 1,500 mg/kg, respectively (Section C.5). PID readings for the ambient air were 0.0 ppm.

[8] Volatile organic compounds
[9] Total petroleum hydrocarbons as diesel, motor oil and heating oil

TABLE 1
PID Readings (reported in ppm)
1607 2nd Avenue, Oakland, CA

ft bgs	B2	B3	B4	B5
1	--	0.0	0.0	--
2	--	--	--	0.0
3	0.0	--	--	--
5	--	0.0	--	0.0
5.5	--	--	0.0	--
7.5	--	**103**	--	0.0
8	0.0	--	0.0	--
8.5	--	**2.1**	--	--
10	0.0	**0.8**	0.0	0.0
11	--	**0.2**	--	--
12	--	--	0.0	0.0
13	0.0	**0.2**	0.0	0.0
14	--	0.0	--	--
15	--	**0.4**	--	0.0
16	--	--	0.0	--
17	--	0.0	--	--
18	--	0.0	0.0	--
20	--	0.0	--	--
21	--	0.0	0.0	--

PID = photo ionization detector; ppm = parts per million; ft bgs = feet below ground surface; -- = not analyzed.

C.4 Soil Sampling Methodology

Soil cores were continuously recovered inside four-foot, 1.5-inch-diameter acetate liners. Soil samples were collected by cutting a specific depth interval from the acetate liner and sealing it at both ends with Teflon septa and tight fitting plastic caps. Samples collected using the hand auger were placed into clear, pre-cleaned, 8 oz glass jars with Teflon-lined caps. Nitrile gloves were utilized to prevent cross contamination.

The samples were labeled, stored on ice and subsequently transported to McCampbell Analytical, Inc. (CDPH ELAP[10] #1644) for analyses. Sample possession during transport was documented using chain-of-custody forms. Samples were analyzed based on the approved project work plan and field observations. Samples submitted to the laboratory but not analyzed were placed on hold for potential future analyses, if required.

C.5 Soil Analytical Results

Soil samples were collected from each of the four borings at 2.5 ft intervals for the purpose of addressing the LTCP criteria for shallow soils. The soil samples selected for analyses (1) were chosen based on PID readings and/or field observations of staining and hydrocarbon odors; or (2) were collected from shallow depths in each of the borings in order to delineate the potential contamination plume. Selected soil analytical results are presented in Tables 2 through 4 and are also shown on the attached Figure 2. The

[10] California Department of Public Health Environmental Laboratory Accreditation Program

laboratory reports are included as Appendix C.

The soil analytical results were compared to the San Francisco Bay Regional Water Quality Control Board (Water Board) Environmental Screening Levels (ESLs) issued February 22, 2016. The Tier 1 ESLs used are based on: groundwater is a current or potential drinking water resource; the Tier 2 ESLs used (Table T2-1) are based on: (1) groundwater is a current or potential drinking water resource; (2) groundwater depth is greater than or equal to 10 ft bgs; (3) the soil type is sandy; and (4) the soil depth for direct exposure is shallow (less than or equal to 10 ft bgs).

TABLE 2
Selected Analytical Results for TPH and VOCs in Soil (reported in mg/kg)
1607 2nd Avenue, Oakland, CA

Sample		TPH			VOCs					
ID	Depth (ft bgs)	TPH-d	TPH-mo	TPH-ho	MTBE	Benzene	Ethylbenzene	Toluene	Xylenes	Naphthalene
B-2-8	8	15	34	6.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
B-2-10	10	ND<1.0	ND<5.0	ND<1.0	--	--	--	--	--	--
B-3-2.5	2.5	ND<1.0	ND<5.0	ND<1.0	--	--	--	--	--	--
B-3-7.5	7.5	**2,700**	**1,300**	1,500	ND<0.33	ND<0.33	ND<0.33	ND<0.33	ND<0.33	**6.5**
B-3-10	10	ND<1.0	ND<5.0	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
B-4-7.5	7.5	ND<1.0	ND<5.0	ND<1.0	--	--	--	--	--	--
B-5-2.5	2.5	ND<1.0	ND<5.0	ND<1.0	--	--	--	--	--	--
B-5-5	5	ND<1.0	ND<5.0	ND<1.0	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
ESLs										
Tier 1 ESL		**240**	**100**	**N/A**	**0.023**	**0.044**	**1.4**	**2.9**	**2.3**	**0.023**
Tier 2 ESL		**100**	**100**	**N/A**	**0.023**	**0.044**	**1.4**	**2.9**	**2.3**	**0.023**

mg/kg = milligrams per kilograms; ft bgs = feet below ground surface; TPH-d, -mo and -ho = total petroleum hydrocarbons in the diesel, motor oil and heating oil ranges; VOCs = volatile organic compounds; MTBE = methyl tert-butyl ether; ND<1.0 = not detected with a reporting limit of 1.0;
-- = not analyzed; N/A = ESL not listed.

ESLs = San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels (February 22, 2016). Tier 1 ESLs based on: groundwater is a current or potential drinking water resource; Tier 2 ESLs (Table T2-1) based on: (1) groundwater is a current or potential drinking water resource; (2) groundwater depth is greater than or equal to 10 ft bgs; (3) the soil type is sandy; and (4) the soil depth for direct exposure is shallow (less than or equal to 10 ft bgs).

Numbers in **bold** indicate concentrations exceeding ESLs. TPH analyzed by EPA Method 8015B(m); VOCs analyzed by EPA Method 8260B.

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Total Petroleum Hydrocarbons

TPH-d was detected in boring B2 at 8 ft bgs and in boring B3 at 7.5 ft bgs at concentrations of, respectively, 15 mg/kg (below the ESLs) and 2,700 mg/kg (above both the Tier 1 and Tier 2 ESLs). TPH-d was not detected above the laboratory reporting limit (RL) of 1.0 mg/kg in any other samples.

TPH-ho was detected in boring B2 at 8 ft bgs and boring B3 at 7.5 ft bgs at concentrations of 6 mg/kg and 1,500 mg/kg, respectively (there are no corresponding ESLs for TPH-ho). TPH-ho was not detected above the laboratory RL of 1.0 mg/kg in

any other samples.

TPH-mo was detected in boring B2 at 8 ft bgs and in boring B3 at 7.5 ft bgs at concentrations of, respectively, 34 mg/kg (below the ESLs) and 1,300 mg/kg (above both the Tier 1 and Tier 2 ESLs). TPH-mo was not detected above the RL of 5.0 mg/kg in any other samples.

It should be noted that the laboratory identified the fuel contamination detected as "unmodified or weakly modified diesel" and "oil range compounds", which indicates that the on-site tank could have contained mixtures of diesel and/or heating oil. The detections of TPH-mo are not likely to have been caused by actual motor oil, but instead suggest the presence of diesel and heating oil decay compounds.

VOCs

VOCs, including MTBE[11], benzene, ethylbenzene, toluene and xylenes, were below the laboratory RLs in the analyzed soil samples; however, the RLs for MTBE and benzene for sample B-3-7.5 were slightly above the Tier 1 and 2 ESL of 0.023 mg/kg. Naphthalene was detected in boring B3 at 7.5 ft bgs at a concentration of 6.5 mg/kg, which exceeds the Tier 1 and 2 ESL of 0.023 mg/kg. Naphthalene was below the laboratory RL of 0.0050 mg/kg in the other analyzed samples. No chlorinated solvents were detected in any sample above the RLs.

TABLE 3
Selected Analytical Results for PAHs in Soil (reported in mg/kg)
1607 2nd Avenue, Oakland, CA

Sample		PAHs				
ID	Depth (ft bgs)	1-Methylnaphthalene	2-Methylnaphthalene	Naphthalene	Phenanthrene	Pyrene
B-5-5	5	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
B-2-8	8	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
B-3-7.5	7.5	13	**10**	**4.1**	8.6	5.5
B-3-10	10	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050	ND<0.0050
ESLs						
Tier 1 ESL		**N/A**	**0.25**	**0.23**	**11**	**85**
Tier 2 ESL		**N/A**	**0.25**	**0.23**	**11**	**85**

mg/kg = milligrams per kilograms; ft bgs = feet below ground surface; PAHs= polynuclear aromatic hydrocarbons; ND<1.0 = not detected with a reporting limit of 1.0; N/A = ESL not listed.

ESLs = San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels (February 22, 2016). Tier 1 ESLs based on: groundwater is a current or potential drinking water resource; Tier 2 ESLs (Table T2-1) based on: (1) groundwater is a current or potential drinking water resource; (2) groundwater depth is greater than or equal to 10 ft bgs; (3) the soil type is sandy; and (4) the soil depth for direct exposure is shallow (less than or equal to 10 ft bgs).

Numbers in **bold** indicate concentrations exceeding ESLs. PAHs analyzed by EPA Method 8310.

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[11] Methyl tert-butyl ether

Polynuclear Aromatic Hydrocarbons (PAHs)

Naphthalene and 2-methylnaphthalene were detected in boring B3 at 7.5 ft bgs at concentrations of 4.1 mg/kg and 10 mg/kg, respectively, which exceed the respective Tier 1 and 2 ESLs of 0.23 mg/kg and 0.25 mg/kg. In addition, 1-methylnaphthalene was detected in boring B3 at 7.5 ft bgs at a concentration of 13 mg/kg (there are no corresponding ESLs). Phenanthrene and pyrene were detected in boring B3 at 7.5 ft bgs at concentrations of 8.6 mg/kg and 5.5 mg/kg, respectively, which are below the ESLs. No PAHs were detected above the laboratory RLs (0.0050 mg/kg) in any other soil sample.

TABLE 4
Selected Analytical Results for LUFT 5 Metals in Soil (reported in mg/kg)
1607 2nd Avenue, Oakland, CA

Sample		Metals					
ID	Depth (ft bgs)	Cadmium	Chromium	Chromium VI	Lead	Nickel	Zinc
B-5-5	5	ND<0.25	83	ND<4.0	9.2	73	68
B-2-8	8	ND<0.25	66	ND<4.0	5.5	63	41
B-3-7.5	7.5	**0.26**	53	ND<4.0	7.8	43	53
B-3-10	10	**0.36**	66	ND<4.0	9.8	**110**	65
ESLs							
Tier 1 ESL		**0.00006**	**N/A**	**1.3**	**80**	**83**	**23,000**
Tier 2 ESL		**0.014**	**N/A**	**1.3**	**80**	**820**	**23,000**

mg/kg = milligrams per kilograms; ft bgs = feet below ground surface; ND<1.0 = not detected with a reporting limit of 1.0; N/A = ESL not listed.

ESLs = San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels (February 22, 2016). Tier 1 ESLs based on: groundwater is a current or potential drinking water resource; Tier 2 ESLs (Table T2-1) based on: (1) groundwater is a current or potential drinking water resource; (2) groundwater depth is greater than or equal to 10 ft bgs; (3) the soil type is sandy; and (4) the soil depth for direct exposure is shallow (less than or equal to 10 ft bgs).

Numbers in **bold** indicate concentrations exceeding ESLs. LUFT 5 metals analyzed by EPA Method 6020.

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Metals

Lead and zinc were detected in all analyzed samples at concentrations below the corresponding ESLs.

Cadmium was detected above the RL of 0.25 mg/kg in two of the analyzed samples. The detected concentrations of 0.26 and 0.36 mg/kg (boring B3) exceeded the Tier 1 and Tier 2 ESLs of 0.00006 and 0.014 mg/kg, respectively. These values may have been listed incorrectly in the newly published ESLs; previous December 2013 ESLs were between 12 and 78 mg/kg for cadmium.[12] Naturally occurring cadmium concentrations in the Oakland area have been found to be between 0.25 and 2.9

[12] San Francisco Bay Water Board ESLs, Tables A-1 and C-1, December 2013

mg/kg.[13] The cadmium concentrations measured in soil at the subject site are within this background range.

Nickel was detected in one of the analyzed samples at 110 mg/kg, which exceeds the Tier 1 ESL of 83 mg/kg but is below the Tier 2 ESL of 820 mg/kg. Naturally occurring nickel concentrations in the Oakland area are between 3 and 130 mg/kg (LBNL, 1995). The nickel concentrations measured in soil at the subject site are within this background range.

All soil samples had analytical results exceeding 50 mg/kg for total chromium. In order to demonstrate that no carcinogenic chromium in the +6 oxidation state was present, the samples were analyzed for chromium VI. Chromium VI was not detected in any sample; however the laboratory RL of 4.0 mg/kg was above the ESL of 1.3 mg/kg.

C.6 Groundwater Sampling Methodology

Groundwater samples were collected from each boring except B2 (a groundwater sample was not collected from B2 due to bore hole cave in). Groundwater flow was found to be very slow and the number of water samples collected was adjusted accordingly.

Groundwater samples were collected using a peristaltic pump, with new tubing for each boring. The samples were analyzed for TPH, VOCs, PAHs (in one boring only) and metals. Sample containers supplied by McCampbell Analytical, Inc. included 1-liter amber bottles containing hydrochloric acid as a preservative, 40-milliliter (ml) VOAs[14] containing hydrochloric acid as a preservative and 250 ml plastic bottles containing nitric acid as a preservative. Groundwater samples that were analyzed for metals were filtered in the field via 0.45-micron inline filters. A quality control duplicate groundwater sample was collected for boring B5.

C.7 Groundwater Analytical Results

Selected groundwater analytical results are presented in Tables 5 and 6 and are also shown on the attached Figure 3. The laboratory reports are included as Appendix C.

The groundwater analytical results were compared to the San Francisco Water Board ESLs issued February 22, 2016. The Tier 1 ESLs used are based on: groundwater is a current or potential drinking water resource; the Tier 2 ESLs used (Table T2-1) are based on: (1) groundwater is a current or potential drinking water resource; (2) groundwater depth is greater than or equal to 10 ft bgs; (3) the soil type is sandy; and (4) the soil depth for direct exposure is shallow (less than or equal to 10 ft bgs).

Due to lack of groundwater in the borings from slow recharge, there was only enough water present in boring B5, located down-gradient from the former UST pit, to collect a second sample for PAH analysis (sample DUP).

[13] Lawrence Berkeley National Laboratory (LBNL), *Protocol for Determining Background Concentrations of Metals in Soil at Lawrence Berkeley National Laboratory*, August 1995

[14] Volatile organics analysis containers

TABLE 5
Selected Analytical Results for TPH and VOCs in Groundwater (reported in µg/L)
1607 2nd Avenue, Oakland, CA

Sample		TPH [1]			VOCs					
ID	Depth (ft bgs)	TPH-d	TPH-mo	TPH-ho	MTBE	Benzene	Ethylbenzene	Toluene	Xylenes	Naphthalene
B-3-21.5-W	21.5	ND<42	ND<90	ND<60	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50 [2]
B-4-22-W	22	ND<37	ND<79	ND<53	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
B-5-15-W	15	ND<36	ND<77	ND<52	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
DUP	15	--	--	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
ESLs										
Tier 1 ESL		**100**	**-- [3]**	**N/A**	**5.0**	**1.0**	**13**	**40**	**20**	**0.12**
Tier 2 ESL		**100**	**50,000**	**N/A**	**5.0**	**1.0**	**16**	**40**	**20**	**0.12**

µg/L = micrograms per liter; ft bgs = feet below ground surface; TPH -d, -mo and -ho = total petroleum hydrocarbons in the diesel, motor oil and heating oil ranges; VOCs = volatile organic compounds; MTBE = methyl tert-butyl ether; ND<1.0 = not detected with a reporting limit of 1.0; DUP = duplicate sample; -- = not analyzed; N/A = ESL not listed.

ESLs = San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels (February 22, 2016). Tier 1 ESLs based on: groundwater is a current or potential drinking water resource; Tier 2 ESLs (Table T2-1) based on: (1) groundwater is a current or potential drinking water resource; (2) groundwater depth is greater than or equal to 10 ft bgs; (3) the soil type is sandy; and (4) the soil depth for direct exposure is shallow (less than or equal to 10 ft bgs).

(1) TPH samples were extracted one day outside of the 7-day holding period. McCampbell Analytical, Inc. has confirmed that the TPH data are still valid.

(2) The new 2016 ESLs do not include values for TPH-mo in groundwater because motor oil is considered to not be soluble. The detected values shown likely represent petroleum degradates.

(3) This table shows analyses for naphthalene by EPA Method 8260B. Naphthalene was also analyzed for using EPA Method 8310 (see discussion of results for PAHs in Section C.7 of this report). The reporting limits using 8310 were at 0.050 µg/L, which is below the Tier 1 and Tier 2 ESLs of 0.12 µg/L.

Numbers in **bold** indicate concentrations exceeding ESLs. TPH analyzed by EPA Methods 8015B; VOCs analyzed by EPA Method 8260B. DUP sample collected at B5.

SCHUTZE & Associates, Inc. / March 2016

Total Petroleum Hydrocarbons

TPH-d, -mo and -ho were not detected in any of the groundwater samples above the laboratory RLs, which ranged from 36 to 90 micrograms per liter (µg/L).

VOCs

VOCs, including MTBE, benzene, ethylbenzene, toluene and xylenes, were not detected above the RLs (0.50 µg/L) in any of the groundwater samples.

Naphthalene, a polynuclear aromatic hydrocarbon (PAH) which can be analyzed for using EPA Method 8260, was not detected above the RL in any of the groundwater samples; however, the ESL for naphthalene of 0.12 µg/L is below the 0.50 µg/L RL (the analytical results for naphthalene using EPA Method 8310 are discussed in the following section).

No chlorinated solvents were detected in any sample above the RLs with the exception of chloroform, which was detected above the Tier 1 ESL of 2.3 µg/L in two of the samples (13 µg/L). It is possible that chloroform was introduced to the samples during extraction in the laboratory.

PAHs

There was not enough groundwater recharge into the borings to collect sufficient samples for PAHs to be analyzed using EPA Method 8310 except in boring B5, located down-gradient from the former UST pit, where a second sample for PAH analysis was able to be collected (this sample also served as a duplicate). No PAHs were detected above the RLs, which ranged from 0.025 to 0.050 µg/L, in sample DUP. The reporting limit for naphthalene was 0.050 µg/L, which is below the Tier 1 and 2 ESL of 0.12 µg/L.

TABLE 6
Selected Analytical Results for LUFT 5 Metals in Groundwater (reported in µg/L)
1607 2nd Avenue, Oakland, CA

Sample		Metals				
ID	Depth (ft bgs)	Cadmium	Chromium	Lead	Nickel	Zinc
B-3-21.5-W	21.5	ND<0.25	ND<0.50	ND<0.50	0.56	ND<15
B-4-22-W	22	ND<0.25	ND<0.50	ND<0.50	ND<0.50	ND<15
B-5-15-W	15	ND<0.25	ND<0.50	ND<0.50	1.7	ND<15
DUP	15	ND<0.25	ND<0.50	ND<0.50	1.8	ND<15
ESLs						
Tier 1 ESL		**0.25**	**50**	**2.5**	**8.2**	**81**
Tier 2 ESL		**0.25**	**50**	**2.5**	**8.2**	**81**

µg/L = micrograms per liter; ft bgs = feet below ground surface; ND<1.0 = not detected with a reporting limit of 1.0.

ESLs = San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels (February 22, 2016). Tier 1 ESLs based on: groundwater is a current or potential drinking water resource; Tier 2 ESLs (Table T2-1) based on: (1) groundwater is a current or potential drinking water resource; (2) groundwater depth is greater than or equal to 10 ft bgs; (3) the soil type is sandy; and (4) the soil depth for direct exposure is shallow (less than or equal to 10 ft bgs).

Numbers in **bold** indicate concentrations exceeding ESLs. LUFT 5 metals analyzed by EPA Method 6020. DUP sample collected at B5.

SCHUTZE & Associates, Inc. / March 2016

Metals

Cadmium, chromium, lead and zinc were not detected above the RLs in any of the groundwater samples. Nickel was detected in three of the four samples, with a maximum concentration of 1.8 µg/L, which is below the Tier 1 and 2 ESL of 8.2 µg/L.

C.8 Summary of Analytical Results

Based on the analytical results for soil and groundwater, SCHUTZE & Associates, Inc. concludes the following:

Soil

TPH-d and -ho were detected in soil in boring B3 at 7.5 ft bgs at concentrations of 2,700 and 1,500 mg/kg, respectively, exceeding the ESLs. The laboratory identified the fuel contamination detected as "unmodified or weakly modified diesel" and "oil range

compounds", which indicates that the on-site tank could have contained mixtures of diesel and/or heating oil. The hydrocarbon contamination adjacent to the building is likely located along the path of a pipe that formerly connected the UST with a boiler located in the building's basement. The extent of the soil impact is therefore considered to be very limited.

VOCs, including MTBE, benzene, ethylbenzene, toluene and xylenes, were below the laboratory RLs in the analyzed soil samples; however, the RLs for MTBE and benzene for sample B-3-7.5 were slightly above the Tier 1 and 2 ESL of 0.023 mg/kg.

Naphthalene was detected in boring B3 at 7.5 ft bgs at a concentration of 6.5 mg/kg, which exceeds the Tier 1 and 2 ESL of 0.023 mg/kg. Other detected PAHs in boring B3 at 7.5 ft bgs were 2-methylnaphthalene, 1-methylnaphthalene, phenanthrene and pyrene. The detected concentration of 2-methylnaphthalene, 10 mg/kg, exceeded the Tier 1 and 2 ESL of 0.25 mg/kg. No PAHs were detected above the laboratory RLs in any other soil sample.

Groundwater

TPH, PAHs and VOCs (with the exception of chloroform) were not detected in any of the groundwater samples above the RLs.

C.9 Quality Assurance / Quality Control (QA/QC)

SCHUTZE & Associates, Inc. performed QA/QC 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. The sampling equipment was decontaminated between borings using a laboratory-grade detergent (Alconox) and was then double-rinsed with water. Nitrile gloves were worn throughout the sampling process and were changed for each boring to minimize cross-contamination.

McCampbell Analytical, Inc. provided sample containers in good condition. Non-disturbed soil samples were collected with new 1.5-inch-diameter acetate liners and then sealed with Teflon septa and tight fitting plastic caps. Disturbed soil samples were placed into clear, pre-cleaned, 8 oz glass jars with Teflon-lined caps. Groundwater samples were collected using a peristaltic pump with new tubing for each boring and were placed into 1-liter amber glass jars, 250 ml plastic containers (after being filtered) and VOAs with no head space. The 1-liter amber glass jars and VOAs were pre-preserved with hydrochloric acid and the 250 ml plastic containers were pre-preserved with nitric acid.

Samples were stored on ice subsequent to collection and during transport to the lab. The samples were delivered to McCampbell Analytical, Inc. in accordance with chain-of-custody procedures.

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 C), all QC samples were found to be within the proper control limits.

Analyses for TPH in groundwater samples were extracted one day outside of the seven-day holding period. McCampbell Analytical, Inc. has confirmed that the TPH data is valid.

A duplicate groundwater sample (DUP) was collected and analyzed for boring B5. The duplicate results were within an acceptable margin when compared to the results of the original sample (B-5-15-W).

D. LTCP CRITERIA COMPARISON / LIMITED CONCEPTUAL SITE MODEL

D.1 LTCP Criteria Comparison

SCHUTZE & Associates, Inc. reviewed an LTCP Checklist for the subject site which is available on the GeoTracker website. The June 26, 2015 Checklist compares the site with the State Water Board's LTCP criteria (see Section A.3). SCHUTZE & Associates, Inc. took these criteria into consideration when conducting the current soil and groundwater investigation, in order to accomplish low-threat case closure for the subject site. General and media-specific criteria for the State Water Board's LTCP are discussed in relation to the subject site in Table 7.

TABLE 7
Low-Threat Underground Storage Tank Case Closure:
General Criteria (A-H) and Media-Specific Criteria (1-3)
Former Heating Oil Tank Site, 1607 2nd Avenue, Oakland, CA

A: The unauthorized release is located within the service area of a public water system.
Yes: The subject site is located within the service area of East Bay Municipal Utility District.
B: The unauthorized release consists only of petroleum.
Yes: The unauthorized release consists only of petroleum.
C: The unauthorized ("primary") release from the UST system has stopped.
Yes: The UST was removed in 2014.
D: Free product has been removed to the maximum extent practicable.
Yes: No free product was observed during either the removal of the former UST in 2014 or the current soil and groundwater investigation.
E: A conceptual site model has been developed.
Yes: SCHUTZE & Associates, Inc. believes that this Soil and Groundwater Investigation Report can serve as a "limited" CSM for the subject site by assessing the nature, extent and mobility of the on-site release. A potential receptor survey has not been conducted for the site; however, based on: (1) non-detections of TPH, VOCs and PAHs and detections of acceptable levels of metals in groundwater; (2) only limited detections of TPH-d and TPH-ho in soil; and (3) the localized character of the detected contamination, it is unlikely that local water supply wells (if present) and local water bodies (e.g., Lake Merritt) would be impacted by contamination from the former UST.
F: Secondary source (e.g., petroleum-impacted soil, free product and/or groundwater) removal has been addressed.
Yes: Golden Gate Tank Removal, Inc. analyzed and over-excavated soils around the former UST during its removal in 2014. In addition, analysis of soil samples during the current investigation indicated that soil-sorbed contamination present on the southwestern and northeastern sides of the former UST pit is minor and unlikely to have significant vertical and lateral extent. Groundwater is not considered a secondary source at this site.

G: Soil and/or groundwater has been tested for MTBE and results reported in accordance with Health and Safety Code section 25296.15.
Yes: Soil and groundwater have been tested for MTBE and the results have been reported in accordance with the Health and Safety Code. MTBE was not detected in soil and groundwater samples above the laboratory reporting limits of 0.005 mg/kg and 0.50 µg/L, respectively, in the current investigation.
H: Nuisance as defined by Water Code section 13050 does not exist at the site.
Yes: Nuisance as defined by the Water Code does not exist at the site.
1. Groundwater.
The groundwater at the site was analyzed for TPH, VOCs, PAHs and metals during the current investigation and, with the exception of insignificant detections of chloroform and nickel, results for all constituents were reported as non-detected above the reporting limits in all groundwater samples. It is therefore concluded that groundwater is unlikely to have been impacted by the former leaking UST.
2. Petroleum Vapor Intrusion to Indoor Air.
According to an ACEH LTCP guidance document, required information to address petroleum vapor intrusion to indoor air includes the following: evidence of LNAPL[15], soil data and applicable soil gas data to demonstrate that a continuous bioattenuation zone is or is not present; concentrations of benzene in groundwater; and direct measurements of soil gas concentrations. Results from preferential pathway and utility conduit surveys are to be presented and evaluated to determine whether a continuous bioattenuation zone is present. The following addresses these information requirements: • No LNAPL was observed. • Soil data show minor remnants of contamination adjacent to the on-site structure. • Benzene was not detected. • Direct measurements of soil gas are not available. • Soil contamination adjacent to the building is likely located along the path of a pipe that formerly connected the UST with a boiler located in the basement (preferential pathway). The extent of the soil impact is therefore considered to be very limited. • Use of the bioattenuation characteristics options offered in the LTCP guidance document is not possible because the contamination is adjacent to a concrete basement structure (not occupied) and is not below a building foundation.
3. Direct Contact and Outdoor Air Exposure.
Direct contact and outdoor air exposure to contaminants as a result of the UST leakage is unlikely and there is a low threat to human and environmental health at the subject site. During the current soil and groundwater investigation, a photo ionization detector (PID) was used to measure potential VOCs in the shallow soils. The highest PID reading collected during the investigation was 103 parts per million (ppm) at 7.5 ft bgs in boring B3. The PID measured 0.0 ppm for all measurements in borings B2, B4 and B5 at depths from 1 to 21 ft bgs. PID readings for the ambient air were 0.0 ppm. Furthermore, VOCs, including MBTEX and naphthalene, were not detected above the laboratory reporting limits in shallow soil samples except in boring B3 at 7.5 ft bgs where naphthalene was detected above the ESs at 6.5 mg/kg.

D.2 Limited Conceptual Site Model (CSM)

SCHUTZE & Associates, Inc. believes that this Soil and Groundwater Investigation Report can serve as a "limited" CSM for the subject site by assessing the nature, extent and mobility of the on-site release. Contained within the current Report are the following: the site's history (including a description of contaminant releases); geologic and hydrogeologic assessments; and delineation of the vertical and horizontal extents of contamination.

Not included in the current Report are the following: potential receptor survey; preferential pathway study, utility conduit survey; and indoor air survey assessment. A potential receptor survey has not been conducted for the site; however, based on: (1) non-detections of TPH, VOCs and PAHs and detections of acceptable levels of metals in groundwater; (2) only limited detections of TPH-d and TPH-ho in soil; and (3) the localized character of the detected contamination, it is unlikely that local water supply

[15] Light non-aqueous phase liquid

wells (if present) and local water bodies (e.g., Lake Merritt) would be impacted by contamination from the former UST. In regards to an indoor air survey assessment, the results of the current investigation indicate a low human health risk within the building because the basement area, which is adjacent to the limited zone of soil contamination (approximately 7 to 8 ft bgs), is used for utilities and is not a residential space.

E. CONCLUSIONS

SCHUTZE & Associates, Inc. has completed a Soil and Groundwater Investigation at the property located at 1607 2nd Avenue, Oakland, California (subject site). The purpose of the work was to further delineate the horizontal and vertical extent of potential hydrocarbon contamination in the soil and groundwater beneath the subject site, with the goal of achieving low-threat case closure for the site.

Drilling was conducted on February 12, 2016 using a Geoprobe 54LT track-mounted direct-push rig. Four 1.5-inch-diameter exploratory soil borings were advanced and soil and groundwater samples were collected from each boring except B2 (a groundwater sample was not collected from B2 due to bore hole cave in). Boring B2 was intended to be advanced in native soil between the former tank pit and the street, but the boring was found to be located in backfilled material within the former UST pit, which made the planned drilling location of boring B1 redundant. Boring B3 was advanced in native soil between the former UST pit and the concrete exterior basement wall of the apartment building. Borings B4 and B5 were advanced up-gradient and down-gradient, respectively, from the former UST pit.

The hydrocarbon ranges detected in soil were total petroleum hydrocarbons as diesel, motor oil and heating oil. The laboratory identified the fuel contamination detected as "unmodified or weakly modified diesel" and "oil range compounds", which indicates that the on-site tank could have contained mixtures of diesel and/or heating oil. The maximum concentrations of TPH-d (2,700 mg/kg) and TPH-ho (1,500 mg/kg) were detected at 7.5 ft bgs in boring B3, located approximately 1 ft southwest of the apartment building and 1.5 ft northeast of the former UST pit. Hydrocarbon contamination adjacent to the building is likely located along the path of a pipe that formerly connected the UST with a boiler located in the building's basement. The extent of the soil impact is therefore considered to be very limited. TPH-d and -ho were also detected, at concentrations below the ESLs, at 8 ft bgs in boring B2, located just southwest of the former UST pit. Based on field observations and soil analytical results, TPH contamination in soil is likely confined at 7 to 8 ft bgs on the northeastern and southwestern edges of the former UST pit, and therefore no further work is recommended.

PAHs in soil, including 2-methylnaphthalene and naphthalene, were detected in boring B3 at 7.5 ft bgs at concentrations above the ESLs. Phenanthrene and pyrene were also detected in boring B3 at 7.5 ft bgs, at concentrations below the ESLs. Due to the limited extent of this soil contamination, no further work is recommended.

No significant detections of TPH, VOCs or PAHs were found in the groundwater samples. Based on these results and the relatively low mobility of diesel and heating oil, leakage from the former UST is unlikely to have significantly impacted groundwater

and no further work is recommended.

Metals were not detected at concentrations above the ESLs and/or regional background levels for any soil and groundwater samples.

Based on the laboratory results for soil and groundwater, SCHUTZE & Associates, Inc. concludes the following:

- TPH was not detected in any groundwater samples. Assuming a northwesterly groundwater flow direction, it appears that the former on-site UST has not significantly impacted groundwater. A narrow soil zone of TPH-d and -ho contamination that was detected between the former UST pit and the basement wall of the building is not a significant concern.

F. RECOMMENDATIONS

1. Due to the limited extent of the TPH-d and -ho contamination in soil at the site, SCHUTZE & Associates, Inc. recommends no further investigations at the subject site related to soil contamination.
2. Based on the results of the Soil and Groundwater Investigation described in this report, SCHUTZE & Associates, Inc. recommends no additional environmental investigations 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 any questions or comments about this report.

Cordially,

SCHUTZE & ASSOCIATES, INC.

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

Attachments

Acronyms and Abbreviations
Figure 1 – Site Vicinity Map
Figure 2 – Site Map with Selected Analytical Results for Soil
Figure 3 – Site Map with Selected Analytical Results for Groundwater
Site Photographs

Appendices

Appendix A: Boring Logs and Schematic Cross Section
Appendix B: Permits
Appendix C: Laboratory Reports and Chain-of-Custody Forms

ACRONYMS & ABBREVIATIONS

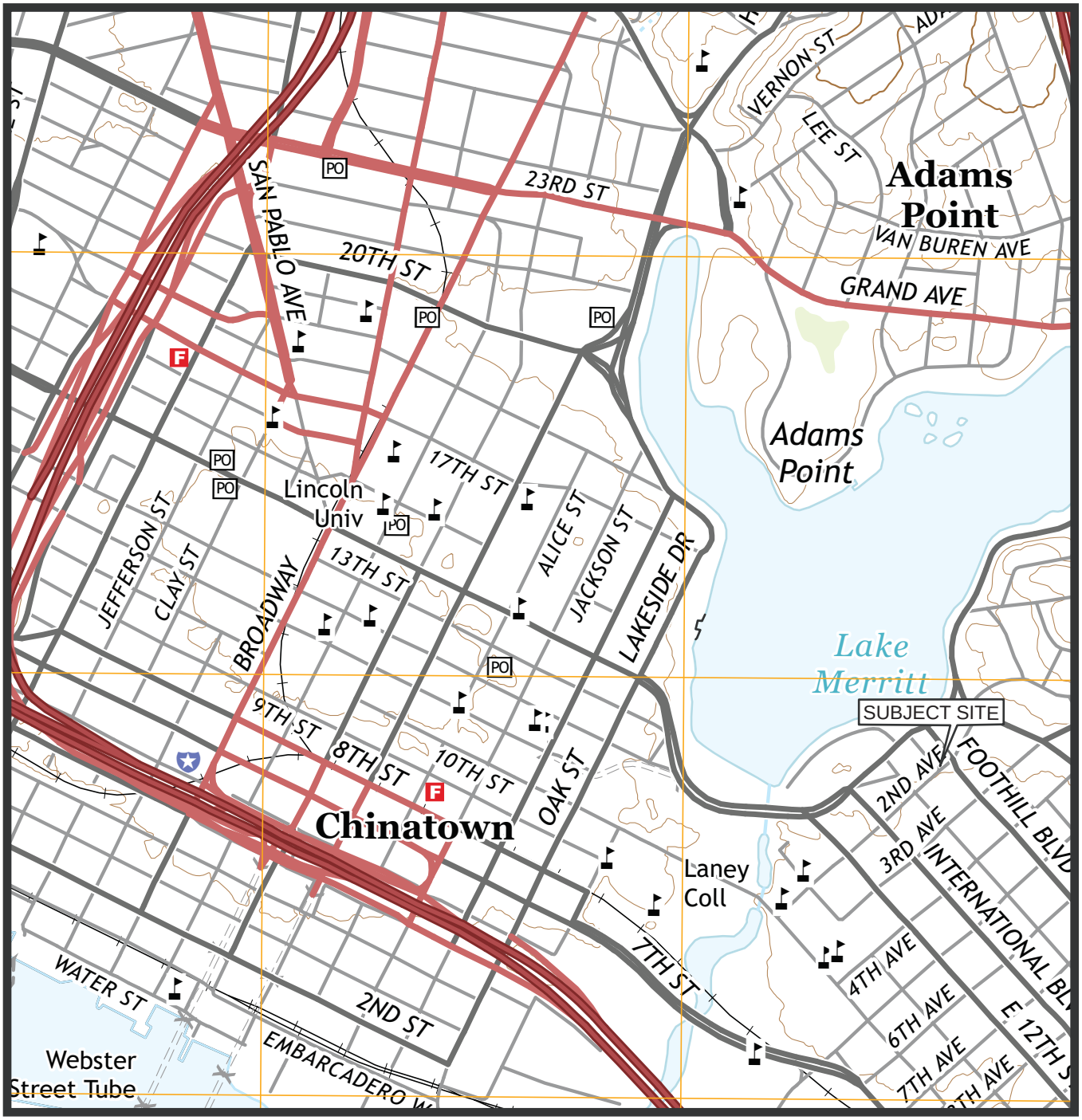
ACRONYMS & ABBREVIATIONS

µg/kg	Micrograms per kilogram
µg/L	Micrograms per liter
BTEX	Benzene, toluene, ethylbenzene and xylenes
CSM	Conceptual site model
ESL(s)	Environmental screening level(s)
ft bgs	Feet below ground surface
GGTR	Golden Gate Tank Removal, Inc.
H&SP	Health & Safety Plan
LBNL	Lawrence Berkeley National Laboratory
LCS	Laboratory control sample
LNAPL	Light non-aqueous phase liquid
LUFT	Leaking underground fuel tank
LUST	Leaking underground storage tank
MBTEX	Methyl tert-butyl ether, benzene, toluene, ethylbenzene and xylenes
MCL(s)	Maximum contamination level(s)
mg/kg	Milligrams per kilogram
mg/L	Milligrams per liter
MSL	Mean sea level
MTBE	Methyl tert-butyl ether
ND	Non-Detect (not detected above the reporting limit)
PAH(s)	Polynuclear aromatic hydrocarbon(s)
PCE	Tetrachloroethene
P.G.	Professional Geologist
PID	Photo Ionization Detector
ppm	Parts per million
QA/QC	Quality Assurance/Quality Control
RL(s)	Reporting limit(s)
STLC	Soluble threshold limit concentration
SVOC(s)	Semi volatile organic compound(s)
TCE	Trichloroethene
TPH	Total petroleum hydrocarbons
TPH-d	Total petroleum hydrocarbons as diesel
TPH-g	Total petroleum hydrocarbons as gasoline
TPH-ho	Total petroleum hydrocarbons as heating oil
TPH-mo	Total petroleum hydrocarbons as motor oil
TTLC	Total threshold limit concentration
UST(s)	Underground storage tank(s)
VOA(s)	Volatile organics analysis container(s)
VOC(s)	Volatile organic compound(s)

GOVERNMENT / AGENCY ACRONYMS

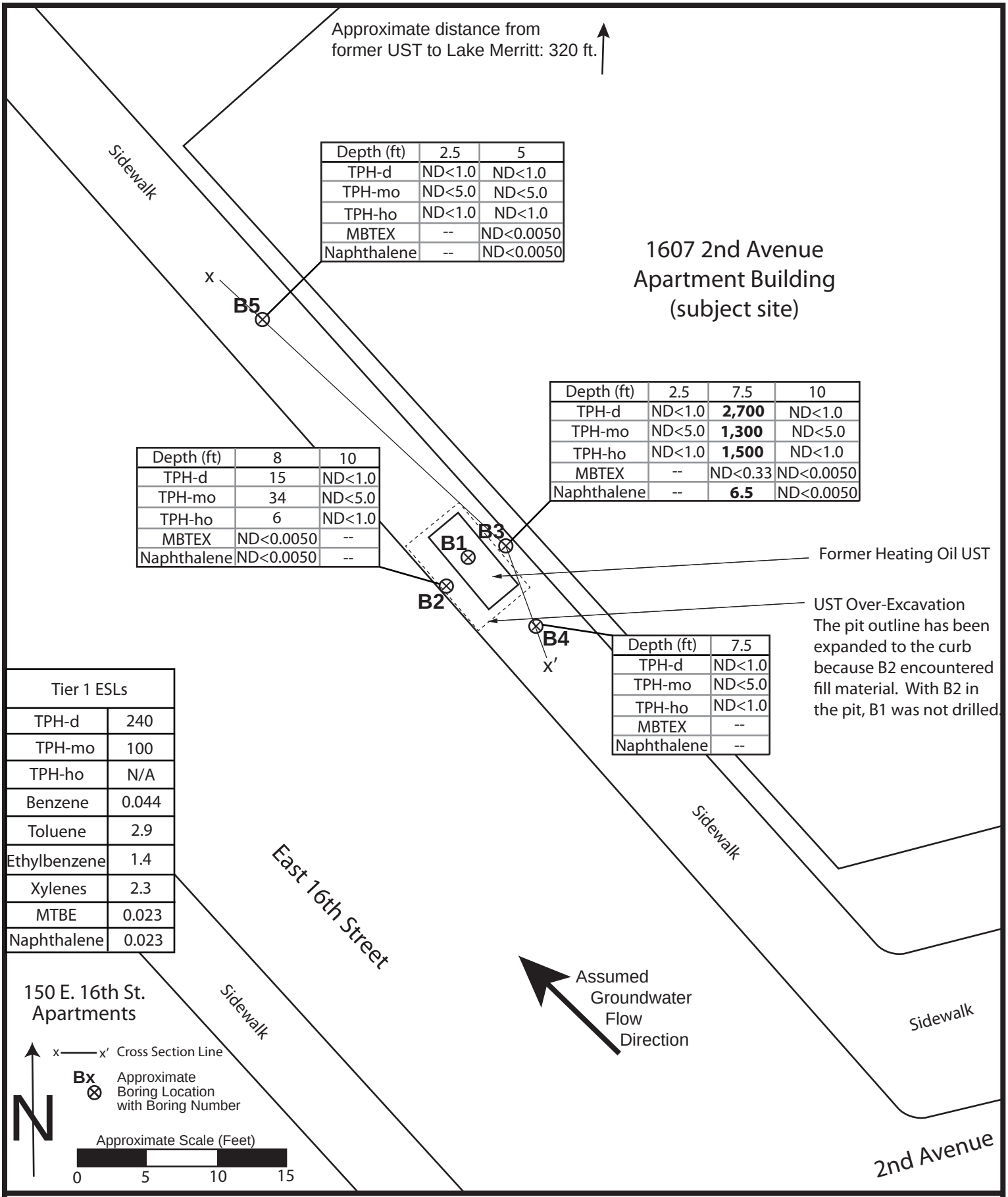
ACEH	Alameda County Environmental Health
ACPWA	Alameda County Public Works Agency
ASTM	American Society for Testing and Materials
Cal/EPA	California Environmental Protection Agency
CCR	California Code of Regulations
CDPH	California Department of Public Health
CFR	Code of Federal Regulations
CHHSL(s)	California Human Health Screening Level(s)
DTSC	Department of Toxic Substances Control
DWR	(California) Department of Water Resources
ELAP	Environmental Laboratory Accreditation Program
EPA	U.S. Environmental Protection Agency
LOP	Local Oversight Program
LTCP	(State Water Board) Low-Threat Closure Policy
NFA	No Further Action
OFD	Oakland Fire Department
OSHA	Occupational Safety & Health Administration
RCRA	Resource Conservation & Recovery Act of 1976
RWQCB	Regional Water Quality Control Board (Water Board)
SWRCB	(California) State Water Resources Control Board
USA	Underground Services Alert
VCP	Voluntary Cleanup Program

FIGURES 1 – 3



SITE VICINITY MAP
1607 2nd Avenue
Oakland, California

SCHUTZE & Associates, Inc. Project No. SCS539.1 March 2016	Source: USGS Oakland West 7.5 Quad 2015 (scale 1:24,000)	Figure 1



Depth (ft)	2.5	5
TPH-d	ND<1.0	ND<1.0
TPH-mo	ND<5.0	ND<5.0
TPH-ho	ND<1.0	ND<1.0
MBTEX	--	ND<0.0050
Naphthalene	--	ND<0.0050

Depth (ft)	2.5	7.5	10
TPH-d	ND<1.0	**2,700**	ND<1.0
TPH-mo	ND<5.0	**1,300**	ND<5.0
TPH-ho	ND<1.0	**1,500**	ND<1.0
MBTEX	--	ND<0.33	ND<0.0050
Naphthalene	--	**6.5**	ND<0.0050

Depth (ft)	8	10
TPH-d	15	ND<1.0
TPH-mo	34	ND<5.0
TPH-ho	6	ND<1.0
MBTEX	ND<0.0050	--
Naphthalene	ND<0.0050	--

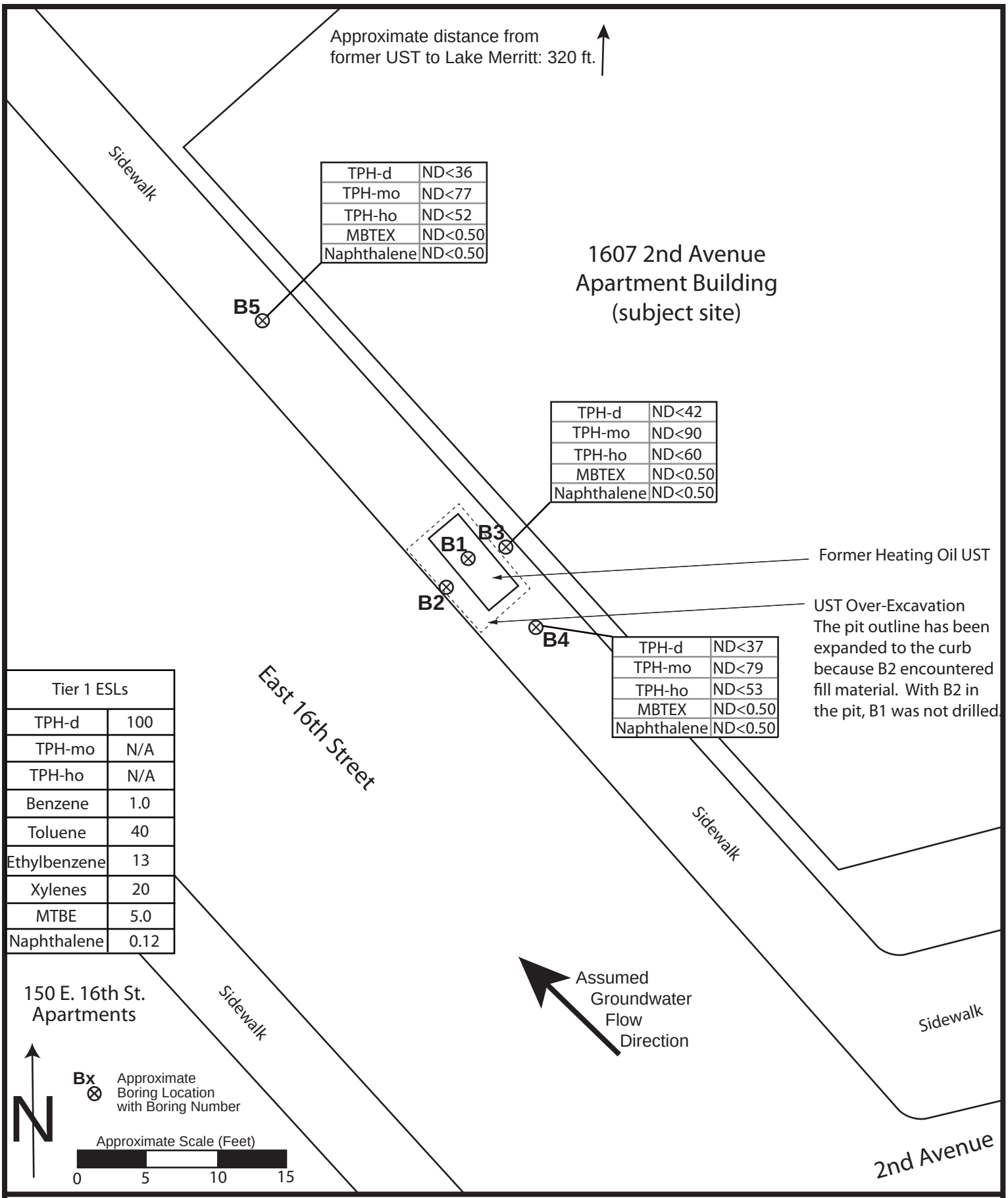
Depth (ft)	7.5
TPH-d	ND<1.0
TPH-mo	ND<5.0
TPH-ho	ND<1.0
MBTEX	--
Naphthalene	--

Tier 1 ESLs	
TPH-d	240
TPH-mo	100
TPH-ho	N/A
Benzene	0.044
Toluene	2.9
Ethylbenzene	1.4
Xylenes	2.3
MTBE	0.023
Naphthalene	0.023

Results for TPH and VOCs in Soil (reported in mg/kg)
1607 2nd Avenue
Oakland, Alameda County, California

SCHUTZE & Associates, Inc.
Project No.: SCS539.1

Figure 2
March 2016

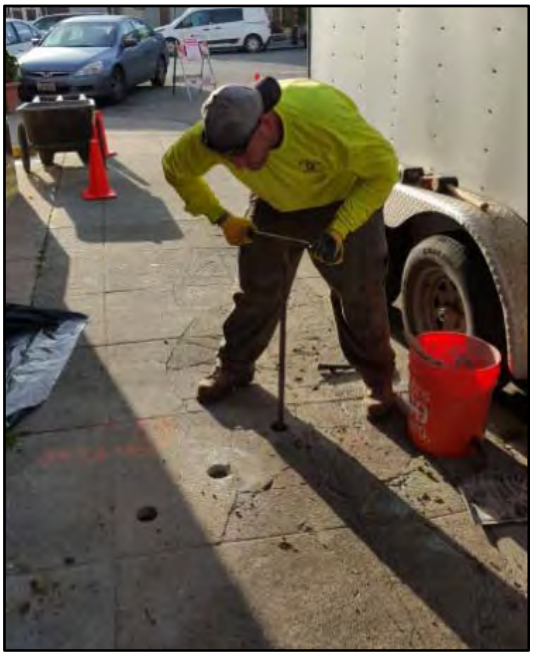


Results for TPH and VOCs in Groundwater (reported in µg/L)
1607 2nd Avenue
Oakland, Alameda County, California

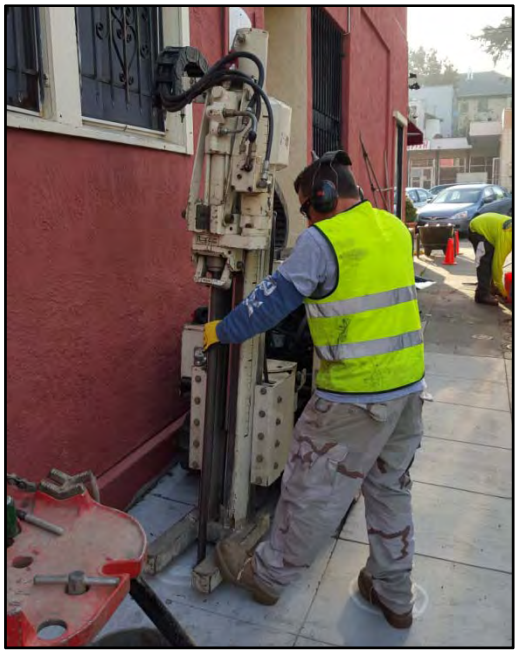
SCHUTZE & Associates, Inc.
Project No.: SCS539.1

Figure 3
March 2016

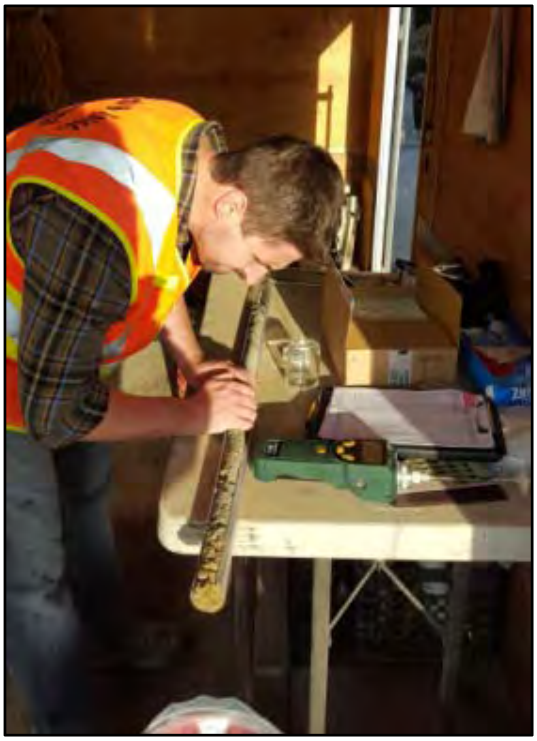
SITE PHOTOGRAPHS



Photograph 1: The first 2.5 feet of each boring was drilled using a hand auger.



Photograph 2: Drilling Boring B3 between the former UST pit and the apartment building.



Photograph 3: The plastic cores from the Geoprobe rig were cut open for geological logging.

Photograph 4: The soil borings were backfilled to ground surface with Portland neat cement grout.

APPENDIX A

BORING LOGS and SCHEMATIC CROSS SECTION

SCHUTZE & Associates

BORING LOG

Drilling Contractor: ECA	Boring Diameter: 1.5"	Boring Number: B2
Drilling Method: Geoprobe	Date Drilled: 2/12/2016	Logged By: KL

Sample Information					Lithology Symbol	Description of Lithology
Depth feet	Lab Sample	Sample Name	PID ppm	USCS Symbol		
						No recovery
			0.0	SW		Pea-gravel and sand fill (from previous over-excavation)
5						
		B-2-8	0.0			
						Gravely sand with silt and clay, medium stiff
10		B-2-10	0.0			
		B-2-12		CL		Sandy clay with some gravel, stiff, (10YR 5/3)
				SM		Silty sand, wet (aquifer), (5Y 5/4)
			0.0	SC		Clayey sand, stiff, moist
15						Boring terminated at 14 ft bgs
20						
25						

Completion Notes:

Tremie grouted with Portland cement

▼ = Water Table Surface

▽ = Piezometric Water Surface

Site:

1607 2nd Avenue
Oakland, Alameda County, California

Project No. SCS539.1

SCHUTZE & Associates

BORING LOG

Drilling Contractor: ECA	Boring Diameter: 1.5"	Boring Number: B3
Drilling Method: Geoprobe	Date Drilled: 2/12/2016	Logged By: KL

Sample Information					Lithology Symbol	Description of Lithology
Depth feet	Lab Sample	Sample Name	PID ppm	USCS Symbol		
						No recovery
		B-3-2.5	0.0	SW		Gravely sand, moist, weak cementation, (5Y 6/2)
5		B-3-5	0.0			
		B-3-7.5	103			Hydrocarbon odor and black staining from 7.0 to 7.5 ft bgs
			2.1	SC		Clayey sand with gravel, moist, weak cementation, (2.5Y 4/3), no visible staining and no odor
10		B-3-10	0.8			
▽			0.2	CL		Sandy clay, moist, very stiff, (2.5Y 4/2)
			0.2	SW		Gravely sand with silt and clay, (5Y 4/4)
		B-3-14.5	0.0	CL		Silty clay with sand, increase in moisture, soft, (5Y 4/2)
15			0.4			
			0.0			Sandy clay, moist, very stiff, (2.5Y 3/2)
			0.0			
20		B-3-20	0.0	SM		Silty Sand, moist, soft, (2.5Y 4/2)
			0.0	CL		Sandy clay, moist, very stiff, (5Y 5/2)
25						Boring terminated at 21.5 ft bgs

Completion Notes:

Tremie grouted with Portland cement

▼ = Water Table Surface

▽ = Piezometric Water Surface

Site:

1607 2nd Avenue
Oakland, Alameda County, California

SCHUTZE & Associates

BORING LOG

Drilling Contractor: ECA	Boring Diameter: 1.5"	Boring Number: B4
Drilling Method: Geoprobe	Date Drilled: 2/12/2016	Logged By: KL

Depth feet	Lab Sample	Sample Name	PID ppm	USCS Symbol	Lithology Symbol	Description of Lithology
		B-4-2.5	0.0	CL		Silty clay, stiff, (5Y 4/3)
						No recovery
5			0.0	SW		Gravely sand with silt, wet, (2.5Y 5/6)
		B-4-7.5	0.0			
				CL		Silty clay with sand, medium stiff, (5Y 4/3)
10		B-4-10	0.0			
			0.0			
			0.0			Sandy clay with silt, moist, soft, (5Y 4/3)
15		B-4-15.5	0.0			
			0.0			
20			0.0	SM		Silty sand, wet (aquifer), (5Y 4/3)
			0.0	CL		Sandy clay, moist, stiff, (5Y 4/2)
25						Boring terminated at 22 ft bgs

Completion Notes:

Tremie grouted with Portland cement

▼ = Water Table Surface

▽ = Piezometric Water Surface

Site:

1607 2nd Avenue
Oakland, Alameda County, California

Project No. SCS539.1

SCHUTZE & Associates

BORING LOG

Drilling Contractor: ECA	Boring Diameter: 1.5"	Boring Number: B5
Drilling Method: Geoprobe	Date Drilled: 2/12/2016	Logged By: KL

Depth feet	Lab Sample	Sample Name	PID ppm	USCS Symbol	Lithology Symbol	Description of Lithology
				SW		Gravely sand fill
		B-5-2.5	0.0	ML		Clayey silt with some sand, moist, very stiff, (2.5Y 4/3)
5		B-5-5	0.0			
		B-5-7.5	0.0	SC		Clayey sand with gravel, soft, moist, (2.5Y 5/2)
10		B-5-10	0.0	SM		Silty sand, weak cementation, moist, (5Y 5/3)
			0.0	SW		Gravely sand, wet (aquifer), (5Y 5/3)
			0.0	ML		Sandy silt with clay, stiff, moist
15		B-5-15	0.0			Boring terminated at 15 ft bgs
20						
25						

Completion Notes:

Tremie grouted with Portland cement

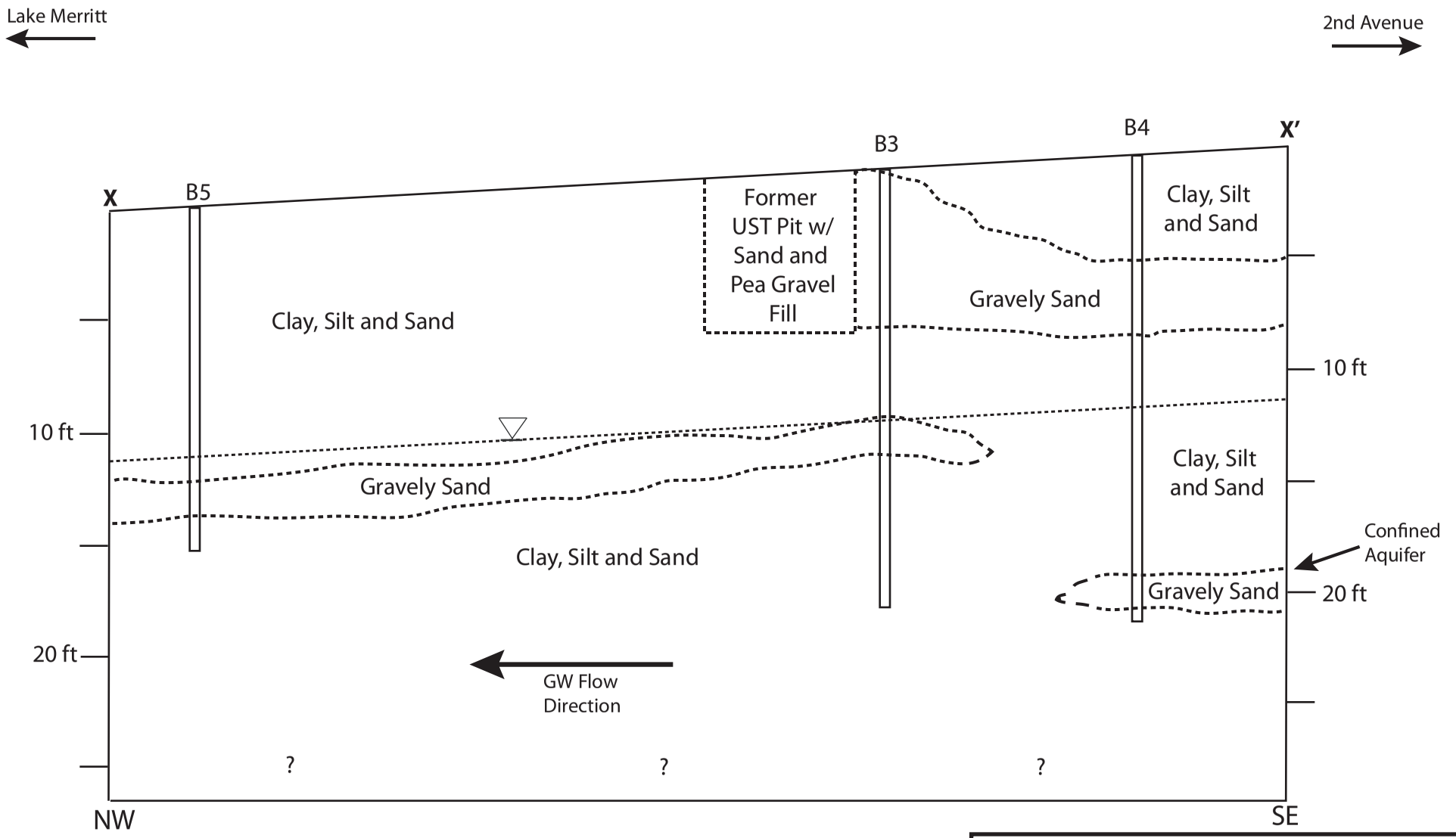
▼ = Water Table Surface

▽ = Piezometric Water Surface

Site:

1607 2nd Avenue
Oakland, Alameda County, California

Project No. SCS539.1



X - X' SCHEMATIC CROSS SECTION
1607 2nd Avenue
Oakland, California

SCHUTZE & Associates, Inc.
Project No. SCS539.1

March 2016

APPENDIX B

PERMITS

Alameda County Public Works Agency - Water Resources Well Permit

Public Works Agency
Alameda County

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 02/02/2016 By jamesy

Permit Numbers: W2016-0061
Permits Valid from 02/12/2016 to 02/12/2016

Application Id:	1453939324659	**City of Project Site:**	Oakland
Site Location:	1607 2nd Avenue Oakland, CA 94606		
Project Start Date:	02/12/2016	**Completion Date:**	02/12/2016
Assigned Inspector:	Contact Lindsay Furuyama at (925) 956-2311 or Lfuruyama@groundzonees.com		
Applicant:	Schutze & Associates, Inc - Kevin Loeb 44358 South Grimmer Blvd., Fremont, CA 94538	**Phone:**	510-226-9944
Property Owner:	1607 2nd Ave, LLC Representative- Harry Tung 4096 Piedmont Avenue # 150, Oakland, CA 94611	**Phone:**	--
Client:	Harry Tung 4096 Piedmont Avenue # 150, Oakland, CA 94611	**Phone:**	--
Contact:	Jan Schutze	**Phone:** **Cell:**	510-226-9944 415-517-8100

	Total Due:	$265.00
Receipt Number: WR2016-0044	**Total Amount Paid:**	$265.00
Payer Name : Jan Schutze	Paid By: VISA	**PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Investigation-Contamination Study - 5 Boreholes
Driller: Environmental Control Associates, Inc - Lic #: 695970 - Method: DP **Work Total: $265.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2016-0061	02/02/2016	05/12/2016	5	1.50 in.	30.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

4. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the

permits and requirements have been approved or obtained.

5. Applicant shall contact assigned inspector listed on the top of the permit at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

6. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

7. Electronic Reporting Regulations (Chapter 30, Division 3 of Title 23 & Division 3 of Title 27, CCR) require electronic submission of any report or data required by a regulatory agency from a cleanup site. Submission dates are set by a Regional Water Board or by a regulatory agency. Once a report/data is successfully uploaded, as required, you have met the reporting requirement (i.e. the compliance measure for electronic submittals is the actual upload itself). The upload date should be on or prior to the regulatory due date.

8. NOTE:
Under California laws, the owner/operator are responsible for reporting the contamination to the governmental regulatory agencies under Section 25295(a). The owner/operator is liable for civil penalties under Section 25299(a)(4) and criminal penalties under Section 25299(d) for failure to report a leak. The owner/operator is liable for civil penalties under Section 25299(b)(4) for knowing failure to ensure compliance with the law by the operator. These penalty provisions do not apply to a potential buyer.

9. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

CITY OF OAKLAND • Community and Economic Development Agency
250 Frank H. Ogawa Plaza, 2nd Floor, Oakland, CA 94612 • Phone (510) 238-3443 • Fax (510) 238-2263

JOB SITE

CHECK REVERSE

CITY OF OAKLAND

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: X1600253 OPW - Excavation

Filed Date: 2/5/2016

Job Site: 1607 2ND AVE

Schedule Inspection by calling: [redacted]

Parcel No: 020 018200300

District:

For SL; X; and CGS permits see **SPECIAL NOTE** below

Project Description: Soil boring(s) on E 16th St near 2nd Avenue; see site plan.
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.
No impact on traffic lane (vehicular or pedestrian) allowed without approved Traffic Control Plan.
Contact: K Loeb 510 468-4151
Permit valid 90 days.
Separate Obstruction permit required to reserve/block parking lane.
Call PWA INSPECTION prior to start: 510-238-3651. 4th FLOOR.

Related Permits:

	Name	Applicant	Address	Phone	License #
Owner:	1607 2ND AVENUE LLC		4096 PIEDMONT AVE OAKLAND, CA		
Contractor-Employee:	ENVIRONMENTAL CONTROL ASSOCIATES	X	3011 TWIN PALMS DRIVE APTOS, CA	(831) 662-8178	
Contractor:	ENVIRONMENTAL CONTROL ASSOCIATES		3011 TWIN PALMS DRIVE APTOS, CA	(831) 662-8178	695970

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:

TOTAL FEES TO BE PAID AT FILING: $434.91

Application Fee	$70.00	Excavation - Private Party Type	$309.00	Records Management Fee	$36.01
Technology Enhancement Fee	$19.90				

Plans Checked By _____ Date _____ Permit Issued By _____ Date 2/5

Finalized By _____ Date _____

ADDRESS: _____

DIST: _____

SPECIAL NOTE

- For SL; X; and CGS permits Call PWA INSPECTION prior to start: 510-238-3651 or visit 4th FLOOR.
- SL and X permits valid 90 days; CGS permits valid 30 days

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.
Applications for which no permit is issued within 180 days shall expire by limitation. No refund after 180 days when expired.

JOB SITE

CITY OF OAKLAND

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: OB1600132 Obstruction **Filed Date:** 2/5/2016

Job Site: 1607 2ND AVE **Schedule Inspection by calling:** 510-238-3444

Parcel No: 020 018200300

District:

Project Description: Reserve 2 NON-METERED parking in front of parcel only for dumpster, construction vehicle, moving van or storage pod. One space NO FEE re: X1600253. Post 72 hours prior; comply with terms set forth in CVC Section 22651 (m). No impact on traffic lane or sidewalk allowed. To Have Illegally Parked Vehicle Ticketed Call 510-777-3333. Applicant arranges towing. For Towed Vehicle: Call 510-238-3021.
Re: Soil boring(s) on E 16th St near 2nd Avenue; see site plan.
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.
Contact: K Loeb 510 468-4151
Call PWA INSPECTION prior to start: 510-238-3651. 4th FLOOR.

Related Permits: X1600253

	Name	Applicant	Address	Phone	License #
Owner:	1607 2ND AVENUE LLC		4096 PIEDMONT AVE OAKLAND, CA		
Contractor-Employee:	ENVIRONMENTAL CONTROL ASSOCIATES	X	3011 TWIN PALMS DRIVE APTOS, CA	(831) 662-8178	
Contractor:	ENVIRONMENTAL CONTROL ASSOCIATES		3011 TWIN PALMS DRIVE APTOS, CA	(831) 662-8178	695970

PERMIT DETAILS: Building/Public Use/Activity/Obstructions

Work Information

Start Date: 02/12/2016
End Date: 02/12/2016

Obstruction Permit Type: Short Term (Max 14 Days)
Number of Meters (Metered Area):
Length Of Obstruction (Unmetered Area): 25

TOTAL FEES TO BE PAID AT FILING: $99.84

Application Fee	$70.00	Records Management Fee	$8.27	Short Term Permits	$17.00
Technology Enhancement Fee	$4.57				

Plans Checked By _____ Date _____ Permit Issued By _____ Date 2.5

Finalized By _____ Date _____

ADDRESS: _____

DIST: _____

APPENDIX C

LABORATORY REPORTS

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1602592 **Amended:** 02/22/2016

Report Created for: Schutze & Associates, Inc.

44358 South Grimmer Blvd
Fremont, CA 94538

Project Contact: Kevin Loeb
Project P.O.:
Project Name: SCS539; Tung

Project Received: 02/16/2016

Analytical Report reviewed & approved for release on 02/22/2016 by:

Angela Rydelius,
Laboratory Manager

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Glossary of Terms & Qualifier Definitions

Client: Schutze & Associates, Inc.
Project: SCS539; Tung
WorkOrder: 1602592

Glossary Abbreviation

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
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)

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Glossary of Terms & Qualifier Definitions

Client: Schutze & Associates, Inc.
Project: SCS539; Tung
WorkOrder: 1602592

Analytical Qualifiers

S	Surrogate spike recovery outside accepted recovery limits
C1	surrogate recovery outside of the control limits due to the dilution of the sample.
e1	unmodified or weakly modified diesel is significant
e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant

Quality Control Qualifiers

F1	MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validated the prep batch.
F3	the surrogate standard recovery and/or RPD is outside of acceptance limits.
F8	MS/MSD recovery and/or RPD was out of acceptance criteria; PDS validated the prep batch. If PDS recovery was out of acceptance criteria, DLT validated the prep batch.

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Received:	2/16/16 20:36	**Extraction Method:**	SW5030B
Date Prepared:	2/16/16	**Analytical Method:**	SW8260B
Project:	SCS539; Tung	**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-5-5	1602592-002A	Soil	02/12/2016 10:00	GC18	116749

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	02/19/2016 16:22
tert-Amyl methyl ether (TAME)	ND	0.0050	1	02/19/2016 16:22
Benzene	ND	0.0050	1	02/19/2016 16:22
Bromobenzene	ND	0.0050	1	02/19/2016 16:22
Bromochloromethane	ND	0.0050	1	02/19/2016 16:22
Bromodichloromethane	ND	0.0050	1	02/19/2016 16:22
Bromoform	ND	0.0050	1	02/19/2016 16:22
Bromomethane	ND	0.0050	1	02/19/2016 16:22
2-Butanone (MEK)	ND	0.020	1	02/19/2016 16:22
t-Butyl alcohol (TBA)	ND	0.050	1	02/19/2016 16:22
n-Butyl benzene	ND	0.0050	1	02/19/2016 16:22
sec-Butyl benzene	ND	0.0050	1	02/19/2016 16:22
tert-Butyl benzene	ND	0.0050	1	02/19/2016 16:22
Carbon Disulfide	ND	0.0050	1	02/19/2016 16:22
Carbon Tetrachloride	ND	0.0050	1	02/19/2016 16:22
Chlorobenzene	ND	0.0050	1	02/19/2016 16:22
Chloroethane	ND	0.0050	1	02/19/2016 16:22
Chloroform	ND	0.0050	1	02/19/2016 16:22
Chloromethane	ND	0.0050	1	02/19/2016 16:22
2-Chlorotoluene	ND	0.0050	1	02/19/2016 16:22
4-Chlorotoluene	ND	0.0050	1	02/19/2016 16:22
Dibromochloromethane	ND	0.0050	1	02/19/2016 16:22
1,2-Dibromo-3-chloropropane	ND	0.0040	1	02/19/2016 16:22
1,2-Dibromoethane (EDB)	ND	0.0040	1	02/19/2016 16:22
Dibromomethane	ND	0.0050	1	02/19/2016 16:22
1,2-Dichlorobenzene	ND	0.0050	1	02/19/2016 16:22
1,3-Dichlorobenzene	ND	0.0050	1	02/19/2016 16:22
1,4-Dichlorobenzene	ND	0.0050	1	02/19/2016 16:22
Dichlorodifluoromethane	ND	0.0050	1	02/19/2016 16:22
1,1-Dichloroethane	ND	0.0050	1	02/19/2016 16:22
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	02/19/2016 16:22
1,1-Dichloroethene	ND	0.0050	1	02/19/2016 16:22
cis-1,2-Dichloroethene	ND	0.0050	1	02/19/2016 16:22
trans-1,2-Dichloroethene	ND	0.0050	1	02/19/2016 16:22
1,2-Dichloropropane	ND	0.0050	1	02/19/2016 16:22
1,3-Dichloropropane	ND	0.0050	1	02/19/2016 16:22
2,2-Dichloropropane	ND	0.0050	1	02/19/2016 16:22

(Cont.)

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"When Quality Counts"

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Received:	2/16/16 20:36	**Extraction Method:**	SW5030B
Date Prepared:	2/16/16	**Analytical Method:**	SW8260B
Project:	SCS539; Tung	**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-5-5	1602592-002A	Soil	02/12/2016 10:00	GC18	116749

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	02/19/2016 16:22
cis-1,3-Dichloropropene	ND	0.0050	1	02/19/2016 16:22
trans-1,3-Dichloropropene	ND	0.0050	1	02/19/2016 16:22
Diisopropyl ether (DIPE)	ND	0.0050	1	02/19/2016 16:22
Ethylbenzene	ND	0.0050	1	02/19/2016 16:22
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	02/19/2016 16:22
Freon 113	ND	0.0050	1	02/19/2016 16:22
Hexachlorobutadiene	ND	0.0050	1	02/19/2016 16:22
Hexachloroethane	ND	0.0050	1	02/19/2016 16:22
2-Hexanone	ND	0.0050	1	02/19/2016 16:22
Isopropylbenzene	ND	0.0050	1	02/19/2016 16:22
4-Isopropyl toluene	ND	0.0050	1	02/19/2016 16:22
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	02/19/2016 16:22
Methylene chloride	ND	0.0050	1	02/19/2016 16:22
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	02/19/2016 16:22
Naphthalene	ND	0.0050	1	02/19/2016 16:22
n-Propyl benzene	ND	0.0050	1	02/19/2016 16:22
Styrene	ND	0.0050	1	02/19/2016 16:22
1,1,1,2-Tetrachloroethane	ND	0.0050	1	02/19/2016 16:22
1,1,2,2-Tetrachloroethane	ND	0.0050	1	02/19/2016 16:22
Tetrachloroethene	ND	0.0050	1	02/19/2016 16:22
Toluene	ND	0.0050	1	02/19/2016 16:22
1,2,3-Trichlorobenzene	ND	0.0050	1	02/19/2016 16:22
1,2,4-Trichlorobenzene	ND	0.0050	1	02/19/2016 16:22
1,1,1-Trichloroethane	ND	0.0050	1	02/19/2016 16:22
1,1,2-Trichloroethane	ND	0.0050	1	02/19/2016 16:22
Trichloroethene	ND	0.0050	1	02/19/2016 16:22
Trichlorofluoromethane	ND	0.0050	1	02/19/2016 16:22
1,2,3-Trichloropropane	ND	0.0050	1	02/19/2016 16:22
1,2,4-Trimethylbenzene	ND	0.0050	1	02/19/2016 16:22
1,3,5-Trimethylbenzene	ND	0.0050	1	02/19/2016 16:22
Vinyl Chloride	ND	0.0050	1	02/19/2016 16:22
Xylenes, Total	ND	0.0050	1	02/19/2016 16:22

(Cont.)

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http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Received:	2/16/16 20:36	**Extraction Method:**	SW5030B
Date Prepared:	2/16/16	**Analytical Method:**	SW8260B
Project:	SCS539; Tung	**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-5-5	1602592-002A	Soil	02/12/2016 10:00	GC18	116749

Analytes	Result	RL	DF	Date Analyzed
Surrogates	**REC (%)**	**Limits**		
Dibromofluoromethane	117	70-130		02/19/2016 16:22
Toluene-d8	113	70-130		02/19/2016 16:22
4-BFB	88	70-130		02/19/2016 16:22
Benzene-d6	121	60-140		02/19/2016 16:22
Ethylbenzene-d10	108	60-140		02/19/2016 16:22
1,2-DCB-d4	109	60-140		02/19/2016 16:22

Analyst(s): AK

(Cont.)

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Received:	2/16/16 20:36	**Extraction Method:**	SW5030B
Date Prepared:	2/16/16	**Analytical Method:**	SW8260B
Project:	SCS539; Tung	**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-3-7.5	1602592-008A	Soil	02/12/2016 08:30	GC10	116749

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	6.7	67	02/20/2016 13:01
tert-Amyl methyl ether (TAME)	ND	0.33	67	02/20/2016 13:01
Benzene	ND	0.33	67	02/20/2016 13:01
Bromobenzene	ND	0.33	67	02/20/2016 13:01
Bromochloromethane	ND	0.33	67	02/20/2016 13:01
Bromodichloromethane	ND	0.33	67	02/20/2016 13:01
Bromoform	ND	0.33	67	02/20/2016 13:01
Bromomethane	ND	0.33	67	02/20/2016 13:01
2-Butanone (MEK)	ND	1.3	67	02/20/2016 13:01
t-Butyl alcohol (TBA)	ND	3.3	67	02/20/2016 13:01
n-Butyl benzene	ND	0.33	67	02/20/2016 13:01
sec-Butyl benzene	ND	0.33	67	02/20/2016 13:01
tert-Butyl benzene	ND	0.33	67	02/20/2016 13:01
Carbon Disulfide	ND	0.33	67	02/20/2016 13:01
Carbon Tetrachloride	ND	0.33	67	02/20/2016 13:01
Chlorobenzene	ND	0.33	67	02/20/2016 13:01
Chloroethane	ND	0.33	67	02/20/2016 13:01
Chloroform	ND	0.33	67	02/20/2016 13:01
Chloromethane	ND	0.33	67	02/20/2016 13:01
2-Chlorotoluene	ND	0.33	67	02/20/2016 13:01
4-Chlorotoluene	ND	0.33	67	02/20/2016 13:01
Dibromochloromethane	ND	0.33	67	02/20/2016 13:01
1,2-Dibromo-3-chloropropane	ND	0.27	67	02/20/2016 13:01
1,2-Dibromoethane (EDB)	ND	0.27	67	02/20/2016 13:01
Dibromomethane	ND	0.33	67	02/20/2016 13:01
1,2-Dichlorobenzene	ND	0.33	67	02/20/2016 13:01
1,3-Dichlorobenzene	ND	0.33	67	02/20/2016 13:01
1,4-Dichlorobenzene	ND	0.33	67	02/20/2016 13:01
Dichlorodifluoromethane	ND	0.33	67	02/20/2016 13:01
1,1-Dichloroethane	ND	0.33	67	02/20/2016 13:01
1,2-Dichloroethane (1,2-DCA)	ND	0.27	67	02/20/2016 13:01
1,1-Dichloroethene	ND	0.33	67	02/20/2016 13:01
cis-1,2-Dichloroethene	ND	0.33	67	02/20/2016 13:01
trans-1,2-Dichloroethene	ND	0.33	67	02/20/2016 13:01
1,2-Dichloropropane	ND	0.33	67	02/20/2016 13:01
1,3-Dichloropropane	ND	0.33	67	02/20/2016 13:01
2,2-Dichloropropane	ND	0.33	67	02/20/2016 13:01

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Received:	2/16/16 20:36	**Extraction Method:**	SW5030B
Date Prepared:	2/16/16	**Analytical Method:**	SW8260B
Project:	SCS539; Tung	**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-3-7.5	1602592-008A	Soil	02/12/2016 08:30	GC10	116749

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.33	67	02/20/2016 13:01
cis-1,3-Dichloropropene	ND	0.33	67	02/20/2016 13:01
trans-1,3-Dichloropropene	ND	0.33	67	02/20/2016 13:01
Diisopropyl ether (DIPE)	ND	0.33	67	02/20/2016 13:01
Ethylbenzene	ND	0.33	67	02/20/2016 13:01
Ethyl tert-butyl ether (ETBE)	ND	0.33	67	02/20/2016 13:01
Freon 113	ND	0.33	67	02/20/2016 13:01
Hexachlorobutadiene	ND	0.33	67	02/20/2016 13:01
Hexachloroethane	ND	0.33	67	02/20/2016 13:01
2-Hexanone	ND	0.33	67	02/20/2016 13:01
Isopropylbenzene	ND	0.33	67	02/20/2016 13:01
4-Isopropyl toluene	ND	0.33	67	02/20/2016 13:01
Methyl-t-butyl ether (MTBE)	ND	0.33	67	02/20/2016 13:01
Methylene chloride	ND	0.33	67	02/20/2016 13:01
4-Methyl-2-pentanone (MIBK)	ND	0.33	67	02/20/2016 13:01
Naphthalene	**6.5**	0.33	67	02/20/2016 13:01
n-Propyl benzene	ND	0.33	67	02/20/2016 13:01
Styrene	ND	0.33	67	02/20/2016 13:01
1,1,1,2-Tetrachloroethane	ND	0.33	67	02/20/2016 13:01
1,1,2,2-Tetrachloroethane	ND	0.33	67	02/20/2016 13:01
Tetrachloroethene	ND	0.33	67	02/20/2016 13:01
Toluene	ND	0.33	67	02/20/2016 13:01
1,2,3-Trichlorobenzene	ND	0.33	67	02/20/2016 13:01
1,2,4-Trichlorobenzene	ND	0.33	67	02/20/2016 13:01
1,1,1-Trichloroethane	ND	0.33	67	02/20/2016 13:01
1,1,2-Trichloroethane	ND	0.33	67	02/20/2016 13:01
Trichloroethene	ND	0.33	67	02/20/2016 13:01
Trichlorofluoromethane	ND	0.33	67	02/20/2016 13:01
1,2,3-Trichloropropane	ND	0.33	67	02/20/2016 13:01
1,2,4-Trimethylbenzene	**1.0**	0.33	67	02/20/2016 13:01
1,3,5-Trimethylbenzene	ND	0.33	67	02/20/2016 13:01
Vinyl Chloride	ND	0.33	67	02/20/2016 13:01
Xylenes, Total	ND	0.33	67	02/20/2016 13:01

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Received:	2/16/16 20:36	**Extraction Method:**	SW5030B
Date Prepared:	2/16/16	**Analytical Method:**	SW8260B
Project:	SCS539; Tung	**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-3-7.5	1602592-008A	Soil	02/12/2016 08:30	GC10	116749

Analytes	Result	RL	DF	Date Analyzed
Surrogates	**REC (%)**	**Limits**		
Dibromofluoromethane	108	70-130		02/20/2016 13:01
Toluene-d8	111	70-130		02/20/2016 13:01
4-BFB	87	70-130		02/20/2016 13:01
Benzene-d6	95	60-140		02/20/2016 13:01
Ethylbenzene-d10	94	60-140		02/20/2016 13:01
1,2-DCB-d4	96	60-140		02/20/2016 13:01

Analyst(s): AK

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Received:	2/16/16 20:36	**Extraction Method:**	SW5030B
Date Prepared:	2/16/16	**Analytical Method:**	SW8260B
Project:	SCS539; Tung	**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-3-10	1602592-009A	Soil	02/12/2016 08:30	GC18	116749

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	02/19/2016 17:01
tert-Amyl methyl ether (TAME)	ND	0.0050	1	02/19/2016 17:01
Benzene	ND	0.0050	1	02/19/2016 17:01
Bromobenzene	ND	0.0050	1	02/19/2016 17:01
Bromochloromethane	ND	0.0050	1	02/19/2016 17:01
Bromodichloromethane	ND	0.0050	1	02/19/2016 17:01
Bromoform	ND	0.0050	1	02/19/2016 17:01
Bromomethane	ND	0.0050	1	02/19/2016 17:01
2-Butanone (MEK)	ND	0.020	1	02/19/2016 17:01
t-Butyl alcohol (TBA)	ND	0.050	1	02/19/2016 17:01
n-Butyl benzene	ND	0.0050	1	02/19/2016 17:01
sec-Butyl benzene	ND	0.0050	1	02/19/2016 17:01
tert-Butyl benzene	ND	0.0050	1	02/19/2016 17:01
Carbon Disulfide	ND	0.0050	1	02/19/2016 17:01
Carbon Tetrachloride	ND	0.0050	1	02/19/2016 17:01
Chlorobenzene	ND	0.0050	1	02/19/2016 17:01
Chloroethane	ND	0.0050	1	02/19/2016 17:01
Chloroform	ND	0.0050	1	02/19/2016 17:01
Chloromethane	ND	0.0050	1	02/19/2016 17:01
2-Chlorotoluene	ND	0.0050	1	02/19/2016 17:01
4-Chlorotoluene	ND	0.0050	1	02/19/2016 17:01
Dibromochloromethane	ND	0.0050	1	02/19/2016 17:01
1,2-Dibromo-3-chloropropane	ND	0.0040	1	02/19/2016 17:01
1,2-Dibromoethane (EDB)	ND	0.0040	1	02/19/2016 17:01
Dibromomethane	ND	0.0050	1	02/19/2016 17:01
1,2-Dichlorobenzene	ND	0.0050	1	02/19/2016 17:01
1,3-Dichlorobenzene	ND	0.0050	1	02/19/2016 17:01
1,4-Dichlorobenzene	ND	0.0050	1	02/19/2016 17:01
Dichlorodifluoromethane	ND	0.0050	1	02/19/2016 17:01
1,1-Dichloroethane	ND	0.0050	1	02/19/2016 17:01
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	02/19/2016 17:01
1,1-Dichloroethene	ND	0.0050	1	02/19/2016 17:01
cis-1,2-Dichloroethene	ND	0.0050	1	02/19/2016 17:01
trans-1,2-Dichloroethene	ND	0.0050	1	02/19/2016 17:01
1,2-Dichloropropane	ND	0.0050	1	02/19/2016 17:01
1,3-Dichloropropane	ND	0.0050	1	02/19/2016 17:01
2,2-Dichloropropane	ND	0.0050	1	02/19/2016 17:01

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Received:	2/16/16 20:36	**Extraction Method:**	SW5030B
Date Prepared:	2/16/16	**Analytical Method:**	SW8260B
Project:	SCS539; Tung	**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-3-10	1602592-009A	Soil	02/12/2016 08:30	GC18	116749

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	02/19/2016 17:01
cis-1,3-Dichloropropene	ND	0.0050	1	02/19/2016 17:01
trans-1,3-Dichloropropene	ND	0.0050	1	02/19/2016 17:01
Diisopropyl ether (DIPE)	ND	0.0050	1	02/19/2016 17:01
Ethylbenzene	ND	0.0050	1	02/19/2016 17:01
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	02/19/2016 17:01
Freon 113	ND	0.0050	1	02/19/2016 17:01
Hexachlorobutadiene	ND	0.0050	1	02/19/2016 17:01
Hexachloroethane	ND	0.0050	1	02/19/2016 17:01
2-Hexanone	ND	0.0050	1	02/19/2016 17:01
Isopropylbenzene	ND	0.0050	1	02/19/2016 17:01
4-Isopropyl toluene	ND	0.0050	1	02/19/2016 17:01
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	02/19/2016 17:01
Methylene chloride	ND	0.0050	1	02/19/2016 17:01
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	02/19/2016 17:01
Naphthalene	ND	0.0050	1	02/19/2016 17:01
n-Propyl benzene	ND	0.0050	1	02/19/2016 17:01
Styrene	ND	0.0050	1	02/19/2016 17:01
1,1,1,2-Tetrachloroethane	ND	0.0050	1	02/19/2016 17:01
1,1,2,2-Tetrachloroethane	ND	0.0050	1	02/19/2016 17:01
Tetrachloroethene	ND	0.0050	1	02/19/2016 17:01
Toluene	ND	0.0050	1	02/19/2016 17:01
1,2,3-Trichlorobenzene	ND	0.0050	1	02/19/2016 17:01
1,2,4-Trichlorobenzene	ND	0.0050	1	02/19/2016 17:01
1,1,1-Trichloroethane	ND	0.0050	1	02/19/2016 17:01
1,1,2-Trichloroethane	ND	0.0050	1	02/19/2016 17:01
Trichloroethene	ND	0.0050	1	02/19/2016 17:01
Trichlorofluoromethane	ND	0.0050	1	02/19/2016 17:01
1,2,3-Trichloropropane	ND	0.0050	1	02/19/2016 17:01
1,2,4-Trimethylbenzene	ND	0.0050	1	02/19/2016 17:01
1,3,5-Trimethylbenzene	ND	0.0050	1	02/19/2016 17:01
Vinyl Chloride	ND	0.0050	1	02/19/2016 17:01
Xylenes, Total	ND	0.0050	1	02/19/2016 17:01

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Received:	2/16/16 20:36	**Extraction Method:**	SW5030B
Date Prepared:	2/16/16	**Analytical Method:**	SW8260B
Project:	SCS539; Tung	**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-3-10	1602592-009A	Soil	02/12/2016 08:30	GC18	116749

Analytes	Result	RL	DF	Date Analyzed
Surrogates	**REC (%)**	**Limits**		
Dibromofluoromethane	117	70-130		02/19/2016 17:01
Toluene-d8	112	70-130		02/19/2016 17:01
4-BFB	85	70-130		02/19/2016 17:01
Benzene-d6	117	60-140		02/19/2016 17:01
Ethylbenzene-d10	105	60-140		02/19/2016 17:01
1,2-DCB-d4	104	60-140		02/19/2016 17:01

Analyst(s): AK

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Received:	2/16/16 20:36	**Extraction Method:**	SW5030B
Date Prepared:	2/16/16	**Analytical Method:**	SW8260B
Project:	SCS539; Tung	**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-2-8	1602592-016A	Soil	02/12/2016 12:15	GC18	116749

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	0.10	1	02/19/2016 17:39
tert-Amyl methyl ether (TAME)	ND	0.0050	1	02/19/2016 17:39
Benzene	ND	0.0050	1	02/19/2016 17:39
Bromobenzene	ND	0.0050	1	02/19/2016 17:39
Bromochloromethane	ND	0.0050	1	02/19/2016 17:39
Bromodichloromethane	ND	0.0050	1	02/19/2016 17:39
Bromoform	ND	0.0050	1	02/19/2016 17:39
Bromomethane	ND	0.0050	1	02/19/2016 17:39
2-Butanone (MEK)	ND	0.020	1	02/19/2016 17:39
t-Butyl alcohol (TBA)	ND	0.050	1	02/19/2016 17:39
n-Butyl benzene	ND	0.0050	1	02/19/2016 17:39
sec-Butyl benzene	ND	0.0050	1	02/19/2016 17:39
tert-Butyl benzene	ND	0.0050	1	02/19/2016 17:39
Carbon Disulfide	ND	0.0050	1	02/19/2016 17:39
Carbon Tetrachloride	ND	0.0050	1	02/19/2016 17:39
Chlorobenzene	ND	0.0050	1	02/19/2016 17:39
Chloroethane	ND	0.0050	1	02/19/2016 17:39
Chloroform	ND	0.0050	1	02/19/2016 17:39
Chloromethane	ND	0.0050	1	02/19/2016 17:39
2-Chlorotoluene	ND	0.0050	1	02/19/2016 17:39
4-Chlorotoluene	ND	0.0050	1	02/19/2016 17:39
Dibromochloromethane	ND	0.0050	1	02/19/2016 17:39
1,2-Dibromo-3-chloropropane	ND	0.0040	1	02/19/2016 17:39
1,2-Dibromoethane (EDB)	ND	0.0040	1	02/19/2016 17:39
Dibromomethane	ND	0.0050	1	02/19/2016 17:39
1,2-Dichlorobenzene	ND	0.0050	1	02/19/2016 17:39
1,3-Dichlorobenzene	ND	0.0050	1	02/19/2016 17:39
1,4-Dichlorobenzene	ND	0.0050	1	02/19/2016 17:39
Dichlorodifluoromethane	ND	0.0050	1	02/19/2016 17:39
1,1-Dichloroethane	ND	0.0050	1	02/19/2016 17:39
1,2-Dichloroethane (1,2-DCA)	ND	0.0040	1	02/19/2016 17:39
1,1-Dichloroethene	ND	0.0050	1	02/19/2016 17:39
cis-1,2-Dichloroethene	ND	0.0050	1	02/19/2016 17:39
trans-1,2-Dichloroethene	ND	0.0050	1	02/19/2016 17:39
1,2-Dichloropropane	ND	0.0050	1	02/19/2016 17:39
1,3-Dichloropropane	ND	0.0050	1	02/19/2016 17:39
2,2-Dichloropropane	ND	0.0050	1	02/19/2016 17:39

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Received:	2/16/16 20:36	**Extraction Method:**	SW5030B
Date Prepared:	2/16/16	**Analytical Method:**	SW8260B
Project:	SCS539; Tung	**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-2-8	1602592-016A	Soil	02/12/2016 12:15	GC18	116749

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.0050	1	02/19/2016 17:39
cis-1,3-Dichloropropene	ND	0.0050	1	02/19/2016 17:39
trans-1,3-Dichloropropene	ND	0.0050	1	02/19/2016 17:39
Diisopropyl ether (DIPE)	ND	0.0050	1	02/19/2016 17:39
Ethylbenzene	ND	0.0050	1	02/19/2016 17:39
Ethyl tert-butyl ether (ETBE)	ND	0.0050	1	02/19/2016 17:39
Freon 113	ND	0.0050	1	02/19/2016 17:39
Hexachlorobutadiene	ND	0.0050	1	02/19/2016 17:39
Hexachloroethane	ND	0.0050	1	02/19/2016 17:39
2-Hexanone	ND	0.0050	1	02/19/2016 17:39
Isopropylbenzene	ND	0.0050	1	02/19/2016 17:39
4-Isopropyl toluene	ND	0.0050	1	02/19/2016 17:39
Methyl-t-butyl ether (MTBE)	ND	0.0050	1	02/19/2016 17:39
Methylene chloride	ND	0.0050	1	02/19/2016 17:39
4-Methyl-2-pentanone (MIBK)	ND	0.0050	1	02/19/2016 17:39
Naphthalene	ND	0.0050	1	02/19/2016 17:39
n-Propyl benzene	ND	0.0050	1	02/19/2016 17:39
Styrene	ND	0.0050	1	02/19/2016 17:39
1,1,1,2-Tetrachloroethane	ND	0.0050	1	02/19/2016 17:39
1,1,2,2-Tetrachloroethane	ND	0.0050	1	02/19/2016 17:39
Tetrachloroethene	ND	0.0050	1	02/19/2016 17:39
Toluene	ND	0.0050	1	02/19/2016 17:39
1,2,3-Trichlorobenzene	ND	0.0050	1	02/19/2016 17:39
1,2,4-Trichlorobenzene	ND	0.0050	1	02/19/2016 17:39
1,1,1-Trichloroethane	ND	0.0050	1	02/19/2016 17:39
1,1,2-Trichloroethane	ND	0.0050	1	02/19/2016 17:39
Trichloroethene	ND	0.0050	1	02/19/2016 17:39
Trichlorofluoromethane	ND	0.0050	1	02/19/2016 17:39
1,2,3-Trichloropropane	ND	0.0050	1	02/19/2016 17:39
1,2,4-Trimethylbenzene	ND	0.0050	1	02/19/2016 17:39
1,3,5-Trimethylbenzene	ND	0.0050	1	02/19/2016 17:39
Vinyl Chloride	ND	0.0050	1	02/19/2016 17:39
Xylenes, Total	ND	0.0050	1	02/19/2016 17:39

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Received:	2/16/16 20:36	**Extraction Method:**	SW5030B
Date Prepared:	2/16/16	**Analytical Method:**	SW8260B
Project:	SCS539; Tung	**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-2-8	1602592-016A	Soil	02/12/2016 12:15	GC18	116749

Analytes	Result	RL	DF	Date Analyzed
Surrogates	**REC (%)**	**Limits**		
Dibromofluoromethane	115	70-130		02/19/2016 17:39
Toluene-d8	113	70-130		02/19/2016 17:39
4-BFB	89	70-130		02/19/2016 17:39
Benzene-d6	123	60-140		02/19/2016 17:39
Ethylbenzene-d10	112	60-140		02/19/2016 17:39
1,2-DCB-d4	112	60-140		02/19/2016 17:39

Analyst(s): AK

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Received:	2/16/16 20:36	**Extraction Method:**	SW3550C
Date Prepared:	2/17/16	**Analytical Method:**	SW8310
Project:	SCS539; Tung	**Unit:**	mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) by HPLC

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-5-5	1602592-002A	Soil	02/12/2016 10:00	HPLC4	116810

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.0050	1	02/17/2016 17:48
Acenaphthylene	ND	0.0050	1	02/17/2016 17:48
Anthracene	ND	0.0050	1	02/17/2016 17:48
Benzo (a) anthracene	ND	0.0050	1	02/17/2016 17:48
Benzo (a) pyrene	ND	0.0050	1	02/17/2016 17:48
Benzo (b) fluoranthene	ND	0.0050	1	02/17/2016 17:48
Benzo (g,h,i) perylene	ND	0.0050	1	02/17/2016 17:48
Benzo (k) fluoranthene	ND	0.0050	1	02/17/2016 17:48
Chrysene	ND	0.0050	1	02/17/2016 17:48
Dibenzo (a,h) anthracene	ND	0.0050	1	02/17/2016 17:48
Fluoranthene	ND	0.0050	1	02/17/2016 17:48
Fluorene	ND	0.0050	1	02/17/2016 17:48
Indeno (1,2,3-cd) pyrene	ND	0.0050	1	02/17/2016 17:48
1-Methylnaphthalene	ND	0.0050	1	02/17/2016 17:48
2-Methylnaphthalene	ND	0.0050	1	02/17/2016 17:48
Naphthalene	ND	0.0050	1	02/17/2016 17:48
Phenanthrene	ND	0.0050	1	02/17/2016 17:48
Pyrene	ND	0.0050	1	02/17/2016 17:48

Surrogates	REC (%)	Limits	
Decafluorobiphenyl	74	70-130	02/17/2016 17:48
4,4-Dichlorobiphenyl	93	70-130	02/17/2016 17:48

Analyst(s): JC

(Cont.)

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Received:	2/16/16 20:36	**Extraction Method:**	SW3550C
Date Prepared:	2/17/16	**Analytical Method:**	SW8310
Project:	SCS539; Tung	**Unit:**	mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) by HPLC

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-3-7.5	1602592-008A	Soil	02/12/2016 08:30	HPLC4	116810

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	2.0	400	02/18/2016 21:54
Acenaphthylene	ND	2.0	400	02/18/2016 21:54
Anthracene	ND	2.0	400	02/18/2016 21:54
Benzo (a) anthracene	ND	2.0	400	02/18/2016 21:54
Benzo (a) pyrene	ND	2.0	400	02/18/2016 21:54
Benzo (b) fluoranthene	ND	2.0	400	02/18/2016 21:54
Benzo (g,h,i) perylene	ND	2.0	400	02/18/2016 21:54
Benzo (k) fluoranthene	ND	2.0	400	02/18/2016 21:54
Chrysene	ND	2.0	400	02/18/2016 21:54
Dibenzo (a,h) anthracene	ND	2.0	400	02/18/2016 21:54
Fluoranthene	ND	2.0	400	02/18/2016 21:54
Fluorene	ND	2.0	400	02/18/2016 21:54
Indeno (1,2,3-cd) pyrene	ND	2.0	400	02/18/2016 21:54
1-Methylnaphthalene	**13**	2.0	400	02/18/2016 21:54
2-Methylnaphthalene	**10**	2.0	400	02/18/2016 21:54
Naphthalene	**4.1**	2.0	400	02/18/2016 21:54
Phenanthrene	**8.6**	2.0	400	02/18/2016 21:54
Pyrene	**5.5**	2.0	400	02/18/2016 21:54

Surrogates	REC (%)	Qualifiers	Limits	
Decafluorobiphenyl	0	S	70-130	02/18/2016 21:54
4,4-Dichlorobiphenyl	0	S	70-130	02/18/2016 21:54

Analyst(s): JC Analytical Comments: C1

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Received:	2/16/16 20:36	**Extraction Method:**	SW3550C
Date Prepared:	2/17/16	**Analytical Method:**	SW8310
Project:	SCS539; Tung	**Unit:**	mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) by HPLC

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-3-10	1602592-009A	Soil	02/12/2016 08:30	HPLC4	116810

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.0050	1	02/18/2016 19:04
Acenaphthylene	ND	0.0050	1	02/18/2016 19:04
Anthracene	ND	0.0050	1	02/18/2016 19:04
Benzo (a) anthracene	ND	0.0050	1	02/18/2016 19:04
Benzo (a) pyrene	ND	0.0050	1	02/18/2016 19:04
Benzo (b) fluoranthene	ND	0.0050	1	02/18/2016 19:04
Benzo (g,h,i) perylene	ND	0.0050	1	02/18/2016 19:04
Benzo (k) fluoranthene	ND	0.0050	1	02/18/2016 19:04
Chrysene	ND	0.0050	1	02/18/2016 19:04
Dibenzo (a,h) anthracene	ND	0.0050	1	02/18/2016 19:04
Fluoranthene	ND	0.0050	1	02/18/2016 19:04
Fluorene	ND	0.0050	1	02/18/2016 19:04
Indeno (1,2,3-cd) pyrene	ND	0.0050	1	02/18/2016 19:04
1-Methylnaphthalene	ND	0.0050	1	02/18/2016 19:04
2-Methylnaphthalene	ND	0.0050	1	02/18/2016 19:04
Naphthalene	ND	0.0050	1	02/18/2016 19:04
Phenanthrene	ND	0.0050	1	02/18/2016 19:04
Pyrene	ND	0.0050	1	02/18/2016 19:04

Surrogates	REC (%)	Limits	
Decafluorobiphenyl	80	70-130	02/18/2016 19:04
4,4-Dichlorobiphenyl	104	70-130	02/18/2016 19:04

Analyst(s): JC

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Received:	2/16/16 20:36	**Extraction Method:**	SW3550C
Date Prepared:	2/17/16	**Analytical Method:**	SW8310
Project:	SCS539; Tung	**Unit:**	mg/kg

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) by HPLC

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-2-8	1602592-016A	Soil	02/12/2016 12:15	HPLC4	116810

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.0050	1	02/19/2016 14:49
Acenaphthylene	ND	0.0050	1	02/19/2016 14:49
Anthracene	ND	0.0050	1	02/19/2016 14:49
Benzo (a) anthracene	ND	0.0050	1	02/19/2016 14:49
Benzo (a) pyrene	ND	0.0050	1	02/19/2016 14:49
Benzo (b) fluoranthene	ND	0.0050	1	02/19/2016 14:49
Benzo (g,h,i) perylene	ND	0.0050	1	02/19/2016 14:49
Benzo (k) fluoranthene	ND	0.0050	1	02/19/2016 14:49
Chrysene	ND	0.0050	1	02/19/2016 14:49
Dibenzo (a,h) anthracene	ND	0.0050	1	02/19/2016 14:49
Fluoranthene	ND	0.0050	1	02/19/2016 14:49
Fluorene	ND	0.0050	1	02/19/2016 14:49
Indeno (1,2,3-cd) pyrene	ND	0.0050	1	02/19/2016 14:49
1-Methylnaphthalene	ND	0.0050	1	02/19/2016 14:49
2-Methylnaphthalene	ND	0.0050	1	02/19/2016 14:49
Naphthalene	ND	0.0050	1	02/19/2016 14:49
Phenanthrene	ND	0.0050	1	02/19/2016 14:49
Pyrene	ND	0.0050	1	02/19/2016 14:49

Surrogates	REC (%)	Limits	
Decafluorobiphenyl	111	70-130	02/19/2016 14:49
4,4-Dichlorobiphenyl	123	70-130	02/19/2016 14:49

Analyst(s): JC

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Received:	2/16/16 20:36	**Extraction Method:**	SW3050B
Date Prepared:	2/16/16	**Analytical Method:**	SW6020
Project:	SCS539; Tung	**Unit:**	mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-5-5	1602592-002A	Soil	02/12/2016 10:00	ICP-MS2	116757

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	02/18/2016 18:20
Chromium	**83**	0.50	1	02/18/2016 18:20
Lead	**9.2**	0.50	1	02/18/2016 18:20
Nickel	**73**	0.50	1	02/18/2016 18:20
Zinc	**68**	5.0	1	02/18/2016 18:20

Surrogates	REC (%)	Limits	
Terbium	100	70-130	02/18/2016 18:20

Analyst(s): BBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-3-7.5	1602592-008A	Soil	02/12/2016 08:30	ICP-MS2	116757

Analytes	Result	RL	DF	Date Analyzed
Cadmium	**0.26**	0.25	1	02/18/2016 18:26
Chromium	**53**	0.50	1	02/18/2016 18:26
Lead	**7.8**	0.50	1	02/18/2016 18:26
Nickel	**43**	0.50	1	02/18/2016 18:26
Zinc	**53**	5.0	1	02/18/2016 18:26

Surrogates	REC (%)	Limits	
Terbium	107	70-130	02/18/2016 18:26

Analyst(s): BBO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-3-10	1602592-009A	Soil	02/12/2016 08:30	ICP-MS2	116757

Analytes	Result	RL	DF	Date Analyzed
Cadmium	**0.36**	0.25	1	02/18/2016 18:32
Chromium	**66**	0.50	1	02/18/2016 18:32
Lead	**9.8**	0.50	1	02/18/2016 18:32
Nickel	**110**	0.50	1	02/18/2016 18:32
Zinc	**65**	5.0	1	02/18/2016 18:32

Surrogates	REC (%)	Limits	
Terbium	99	70-130	02/18/2016 18:32

Analyst(s): BBO

(Cont.)

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Received:	2/16/16 20:36	**Extraction Method:**	SW3050B
Date Prepared:	2/16/16	**Analytical Method:**	SW6020
Project:	SCS539; Tung	**Unit:**	mg/Kg

LUFT 5 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-2-8	1602592-016A	Soil	02/12/2016 12:15	ICP-MS2	116757

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	02/18/2016 19:03
Chromium	**66**	0.50	1	02/18/2016 19:03
Lead	**5.5**	0.50	1	02/18/2016 19:03
Nickel	**63**	0.50	1	02/18/2016 19:03
Zinc	**41**	5.0	1	02/18/2016 19:03

Surrogates	REC (%)	Limits	
Terbium	110	70-130	02/18/2016 19:03

Analyst(s): BBO

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Received:	2/16/16 20:36	**Extraction Method:**	SW3550B
Date Prepared:	2/16/16	**Analytical Method:**	SW8015B
Project:	SCS539; Tung	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-5-2.5	1602592-001A	Soil	02/12/2016 10:00	GC39B	116756

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/19/2016 06:41
TPH-Motor Oil (C18-C36)	ND	5.0	1	02/19/2016 06:41
TPH-Heating Oil (C9-C18)	ND	1.0	1	02/19/2016 06:41

Surrogates	REC (%)	Limits	
C9	106	70-130	02/19/2016 06:41

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-5-5	1602592-002A	Soil	02/12/2016 10:00	GC39B	116756

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/19/2016 05:23
TPH-Motor Oil (C18-C36)	ND	5.0	1	02/19/2016 05:23
TPH-Heating Oil (C9-C18)	ND	1.0	1	02/19/2016 05:23

Surrogates	REC (%)	Limits	
C9	106	70-130	02/19/2016 05:23

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-3-2.5	1602592-006A	Soil	02/12/2016 10:20	GC39B	116756

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/19/2016 04:06
TPH-Motor Oil (C18-C36)	ND	5.0	1	02/19/2016 04:06
TPH-Heating Oil (C9-C18)	ND	1.0	1	02/19/2016 04:06

Surrogates	REC (%)	Limits	
C9	106	70-130	02/19/2016 04:06

Analyst(s): TK

(Cont.)

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Received:	2/16/16 20:36	**Extraction Method:**	SW3550B
Date Prepared:	2/16/16	**Analytical Method:**	SW8015B
Project:	SCS539; Tung	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-3-7.5	1602592-008A	Soil	02/12/2016 08:30	GC6A	116756

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**2700**	50	50	02/18/2016 06:51
TPH-Motor Oil (C18-C36)	**1300**	250	50	02/18/2016 06:51
TPH-Heating Oil (C9-C18)	**1500**	50	50	02/18/2016 06:51

Surrogates	REC (%)	Limits	
C9	82	70-130	02/18/2016 06:51

Analyst(s): TK Analytical Comments: e1,e7

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-3-10	1602592-009A	Soil	02/12/2016 08:30	GC39B	116756

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/19/2016 02:48
TPH-Motor Oil (C18-C36)	ND	5.0	1	02/19/2016 02:48
TPH-Heating Oil (C9-C18)	ND	1.0	1	02/19/2016 02:48

Surrogates	REC (%)	Limits	
C9	107	70-130	02/19/2016 02:48

Analyst(s): TK

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-4-7.5	1602592-013A	Soil	02/12/2016 11:40	GC39B	116756

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/19/2016 01:30
TPH-Motor Oil (C18-C36)	ND	5.0	1	02/19/2016 01:30
TPH-Heating Oil (C9-C18)	ND	1.0	1	02/19/2016 01:30

Surrogates	REC (%)	Limits	
C9	106	70-130	02/19/2016 01:30

Analyst(s): TK

(Cont.)

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Received:	2/16/16 20:36	**Extraction Method:**	SW3550B
Date Prepared:	2/16/16	**Analytical Method:**	SW8015B
Project:	SCS539; Tung	**Unit:**	mg/Kg

Total Extractable Petroleum Hydrocarbons w/out SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-2-8	1602592-016A	Soil	02/12/2016 12:15	GC39B	116756

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	**15**	1.0	1	02/19/2016 00:12
TPH-Motor Oil (C18-C36)	**34**	5.0	1	02/19/2016 00:12
TPH-Heating Oil (C9-C18)	**6.0**	1.0	1	02/19/2016 00:12
Surrogates	REC (%)	Limits		
C9	106	70-130		02/19/2016 00:12

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-2-10	1602592-017A	Soil	02/12/2016 14:30	GC39B	116756

Analytes	Result	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	1.0	1	02/19/2016 15:08
TPH-Motor Oil (C18-C36)	ND	5.0	1	02/19/2016 15:08
TPH-Heating Oil (C9-C18)	ND	1.0	1	02/19/2016 15:08
Surrogates	REC (%)	Limits		
C9	106	70-130		02/19/2016 15:08

Analyst(s): TK

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Prepared:	2/16/16	**BatchID:**	116749
Date Analyzed:	2/17/16	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	SCS539; Tung	**Sample ID:**	MB/LCS-116749 1602558-005AMS/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	0.0442	0.0050	0.050	-	88	53-116
Benzene	ND	0.0468	0.0050	0.050	-	94	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	0.239	0.050	0.20	-	120	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	0.0425	0.0050	0.050	-	85	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	0.0432	0.0040	0.050	-	86	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	0.0518	0.0040	0.050	-	104	58-135
1,1-Dichloroethene	ND	0.0440	0.0050	0.050	-	88	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.)

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Quality Control Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Prepared:	2/16/16	**BatchID:**	116749
Date Analyzed:	2/17/16	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	SCS539; Tung	**Sample ID:**	MB/LCS-116749 1602558-005AMS/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	0.0474	0.0050	0.050	-	95	52-129
Ethylbenzene	ND	-	0.0050	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	0.0477	0.0050	0.050	-	95	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	0.0472	0.0050	0.050	-	94	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	0.0459	0.0050	0.050	-	92	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	0.0446	0.0050	0.050	-	89	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	-	-	-	-

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Quality Control Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Prepared:	2/16/16	**BatchID:**	116749
Date Analyzed:	2/17/16	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	SCS539; Tung	**Sample ID:**	MB/LCS-116749 1602558-005AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	0.127	0.127		0.12	102	102	70-130
Toluene-d8	0.134	0.132		0.12	107	106	70-130
4-BFB	0.0144	0.0153		0.012	115	122	70-130
Benzene-d6	0.111	0.103		0.10	111	103	60-140
Ethylbenzene-d10	0.116	0.111		0.10	117	111	60-140
1,2-DCB-d4	0.0749	0.0751		0.10	75	75	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)	0.0407	0.0433	0.050	ND	81	87	56-94	6.26	20
Benzene	0.0347	0.0374	0.050	ND	69	75	60-106	7.49	20
t-Butyl alcohol (TBA)	0.175	0.186	0.20	ND	88	93	56-140	6.11	20
Chlorobenzene	0.0300	0.0331	0.050	ND	60,F1	66	61-108	9.68	20
1,2-Dibromoethane (EDB)	0.0317	0.0348	0.050	ND	63	70	54-119	9.33	20
1,2-Dichloroethane (1,2-DCA)	0.0356	0.0379	0.050	ND	71	76	48-115	6.32	20
1,1-Dichloroethene	0.0292	0.0328	0.050	ND	58	66	46-111	11.6	20
Diisopropyl ether (DIPE)	0.0417	0.0436	0.050	ND	83	87	53-111	4.60	20
Ethyl tert-butyl ether (ETBE)	0.0403	0.0427	0.050	ND	81	85	61-104	5.85	20
Methyl-t-butyl ether (MTBE)	0.0394	0.0419	0.050	ND	79	84	58-107	6.25	20
Toluene	0.0273	0.0299	0.050	ND	55,F1	60,F1	64-114	9.16	20
Trichloroethene	0.0295	0.0328	0.050	ND	59,F1	66	60-116	10.8	20
Surrogate Recovery									
Dibromofluoromethane	0.140	0.143	0.12		112	114	70-130	2.07	20
Toluene-d8	0.126	0.127	0.12		101	101	70-130	0	20
4-BFB	0.0125	0.0130	0.012		100	104	88-121	3.97	20
Benzene-d6	0.0763	0.0817	0.10		76	82	60-140	6.87	20
Ethylbenzene-d10	0.0588	0.0660	0.10		59,F3	66	60-140	11.6	20
1,2-DCB-d4	0.0596	0.0656	0.10		60	66	60-140	9.47	20

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Quality Control Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Prepared:	2/17/16	**BatchID:**	116810
Date Analyzed:	2/19/16	**Extraction Method:**	SW3550C
Instrument:	HPLC4	**Analytical Method:**	SW8310
Matrix:	Soil	**Unit:**	mg/kg
Project:	SCS539; Tung	**Sample ID:**	MB/LCS-116810 1602592-002AMS/MSD

QC Summary Report for SW8310

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	-	0.0050	-	-	-	-
Acenaphthylene	ND	-	0.0050	-	-	-	-
Anthracene	ND	-	0.0050	-	-	-	-
Benzo (a) anthracene	ND	0.0154	0.0050	0.015	-	102	70-130
Benzo (a) pyrene	ND	0.0154	0.0050	0.015	-	103	70-130
Benzo (b) fluoranthene	ND	-	0.0050	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.0050	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.0050	-	-	-	-
Chrysene	ND	0.0150	0.0050	0.015	-	100	70-130
Dibenzo (a,h) anthracene	ND	-	0.0050	-	-	-	-
Fluoranthene	ND	-	0.0050	-	-	-	-
Fluorene	ND	-	0.0050	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.0050	-	-	-	-
1-Methylnaphthalene	ND	0.0175	0.0050	0.015	-	117	70-130
2-Methylnaphthalene	ND	0.0170	0.0050	0.015	-	113	70-130
Naphthalene	ND	-	0.0050	-	-	-	-
Phenanthrene	ND	0.0161	0.0050	0.015	-	107	70-130
Pyrene	ND	0.0164	0.0050	0.015	-	109	70-130
Surrogate Recovery							
Decafluorobiphenyl	1.05	1.13		1	105	113	70-130
4,4-Dichlorobiphenyl	0.520	0.568		0.50	104	114	70-130

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Quality Control Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Prepared:	2/17/16	**BatchID:**	116810
Date Analyzed:	2/19/16	**Extraction Method:**	SW3550C
Instrument:	HPLC4	**Analytical Method:**	SW8310
Matrix:	Soil	**Unit:**	mg/kg
Project:	SCS539; Tung	**Sample ID:**	MB/LCS-116810 1602592-002AMS/MSD

QC Summary Report for SW8310

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Benzo (a) anthracene	0.0135	0.0138	0.015	ND	90	92	70-130	2.04	30
Benzo (a) pyrene	0.0102	0.0103	0.015	ND	68,F1	69,F1	70-130	0.838	30
Chrysene	0.0124	0.0126	0.015	ND	82	84	70-130	1.82	30
1-Methylnaphthalene	0.0181	0.0172	0.015	ND	121	115	70-130	5.11	30
2-Methylnaphthalene	0.0153	0.0148	0.015	ND	102	99	70-130	3.51	30
Phenanthrene	0.0156	0.0153	0.015	ND	104	102	70-130	2.00	30
Pyrene	0.0167	0.0156	0.015	ND	112	104	70-130	7.36	30
Surrogate Recovery									
Decafluorobiphenyl	0.789	0.728	1		79	73	70-130	7.98	30
4,4-Dichlorobiphenyl	0.492	0.507	0.50		98	101	70-130	2.92	30

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Quality Control Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Prepared:	2/16/16	**BatchID:**	116757
Date Analyzed:	2/17/16	**Extraction Method:**	SW3050B
Instrument:	ICP-MS3	**Analytical Method:**	SW6020
Matrix:	Soil	**Unit:**	mg/Kg
Project:	SCS539; Tung	**Sample ID:**	MB/LCS-116757 1602589-004AMS/MSD 1602589-004APDS

QC Summary Report for Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	51.4	0.25	50	-	103	75-125
Chromium	ND	53.3	0.50	50	-	107	75-125
Lead	ND	51.0	0.50	50	-	102	75-125
Nickel	ND	53.5	0.50	50	-	107	75-125
Zinc	ND	531	5.0	500	-	106	75-125
Surrogate Recovery							
Terbium	510	520		500	102	104	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Cadmium	50.9	46.2	50	0.4799	101	91	75-125	9.68	20
Chromium	105	97.8	50	47.07	116	101	75-125	7.21	20
Lead	320	206	50	182.2	277,F8	48,F8	75-125	43.4,F8	20
Nickel	99.8	90.8	50	40.01	120	102	75-125	9.40	20
Zinc	707	605	500	144.4	113	92	75-125	15.5	20
Surrogate Recovery									
Terbium	507	470	500		101	94	70-130	7.72	20

Analyte	PDS Result	SPK Val	SPKRef Val	PDS %REC	PDS Limits
Lead	247	50	182.2	130	80-120

Analyte	DLT Result	DLTRef Val	RPD	RPD Limit
Lead	167	182.2	8.74	10

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Quality Control Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Prepared:	2/16/16	**BatchID:**	116756
Date Analyzed:	2/17/16	**Extraction Method:**	SW3550B
Instrument:	GC39A, GC39B	**Analytical Method:**	SW8015B
Matrix:	Soil	**Unit:**	mg/Kg
Project:	SCS539; Tung	**Sample ID:**	MB/LCS-116756 1602589-004AMS/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	40.1	1.0	40	-	100	70-130
TPH-Motor Oil (C18-C36)	ND	-	5.0	-	-	-	-
Surrogate Recovery							
C9	26.1	26.5		25	104	106	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		11	NR	NR	-	NR	
Surrogate Recovery									
C9	NR	NR			NR	NR	-	NR	

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CHAIN-OF-CUSTODY RECORD

WorkOrder: 1602592 **ClientCode: SCO**

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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: SCS539; Tung

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

Requested TAT: 5 days;

Date Received: **02/12/2016**
Date Logged: **02/16/2016**

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
1602592-001	B-5-2.5	Soil	2/12/2016 10:00	☐				A	A							
1602592-002	B-5-5	Soil	2/12/2016 10:00	☐	A	A	A		A							
1602592-006	B-3-2.5	Soil	2/12/2016 10:20	☐					A							
1602592-008	B-3-7.5	Soil	2/12/2016 8:30	☐	A	A	A		A							
1602592-009	B-3-10	Soil	2/12/2016 8:30	☐	A	A	A		A							
1602592-013	B-4-7.5	Soil	2/12/2016 11:40	☐					A							
1602592-016	B-2-8	Soil	2/12/2016 12:15	☐	A	A	A		A							
1602592-017	B-2-10	Soil	2/12/2016 14:30	☐					A							

Test Legend:

1	8260B_S	2	8310_S	3	LUFTMS_6020_TTLC_S	4	PREDF REPORT
5	TPH_S	6		7		8	
9		10		11		12	

Project Manager:

Prepared by: Agustina Venegas

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.

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WORK ORDER SUMMARY

Client Name: SCHUTZE & ASSOCIATES, INC.
QC Level: LEVEL 2
Work Order: 1602592
Project: SCS539; Tung
Client Contact: Kevin Loeb
Date Logged: 2/16/2016
Comments:
Contact's Email: kevin@schutze-inc.com; js@schutze-inc.com; Mari@schutze-inc.com; claudine@schutze-inc.com

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Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1602592-001A	B-5-2.5	Soil	SW8015B (TEPHs) <TPH-Diesel (C10-C23), TPH-Hydraulic Oil (C18-C36), TPH-Motor Oil (C18-C36)>	1	8OZ GJ	☐	2/12/2016 10:00	5 days		☐	
1602592-002A	B-5-5	Soil	SW8015B (TEPHs) <TPH-Diesel (C10-C23), TPH-Hydraulic Oil (C18-C36), TPH-Motor Oil (C18-C36)>	1	Acetate Liner	☐	2/12/2016 10:00	5 days		☐	
			SW6020 (LUFT)			☐		5 days		☐	
			SW8310 (PAHs/PNAs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1602592-003A	B-5-7.5	Soil		1	Acetate Liner	☐	2/12/2016 10:00			☑	
1602592-004A	B-5-10	Soil		1	Acetate Liner	☐	2/12/2016 10:00			☑	
1602592-005A	B-5-15	Soil		1	Acetate Liner	☐	2/12/2016 10:00			☑	
1602592-006A	B-3-2.5	Soil	SW8015B (TEPHs) <TPH-Diesel (C10-C23), TPH-Hydraulic Oil (C18-C36), TPH-Motor Oil (C18-C36)>	1	8OZ GJ	☐	2/12/2016 10:20	5 days		☐	
1602592-007A	B-3-5	Soil		1	Acetate Liner	☐	2/12/2016 8:30			☑	
1602592-008A	B-3-7.5	Soil	SW8015B (TEPHs) <TPH-Diesel (C10-C23), TPH-Hydraulic Oil (C18-C36), TPH-Motor Oil (C18-C36)>	1	8OZ GJ	☐	2/12/2016 8:30	5 days		☐	
			SW6020 (LUFT)			☐		5 days		☐	

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.

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WORK ORDER SUMMARY

Client Name: SCHUTZE & ASSOCIATES, INC.
QC Level: LEVEL 2
Work Order: 1602592
Project: SCS539; Tung
Client Contact: Kevin Loeb
Date Logged: 2/16/2016
Comments:
Contact's Email: kevin@schutze-inc.com; js@schutze-inc.com; Mari@schutze-inc.com; claudine@schutze-inc.com

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Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1602592-008A	B-3-7.5	Soil	SW8310 (PAHs/PNAs)	1	8OZ GJ	☐	2/12/2016 8:30	5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1602592-009A	B-3-10	Soil	SW8015B (TEPHs) <TPH-Diesel (C10-C23), TPH-Hydraulic Oil (C18-C36), TPH-Motor Oil (C18-C36)>	1	Acetate Liner	☐	2/12/2016 8:30	5 days		☐	
			SW6020 (LUFT)			☐		5 days		☐	
			SW8310 (PAHs/PNAs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1602592-010A	B-3-14.5	Soil		1	Acetate Liner	☐	2/12/2016 8:30			☑	
1602592-011A	B-3-20	Soil		1	Acetate Liner	☐	2/12/2016 9:00			☑	
1602592-012A	B-4-2.5	Soil		1	8OZ GJ	☐	2/12/2016 11:40			☑	
1602592-013A	B-4-7.5	Soil	SW8015B (TEPHs) <TPH-Diesel (C10-C23), TPH-Hydraulic Oil (C18-C36), TPH-Motor Oil (C18-C36)>	1	Acetate Liner	☐	2/12/2016 11:40	5 days		☐	
1602592-014A	B-4-10	Soil		1	Acetate Liner	☐	2/12/2016 11:40			☑	
1602592-015A	B-4-15.5	Soil		1	Acetate Liner	☐	2/12/2016 11:40			☑	
1602592-016A	B-2-8	Soil	SW8015B (TEPHs) <TPH-Diesel (C10-C23), TPH-Hydraulic Oil (C18-C36), TPH-Motor Oil (C18-C36)>	1	Acetate Liner	☐	2/12/2016 12:15	5 days		☐	

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.

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WORK ORDER SUMMARY

Client Name: SCHUTZE & ASSOCIATES, INC.
QC Level: LEVEL 2
Work Order: 1602592
Project: SCS539; Tung
Client Contact: Kevin Loeb
Date Logged: 2/16/2016
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
1602592-016A	B-2-8	Soil	SW6020 (LUFT)	1	Acetate Liner	☐	2/12/2016 12:15	5 days		☐	
			SW8310 (PAHs/PNAs)			☐		5 days		☐	
			SW8260B (VOCs)			☐		5 days		☐	
1602592-017A	B-2-10	Soil	SW8015B (TEPHs) <TPH-Diesel (C10-C23), TPH-Hydraulic Oil (C18-C36), TPH-Motor Oil (C18-C36)>	1	8OZ GJ	☐	2/12/2016 14:30	5 days		☐	
1602592-018A	B-2-12	Soil		1	8OZ GJ	☐	2/12/2016 14:30			☑	

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.

1602592

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CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH ☐ 1 DAY ☐ 2 DAY ☐ 3 DAY ☐ 5 DAY ☒

GeoTracker EDF ☒ PDF ☐ EDD ☐ Write On (DW) ☐ EQuIS ☐ 10 DAY ☐

Effluent Sample Requiring "J" flag ☐ UST Clean Up Fund Project ☐; Claim #_____

Report To: Kevin Love **Bill To:**

Company: Schutze & Associates, Inc.

Tele: (510) 226-9944 **E-Mail:**

Project #: 505539 **Project Name:** Tung

Project Location: Oakland **Purchase Order#**

Sampler Signature:

SAMPLE ID	Location/ Field Point Name	SAMPLING Date	SAMPLING Time	# Containers	MATRIX: Ground Water	Waste Water	Drinking Water	Sea Water	Soil	Air	Sludge	Other	METHOD PRESERVED: HCL	HNO_3	Other Ice
B-5-2.5		2/12	10:00	1					X						X
B-5-5			"	1					X						X
B-5-7.5				1					X						X
B-5-10				1					X						X
B-5-15				1					X						X
B-3-2.5			10:20	1					X						X
B-3-5			8:30	1					X						X
B-3-7.5				1					X						X
B-3-10				1					X						X
B-3-14.5				1					X						X
B-3-20		↓	9:00 ↓	1					X						X

Analysis Request

BTEX & TPH as Gas (8021/8015) MTBE	TPH as Diesel (8015) (-D, -MO, -HO)	Total Petroleum Oil & Grease (1664/5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 505/608/8081 (Cl Pesticides)	EPA 608/8082 PCB's; Aroclors/Congeners	EPA 507/8141 (NP Pesticides)	EPA 515/8151 (Acidic Cl Herbicides)	EPA 524.2/624/8260 (VOCs)	EPA 525.2/625/8270 (SVOCs)	EPA 8270 SIM/8310 (PAHs/PNAs)	CAM 17 Metals (200.8/6020)***	LUFT 5 Metals (200.8/6020)***	Metals (200.8/6020)***	Lab to Filter sample for Dissolved metals analysis	PAHs (EPA 8100 mod.) 8310	H-Cr
	X															
	X							X				X			X	
																X
																X
																X
	X															
																X
	X							X				X			X	
	X							X				X			X	
																X
																X

**MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate $250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

*** If metals are requested for water samples and the water type is not specified on the chain of custody, then MAI will default to metals by E200.8.

Relinquished By:	Date:	Time:	Received By:
	2/12/12	5:20	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° 6

GOOD CONDITION_____

HEAD SPACE ABSENT_____

DECHLORINATED IN LAB_____

APPROPRIATE CONTAINERS_____

PRESERVED IN LAB_____

COMMENTS:

VOAS O&G METALS OTHER HAZARDOUS:

PRESERVATION_____ pH<2_____

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CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH ☐ 1 DAY ☐ 2 DAY ☐ 3 DAY ☐ 5 DAY ☒

GeoTracker EDF ☒ / PDF ☐ EDD ☐ Write On (DW) ☐ EQuIS ☐ 10 DAY ☐

Effluent Sample Requiring "J" flag ☐ UST Clean Up Fund Project ☐; Claim #_____

Report To: Kevin Loeb **Bill To:**

Company: Schutze & Associates, Inc

Tele: (510) 226-9944 **E-Mail:**

Project #: SCS539 **Project Name:** Tung

Project Location: Oakland **Purchase Order#**

Sampler Signature:

SAMPLE ID	Location/ Field Point Name	SAMPLING Date	SAMPLING Time	# Containers	MATRIX: Ground Water	Waste Water	Drinking Water	Sea Water	Soil	Air	Sludge	Other	METHOD PRESERVED: HCL	HNO_3	Other	BTEX & TPH as Gas (8021/8015) MTBE	TPH as Diesel (8015) (-d,-mo,ho)	Total Petroleum Oil & Grease (1664/5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 505/608/8081 (Cl Pesticides)	EPA 608/8082 PCB's; Aroclors/Congeners	EPA 507/8141 (NP Pesticides)	EPA 515/8151 (Acidic Cl Herbicides)	EPA 524.2/624/8260 (VOCs)	EPA 525.2/625/8270 (SVOCs)	EPA 8270 SIM/8310 (PAHs/PNAs)	CAM 17 Metals (200.8/6020)***	LUFT 5 Metals (200.8/6020)***	Metals (200.8/6020)***	Lab to Filter sample for Dissolved metals analysis	PAHs (EPA 8100 Mod.)	Hold
B-4-2.5		2/12	11:40	1					X						X																	X	
B-4-7.5				1					X						X		X																
B-4-10				1					X						X																	X	
B-4-15.5				1					X						X																	X	
B-2-8			12:50	1					X						X		X							X							X		
B-2-10			2:30	1					X						X		X																
B-2-12				1					X						X																	X	

Analysis Request

****MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate $250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.**

***** If metals are requested for water samples and the water type is not specified on the chain of custody, then MAI will default to metals by E200.8.**

Relinquished By:	Date:	Time:	Received By:
	2/12/15	5:20	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t°_____ COMMENTS:

GOOD CONDITION_____

HEAD SPACE ABSENT_____

DECHLORINATED IN LAB_____

APPROPRIATE CONTAINERS_____

PRESERVED IN LAB_____

VOAS O&G METALS OTHER HAZARDOUS:

PRESERVATION_____ pH<2_____

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Sample Receipt Checklist

Client Name:	**Schutze & Associates, Inc.**	Date and Time Received:	**2/12/2016 17:20**
Project Name:	**SCS539; Tung**	Date Logged:	**2/16/2016**
WorkOrder №:	**1602592** Matrix: Soil	Received by:	Alexandra Iniguez
Carrier:	Client Drop-In	Logged by:	Agustina Venegas

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Sample/Temp Blank temperature	Temp: 6°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	NA ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
pH acceptable upon receipt (Metal: <2; 522: <4; 218.7: >8)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	
	(Ice Type: WET ICE)		

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes ☐	No ☐	NA ☑
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes ☐	No ☐	NA ☑

** NOTE: If the "No" box is checked, see comments below.*

Comments:

McCampbell Analytical, Inc.
"When Quality Counts"

Analytical Report

WorkOrder: 1602578

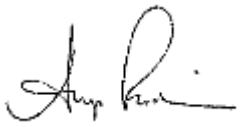
Report Created for: Schutze & Associates, Inc.

44358 South Grimmer Blvd
Fremont, CA 94538

Project Contact: Kevin Loeb
Project P.O.:
Project Name: 539; Tung

Project Received: 02/16/2016

Analytical Report reviewed & approved for release on 02/22/2016 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.

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Glossary of Terms & Qualifier Definitions

Client: Schutze & Associates, Inc.
Project: 539; Tung
WorkOrder: 1602578

Glossary Abbreviation

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
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)

Analytical Qualifiers

H	samples were analyzed out of holding time
b1	aqueous sample that contains greater than ~1 vol. % sediment

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Glossary of Terms & Qualifier Definitions

Client: Schutze & Associates, Inc.
Project: 539; Tung
WorkOrder: 1602578

Quality Control Qualifiers

F3	the surrogate standard recovery and/or RPD is outside of acceptance limits.

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602578
Date Received:	2/16/16 18:20	**Extraction Method:**	SW5030B
Date Prepared:	2/19/16	**Analytical Method:**	SW8260B
Project:	539; Tung	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Dup	1602578-001B	Water	02/12/2016 10:45	GC28	116877

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	02/19/2016 01:03
tert-Amyl methyl ether (TAME)	ND	0.50	1	02/19/2016 01:03
Benzene	ND	0.50	1	02/19/2016 01:03
Bromobenzene	ND	0.50	1	02/19/2016 01:03
Bromochloromethane	ND	0.50	1	02/19/2016 01:03
Bromodichloromethane	ND	0.50	1	02/19/2016 01:03
Bromoform	ND	0.50	1	02/19/2016 01:03
Bromomethane	ND	0.50	1	02/19/2016 01:03
2-Butanone (MEK)	ND	2.0	1	02/19/2016 01:03
t-Butyl alcohol (TBA)	ND	2.0	1	02/19/2016 01:03
n-Butyl benzene	ND	0.50	1	02/19/2016 01:03
sec-Butyl benzene	ND	0.50	1	02/19/2016 01:03
tert-Butyl benzene	ND	0.50	1	02/19/2016 01:03
Carbon Disulfide	ND	0.50	1	02/19/2016 01:03
Carbon Tetrachloride	ND	0.50	1	02/19/2016 01:03
Chlorobenzene	ND	0.50	1	02/19/2016 01:03
Chloroethane	ND	0.50	1	02/19/2016 01:03
Chloroform	**13**	0.50	1	02/19/2016 01:03
Chloromethane	ND	0.50	1	02/19/2016 01:03
2-Chlorotoluene	ND	0.50	1	02/19/2016 01:03
4-Chlorotoluene	ND	0.50	1	02/19/2016 01:03
Dibromochloromethane	ND	0.50	1	02/19/2016 01:03
1,2-Dibromo-3-chloropropane	ND	0.20	1	02/19/2016 01:03
1,2-Dibromoethane (EDB)	ND	0.50	1	02/19/2016 01:03
Dibromomethane	ND	0.50	1	02/19/2016 01:03
1,2-Dichlorobenzene	ND	0.50	1	02/19/2016 01:03
1,3-Dichlorobenzene	ND	0.50	1	02/19/2016 01:03
1,4-Dichlorobenzene	ND	0.50	1	02/19/2016 01:03
Dichlorodifluoromethane	ND	0.50	1	02/19/2016 01:03
1,1-Dichloroethane	ND	0.50	1	02/19/2016 01:03
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	02/19/2016 01:03
1,1-Dichloroethene	ND	0.50	1	02/19/2016 01:03
cis-1,2-Dichloroethene	ND	0.50	1	02/19/2016 01:03
trans-1,2-Dichloroethene	ND	0.50	1	02/19/2016 01:03
1,2-Dichloropropane	ND	0.50	1	02/19/2016 01:03
1,3-Dichloropropane	ND	0.50	1	02/19/2016 01:03
2,2-Dichloropropane	ND	0.50	1	02/19/2016 01:03

(Cont.)

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602578
Date Received:	2/16/16 18:20	**Extraction Method:**	SW5030B
Date Prepared:	2/19/16	**Analytical Method:**	SW8260B
Project:	539; Tung	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Dup	1602578-001B	Water	02/12/2016 10:45	GC28	116877

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	02/19/2016 01:03
cis-1,3-Dichloropropene	ND	0.50	1	02/19/2016 01:03
trans-1,3-Dichloropropene	ND	0.50	1	02/19/2016 01:03
Diisopropyl ether (DIPE)	ND	0.50	1	02/19/2016 01:03
Ethylbenzene	ND	0.50	1	02/19/2016 01:03
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	02/19/2016 01:03
Freon 113	ND	0.50	1	02/19/2016 01:03
Hexachlorobutadiene	ND	0.50	1	02/19/2016 01:03
Hexachloroethane	ND	0.50	1	02/19/2016 01:03
2-Hexanone	ND	0.50	1	02/19/2016 01:03
Isopropylbenzene	ND	0.50	1	02/19/2016 01:03
4-Isopropyl toluene	ND	0.50	1	02/19/2016 01:03
Methyl-t-butyl ether (MTBE)	ND	0.50	1	02/19/2016 01:03
Methylene chloride	ND	0.50	1	02/19/2016 01:03
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	02/19/2016 01:03
Naphthalene	ND	0.50	1	02/19/2016 01:03
n-Propyl benzene	ND	0.50	1	02/19/2016 01:03
Styrene	ND	0.50	1	02/19/2016 01:03
1,1,1,2-Tetrachloroethane	ND	0.50	1	02/19/2016 01:03
1,1,2,2-Tetrachloroethane	ND	0.50	1	02/19/2016 01:03
Tetrachloroethene	ND	0.50	1	02/19/2016 01:03
Toluene	ND	0.50	1	02/19/2016 01:03
1,2,3-Trichlorobenzene	ND	0.50	1	02/19/2016 01:03
1,2,4-Trichlorobenzene	ND	0.50	1	02/19/2016 01:03
1,1,1-Trichloroethane	ND	0.50	1	02/19/2016 01:03
1,1,2-Trichloroethane	ND	0.50	1	02/19/2016 01:03
Trichloroethene	ND	0.50	1	02/19/2016 01:03
Trichlorofluoromethane	ND	0.50	1	02/19/2016 01:03
1,2,3-Trichloropropane	ND	0.50	1	02/19/2016 01:03
1,2,4-Trimethylbenzene	ND	0.50	1	02/19/2016 01:03
1,3,5-Trimethylbenzene	ND	0.50	1	02/19/2016 01:03
Vinyl Chloride	ND	0.50	1	02/19/2016 01:03
Xylenes, Total	ND	0.50	1	02/19/2016 01:03

(Cont.)

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602578
Date Received:	2/16/16 18:20	**Extraction Method:**	SW5030B
Date Prepared:	2/19/16	**Analytical Method:**	SW8260B
Project:	539; Tung	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Dup	1602578-001B	Water	02/12/2016 10:45	GC28	116877

Analytes	Result	RL	DF	Date Analyzed
Surrogates	REC (%)	Limits		
Dibromofluoromethane	117	70-130		02/19/2016 01:03
Toluene-d8	116	70-130		02/19/2016 01:03
4-BFB	84	70-130		02/19/2016 01:03

Analyst(s): AK

(Cont.)

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602578
Date Received:	2/16/16 18:20	**Extraction Method:**	SW5030B
Date Prepared:	2/19/16	**Analytical Method:**	SW8260B
Project:	539; Tung	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-5-15-W	1602578-002B	Water	02/12/2016 10:45	GC28	116877

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	02/19/2016 01:41
tert-Amyl methyl ether (TAME)	ND	0.50	1	02/19/2016 01:41
Benzene	ND	0.50	1	02/19/2016 01:41
Bromobenzene	ND	0.50	1	02/19/2016 01:41
Bromochloromethane	ND	0.50	1	02/19/2016 01:41
Bromodichloromethane	ND	0.50	1	02/19/2016 01:41
Bromoform	ND	0.50	1	02/19/2016 01:41
Bromomethane	ND	0.50	1	02/19/2016 01:41
2-Butanone (MEK)	ND	2.0	1	02/19/2016 01:41
t-Butyl alcohol (TBA)	ND	2.0	1	02/19/2016 01:41
n-Butyl benzene	ND	0.50	1	02/19/2016 01:41
sec-Butyl benzene	ND	0.50	1	02/19/2016 01:41
tert-Butyl benzene	ND	0.50	1	02/19/2016 01:41
Carbon Disulfide	ND	0.50	1	02/19/2016 01:41
Carbon Tetrachloride	ND	0.50	1	02/19/2016 01:41
Chlorobenzene	ND	0.50	1	02/19/2016 01:41
Chloroethane	ND	0.50	1	02/19/2016 01:41
Chloroform	**13**	0.50	1	02/19/2016 01:41
Chloromethane	ND	0.50	1	02/19/2016 01:41
2-Chlorotoluene	ND	0.50	1	02/19/2016 01:41
4-Chlorotoluene	ND	0.50	1	02/19/2016 01:41
Dibromochloromethane	ND	0.50	1	02/19/2016 01:41
1,2-Dibromo-3-chloropropane	ND	0.20	1	02/19/2016 01:41
1,2-Dibromoethane (EDB)	ND	0.50	1	02/19/2016 01:41
Dibromomethane	ND	0.50	1	02/19/2016 01:41
1,2-Dichlorobenzene	ND	0.50	1	02/19/2016 01:41
1,3-Dichlorobenzene	ND	0.50	1	02/19/2016 01:41
1,4-Dichlorobenzene	ND	0.50	1	02/19/2016 01:41
Dichlorodifluoromethane	ND	0.50	1	02/19/2016 01:41
1,1-Dichloroethane	ND	0.50	1	02/19/2016 01:41
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	02/19/2016 01:41
1,1-Dichloroethene	ND	0.50	1	02/19/2016 01:41
cis-1,2-Dichloroethene	ND	0.50	1	02/19/2016 01:41
trans-1,2-Dichloroethene	ND	0.50	1	02/19/2016 01:41
1,2-Dichloropropane	ND	0.50	1	02/19/2016 01:41
1,3-Dichloropropane	ND	0.50	1	02/19/2016 01:41
2,2-Dichloropropane	ND	0.50	1	02/19/2016 01:41

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602578
Date Received:	2/16/16 18:20	**Extraction Method:**	SW5030B
Date Prepared:	2/19/16	**Analytical Method:**	SW8260B
Project:	539; Tung	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-5-15-W	1602578-002B	Water	02/12/2016 10:45	GC28	116877

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	02/19/2016 01:41
cis-1,3-Dichloropropene	ND	0.50	1	02/19/2016 01:41
trans-1,3-Dichloropropene	ND	0.50	1	02/19/2016 01:41
Diisopropyl ether (DIPE)	ND	0.50	1	02/19/2016 01:41
Ethylbenzene	ND	0.50	1	02/19/2016 01:41
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	02/19/2016 01:41
Freon 113	ND	0.50	1	02/19/2016 01:41
Hexachlorobutadiene	ND	0.50	1	02/19/2016 01:41
Hexachloroethane	ND	0.50	1	02/19/2016 01:41
2-Hexanone	ND	0.50	1	02/19/2016 01:41
Isopropylbenzene	ND	0.50	1	02/19/2016 01:41
4-Isopropyl toluene	ND	0.50	1	02/19/2016 01:41
Methyl-t-butyl ether (MTBE)	ND	0.50	1	02/19/2016 01:41
Methylene chloride	ND	0.50	1	02/19/2016 01:41
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	02/19/2016 01:41
Naphthalene	ND	0.50	1	02/19/2016 01:41
n-Propyl benzene	ND	0.50	1	02/19/2016 01:41
Styrene	ND	0.50	1	02/19/2016 01:41
1,1,1,2-Tetrachloroethane	ND	0.50	1	02/19/2016 01:41
1,1,2,2-Tetrachloroethane	ND	0.50	1	02/19/2016 01:41
Tetrachloroethene	ND	0.50	1	02/19/2016 01:41
Toluene	ND	0.50	1	02/19/2016 01:41
1,2,3-Trichlorobenzene	ND	0.50	1	02/19/2016 01:41
1,2,4-Trichlorobenzene	ND	0.50	1	02/19/2016 01:41
1,1,1-Trichloroethane	ND	0.50	1	02/19/2016 01:41
1,1,2-Trichloroethane	ND	0.50	1	02/19/2016 01:41
Trichloroethene	ND	0.50	1	02/19/2016 01:41
Trichlorofluoromethane	ND	0.50	1	02/19/2016 01:41
1,2,3-Trichloropropane	ND	0.50	1	02/19/2016 01:41
1,2,4-Trimethylbenzene	ND	0.50	1	02/19/2016 01:41
1,3,5-Trimethylbenzene	ND	0.50	1	02/19/2016 01:41
Vinyl Chloride	ND	0.50	1	02/19/2016 01:41
Xylenes, Total	ND	0.50	1	02/19/2016 01:41

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602578
Date Received:	2/16/16 18:20	**Extraction Method:**	SW5030B
Date Prepared:	2/19/16	**Analytical Method:**	SW8260B
Project:	539; Tung	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-5-15-W	1602578-002B	Water	02/12/2016 10:45	GC28	116877

Analytes	Result	RL	DF	Date Analyzed
Surrogates	**REC (%)**	**Limits**		
Dibromofluoromethane	117	70-130		02/19/2016 01:41
Toluene-d8	116	70-130		02/19/2016 01:41
4-BFB	85	70-130		02/19/2016 01:41

Analyst(s): AK Analytical Comments: b1

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602578
Date Received:	2/16/16 18:20	**Extraction Method:**	SW5030B
Date Prepared:	2/19/16	**Analytical Method:**	SW8260B
Project:	539; Tung	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-4-22-W	1602578-003B	Water	02/12/2016 13:15	GC28	116877

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	02/19/2016 02:19
tert-Amyl methyl ether (TAME)	ND	0.50	1	02/19/2016 02:19
Benzene	ND	0.50	1	02/19/2016 02:19
Bromobenzene	ND	0.50	1	02/19/2016 02:19
Bromochloromethane	ND	0.50	1	02/19/2016 02:19
Bromodichloromethane	ND	0.50	1	02/19/2016 02:19
Bromoform	ND	0.50	1	02/19/2016 02:19
Bromomethane	ND	0.50	1	02/19/2016 02:19
2-Butanone (MEK)	ND	2.0	1	02/19/2016 02:19
t-Butyl alcohol (TBA)	ND	2.0	1	02/19/2016 02:19
n-Butyl benzene	ND	0.50	1	02/19/2016 02:19
sec-Butyl benzene	ND	0.50	1	02/19/2016 02:19
tert-Butyl benzene	ND	0.50	1	02/19/2016 02:19
Carbon Disulfide	ND	0.50	1	02/19/2016 02:19
Carbon Tetrachloride	ND	0.50	1	02/19/2016 02:19
Chlorobenzene	ND	0.50	1	02/19/2016 02:19
Chloroethane	ND	0.50	1	02/19/2016 02:19
Chloroform	ND	0.50	1	02/19/2016 02:19
Chloromethane	ND	0.50	1	02/19/2016 02:19
2-Chlorotoluene	ND	0.50	1	02/19/2016 02:19
4-Chlorotoluene	ND	0.50	1	02/19/2016 02:19
Dibromochloromethane	ND	0.50	1	02/19/2016 02:19
1,2-Dibromo-3-chloropropane	ND	0.20	1	02/19/2016 02:19
1,2-Dibromoethane (EDB)	ND	0.50	1	02/19/2016 02:19
Dibromomethane	ND	0.50	1	02/19/2016 02:19
1,2-Dichlorobenzene	ND	0.50	1	02/19/2016 02:19
1,3-Dichlorobenzene	ND	0.50	1	02/19/2016 02:19
1,4-Dichlorobenzene	ND	0.50	1	02/19/2016 02:19
Dichlorodifluoromethane	ND	0.50	1	02/19/2016 02:19
1,1-Dichloroethane	ND	0.50	1	02/19/2016 02:19
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	02/19/2016 02:19
1,1-Dichloroethene	ND	0.50	1	02/19/2016 02:19
cis-1,2-Dichloroethene	ND	0.50	1	02/19/2016 02:19
trans-1,2-Dichloroethene	ND	0.50	1	02/19/2016 02:19
1,2-Dichloropropane	ND	0.50	1	02/19/2016 02:19
1,3-Dichloropropane	ND	0.50	1	02/19/2016 02:19
2,2-Dichloropropane	ND	0.50	1	02/19/2016 02:19

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602578
Date Received:	2/16/16 18:20	**Extraction Method:**	SW5030B
Date Prepared:	2/19/16	**Analytical Method:**	SW8260B
Project:	539; Tung	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-4-22-W	1602578-003B	Water	02/12/2016 13:15	GC28	116877

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	02/19/2016 02:19
cis-1,3-Dichloropropene	ND	0.50	1	02/19/2016 02:19
trans-1,3-Dichloropropene	ND	0.50	1	02/19/2016 02:19
Diisopropyl ether (DIPE)	ND	0.50	1	02/19/2016 02:19
Ethylbenzene	ND	0.50	1	02/19/2016 02:19
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	02/19/2016 02:19
Freon 113	ND	0.50	1	02/19/2016 02:19
Hexachlorobutadiene	ND	0.50	1	02/19/2016 02:19
Hexachloroethane	ND	0.50	1	02/19/2016 02:19
2-Hexanone	ND	0.50	1	02/19/2016 02:19
Isopropylbenzene	ND	0.50	1	02/19/2016 02:19
4-Isopropyl toluene	ND	0.50	1	02/19/2016 02:19
Methyl-t-butyl ether (MTBE)	ND	0.50	1	02/19/2016 02:19
Methylene chloride	ND	0.50	1	02/19/2016 02:19
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	02/19/2016 02:19
Naphthalene	ND	0.50	1	02/19/2016 02:19
n-Propyl benzene	ND	0.50	1	02/19/2016 02:19
Styrene	ND	0.50	1	02/19/2016 02:19
1,1,1,2-Tetrachloroethane	ND	0.50	1	02/19/2016 02:19
1,1,2,2-Tetrachloroethane	ND	0.50	1	02/19/2016 02:19
Tetrachloroethene	ND	0.50	1	02/19/2016 02:19
Toluene	ND	0.50	1	02/19/2016 02:19
1,2,3-Trichlorobenzene	ND	0.50	1	02/19/2016 02:19
1,2,4-Trichlorobenzene	ND	0.50	1	02/19/2016 02:19
1,1,1-Trichloroethane	ND	0.50	1	02/19/2016 02:19
1,1,2-Trichloroethane	ND	0.50	1	02/19/2016 02:19
Trichloroethene	ND	0.50	1	02/19/2016 02:19
Trichlorofluoromethane	ND	0.50	1	02/19/2016 02:19
1,2,3-Trichloropropane	ND	0.50	1	02/19/2016 02:19
1,2,4-Trimethylbenzene	ND	0.50	1	02/19/2016 02:19
1,3,5-Trimethylbenzene	ND	0.50	1	02/19/2016 02:19
Vinyl Chloride	ND	0.50	1	02/19/2016 02:19
Xylenes, Total	ND	0.50	1	02/19/2016 02:19

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602578
Date Received:	2/16/16 18:20	**Extraction Method:**	SW5030B
Date Prepared:	2/19/16	**Analytical Method:**	SW8260B
Project:	539; Tung	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-4-22-W	1602578-003B	Water	02/12/2016 13:15	GC28	116877

Analytes	Result	RL	DF	Date Analyzed
Surrogates	**REC (%)**	**Limits**		
Dibromofluoromethane	117	70-130		02/19/2016 02:19
Toluene-d8	115	70-130		02/19/2016 02:19
4-BFB	85	70-130		02/19/2016 02:19

Analyst(s): AK Analytical Comments: b1

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602578
Date Received:	2/16/16 18:20	**Extraction Method:**	SW5030B
Date Prepared:	2/19/16	**Analytical Method:**	SW8260B
Project:	539; Tung	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-3-21.5-W	1602578-004B	Water	02/12/2016 14:00	GC10	116877

Analytes	Result	RL	DF	Date Analyzed
Acetone	ND	10	1	02/19/2016 13:56
tert-Amyl methyl ether (TAME)	ND	0.50	1	02/19/2016 13:56
Benzene	ND	0.50	1	02/19/2016 13:56
Bromobenzene	ND	0.50	1	02/19/2016 13:56
Bromochloromethane	ND	0.50	1	02/19/2016 13:56
Bromodichloromethane	ND	0.50	1	02/19/2016 13:56
Bromoform	ND	0.50	1	02/19/2016 13:56
Bromomethane	ND	0.50	1	02/19/2016 13:56
2-Butanone (MEK)	ND	2.0	1	02/19/2016 13:56
t-Butyl alcohol (TBA)	ND	2.0	1	02/19/2016 13:56
n-Butyl benzene	ND	0.50	1	02/19/2016 13:56
sec-Butyl benzene	ND	0.50	1	02/19/2016 13:56
tert-Butyl benzene	ND	0.50	1	02/19/2016 13:56
Carbon Disulfide	ND	0.50	1	02/19/2016 13:56
Carbon Tetrachloride	ND	0.50	1	02/19/2016 13:56
Chlorobenzene	ND	0.50	1	02/19/2016 13:56
Chloroethane	ND	0.50	1	02/19/2016 13:56
Chloroform	ND	0.50	1	02/19/2016 13:56
Chloromethane	ND	0.50	1	02/19/2016 13:56
2-Chlorotoluene	ND	0.50	1	02/19/2016 13:56
4-Chlorotoluene	ND	0.50	1	02/19/2016 13:56
Dibromochloromethane	ND	0.50	1	02/19/2016 13:56
1,2-Dibromo-3-chloropropane	ND	0.20	1	02/19/2016 13:56
1,2-Dibromoethane (EDB)	ND	0.50	1	02/19/2016 13:56
Dibromomethane	ND	0.50	1	02/19/2016 13:56
1,2-Dichlorobenzene	ND	0.50	1	02/19/2016 13:56
1,3-Dichlorobenzene	ND	0.50	1	02/19/2016 13:56
1,4-Dichlorobenzene	ND	0.50	1	02/19/2016 13:56
Dichlorodifluoromethane	ND	0.50	1	02/19/2016 13:56
1,1-Dichloroethane	ND	0.50	1	02/19/2016 13:56
1,2-Dichloroethane (1,2-DCA)	ND	0.50	1	02/19/2016 13:56
1,1-Dichloroethene	ND	0.50	1	02/19/2016 13:56
cis-1,2-Dichloroethene	ND	0.50	1	02/19/2016 13:56
trans-1,2-Dichloroethene	ND	0.50	1	02/19/2016 13:56
1,2-Dichloropropane	ND	0.50	1	02/19/2016 13:56
1,3-Dichloropropane	ND	0.50	1	02/19/2016 13:56
2,2-Dichloropropane	ND	0.50	1	02/19/2016 13:56

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http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602578
Date Received:	2/16/16 18:20	**Extraction Method:**	SW5030B
Date Prepared:	2/19/16	**Analytical Method:**	SW8260B
Project:	539; Tung	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-3-21.5-W	1602578-004B	Water	02/12/2016 14:00	GC10	116877

Analytes	Result	RL	DF	Date Analyzed
1,1-Dichloropropene	ND	0.50	1	02/19/2016 13:56
cis-1,3-Dichloropropene	ND	0.50	1	02/19/2016 13:56
trans-1,3-Dichloropropene	ND	0.50	1	02/19/2016 13:56
Diisopropyl ether (DIPE)	ND	0.50	1	02/19/2016 13:56
Ethylbenzene	ND	0.50	1	02/19/2016 13:56
Ethyl tert-butyl ether (ETBE)	ND	0.50	1	02/19/2016 13:56
Freon 113	ND	0.50	1	02/19/2016 13:56
Hexachlorobutadiene	ND	0.50	1	02/19/2016 13:56
Hexachloroethane	ND	0.50	1	02/19/2016 13:56
2-Hexanone	ND	0.50	1	02/19/2016 13:56
Isopropylbenzene	ND	0.50	1	02/19/2016 13:56
4-Isopropyl toluene	ND	0.50	1	02/19/2016 13:56
Methyl-t-butyl ether (MTBE)	ND	0.50	1	02/19/2016 13:56
Methylene chloride	ND	0.50	1	02/19/2016 13:56
4-Methyl-2-pentanone (MIBK)	ND	0.50	1	02/19/2016 13:56
Naphthalene	ND	0.50	1	02/19/2016 13:56
n-Propyl benzene	ND	0.50	1	02/19/2016 13:56
Styrene	ND	0.50	1	02/19/2016 13:56
1,1,1,2-Tetrachloroethane	ND	0.50	1	02/19/2016 13:56
1,1,2,2-Tetrachloroethane	ND	0.50	1	02/19/2016 13:56
Tetrachloroethene	ND	0.50	1	02/19/2016 13:56
Toluene	ND	0.50	1	02/19/2016 13:56
1,2,3-Trichlorobenzene	ND	0.50	1	02/19/2016 13:56
1,2,4-Trichlorobenzene	ND	0.50	1	02/19/2016 13:56
1,1,1-Trichloroethane	ND	0.50	1	02/19/2016 13:56
1,1,2-Trichloroethane	ND	0.50	1	02/19/2016 13:56
Trichloroethene	ND	0.50	1	02/19/2016 13:56
Trichlorofluoromethane	ND	0.50	1	02/19/2016 13:56
1,2,3-Trichloropropane	ND	0.50	1	02/19/2016 13:56
1,2,4-Trimethylbenzene	ND	0.50	1	02/19/2016 13:56
1,3,5-Trimethylbenzene	ND	0.50	1	02/19/2016 13:56
Vinyl Chloride	ND	0.50	1	02/19/2016 13:56
Xylenes, Total	ND	0.50	1	02/19/2016 13:56

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602578
Date Received:	2/16/16 18:20	**Extraction Method:**	SW5030B
Date Prepared:	2/19/16	**Analytical Method:**	SW8260B
Project:	539; Tung	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-3-21.5-W	1602578-004B	Water	02/12/2016 14:00	GC10	116877

Analytes	Result	RL	DF	Date Analyzed
Surrogates	**REC (%)**	**Limits**		
Dibromofluoromethane	107	70-130		02/19/2016 13:56
Toluene-d8	112	70-130		02/19/2016 13:56
4-BFB	82	70-130		02/19/2016 13:56

Analyst(s): AK Analytical Comments: b1

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602578
Date Received:	2/16/16 18:20	**Extraction Method:**	SW3510C
Date Prepared:	2/17/16	**Analytical Method:**	SW8310
Project:	539; Tung	**Unit:**	µg/L

Polynuclear Aromatic Hydrocarbons (PAHs / PNAs) by HPLC

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Dup	1602578-001A	Water	02/12/2016 10:45	HPLC4	116799

Analytes	Result	RL	DF	Date Analyzed
Acenaphthene	ND	0.0500	1	02/18/2016 16:14
Acenaphthylene	ND	0.0500	1	02/18/2016 16:14
Anthracene	ND	0.0500	1	02/18/2016 16:14
Benzo (a) anthracene	ND	0.0250	1	02/18/2016 16:14
Benzo (a) pyrene	ND	0.0500	1	02/18/2016 16:14
Benzo (b) fluoranthene	ND	0.0250	1	02/18/2016 16:14
Benzo (k) fluoranthene	ND	0.0250	1	02/18/2016 16:14
Benzo (g,h,i) perylene	ND	0.0500	1	02/18/2016 16:14
Chrysene	ND	0.0500	1	02/18/2016 16:14
Dibenzo (a,h) anthracene	ND	0.0500	1	02/18/2016 16:14
Fluoranthene	ND	0.0500	1	02/18/2016 16:14
Fluorene	ND	0.0500	1	02/18/2016 16:14
Indeno (1,2,3-cd) pyrene	ND	0.0250	1	02/18/2016 16:14
1-Methylnaphthalene	ND	0.0500	1	02/18/2016 16:14
2-Methylnaphthalene	ND	0.0500	1	02/18/2016 16:14
Naphthalene	ND	0.0500	1	02/18/2016 16:14
Phenanthrene	ND	0.0500	1	02/18/2016 16:14
Pyrene	ND	0.0500	1	02/18/2016 16:14

Surrogates	REC (%)	Limits	
Decafluorobiphenyl	111	70-130	02/18/2016 16:14
4,4-Dichlorobiphenyl	116	70-130	02/18/2016 16:14

Analyst(s): JC

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602578
Date Received:	2/16/16 18:20	**Extraction Method:**	SW3005
Date Prepared:	2/16/16	**Analytical Method:**	SW6020
Project:	539; Tung	**Unit:**	µg/L

Dissolved LUFT 5 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
Dup	1602578-001C	Water	02/12/2016 10:45	ICP-MS3	116751

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	02/18/2016 19:53
Chromium	ND	0.50	1	02/18/2016 19:53
Lead	ND	0.50	1	02/18/2016 19:53
Nickel	**1.8**	0.50	1	02/18/2016 19:53
Zinc	ND	15	1	02/18/2016 19:53

Analyst(s): DVH

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-5-15-W	1602578-002C	Water	02/12/2016 10:45	ICP-MS3	116751

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	02/18/2016 19:59
Chromium	ND	0.50	1	02/18/2016 19:59
Lead	ND	0.50	1	02/18/2016 19:59
Nickel	**1.7**	0.50	1	02/18/2016 19:59
Zinc	ND	15	1	02/18/2016 19:59

Analyst(s): DVH Analytical Comments: b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-4-22-W	1602578-003C	Water	02/12/2016 13:15	ICP-MS3	116751

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	02/18/2016 20:05
Chromium	ND	0.50	1	02/18/2016 20:05
Lead	ND	0.50	1	02/18/2016 20:05
Nickel	ND	0.50	1	02/18/2016 20:05
Zinc	ND	15	1	02/18/2016 20:05

Analyst(s): DVH Analytical Comments: b1

(Cont.)

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602578
Date Received:	2/16/16 18:20	**Extraction Method:**	SW3005
Date Prepared:	2/16/16	**Analytical Method:**	SW6020
Project:	539; Tung	**Unit:**	µg/L

Dissolved LUFT 5 Metals

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-3-21.5-W	1602578-004C	Water	02/12/2016 14:00	ICP-MS3	116751

Analytes	Result	RL	DF	Date Analyzed
Cadmium	ND	0.25	1	02/18/2016 10:05
Chromium	ND	0.50	1	02/18/2016 10:05
Lead	ND	0.50	1	02/18/2016 10:05
Nickel	**0.56**	0.50	1	02/18/2016 10:05
Zinc	ND	15	1	02/18/2016 10:05

Analyst(s): DVH

Analytical Comments: b1

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602578
Date Received:	2/16/16 18:20	**Extraction Method:**	SW3510C/3630C
Date Prepared:	2/20/16	**Analytical Method:**	SW8015B
Project:	539; Tung	**Unit:**	µg/L

Total Extractable Petroleum Hydrocarbons w/ SG Clean-Up

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-5-15-W	1602578-002A	Water	02/12/2016 10:45	GC2A	116996

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	H	36	1	02/21/2016 04:08
TPH-Motor Oil (C18-C36)	ND	H	77	1	02/21/2016 04:08
TPH-Heating Oil (C9-C18)	ND	H	52	1	02/21/2016 04:08

Surrogates	REC (%)	Qualifiers	Limits	
C26	90	H	71-134	02/21/2016 04:08

Analyst(s): TK Analytical Comments: b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-4-22-W	1602578-003A	Water	02/12/2016 13:15	GC2A	116996

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	H	37	1	02/21/2016 01:37
TPH-Motor Oil (C18-C36)	ND	H	79	1	02/21/2016 01:37
TPH-Heating Oil (C9-C18)	ND	H	53	1	02/21/2016 01:37

Surrogates	REC (%)	Qualifiers	Limits	
C26	97	H	71-134	02/21/2016 01:37

Analyst(s): TK Analytical Comments: b1

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-3-21.5-W	1602578-004A	Water	02/12/2016 14:00	GC2A	116996

Analytes	Result	Qualifiers	RL	DF	Date Analyzed
TPH-Diesel (C10-C23)	ND	H	42	1	02/21/2016 06:40
TPH-Motor Oil (C18-C36)	ND	H	90	1	02/21/2016 06:40
TPH-Heating Oil (C9-C18)	ND	H	60	1	02/21/2016 06:40

Surrogates	REC (%)	Qualifiers	Limits	
C26	95	H	71-134	02/21/2016 06:40

Analyst(s): TK Analytical Comments: b1

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Quality Control Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602578
Date Prepared:	2/18/16	**BatchID:**	116877
Date Analyzed:	2/18/16	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	539; Tung	**Sample ID:**	MB/LCS-116877 1602458-001AMS/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	10.4	0.50	10	-	104	54-140
Benzene	ND	11.7	0.50	10	-	117	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	41.2	2.0	40	-	103	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	10.8	0.50	10	-	108	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	10.8	0.50	10	-	108	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	11.0	0.50	10	-	110	66-125
1,1-Dichloroethene	ND	10.8	0.50	10	-	108	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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Quality Control Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602578
Date Prepared:	2/18/16	**BatchID:**	116877
Date Analyzed:	2/18/16	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	539; Tung	**Sample ID:**	MB/LCS-116877 1602458-001AMS/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	12.0	0.50	10	-	120	57-136
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	11.4	0.50	10	-	114	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	10.5	0.50	10	-	105	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	11.1	0.50	10	-	111	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	11.4	0.50	10	-	114	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	-	-	-	-

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Quality Control Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602578
Date Prepared:	2/18/16	**BatchID:**	116877
Date Analyzed:	2/18/16	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	539; Tung	**Sample ID:**	MB/LCS-116877 1602458-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Surrogate Recovery							
Dibromofluoromethane	28.4	28.3		25	114	113	70-130
Toluene-d8	29.4	29.2		25	118	117	70-130
4-BFB	2.15	2.56		2.5	86	103	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	9.79	10	ND	98	98	69-139	0	20
Benzene	10.6	10.2	10	ND	106	102	69-141	3.96	20
t-Butyl alcohol (TBA)	40.8	45.3	40	ND	102	113	41-152	10.3	20
Chlorobenzene	9.75	9.35	10	ND	97	94	77-120	4.16	20
1,2-Dibromoethane (EDB)	10.5	10.7	10	ND	105	107	76-135	1.74	20
1,2-Dichloroethane (1,2-DCA)	10.5	10.2	10	ND	105	102	73-139	2.71	20
1,1-Dichloroethene	10.0	9.56	10	ND	101	96	59-140	5.02	20
Diisopropyl ether (DIPE)	11.3	10.9	10	ND	113	109	72-140	3.64	20
Ethyl tert-butyl ether (ETBE)	11.1	11.0	10	ND	111	110	71-140	1.42	20
Methyl-t-butyl ether (MTBE)	11.0	10.8	10	ND	110	108	73-139	1.12	20
Toluene	10.1	9.74	10	ND	99	96	71-128	3.19	20
Trichloroethene	10.5	10.0	10	ND	105	100	64-132	4.67	20
Surrogate Recovery									
Dibromofluoromethane	29.1	28.7	25		116	115	70-130	1.38	20
Toluene-d8	28.3	28.5	25		113	114	70-130	0.563	20
4-BFB	2.42	2.56	2.5		97	102	70-130	5.50	20

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Quality Control Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602578
Date Prepared:	2/17/16	**BatchID:**	116799
Date Analyzed:	2/18/16	**Extraction Method:**	SW3510C
Instrument:	HPLC4	**Analytical Method:**	SW8310
Matrix:	Water	**Unit:**	µg/L
Project:	539; Tung	**Sample ID:**	MB/LCS-116799

QC Summary Report for SW8310

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acenaphthene	ND	-	0.0500	-	-	-	-
Acenaphthylene	ND	-	0.0500	-	-	-	-
Anthracene	ND	-	0.0500	-	-	-	-
Benzo (a) anthracene	ND	0.717	0.0250	0.75	-	96	70-130
Benzo (a) pyrene	ND	0.732	0.0500	0.75	-	98	70-130
Benzo (b) fluoranthene	ND	-	0.0250	-	-	-	-
Benzo (k) fluoranthene	ND	-	0.0250	-	-	-	-
Benzo (g,h,i) perylene	ND	-	0.0500	-	-	-	-
Chrysene	ND	0.702	0.0500	0.75	-	94	70-130
Dibenzo (a,h) anthracene	ND	-	0.0500	-	-	-	-
Fluoranthene	ND	-	0.0500	-	-	-	-
Fluorene	ND	-	0.0500	-	-	-	-
Indeno (1,2,3-cd) pyrene	ND	-	0.0250	-	-	-	-
1-Methylnaphthalene	ND	0.778	0.0500	0.75	-	104	70-130
2-Methylnaphthalene	ND	0.734	0.0500	0.75	-	98	70-130
Naphthalene	ND	-	0.0500	-	-	-	-
Phenanthrene	ND	0.752	0.0500	0.75	-	100	70-130
Pyrene	ND	0.691	0.0500	0.75	-	92	70-130
Surrogate Recovery							
Decafluorobiphenyl	42.8	49.1		50	86	98	70-130
4,4-Dichlorobiphenyl	25.3	26.6		25	101	106	70-130

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Quality Control Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602578
Date Prepared:	2/16/16	**BatchID:**	116751
Date Analyzed:	2/18/16	**Extraction Method:**	SW3005
Instrument:	ICP-MS3	**Analytical Method:**	SW6020
Matrix:	Water	**Unit:**	µg/L
Project:	539; Tung	**Sample ID:**	MB/LCS-116751 1602578-004CMS/MSD

QC Summary Report for Dissolved Metals

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Cadmium	ND	52.8	0.25	50	-	106	85-115
Chromium	ND	53.4	0.50	50	-	107	85-115
Lead	ND	51.3	0.50	50	-	103	85-115
Nickel	ND	53.6	0.50	50	-	107	85-115
Zinc	ND	535	15	500	-	107	85-115

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Cadmium	54.4	54.9	50	ND	109	110	70-130	0.841	20
Chromium	53.1	53.5	50	ND	106	107	70-130	0.788	20
Lead	55.9	53.6	50	ND	112	107	70-130	4.13	20
Nickel	52.0	52.3	50	0.56	103	103	70-130	0	20
Zinc	542	541	500	ND	108	108	70-130	0	20

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Quality Control Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602578
Date Prepared:	2/20/16	**BatchID:**	116996
Date Analyzed:	2/21/16 - 2/22/16	**Extraction Method:**	SW3510C/3630C
Instrument:	GC2B, GC39B	**Analytical Method:**	SW8015B
Matrix:	Water	**Unit:**	µg/L
Project:	539; Tung	**Sample ID:**	MB/LCS-116996

QC Report for SW8015B w/ SG Clean-Up

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH-Diesel (C10-C23)	ND	226	35	200	-	113	70-130
Surrogate Recovery							
C9	79.5	73.3		125	64,F3	59, F3	65-122

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CHAIN-OF-CUSTODY RECORD

WorkOrder: 1602578 **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: 539; Tung

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

Requested TAT: **5 days;**

Date Received: **02/12/2016**
Date Logged: **02/16/2016**

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
1602578-001	Dup	Water	2/12/2016 10:45	☐	B	A	C	A								
1602578-002	B-5-15-W	Water	2/12/2016 10:45	☐	B		C		A							
1602578-003	B-4-22-W	Water	2/12/2016 13:15	☐	B		C		A							
1602578-004	B-3-21.5-W	Water	2/12/2016 14:00	☐	B		C		A							

Test Legend:

1	8260B_W	2	8310_W	3	LUFTMS_6020FF_DISS	4	PREDF REPORT
5	TPH_LVWSG_W	6		7		8	
9		10		11		12	

Project Manager:

Prepared by: Jena Alfaro

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.

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WORK ORDER SUMMARY

Client Name: SCHUTZE & ASSOCIATES, INC.
QC Level: LEVEL 2
Work Order: 1602578
Project: 539; Tung
Client Contact: Kevin Loeb
Date Logged: 2/16/2016
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
1602578-001A	Dup	Water	SW8310 (PAHs/PNAs)	1	1LA w/ HCl	☐	2/12/2016 10:45	5 days	Present	☐	
1602578-001B	Dup	Water	SW8260B (VOCs)	4	VOA w/ HCl	☐	2/12/2016 10:45	5 days	Present	☐	
1602578-001C	Dup	Water	SW6020 (LUFT) (Dissolved-Field Filtered)	1	250mL HDPE w/ HNO3	☐	2/12/2016 10:45	5 days	Present	☐	
1602578-002A	B-5-15-W	Water	SW8015B (TEPHs w/ Column Style S.G. Clean-Up) <TPH-Diesel (C10-C23), TPH-Hydraulic Oil (C18-C36), TPH-Motor Oil (C18-C36)>	1	1LA w/ HCl	☐	2/12/2016 10:45	5 days	1%+	☐	
1602578-002B	B-5-15-W	Water	SW8260B (VOCs)	4	VOA w/ HCl	☐	2/12/2016 10:45	5 days	1%+	☐	
1602578-002C	B-5-15-W	Water	SW6020 (LUFT) (Dissolved-Field Filtered)	1	250mL HDPE w/ HNO3	☐	2/12/2016 10:45	5 days	1%+	☐	
1602578-003A	B-4-22-W	Water	SW8015B (TEPHs w/ Column Style S.G. Clean-Up) <TPH-Diesel (C10-C23), TPH-Hydraulic Oil (C18-C36), TPH-Motor Oil (C18-C36)>	1	1LA w/ HCl	☐	2/12/2016 13:15	5 days	1%+	☐	
1602578-003B	B-4-22-W	Water	SW8260B (VOCs)	4	VOA w/ HCl	☐	2/12/2016 13:15	5 days	1%+	☐	
1602578-003C	B-4-22-W	Water	SW6020 (LUFT) (Dissolved-Field Filtered)	1	250mL HDPE w/ HNO3	☐	2/12/2016 13:15	5 days	1%+	☐	
1602578-004A	B-3-21.5-W	Water	SW8015B (TEPHs w/ Column Style S.G. Clean-Up) <TPH-Diesel (C10-C23), TPH-Hydraulic Oil (C18-C36), TPH-Motor Oil (C18-C36)>	1	1LA w/ HCl	☐	2/12/2016 14:00	5 days	1%+	☐	

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.

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WORK ORDER SUMMARY

Client Name: SCHUTZE & ASSOCIATES, INC.
QC Level: LEVEL 2
Work Order: 1602578
Project: 539; Tung
Client Contact: Kevin Loeb
Date Logged: 2/16/2016
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
1602578-004B	B-3-21.5-W	Water	SW8260B (VOCs)	4	VOA w/ HCl	☐	2/12/2016 14:00	5 days	1%+	☐	
1602578-004C	B-3-21.5-W	Water	SW6020 (LUFT) (Dissolved-Field Filtered)	1	250mL HDPE w/ HNO3	☐	2/12/2016 14:00	5 days	1%+	☐	

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.

1602578

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CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH ☐ 1 DAY ☐ 2 DAY ☐ 3 DAY ☐ 5 DAY ☒

GeoTracker EDF ☒ PDF ☐ EDD ☐ Write On (DW) ☐ EQuIS ☐ 10 DAY ☐

Effluent Sample Requiring "J" flag ☐ UST Clean Up Fund Project ☐; Claim #_____

Report To: Kevin Love **Bill To:**

Company: Schutze & Associates, Inc.

Tele: (510) 226-9949 **E-Mail:**

Project #: 539 **Project Name:** Tung

Project Location: Oakland **Purchase Order#**

Sampler Signature:

SAMPLE ID	Location/ Field Point Name	SAMPLING Date	SAMPLING Time	# Containers	MATRIX: Ground Water	Waste Water	Drinking Water	Sea Water	Soil	Air	Sludge	Other	METHOD PRESERVED: HCL	HNO_3	Other Ice
Dup		2/12	10:45	6	X								X	X	X
B-5-15-W		2/12	10:45	6	X								X	X	X
B-4-22-W		2/12	1:15	6	X								X	X	X
B-3-21.5-W		2/12	2:00	6	X								X	X	X
~~B-2-20-W~~		~~2/12~~	~~2:00~~	~~6~~											
		~~2/12~~													

Analysis Request

BTEX & TPH as Gas (8021/ 8015) MTBE	TPH as Diesel (8015) (with silica gel cleanup)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's ; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic Cl Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.8 / 6020)***	LUFT 5 Metals (200.8 / 6020)*** FF	Metals (200.8 / 6020)***	Lab to Filter sample for Dissolved metals analysis	PAHs (EPA 8100 mod.) 8310
	X							X				X			X
	X							X				X			X
	X							X				X			X
	X							X				X			X
	~~X~~														
	~~X~~														

→ Please provide chromatograms.

**MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate $250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

*** If metals are requested for water samples and the water type is not specified on the chain of custody, then MAI will default to metals by E200.8.

Relinquished By:	Date:	Time:	Received By:
	2/12/12	5:20	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t°_____ COMMENTS:

GOOD CONDITION_____

HEAD SPACE ABSENT_____

DECHLORINATED IN LAB_____

APPROPRIATE CONTAINERS_____

PRESERVED IN LAB_____

VOAS O&G METALS OTHER HAZARDOUS:

PRESERVATION_____ pH<2_____

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Sample Receipt Checklist

Client Name:	**Schutze & Associates, Inc.**	Date and Time Received:	**2/12/2016 17:20**
Project Name:	**539; Tung**	Date Logged:	**2/16/2016**
WorkOrder №:	**1602578** Matrix: Water	Received by:	Alexandra Iniguez
Carrier:	Client Drop-In	Logged by:	Jena Alfaro

Chain of Custody (COC) Information

Chain of custody present?	Yes	☑	No	☐	
Chain of custody signed when relinquished and received?	Yes	☑	No	☐	
Chain of custody agrees with sample labels?	Yes	☑	No	☐	
Sample IDs noted by Client on COC?	Yes	☑	No	☐	
Date and Time of collection noted by Client on COC?	Yes	☑	No	☐	
Sampler's name noted on COC?	Yes	☑	No	☐	

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes	☐	No	☐	NA ☑
Shipping container/cooler in good condition?	Yes	☑	No	☐	
Samples in proper containers/bottles?	Yes	☑	No	☐	
Sample containers intact?	Yes	☑	No	☐	
Sufficient sample volume for indicated test?	Yes	☑	No	☐	

Sample Preservation and Hold Time (HT) Information

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

UCMR3 Samples:

Total Chlorine tested and acceptable upon receipt for EPA 522?	Yes	☐	No	☐	NA ☑
Free Chlorine tested and acceptable upon receipt for EPA 218.7, 300.1, 537, 539?	Yes	☐	No	☐	NA ☑

** NOTE: If the "No" box is checked, see comments below.*

Comments:

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1602592 A

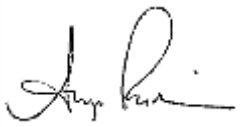
Report Created for: Schutze & Associates, Inc.

44358 South Grimmer Blvd
Fremont, CA 94538

Project Contact: Kevin Loeb
Project P.O.:
Project Name: SCS539; Tung

Project Received: 02/16/2016

Analytical Report reviewed & approved for release on 02/25/2016 by:



Angela Rydelius,
Laboratory Manager

McCampbell Analytical, Inc.
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Glossary of Terms & Qualifier Definitions

Client: Schutze & Associates, Inc.
Project: SCS539; Tung
WorkOrder: 1602592

Glossary Abbreviation

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
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)

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Glossary of Terms & Qualifier Definitions

Client: Schutze & Associates, Inc.
Project: SCS539; Tung
WorkOrder: 1602592

Analytical Qualifiers

S	Surrogate spike recovery outside accepted recovery limits
C1	surrogate recovery outside of the control limits due to the dilution of the sample.
e1	unmodified or weakly modified diesel is significant
e2	diesel range compounds are significant; no recognizable pattern
e7	oil range compounds are significant

Quality Control Qualifiers

F1	MS/MSD recovery and/or RPD is out of acceptance criteria; LCS validated the prep batch.
F3	the surrogate standard recovery and/or RPD is outside of acceptance limits.
F8	MS/MSD recovery and/or RPD was out of acceptance criteria; PDS validated the prep batch. If PDS recovery was out of acceptance criteria, DLT validated the prep batch.

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Analytical Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Received:	2/16/16 20:36	**Extraction Method:**	SW3060A
Date Prepared:	2/23/16	**Analytical Method:**	SW7199
Project:	SCS539; Tung	**Unit:**	mg/Kg

Hexachrome by Alkaline Digestion and IC Analysis

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-5-5	1602592-002A	Soil	02/12/2016 10:00	IC2	117043

Analytes	Result	RL	DF	Date Analyzed
Hexachrome	ND	4.0	1	02/24/2016 15:08

Analyst(s): AO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-3-7.5	1602592-008A	Soil	02/12/2016 08:30	IC2	117043

Analytes	Result	RL	DF	Date Analyzed
Hexachrome	ND	4.0	1	02/24/2016 15:27

Analyst(s): AO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-3-10	1602592-009A	Soil	02/12/2016 08:30	IC2	117043

Analytes	Result	RL	DF	Date Analyzed
Hexachrome	ND	4.0	1	02/24/2016 15:46

Analyst(s): AO

Client ID	Lab ID	Matrix	Date Collected	Instrument	Batch ID
B-2-8	1602592-016A	Soil	02/12/2016 12:15	IC2	117043

Analytes	Result	RL	DF	Date Analyzed
Hexachrome	ND	4.0	1	02/24/2016 16:05

Analyst(s): AO

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Quality Control Report

Client:	Schutze & Associates, Inc.	**WorkOrder:**	1602592
Date Prepared:	2/22/16	**BatchID:**	117043
Date Analyzed:	2/24/16	**Extraction Method:**	SW3060A
Instrument:	IC2	**Analytical Method:**	SW7199
Matrix:	Soil	**Unit:**	mg/Kg
Project:	SCS539; Tung	**Sample ID:**	MB/LCS-117043 1602693-001AMS/MSD

QC Summary Report for SW7199 (Hexachrome)

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Hexachrome	ND	210	4.0	200	-	105	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
Hexachrome	181	183	200	ND	90	91	70-130	1.10	20

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(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1602592 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: SCS539; Tung

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

Requested TAT: **5 days;**

Date Received: **02/12/2016**
Date Logged: **02/16/2016**
Date Add-On: **02/22/2016**

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
1602592-002	B-5-5	Soil	2/12/2016 10:00	☐	A											
1602592-008	B-3-7.5	Soil	2/12/2016 8:30	☐	A											
1602592-009	B-3-10	Soil	2/12/2016 8:30	☐	A											
1602592-016	B-2-8	Soil	2/12/2016 12:15	☐	A											

Test Legend:

1	7199_TTLC_S	2		3		4	
5		6		7		8	
9		10		11		12	

Project Manager:

Prepared by: Agustina Venegas

Add-On Prepared By: Maria Venegas

Comments: Cr6 added to 002,008,009,016 2/22/16 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.

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WORK ORDER SUMMARY

Client Name: SCHUTZE & ASSOCIATES, INC.
Project: SCS539; Tung
Comments: Cr6 added to 002,008,009,016 2/22/16 STAT.

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: 1602592
Date Logged: 2/16/2016
Date Add-On: 2/22/2016

Lab ID	Client ID	Matrix	Test Name	Containers /Composites	Bottle & Preservative	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1602592-002A	B-5-5	Soil	SW7199 (Hexachrome)	1	Acetate Liner	2/12/2016 10:00	5 days		☐	
1602592-008A	B-3-7.5	Soil	SW7199 (Hexachrome)	1	8OZ GJ	2/12/2016 8:30	5 days		☐	
1602592-009A	B-3-10	Soil	SW7199 (Hexachrome)	1	Acetate Liner	2/12/2016 8:30	5 days		☐	
1602592-016A	B-2-8	Soil	SW7199 (Hexachrome)	1	Acetate Liner	2/12/2016 12:15	5 days		☐	

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.

1602592

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CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH ☐ 1 DAY ☐ 2 DAY ☐ 3 DAY ☐ 5 DAY ☒

GeoTracker EDF ☒ PDF ☐ EDD ☐ Write On (DW) ☐ EQuIS ☐ 10 DAY ☐

Effluent Sample Requiring "J" flag ☐ UST Clean Up Fund Project ☐; Claim #_____

Report To: Kevin Love **Bill To:**

Company: Schutze & Associates, Inc.

Tele: (510) 226-9944 **E-Mail:**

Project #: SCS539 **Project Name:** Tung

Project Location: Oakland **Purchase Order#**

Sampler Signature:

SAMPLE ID	Location/ Field Point Name	SAMPLING Date	SAMPLING Time	# Containers	MATRIX: Ground Water	Waste Water	Drinking Water	Sea Water	Soil	Air	Sludge	Other	METHOD PRESERVED: HCL	HNO_3	Other Ice	BTEX & TPH as Gas (8021/ 8015) MTBE	TPH as Diesel (8015) (-D, -MO, -HO)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic Cl Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.8 / 6020)***	LUFT 5 Metals (200.8 / 6020)***	Metals (200.8 / 6020)***	Lab to Filter sample for Dissolved metals analysis	PAHs (EPA 8100 mod.) 8310	H-12	TTLC CAM Added 2/22/16 STD		
B-5-2.5		2/12	10:00	1					X						X		X																		
B-5-5			"	1					X						X		X							X				X			X				
B-5-7.5				1					X						X																X	X			
B-5-10				1					X						X																	X	X		
B-5-15				1					X						X																	X	X		
B-3-2.5			10:20	1					X						X		X																		
B-3-5			8:30	1					X						X																	X			
B-3-7.5				1					X						X		X							X				X			XX		XX		
B-3-10				1					X						X		X							X				X			XX		XX		
B-3-14.5				1					X						X																	X	X		
B-3-20		V	9:00	1					X						Y																	X	X		

**MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate $250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

*** If metals are requested for water samples and the water type is not specified on the chain of custody, then MAI will default to metals by E200.8.

Relinquished By:	Date:	Time:	Received By:
	2/12/16	5:20	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° 6
GOOD CONDITION
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS
PRESERVED IN LAB

COMMENTS:

VOAS O&G METALS OTHER HAZARDOUS:
PRESERVATION pH<2

McCampbell Analytical, Inc.

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www.mccampbell.com / main@mccampbell.com
Telephone: (877) 252-9262 / Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH ☐ 1 DAY ☐ 2 DAY ☐ 3 DAY ☐ 5 DAY ☒

GeoTracker EDF ☒ / PDF ☐ EDD ☐ Write On (DW) ☐ EQuIS ☐ 10 DAY ☐

Effluent Sample Requiring "J" flag ☐ UST Clean Up Fund Project ☐; Claim #_____

Report To: Kevin Lobb **Bill To:**

Company: Schutze & Associates, Inc

Tele: (510) 226-9944 **E-Mail:**

Project #: SCS539 **Project Name:** Tung

Project Location: Oakland **Purchase Order#**

Sampler Signature:

SAMPLE ID	Location/ Field Point Name	SAMPLING Date	SAMPLING Time	# Containers	MATRIX: Ground Water	Waste Water	Drinking Water	Sea Water	Soil	Air	Sludge	Other	METHOD PRESERVED: HCL	HNO_3	Other Ice
B-4-2.5		2/12	11:40	1					X						X
B-4-7.5				1					X						X
B-4-10				1					X						X
B-4-15.5				1					X						X
B-2-8			12:50	1					X						X
B-2-10			2:30	1					X						X
B-2-12			↓	1					X						X
		↓													

Analysis Request

BTEX & TPH as Gas (8021/ 8015) MTBE	TPH as Diesel (8015) (S-mo-ho)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic Cl Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.8 / 6020)***	LUFT 5 Metals (200.8 / 6020)***	Metals (200.8 / 6020)***	Lab to Filter sample for Dissolved metals analysis	PAHs (EPA 8100 Mod.)	Hold	TTLC CPL
																X	
	X																
																X	
																X	
	X							X				X			X		X
	X															X	
																X	

**MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate $250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.

*** If metals are requested for water samples and the water type is not specified on the chain of custody, then MAI will default to metals by E200.8.

Relinquished By:	Date:	Time:	Received By:
	2/12/13	5:20	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t°_____
GOOD CONDITION_____
HEAD SPACE ABSENT_____
DECHLORINATED IN LAB_____
APPROPRIATE CONTAINERS_____
PRESERVED IN LAB_____

COMMENTS:

VOAS O&G METALS OTHER HAZARDOUS:
PRESERVATION_____ pH<2_____