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**SUBSURFACE INVESTIGATION,
REPORT**

6211 San Pablo Avenue
Oakland, California

AEI Project No. 280346

Prepared For

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1.0 INTRODUCTION

AEI Consultants (AEI) has prepared this Subsurface Investigation Report on behalf of Mr. Pritpaul Sappal (client) for the property located at 6211 San Pablo Avenue in the City of Oakland, Alameda County, California. AEI has been retained by the client to provide environmental engineering and consulting services for the subject property due to a release of petroleum hydrocarbons which has impacted soil and groundwater at the site.

This investigation has been performed in an attempt to characterize the extent of the known hydrocarbon contamination. The investigation was originally proposed in multiple reports from the previous consultant, Herschy Environmental Inc. (Herschy), particularly Herschy's *Additional Investigation Work Plan* dated May 27, 2008. The final scope of work was proposed in AEI's *Revised Site Conceptual Model and Work Plan* dated October 8, 2008 and approved by the Alameda County Health Care Services Agency (ACHCSA) in a letter dated October 16, 2008.

2.0 SITE DESCRIPTION AND HISTORY

The subject property is located at 6211 San Pablo Avenue, northwest of the intersection of San Pablo Avenue and 62nd Street in a mixed residential and light commercial area of Oakland, California (Figure 1 and 2). The site currently consists of a retail gasoline station with three underground storage tanks (USTs) dispensing gasoline fuel through six dual-sided fuel dispensing islands. Site features are included in Figure 3.

In April 1999, three borings B-1 through B-3 were advanced at the site by Herschy. Significant concentrations of hydrocarbons were present in the soil and groundwater samples collected during the investigation. Subsequently, in June 1999, five additional soil borings were advanced (B-4 through B-8) at the site. Based on the data collected during the investigation, it was determined that additional assessment was necessary as the lateral extent of the contamination had not been determined. Therefore, in October 1999 monitoring wells MW-1 through MW-3 were installed and a groundwater monitoring program was initiated.

In November 2001, monitoring wells MW-4 through MW-6 were installed and borings B-9 through B-14 were advanced on the property. Based on the data obtained it was determined that additional wells were necessary offsite and interim remedial action was required, therefore a workplan was prepared for the implementation of both. To date, the offsite monitoring wells have not been installed due to difficulty obtaining an encroachment permit with the City of Oakland.

In an effort to remediate hydrocarbons at the site, five air sparge wells (AS-1 through AS-5), thirteen vapor extraction wells (VE-1 through VE-13), and one groundwater extraction well (EX-1) were installed in January 2004. In addition, well MW-1R was installed to replace well MW-1. In February 2004, three 10,000 gallon USTs and associated product piping were removed and replaced (with the current UST system) at the site. During construction activities, approximately 1,100 tons of soil and 40,000 to 60,000 gallons of groundwater was removed from the site and properly disposed of.

A soil vapor extraction system was installed and was operational from August 31, 2006 through November 19, 2007. The system is currently not operating at the site as the equipment was removed by the prior consultant in August and September 2008. In August 2007 borings DP-1 and DP-3 were installed at and in the vicinity of the site. Several offsite borings were expected to be completed, however, they were not performed for a variety of reasons. In September 2008, consulting responsibilities were transferred to AEI Consultants. Subsequently, AEI submitted the requested revised Site Conceptual Model (SCM) dated October 8, 2008 which updates a proposed scope of work to complete additional offsite characterization for the site. Approval for the completion of the work was issued in a letter from the ACHCSA dated October 16, 2008.

The location of all former and current site features, including previous boring locations, are included on Figures 2 and 3.

3.0 GEOLOGY AND HYDROLOGY

Sediments encountered during the recent investigation were generally classified as fine grained sediments (a combination of silt and clay) just below the asphalt surface to depths ranging from approximately 5 to 11 feet below ground surface (bgs). Grain size distribution analysis of select sediments encountered from this zone indicated approximately 7% to 21% sand, approximately 40% silt, and approximately 37% to 53% clay. The fine grained silty clay was underlain by a sandy, gravelly silt/clay with varying amounts of fine to coarse grained sand and minor gravel to depths ranging from approximately 11 feet bgs to 17 feet bgs (the terminus of several of the shallow borings). Grain size distribution analysis of select sediments encountered from this zone indicated approximately 4% to 26% gravel, 44% to 58% sand, and 29% to 36% fine grained silt and clay. Deep borings advanced at the site indicated interbedded layers of silt and well graded sand and gravel to the maximum depth explored, 40 feet bgs.

Shallow groundwater was encountered at varying depths ranging generally from 11 to 14 feet bgs, and stabilizing from 5 feet to 10 feet bgs. In deep borings DDP-2 through DDP-4, deep groundwater (past 20 feet bgs) was not collected. Several potential water producing zones were identified during drilling, however the zones may be described as slow producing and upon setting screens in these borings at varying depths from 25 to 40 feet bgs, measurable groundwater was not present after approximately 1 hour. In boring DDP-1, a hydropunch screen was open from 32 to 40 feet bgs, however was initially dry. After approximately 3 hours, groundwater was measured at 28 feet bgs.

Groundwater during the 3rd Quarter 2008 quarterly monitoring episode ranged from 5.46 to 9.36 feet below the top of casing or 26.85 to 28.18 feet above mean sea level (amsl). The direction of the groundwater flow during the September 10, 2008 sampling event was towards the southwest with an estimated overall hydraulic gradient of 0.015 feet/foot, consistent with historical data. A detailed description of the soil lithology and PID data is included on the boring logs in Appendix A, with the physical properties included on Table 5. Historical subsurface conditions as

historically encountered by Herschy are reported in cross sections and boring logs contained in Herschy's *Site Conceptual Model* dated May 27, 2008.

4.0 SOIL BORINGS/SOIL VAPOR PROBES

4.1 Soil Borings

Prior to initiating drilling activities, a soil boring permit (permit number W2008-0840) and soil vapor well permit (permt number W2008-0841 to W20080843) was obtained from the Alameda County Public Works (ACPW). In addition, an encroachment/excavation permit was obtained from the State of California (permit number 0408-6SV 1861) and the city of Oakland (permit number X0802228 to X0802231). A copy of the permits is included in Appendix B. Following permit approval, drilling activities were scheduled and Underground Utility Services (USA North) was notified to locate possible underground utilities in the area. In addition, all necessary parties were given advance notice of the drilling schedule in accordance with the permits.

On November 24 to November 26, 2008, AEI advanced ten shallow soil borings (DP-4, SB-5, and SB-7 to SB-14) in the vicinity of the subject property and four deep soil borings (DDP-1 to DDP-4) at the subject property. The borings were advanced with a direct-push drilling rig operated by Environmental Control Associates (CA C57 License # 695-970). Shallow borings used standard truck mounted drilling rig equipment, and deep borings used double wall, direct push drilling equipment.

The shallow borings were advanced to depths ranging from approximately 8 to 17 feet bgs and the deep borings were advanced to depths ranging from 26 to 40 feet bgs. The soil cores were continuously collected in either 1" or 2" diameter acrylic liner and logged by the onsite AEI scientist. Soil samples were described by AEI personnel and logged using the unified soil classification system and screened in the field using a photo ionization detector (PID). Field observations and screening data is presented on the borings logs in Appendix A. Sampling equipment, including sampling barrels and other equipment used to sample, were decontaminated between samples using a triple rinse system containing Alconox™ or similar detergent.

A six inch sample at select depths was cut from the acrylic liner and sealed with Teflon tape and plastic caps, labeled with a unique identifier, placed in a cooler filled with water ice, and transported under appropriate chain-of-custody documentation for analysis to McCampell Analytical Inc., (DOHS Certification Number 1644) of Pittsburg, California. Select soil samples were analyzed for TPHg by EPA method 8015 Modified, benzene, toluene, ethylbenzene, and xylenes (collectively referred to as BTEX), and methyl tertiary butyl ether (MTBE) by EPA method 8021B, and fuel oxygenates MTBE, t-Butyl alcohol (TBA), tert-amyl methyl ether (TAME), diisopropl ether (DIPE), ethyl tert-butyl ether (ETBE), 1,2-dibromoethane (EDB), and 1,2-Dichloroethane (1,2-DCA) by EPA method 8260B. Soil cuttings generated during the drilling activities were stored on-site in a sealed, labeled, 55-gallon drum pending disposal.

4.2 Groundwater Sample Collection

Shallow Soil Borings

In the shallow soil borings, upon encountering saturated sediments, a temporary ¾" diameter factory-slotted poly-vinyl chloride (PVC) casing was inserted into the borings to facilitate the collection of groundwater samples. Groundwater samples were collected with a drop tube and check valve into 40-ml volatile organic analysis (VOA) vials. The groundwater samples were capped so that there was no head space or visible air bubbles within the vials, labeled with a unique identifier, placed in a cooler filled with ice, and transported to an offsite laboratory and analyzed for TPHg using EPA Method 8015, BTEX and MTBE using EPA Method 8021B, and fuel oxygenates MTBE, TBA, TAME, DIPE, ETBE, EDB, and 1,2-DCA by EPA method 8260B.

Deep Soil Borings

An attempt to collect groundwater samples was made in the deep borings, however was not successful in borings DDP-2 through DDP-4 due to the lack of sufficient groundwater recharge in the deep groundwater zone. Boring DDP-1 was advanced to a depth of 26 feet bgs, and a groundwater sample was collected from the boring as water was initially measured at 13 feet bgs. In boring DDP-1, an additional attempt was made to grab a groundwater sample from deep groundwater not hydrologically connected to the shallow zone. Therefore, a hydropunch tool was advanced to approximately 40 feet bgs, and the hydropunch sample was retracted approximately 8 feet, exposing the screen from approximately 32 to 40 feet bgs. The borehole was initially dry, however after approximately 3 hours, groundwater was present at approximately 28 feet bgs, and a groundwater sample was collected.

4.3 Soil Vapor Monitoring Probe Installation

On November 25, 2008, AEI advanced three soil borings (SG-1 through SG-3) at the subject property, and converted each of the borings into nested soil gas sampling points. The borings were advanced with hand drilling equipment, creating a 1½ inch diameter borehole for the installation of the monitoring probes. The borings were advanced to a depth of 6 feet bgs. Each of the boreholes was converted into nested soil gas monitoring points by first adding approximately 2 inches of clean #30 Mesh Sand followed by the soil gas monitoring probe, consisting of a 6 inch long, ¼ inch diameter stainless steel vapor screen attached to ¼ inch diameter kynar tubing, to the depth of approximately 6 feet bgs. An annular sand pack (consisting of clean #30 Mesh Sand) was installed ½ foot above the vapor screen (5 feet bgs). The borehole was then backfilled with a hydrated bentonite seal to approximately 2 inches below the second vapor screen (approximately 38 inches bgs). Clean sand as then placed on top of the bentonite, a second vapor screen was installed, and backfilled with clean sand to approximately 24 inches bgs. The borehole was subsequently backfilled with hydrated bentonite to approximately 12 inches bgs, and the remainder of

each boring was sealed with cement grout. A flush mounted traffic rated well box was installed over the borehole and tubing. A soil gas probe schematic is shown on Figure 4.

5.0 SAMPLE ANALYTICAL RESULTS

5.1 Soil Analytical Results – Shallow Borings

Select soil samples were analyzed from each of the shallow borings, typically, at a minimum, from the perceived capillary fringe. Petroleum hydrocarbons were detected in the soil as follows:

- Soil boring DP-4 at 3.5 feet bgs was reported to contain concentrations of TPHg, toluene, xylenes, and TBA at 16 mg/kg, 0.037 mg/kg, 0.041 mg/kg, and 0.15 mg/kg, respectively. At 7.5 feet bgs, DP-4 was reported to contain concentrations of TPHg, toluene, ethylbenzene, and xylenes at 16 mg/kg, 0.12 mg/kg, 0.016 mg/kg, and 0.032 mg/kg, respectively. At 15 feet bgs, DP-4 was reported to contain MTBE and TAME at a concentration of 1.3 mg/kg and 0.12 mg/kg, respectively. The remaining constituents were not reported at or above the laboratory detection limit.
- Soil boring SB-8 at 3.5 feet bgs was reported to contain TPHg, toluene, and MTBE at concentrations of 1.5 mg/kg, 0.024 mg/kg, and 0.055 mg/kg, respectively. At 6 feet bgs, SB-8 was reported to contain concentrations of TPHg, BTEX, MTBE, and TBA at concentrations of 14 mg/kg, 0.024 mg/kg, 0.12 mg/kg, 0.45 mg/kg, 0.087 mg/kg, 0.092 mg/kg, and 0.090 mg/kg, respectively. At 11.5 feet bgs, SB-8 was reported to contain TPHg, ethylbenzene, xylenes, MTBE, TAME, and TBA at concentrations of 1.4 mg/kg, 0.034 mg/kg, 0.049 mg/kg, 1.4 mg/kg, 0.061 mg/kg, and 2.7 mg/kg, respectively. The remaining constituents were not reported at or above the laboratory detection limit.
- Soil boring SB-11 at 7.5 feet bgs was reported to contain concentrations of TPHg, toluene, ethylbenzene, and xylenes at 200 mg/kg, 0.96 mg/kg, 1.4 mg/kg, and 3.9 mg/kg, respectively. At 15.5 feet bgs, SB-11 was reported to contain MTBE at a concentration of 0.023 mg/kg. The remaining constituents were not reported at or above the laboratory detection limit.
- Soil boring SB-12 at 3.5 feet bgs was reported to contain MTBE at a concentration of 0.0083 mg/kg. At 6.5 feet bgs, SB-12 was reported to contain TPHg, BTEX, MTBE and TBA at a concentration of 4.2 mg/kg, 0.023 mg/kg, 0.034 mg/kg, 0.036 mg/kg, 0.0088 mg/kg, 0.26 mg/kg, and 0.17 mg/kg, respectively. At 11.5 feet bgs, SB-12 was reported to contain TBA at a concentration of 2.1 mg/kg. The remaining constituents were not reported at or above the laboratory detection limit.
- Soil boring SB-13 at 7.5 feet bgs was reported to contain concentrations of TPHg, BTEX, and TBA at concentrations of 26 mg/kg, 0.010 mg/kg, 0.20 mg/kg, 0.18 mg/kg, 0.64 mg/kg, and 0.12 mg/kg, respectively. The remaining constituents were not reported at or above the laboratory detection limit.
- Soil boring SB-14 at 3.5 feet bgs was reported to contain concentrations of TPHg and toluene at 3.0 mg/kg and 0.014 mg/kg, respectively. At 7.5 feet bgs, SB-14 was reported to contain TPHg, toluene, ethylbenzene, and xylenes at concentrations of 120

mg/kg, 0.75 mg/kg, 2.3 mg/kg, and 6.2 mg/kg, respectively. At 11.5 feet bgs, SB-14 was reported to contain MTBE at a concentration of 0.15 mg/kg. The remaining constituents were not reported at or above the laboratory detection limit.

- The soil sample from borings SB-5 (7.5 feet bgs), SB-7 (3.5 feet bgs and 10.5 feet bgs), SB-9 (10 feet bgs), SB-10 (6 feet bgs), and SB-11 (3.5 feet bgs) did not contain TPHg, BTEX, or fuel oxygenates at or above the laboratory detection limit.

Soil analytical data is displayed on Table 1 and Figure 5, and a copy of the laboratory analytical reports is included in Appendix C.

5.2 Soil Analytical Results – Deep Borings

Multiple soil samples were analyzed from each of the deep borings, with the intent of obtaining vertical delineation at the site. Select petroleum hydrocarbons were detected in the soil samples as follows:

- Soil samples were analyzed from boring DDP-1 at 5 feet, 8 feet, 11.5 feet, and 19.5 feet bgs. TPHg was detected at concentrations of 4.5 mg/kg, 96 mg/kg, and 11 mg/kg, respectively. At 19.5 feet bgs, TPHg was not detected at or above the laboratory detection limit. Benzene was detected at 5 feet and 11.5 feet bgs at a concentration of 0.096 mg/kg and 0.0077 mg/kg, respectively, however not detected at or above the laboratory detection limit at 8 feet or 19.5 feet bgs. MTBE was detected in each of the soil samples at concentrations of 7.9 mg/kg, 0.32 mg/kg, 1.0 mg/kg, and 4.0 mg/kg, respectively.
- Soil samples were analyzed from boring DDP-2 at 5 feet, 7.5 feet, 10.5 feet, 20.5 feet, 26.5, and 35.5 feet bgs. At 5 feet, 7.5 feet, and 10.5 feet bgs, TPHg was detected at concentrations of 5.8 mg/kg, 850 mg/kg, and 14 mg/kg and benzene was detected at a concentration of 0.010 mg/kg, 0.78 mg/kg, and 0.045 mg/kg, respectively. TPHg and benzene were not detected at or above the laboratory detection limit at the remaining depths. MTBE was detected at concentrations of 3.4 mg/kg, 7.9 mg/kg, 8.0 mg/kg, 0.86 mg/kg, 0.14 mg/kg, and 0.039 mg/kg, respectively.
- Soil samples were analyzed from boring DDP-3 at 5 feet, 7.5 feet, 12.5 feet, 20.5 feet, 26 feet, and 35.5 feet bgs. At 5 feet and 7.5 feet bgs, TPHg was detected at concentrations of 170 mg/kg and 930 mg/kg, respectively. The remaining soil samples did not contain TPHg at or above the laboratory detection limit. Benzene was detected at 7.5 feet bgs at a concentration of 1.7 mg/kg, however not detected at or above the laboratory detection limit in the remaining soil samples. MTBE was detected in each of the soil samples at concentrations of 6.3 mg/kg, 11 mg/kg, 0.78 mg/kg, 0.18 mg/kg, 0.022 mg/kg, and 0.020 mg/kg, respectively.
- Soil samples were analyzed from boring DDP-4 at 3.5 feet, 7.5 feet, 10.5 feet, 20.5 feet, and 29.5 feet bgs. In the soil sample collected at 7.5 feet bgs, TPHg and benzene were detected at a concentration of 180 mg/kg and 0.040 mg/kg, respectively. The remaining soil samples did not contain TPHg or benzene at or above the laboratory detection limit. MTBE was detected in soil samples from 3.5 feet, 7.5 feet, and 10.5 feet bgs at

concentrations of 0.055 mg/kg, 0.11 mg/kg, and 0.0093 mg/kg, respectively, however MTBE was not detected in the remaining soil samples analyzed.

Soil analytical data is displayed on Table 1 and Figure 5, and a copy of the laboratory analytical report is included in Appendix C.

5.3 Groundwater Analytical Results

Petroleum hydrocarbons were detected in the groundwater samples obtained from the soil borings as follows:

- TPHg was detected in nine of the borings at concentrations ranging from 130 µg/L (DDP-1D) to 47,000 µg/L (SB-8). TPHg was not detected at or above the laboratory detection limit in the groundwater sample analyzed from borings SB-7, SB-10, and DDP-1.
- Benzene was detected in seven of the borings at concentrations ranging from 1.3 µg/L (SB-12) to 530 µg/L (SB-8). Benzene was not detected at or above the laboratory detection limit in the groundwater samples analyzed from borings SB-5, SB-7, SB-10, SB-13, and DDP-1.
- Toluene was detected in seven of the borings at concentrations ranging from 0.59 µg/L (SB-11) to 200 µg/L (SB-8). Toluene was not detected at or above the laboratory detection limit in the groundwater samples analyzed from borings SB-5, SB-7, SB-10, SB-13, and DDP-1.
- Ethylbenzene was detected in seven of the borings at concentrations ranging from 5.4 µg/L (DDP-1D) to 3,100 µg/L (SB-8). Ethylbenzene was not detected at or above the laboratory detection limit in the groundwater samples analyzed from borings SB-5, SB-7, SB-10, SB-13, and DDP-1.
- Xylenes were detected in eight of the borings at concentrations ranging from 5.3 µg/L (DP-4) to 4,100 µg/L (SB-8). Xylenes were not detected at or above the laboratory detection limit in the groundwater samples analyzed from borings SB-5, SB-7, SB-10, and DDP-1.
- MTBE was detected in each of the borings with the exception of SB-7. MTBE was present at concentrations ranging from 18 µg/L (SB-10) to 18,000 µg/L (SB-13).
- TAME was detected in seven of the borings at concentrations ranging from 2.7 µg/L (DDP-1D) to 800 µg/L (DP-4). TAME was not detected at or above the laboratory detection limit in the groundwater samples analyzed from borings SB-7, SB-8, SB-10, and SB-12.
- TBA was detected in each of the borings with the exception of SB-5 and SB-7. TBA was present at concentrations ranging from 2.5 µg/L (SB-10) to 30,000 µg/L (SB-8).

DIPE, ETBE, 1,2-DCA, and EDB were not detected at or above the laboratory detection limit in any of the groundwater samples analyzed. Groundwater analytical results are displayed on Table 2 and Figure 6, and a copy of the laboratory analytical report is included in Appendix C.

6.0 SOIL VAPOR SAMPLING

On December 3, 2008, soil gas samples were collected from nested gas probes SG-1 through SG-3 which were screened at two depths, 3 feet bgs and 6 feet bgs. Prior to sample collection, the soil gas probes were purged of three (3) volumes of dead air using a 30 to 60 milliliter (mL) syringe connected via an on-off valve. This helped to ensure that a sufficient volume of ambient air was removed from the sampling point and that samples collected were representative of subsurface conditions. The purged volume was calculated by summing the volume of the sample tubing and annular space around the probe tip. One purge volume for the 3 and 6-foot probes are approximately 12 and 29 milliliters (mL), respectively. Three default purge volumes for the 3 and 6-foot probes are 35 and 58 mL, respectively.

After the probes were adequately purged of three well volumes, soil gas samples were collected into laboratory–evacuated 1-L Summa™ canisters. A sampling manifold with a critical orifice flow controllers designed and provided by McCampbell Analytical Inc. was placed inline between the soil gas probe and Summa™ canister to ensure that it was filled at a constant rate of between 100 to 200 milliliters per minute (mL/min) as recommended by the ASGI. A new laboratory-certified clean sampling manifold was used at each sampling point.

During sampling, an open container of isopropyl alcohol (leak check compound), was placed inside a plastic Tupperware box designed to encompass the well box where the soil gas tubing and the grout seal meet, the sampling manifold, and the Summa canister. Weather stripping was attached to the bottom of the Tupperware box to help seal the box to the pavement. A small access hole was drilled into the box which was used as an access port for PID measurements during sampling. To avoid possible cross contamination, the isopropyl alcohol leak check compound was stored separately from other sampling tools in a zipper locking bag.

A total of nine (7) soil gas samples, which included one field duplicate (SG-3-6-Dup) were transported under proper chain of custody protocol to McCampbell Analytical, Inc. of Pittsburg, California (Department of Health Services Certification #1644). Samples were analyzed for TPH-g by EPA Method Modified TO-3, and BTEX and MTBE by EPA Method Modified TO-15, when possible. If hydrocarbon concentrations were too high, sample analysis was run by EPA Method 8015 and 8021B, respectively. In addition, the samples were analyzed for isopropyl alcohol, the leak check compound, as detect or non detect. Laboratory procedures included appropriate quality assurance and quality control analyses, including method blanks and use of surrogates during sample analyses. According to McCampbell Analytical, the analytical equipment was calibrated in conformance with the most current ASGI and the modified EPA Analytical Methods. In addition, the leak compound was not detected at or above the requested detection limit, indicating that a significant leak was not present during sampling.

6.1 Soil Vapor Analytical Results

Petroleum hydrocarbons were detected in the soil vapor samples obtained from the shallow vapor probes as follows:

- TPHg was detected in each of the three shallow probes at concentrations of 20,000 micrograms per cubic meter (µg/m^3) (SG-1-3), 18,000 µg/m^3 (SG-2-3), and 470,000 µg/m^3 (SG-3-3).
- Benzene was not detected in the shallow soil vapor probes at or above the laboratory detection limit.
- Toluene was detected in two of the three shallow probes at concentrations of 25 µg/m^3 (SG-1-3) and 10,000 µg/m^3 (SG-3-3).
- Ethylbenzene was detected in one of the three shallow probes at a concentration of 10 µg/m^3 (SG-1-3).
- Xylenes were detected in two of the three shallow probes at concentrations of 39 µg/m^3 (SG-1-3) and 750 µg/m^3 (SG-3-3).
- MTBE was detected in one of the three shallow probes at a concentration of 470 µg/m^3 (SG-2-3).

Petroleum hydrocarbons were detected in the soil vapor samples obtained from the deep vapor probes as follows:

- TPHg was detected in each of the three deep probes at concentrations of 43,000,000 µg/m^3 (SG-1-6), 38,000,000 µg/m^3 (SG-2-6), and 1,200,000 µg/m^3 (SG-3-6).
- Benzene was detected in each of the three deep probes at concentrations of 12,000 µg/m^3 (SG-1-6), 41,000 µg/m^3 (SG-2-6), and 890 µg/m^3 (SG-3-6).
- Toluene was detected in each of the three deep probes at concentrations of 480,000 µg/m^3 (SG-1-6), 370,000 µg/m^3 (SG-2-6), and 26,000 µg/m^3 (SG-3-6).
- Xylenes were detected in two of the three deep probes at concentrations of 21,000 µg/m^3 (SG-1-6) and 2,300 µg/m^3 (SG-3-6).

Ethylbenzene and MTBE were not detected at or above the laboratory detection limit in Soil vapor analytical results are displayed on Table 4 and Figure 7, and a copy of the laboratory analytical report is included in Appendix C.

7.0 SUMMARY AND CONCLUSIONS

On November 24 through November 26, 2008 AEI advanced ten shallow soil borings (DP-4, SB-5, SB-7 to SB-14) in the vicinity of the subject property and four deep soil borings (DDP-1 to DDP-4) at the subject property. In addition, three nested soil vapor probes (SG-1 through SG-3) were installed at the site. The work was performed in order to further delineate vertical and lateral hydrocarbon contamination beneath the site and obtain baseline information regarding soil vapor beneath the site.

7.1 Vertical Soil Delineation

Soil borings DDP-1 through DDP-4 were advanced for the purpose of obtaining vertical soil delineation. Based on the results obtained, it appears that the majority of the

hydrocarbon contaminated soil is present between 5 and 10 feet bgs. By 20 feet bgs, TPHg and benzene concentrations drop to below laboratory detection limits. MTBE decreases with depth in the soil borings and is below the respective Environmental Screening Level (ESL) by 10 feet bgs in DDP-4 and 26 feet bgs in DDP-3. In DDP-2, MTBE is present at a concentration of 0.039 mg/kg at 35.5 feet bgs which is slightly above the ESL of 0.023 mg/kg, however MTBE exhibited a decreasing trend with depth in this boring beginning at 10 feet bgs. Based on the results of the soil samples, it appears that hydrocarbons adequately decrease with depth in the borings.

7.2 Lateral Groundwater Delineation

Soil borings DP-4, SB-5, and SB-7 to SB-14 were advanced for the purpose of obtaining lateral groundwater delineation. Hydrocarbons were not detected in boring SB-7, therefore the groundwater appears delineated to the south/southeast. Based on data obtained from the remaining borings, it is apparent that the dissolved hydrocarbon plume extends in a westerly and southwesterly direction from the site. The furthest downgradient boring (SB-14) contained elevated concentrations of hydrocarbons, and it appears that further delineation/monitoring is necessary to determine the extent of the dissolved hydrocarbon plume.

7.3 Soil Vapor Data

Soil vapor probes SG-1 through SG-3 were installed for the purpose of obtaining baseline soil vapor data at the site. Soil vapor samples collected at 6 feet bgs contained relatively high concentrations of TPHg, benzene, and toluene. However, these concentrations significantly attenuate by the 3 foot bgs sample. At 3 feet bgs, only TPHg in SG-3-3 exceeded its respective ESL. AEI recommends another round of samples be collected from the soil vapor probes to further evaluate the soil vapor concentrations beneath the site.

8.0 PROPOSED ADDITIONAL CHARACTERIZATION

Data obtained during this investigation further validates the known need for offsite monitoring wells in the vicinity of the site. Previous attempts by Herschy to obtain encroachment permits with the City of Oakland have been unsuccessful, therefore the offsite wells have not been installed. AEI has since been able to obtain the necessary encroachment permits with the City of Oakland and is ready to complete the longstanding goal of offsite well installation activities. Following the installation and sampling of the offsite monitoring wells, a better understanding of the dissolved hydrocarbon plume will be available and AEI will be prepared to move forward with a remedial strategy for the site. The remedial strategy will include necessary pilot testing activities to determine the most efficient and cost effective approach for cleanup at the site, and may incorporate the onsite sparge wells, extraction wells, and sparge system (the extraction system was removed by the previous consultant). During the recent investigation, additional analytical parameters, including grain size analysis, moisture content, density, and inorganic and organic carbon content were obtained to help assist in remedial strategy and planning.

The goal of the proposed additional characterization is to further define the extent of dissolved phase hydrocarbons (and LNAPL if present) by providing monitoring well locations to assess the stability of the dissolved phase plume and groundwater movement. Proposed wells are shown on Figure 8 and a summary is presented below:

Proposed Monitoring Wells

Well ID	*Location / Purpose*
MW-7	South of the subject site to monitor groundwater flow and hydrocarbon distribution.
MW-8	Southwest of the subject site to monitor observed free product in SB-8.
MW-9	Southwest of the subject site between SB-8 and SB-9 to monitor groundwater flow and hydrocarbon distribution.
MW-10	Southwest of the subject site near SB-11 to monitor groundwater flow and extent of hydrocarbon distribution, particularly MTBE.
MW-11	West of the subject site, near SB-12 and SB-13 to monitor groundwater flow and extent of hydrocarbon distribution.
MW-12	Southwest of the subject site near SB-14 to monitor groundwater flow and extent hydrocarbon distribution, particularly MTBE.
MW-13	Southwest of the subject site near SB-14 to monitor groundwater flow and extent of hydrocarbon distribution, particularly MTBE.
MW-14	Southwest of the subject site beyond SB-14 to monitor groundwater flow and further delineate the extent of MTBE past SB-14.

The scope of work and standard operating procedures to accomplish the investigation is discussed below in more detail. Upon review and comment by the ACHCSA and involved parties, the project will be scheduled.

8.1 Permitting and Setup Activities

The necessary encroachment permits with the City of Oakland have been obtained by AEI, therefore permitting delays are not expected. Upon approval, the appropriate well permits from ACPW and final excavation permits from the City of Oakland will be obtained; utility clearances and mark-out performed; and notification give to involved parties and agencies. All drilling work will be performed by a California C57 licensed drilling contractor working under the direction of AEI professional staff. AEI will prepare a site specific Health and Safety Plan conforming to Part 1910.120 (i) (2) of 29 CFR. The HSP will outline specific worker protection and health and safety measures, be reviewed prior to start of field work, and be available at all times onsite.

8.2 Soil Borings and Sampling

All soil borings will be advanced with hollow stem auger drilling equipment. Soil samples will be collected as deemed necessary by an AEI geologist. Based on the proximity of the borings to existing borings, soil samples may or may not be collected. Soil borings will be advanced to an approximate depth of 15 feet bgs for observations and appropriate sample collection, as deemed necessary.

Soil samples will be collected in 2 inch diameter brass liners within the sampling barrel from which a 6 inch sample will be taken as needed for possible analyses. A PID will be used to screen soil samples in the field, and PID readings for each sample will be included on boring logs. Samples will be sealed with Teflon tape and plastic end caps.

8.3 Well Construction

Each boring will be converted to a monitoring well by overdrilling the boring with 8¼ inch diameter hollow stem augers. The boreholes will be advanced to approximately 15 feet bgs, however the exact depth will be determined based on field observations. The wells will be constructed with 2 inch diameter well casing, with 10 feet of factory slotted 0.020-inch well screen. Depths may be adjusted slightly based on field conditions but screen intervals are planned to be above anticipated high water level.

The well casings will be installed through the augers. The casing will be flush threaded PVC fitted with a threaded bottom cap. An annular sand pack (consisting of clean #3 Monterey Sand) will be installed through the augers to approximately 0.5 feet above the screened interval. During placement of the sand pack, the augers will be lifted from the borehole in 1-foot lifts. Given the shallow depth of the wells, a minimum bentonite seal (no more than 1 foot) will be placed above the sand and hydrated. The remainder of the well will be sealed with cement grout annular seal. Each will be equipped with a locking, expandable inner cap and finished with a flush mount traffic rated well box. The wells will be developed no sooner than 3 days after setting the well seals by surging, bailing, and purging to stabilize the formation and remove accumulated fines from the casing and sand pack.

Each well will be surveyed relative to each other, existing wells, and site features, and to mean sea level by a California licensed land surveyor, and the data will be uploaded to the state Geotracker database as required. DWR well registration forms (DWR Form 188) will be completed for each of the wells upon installation.

8.4 Sample Storage and Analyses

All samples will be labeled with at a minimum, a unique sample identification, sample date and time, and project number. The samples will be sealed in plastic bags and immediately placed in a pre-chilled cooler over water ice. Samples will be entered onto a chain of custody prior to leaving the site. Samples will be delivered on the day of collection to a California Department of Health Services (DHS) certified analytical laboratory. It is anticipated soil samples may or may not be analyzed from each soil boring, depending on the proximity of nearby borings. The following analyses are proposed:

- TPH-g, by EPA method 8015 Modified.
- BTEX and MTBE by EPA method 8021B.
- Fuel oxygenates MTBE, DIPE, ETBE, TAME, TBA by EPA Method 8260B.

8.5 Equipment Decontamination

Sampling equipment, including sampling barrels, augers, and other equipment used to sample, will be decontaminated between samples using a triple rinse system containing Alconox™ or similar detergent. Rinse water will be contained in sealed labeled DOT approved 55-gallon drums in a secure location on-site pending proper disposal.

8.6 Quarterly Monitoring Activities

Monitoring and sampling of the resulting network of wells will occur on a quarterly basis with the first event to no sooner than 3 days after well development. The existing schedule may be adjusted to coordinate sampling of the newly installed wells. During each monitoring event, water levels will be measured and LNAPL checked with an oil-water interface probe. Wells not containing measurable LNAPL will be purged of at least 3 well volumes, or until reasonably clear, prior to sample collection. During purging the following water quality measurements will be collected: temperature, pH, specific conductivity, and dissolved oxygen (DO). Groundwater samples will be collected with new, unused disposable bailers into appropriate laboratory-supplied containers. Following the first event, a monitoring program will be proposed with the report.

8.7 Waste Handling

All investigation-derived waste (IDW) will be stored on-site in sealed, labeled 55-gallon drums. IDW will include soil cuttings, plastic sample liners, and other sampling disposables. Equipment rinse water and well purge water will also be stored onsite. Waste will be profiled for disposal to an appropriate facility and transported under manifest from the site in a timely manner.

8.8 Reporting

AEI will prepare and issue a final report following receipt of all necessary data. The report will include logs of borings, cumulative data tables, figures of sampling locations and results, and copies of laboratory analytical and survey reports. A written discussion of the methods, findings, and recommendations will be included. The report and subsequent quarterly monitoring reports will include a summary of results and recommendations as necessary. The report (updated Site Conceptual Model) will be followed by a corrective action plan which will include a pilot test / feasibility study work plan for mitigation at the site. Site data and electronic report copies will be uploaded into the GeoTracker database, as necessary. The project will be overseen and the reports signed by AEI California registered professionals.

8.9 Estimated Schedule

AEI anticipates receiving the drilling permits from the ACPW and City of Oakland within two to three weeks from the approval of this Work Plan. Upon receipt of the permit from the ACPW and City of Oakland, AEI anticipates that field activities will commence within two

weeks. Laboratory analytical results will be obtained within approximately one week of sample collection. A final report will be prepared and submitted to the client and ACHCSA shortly thereafter. This report and the results of the investigation have been uploaded to Geotracker as required by Assembly Bill 592 and Senate Bill 1189.

9.0 REPORT LIMITATIONS AND SIGNATURES

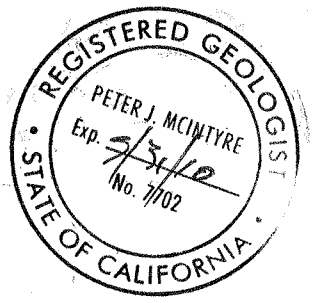
This report presents a summary of work completed by AEI, including observations and descriptions of site conditions. Where appropriate, it includes analytical results for samples taken during the course of the work. The number and location of samples are chosen to provide required information, but it cannot be assumed that they are entirely representative of all areas not sampled. All conclusions and recommendations are based on these analyses, observations, and the governing regulations. Conclusions beyond those stated and reported herein should not be inferred from this document.

These services were performed in accordance with generally accepted practices in the environmental engineering and construction field that existed at the time and location of the work. AEI requests comment and concurrence with this plan. If you have any questions regarding this report, we can be reached at (925) 944-2899.

Sincerely,
AEI Consultants

Jeremy Smith
Senior Project Manager

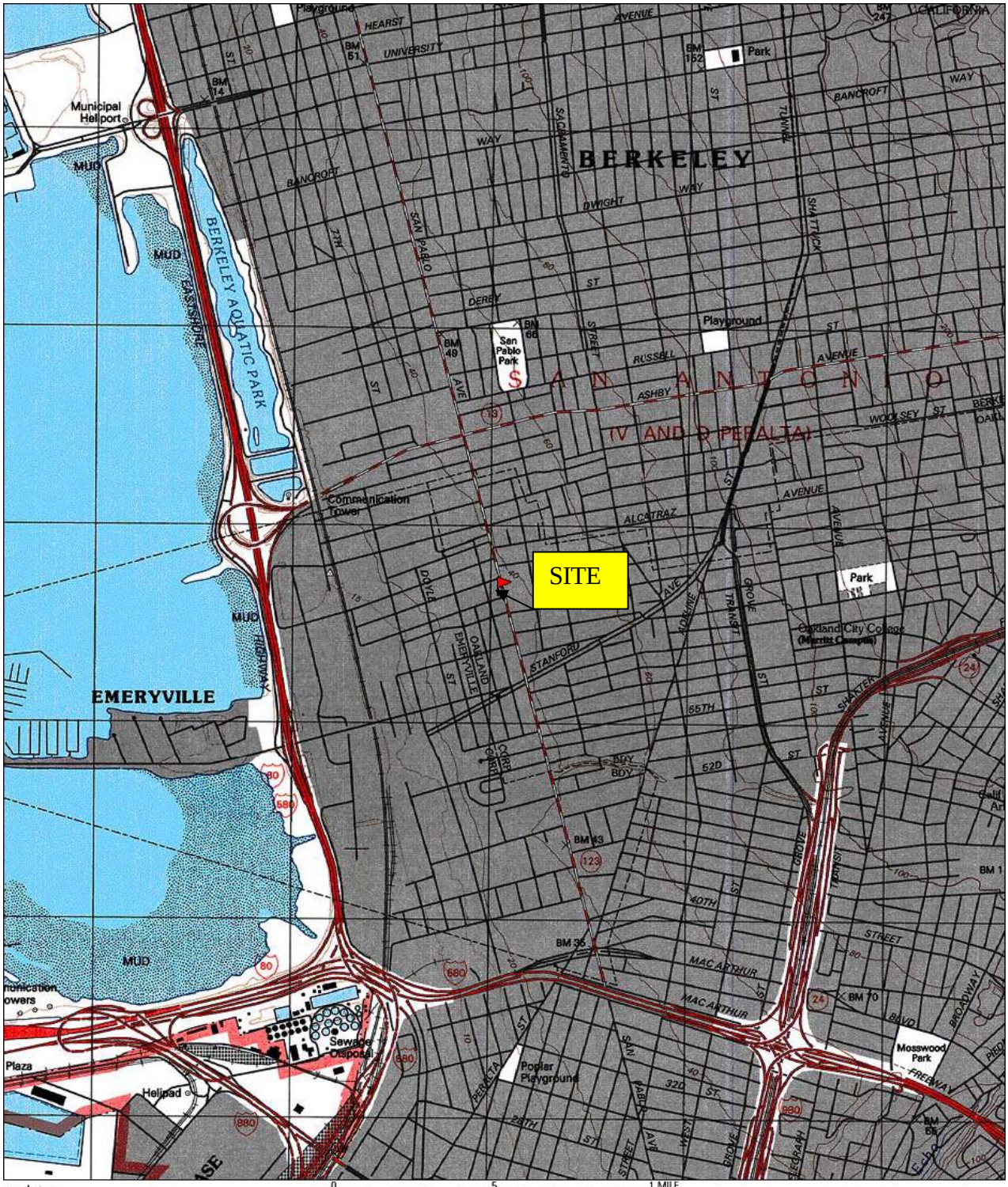
Peter J. McIntyre, PG
Senior Project Geologist



Report Distribution:

Mr. Pritpaul Sappal, 2718 Washburn Court, Vallejo, CA 94591
Mr. Paresh Khatri, ACHCSA, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502 (electronic upload)
Mr. Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612

FIGURES



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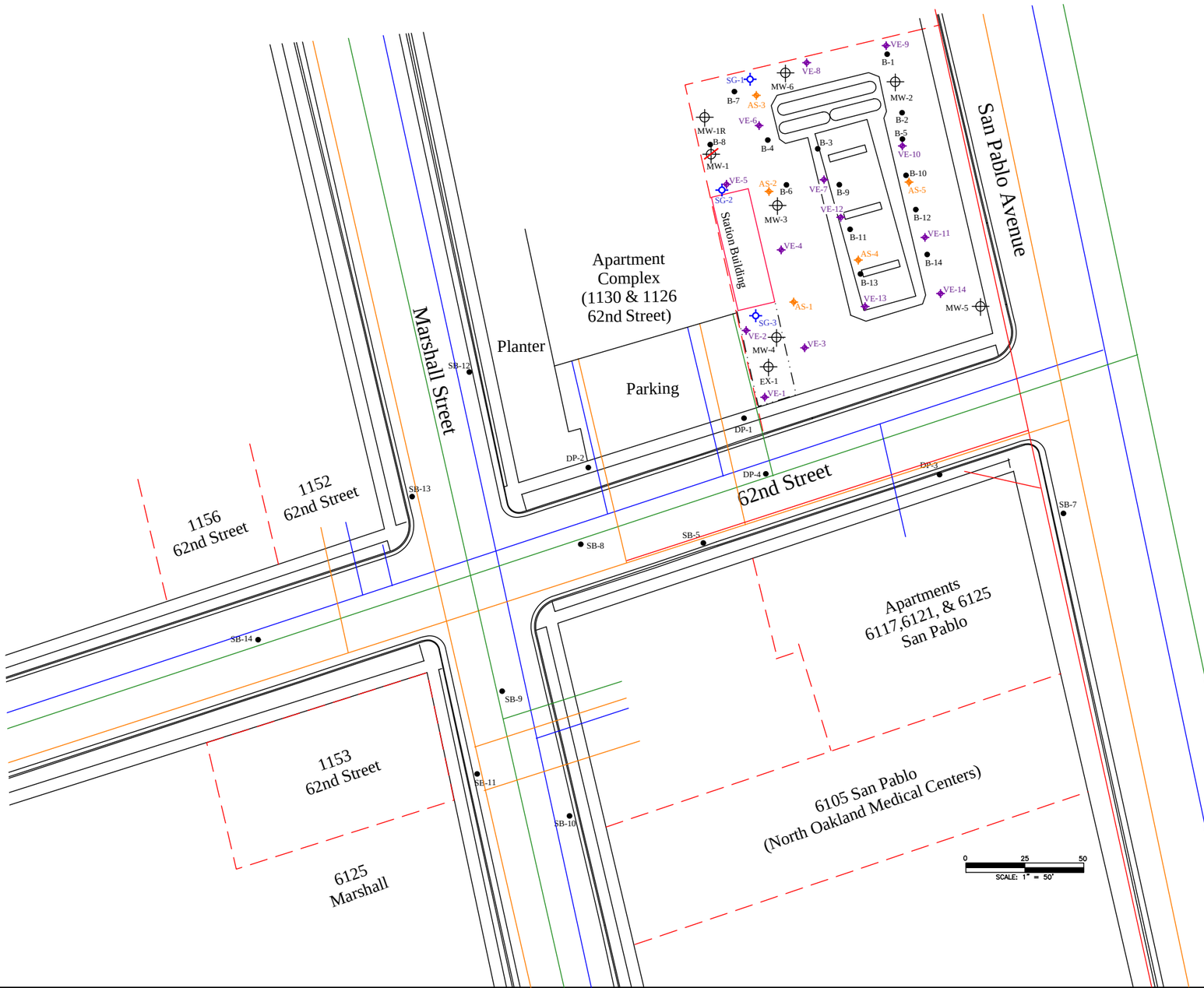
SITE LOCATION PLAN

6211 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

FIGURE 1
PROJECT NO. 280346



LEGEND

- MONITORING WELL
- SOIL BORING
- ABANDONED WELL
- NESTED VAPOR PROBE
- VAPOR EXTRACTION WELL
- AIR SPARGE WELL
- APPROXIMATE PROPERTY BOUNDARY
- WATER LINE
- NATURAL GAS LINE
- ELECTRIC LINE
- SEWER LINE

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REVISED BY JAS 9/26/08

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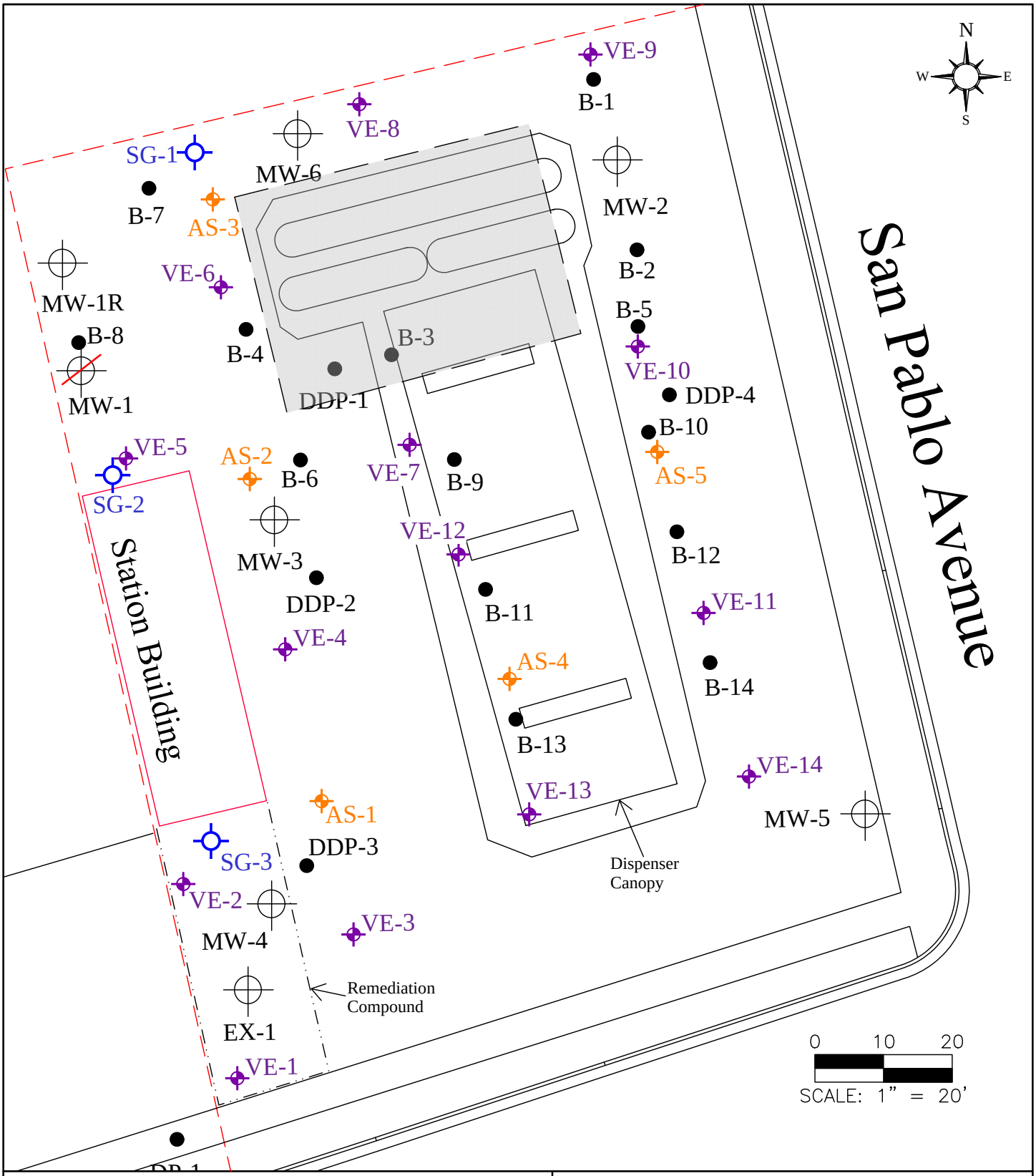
EXTENDED SITE PLAN

6211 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

FIGURE 2
PROJECT NO. 280346



LEGEND

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- MONITORING WELL
- SOIL BORING
- ABANDONED WELL
- NESTED VAPOR PROBE
- VAPOR EXTRACTION WELL
- AIR SPARGE WELL
- UNDERGROUND STORAGE TANK
- DISPENSER ISLAND
- FORMER UST EXCAVATION

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SITE PLAN

6211 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

FIGURE 3
PROJECT NO. 280346

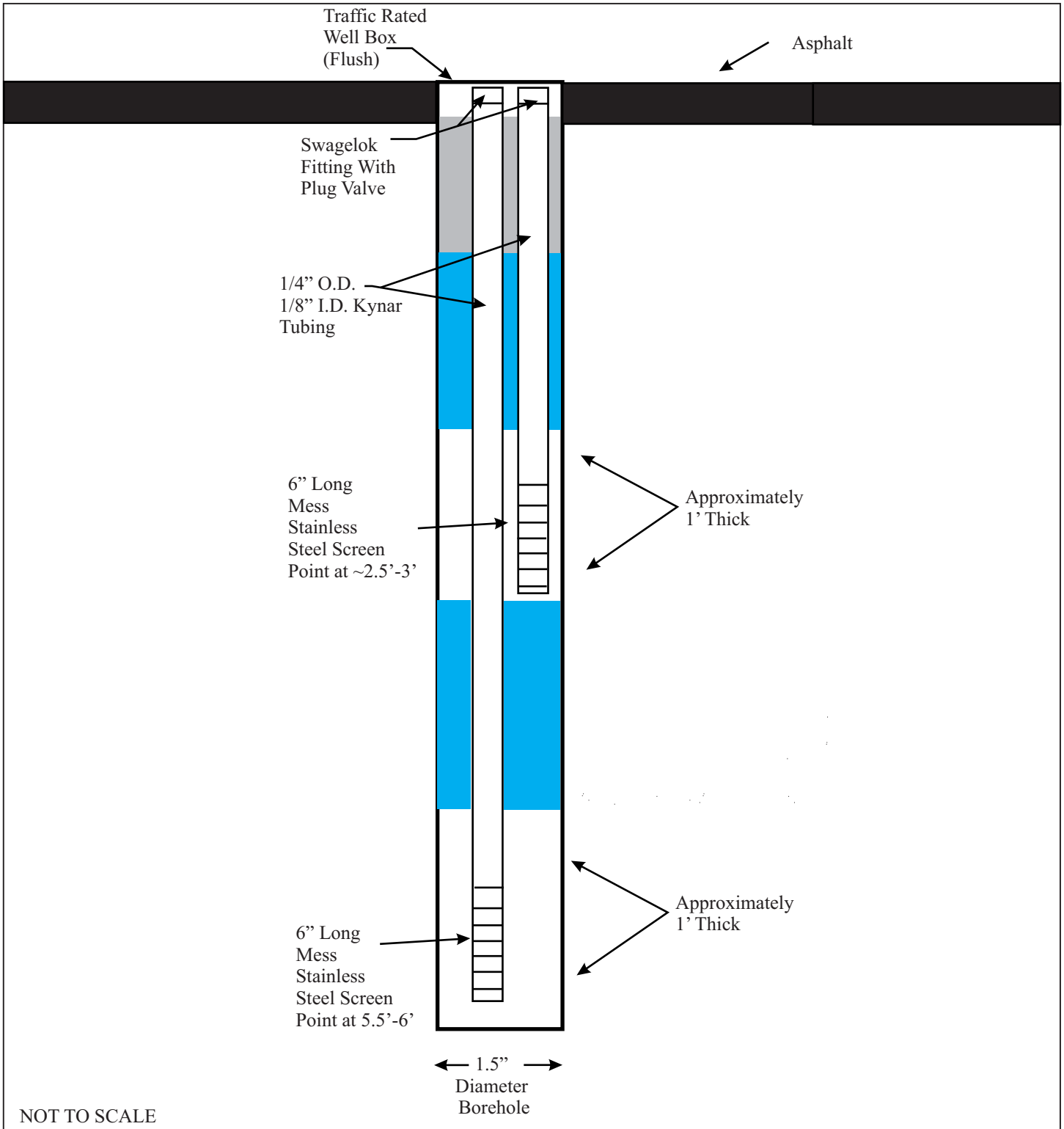

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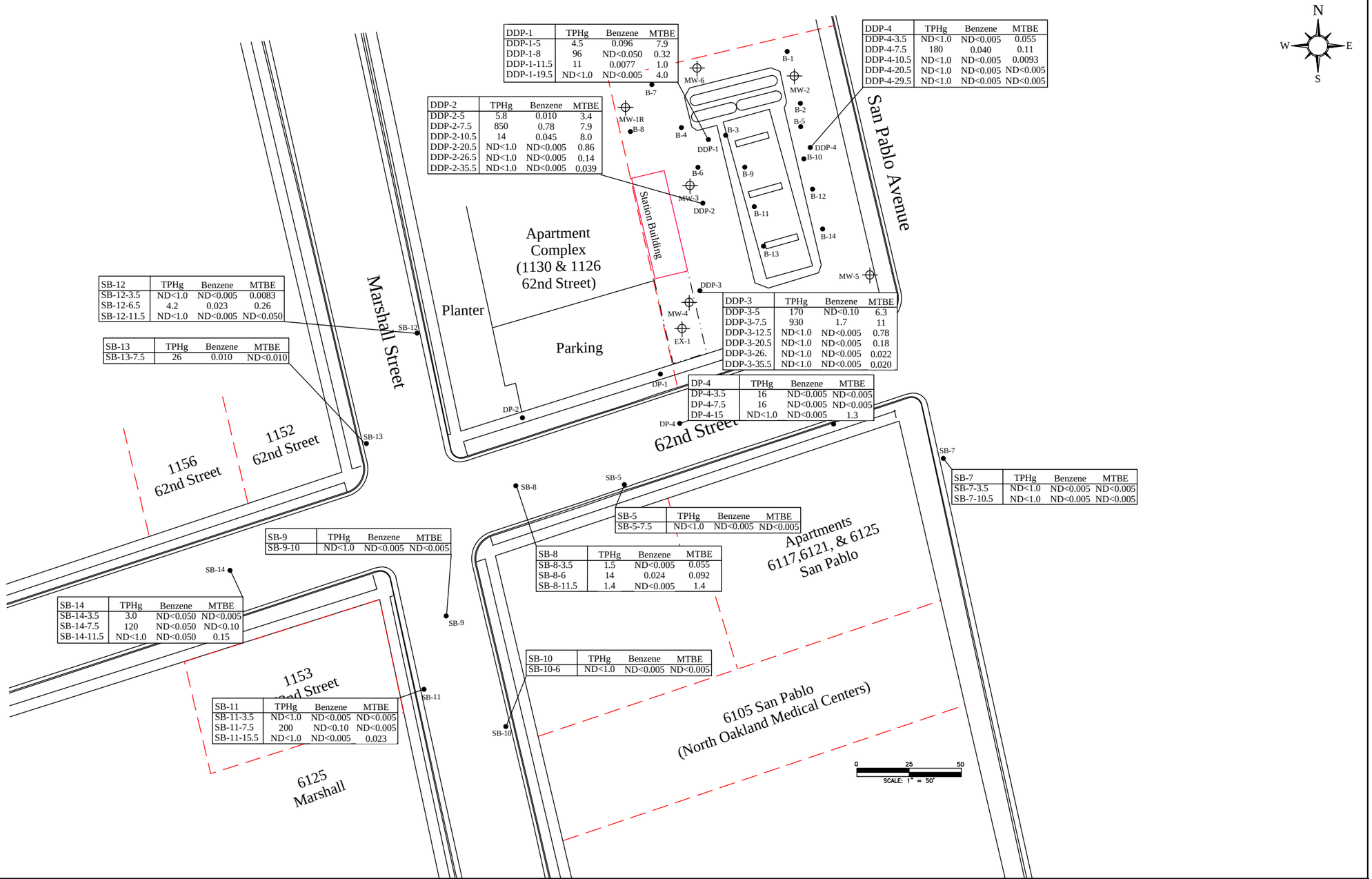
FIGURE 4:
SOIL VAPOR PROBE SCHEMATIC



DDP-1	TPHg	Benzene	MTBE
DDP-1-5	4.5	0.096	7.9
DDP-1-8	96	ND<0.050	0.32
DDP-1-11.5	11	0.0077	1.0
DDP-1-19.5	ND<1.0	ND<0.005	4.0

DDP-2	TPHg	Benzene	MTBE
DDP-2-5	5.8	0.010	3.4
DDP-2-7.5	850	0.78	7.9
DDP-2-10.5	14	0.045	8.0
DDP-2-20.5	ND<1.0	ND<0.005	0.86
DDP-2-26.5	ND<1.0	ND<0.005	0.14
DDP-2-35.5	ND<1.0	ND<0.005	0.039

DDP-4	TPHg	Benzene	MTBE
DDP-4-3.5	ND<1.0	ND<0.005	0.055
DDP-4-7.5	180	0.040	0.11
DDP-4-10.5	ND<1.0	ND<0.005	0.0093
DDP-4-20.5	ND<1.0	ND<0.005	ND<0.005
DDP-4-29.5	ND<1.0	ND<0.005	ND<0.005

SB-12	TPHg	Benzene	MTBE
SB-12-3.5	ND<1.0	ND<0.005	0.0083
SB-12-6.5	4.2	0.023	0.26
SB-12-11.5	ND<1.0	ND<0.005	ND<0.050

SB-13	TPHg	Benzene	MTBE
SB-13-7.5	26	0.010	ND<0.010

DDP-3	TPHg	Benzene	MTBE
DDP-3-5	170	ND<0.10	6.3
DDP-3-7.5	930	1.7	11
DDP-3-12.5	ND<1.0	ND<0.005	0.78
DDP-3-20.5	ND<1.0	ND<0.005	0.18
DDP-3-26.	ND<1.0	ND<0.005	0.022
DDP-3-35.5	ND<1.0	ND<0.005	0.020

DP-4	TPHg	Benzene	MTBE
DP-4-3.5	16	ND<0.005	ND<0.005
DP-4-7.5	16	ND<0.005	ND<0.005
DP-4-15	ND<1.0	ND<0.005	1.3

SB-7	TPHg	Benzene	MTBE
SB-7-3.5	ND<1.0	ND<0.005	ND<0.005
SB-7-10.5	ND<1.0	ND<0.005	ND<0.005

SB-5	TPHg	Benzene	MTBE
SB-5-7.5	ND<1.0	ND<0.005	ND<0.005

SB-8	TPHg	Benzene	MTBE
SB-8-3.5	1.5	ND<0.005	0.055
SB-8-6	14	0.024	0.092
SB-8-11.5	1.4	ND<0.005	1.4

SB-9	TPHg	Benzene	MTBE
SB-9-10	ND<1.0	ND<0.005	ND<0.005

SB-10	TPHg	Benzene	MTBE
SB-10-6	ND<1.0	ND<0.005	ND<0.005

SB-14	TPHg	Benzene	MTBE
SB-14-3.5	3.0	ND<0.050	ND<0.005
SB-14-7.5	120	ND<0.050	ND<0.10
SB-14-11.5	ND<1.0	ND<0.050	0.15

SB-11	TPHg	Benzene	MTBE
SB-11-3.5	ND<1.0	ND<0.005	ND<0.005
SB-11-7.5	200	ND<0.10	ND<0.005
SB-11-15.5	ND<1.0	ND<0.005	0.023

LEGEND

○ MONITORING WELL

● SOIL BORING

All results in milligrams per kilogram (mg/kg)
TPHg = Total Petroleum Hydrocarbons as gasoline
MTBE = methyl tert butyl ether

Refer to Table 1 for complete analytical data.

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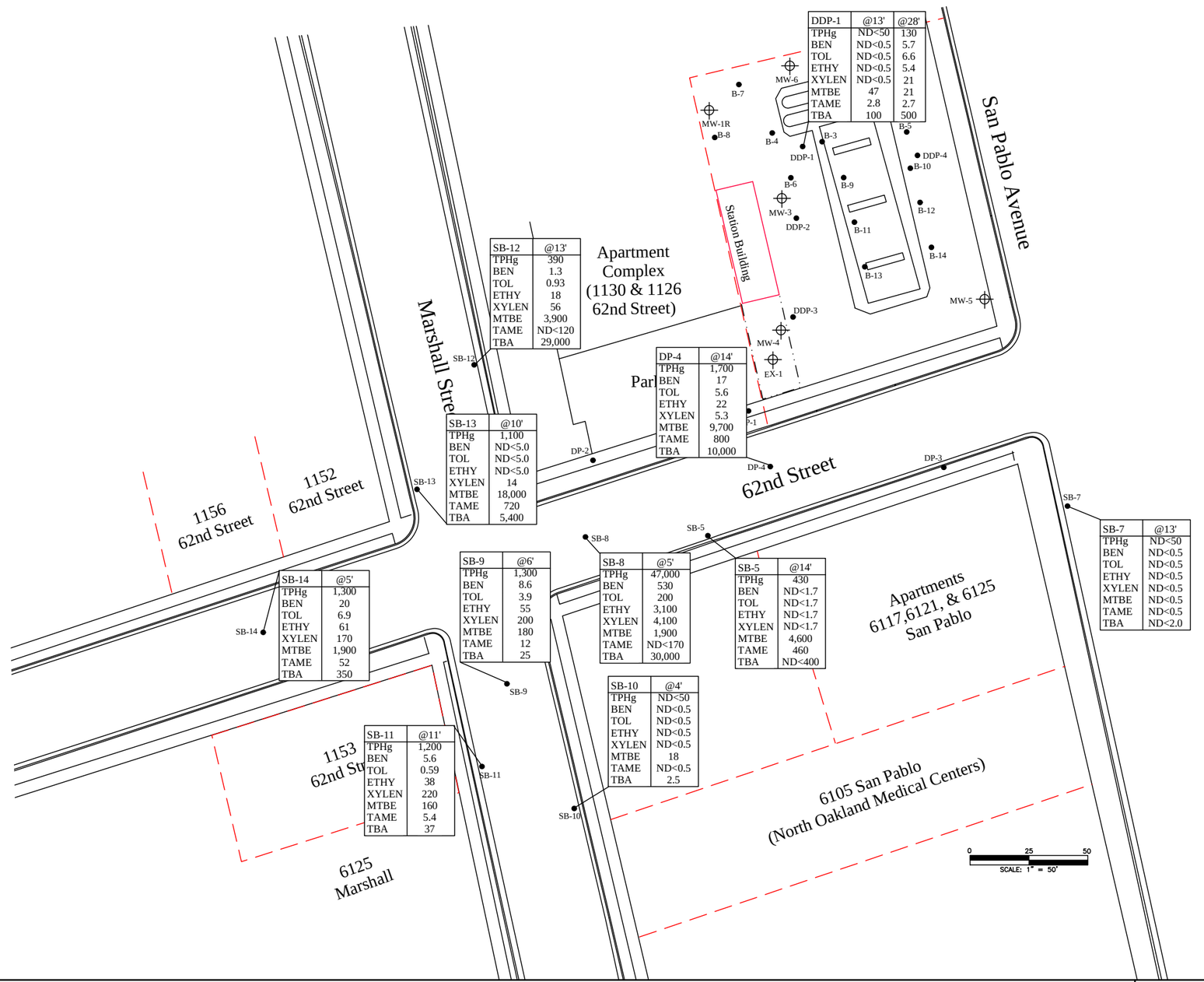
SOIL ANALYTICAL MAP

6211 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

FIGURE 5
PROJECT NO. 280346



DDP-1	@13'	@28'
TPHg	ND<50	130
BEN	ND<0.5	5.7
TOL	ND<0.5	6.6
ETHY	ND<0.5	5.4
XYLEN	ND<0.5	21
MTBE	47	21
TAME	2.8	2.7
TBA	100	500

SB-12	@13'
TPHg	390
BEN	1.3
TOL	0.93
ETHY	18
XYLEN	56
MTBE	3,900
TAME	ND<120
TBA	29,000

DP-4	@14'
TPHg	1,700
BEN	17
TOL	5.6
ETHY	22
XYLEN	5.3
MTBE	9,700
TAME	800
TBA	10,000

SB-13	@10'
TPHg	1,100
BEN	ND<5.0
TOL	ND<5.0
ETHY	ND<5.0
XYLEN	14
MTBE	18,000
TAME	720
TBA	5,400

SB-14	@5'
TPHg	1,300
BEN	20
TOL	6.9
ETHY	61
XYLEN	170
MTBE	1,900
TAME	52
TBA	350

SB-9	@6'
TPHg	1,300
BEN	8.6
TOL	3.9
ETHY	55
XYLEN	200
MTBE	180
TAME	12
TBA	25

SB-8	@5'
TPHg	47,000
BEN	530
TOL	200
ETHY	3,100
XYLEN	4,100
MTBE	1,900
TAME	ND<170
TBA	30,000

SB-5	@14'
TPHg	430
BEN	ND<1.7
TOL	ND<1.7
ETHY	ND<1.7
XYLEN	ND<1.7
MTBE	4,600
TAME	460
TBA	ND<400

SB-7	@13'
TPHg	ND<50
BEN	ND<0.5
TOL	ND<0.5
ETHY	ND<0.5
XYLEN	ND<0.5
MTBE	ND<0.5
TAME	ND<0.5
TBA	ND<2.0

SB-10	@4'
TPHg	ND<50
BEN	ND<0.5
TOL	ND<0.5
ETHY	ND<0.5
XYLEN	ND<0.5
MTBE	18
TAME	ND<0.5
TBA	2.5

SB-11	@11'
TPHg	1,200
BEN	5.6
TOL	0.59
ETHY	38
XYLEN	220
MTBE	160
TAME	5.4
TBA	37

LEGEND

○ MONITORING WELL

● SOIL BORING

All results in micrograms per liter (ug/L)
TPHg = Total Petroleum Hydrocarbons as gasoline
BEN = benzene, TOL= toluene, ETHY = ethylbenzene,
XYLEN = xylenes, MTBE = methyl tert butyl ether,
TAME = tert-amyl methyl ether, TBA = tert-butyl alcohol

Refer to Table 2 for complete analytical details.

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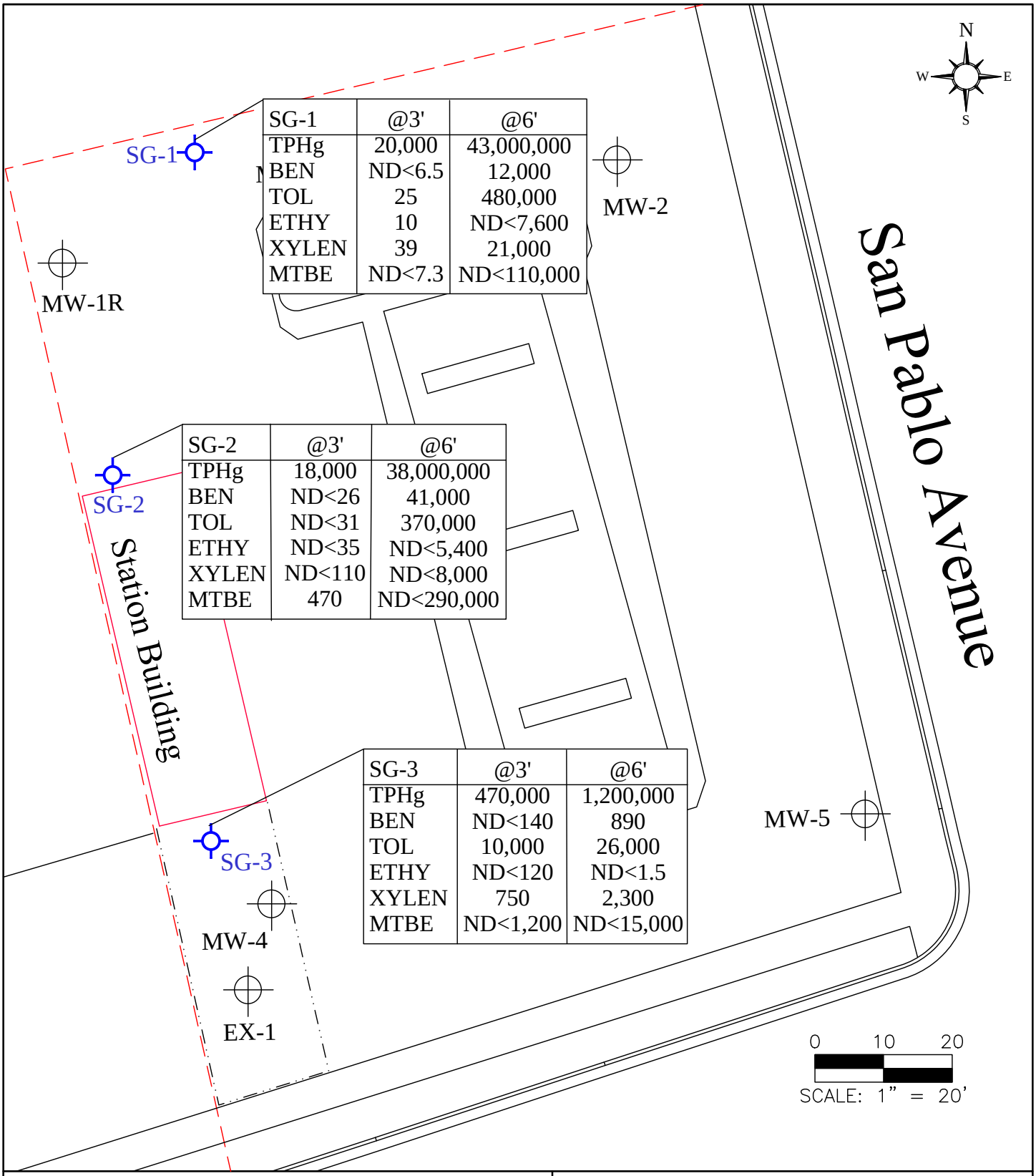
2500 CAMINO DIABLO, SUITE 200, WALNUT CREEK

GROUNDWATER ANALYTICAL MAP

6211 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

FIGURE 6
PROJECT NO. 280346



SG-1	@3'	@6'
TPHg	20,000	43,000,000
BEN	ND<6.5	12,000
TOL	25	480,000
ETHY	10	ND<7,600
XYLEN	39	21,000
MTBE	ND<7.3	ND<110,000

SG-2	@3'	@6'
TPHg	18,000	38,000,000
BEN	ND<26	41,000
TOL	ND<31	370,000
ETHY	ND<35	ND<5,400
XYLEN	ND<110	ND<8,000
MTBE	470	ND<290,000

SG-3	@3'	@6'
TPHg	470,000	1,200,000
BEN	ND<140	890
TOL	10,000	26,000
ETHY	ND<120	ND<1.5
XYLEN	750	2,300
MTBE	ND<1,200	ND<15,000

LEGEND

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REVISED BY JAS 09-26-08

- ◯ MONITORING WELL
- NESTED VAPOR PROBE

All results in micrograms per cubic meter (ug/m3)
TPHg = Total Petroleum Hydrocarbons as gasoline
BEN = benzene, TOL= toluene, ETHY = ethylbenzene,
XYLEN = xylenes, MTBE = methyl tert butyl ether

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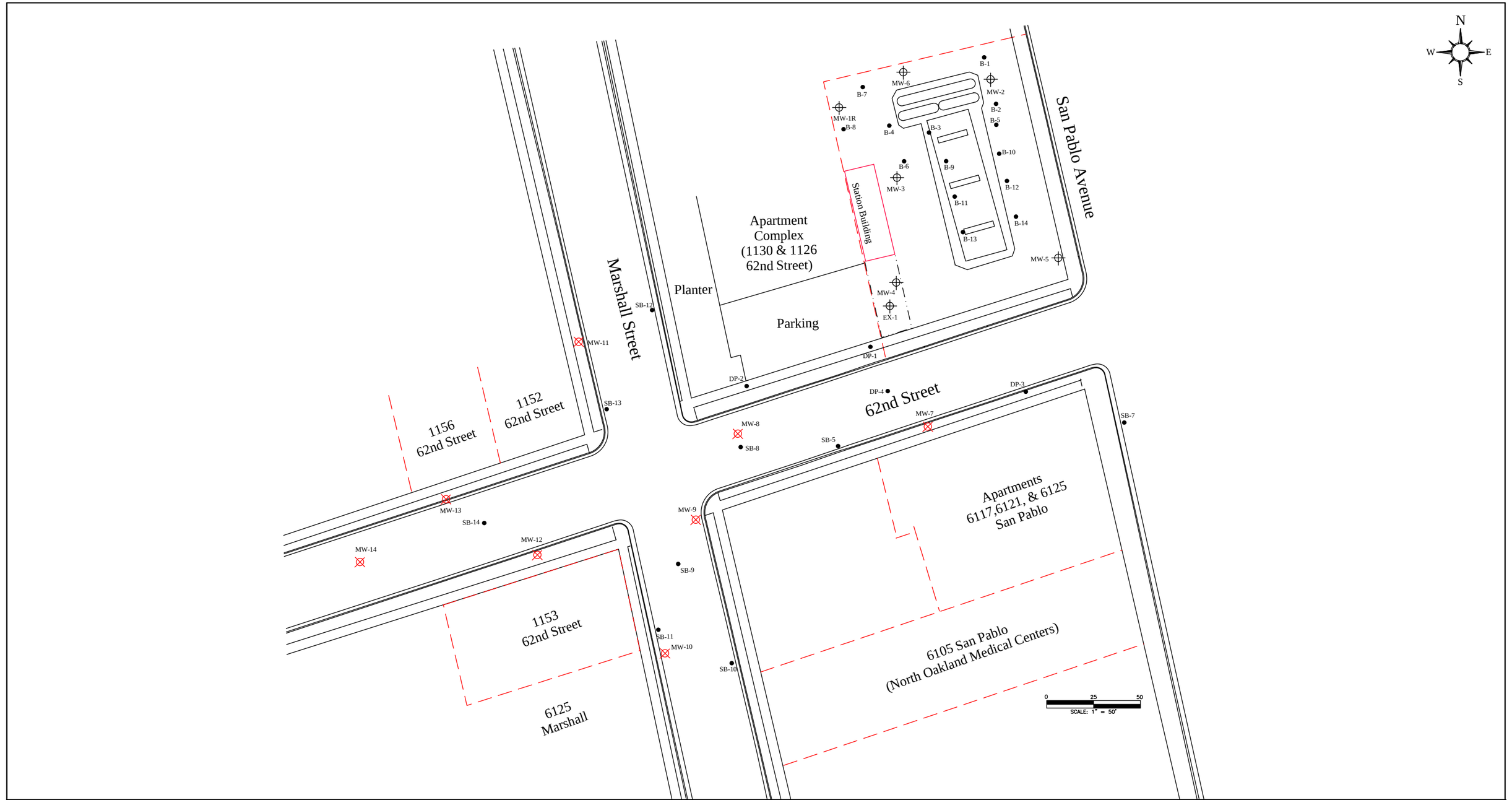
2500 CAMINO DIABLO, WALNUT CREEK

SOIL VAPOR ANALYTICAL MAP

6211 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

FIGURE 7
PROJECT NO. 280346



LEGEND

- ○ MONITORING WELL
- ● SOIL BORING
- ⊠ PROPOSED MONITORING WELL

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REVISED BY JAS 9/26/08

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2500 CAMINO DIABLO, SUITE 200, WALNUT CREEK

PROPOSED MONITORING WELL LOCATIONS

6211 SAN PABLO AVENUE
OAKLAND, CALIFORNIA

FIGURE 8
PROJECT NO. 280346

TABLES

Table 1, 6211 San Pablo Avenue, Oakland, CA - AEI Project # 280346

Soil Analytical Data

Sample ID	Date	Depth (feet bgs)	TPHg mg/kg	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	MTBE mg/kg	DIPE mg/kg	ETBE mg/kg	TAME mg/kg	TBA mg/kg	1,2-DCA mg/kg	EDB mg/kg
DP-4														
DP-4-3.5	11/24/2008	3.5	**16**	ND<0.005	**0.037**	ND<0.005	**0.041**	ND<0.005	ND<0.005	ND<0.005	ND<0.005	**0.15**	ND<0.004	ND<0.004
DP-4-7.5	11/24/2008	7.5	**16**	ND<0.005	**0.12**	**0.016**	**0.032**	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05	ND<0.004	ND<0.004
DP-4-15	11/24/2008	15	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	**1.3**	ND<0.10	ND<0.10	**0.12**	ND<1.0	ND<0.080	ND<0.080
SB-5														
SB-5-7.5	11/25/2008	7.5	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05	ND<0.004	ND<0.004
SB-7														
SB-7-3.5	11/25/2008	3.5	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05	ND<0.004	ND<0.004
SB-7-10.5	11/25/2008	10.5	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05	ND<0.004	ND<0.004
SB-8														
SB-8-3.5	11/24/2008	3.5	**1.5**	ND<0.005	**0.024**	ND<0.005	ND<0.005	**0.055**	ND<0.005	ND<0.005	ND<0.005	ND<0.05	ND<0.004	ND<0.004
SB-8-6	11/24/2008	6	**14**	**0.024**	**0.12**	**0.45**	**0.087**	**0.092**	ND<0.005	ND<0.005	ND<0.005	**0.090**	ND<0.004	ND<0.004
SB-8-11.5	11/24/2008	11.5	**1.4**	ND<0.005	ND<0.005	**0.034**	**0.049**	**1.4**	ND<0.050	ND<0.050	**0.061**	**2.7**	ND<0.040	ND<0.040
SB-9														
SB-9-10	11/24/2008	10	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05	ND<0.004	ND<0.004
SB-10														
SB-10-6	11/24/2008	6	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05	ND<0.004	ND<0.004
SB-11														
SB-11-3.5	11/24/2008	3.5	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05	ND<0.004	ND<0.004
SB-11-7.5	11/24/2008	7.5	**200**	ND<0.10	**0.96**	**1.4**	**3.9**	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05	ND<0.004	ND<0.004
SB-11-15.5	11/24/2008	15.5	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	**0.023**	ND<0.005	ND<0.005	ND<0.005	ND<0.05	ND<0.004	ND<0.004
SB-12														
SB-12-3.5	11/25/2008	3.5	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	**0.0083**	ND<0.005	ND<0.005	ND<0.005	ND<0.05	ND<0.004	ND<0.004
SB-12-6.5	11/25/2008	6.5	**4.2**	**0.023**	**0.034**	**0.036**	**0.0088**	**0.26**	ND<0.010	ND<0.010	ND<0.010	**0.17**	ND<0.0080	ND<0.0080
SB-12-11.5	11/25/2008	11.5	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.050	ND<0.050	ND<0.050	ND<0.050	**2.1**	ND<0.040	ND<0.040
SB-13														
SB-13-7.5	11/25/2008	7.5	**26**	**0.010**	**0.20**	**0.18**	**0.64**	ND<0.010	ND<0.010	ND<0.010	ND<0.010	**0.12**	ND<0.0080	ND<0.0080
SB-14														
SB-14-3.5	11/24/2008	3.5	**3.0**	ND<0.050	**0.014**	ND<0.050	ND<0.050	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05	ND<0.004	ND<0.004
SB-14-7.5	11/24/2008	7.5	**120**	ND<0.050	**0.75**	**2.3**	**6.2**	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<1.0	ND<0.080	ND<0.080
SB-14-11.5	11/24/2008	11.5	ND<1.0	ND<0.050	ND<0.050	ND<0.050	ND<0.050	**0.15**	ND<0.005	ND<0.005	ND<0.005	ND<0.05	ND<0.004	ND<0.004

Table 1, 6211 San Pablo Avenue, Oakland, CA - AEI Project # 280346

Soil Analytical Data

Sample ID	Date	Depth (feet bgs)	TPHg mg/kg	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	MTBE mg/kg	DIPE mg/kg	ETBE mg/kg	TAME mg/kg	TBA mg/kg	1,2-DCA mg/kg	EDB mg/kg
DDP-1														
DDP-1-5	11/25/2008	5	**4.5**	**0.096**	**0.044**	**0.017**	**0.021**	**7.9**	ND<0.25	ND<0.25	**0.28**	**12**	ND<0.20	ND<0.20
DDP-1-8	11/25/2008	8	**96**	ND<0.050	**0.93**	**0.19**	**0.13**	**0.32**	ND<0.020	ND<0.020	ND<0.020	**1.3**	ND<0.016	ND<0.016
DDP-1-11.5	11/25/2008	11.5	**11**	**0.0077**	**0.099**	**0.016**	**0.057**	**1.0**	ND<0.033	ND<0.033	**0.17**	**4.4**	ND<0.027	ND<0.027
DDP-1-19.5	11/25/2008	19.5	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	**4.0**	ND<0.20	ND<0.20	**0.26**	**7.1**	ND<0.16	ND<0.16
DDP-2														
DDP-2-5	11/26/2008	5	**5.8**	**0.010**	**0.054**	**0.0063**	**0.057**	**3.4**	ND<0.10	ND<0.10	**0.23**	**2.3**	ND<0.080	ND<0.080
DDP-2-7.5	11/26/2008	7.5	**850**	**0.78**	**4.0**	**6.8**	**63**	**7.9**	ND<0.20	ND<0.20	**0.58**	**3.4**	ND<0.16	ND<0.16
DDP-2-10.5	11/26/2008	10.5	**14**	**0.045**	**0.13**	**0.040**	**0.14**	**8.0**	ND<0.50	ND<0.50	ND<0.50	**12**	ND<0.40	ND<0.40
DDP-2-20.5	11/26/2008	20.5	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	**0.86**	ND<0.050	ND<0.050	ND<0.050	ND<0.50	ND<0.040	ND<0.040
DDP-2-26.5	11/26/2008	26.5	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	**0.14**	ND<0.005	ND<0.005	ND<0.005	ND<0.05	ND<0.004	ND<0.004
DDP-2-35.5	11/26/2008	35.5	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	**0.039**	ND<0.005	ND<0.005	ND<0.005	ND<0.05	ND<0.004	ND<0.004
DDP-3														
DDP-3-5	11/26/2008	5	**170**	ND<0.10	**1.6**	**0.81**	**20**	**6.3**	ND<0.25	ND<0.25	**0.38**	**6.6**	ND<0.20	ND<0.20
DDP-3-7.5	11/26/2008	7.5	**930**	**1.7**	**23**	**11**	**73**	**11**	ND<0.50	ND<0.50	**1.1**	ND<5.0	ND<0.40	ND<0.40
DDP-3-12.5	11/26/2008	12.5	ND<1.0	ND<0.005	**0.0075**	ND<0.005	**0.013**	**0.78**	ND<0.10	ND<0.10	ND<0.10	**12**	ND<0.080	ND<0.080
DDP-3-20.5	11/26/2008	20.5	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	**0.18**	ND<0.010	ND<0.010	ND<0.010	ND<0.10	ND<0.0080	ND<0.0080
DDP-3-26	11/26/2008	26	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	**0.022**	ND<0.005	ND<0.005	ND<0.005	ND<0.05	ND<0.004	ND<0.004
DDP-3-35.5	11/26/2008	35.5	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	**0.020**	ND<0.005	ND<0.005	ND<0.005	ND<0.05	ND<0.004	ND<0.004
DDP-4														
DDP-4-3.5	11/26/2008	3.5	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	**0.055**	ND<0.005	ND<0.005	ND<0.005	ND<0.05	ND<0.004	ND<0.004
DDP-4-7.5	11/26/2008	7.5	**180**	**0.040**	**0.84**	**0.26**	**2.5**	**0.11**	ND<0.020	ND<0.020	ND<0.020	ND<0.20	ND<0.016	ND<0.016
DDP-4-10.5	11/26/2008	10.5	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	**0.0093**	ND<0.005	ND<0.005	ND<0.005	ND<0.05	ND<0.004	ND<0.004
DDP-4-20.5	11/26/2008	20.5	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05	ND<0.004	ND<0.004
DDP-4-29.5	11/26/2008	29.5	ND<1.0	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.005	ND<0.05	ND<0.004	ND<0.004

Notes:
TPHg = total petroleum hydrocarbons as gasoline using EPA Method 8015
Benzene, toluene, ethylbenzene, and xylenes using EPA Method 8021B
MTBE = methyl-tertiary butyl ether using EPA Method 8260B
TBA = tert-butyl alcohol using EPA Method 8260B
TAME = tert-amyl methyl ether using EPA Method 8260B
DIPE = diisopropyl ether using EPA Method 8260B
ETBE = ethyl tert-butyl ether using EPA Method 8260B
1,2-DCA = 1,2-dichloroethane using EPA Method 8260B
EDB = Ethylene dibromide using EPA Method 8260B
mg/kg = milligrams per kilogram
ND = non detect at respective reporting limit

Table 2, 6211 San Pablo Avenue, Oakland, CA - AEI Project # 280346

Groundwater Analytical Data - Soil Borings

Sample ID	Date	TPHg ug/L	Benzene ug/L	Toluene ug/L	Ethylbenzene ug/L	Xylenes ug/L	MTBE ug/L	DIPE ug/L	ETBE ug/L	TAME ug/L	TBA ug/L	1,2-DCA ug/L	EDB ug/L
DP-4	11/24/2008	**1,700**	**17**	**5.6**	**22**	**5.3**	**9,700**	ND<250	ND<250	**800**	**10,000**	ND<250	ND<250
SB-5	11/25/2008	**430**	ND<1.7	ND<1.7	ND<1.7	ND<1.7	**4,600**	ND<100	ND<100	**460**	ND<400	ND<100	ND<100
SB-7	11/25/2008	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<0.5	ND<2.0	ND<0.5	ND<0.5
SB-8	11/24/2008	**47,000**	**530**	**200**	**3,100**	**4,100**	**1,900**	ND<170	ND<170	ND<170	**30,000**	ND<170	ND<170
SB-9	11/24/2008	**1,300**	**8.6**	**3.9**	**55**	**200**	**180**	ND<5.0	ND<5.0	**12**	**25**	ND<5.0	ND<5.0
SB-10	11/24/2008	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**18**	ND<0.5	ND<0.5	ND<0.5	**2.5**	ND<0.5	ND<0.5
SB-11	11/24/2008	**1,200**	**5.6**	**0.59**	**38**	**220**	**160**	ND<5.0	ND<5.0	**5.4**	**37**	ND<5.0	ND<5.0
SB-12	11/25/2008	**390**	**1.3**	**0.93**	**18**	**56**	**3,900**	ND<120	ND<120	ND<120	**29,000**	ND<120	ND<120
SB-13	11/25/2008	**1,100**	ND<5.0	ND<5.0	ND<5.0	**14**	**18,000**	ND<250	ND<250	**720**	**5,400**	ND<250	ND<250
SB-14	11/24/2008	**1,300**	**20**	**6.9**	**61**	**170**	**1,900**	ND<50	ND<50	**52**	**350**	ND<50	ND<50
DDP-1	11/25/2008	ND<50	ND<0.5	ND<0.5	ND<0.5	ND<0.5	**47**	ND<1.0	ND<1.0	**2.8**	**100**	ND<1.0	ND<1.0
DDP-1D	11/25/2008	**130**	**5.7**	**6.6**	**5.4**	**21**	**21**	ND<2.5	ND<2.5	**2.7**	**500**	ND<2.5	ND<2.5

Notes:
TPHg = total petroleum hydrocarbons as gasoline using EPA Method 8015
Benzene, toluene, ethylbenzene, and xylenes using EPA Method 8021B
MTBE = methyl-tertiary butyl ether using EPA Method 8260B
TBA = tert-butyl alcohol using EPA Method 8260B
TAME = tert-amyl methyl ether using EPA Method 8260B
DIPE = diisopropyl ether using EPA Method 8260B
ETBE = ethyl tert-butyl ether using EPA Method 8260B
1,2-DCA = 1,2-dichloroethane using EPA Method 8260B
EDB = Ethylene dibromide using EPA Method 8260B
µg/L= micrograms per liter
ND = non detect at respective reporting limit

Table 3, 6211 San Pablo Avenue, Oakland, CA - AEI Project # 280346

Groundwater Analytical Data

Sample ID	Date	TPHg µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L	DIPE µg/L	ETBE µg/L	TAME µg/L	TBA µg/L	1,2-DCA µg/L	EDB µg/L	Methanol µg/L	Ethanol µg/L
MW-1	11/7/1999	5,700	170	59	22	85	20,000	NA	NA	NA	NA	NA	NA	NA	NA
	3/8/2001	17,000	480	150	52	170	38,000	NA	NA	NA	NA	NA	NA	NA	NA
	11/17/2001	10,000	230	210	60	250	22,000	NA	NA	NA	NA	NA	NA	NA	NA
	3/31/2002	12,000	61	ND	ND	29	35,000	NA	NA	NA	NA	NA	NA	NA	NA
	11/9/2003	19,000	ND	ND	ND	ND	50,000	NA	NA	NA	NA	NA	NA	NA	NA
	12/9/2003	22,000	150	ND	ND	ND	66,000	NA	NA	NA	NA	NA	NA	NA	NA
MW-1R	11/17/2001	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	3/31/2002	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	9/9/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	12/9/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	2/19/2004	1,800	95	130	44	200	220	NA	NA	NA	NA	NA	NA	NA	NA
	5/24/2004	210	12	10	5.4	23	79	ND	ND	2.1	37	ND	ND	ND	ND
	9/3/2004	300	1.5	7.1	9.4	42	81	ND	ND	1.6	ND	ND	ND	ND	ND
	11/2/2004	290	14	30	9.5	45	45	ND	ND	1.1	ND	NA	NA	ND	ND
	2/17/2005	530	3.4	ND	ND	2.6	1,000	ND	ND	100	ND	NA	NA	ND	ND
	5/24/2005	NA	NA	NA	NA	NA	NA	ND	ND	610	ND	ND	ND	NA	NA
	8/15/2005	2,500	64	240	61	210	2,300	ND	ND	210	ND	ND	ND	NA	NA
	11/17/2005	2,500	66	290	75	290	1,300	ND	ND	110	1,600	ND	ND	NA	NA
	2/8/2006	3,300	100	310	86	470	1,400	ND	ND	130	1,400	ND	ND	NA	NA
	5/5/2006	3,400	170	350	97	550	1,100	ND	ND	100	2,400	ND	ND	NA	NA
	8/18/2006	5,800	190	1,000	230	1,000	490	ND	ND	36	2,900	ND	ND	NA	NA
	12/1/2006	410	1.7	6.3	1.2	47	100	ND	ND	4.7	100	ND	ND	NA	NA
	2/23/2007	ND	ND	0.51	ND	1.4	3	ND	ND	ND	ND	ND	ND	NA	NA
	5/10/2007	ND	ND	ND	ND	2.0	5.9	ND	ND	ND	ND	ND	ND	NA	NA
	8/16/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	NA	NA
	11/8/2007	1,300	11	82	54	270	1.4	ND	ND	ND	ND	ND	ND	NA	NA
	2/14/2008	800	7.6	31	23	150	1.7	ND	ND	ND	ND	ND	ND	NA	NA
	5/15/2008	3,200	20	200	110	550	4.2	ND<0.50	ND<0.50	1.0	ND<20	ND<0.50	ND<0.50	NA	NA
	9/10/2008	**1,000**	**6.5**	**22**	**19**	**120**	**2.3**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**4.0**	**ND<0.50**	**ND<0.50**	**NA**	**NA**
MW-2	11/7/1999	6,000	1,300	92	50	400	6,800	NA	NA	NA	NA	NA	NA	NA	NA
	3/8/2001	41,000	8,100	870	2,000	4,100	26,000	NA	NA	NA	NA	NA	NA	NA	NA
	11/17/2001	18,000	3,700	180	610	640	16,000	NA	NA	NA	NA	NA	NA	NA	NA
	3/31/2002	32,000	6,500	270	1,700	2,700	19,000	NA	NA	NA	NA	NA	NA	NA	NA
	9/9/2003	24,000	4,600	ND	1,200	440	19,000	NA	NA	NA	NA	NA	NA	NA	NA
	12/9/2003	31,000	6,200	170	1,600	2,700	19,000	NA	NA	NA	NA	NA	NA	NA	NA
	2/19/2004	21,000	4,600	120	970	2,000	15,000	NA	NA	NA	NA	NA	NA	NA	NA
	5/24/2004	1,200	120	3	63	67	1,900	ND	ND	ND	ND	ND	ND	ND	ND
	9/3/2004	2,300	120	ND	51	70	1,700	ND	ND	26	ND	ND	ND	ND	ND
	11/2/2004	530	35	ND	17	30	520	ND	ND	28	100	NA	NA	ND	ND

Table 3, 6211 San Pablo Avenue, Oakland, CA - AEI Project # 280346

Groundwater Analytical Data

Sample ID	Date	TPHg µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L	DIPE µg/L	ETBE µg/L	TAME µg/L	TBA µg/L	1,2-DCA µg/L	EDB µg/L	Methanol µg/L	Ethanol µg/L
MW-2	2/17/2005	18,000	2,100	31	800	680	20,000	ND	ND	1,000	ND	NA	NA	ND	ND
(cont.)	5/24/2005	22,000	3,200	52	1,400	1,700	16,000	ND	ND	NS	NS	ND	ND	NS	NS
	8/15/2005	2,000	66	ND	46	47	2,400	ND	ND	95	880	ND	ND	NA	NA
	11/17/2005	760	19	0.64	15	13	1,000	ND	ND	26	810	ND	ND	NA	NA
	2/8/2006	10,000	1,500	8	660	380	4,300	ND	ND	120	2,800	ND	ND	NA	NA
	5/5/2006	15,000	1,800	ND	1,200	1,200	5,800	ND	ND	150	4,300	ND	ND	NA	NA
	8/18/2006	360	11	ND	13	9.7	160	ND	ND	4.6	600	ND	ND	NA	NA
	12/1/2006	11,000	1,000	ND	990	910	2,100	ND	ND	87	2,000	ND	ND	NA	NA
	2/23/2007	3,200	210	ND	270	85	900	ND	ND	33	1,400	ND	ND	NA	NA
	5/10/2007	590	31	ND	39	22	200	ND	ND	5.9	250	ND	ND	NA	NA
	8/16/2007	650	49	ND	71	49	100	ND	ND	3.5	82	ND	ND	NA	NA
	11/8/2007	110	1.6	ND	1.9	1.6	23	ND	ND	0.64	48	ND	ND	NA	NA
	2/14/2008	350	24	ND	12	5.9	190	ND	ND	7.7	320	ND	ND	NA	NA
	5/15/2008	81	0.59	ND<0.50	0.71	0.66	38	ND<0.50	ND<0.50	1.4	54	ND<0.50	ND<0.50	NA	NA
	9/10/2008	**150**	**6.4**	**ND<0.50**	**8.4**	**5.1**	**14**	**ND<0.50**	**ND<0.50**	**0.55**	**38**	**ND<0.50**	**ND<0.50**	**NA**	**NA**
MW-3	11/7/1999	43,000	860	70	ND	65	120,000	NA	NA	NA	NA	NA	NA	NA	NA
	3/8/2001	90,000	1,800	ND	ND	ND	210,000	NA	NA	NA	NA	NA	NA	NA	NA
	11/17/2001	110,000	1,600	ND	ND	ND	300,000	NA	NA	NA	NA	NA	NA	NA	NA
	3/31/2002	130,000	2,400	670	300	390	300,000	NA	NA	NA	NA	NA	NA	NA	NA
	9/9/2003	190,000	1,600	ND	ND	ND	420,000	NA	NA	NA	NA	NA	NA	NA	NA
	12/9/2003	170,000	2,000	ND	ND	ND	4,500,000	NA	NA	NA	NA	NA	NA	NA	NA
	2/19/2004	86,000	1,800	630	ND	ND	160,000	NA	NA	NA	NA	NA	NA	NA	NA
	5/24/2004	120,000	2,200	ND	180	220	400,000	ND	ND	15,000	ND	ND	ND	ND	ND
	9/3/2004	180,000	2,000	ND	ND	ND	510,000	ND	ND	14,000	ND	ND	ND	ND	ND
	11/2/2004	150,000	1,700	ND	ND	ND	350,000	ND	ND	31,000	140,000	NA	NA	ND	ND
	2/17/2005	130,000	2,100	420	210	730	290,000	ND	ND	11,000	ND	NA	NA	ND	ND
	5/24/2005	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
	8/15/2005	110,000	1,500	ND	ND	ND	260,000	ND	ND	21,000	25,000	ND	ND	NA	NA
	11/17/2005	200,000	2,400	ND	ND	ND	580,000	ND	ND	24,000	49,000	ND	ND	NA	NA
	2/8/2006	470,000	3,800	660	ND	790	490,000	ND	ND	26,000	49,000	ND	ND	NA	NA
	5/5/2006	400,000	3,300	ND	ND	ND	590,000	ND	ND	21,000	86,000	ND	ND	NA	NA
	8/18/2006	310,000	1,800	ND	ND	ND	440,000	ND	ND	23,000	79,000	ND	ND	NA	NA
	12/1/2006	270,000	ND	ND	ND	ND	290,000	ND	ND	11,000	90,000	ND	ND	NA	NA
	2/23/2007	220,000	ND	ND	ND	ND	260,000	ND	ND	15,000	33,000	ND	ND	NA	NA
	5/10/2007	140,000	ND	ND	ND	ND	180,000	ND	ND	7,100	80,000	ND	ND	NA	NA
	8/16/2007	69,000	ND	ND	ND	ND	85,000	ND	ND	3,400	180,000	ND	ND	NA	NA
	11/8/2007	34,000	ND	ND	ND	ND	38,000	ND	ND	1,400	140,000	ND	ND	NA	NA
	2/14/2008	41,000	ND	ND	ND	ND	44,000	ND	ND	1,900	110,000	ND	ND	NA	NA
	5/15/2008	43,000	ND<100	ND<100	ND<100	ND<100	62,000	ND<100	ND<100	1,100	200,000	ND<100	ND<100	NA	NA
	9/10/2008	**1,600**	**14**	**8.6**	**7.7**	**23**	**21,000**	**ND<1,000**	**ND<1,000**	**ND<1,000**	**290,000**	**ND<1,000**	**ND<1,000**	**NA**	**NA**

Table 3, 6211 San Pablo Avenue, Oakland, CA - AEI Project # 280346

Groundwater Analytical Data

Sample ID	Date	TPHg µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L	DIPE µg/L	ETBE µg/L	TAME µg/L	TBA µg/L	1,2-DCA µg/L	EDB µg/L	Methanol µg/L	Ethanol µg/L
MW-4	11/17/2001	64,000	960	1,400	360	1,600	140,000	NA	NA	NA	NA	NA	NA	NA	NA
	3/31/2002	78,000	4,400	4,700	690	2,700	150,000	NA	NA	NA	NA	NA	NA	NA	NA
	9/6/2007	49,000	710	840	ND	10,000	3,600	ND	ND	510	32,000	ND	ND	NA	NA
	11/8/2007	64,000	1,300	2,600	1,000	8,500	1,500	ND	ND	360	14,000	ND	ND	NA	NA
	2/14/2008	60,000	390	460	230	2,000	52,000	ND	ND	2,000	58,000	ND	ND	NA	NA
	5/15/2008	22,000	670	130	740	2,700	3,300	ND<5.0	ND<5.0	340	35,000	ND<5.0	ND<5.0	NA	NA
	9/10/2008	**16,000**	**500**	**150**	**730**	**2,500**	**2,000**	**ND<250**	**ND<250**	**ND<250**	**65,000**	**ND<250**	**ND<250**	**NA**	**NA**
MW-5	11/17/2001	210	15	12	11	23	4.8	NA	NA	NA	NA	NA	NA	NA	NA
	3/31/2002	120	11	7.4	6.1	16	4.2	NA	NA	NA	NA	NA	NA	NA	NA
	9/9/2003	ND	1.5	ND	ND	ND	1.7	NA	NA	NA	NA	NA	NA	NA	NA
	12/9/2003	130	32	ND	2.6	0.57	5	NA	NA	NA	NA	NA	NA	NA	NA
	2/19/2004	ND	ND	ND	ND	ND	1.5	NA	NA	NA	NA	NA	NA	NA	NA
	5/24/2004	ND	ND	ND	ND	ND	0.55	ND	ND	ND	ND	ND	ND	ND	ND
	9/3/2004	100	6.4	ND	ND	0.79	4.2	ND	ND	ND	ND	ND	ND	ND	ND
	11/2/2004	ND	2.6	ND	1.7	0.87	1	ND	ND	ND	ND	ND	ND	ND	ND
	2/17/2005	51	0.74	ND	0.94	ND	1.5	ND	ND	ND	ND	ND	ND	ND	ND
	5/24/2005	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	NA	NA
	8/15/2005	ND	ND	ND	ND	ND	0.88	ND	ND	ND	ND	ND	ND	NA	NA
	11/17/2005	71	0.81	ND	1.1	ND	1.4	ND	ND	ND	ND	ND	ND	NA	NA
	2/8/2006	50	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	NA	NA
	5/5/2006	ND	ND	ND	ND	ND	0.93	ND	ND	ND	ND	ND	ND	NA	NA
	8/18/2006	ND	ND	ND	ND	ND	1	ND	ND	ND	ND	ND	ND	NA	NA
	12/1/2006	ND	0.69	ND	ND	0.52	0.97	ND	ND	ND	ND	ND	ND	NA	NA
	2/23/2007	73	ND	ND	ND	ND	1.7	ND	ND	ND	ND	ND	ND	NA	NA
	5/10/2007	ND	ND	ND	ND	ND	1.5	ND	ND	ND	ND	ND	ND	NA	NA
	8/16/2007	ND	ND	ND	ND	ND	1.3	ND	ND	ND	ND	ND	ND	NA	NA
	11/8/2007	ND	ND	ND	ND	ND	1.5	ND	ND	ND	ND	ND	ND	NA	NA
	2/14/2008	ND	ND	ND	ND	ND	1.3	ND	ND	ND	ND	ND	ND	NA	NA
	5/15/2008	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	1.7	ND<0.50	ND<0.50	ND<0.50	ND<20	ND<0.50	ND<0.50	NA	NA
	9/10/2008	**480**	**17**	**1.8**	**2.7**	**0.59**	**12**	**ND<0.50**	**ND<0.50**	**ND<0.50**	**4.4**	**ND<0.50**	**ND<0.50**	**NA**	**NA**
MW-6	11/17/2001	3,500	160	260	95	420	1,500	NA	NA	NA	NA	NA	NA	NA	NA
	3/31/2002	3,200	410	170	82	280	3,000	NA	NA	NA	NA	NA	NA	NA	NA
	9/9/2003	800	49	ND	7.4	ND	1,700	NA	NA	NA	NA	NA	NA	NA	NA
	12/9/2003	970	150	9.9	31	83	1,200	NA	NA	NA	NA	NA	NA	NA	NA
	2/19/2004	1,900	280	58	17	160	2,700	NA	NA	NA	NA	NA	NA	NA	NA
	9/3/2004	1,100	27	ND	14	27	2,200	ND	ND	85	ND	ND	ND	ND	ND
	11/2/2004	1,800	32	ND	5	11	4,100	ND	ND	170	270	ND	ND	ND	ND
	2/17/2005	5,600	190	34	41	110	10,000	ND	ND	780	2,000	ND	ND	ND	ND
	8/15/2005	1,800	27	ND	6	23	3,800	ND	ND	300	3,500	ND	ND	NA	NA
	11/17/2005	1,100	30	ND	4	9	2,400	ND	ND	190	9,500	ND	ND	NA	NA
	2/8/2006	3,600	220	43	66	160	2,700	ND	ND	180	7,800	ND	ND	NA	NA

Table 3, 6211 San Pablo Avenue, Oakland, CA - AEI Project # 280346

Groundwater Analytical Data

Sample ID	Date	TPHg µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE µg/L	DIPE µg/L	ETBE µg/L	TAME µg/L	TBA µg/L	1,2-DCA µg/L	EDB µg/L	Methanol µg/L	Ethanol µg/L
MW-6	5/5/2006	1,600	130	21	37	65	1,400	ND	ND	53	3,100	ND	ND	NA	NA
(cont.)	8/18/2006	270	27	ND	3	4	240	ND	ND	11	2,400	ND	ND	NA	NA
	12/1/2006	1,700	ND	ND	ND	ND	1,700	ND	ND	92	800	ND	ND	NA	NA
	2/23/2007	ND	ND	ND	ND	ND	15	ND	ND	ND	ND	ND	ND	NA	NA
	5/10/2007	ND	3.0	ND	ND	1.9	26	ND	ND	2	48	ND	ND	NA	NA
	8/16/2007	ND	ND	ND	ND	ND	1.4	ND	ND	ND	ND	ND	ND	NA	NA
	11/8/2007	ND	ND	ND	ND	ND	5.3	ND	ND	ND	ND	ND	ND	NA	NA
	2/14/2008	ND	ND	ND	ND	ND	11	ND	ND	0.94	220	ND	ND	NA	NA
	5/15/2008	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	13	ND<0.50	ND<0.50	1.0	130	ND<0.50	ND<0.50	NA	NA
	9/10/2008	**78**	**1.4**	**0.60**	**0.94**	**1.3**	**71**	**ND<1.0**	**ND<1.0**	**6.2**	**160**	**ND<1.0**	**ND<1.0**	**NA**	**NA**
EX-1	2/19/2004	120,000	9,500	4,300	840	3,900	150,000	NA	NA	NA	NA	NA	NA	NA	NA
	2/14/2008	84,000	2,300	4,900	1,800	14,000	3,900	ND	ND	610	10,000	ND	ND	NA	NA
	5/15/2008	24,000	2,100	750	640	2,100	1,800	ND<0.50	ND<0.50	380	11,000	ND<0.50	ND<0.50	NA	NA
	9/10/2008	**9,200**	**1,000**	**160**	**300**	**1,000**	**780**	**ND<100**	**ND<100**	**180**	**22,000**	**ND<100**	**ND<100**	**NA**	**NA**

Notes:
TPHg = total petroleum hydrocarbons as gasoline using EPA Method 8015
Benzene, toluene, ethylbenzene, and xylenes using EPA Method 8021B
MTBE = methyl-tertiary butyl ether using EPA Method 8021B; EPA Method 8260B Beginning in May 2008
TBA = tert-butyl alcohol using EPA Method 8260B
TAME = tert-amyl methyl ether using EPA Method 8260B
DIPE = diisopropyl ether using EPA Method 8260B
ETBE = ethyl tert-butyl ether using EPA Method 8260B
1,2-DCA = 1,2-dichloroethane using EPA Method 8260B
EDB = Ethylene dibromide using EPA Method 8260B
Methanol and Ethanol using EPA Method 8260B
µg/L= micrograms per liter
ND = non detect at respective reporting limit
NA - not analyzed

Table 4, 6211 San Pablo Avenue, Oakland, CA - AEI Project # 280346
Soil Vapor Analytical Data

Sample ID	Date	TPHg ug/m^3	Benzene ug/m^3	Toluene ug/m^3	Ethylbenzene ug/m^3	Xylenes ug/m^3	MTBE ug/m^3
Shallow Probes							
SG-1-3	12/3/2008	**20,000**	ND<6.5	**25**	**10**	**39**	ND<7.3
SG-2-3	12/3/2008	**18,000**	ND<26	ND<31	ND<35	ND<110	**470**
SG-3-3	12/3/2008*	**470,000**	ND<140	**10,000**	ND<120	**750**	ND<1,200
Deep Probes							
SG-1-6	12/3/2008*	**43,000,000**	**12,000**	**480,000**	ND<7,600	**21,000**	ND<110,000
SG-2-6	12/3/2008*	**38,000,000**	**41,000**	**370,000**	ND<5,400	ND<8,000	ND<290,000
SG-3-6	12/3/2008*	**1,200,000**	**890**	**26,000**	ND<1.5	**2,300**	ND<15,000
SG-3-6-DUP	12/3/2008*	**440,000**	**570**	**8,800**	ND<390	**1,100**	ND<17,000
ESL - Residential		10,000	84	63,000	980	21,000	9,400
ESL - Commercial		29,000	280	180,000	3,300	58,000	31,000

Notes:
TPHg = total petroleum hydrocarbons as gasoline using TO3 or EPA Method 8015*
Benzene, toluene, ethylbenzene, and xylenes using Method TO15 or EPA Method 8021B*
MTBE = methyl-tertiary butyl ether using Method TO15 or EPA Method 8021B*
$\mu g/m^3$= micrograms per cubic meter
ND = non detect at respective reporting limit
ESL = Environmental Screening Level for shallow soil vapor as determined by the Regional Water Quality Control Board - San Francisco Bay Region.

Table 5, 6211 San Pablo Avenue, Oakland, CA - AEI Project # 280346
Additional Soil Analytical Data

Sample ID	Date	Depth (feet bgs)	*Moisture Content (wet wt %)	Wet Bulk Density (g/cm^3)	Dry Bulk Density (g/cm^3)	Wet Bulk Density (pcf)	Dry Bulk Density (pcf)	Porosity (Est.) n	TIC (mg/kg)	TOC (mg/kg)	TC (mg/kg)	Grain Size Distribution as % Gravel	Sand	Silt	Clay	Soil Description
SB-12																
SB-12-11.5	11/25/08	11.5	17.4%	2.0	1.7	124.7	106.3	0.36	390	660	1,050	4.4	58.5	26.9	10.2	Gray Clayey SAND
DDP-1																
DDP-1-6	11/25/08	6	19.6%	1.9	1.6	118.5	99.1	0.40	1,200	5,200	6,400	0	7.3	39.6	53.1	Gray CLAY
DDP-1-10	11/25/08	10	13.3%	2.1	1.9	131.0	115.6	0.30	ND<200	1,000	1,100	18.5	45.6	21.1	14.8	Olive Gray Clayey SAND w/ Gravel
DDP-3																
DDP-3-5.5	11/26/08	5.5	13.1%	1.9	1.7	118.5	104.8	0.37	6,700	10,000	16,700	0	21.1	41.5	37.4	Gray CLAY w/ Sand & Calcium Carbonate
DDP-3-10	11/26/08	10	14.8%	1.9	1.7	118.5	103.2	0.38	ND<200	900	1,000	26.3	44.9	21.8	7.0	Mottled Olive Clayey SAND w/ Gravel

Notes:

feet bgs = feet below ground surface
g/cm^3 = grams per cubic centimeter
pcf = pounds per cubic foot
wet wt = wet weight
TIC = Total Inorganic Carbon
TOC = Total Organic Carbon
TC = TIC + TOC = Total Carbon

Bulk Density by SSSA #5
Moisture Content by ASTM D2216
TIC by SM5310B
TOC by SM5310B
Grain size / particle distribution by ASTM D422

Porosity = 1 - (Dry Bulk Density / Soil Specific Gravity)
Soil Specific Gravity = 2.65 (estimated value for sand)
1 pound = 454 grams
1 ft^3 = 28,317 cm^3
g/cm^3 * 62.37 = pcf

*A 2% by weight was the lowest soil moisture content measured at a successful U.S. Air Force Bioventing Initiative site in San Bernardino County, California (Hinchee & Leeson, 1997)

APPENDIX A

BORING LOGS

Project: Alaska Gasoline
Project Location: 6211 San Pablo Avenue, Oakland, CA
Project Number: 280346

Log of Boring DDP-1

Sheet 1 of 2

Date(s) Drilled **November 25, 2008**	Logged By **Jeremy Smith**	Checked By **Peter McIntyre**
Drilling Method **Double walled direct push**	Drill Bit Size/Type **2 inch**	Total Depth of Borehole **26 feet bgs**
Drill Rig Type **Truck-Mounted**	Drilling Contractor **ECA**	Approximate Surface Elevation
Groundwater Level and Date Measured **24 feet ATD, 13 feet after 10 minutes**	Sampling Method(s) **Tube**	Well Permit.
Borehole Backfill **Neat Cement**	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	0			Asphalt		Asphalt and fill material		
				CL		Silty clay, black, (0,10,90), moist, plastic.	66	
	5		DDP-1-5	CL		Becomes brown (10YR 5/3), trace fine gravel, (5,5,90)	81	
			DDP-1-8	SC-CL		Becomes greenish, Increase in sand content, (10,20,70), fine to coarse grained sand, moist.		
	10			SM		Increase in sand and gravel, Increase in silt with depth, (15,30,55) - very moist at 11 to 12 feet bgs.		
			DDP-1-11.5				2,357	
				SM-ML		Sandy silt, (0,20,80), greenish grey (10G/5), fine grained sand (after 10 minutes) ▼		
	15						14	
				CL-ML		Transitions to brown, clayey silt, (0,10,90)		
	20		DDP-1-19.5				21	

Figure

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Project: Alaska Gasoline
Project Location: 6211 San Pablo Avenue, Oakland, CA
Project Number: 280346

Log of Boring DDP-1

Sheet 2 of 2

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	20			CL-ML		Brown, silty clay/silty sand, pockets of increased sand.	25	
				SM		Increased sand, fine to coarse grained (0,40,60)		
				SW		(ATD) ▽ Well graded sand, wet.		
	25						1.4	
						Drilling refusal (double walled) at 26 feet bgs. Set screen from 20 to 25 feet bgs; groundwater initially at 13 feet bgs, sample collected. Then hydropunched to 40 feet bgs, screened from 36 to 40 feet bgs, initially dry, pulled screen up to 32 feet bgs, initially dry. Let set for 3 hours. Groundwater at approximately 28 feet bgs, collect sample.		
	30							
	35							
	40							
	45							

Figure

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Project: Alaska Gasoline
Project Location: 6211 San Pablo Avenue, Oakland, CA
Project Number: 280346

Log of Boring DDP-2

Sheet 1 of 2

Date(s) Drilled **November 26, 2008**	Logged By **Jeremy Smith**	Checked By **Peter McIntyre**
Drilling Method **Double walled direct push**	Drill Bit Size/Type **2 inch**	Total Depth of Borehole **38 feet bgs**
Drill Rig Type **Truck-Mounted**	Drilling Contractor **ECA**	Approximate Surface Elevation
Groundwater Level and Date Measured **Not Encountered ATD**	Sampling Method(s) **Tube**	Well Permit.
Borehole Backfill **Neat Cement**	Location	

Depth, feet	Sample Type	Sample Number	USCS Symbol	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
0			Asphalt	Asphalt and fill material		
			CL	Silty clay, black, moist, plastic (0,10,90)	35	
5		DDP-2-5			104	
		DDP-2-7.5	CL	Becomes greenish grey, gravelly clay (20,20,60)	1,624	
			SC	Sandy, gravelly clay, very moist to wet.		
10		DDP-2-10.5	ML	Sandy silt, (0,20,80) very moist, transitions to brown @ 12', end coarse grained sand.	217	
			ML	Sandy silt, (0,35,65), fine grained sand, soft, very moist.	260	
15			ML	Stiff		
			SW-SM	Well graded wet sand, fine to coarse grained.		
20						

Figure

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Project: Alaska Gasoline
Project Location: 6211 San Pablo Avenue, Oakland, CA
Project Number: 280346

Log of Boring DDP-2

Sheet 2 of 2

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	20			ML		Stiff silt, moist		
		X	DDP-2-20.5				13.4	
				ML		Increase in sand throughout (10,30,60), soft, very moist		
		X		SW		Well graded hard sand (10,60,30)	12.3	
				ML		Sandy silt, (0,20,80) turning light olive grey (5Y 6/2) at 25 feet., soft and becoming stiff at 26.5 feet.		
	25	X	DDP-2-26.5				1.9	
				CL-ML		Stiff, silty clay, (0,10,90), some coarse grained sand.		
		X					2.3	
				SC		Gravelly, sandy clay (20,20,60)		
	30			SC-CL		Silty clay with interbedded lenses of gravelly sandy clay, very moist to wet.		
		X					0.9	
				SM-ML		Clayey silt with interbedded gravel adn sand, some very moist to wet.		
	35	X	DDP-2-35.5				1.1	
				ML		Stiff, clayey silt, moist, (0,10,90)		
		X					1.6	
						Boring terminated at 38 feet bgs, PVC screen from 33 to 38 feet bgs. Initially dry. Dry after 1 hour, no groundwater sample collected.		
	40							
	45							

Figure

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Project: Alaska Gasoline
Project Location: 6211 San Pablo Avenue, Oakland, CA
Project Number: 280346

Log of Boring DDP-3

Sheet 1 of 2

Date(s) Drilled **November 26, 2008**	Logged By **Jeremy Smith**	Checked By **Peter McIntyre**
Drilling Method **Double walled direct push**	Drill Bit Size/Type **2 inch**	Total Depth of Borehole **40 feet bgs**
Drill Rig Type **Truck-Mounted**	Drilling Contractor **ECA**	Approximate Surface Elevation
Groundwater Level and Date Measured **Not Encountered ATD**	Sampling Method(s) **Tube**	Well Permit.
Borehole Backfill **Neat Cement**	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	0			Asphalt		Asphalt and fill material.		
				SC-CL		Gravelly, sandy clay, greenish grey, (0,15,85), plastic	29	
	5		DDP-3-5				4,247	
			DDP-3-7.5	SC		Sandy clay, (15,30,55) fine to coarse grained sand, fine gravel, moist	1,306	
	10			SC		Increase in sand and gravel (20,30,50)		
			DDP-3-12.5	ML		Brown, sandy silt, (0,20,80), wet	34	
	15			ML		Soft silt, brown (0,20,80), fine grained sand, very moist to wet.	109	
				ML		Wet		
	20			SW				

Figure

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Project: Alaska Gasoline
Project Location: 6211 San Pablo Avenue, Oakland, CA
Project Number: 280346

Log of Boring DDP-3

Sheet 2 of 2

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	20	☒	DDP-3-20.5	ML		Silt, stiff, moist, with fine grained sand (0,20,80)	25	
		☒		SM-ML		Interbedded layers of silt and silty gravelly sand (wet)	1.0	
				ML		Becomes very dar grey silt, (0,10,90)		
	25	☒	DDP-3-26				1.1	
				ML		Becomes brown, varying amounts of sand throughout.		
		☒					1.4	
	30			ML		Becomes olive brown, grey, moist, stiff.		
		☒					1.6	
				SM		Sandy silt, brown (10,30,60), moist.		
				CL/ML		Silty clay, olive brown, plastic, moist, 0,10,90)		
	35	☒	DDP-3-35.5				1.9	
				SM		Stiff, sandy silt, brown.		
				SM		Wet, fine to coarse sand and silt, (10,50,40), brown.		
		☒		CL/ML		Stiff, clayey silt, olive grey, with coarse sand/gravel (10,20,70), moist.	1.4	
	40					Boring terminated at 40 feet bgs, screened from 35 to 40 feet. Pulled rods up to 32 feet bgs. Borehole dry, no groundwater sample collected.		
	45							

Figure

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Project: Alaska Gasoline
Project Location: 6211 San Pablo Avenue, Oakland, CA
Project Number: 280346

Log of Boring DDP-4

Sheet 1 of 2

Date(s) Drilled **November 26, 2008**	Logged By **Jeremy Smith**	Checked By **Peter McIntyre**
Drilling Method **Double walled direct push**	Drill Bit Size/Type **2 inch**	Total Depth of Borehole **30 feet bgs**
Drill Rig Type **Truck-Mounted**	Drilling Contractor **ECA**	Approximate Surface Elevation
Groundwater Level and Date Measured **Not Encountered ATD**	Sampling Method(s) **Tube**	Well Permit.
Borehole Backfill **Neat Cement**	Location	

Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
0			Asphalt		Asphalt and fill material.		
			CL		Silty clay, very dark brown/black, moist, plastic, (0,10,90)		
		DDP-4-3.5				4.0	
5			SC		Sandy, gravelly, clay, greenish grey and brown (10,30,60), moist.		
		DDP-4-7.5				130	
10			CL		Brown, silty clay		
		DDP-4-10.5				2.6	
			SM		Silty sand, sandy silt with gravel (10,40,50), brown, wet in spots throughout.	0.6	
15			ML		Sandy silt, very moist, decrease in sand (0,30,70)	1.1	
			SM		Increase in sand and gravel (20,40,40)	1.1	
20							

Figure

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Project: Alaska Gasoline
Project Location: 6211 San Pablo Avenue, Oakland, CA
Project Number: 280346

Log of Boring DDP-4

Sheet 2 of 2

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	20			ML		Silt, soft and very moist.		
		X	DDP-4-20.5				0.8	
				SW		Well graded silty sand (20,50,30) fine to coarse grained sand, brown, very moist to wet.		
	25	X		SM		Soft, sandy silt, pockets of wet, some gravel (15,35,50)	1.0	
				ML		Olive brown, some sand (0,20,80), stiff.		
				SM		Sandy silt, brown, (20,30,50), fine to coarse grained sand, very moist to wet.		
		X	DDP-4-29.5				1.1	
	30					Boring terminated at 30 feet bgs. Temporary PVC screen from 25 to 30 feet bgs. Initially dry. Dry after 45 minutes, no groundwater sample collected.		
	35							
	40							
	45							

Figure

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\CHARACTERIZATION\280346 Alaska Gasoline - Oakland (JAS)\Offsite Investigation Nov 08\Soil Borigns.bgs [AEI GEOPROBE 40'.tpl]

Project: Alaska Gasoline
Project Location: 6211 San Pablo Avenue, Oakland, CA
Project Number: 280346

Log of Boring DP-4

Sheet 1 of 1

Date(s) Drilled **November 24, 2008**	Logged By **Jeremy Smith**	Checked By **Peter McIntyre**
Drilling Method **Direct Push**	Drill Bit Size/Type **2 inch**	Total Depth of Borehole **16 feet bgs**
Drill Rig Type **Truck-Mounted**	Drilling Contractor **ECA**	Approximate Surface Elevation
Groundwater Level and Date Measured **14.4 feet after 10 Minutes**	Sampling Method(s) **Tube**	Well Permit.
Borehole Backfill **Neat Cement**	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	0			Asphalt		Asphalt and fill material		
				CL		Silty clay, black (10YR 2/1) (0,10,90), trace fine grained sand, moist, plastic, soft.	21	
	5			CL		At 5' bgs becomes greenish grey (10G,5)		
			DP-4-7.5	CL		Increase in sand content (0,20,80)	1,476	
	10			CL		Mottled brown, black, grey, with some fine gravel (10,20,70)		
				SC/SM		Very moist, silty, sandy clay (0,35,65)	24	
				SM		Sandy silt, light brownish grey (10YR 6/2) and yellowish brown (10YR 5/6), (0,35,65) very soft, very moist. (after 10 Minutes) ▼		
	15		DP-4-15				6.6	
						Boring terminated at 16 feet bgs, temporary PVC casing set and groundwater initially at 14.4' bgs.		
	20							

Figure

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Project: Alaska Gasoline
Project Location: 6211 San Pablo Avenue, Oakland, CA
Project Number: 280346

Log of Boring SB-5

Sheet 1 of 1

Date(s) Drilled **November 25, 2008**	Logged By **Jeremy Smith**	Checked By **Peter McIntyre**
Drilling Method **Direct Push**	Drill Bit Size/Type **2 inch**	Total Depth of Borehole **17 feet bgs**
Drill Rig Type **Truck-Mounted**	Drilling Contractor **ECA**	Approximate Surface Elevation
Groundwater Level and Date Measured **14.5 feet ATD**	Sampling Method(s) **Tube**	Well Permit.
Borehole Backfill **Neat Cement**	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	0			Asphalt		Asphalt and fill material		
				CL		Silty clay, black, (0,5,95) moist, plastic	1.1	
	5			CL		Becomes grey, light brown mottled (5,20,75) fine to coarse grained sand.		
			SB-5-7.5				1.3	
				CL-ML		Sandy clayey silt, (0,10,90) moist		
	10						3.2	
				SM		Fine grained silty sand, (10, 50, 40), moist	2.2	
				SM-ML		Sandy silt, wet at 14.5 (ATD) ▽		
	15						1.8	
				SM		Very dense, sandy silt, (10,50,40) fine to coarse grained sand.		
						Boring terminated at 17 feet bgs, temporary PVC casing set and groundwater sample collected.		
	20							

Figure

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Project: Alaska Gasoline
Project Location: 6211 San Pablo Avenue, Oakland, CA
Project Number: 280346

Log of Boring SB-7

Sheet 1 of 1

Date(s) Drilled **November 25, 2008**	Logged By **Jeremy Smith**	Checked By **Peter McIntyre**
Drilling Method **Direct Push**	Drill Bit Size/Type **2 inch**	Total Depth of Borehole **16 feet bgs**
Drill Rig Type **Truck-Mounted**	Drilling Contractor **ECA**	Approximate Surface Elevation
Groundwater Level and Date Measured **13 feet ATD**	Sampling Method(s) **Tube**	Well Permit.
Borehole Backfill **Neat Cement**	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	0			Asphalt		Asphalt and fill material		
				CL		Silty clay, black, stiff, plastic, moist, (0,15,85)		
		X	SB-7-3.5				1.1	
				CL		Becomes light olive brown (2.5Y 5/3), sandy clay (0,25,75), fine to coarse grained sand, moist.		
	5							
				CL		decrease in sand (0,10,90)		
		X					1.4	
				SM		Gravelly, sandy silt, (15,25,60)		
	10							
		X	SB-7-10.5	SM		Silt and fine grained sand (0,50,50)	1.0	
				SM		Gravelly sandy silt, (15,25,60)		
				SM		Saturated, soft, sandy silt (0,30,70) (ATD) ▽		
				CL		Dense, sandy, silty clay		
	15	X					0.9	
						Boring terminated at 16 feet bgs, temporary PVC casing set, groundwater sample collected.		
	20							

Figure

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Project: Alaska Gasoline
Project Location: 6211 San Pablo Avenue, Oakland, CA
Project Number: 280346

Log of Boring SB-8

Sheet 1 of 1

Date(s) Drilled **November 24, 2008**	Logged By **Jeremy Smith**	Checked By **Peter McIntyre**
Drilling Method **Direct Push**	Drill Bit Size/Type **2 inch**	Total Depth of Borehole **12 feet bgs**
Drill Rig Type **Truck-Mounted**	Drilling Contractor **ECA**	Approximate Surface Elevation
Groundwater Level and Date Measured **9 feet ATD, 4.7 feet after 10 minutes**	Sampling Method(s) **Tube**	Well Permit.
Borehole Backfill **Neat Cement**	Location	

Depth, feet	Sample Type	Sample Number	USCS Symbol	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
0			Asphalt	Asphalt and fill material		
			CL	Silty clay, black, (10YR 2/1) (0,5,95) moist, plastic	27	
5				(after 10 minutes) ▼		
		SB-8-6	SC-CL	Sandy clay, greenish grey, increased sand with depth (0,20,80), fine to coarse grained sand	4,045	
			SC	(10,30,60)		
			SC	(ATD) ▽ Saturated with LNAPL present		
10			CL	Sandy, silty clay.	28	
				Boring terminated at 12 feet bgs, temporary PVC set and groundwater collected.		
15						
20						

Figure

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Project: Alaska Gasoline
Project Location: 6211 San Pablo Avenue, Oakland, CA
Project Number: 280346

Log of Boring SB-9

Sheet 1 of 1

Date(s) Drilled **November 24, 2008**	Logged By **Jeremy Smith**	Checked By **Peter McIntyre**
Drilling Method **Direct Push**	Drill Bit Size/Type **2 inch**	Total Depth of Borehole **16 feet bgs**
Drill Rig Type **Truck-Mounted**	Drilling Contractor **ECA**	Approximate Surface Elevation
Groundwater Level and Date Measured **11.5 feet ATD, 5.5 feet after 10 minutes**	Sampling Method(s) **Tube**	Well Permit.
Borehole Backfill **Neat Cement**	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	0			Asphalt		Asphalt and fill material		
				CL		Silty clay, black		
				CL		Becoming grey silty clay (0,10,90) trace fine grained sand, moist, plastic.	23	
	5					(after 10 minutes) ▼		
							189	
				SC		Sandy clay (10,30,60) fine to coarse grained sand,		
	10		SB-9-10.5	SC		Becomes brown clayey sand, 10,50,40)	393	
						(ATD) ▽		
				SC		Decreasing sand, wet		
	15			ML		Silt	2.6	
						Boring terminated at 16 feet bgs, temporary PVC casing set and groundwater sample collected.		
	20							

Figure

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Project: Alaska Gasoline
Project Location: 6211 San Pablo Avenue, Oakland, CA
Project Number: 280346

Log of Boring SB-10

Sheet 1 of 1

Date(s) Drilled **November 24, 2008**	Logged By **Jeremy Smith**	Checked By **Peter McIntyre**
Drilling Method **Direct Push**	Drill Bit Size/Type **2 inch**	Total Depth of Borehole **8 feet bgs**
Drill Rig Type **Truck-Mounted**	Drilling Contractor **ECA**	Approximate Surface Elevation
Groundwater Level and Date Measured **7 feet ATD, 4 feet after 10 minutes**	Sampling Method(s) **Tube**	Well Permit.
Borehole Backfill **Neat Cement**	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	0			Asphalt		Asphalt and fill material		
				CL		Silty clay, light olive brown (2.5Y 5/4) (0,10,90), moist, plastic		
						(after 10 minutes) ▼	1.4	
				SC		Clayey sand (20,60,20) fine to coarse grained sand, loose, very moist to wet at 7'.		
	5		SB-10-6				1.8	
						(ATD) ▽		
						Boring terminated at 8 feet bgs, temporary PVC set and groundwater sample collected.		
	10							
	15							
	20							

Figure

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Project: Alaska Gasoline
Project Location: 6211 San Pablo Avenue, Oakland, CA
Project Number: 280346

Log of Boring SB-11

Sheet 1 of 1

Date(s) Drilled **November 24, 2008**	Logged By **Jeremy Smith**	Checked By **Peter McIntyre**
Drilling Method **Direct Push**	Drill Bit Size/Type **2 inch**	Total Depth of Borehole **16 feet bgs**
Drill Rig Type **Truck-Mounted**	Drilling Contractor **ECA**	Approximate Surface Elevation
Groundwater Level and Date Measured **10.8 feet after 10 minutes**	Sampling Method(s) **Tube**	Well Permit.
Borehole Backfill **Neat Cement**	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	0			Asphalt		Asphalt and fill material.		
				CL		Silty clay, olive brown (2.5Y 4/3) trace sand (0,20,80) fine to coarse grained, mosit, plastic.		
							2.2	
				SC-CL		Incrase in gravel and sand with depth (10,25,65)		
	5							
						Becomes greenish grey (10G/5) (15,25,60)		
			SB-11-7.5				369	
				SM-ML		Becomes brown (10YR 5/2) sandy silt, fine grained sand (0,20,80)		
	10					(after 10 minutes) ▼		
							8.9	
	15						22.3	
						Boring terminated at 16 feet bgs, temporary PVC set and groundwater sample collected.		
	20							

Figure

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Project: Alaska Gasoline
Project Location: 6211 San Pablo Avenue, Oakland, CA
Project Number: 280346

Log of Boring SB-12

Sheet 1 of 1

Date(s) Drilled **November 25, 2008**	Logged By **Jeremy Smith**	Checked By **Peter McIntyre**
Drilling Method **Direct Push**	Drill Bit Size/Type **2 inch**	Total Depth of Borehole **17 feet bgs**
Drill Rig Type **Truck-Mounted**	Drilling Contractor **ECA**	Approximate Surface Elevation
Groundwater Level and Date Measured **13 feet ATD**	Sampling Method(s) **Tube**	Well Permit.
Borehole Backfill **Neat Cement**	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	0			Asphalt		Asphalt and fill material		
				CL		Silty clay, black		
		X	SB-12-3.5	CL		Transitions to light olive brown (2.5Y 5/3), moist, (5,10,85) plastic	1.6	
	5			CL		Becomes greenish grey, increasing sand and gravel with depth, very moist.		
		X	SB-12-6.5				19	
				SM		(15,20,65), sandy silt		
				ML		Silty, greenish grey		
	10			SM		Silty sand and gravel, (15,30,55), fine to coarse grained sand, very moist.		
		X	SB-12-11.5				3	
				SP		(ATD) ▽ Wet, poorly graded fine/medium grained sand (0,70,30)		
				SM		Brown, silty sand, (20,40,40)		
		X					5.5	
	15			CL		Very stiff, silty clay, brown, moist.		
						Boring terminated at 17 feet bgs, temporary PVC set and groundwater sample collected.		
	20							

Figure

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Project: Alaska Gasoline
Project Location: 6211 San Pablo Avenue, Oakland, CA
Project Number: 280346

Log of Boring SB-13

Sheet 1 of 1

Date(s) Drilled **November 25, 2008**	Logged By **Jeremy Smith**	Checked By **Peter McIntyre**
Drilling Method **Direct Push**	Drill Bit Size/Type **2 inch**	Total Depth of Borehole **16 feet bgs**
Drill Rig Type **Truck-Mounted**	Drilling Contractor **ECA**	Approximate Surface Elevation
Groundwater Level and Date Measured	Sampling Method(s) **Tube**	Well Permit.
Borehole Backfill **Neat Cement**	Location	

Depth, feet	Sample Type	Sample Number	USCS Symbol	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
0			Asphalt	Asphalt and fill material		
			CL	Silty clay, black, plastic, moist.		
			CL	Light brownish grey (2.5Y 6/2), some fine to coarse grained sand (10,15,75)		
	☒				1.7	
5			SM	Silty sand (20,50,30), brown, fine to corase grained sand, fine gravel.		
			SM	Becomes greenish grey.		
	☒	SB-13-7.5			1,406	
			SM-ML	Mostly silt, (10,10,80)		
10			SM	Brown / grey mottled (10,25,65), very moist with pockets of wet throughout.		
	☒				4.0	
			ML	Silt, (20,10,70)		
			SM	Silty sand, (20,40,40) fine to coarse grained sand.		
15	☒				2.2	
			SW	Well graded sand and gravel.		
				Boring terminated at 16 feet bgs. Temporary PVC set and groundwater sample collected.		
20						

Figure

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Project: Alaska Gasoline
Project Location: 6211 San Pablo Avenue, Oakland, CA
Project Number: 280346

Log of Boring SB-14

Sheet 1 of 1

Date(s) Drilled **November 24, 2008**	Logged By **Jeremy Smith**	Checked By **Peter McIntyre**
Drilling Method **Direct Push**	Drill Bit Size/Type **2 inch**	Total Depth of Borehole **12 feet bgs**
Drill Rig Type **Truck-Mounted**	Drilling Contractor **ECA**	Approximate Surface Elevation
Groundwater Level and Date Measured **8 feet ATD, 5.4 feet after 10 minutes**	Sampling Method(s) **Tube**	Well Permit.
Borehole Backfill **Neat Cement**	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
	0			Asphalt		Asphalt and fill material		
				CL		Silty clay, black, (0,5,95)		
				CL		Becomes greyish green. (10,20,70) fine to coarse grained sand, mosit.	13	
	5			SM		Sandy silt, (10,30,60) fine to coarse grained sand, fine gravel, medium stiff. (after 10 minutes) ▼		
			SB-14-7.5			(ATD) ▽	356	
				SM		Increase in sand, fine to coarse grained (10,60,30), wet		
	10			SM		Becomes brown, less visible contamination.	154	
						Boring terminated at 12 feet bgs, tempoary PVC casing set, and groundwater sample collected.		
	15							
	20							

Figure

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APPENDIX B

PERMITS

STATE OF CALIFORNIA • DEPARTMENT OF TRANSPORTATION

ENCROACHMENT PERMIT

TR-0120

Permit No.	0408-6SV 1861
Dist/Co/Rte/PM	04-ALA-123-1.39
Date	November 13, 2008
Fee Paid	$ 328.00
Deposit	$328.00
Performance Bond Amount (1)	
Payment Bond Amount (2)	
Bond Company	
Bond Number (1)	
Bond Number (2)	

In compliance with (*Check one*):

☐ Your application of October 29, 2008

☐ Utility Notice No. _____ of _____

☐ Agreement No. _____ of _____

☐ R/W Contract No. _____ of _____

TO: ☐ AEI Consultants
2500 Camino Diablo
Walnut Creek, CA-94597

Attn: Jeremy Smith
☐ Phone: (925) 944-2899 ☐ , **PERMITTEE**

and subject to the following, **PERMISSION IS HEREBY GRANTED** to:

Advance one twenty foot deep soil boring for soil and groundwater analysis. Boring will be completed in the sidewalk area, on State Highway 04-ALA-123, Post Mile1.39, at 6211 San Pablo Avenue in the City of Oakland.

A minimum of one week prior to the start of work under this permit, notice shall be given to, and approval of construction details, operations, public safety, and traffic control shall be obtained from State Representative Sunny Mantravadi, 600 Lewelling Boulevard, San Leandro, CA-94579, (510) 614-5951, weekdays, between 6:30 A.M. and 3:00 P.M.

All permitted work requires the permittee to apply for and obtain a work authorization number prior to the start of work. See the attached "Encroachment Permit Project Work Scheduling Procedures" and the attached "Permit Project Work Scheduling Request Form". Additional time beyond the minimum seven days advanced notice required in the above paragraph may be required for obtaining approval for the traffic control.

The following attachments are also included as part of this permit (*Check applicable*):

☒ Yes	☐ No	General Provisions
☒ Yes	☐ No	Utility Maintenance Provisions
☒ Yes	☐ No	Storm Water Special Provisions
☐ Yes	☒ No	A Cal-OSHA permit required prior to beginning work: #

In addition to fee, the permittee will be billed actual costs for:

☐ Yes	☒ No	Review
☐ Yes	☒ No	Inspection
☐ Yes	---------	Field Work

(If any Caltrans effort expended)

☐ Yes ☒ No The information in the environmental documentation has been reviewed and considered prior to approval of this permit.

This permit is void unless the work is completed before June 30, 2009

This permit is to be strictly construed and no other work other than specifically mentioned is hereby authorized.
No project work shall be commenced until all other necessary permits and environmental clearances have been obtained.

BW

CC MM, SM,
DTM-Phyllis Chan
TMC-J.Richardson

APPROVED:

BIJAN SARTIPI, District Director

BY:

for **M.D. CONDIE, District Permit Engineer**

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

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

Appl# X0802231 Job Site 6211 SAN PABLO AV Parcel# 016 -1455-020-00

Descr Block traffic lane & reserv parking for soil boring. See site plan. On Marshall St and on 62nd St. Loc 4
Allow six (6) monitoring wells in Public Right-of-Way
Permit Issued 11/06/08

Work Type EXCAVATION-PRIVATE P

USA # Util Co. Job # Acctg#:
Util Fund #:

		Applcnt	Phone#	Lic#	--License Classes--
Owner	SAPPAL KANWALJIT K				
Contractor	ALL ENVIRONMENTAL INC	X	(925)283-6000	654919	A
Arch/Engr					
Agent	AEI CONSULTANTS/		(925)944-2899		

JOB SITE

Applic Addr 2500 CAMINO DIABLO, WALNUT CREEK, CA, 94597

$419.99 TOTAL FEES PAID AT ISSUANCE

$66.00 Applic	$300.00 Permit
$.00 Process	$34.77 Rec Mgmt
$.00 Gen Plan	$.00 Invstg
$.00 Other	$19.22 Tech Enh

ADDRESS:

DIST:

CITY OF OAKLAND

PAID
11/6/08

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

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

Appl# X0802230 Job Site 6211 SAN PABLO AV Parcel# 016 -1455-020-00

Descr Block traffic lane & reserv parking for soil boring. See site plan. On Marshall St and on 62nd St. Loc 3
Allow six (6) monitoring wells in Public Right-of-Way
Permit Issued 11/06/08
Work Type EXCAVATION-PRIVATE P

USA # Util Co. Job # Acctg#:
Util Fund #:

		Applcnt	Phone#	Lic#	--License Classes--
Owner	SAPPAL KANWALJIT K				
Contractor	ALL ENVIRONMENTAL INC	X	(925)283-6000	654919	A
Arch/Engr					
Agent	AEI CONSULTANTS/		(925)944-2899		

JOB SITE

Applic Addr 2500 CAMINO DIABLO, WALNUT CREEK, CA, 94597

$419.99 TOTAL FEES PAID AT ISSUANCE

$66.00	Applic	$300.00	Permit
$.00	Process	$34.77	Rec Mgmt
$.00	Gen Plan	$.00	Invstg
$.00	Other	$19.22	Tech Enh

DRESS:

DIST:

CITY OF OAKLAND

PAID
11/6/08 mb

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

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

Appl# X0802229 Job Site 6211 SAN PABLO AV Parcel# 016 -1455-020-00

Descr Block traffic lane & reserv parking for soil boring. See site plan. On Marshall St and on 62nd St. Loc 2
Allow six (6) monitoring wells in Public Right-of-Way
Permit Issued 11/06/08
Work Type EXCAVATION-PRIVATE P

USA # Util Co. Job # Acctg#:
Util Fund #:

	Applcnt	Phone#	Lic#	--License Classes--
Owner SAPPAL KANWALJIT K				
Contractor ALL ENVIRONMENTAL INC	X	(925)283-6000	654919	A
Arch/Engr				
Agent AEI CONSULTANTS/		(925)944-2899		

Applic Addr 2500 CAMINO DIABLO, WALNUT CREEK, CA, 94597

JOB SITE

$419.99 TOTAL FEES PAID AT ISSUANCE

$66.00 Applic	$300.00 Permit
$.00 Process	$34.77 Rec Mgmt
$.00 Gen Plan	$.00 Invstg
$.00 Other	$19.22 Tech Enh

ADDRESS:

DIST:

CITY OF OAKLAND

PAID
11/6/08

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

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

Appl# X0802228 Job Site 6211 SAN PABLO AV Parcel# 016 -1455-020-00

Descr Block traffic lane & reserv parking for soil boring. See site plan. On Marshall St and on 62nd St. Loc 1
Allow six (6) monitoring wells in Public Right-of-Way
Work Type EXCAVATION-PRIVATE P

Permit Issued 11/06/08

USA # Util Co. Job # Acctg#:
Util Fund #:

		Applcnt	Phone#	Lic#	--License Classes--
Owner	SAPPAL KANWALJIT K				
Contractor	ALL ENVIRONMENTAL INC	X	(925)283-6000	654919	A
Arch/Engr					
Agent	AEI CONSULTANTS/		(925)944-2899		

Applic Addr 2500 CAMINO DIABLO, WALNUT CREEK, CA, 94597

JOB SITE

$419.99 TOTAL FEES PAID AT ISSUANCE

$66.00 Applic	$300.00 Permit
$.00 Process	$34.77 Rec Mgmt
$.00 Gen Plan	$.00 Invstg
$.00 Other	$19.22 Tech Enh

ADDRESS:

DIST:

CITY OF OAKLAND

PAID
11/6/08

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

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

Appl# OB080919 Job Site 6211 SAN PABLO AV Parcel# 016 -1455-020-00

Block traffic lane & reserv parking for soil boring. See site plan. On Marshall St and on 62nd St. One location at one time. Allow six (6) monitoring wells

Permit Issued 11/06/08

Nbr of days: 1 Linear feet: 525
Effective: 11/24/08 Expiration: 11/24/08

SHORT TERM NON-METERED

	Applcnt	Phone#	Lic#	--License Classes--
Owner SAPPAL KANWALJIT K				
Contractor ALL ENVIRONMENTAL INC	X	(925)283-6000	654919	A
Arch/Engr				
Agent AEI CONSULTANTS/		(925)944-2899		

Applic Addr 2500 CAMINO DIABLO, WALNUT CREEK, CA, 94597

$467.60 TOTAL FEES PAID AT ISSUANCE

$66.00 Applic	$341.50 Permit
$.00 Process	$38.71 Rec Mgmt
$.00 Gen Plan	$.00 Invstg
$.00 Other	$21.39 Tech Enh

ADDRESS:

JOB SITE

DIST:

TCP needs to be approved by Transportation Services every 30 days or whenever deviated from the previously approved plan.

Applicant: _____ 11/6/08

Issued by: _____ ^

CITY OF OAKLAND

PAID
11/6/08

Alameda County Public Works Agency - Water Resources Well Permit

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

Application Approved on: 11/10/2008 By jamesy

Permit Numbers: W2008-0840 to W2008-0843
Permits Valid from 11/24/2008 to 11/26/2008

Application Id: 1226008107165
City of Project Site: Oakland
Site Location: 6211 San Pablo Avenue
Project Start Date: 11/24/2008
Completion Date: 11/26/2008
Requested Inspection: 11/24/2008
Scheduled Inspection: 11/24/2008 at 2:00 PM (Contact your inspector, Vicky Hamlin at (510) 670-5443, to confirm.)

Applicant: AEI Consultants - Jeremy Smith
2500 Camino Diablo, Walnut Creek, CA 94597
Phone: 925-746-6028

Property Owner: Pritpaul Sappal
2718 Washburn Court, Vallejo,, CA 94591
Phone: 707-557-0999

Client: ** same as Property Owner **

Contact: Jeremy Smith
Phone: --
Cell: --

Total Due: $1265.00
Receipt Number: WR2008-0402 **Total Amount Paid:** $1265.00
Payer Name : Jeremy Smith Paid By: VISA **PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Geo Probes-Sampling 24 to 72 hours only - 14 Boreholes
Driller: ECA - Lic #: 695970 - Method: DP **Work Total: $230.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2008-0840	11/10/2008	02/22/2009	14	2.00 in.	45.00 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. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org 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.

5. Permitte, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled,

properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

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. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a 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.

8. 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.

Well Construction-Vapor Monitoring Well-Vapor Monitoring Well - 3 Wells
Driller: ECA - Lic #: 695970 - Method: DP **Work Total: $1035.00**

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2008-0841	11/10/2008	02/22/2009	SG-1	2.00 in.	0.50 in.	4.00 ft	6.00 ft
W2008-0842	11/10/2008	02/22/2009	SG-2	2.00 in.	0.50 in.	4.00 ft	6.00 ft
W2008-0843	11/10/2008	02/22/2009	SG-3	2.00 in.	0.50 in.	4.00 ft	6.00 ft

Specific Work Permit Conditions

1. Drilling Permit(s) can be voided/ cancelled only in writing. It is the applicant's responsibility to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.

2. Permitte, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.

4. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.

5. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org 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. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.

7. Minimum surface seal thickness is two inches of cement grout placed by tremie

8. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.

9. 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.

APPENDIX C

LABORATORY ANALYTICAL REPORT

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/24/08
		Date Received: 11/24/08
	Client Contact: Jeremy Smith	Date Reported: 12/03/08
	Client P.O.:	Date Completed: 12/02/08

WorkOrder: 0811757

December 03, 2008

Dear Jeremy:

Enclosed within are:

1) The results of the **13** analyzed samples from your project: **#280346; Alaska Gas,**
2) A QC report for the above samples,
3) A copy of the chain of custody, and
4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

0811757 Pg 1 of 2

McCAMPBELL ANALYTICAL INC.

1534 Willow Pass Road
Pittsburg, CA 94565
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY
EDF Required? ☒ Yes ☐ No

Report To: Jeremy Smith Bill To: same P.O. # WC081040
Company: AEI Consultants
2500 Camino Diablo
Walnut Creek, CA 94597 E-Mail: jasmith@aeiconsultants.com
Tele: (925) 944-2899 Fax: (925) 944-2895
Project #: 280346 Project Name: Alaska Gas
Project Location: 6211 San Pablo Avenue, Oakland, California
Sampler Signature:

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX / MTBE 8021B	TPH - gasoline (8015)	Total Petroleum Oil & Grease (413.1) w/ Silica	Total Petroleum Hydrocarbons (418.1)	Fuel Oxys (8260) – MTBE, DIPE, ETBE, TAME, TBA, 1,2-DCA, EDB	Nitrate/Nitrite	EPA 608 / 8080 PCB's ONLY	VOCs 8260	SVOCs (with PAHs) 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals (Cd, Cr, pb,,Ni,zinc (6010C).	Lead (field filtered 200.8)	RCI	Other: HOLD	Comments
SB-8-3.5		11/24/09	915	1	Liner		X				X				X	X			X										X	
SB-8-6			945				X								X	X			X											
SB-8-11.5			950				X																						X	
SB-8			945	3	VOA	X						X			X	X			X											
DP-4-3.5			800	1	Liner		X																						X	
DP-4-7.5			805				X								X	X			X											
DP-4-11.5			810				X																						X	
DP-4-15			820				X								X	X			X											
DP-4			830	3	VOA	X						X			X	X			X											
SB-9-3.5			1115	1	Liner		X																						X	
SB-9-7.5			1118				X																						X	
SB-9-10			1130				X								X	X			X											
SB-9			1145	3	VOA	X						X			X	X			X											

Relinquished By:	Date:	Time:	Received By:
	11/24/09	430	ENVIRO-TECH SERVICES AA 16.30
Enviro-Tech SR.	11/24	1953	
	11-24	8:15	

ICE/t° YES 4.2°C
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB N/A PRESERVED IN LAB NO

PRESERVATION	VOAS	O&G	METALS	OTHER
APPROPRIATE CONTAINERS	✓			

081757

McCAMPBELL ANALYTICAL INC.
1534 Willow Pass Road
Pittsburg, CA 94565
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? ☒ Yes ☐ No

Report To: Jeremy Smith **Bill To:** same **P.O. #** WC081040
Company: AEI Consultants
2500 Camino Diablo
Walnut Creek, CA 94597 **E-Mail:** jasmith@aeiconsultants.com
Tele: (925) 944-2899 **Fax:** (925) 944-2895
Project #: 280346 **Project Name:** Alaska Gas
Project Location: 6211 San Pablo Avenue, Oakland, California
Sampler Signature:

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX / MTBE 8021B	TPH - gasoline (8015)	Total Petroleum Oil & Grease (413.1) w/ Silica	Total Petroleum Hydrocarbons (418.1)	Fuel Oxys (8260) – MTBE, DIPE, ETBE, TAME, TBA, 1,2-DCA, EDB	Nitrate/Nitrite	EPA 608 / 8080 PCB's ONLY	VOCs 8260	SVOCs (with PAHs) 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals (Cd, Cr, pb, Ni, zinc (6010C).	Lead (field filtered 200.8)	RCI	Other: HOLD	Comments
SB-10-3.5		11/24/08	110	1	Liner		X				X				X	X			X										X	
SB-10-6			115	1	1		X								X	X			X											
SB-10			125	3	VOA	X					X	X			X	X			X											
SB-11-3.5			220	1	Liner		X																						X	
SB-11-7.5			225				X								X	X			X											
SB-11-11.5			230				X																						X	
SB-11-15.5			240				X																						X	
SB-11			245	3	VOA	X						X			X	X			X										X	
SB-14-3.5			1020	1	Liner		X																						X	
SB-14-7.5			1030	1			X								X	X			X											
SB-14-11.5			1040	1			X																						X	
SB-14			1045	3	VOA	X						X			X	X			X											

Relinquished By:	Date:	Time:	Received By:
	11/24/08	430	ENVIRO-TECH SERVICES AA 16:30
Relinquished By: ENVIRO-TECH SR	Date: 11/24	Time: 1953	Received By:
Relinquished By:	Date: 11-24	Time: 8:15	Received By:

ICE/t° YES 4.2 oc
GOOD CONDITION Y
HEAD SPACE ABSENT Y
DECHLORINATED IN LAB N/A

PRESERVATION APPROPRIATE	VOAS	O&G	METALS	OTHER
CONTAINERS	Y			
PERSERVED IN LAB	NO			

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0811757 **ClientCode: AEL**

☐ WriteOn ☑ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Jeremy Smith
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
(925) 283-6000 FAX (925) 944-2895

Email: jasmith@aeiconsultants.com
cc:
PO:
ProjectNo: #280346; Alaska Gas

Bill to:
Denise Mockel
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
dmockel@aeiconsultants.com

Requested TAT: 5 days

Date Received: **11/24/2008**
Date Printed: **11/24/2008**

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
0811757-002	SB-8-6	Soil	11/24/2008 9:45	☐	A		A		A							
0811757-004	SB-8	Water	11/24/2008 9:45	☐		B		A								
0811757-006	DP-4-7.5	Soil	11/24/2008 8:05	☐	A		A									
0811757-008	DP-4-15	Soil	11/24/2008 8:20	☐	A		A									
0811757-009	DP-4	Water	11/24/2008 8:30	☐		B		A								
0811757-012	SB-9-10	Soil	11/24/2008 11:30	☐	A		A									
0811757-013	SB-9	Water	11/24/2008 11:45	☐		B		A								
0811757-015	SB-10-6	Soil	11/24/2008 13:15	☐	A		A									
0811757-016	SB-10	Water	11/24/2008 13:25	☐		B		A								
0811757-018	SB-11-7.5	Soil	11/24/2008 14:25	☐	A		A									
0811757-021	SB-11	Water	11/24/2008 14:45	☐		B		A								
0811757-023	SB-14-7.5	Soil	11/24/2008 10:30	☐	A		A									
0811757-025	SB-14	Water	11/24/2008 10:45	☐		B		A								

Test Legend:

1	5-OXYS+PBSCV_S	2	5-OXYS+PBSCV_W	3	G-MBTEX_S	4	G-MBTEX_W	5	PREDF REPORT
6		7		8		9		10	
11		12							

Prepared by: Samantha Arbuckle

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.

McCampbell Analytical, Inc.
"When Quality Counts"

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Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Sample Receipt Checklist

Client Name: **AEI Consultants**

Date and Time Received: **11/24/08 8:09:23 PM**

Project Name: **#280346; Alaska Gas**

Checklist completed and reviewed by: Samantha Arbuckle

WorkOrder N°: **0811757** Matrix Soil/Water

Carrier: EnviroTech

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 ☐	
Container/Temp Blank temperature	Cooler Temp: 4.2°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
TTLC Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

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

Client contacted: Date contacted: Contacted by:

Comments:

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Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/24/08
		Date Received: 11/24/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 11/24/08
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed 11/27/08

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0811757

Lab ID	0811757-002A	0811757-006A	0811757-008A	0811757-012A	Reporting Limit for DF =1	
Client ID	SB-8-6	DP-4-7.5	DP-4-15	SB-9-10		
Matrix	S	S	S	S		
DF	1	1	20	1	S	W
Compound	**Concentration**				mg/kg	ug/L
tert-Amyl methyl ether (TAME)	ND	ND	0.12	ND	0.005	NA
t-Butyl alcohol (TBA)	0.090	ND	ND<1.0	ND	0.05	NA
1,2-Dibromoethane (EDB)	ND	ND	ND<0.080	ND	0.004	NA
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND<0.080	ND	0.004	NA
Diisopropyl ether (DIPE)	ND	ND	ND<0.10	ND	0.005	NA
Ethyl tert-butyl ether (ETBE)	ND	ND	ND<0.10	ND	0.005	NA
Methyl-t-butyl ether (MTBE)	0.092	ND	1.3	ND	0.005	NA
Surrogate Recoveries (%)						
%SS1:	93	94	100	96		
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

a3) sample diluted due to high organic content / matrix interference.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/24/08
		Date Received: 11/24/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 11/24/08
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed 11/27/08

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0811757

Lab ID	0811757-015A	0811757-018A	0811757-023A		Reporting Limit for DF =1	
Client ID	SB-10-6	SB-11-7.5	SB-14-7.5			
Matrix	S	S	S			
DF	1	1	20		S	W
Compound	**Concentration**				mg/kg	ug/L
tert-Amyl methyl ether (TAME)	ND	ND	ND<0.10		0.005	NA
t-Butyl alcohol (TBA)	ND	ND	ND<1.0		0.05	NA
1,2-Dibromoethane (EDB)	ND	ND	ND<0.080		0.004	NA
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND<0.080		0.004	NA
Diisopropyl ether (DIPE)	ND	ND	ND<0.10		0.005	NA
Ethyl tert-butyl ether (ETBE)	ND	ND	ND<0.10		0.005	NA
Methyl-t-butyl ether (MTBE)	ND	ND	ND<0.10		0.005	NA
Surrogate Recoveries (%)						
%SS1:	97	103	93			
Comments			a3			

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

a3) sample diluted due to high organic content / matrix interference.

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Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/24/08
		Date Received: 11/24/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 11/26/08-11/27/08
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed 11/26/08-11/27/08

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0811757

Lab ID	0811757-004B	0811757-009B	0811757-013B	0811757-016B	Reporting Limit for DF =1	
Client ID	SB-8	DP-4	SB-9	SB-10		
Matrix	W	W	W	W		
DF	330	500	10	1	S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND<170	800	12	ND	NA	0.5
t-Butyl alcohol (TBA)	30,000	10,000	25	2.5	NA	2.0
1,2-Dibromoethane (EDB)	ND<170	ND<250	ND<5.0	ND	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND<170	ND<250	ND<5.0	ND	NA	0.5
Diisopropyl ether (DIPE)	ND<170	ND<250	ND<5.0	ND	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND<170	ND<250	ND<5.0	ND	NA	0.5
Methyl-t-butyl ether (MTBE)	1900	9700	180	18	NA	0.5
Surrogate Recoveries (%)						
%SS1:	91	90	94	93		
Comments	b6,b1	b1	b1	b1		

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

b1) aqueous sample that contains greater than ~1 vol. % sediment
b6) lighter than water immiscible sheen/product is present

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/24/08
		Date Received: 11/24/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 11/26/08-11/27/08
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed 11/26/08-11/27/08

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0811757

Lab ID	0811757-021B	0811757-025B			Reporting Limit for DF =1	
Client ID	SB-11	SB-14				
Matrix	W	W				
DF	10	100			S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	5.4	52			NA	0.5
t-Butyl alcohol (TBA)	37	350			NA	2.0
1,2-Dibromoethane (EDB)	ND<5.0	ND<50			NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND<5.0	ND<50			NA	0.5
Diisopropyl ether (DIPE)	ND<5.0	ND<50			NA	0.5
Ethyl tert-butyl ether (ETBE)	ND<5.0	ND<50			NA	0.5
Methyl-t-butyl ether (MTBE)	160	1900			NA	0.5
Surrogate Recoveries (%)						
%SS1:	93	93				
Comments	b1	b1				

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

b1) aqueous sample that contains greater than ~1 vol. % sediment
b6) lighter than water immiscible sheen/product is present

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/24/08
		Date Received: 11/24/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 11/24/08-12/02/08
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed 11/25/08-12/02/08

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method SW5030B Analytical methods SW8021B/8015Cm Work Order: 0811757

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
002A	SB-8-6	S	14,d2	ND<0.17	0.024	0.12	0.45	0.087	3.3	88
004A	SB-8	W	47,000,d1,b6,b1	2400	530	200	3100	4100	10	100
006A	DP-4-7.5	S	16,d2,d9	ND	ND	0.12	0.016	0.032	1	91
008A	DP-4-15	S	ND	0.97	ND	ND	ND	ND	1	92
009A	DP-4	W	1700,d1,b1	7800	17	5.6	22	5.3	10	104
012A	SB-9-10	S	ND	ND	ND	ND	ND	ND	1	95
013A	SB-9	W	1300,d1,b1	160	8.6	3.9	55	200	3.3	103
015A	SB-10-6	S	ND	ND	ND	ND	ND	ND	1	91
016A	SB-10	W	ND,b1	17	ND	ND	ND	ND	1	105
018A	SB-11-7.5	S	200,d2,d9	ND<1.0	ND<0.10	0.96	1.4	3.9	20	85
021A	SB-11	W	1200,d2,b1	140	5.6	0.59	38	220	1	93
023A	SB-14-7.5	S	120,d2,d9	ND<0.50	ND<0.050	0.75	2.3	6.2	10	114
025A	SB-14	W	1300,d1,b1	2000	20	6.9	61	170	10	111

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5	0.5	0.5	0.5	0.5	µg/L
	S	1	0.05	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

b1) aqueous sample that contains greater than ~1 vol. % sediment
b6) lighter than water immiscible sheen/product is present
d1) weakly modified or unmodified gasoline is significant
d2) heavier gasoline range compounds are significant (aged gasoline?)
d9) no recognizable pattern

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 39826 WorkOrder 0811757

EPA Method SW8260B **Extraction SW5030B** **Spiked Sample ID: 0811670-003A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	0.050	81.4	81.2	0.236	98.5	97.7	0.772	60 - 130	30	60 - 130	30
t-Butyl alcohol (TBA)	ND	0.25	92.1	90.4	1.83	97.9	97	0.883	60 - 130	30	60 - 130	30
1,2-Dibromoethane (EDB)	ND	0.050	101	96.9	3.69	104	101	3.29	60 - 130	30	60 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	0.050	99.6	98.4	1.21	120	119	0.758	60 - 130	30	60 - 130	30
Diisopropyl ether (DIPE)	ND	0.050	91.8	90.9	0.995	108	107	1.29	60 - 130	30	60 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	0.050	95.3	94.9	0.426	115	115	0	60 - 130	30	60 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	82.3	81.4	1.18	96.3	94.7	1.73	60 - 130	30	60 - 130	30
%SS1:	103	0.12	87	87	0	95	95	0	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 39826 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811757-002A	11/24/08 9:45 AM	11/24/08	11/27/08 6:01 AM	0811757-006A	11/24/08 8:05 AM	11/24/08	11/27/08 6:44 AM
0811757-008A	11/24/08 8:20 AM	11/24/08	11/27/08 7:27 AM	0811757-012A	11/24/08 11:30 AM	11/24/08	11/27/08 8:09 AM
0811757-015A	11/24/08 1:15 PM	11/24/08	11/27/08 8:52 AM	0811757-018A	11/24/08 2:25 PM	11/24/08	11/27/08 9:34 AM
0811757-023A	11/24/08 10:30 AM	11/24/08	11/27/08 10:17 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS ELAP Certification 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 39879 WorkOrder 0811757

EPA Method SW8021B/8015Cm **Extraction SW5030B** **Spiked Sample ID: 0811750-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	0.60	109	109	0	81	93.8	14.7	70 - 130	20	70 - 130	20
MTBE	ND	0.10	90	91	1.05	85.2	92.4	8.07	70 - 130	20	70 - 130	20
Benzene	ND	0.10	83.2	88.8	6.40	85.9	94.3	9.38	70 - 130	20	70 - 130	20
Toluene	ND	0.10	98.9	96	3.03	78.3	86.7	10.2	70 - 130	20	70 - 130	20
Ethylbenzene	ND	0.10	107	98.7	7.93	88.9	98.5	10.2	70 - 130	20	70 - 130	20
Xylenes	ND	0.30	123	114	7.56	87	95.9	9.78	70 - 130	20	70 - 130	20
%SS:	91	0.10	121	114	6.39	83	92	10.4	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 39879 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811757-002A	11/24/08 9:45 AM	11/24/08	11/27/08 12:50 AM	0811757-006A	11/24/08 8:05 AM	11/24/08	12/02/08 2:21 AM
0811757-008A	11/24/08 8:20 AM	11/24/08	11/26/08 9:20 PM	0811757-012A	11/24/08 11:30 AM	11/24/08	12/01/08 4:35 PM
0811757-015A	11/24/08 1:15 PM	11/24/08	11/25/08 4:06 PM	0811757-018A	11/24/08 2:25 PM	11/24/08	11/26/08 9:51 PM
0811757-023A	11/24/08 10:30 AM	11/24/08	12/02/08 3:22 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 39880 WorkOrder 0811757

EPA Method SW8260B **Extraction SW5030B** **Spiked Sample ID: 0811752-006A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	10	93.4	97	3.83	125	125	0	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	50	93.4	96	2.74	111	112	0.956	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	108	112	3.43	122	122	0	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	99.7	104	4.62	125	125	0	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	91.5	95.7	4.44	111	113	1.08	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	107	112	4.82	119	120	0.364	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	92.3	95.4	3.26	117	118	0.242	70 - 130	30	70 - 130	30
%SS1:	89	25	85	87	1.96	97	98	1.57	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 39880 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811757-004B	11/24/08 9:45 AM	11/27/08	11/27/08 8:10 AM	0811757-009B	11/24/08 8:30 AM	11/26/08	11/26/08 7:54 PM
0811757-013B	11/24/08 11:45 AM	11/27/08	11/27/08 6:42 AM	0811757-016B	11/24/08 1:25 PM	11/27/08	11/27/08 7:25 AM
0811757-021B	11/24/08 2:45 PM	11/27/08	11/27/08 8:08 AM	0811757-025B	11/24/08 10:45 AM	11/27/08	11/27/08 8:51 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS ELAP Certification 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 39882 WorkOrder 0811757

EPA Method SW8021B/8015Cm **Extraction SW5030B** **Spiked Sample ID: 0811760-003A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	60	94.7	92.1	2.73	84.7	94.2	10.6	70 - 130	20	70 - 130	20
MTBE	ND	10	97	95.8	1.27	87.7	89	1.54	70 - 130	20	70 - 130	20
Benzene	ND	10	93	93.5	0.495	91.6	103	11.3	70 - 130	20	70 - 130	20
Toluene	ND	10	92.1	93.2	1.21	101	115	12.3	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	96.2	96.8	0.681	100	113	11.9	70 - 130	20	70 - 130	20
Xylenes	ND	30	106	106	0	109	123	12.6	70 - 130	20	70 - 130	20
%SS:	102	10	94	94	0	107	105	1.86	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 39882 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811757-004A	11/24/08 9:45 AM	12/02/08	12/02/08 4:22 AM	0811757-009A	11/24/08 8:30 AM	11/26/08	11/26/08 3:36 AM
0811757-009A	11/24/08 8:30 AM	11/26/08	11/26/08 10:51 PM	0811757-013A	11/24/08 11:45 AM	11/27/08	11/27/08 1:53 AM
0811757-016A	11/24/08 1:25 PM	11/25/08	11/25/08 8:37 PM	0811757-021A	11/24/08 2:45 PM	11/27/08	11/27/08 12:13 AM
0811757-025A	11/24/08 10:45 AM	11/26/08	11/26/08 4:41 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.

DHS ELAP Certification 1644

QA/QC Officer

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Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/24/08
		Date Received: 11/24/08
	Client Contact: Jeremy Smith	Date Reported: 12/03/08
	Client P.O.:	Date Completed: 12/12/08

WorkOrder: 0811757

December 12, 2008

Dear Jeremy:

Enclosed within are:

1) The results of the **7** analyzed samples from your project: **#280346; Alaska Gas,**
2) A QC report for the above samples,
3) A copy of the chain of custody, and
4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

0811757 Pg 1 of 2

McCAMPBELL ANALYTICAL INC.

1534 Willow Pass Road
Pittsburg, CA 94565
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CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAY

EDF Required? ☑ Yes ☐ No

Report To: Jeremy Smith	**Bill To:** same	**P.O. #** WC081040
Company: AEI Consultants		
2500 Camino Diablo		
Walnut Creek, CA 94597	**E-Mail:** jasmith@aeiconsultants.com	
Tele: (925) 944-2899	**Fax:** (925) 944-2895	
Project #: 280346	**Project Name:** Alaska Gas	
Project Location: 6211 San Pablo Avenue, Oakland, California		
Sampler Signature:		

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other
SB-8-3.5		11/24/08	915	1	Liner		X				X			
SB-8-6			945				X							
SB-8-11.5			950				X							
+50 SB-8			945	3	VOA	X						X		
DP-4-3.5			800	1	Liner		X							
DP-4-7.5			805				X							
DP-4-11.5			810				X							
DP-4-15			820				X							
+25 DP-4			830	3	VOA	X						X		
SB-9-3.5			1115	1	Liner		X							
SB-9-7.5			1120				X							
SB-9-10			1130				X							
+1 SB-9			1145	3	VOA	X						X		

Analysis Request

BTEX / MTBE 8021B	TPH - gasoline (8015)	Total Petroleum Oil & Grease (413.1) w/ Silica	Total Petroleum Hydrocarbons (418.1)	Fuel Oxys (8260) – MTBE, DIPE, ETBE, TAME, TBA, 1,2-DCA, EDB	Nitrate/Nitrite	EPA 608 / 8080 PCB's ONLY	VOCs 8260	SVOCs (with PAHs) 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals (Cd, Cr, pb, Ni, zinc (6010C).	Lead (field filtered 200.8)	RCI
X	X			X									
X	X			X									
X	X			X									
X	X			X									
X	X			X									
X	X			X									
X	X			X									
X	X			X									
X	X			X									
X	X			X									
X	X			X									
X	X			X									

Other

HOLD				
X				
X				
X				
X				
X				
X				
X				
X				
X				
X				

Comments

OFF HOLD 12/08/08 per JS
OFF HOLD 12/8/08 per JS
OFF HOLD 12/8/08 per JS

Relinquished By:	Date:	Time:	Received By:
	11/24/08	430	ENVIRO-TECH SERVICES AM 16.30
Relinquished By: Enviro-Tech SR.	Date: 11/24	Time: 1753	Received By:
Relinquished By:	Date: 11-24	Time: 8:15	Received By:

ICE/t° YES 4.2°C
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB N/A PERSERVED IN LAB NO

PRESERVATION	VOAS	O&G	METALS	OTHER
APPROPRIATE CONTAINERS ✓				

081757

Page 2 of 2

McCAMPBELL ANALYTICAL INC.

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CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? ☒ Yes ☐ No

Report To: Jeremy Smith Bill To: same P.O. # WC081040

Company: AEI Consultants
2500 Camino Diablo
Walnut Creek, CA 94597 E-Mail: jasmith@aeiconsultants.com

Tele: (925) 944-2899 Fax: (925) 944-2895

Project #: 280346 Project Name: Alaska Gas

Project Location: 6211 San Pablo Avenue, Oakland, California

Sampler Signature:

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	Soil	Air	Sludge	Other	METHOD PRESERVED Ice	HCl	HNO_3	Other	BTEX / MTBE 8021B	TPH - gasoline (8015)	Total Petroleum Oil & Grease (413.1) w/ Silica	Total Petroleum Hydrocarbons (418.1)	Fuel Oxys (8260) – MTBE, DIPE, ETBE, TAME, TBA, 1,2-DCA, EDB	Nitrate/Nitrite	EPA 608 / 8080 PCB's ONLY	VOCs 8260	SVOCs (with PAHs) 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals (Cd, Cr, pb, Ni, zinc (6010C).	Lead (field filtered 200.8)	RCI	Other	Comments
SB-10-3.5		11/24/08	110	1	Liner		X				X				X	X			X										X	
SB-10-6			115	1	1		X								X	X			X											
+1 SB-10			125	3	VOA	X					X	X			X	X			X											
SB-11-3.5			220	1	Liner		X								X	X			X										X	OFF HOLD 12/8/08 per J.S
SB-11-7.5			225				X								X	X			X											
SB-11-11.5			230				X																						X	
SB-11-15.5			240				X								X	X			X										X	OFF HOLD 12/8/08 per J.S
+50 SB-11			245	3	VOA	X						X			X	X			X											
SB-14-3.5			1020	1	Liner		X								X	X			X										X	OFF HOLD 12/8/08 per J.S
SB-14-7.5			1030	1			X								X	X			X											
+80 SB-14-11.5			1040	1			X								X	X			X										X	OFF HOLD 12/8/08 per J.S
SB-14			1045	3	VOA	X					X	X			X	X			X											

Relinquished By:	Date:	Time:	Received By:
	11/24/08	430	ENVIRO-TECH SERVICES AA 16:30
Relinquished By: ENVIRO-TECH SR	Date: 11/24	Time: 1953	Received By:
Relinquished By:	Date: 11-24	Time: 8:15	Received By:

ICE/t° YES 4.2 oc
GOOD CONDITION Y
HEAD SPACE ABSENT Y
DECHLORINATED IN LAB N/A

PRESERVATION APPROPRIATE	VOAS	O&G	METALS	OTHER
CONTAINERS Y				

PERSERVED IN LAB NO

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 081175 A **ClientCode: AEL**

☐ WriteOn ☑ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Jeremy Smith
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
(925) 944-2899 FAX (925) 944-2895

Email: jasmith@aeiconsultants.com
cc:
PO:
ProjectNo: #280346; Alaska Gas

Bill to:
Denise Mockel
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
dmockel@aeiconsultants.com

Requested TAT: 5 days
Date Received: **11/24/2008**
Date Add-On: **12/08/2008**
Date Printed: **12/08/2008**

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
0811757-001	SB-8-3.5	Soil	11/24/2008 9:15	☐	A	A										
0811757-003	SB-8-11.5	Soil	11/24/2008 9:50	☐	A	A										
0811757-005	DP-4-3.5	Soil	11/24/2008 8:00	☐	A	A										
0811757-017	SB-11-3.5	Soil	11/24/2008 14:20	☐	A	A										
0811757-020	SB-11-15.5	Soil	11/24/2008 14:40	☐	A	A										
0811757-022	SB-14-3.5	Soil	11/24/2008 10:20	☐	A	A										
0811757-024	SB-14-11.5	Soil	11/24/2008 10:40	☐	A	A										

Test Legend:

1	9-OXYS_S	2	G-MBTEX_S	3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Samantha Arbuckle

Comments: Gmbtex and 9oxys added on 12/08/08 on a std tat per J.S/Fax

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.

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/24/08
		Date Received: 11/24/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/08/08
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed 12/08/08-12/09/08

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0811757

Lab ID	0811757-001A	0811757-003A	0811757-005A	0811757-017A	Reporting Limit for DF =1	
Client ID	SB-8-3.5	SB-8-11.5	DP-4-3.5	SB-11-3.5		
Matrix	S	S	S	S		
DF	1	10	1	1	S	W
Compound	**Concentration**				mg/kg	ug/L
tert-Amyl methyl ether (TAME)	ND	0.061	ND	ND	0.005	NA
t-Butyl alcohol (TBA)	ND	2.7	0.15	ND	0.05	NA
1,2-Dibromoethane (EDB)	ND	ND<0.040	ND	ND	0.004	NA
1,2-Dichloroethane (1,2-DCA)	ND	ND<0.040	ND	ND	0.004	NA
Diisopropyl ether (DIPE)	ND	ND<0.050	ND	ND	0.005	NA
Ethanol	ND	ND<5.0	ND	ND	0.5	NA
Ethyl tert-butyl ether (ETBE)	ND	ND<0.050	ND	ND	0.005	NA
Methanol	ND	ND<50	ND	ND	5.0	NA
Methyl-t-butyl ether (MTBE)	0.055	1.4	ND	ND	0.005	NA
Surrogate Recoveries (%)						
%SS1:	82	94	88	92		
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/24/08
		Date Received: 11/24/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/08/08
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed 12/08/08-12/09/08

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0811757

Lab ID	0811757-020A	0811757-022A	0811757-024A		Reporting Limit for DF =1	
Client ID	SB-11-15.5	SB-14-3.5	SB-14-11.5			
Matrix	S	S	S			
DF	1	1	1		S	W
Compound	**Concentration**				mg/kg	ug/L
tert-Amyl methyl ether (TAME)	ND	ND	ND		0.005	NA
t-Butyl alcohol (TBA)	ND	ND	ND		0.05	NA
1,2-Dibromoethane (EDB)	ND	ND	ND		0.004	NA
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND		0.004	NA
Diisopropyl ether (DIPE)	ND	ND	ND		0.005	NA
Ethanol	ND	ND	ND		0.5	NA
Ethyl tert-butyl ether (ETBE)	ND	ND	ND		0.005	NA
Methanol	ND	ND	ND		5.0	NA
Methyl-t-butyl ether (MTBE)	0.023	ND	0.15		0.005	NA
Surrogate Recoveries (%)						
%SS1:	90	91	91			
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/24/08
		Date Received: 11/24/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/08/08
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed 12/09/08-12/11/08

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method SW5030B Analytical methods SW8021B/8015Cm Work Order: 0811757

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	SB-8-3.5	S	1.5,d1	0.081	ND	0.024	ND	ND	1	107
003A	SB-8-11.5	S	1.4,d1	1.1	ND	ND	0.034	0.049	1	111
005A	DP-4-3.5	S	16,d7,d9	ND	ND	0.037	ND	0.041	1	91
017A	SB-11-3.5	S	ND	ND	ND	ND	ND	ND	1	80
020A	SB-11-15.5	S	ND	0.075	ND	ND	ND	ND	1	93
022A	SB-14-3.5	S	3.0,d1	ND	ND	0.014	ND	ND	1	81
024A	SB-14-11.5	S	ND	0.21	ND	ND	ND	ND	1	106

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	ug/L
	S	1	0.05	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

d1) weakly modified or unmodified gasoline is significant
d7) strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
d9) no recognizable pattern

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 40126 WorkOrder 0811757

EPA Method SW8260B **Extraction SW5030B** **Spiked Sample ID: 0812203-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	0.050	85.3	83.5	2.09	88.6	89.6	1.07	60 - 130	30	60 - 130	30
t-Butyl alcohol (TBA)	ND	0.25	85.3	84.1	1.49	93.1	89.9	3.46	60 - 130	30	60 - 130	30
1,2-Dibromoethane (EDB)	ND	0.050	87.5	84.6	3.35	91.4	92.5	1.17	60 - 130	30	60 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	0.050	93.9	92.7	1.30	98.9	97.2	1.78	60 - 130	30	60 - 130	30
Diisopropyl ether (DIPE)	ND	0.050	114	114	0	118	118	0	60 - 130	30	60 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	0.050	101	99	1.48	105	104	0.331	60 - 130	30	60 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	86.4	85.3	1.27	90.3	89	1.48	60 - 130	30	60 - 130	30
%SS1:	84	0.12	91	90	0.787	90	90	0	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 40126 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811757-001A	11/24/08 9:15 AM	12/08/08	12/08/08 8:15 PM	0811757-003A	11/24/08 9:50 AM	12/08/08	12/09/08 8:51 PM
0811757-005A	11/24/08 8:00 AM	12/08/08	12/08/08 9:17 PM	0811757-017A	11/24/08 2:20 PM	12/08/08	12/09/08 12:12 AM
0811757-020A	11/24/08 2:40 PM	12/08/08	12/09/08 1:37 AM	0811757-022A	11/24/08 10:20 AM	12/08/08	12/09/08 3:02 AM
0811757-024A	11/24/08 10:40 AM	12/08/08	12/09/08 3:44 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS ELAP Certification 1644


QA/QC Officer

McCampbell Analytical, Inc.
"When Quality Counts"

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Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 40140 WorkOrder: 0811757

EPA Method SW8021B/8015Cm **Extraction SW5030B** **Spiked Sample ID: 0812281-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	0.60	97.2	96.5	0.803	118	99.9	16.2	70 - 130	20	70 - 130	20
MTBE	ND	0.10	102	96.5	5.14	104	116	11.2	70 - 130	20	70 - 130	20
Benzene	ND	0.10	86.2	89	3.09	94	103	8.89	70 - 130	20	70 - 130	20
Toluene	ND	0.10	78.4	80.3	2.31	84.4	91.9	8.52	70 - 130	20	70 - 130	20
Ethylbenzene	ND	0.10	92.5	95.7	3.47	97.8	104	6.38	70 - 130	20	70 - 130	20
Xylenes	ND	0.30	91.2	94.5	3.52	97	102	5.40	70 - 130	20	70 - 130	20
%SS:	89	0.10	93	102	9.30	96	96	0	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 40140 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811757-001A	11/24/08 9:15 AM	12/08/08	12/11/08 12:10 AM	0811757-003A	11/24/08 9:50 AM	12/08/08	12/10/08 2:10 PM
0811757-005A	11/24/08 8:00 AM	12/08/08	12/09/08 9:57 AM	0811757-017A	11/24/08 2:20 PM	12/08/08	12/10/08 4:15 AM
0811757-020A	11/24/08 2:40 PM	12/08/08	12/10/08 2:40 PM	0811757-022A	11/24/08 10:20 AM	12/08/08	12/10/08 5:22 AM
0811757-024A	11/24/08 10:40 AM	12/08/08	12/10/08 4:11 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #280346; Alaska Gas, 6211 San Pablo Avenue	Date Sampled: 11/25/08
		Date Received: 11/25/08
	Client Contact: Jeremy Smith	Date Reported: 12/04/08
	Client P.O.: WC081040	Date Completed: 12/04/08

WorkOrder: 0811807

December 04, 2008

Dear Jeremy:

Enclosed within are:

1) The results of the **15** analyzed samples from your project: **#280346; Alaska Gas, 6211 San Pab**
2) A QC report for the above samples,
3) A copy of the chain of custody, and
4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

08110807 PG 1 of 2

McCAMPBELL ANALYTICAL INC.

1534 Willow Pass Road
Pittsburg, CA 94565
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? ☒ Yes ☐ No

Report To: Jeremy Smith Bill To: same P.O. # WC081040

Company: AEI Consultants
2500 Camino Diablo
Walnut Creek, CA 94597 E-Mail: jasmith@aeiconsultants.com

Tele: (925) 944-2899 Fax: (925) 944-2895

Project #: 280346 Project Name: Alaska Gas

Project Location: 6211 San Pablo Avenue, Oakland, California

Sampler Signature:

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX / MTBE 8021B	TPH - gasoline (8015)	Total Petroleum Oil & Grease (413.1) w/ Silica	Total Petroleum Hydrocarbons (418.1)	Fuel Oxys (8260) – MTBE, DIPE, ETBE, TAME, TBA, 1,2-DCA, EDB	Nitrate/Nitrite	EPA 608 / 8080 PCB's ONLY	VOCs 8260	SVOCs (with PAHs) 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals (Cd, Cr, pb,,Ni,zinc (6010C).	Lead (field filtered 200.8)	RCI	Other: HOLD	Other: Sieve + Hydrometer ASTM D422	Other: Moisture + Density ASTM D 2937	Other: TOC-TIC SM 5310B	Comments
SB-7-3.5		11/25/08	230	1	Liner		X				X				X	X			X														
SB-7-7.5			240				X																						X				
SB-7-10.5			245				X								X	X			X														
SB-7-15.5			250				X																						X				
+5 SB-7			255	3	VOA	X						X			X	X			X														
DDP-1-5			840	1	Liner		X								X	X			X														
1 DDP-1-6			845																											X	X	X	
DDP-1-8			850																										X				
1 DDP-1-10			855																											X	X	X	
DPP-1-11.5			900																										X				
DDP-1-15.5			905																										X				
DDP-1-19.5			910																										X				
+1 DDP-1			920	3	VOA	X						X			X	X			X														
+1 DDP-1D			1255	3	VOA	X						X			X	X			X														

Relinquished By:	Date:	Time:	Received By:
	11/26/08	530	Envirotech T.L.
Enviro-Tech SR.	11/25	2000	
	11-25	8:20 PM	

ICE/t° 3.8
GOOD CONDITION
HEAD SPACE ABSENT
DECHLORINATED IN LAB
PRESERVATION APPROPRIATE CONTAINERS
PERSERVED IN LAB

VOAS	O&G	METALS	OTHER

McCAMPBELL ANALYTICAL INC.
1534 Willow Pass Road
Pittsburg, CA 94565
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAY

EDF Required? ☑ Yes ☐ No

Report To: Jeremy Smith | Bill To: same | P.O. # WC081040

Company: AEI Consultants
2500 Camino Diablo
Walnut Creek, CA 94597 E-Mail: jasmith@aeiconsultants.com
Tele: (925) 944-2899 Fax: (925) 944-2895
Project #: 280346 Project Name: Alaska Gas
Project Location: 6211 San Pablo Avenue, Oakland, California
Sampler Signature:

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX / MTBE 8021B	TPH - gasoline (8015)	Total Petroleum Oil & Grease (413.1) w/ Silica	Total Petroleum Hydrocarbons (418.1)	Fuel Oxys (8260) – MTBE, DIPE, ETBE, TAME, TBA, 1,2-DCA, EDB	Nitrate/Nitrite	EPA 608 / 8080 PCB's ONLY	VOCs 8260	SVOCs (with PAHs) 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals (Cd, Cr, pb, Ni, zinc (6010C).	Lead (field filtered 200.8)	RCI	Other: HOLD	Comments
SB-5-3.5		11/25/08	1115	1	Liner		X				X				X	X			X										X	
SB-5-7.5			1120				X								X	X			X											
SB-5-10			1125				X																						X	
SB-5			1140	3	VOA	X						X			X	X			X											
SB-12-3.5			1020	1	Liner		X																						X	
SB-12-6.5			1025				X								X	X			X											
SB-12-11.5			1030				X																						X	
SB-12-14.5			1035				X																						X	
SB-12			125	3	VOA	X						X			X	X			X											
SB-13-3.5			145	1	Liner		X																						X	
SB-13-7.5			150				X								X	X			X											
SB-13-15.5			200				X																						X	
SB-13			205	3	VOA	X						X			X	X			X											

Relinquished By:	Date:	Time:	Received By:
	11/25/08	530	Envirotech T.L.
Enviro-Tech SR.	11/25	2000	
	11-25	8:20 PM	

ICE/t° _____ GOOD CONDITION _____ HEAD SPACE ABSENT _____ DECHLORINATED IN LAB _____

PRESERVATION APPROPRIATE CONTAINERS	VOAS	O&G	METALS	OTHER
PERSERVED IN LAB				

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0811807 **ClientCode: AEL**

☐ WriteOn ☑ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Jeremy Smith
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
(925) 283-6000 FAX (925) 944-2895

Email: jasmith@aeiconsultants.com
cc:
PO: WC081040
ProjectNo: #280346; Alaska Gas, 6211 San Pablo Avenue

Bill to:
Denise Mockel
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
dmockel@aeiconsultants.com

Requested TAT: 5 days

Date Received: **11/25/2008**
Date Printed: **11/26/2008**

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
0811807-001	SB-7-3.5	Soil	11/25/2008 14:30	☐	A			A					A			
0811807-003	SB-7-10.5	Soil	11/25/2008 14:45	☐	A			A								
0811807-005	SB-7	Water	11/25/2008 14:55	☐		B			A							
0811807-006	DDP-1-5	Soil	11/25/2008 8:40	☐	A			A								
0811807-007	DDP-1-6	Soil	11/25/2008 8:45	☐			A			A	A	A		A	A	
0811807-009	DDP-1-10	Soil	11/25/2008 8:55	☐			A			A	A	A		A	A	
0811807-013	DDP-1	Water	11/25/2008 9:20	☐		B			A							
0811807-014	DDP-1D	Water	11/25/2008 12:55	☐		B			A							
0811807-016	SB-5-7.5	Soil	11/25/2008 11:20	☐	A			A								
0811807-018	SB-5	Water	11/25/2008 11:40	☐		B			A							
0811807-020	SB-12-6.5	Soil	11/25/2008 10:25	☐	A			A								
0811807-023	SB-12	Water	11/25/2008 13:25	☐		B			A							
0811807-025	SB-13-7.5	Soil	11/25/2008 13:50	☐	A			A								
0811807-027	SB-13	Water	11/25/2008 14:05	☐		B			A							

Test Legend:

1	9-OXYS_S	2	9-OXYS_W	3	Density_S	4	G-MBTEX_S	5	G-MBTEX_W
6	Hydrometer	7	IC(C)_S	8	Moisture_S	9	PREDF REPORT	10	Sieve Analysis
11	TOC_S	12							

Prepared by: Ana 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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Sample Receipt Checklist

Client Name: **AEI Consultants** Date and Time Received: **11/25/08 8:32:47 PM**

Project Name: **#280346; Alaska Gas, 6211 San Pablo Avenue** Checklist completed and reviewed by: Ana Venegas

WorkOrder N°: **0811807** Matrix Soil/Water Carrier: EnviroTech

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 ☐	
Container/Temp Blank temperature	Cooler Temp: 3.8°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
TTLC Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

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

Client contacted: Date contacted: Contacted by:

Comments:

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AEI Consultants	Client Project ID: #280346; Alaska Gas, 6211 San Pablo Avenue	Date Sampled: 11/25/08
		Date Received: 11/25/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 11/25/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed 12/01/08-12/02/08

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0811807

Lab ID	0811807-001A	0811807-003A	0811807-006A	0811807-016A	Reporting Limit for DF =1	
Client ID	SB-7-3.5	SB-7-10.5	DDP-1-5	SB-5-7.5		
Matrix	S	S	S	S		
DF	1	1	50	1	S	W
Compound	**Concentration**				mg/kg	ug/L
tert-Amyl methyl ether (TAME)	ND	ND	0.28	ND	0.005	NA
t-Butyl alcohol (TBA)	ND	ND	12	ND	0.05	NA
1,2-Dibromoethane (EDB)	ND	ND	ND<0.20	ND	0.004	NA
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND<0.20	ND	0.004	NA
Diisopropyl ether (DIPE)	ND	ND	ND<0.25	ND	0.005	NA
Ethyl tert-butyl ether (ETBE)	ND	ND	ND<0.25	ND	0.005	NA
Methyl-t-butyl ether (MTBE)	ND	ND	7.9	ND	0.005	NA
Surrogate Recoveries (%)						
%SS1:	95	96	98	95		
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

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Angela Rydelius, Lab Manager

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AEI Consultants	Client Project ID: #280346; Alaska Gas, 6211 San Pablo Avenue	Date Sampled: 11/25/08
		Date Received: 11/25/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 11/25/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed 12/01/08-12/02/08

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0811807

Lab ID	0811807-020A	0811807-025A			Reporting Limit for DF =1	
Client ID	SB-12-6.5	SB-13-7.5				
Matrix	S	S				
DF	2	2			S	W
Compound	**Concentration**				mg/kg	ug/L
tert-Amyl methyl ether (TAME)	ND<0.010	ND<0.010			0.005	NA
t-Butyl alcohol (TBA)	0.17	0.12			0.05	NA
1,2-Dibromoethane (EDB)	ND<0.0080	ND<0.0080			0.004	NA
1,2-Dichloroethane (1,2-DCA)	ND<0.0080	ND<0.0080			0.004	NA
Diisopropyl ether (DIPE)	ND<0.010	ND<0.010			0.005	NA
Ethyl tert-butyl ether (ETBE)	ND<0.010	ND<0.010			0.005	NA
Methyl-t-butyl ether (MTBE)	0.26	ND<0.010			0.005	NA
Surrogate Recoveries (%)						
%SS1:	96	98				
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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AEI Consultants	Client Project ID: #280346; Alaska Gas, 6211 San Pablo Avenue	Date Sampled: 11/25/08
		Date Received: 11/25/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/02/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed 12/02/08

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0811807

Lab ID	0811807-005B	0811807-013B	0811807-014B	0811807-018B	Reporting Limit for DF =1	
Client ID	SB-7	DDP-1	DDP-1D	SB-5		
Matrix	W	W	W	W		
DF	1	2	5	200	S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND	2.8	2.7	460	NA	0.5
t-Butyl alcohol (TBA)	ND	100	500	ND<400	NA	2.0
1,2-Dibromoethane (EDB)	ND	ND<1.0	ND<2.5	ND<100	NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND	ND<1.0	ND<2.5	ND<100	NA	0.5
Diisopropyl ether (DIPE)	ND	ND<1.0	ND<2.5	ND<100	NA	0.5
Ethyl tert-butyl ether (ETBE)	ND	ND<1.0	ND<2.5	ND<100	NA	0.5
Methyl-t-butyl ether (MTBE)	ND	47	21	4600	NA	0.5
Surrogate Recoveries (%)						
%SS1:	99	86	87	89		
Comments	b1	b1	b1	b1		

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

b1) aqueous sample that contains greater than ~1 vol. % sediment

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AEI Consultants	Client Project ID: #280346; Alaska Gas, 6211 San Pablo Avenue	Date Sampled: 11/25/08
		Date Received: 11/25/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/02/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed 12/02/08

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0811807

Lab ID	0811807-023B	0811807-027B			Reporting Limit for DF =1	
Client ID	SB-12	SB-13				
Matrix	W	W				
DF	250	500			S	W
Compound	**Concentration**				ug/kg	µg/L
tert-Amyl methyl ether (TAME)	ND<120	720			NA	0.5
t-Butyl alcohol (TBA)	29,000	5400			NA	2.0
1,2-Dibromoethane (EDB)	ND<120	ND<250			NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND<120	ND<250			NA	0.5
Diisopropyl ether (DIPE)	ND<120	ND<250			NA	0.5
Ethyl tert-butyl ether (ETBE)	ND<120	ND<250			NA	0.5
Methyl-t-butyl ether (MTBE)	3900	18,000			NA	0.5
Surrogate Recoveries (%)						
%SS1:	88	85				
Comments	b1	b1				

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

b1) aqueous sample that contains greater than ~1 vol. % sediment

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Angela Rydelius, Lab Manager

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Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #280346; Alaska Gas, 6211 San Pablo Avenue	Date Sampled: 11/25/08
		Date Received: 11/25/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/01/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed 12/01/08

Bulk Density

Analytical Method: SSSA #5 Work Order: 0811807

Lab ID	Client ID	Matrix	Bulk Density	DF
0811807-007A	DDP-1-6	S	1.9	1
0811807-009A	DDP-1-10	S	2.1	1
0811807-021A	SB-12-11.5	S	2.0	1

Method Accuracy and Reporting Units	W	NA	
	S	±0.1 g/ml	

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AEI Consultants	Client Project ID: #280346; Alaska Gas, 6211 San Pablo Avenue	Date Sampled: 11/25/08
		Date Received: 11/25/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 11/25/08-12/03/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed 11/26/08-12/03/08

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method SW5030B Analytical methods SW8021B/8015Cm Work Order: 0811807

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	SB-7-3.5	S	ND	ND	ND	ND	ND	ND	1	88
003A	SB-7-10.5	S	ND	ND	ND	ND	ND	ND	1	85
005A	SB-7	W	ND,b1	ND	ND	ND	ND	ND	1	100
006A	DDP-1-5	S	4.5,d1	7.1	0.096	0.044	0.017	0.021	1	88
013A	DDP-1	W	ND,b1	27	ND	ND	ND	ND	1	102
014A	DDP-1D	W	130,d1,b1	38	5.7	6.6	5.4	21	1	111
016A	SB-5-7.5	S	ND	ND	ND	ND	ND	ND	1	90
018A	SB-5	W	430,d6,b1	4200	ND<1.7	ND<1.7	ND<1.7	ND<1.7	3.3	99
020A	SB-12-6.5	S	4.2,d1	0.34	0.023	0.034	0.036	0.0088	1	93
023A	SB-12	W	390,d1,b1	4000	1.3	0.93	18	56	1	103
025A	SB-13-7.5	S	26,d1	ND	0.010	0.20	0.18	0.64	1	98
027A	SB-13	W	1100,d6,b1	16,000	ND<5.0	ND<5.0	ND<5.0	14	10	99

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5	0.5	0.5	0.5	0.5	µg/L
	S	1	0.05	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

b1) aqueous sample that contains greater than ~1 vol. % sediment
d1) weakly modified or unmodified gasoline is significant
d6) one to a few isolated non-target peaks present in the TPH(g) chromatogram

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Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #280346; Alaska Gas, 6211 San Pablo Avenue	Date Sampled: 11/25/08
		Date Received: 11/25/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 11/26/08-12/03/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed 11/26/08-12/03/08

Inorganic Carbon as Carbon*

Analytical Method: SM5310B Work Order: 0811807

Lab ID	Client ID	Matrix	IC as C	DF
0811807-007A	DDP-1-6	S	1200	1
0811807-009A	DDP-1-10	S	ND	1
0811807-021A	SB-12-11.5	S	390	1

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	NA	
	S	200 mg/Kg	

* water samples are reported in mg/L, soil/sludge/solid samples in mg/kg.

* Non-Purgeable Organic Carbon=NPOC; TOC=Total Organic Carbon; DOC=Dissolved Organic Carbon; POC=Purgeable Organic Cabon; IC=Inorganic Carbon.

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AEI Consultants	Client Project ID: #280346; Alaska Gas, 6211 San Pablo Avenue	Date Sampled: 11/25/08
		Date Received: 11/25/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/02/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed 12/03/08

Percent Moisture

Analytical Method: ASTMD2216-92 Work Order: 0811807

Lab ID	Client ID	Matrix	% Moisture	DF
0811807-007A	DDP-1-6	S	19.6	1
0811807-009A	DDP-1-10	S	13.3	1
0811807-021A	SB-12-11.5	S	17.4	1

Method Accuracy and Reporting Units	W	NA	
	S	±0.1, wet wt%	

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AEI Consultants	Client Project ID: #280346; Alaska Gas, 6211 San Pablo Avenue	Date Sampled: 11/25/08
		Date Received: 11/25/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 11/26/08-12/03/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed 11/26/08-12/03/08

Total Organic Carbon (TOC)*

Analytical Method: SM5310B Work Order: 0811807

Lab ID	Client ID	Matrix	TOC	DF
0811807-007A	DDP-1-6	S	5200	1
0811807-009A	DDP-1-10	S	1000	1
0811807-021A	SB-12-11.5	S	660	1

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	NA	
	S	200 mg/Kg	

* water samples are reported in mg/L, soil/sludge/solid samples in mg/kg.

* Non-Purgeable Organic Carbon=NPOC; TOC=Total Organic Carbon; DOC=Dissolved Organic Carbon; POC=Purgeable Organic Cabon; IC=Inorganic Carbon.

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 39918 WorkOrder 0811807

EPA Method SW8260B **Extraction SW5030B** **Spiked Sample ID: 0811800-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	0.050	76.8	78.1	1.65	76.5	79.7	4.07	60 - 130	30	60 - 130	30
t-Butyl alcohol (TBA)	ND	0.25	88.2	95.3	7.73	83.1	85	2.27	60 - 130	30	60 - 130	30
1,2-Dibromoethane (EDB)	ND	0.050	97	99.7	2.83	85.9	89.6	4.22	60 - 130	30	60 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	0.050	99.3	101	2.17	98.3	98.6	0.238	60 - 130	30	60 - 130	30
Diisopropyl ether (DIPE)	ND	0.050	101	103	2.18	96.5	99.8	3.30	60 - 130	30	60 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	0.050	101	104	2.19	99.6	102	2.26	60 - 130	30	60 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	92.5	94.5	2.14	88.7	89.9	1.34	60 - 130	30	60 - 130	30
%SS1:	92	0.12	88	88	0	95	95	0	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 39918 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811807-001A	11/25/08 2:30 PM	11/25/08	12/01/08 11:34 PM	0811807-003A	11/25/08 2:45 PM	11/25/08	12/02/08 12:17 AM
0811807-006A	11/25/08 8:40 AM	11/25/08	12/02/08 12:59 AM	0811807-016A	11/25/08 11:20 AM	11/25/08	12/02/08 1:42 AM
0811807-020A	11/25/08 10:25 AM	11/25/08	12/02/08 2:24 AM	0811807-025A	11/25/08 1:50 PM	11/25/08	12/02/08 3:07 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

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QA/QC Officer

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QC SUMMARY REPORT FOR SM5310B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 39840 WorkOrder 0811807

EPA Method SM5310B **Extraction SM5310B** **Spiked Sample ID: 0811698-004A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TOC	230	8200	103	104	1.22	101	99.8	1.55	70 - 130	20	80 - 120	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 39840 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811807-007A	11/25/08 8:45 AM	11/26/08	11/26/08 8:28 PM	0811807-007A	11/25/08 8:45 AM	11/26/08	11/26/08 9:29 PM
0811807-009A	11/25/08 8:55 AM	11/26/08	11/26/08 8:41 PM	0811807-009A	11/25/08 8:55 AM	11/26/08	11/26/08 9:43 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not applicable to this method.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 39934 WorkOrder 0811807

EPA Method SW8260B **Extraction SW5030B** **Spiked Sample ID: 0811819-003B**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	10	93.5	98.5	5.23	112	115	2.84	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	50	88.6	104	16.4	89.6	94.3	5.14	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	111	115	3.87	117	119	1.29	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	103	110	5.96	112	116	4.08	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	106	112	5.39	108	110	2.21	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	119	126	5.63	122	123	0.809	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	102	113	9.77	106	108	1.54	70 - 130	30	70 - 130	30
%SS1:	93	25	84	87	3.94	97	96	0.781	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 39934 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811807-005B	11/25/08 2:55 PM	12/02/08	12/02/08 3:49 AM	0811807-013B	11/25/08 9:20 AM	12/02/08	12/02/08 5:04 PM
0811807-014B	11/25/08 12:55 PM	12/02/08	12/02/08 5:43 PM	0811807-018B	11/25/08 11:40 AM	12/02/08	12/02/08 2:58 AM
0811807-023B	11/25/08 1:25 PM	12/02/08	12/02/08 6:22 PM	0811807-027B	11/25/08 2:05 PM	12/02/08	12/02/08 7:01 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

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QC SUMMARY REPORT FOR WET CHEMISTRY TESTS

Test Method: Bulk Density **Matrix: S** **WorkOrder: 0811807**

Method Name: SSSA #5 Units ± g/ml BatchID: 40034

Lab ID	Sample	DF	Dup / Ser. Dil.	DF	% RPD	Acceptance Criteria (%)
0811807-007A	1.9	1	1.9	1	0	<20
0811807-009A	2.1	1	2.0	1	1.78	<20
0811807-021A	2.0	1	2.0	1	0.989	<20

BATCH 40034 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811807-007A	11/25/08 8:45 AM	12/01/08	12/01/08 3:00 PM	0811807-009A	11/25/08 8:55 AM	12/01/08	12/01/08 3:10 PM
0811807-021A	11/25/08 10:30 AM	12/01/08	12/01/08 3:40 PM				

Test Method: Percent Moisture **Matrix: S** **WorkOrder: 0811807**

Method Name: ASTMD2216-92 Units ±, wet wt% BatchID: 39905

Lab ID	Sample	DF	Dup / Ser. Dil.	DF	% RPD	Acceptance Criteria (%)
0811807-007A	19.6	1	19.5	1	0.693	<15
0811807-009A	13.3	1	13.3	1	0.539	<15

BATCH 39905 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811807-007A	11/25/08 8:45 AM	12/02/08	12/03/08 1:50 PM	0811807-009A	11/25/08 8:55 AM	12/02/08	12/03/08 2:00 PM

Test Method: Percent Moisture **Matrix: S** **WorkOrder: 0811807**

Method Name: ASTMD2216-92 Units ±, wet wt% BatchID: 40010

Lab ID	Sample	DF	Dup / Ser. Dil.	DF	% RPD	Acceptance Criteria (%)
0811807-021A	17.4	1	17.2	1	0.751	<15

BATCH 40010 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811807-021A	11/25/08 10:30 AM	12/02/08	12/03/08 2:10 PM				

Dup = Duplicate; Ser. Dil. = Serial Dilution; MS = Matrix Spike; RD = Relative Difference; RPD = Relative Percent Deviation.

Precision = Absolute Value (Sample - Duplicate)

RPD = 100 * (Sample - Duplicate) / [(Sample + Duplicate) / 2]

%RPD is calculated using results of up to 10 significant figures, however the reported results are rounded to 2 or 3 significant figures. Therefore there may be a slight discrepancy between the %RPD displayed above and %RPD calculated using the reported results. MAI considers %RPD based upon more significant figures to be more accurate.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 39879 WorkOrder 0811807

EPA Method SW8021B/8015Cm **Extraction SW5030B** **Spiked Sample ID: 0811750-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	0.60	109	109	0	81	93.8	14.7	70 - 130	20	70 - 130	20
MTBE	ND	0.10	90	91	1.05	85.2	92.4	8.07	70 - 130	20	70 - 130	20
Benzene	ND	0.10	83.2	88.8	6.40	85.9	94.3	9.38	70 - 130	20	70 - 130	20
Toluene	ND	0.10	98.9	96	3.03	78.3	86.7	10.2	70 - 130	20	70 - 130	20
Ethylbenzene	ND	0.10	107	98.7	7.93	88.9	98.5	10.2	70 - 130	20	70 - 130	20
Xylenes	ND	0.30	123	114	7.56	87	95.9	9.78	70 - 130	20	70 - 130	20
%SS:	91	0.10	121	114	6.39	83	92	10.4	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 39879 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811807-001A	11/25/08 2:30 PM	11/25/08	11/26/08 5:32 PM	0811807-003A	11/25/08 2:45 PM	11/25/08	11/26/08 6:40 PM
0811807-006A	11/25/08 8:40 AM	11/25/08	11/26/08 8:21 PM	0811807-006A	11/25/08 8:40 AM	11/25/08	12/01/08 7:50 PM
0811807-016A	11/25/08 11:20 AM	11/25/08	12/03/08 8:22 AM	0811807-020A	11/25/08 10:25 AM	11/25/08	11/26/08 6:06 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 39899 WorkOrder 0811807

EPA Method SW8021B/8015Cm **Extraction SW5030B** **Spiked Sample ID: 0811803-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	60	94.5	97.5	3.11	103	87.7	15.9	70 - 130	20	70 - 130	20
MTBE	ND	10	99.4	102	2.47	111	104	6.74	70 - 130	20	70 - 130	20
Benzene	ND	10	97.8	95	2.87	100	98.8	1.47	70 - 130	20	70 - 130	20
Toluene	ND	10	97.6	94.8	2.84	92.1	88.9	3.60	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	102	99.1	3.30	97	99	2.05	70 - 130	20	70 - 130	20
Xylenes	ND	30	111	108	2.84	93.4	91.2	2.38	70 - 130	20	70 - 130	20
%SS:	113	10	97	94	3.07	101	101	0	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 39899 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811807-005A	11/25/08 2:55 PM	11/26/08	11/26/08 6:55 PM	0811807-013A	11/25/08 9:20 AM	11/26/08	11/26/08 7:25 PM
0811807-014A	11/25/08 12:55 PM	11/26/08	11/26/08 7:55 PM	0811807-018A	11/25/08 11:40 AM	11/26/08	11/26/08 4:57 PM
0811807-018A	11/25/08 11:40 AM	12/01/08	12/01/08 5:03 PM	0811807-023A	11/25/08 1:25 PM	11/26/08	11/26/08 8:55 PM
0811807-023A	11/25/08 1:25 PM	12/02/08	12/02/08 6:52 AM	0811807-027A	11/25/08 2:05 PM	11/26/08	11/26/08 5:31 PM
0811807-027A	11/25/08 2:05 PM	12/01/08	12/01/08 10:36 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.

DHS ELAP Certification 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 39933 WorkOrder 0811807

EPA Method SW8021B/8015Cm **Extraction SW5030B** **Spiked Sample ID: 0811829-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	0.60	101	98.8	2.47	95.1	110	14.7	70 - 130	20	70 - 130	20
MTBE	ND	0.10	88	87.4	0.658	84.1	87.4	3.80	70 - 130	20	70 - 130	20
Benzene	ND	0.10	91.1	83.4	8.91	84.1	87.3	3.77	70 - 130	20	70 - 130	20
Toluene	ND	0.10	94.5	87.4	7.80	92	92	0	70 - 130	20	70 - 130	20
Ethylbenzene	ND	0.10	101	94.1	7.37	99.7	97.9	1.88	70 - 130	20	70 - 130	20
Xylenes	ND	0.30	116	106	8.46	115	112	2.75	70 - 130	20	70 - 130	20
%SS:	86	0.10	115	107	6.92	115	110	4.00	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 39933 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811807-025A	11/25/08 1:50 PM	11/25/08	11/26/08 2:43 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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QC SUMMARY REPORT FOR SM5310B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 39840 WorkOrder 0811807

EPA Method SM5310B **Extraction SM5310B** **Spiked Sample ID: 0811698-004A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TOC	230	8200	103	104	1.22	101	99.8	1.55	70 - 130	20	80 - 120	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 39840 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811807-007A	11/25/08 8:45 AM	11/26/08	11/26/08 8:28 PM	0811807-007A	11/25/08 8:45 AM	11/26/08	11/26/08 9:29 PM
0811807-009A	11/25/08 8:55 AM	11/26/08	11/26/08 8:41 PM	0811807-009A	11/25/08 8:55 AM	11/26/08	11/26/08 9:43 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not applicable to this method.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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QC SUMMARY REPORT FOR SM5310B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 40012 WorkOrder 0811807

EPA Method SM5310B **Extraction SM5310B** **Spiked Sample ID: 0811807-021A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TOC	ND	8200	109	115	5.15	101	99.6	1.20	70 - 130	20	80 - 120	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 40012 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811807-021A	11/25/08 10:30 AM	12/03/08	12/03/08 7:55 PM	0811807-021A	11/25/08 10:30 AM	12/03/08	12/03/08 9:17 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not applicable to this method.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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QA/QC Officer

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AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #280346; Alaska Gas, 6211 San Pablo Avenue	Date Sampled: 11/25/08
		Date Received: 11/25/08
	Client Contact: Jeremy Smith	Date Reported: 12/04/08
	Client P.O.: WC081040	Date Completed: 12/10/08

WorkOrder: 0811807

December 12, 2008

Dear Jeremy:

Enclosed within are:

1) The results of the **5** analyzed samples from your project: **#280346; Alaska Gas, 6211 San Pab**
2) A QC report for the above samples,
3) A copy of the chain of custody, and
4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

McCAMPBELL ANALYTICAL INC.

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Pittsburg, CA 94565
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

EDF Required? ☒ Yes ☐ No

Report To: Jeremy Smith Bill To: same P.O. # WC081040
Company: AEI Consultants
2500 Camino Diablo
Walnut Creek, CA 94597 E-Mail: jasmith@aeiconsultants.com
Tele: (925) 944-2899 Fax: (925) 944-2895
Project #: 280346 Project Name: Alaska Gas
Project Location: 6211 San Pablo Avenue, Oakland, California
Sampler Signature: [signature]

	SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	BTEX / MTBE 8021B	TPH - gasoline (8015)	Total Petroleum Oil & Grease (413.1) w/ Silica	Total Petroleum Hydrocarbons (418.1)	Fuel Oxys (8260) – MTBE, DIPE, ETBE, TAME, TBA, 1,2-DCA, EDB	BTEX & 9 OXYS ADDED ON 12/08/08 STD TAT PER J.S / FAX	Nitrate/Nitrite	EPA 608 / 8080 PCB's ONLY	VOCs 8260	SVOCs (with PAHs) 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals (Cd, Cr, pb., Ni, zinc (6010C).	Lead (field filtered 200.8)	RCI	Other: HOLD	Other: Sieve + Hydrometer ASTM D422	Other: Moisture + Density ASTM D2937	Other: TOC-TIC SM 5310B	Comments
	SB-7-3.5		11/25/08	230	1	Liner		X				X				X	X			X															
	SB-7-7.5			240				X																							X				
	SB-7-10.5			245				X								X	X			X															
	SB-7-15.5			250				X																							X				
+5	SB-7			255	3	VOA	X						X			X	X			X															
	DDP-1-5			840	1	Liner		X								X	X			X															
—	DDP-1-6			845																												X	X	X	
	DDP-1-8			850												X	X			X	X										X (struck)				OFF HOLD 12/08/08 ON STD PER J.S
—	DDP-1-10			855																												X	X	X	
	DPP-1-11.5			900												X	X			X	X										X (struck)				OFF HOLD 12/8/08 PER J.S
	DDP-1-15.5			905																											X				
	DDP-1-19.5			910												X	X			X	X										X (struck)				OFF HOLD PER J.S
+1	DDP-1			920	3	VOA	X						X			X	X			X															
+1	DDP-1D			1255	3	VOA	X						X			X	X			X															

Relinquished By:	Date:	Time:	Received By:
[signature]	11/25/08	530	Envirotech T.L
Enviro-Tech SR.	11/25	2000	[signature]
[signature]	11-25	8:20 PM.	[signature]

ICE/t° 3.8
GOOD CONDITION_____
HEAD SPACE ABSENT_____
DECHLORINATED IN LAB_____

	VOAS	O&G	METALS	OTHER
PRESERVATION				

APPROPRIATE CONTAINERS_____
PERSERVED IN LAB_____

McCAMPBELL ANALYTICAL INC.

1534 Willow Pass Road
Pittsburg, CA 94565
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAY

EDF Required? ☑ Yes ☐ No

Report To: Jeremy Smith Bill To: same P.O. # WC081040

Company: AEI Consultants

2500 Camino Diablo

Walnut Creek, CA 94597 E-Mail: jasmith@aeiconsultants.com

Tele: (925) 944-2899 Fax: (925) 944-2895

Project #: 280346 Project Name: Alaska Gas

Project Location: 6211 San Pablo Avenue, Oakland, California

Sampler Signature:

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX / MTBE 8021B	TPH - gasoline (8015)	Total Petroleum Oil & Grease (413.1) w/ Silica	Total Petroleum Hydrocarbons (418.1)	Fuel Oxys (8260) – MTBE, DIPE, ETBE, TAME, TBA, 1,2-DCA, EDB	Nitrate/Nitrite	EPA 608 / 8080 PCB's ONLY	VOCs 8260	SVOCs (with PAHs) 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals (Cd, Cr, pb, Ni, zinc (6010C).	Lead (field filtered 200.8)	RCI	Other: HOLD	Comments
SB-5-3.5		11/25/08	1115	1	Liner		X				X																	X	
SB-5-7.5			1120				X									X			X										
SB-5-10			1125				X																					X	
#2 SB-5			1140	3	VOA	X						X				X			X										
SB-12-3.5			1020	1	Liner		X																						OFF HOLD 12/3/08 PER J.S
SB-12-6.5			1025				X									X			X										
SB-12-11.5			1030				X																					X X X	OFF HOLD AS OF 12/01/08 PER J.S
SB-12-14.5			1035				X																					X	
#1 SB-12			125	3	VOA	X						X				X			X										
SB-13-3.5			145	1	Liner		X																					X	
SB-13-7.5			150				X									X			X										
SB-13-15.5			200				X																					X	
#10 SB-13			205	3	VOA	X						X				X			X										

Relinquished By:	Date:	Time:	Received By:
	11/25/08	530	Enviro Tech T.C.
Relinquished By: Enviro-Tech SR.	Date: 11/25	Time: 2000	Received By:
Relinquished By:	Date: 11-25	Time: 8:20 PM	Received By:

	VOAS	O&G	METALS	OTHER
ICE/t°				
GOOD CONDITION				
HEAD SPACE ABSENT				
DECHLORINATED IN LAB				
PRESERVATION APPROPRIATE				
CONTAINERS				
PERSERVED IN LAB				

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 081180 B **ClientCode: AEL**

☐ WriteOn ☑ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Jeremy Smith
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
(925) 944-2899 FAX (925) 944-2895

Email: jasmith@aeiconsultants.com
cc:
PO: WC081040
ProjectNo: #280346; Alaska Gas, 6211 San Pablo Avenue

Bill to:
Denise Mockel
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
dmockel@aeiconsultants.com

Requested TAT: 5 days
Date Received: **11/25/2008**
Date Add-On: **12/08/2008**
Date Printed: **12/08/2008**

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
0811807-008	DDP-1-8	Soil	11/25/2008 8:50	☐	A	A										
0811807-010	DPP-1-11.5	Soil	11/25/2008 9:00	☐	A	A										
0811807-012	DDP-1-19.5	Soil	11/25/2008 9:10	☐	A	A										
0811807-019	SB-12-3.5	Soil	11/25/2008 10:20	☐	A	A										
0811807-021	SB-12-11.5	Soil	11/25/2008 10:30	☐	A	A										

Test Legend:

1	9-OXYS_S	2	G-MBTEX_S	3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Ana Venegas

Comments: Sample #21 Taken Off hold on 12/01/08, TOC,IC(C) Moisture,Density added on a std tat per J.S/Fax. Gmbtex And 9 oxys added on 12/08/08 on a std tat per J.S/Fax

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.

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #280346; Alaska Gas, 6211 San Pablo Avenue	Date Sampled: 11/25/08
		Date Received: 11/25/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/08/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed 12/09/08

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0811807

Lab ID	0811807-008A	0811807-010A	0811807-012A	0811807-019A	Reporting Limit for DF =1	
Client ID	DDP-1-8	DPP-1-11.5	DDP-1-19.5	SB-12-3.5		
Matrix	S	S	S	S		
DF	4	6.7	40	1	S	W
Compound	**Concentration**				mg/kg	ug/L
tert-Amyl methyl ether (TAME)	ND<0.020	0.17	0.26	ND	0.005	NA
t-Butyl alcohol (TBA)	1.3	4.4	7.1	ND	0.05	NA
1,2-Dibromoethane (EDB)	ND<0.016	ND<0.027	ND<0.16	ND	0.004	NA
1,2-Dichloroethane (1,2-DCA)	ND<0.016	ND<0.027	ND<0.16	ND	0.004	NA
Diisopropyl ether (DIPE)	ND<0.020	ND<0.033	ND<0.20	ND	0.005	NA
Ethanol	ND<2.0	ND<3.3	ND<20	ND	0.5	NA
Ethyl tert-butyl ether (ETBE)	ND<0.020	ND<0.033	ND<0.20	ND	0.005	NA
Methanol	ND<20	ND<33	ND<200	ND	5.0	NA
Methyl-t-butyl ether (MTBE)	0.32	1.0	4.0	0.0083	0.005	NA
Surrogate Recoveries (%)						
%SS1:	85	90	95	89		
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #280346; Alaska Gas, 6211 San Pablo Avenue	Date Sampled: 11/25/08
		Date Received: 11/25/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/08/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed 12/09/08

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0811807

					Reporting Limit for DF =1	
Lab ID	0811807-021A					
Client ID	SB-12-11.5					
Matrix	S					
DF	10				S	W
Compound	**Concentration**				mg/kg	ug/L
tert-Amyl methyl ether (TAME)	ND<0.050				0.005	NA
t-Butyl alcohol (TBA)	2.1				0.05	NA
1,2-Dibromoethane (EDB)	ND<0.040				0.004	NA
1,2-Dichloroethane (1,2-DCA)	ND<0.040				0.004	NA
Diisopropyl ether (DIPE)	ND<0.050				0.005	NA
Ethanol	ND<5.0				0.5	NA
Ethyl tert-butyl ether (ETBE)	ND<0.050				0.005	NA
Methanol	ND<50				5.0	NA
Methyl-t-butyl ether (MTBE)	ND<0.050				0.005	NA
Surrogate Recoveries (%)						
%SS1:	93					
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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"When Quality Counts"

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Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #280346; Alaska Gas, 6211 San Pablo Avenue	Date Sampled: 11/25/08
		Date Received: 11/25/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/08/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed 12/09/08

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method SW5030B Analytical methods SW8021B/8015Cm Work Order: 0811807

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
008A	DDP-1-8	S	96,d7,d9	ND<1.0	ND<0.050	0.93	0.19	0.13	10	118
010A	DPP-1-11.5	S	11,d1	0.65	0.0077	0.099	0.016	0.057	1	93
012A	DDP-1-19.5	S	ND	4.2	ND	ND	ND	ND	1	95
019A	SB-12-3.5	S	ND	ND	ND	ND	ND	ND	1	93
021A	SB-12-11.5	S	ND	ND	ND	ND	ND	ND	1	102

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	ug/L
	S	1	0.05	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

d1) weakly modified or unmodified gasoline is significant
d7) strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
d9) no recognizable pattern

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 40126 WorkOrder 0811807

EPA Method SW8260B **Extraction SW5030B** **Spiked Sample ID: 0812203-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	0.050	85.3	83.5	2.09	88.6	89.6	1.07	60 - 130	30	60 - 130	30
t-Butyl alcohol (TBA)	ND	0.25	85.3	84.1	1.49	93.1	89.9	3.46	60 - 130	30	60 - 130	30
1,2-Dibromoethane (EDB)	ND	0.050	87.5	84.6	3.35	91.4	92.5	1.17	60 - 130	30	60 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	0.050	93.9	92.7	1.30	98.9	97.2	1.78	60 - 130	30	60 - 130	30
Diisopropyl ether (DIPE)	ND	0.050	114	114	0	118	118	0	60 - 130	30	60 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	0.050	101	99	1.48	105	104	0.331	60 - 130	30	60 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	86.4	85.3	1.27	90.3	89	1.48	60 - 130	30	60 - 130	30
%SS1:	84	0.12	91	90	0.787	90	90	0	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 40126 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811807-008A	11/25/08 8:50 AM	12/08/08	12/09/08 9:33 PM	0811807-010A	11/25/08 9:00 AM	12/08/08	12/09/08 10:26 PM
0811807-012A	11/25/08 9:10 AM	12/08/08	12/09/08 11:09 PM	0811807-019A	11/25/08 10:20 AM	12/08/08	12/09/08 12:54 AM
0811807-021A	11/25/08 10:30 AM	12/08/08	12/09/08 11:51 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS ELAP Certification 1644

QA/QC Officer

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 40140 WorkOrder: 0811807

EPA Method SW8021B/8015Cm **Extraction SW5030B** **Spiked Sample ID: 0812281-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	0.60	97.2	96.5	0.803	118	99.9	16.2	70 - 130	20	70 - 130	20
MTBE	ND	0.10	102	96.5	5.14	104	116	11.2	70 - 130	20	70 - 130	20
Benzene	ND	0.10	86.2	89	3.09	94	103	8.89	70 - 130	20	70 - 130	20
Toluene	ND	0.10	78.4	80.3	2.31	84.4	91.9	8.52	70 - 130	20	70 - 130	20
Ethylbenzene	ND	0.10	92.5	95.7	3.47	97.8	104	6.38	70 - 130	20	70 - 130	20
Xylenes	ND	0.30	91.2	94.5	3.52	97	102	5.40	70 - 130	20	70 - 130	20
%SS:	89	0.10	93	102	9.30	96	96	0	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 40140 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811807-008A	11/25/08 8:50 AM	12/08/08	12/09/08 5:35 PM	0811807-010A	11/25/08 9:00 AM	12/08/08	12/09/08 12:36 AM
0811807-012A	11/25/08 9:10 AM	12/08/08	12/09/08 1:07 AM	0811807-019A	11/25/08 10:20 AM	12/08/08	12/09/08 2:08 AM
0811807-021A	11/25/08 10:30 AM	12/08/08	12/09/08 10:43 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification 1644

QA/QC Officer

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/26/08
		Date Received: 11/26/08
	Client Contact: Jeremy Smith	Date Reported: 12/05/08
	Client P.O.: WC081040	Date Completed: 12/05/08

WorkOrder: 0811887

December 05, 2008

Dear Jeremy:

Enclosed within are:

1) The results of the **13** analyzed samples from your project: **#280346; Alaska Gas,**
2) A QC report for the above samples,
3) A copy of the chain of custody, and
4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

0811887

Pg. 1 of 3

McCAMPBELL ANALYTICAL INC.

1534 Willow Pass Road
Pittsburg, CA 94565
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAY

EDF Required? ☑ Yes ☐ No

Report To: Jeremy Smith Bill To: same P.O. # WC081040

Company: AEI Consultants

2500 Camino Diablo

Walnut Creek, CA 94597 E-Mail: jasmith@aeiconsultants.com

Tele: (925) 944-2899 Fax: (925) 944-2895

Project #: 280346 Project Name: Alaska Gas

Project Location: 6211 San Pablo Avenue, Oakland, California

Sampler Signature:

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX / MTBE 8021B	TPH - gasoline (8015)	Total Petroleum Oil & Grease (413.1) w/ Silica	Total Petroleum Hydrocarbons (418.1)	Fuel Oxys (8260) – MTBE, DIPE, ETBE, TAME, TBA, 1,2-DCA, EDB	Nitrate/Nitrite	EPA 608 / 8080 PCB's ONLY	VOCs 8260	SVOCs (with PAHs) 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals (Cd, Cr, pb,,Ni,zinc (6010C).	Lead (field filtered 200.8)	RCI	Other	Comments
DDP-2-5		11/26/08	740	1	Liner		X				X				X	X			X										HOLD	
DDP-2-7.5			745												X	X			X											
DDP-2-10.5			750																										X	
DDP-2-14.5			800																										X	
DDP-2-20.5			805												X	X			X											
DDP-2-23.5			807																										X	
DDP-2-26.5			810																										X	
DDP-2-32.5			820																										X	
DDP-2-35.5			830												X	X			X											
DDP-3-5			1010												X	X			X											
DDP-3-5.5			1020																										X	X
DDP-3-7.5			1030																										X	
DDP-3-10			1110																										X	X
DDP-3-10.5			1115																										X	

Relinquished By:	Date:	Time:	Received By:
	11/26/08	17:20	Enviro Tech T.L
Relinquished By: Enviro-Tech SR.	Date: 11/26	Time: 2030	Received By:
Relinquished By:	Date: 11-26	Time: 8:50 P.M.	Received By:

ICE/t° _____ VOAS | O&G | METALS | OTHER

GOOD CONDITION _____ PRESERVATION APPROPRIATE _____

HEAD SPACE ABSENT _____ CONTAINERS _____

DECHLORINATED IN LAB _____ PERSERVED IN LAB _____

McCAMPBELL ANALYTICAL INC.

1534 Willow Pass Road
Pittsburg, CA 94565
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAY

EDF Required? ☑ Yes ☐ No

Report To: Jeremy Smith **Bill To:** same **P.O. # WC081040**

Company: AEI Consultants
2500 Camino Diablo
Walnut Creek, CA 94597 **E-Mail:** jasmith@aeiconsultants.com
Tele: (925) 944-2899 **Fax:** (925) 944-2895
Project #: 280346 **Project Name:** Alaska Gas
Project Location: 6211 San Pablo Avenue, Oakland, California
Sampler Signature:

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX / MTBE 8021B	TPH - gasoline (8015)	Total Petroleum Oil & Grease (413.1) w/ Silica	Total Petroleum Hydrocarbons (418.1)	Fuel Oxys (8260) – MTBE, DIPE, ETBE, TAME, TBA, 1,2-DCA, EDB	Nitrate/Nitrite	EPA 608 / 8080 PCB's ONLY	VOCs 8260	SVOCs (with PAHs) 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals (Cd, Cr, pb,,Ni,zinc (6010C).	Lead (field filtered 200.8)	RCI	Other: HOLD	Comments
DDP-3-12.5		11/26/08	1180	1	Liner		X				X				~~X~~	~~X~~			~~X~~										X	
DDP-3-17.5			1130																										X	
DDP-3-20.5			1140																										X	
DDP-3-23.5			1150																										X	
DDP-3-26			1200												X	X			X											
DDP-3-28			1210																										X	
DDP-3-32.5			1220																										X	
DDP-3-35.5			1230												X	X			X											
DDP-3-39.5			1240																										X	
DDP-4-3.5			150																										X	
DDP-4-7.5			155												X	X			X											
DDP-4-10.5			200												X	X			X											
DDP-4-14.5			205																										X	
DDP-4-17.5			210																										X	

Relinquished By:	Date:	Time:	Received By:
	11/26/08	17:20	Environtech T.L
Environ-Tech SF.	11/26	2030	
Vicky Italy	11-26	9:50 PM	

ICE/t° _____ GOOD CONDITION _____ HEAD SPACE ABSENT _____ DECHLORINATED IN LAB _____

PRESERVATION APPROPRIATE CONTAINERS	VOAS	O&G	METALS	OTHER
PERSERVED IN LAB				

McCAMPBELL ANALYTICAL INC.
1534 Willow Pass Road
Pittsburg, CA 94565
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAY

EDF Required? ☑ Yes ☐ No

Report To: Jeremy Smith	**Bill To:** same	**P.O. #** WC081040
Company: AEI Consultants		
2500 Camino Diablo		
Walnut Creek, CA 94597	**E-Mail:** jasmith@aeiconsultants.com	
Tele: (925) 944-2899	**Fax:** (925) 944-2895	
Project #: 280346	**Project Name:** Alaska Gas	
Project Location: 6211 San Pablo Avenue, Oakland, California		
Sampler Signature:		

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX / MTBE 8021B	TPH - gasoline (8015)	Total Petroleum Oil & Grease (413.1) w/ Silica	Total Petroleum Hydrocarbons (418.1)	Fuel Oxys (8260) – MTBE, DIPE, ETBE, TAME, TBA, 1,2-DCA, EDB	Nitrate/Nitrite	EPA 608 / 8080 PCB's ONLY	VOCs 8260	SVOCs (with PAHs) 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals (Cd, Cr, pb,,Ni,zinc (6010C).	Lead (field filtered 200.8)	RCI	Other: HOLD	Comments
DDP-4-20.5		11/26/08	220	1	Liner		X				X				X	X			X											
DDP-4-23.5		"	230	"	"		"				"				YES														X	
DDP-4-26.5		"	240	"	"		"				"																		X	
DDP-4-29.5		"	250	"	"		"				"				X	X			X											

Relinquished By:	Date:	Time:	Received By:
	11/26	17:30	Environtech T.C.
Relinquished By: Environ-Tech SR	Date: 11/26	Time: 2030	Received By:
Relinquished By:	Date: 11-26	Time: 9:50 PM.	Received By:

ICE/t°_____ PRESERVATION APPROPRIATE CONTAINERS

VOAS	O&G	METALS	OTHER

GOOD CONDITION_____
HEAD SPACE ABSENT_____
DECHLORINATED IN LAB_____ PERSERVED IN LAB_____

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0811887 **ClientCode: AEL**

☐ WriteOn ☑ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Jeremy Smith
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
(925) 283-6000 FAX (925) 944-2895

Email: jasmith@aeiconsultants.com
cc:
PO: WC081040
ProjectNo: #280346; Alaska Gas

Bill to:
Denise Mockel
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
dmockel@aeiconsultants.com

Requested TAT: 5 days

Date Received: **11/26/2008**
Date Printed: **11/28/2008**

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
0811887-001	DDP-2-5	Soil	11/26/2008	☐	A		A				A					
0811887-002	DDP-2-7.5	Soil	11/26/2008 7:45	☐	A		A									
0811887-005	DDP-2-20.5	Soil	11/26/2008 8:05	☐	A		A									
0811887-009	DDP-2-35.5	Soil	11/26/2008 8:30	☐	A		A									
0811887-010	DDP-3-5	Soil	11/26/2008 10:10	☐	A		A									
0811887-011	DDP-3-5.5	Soil	11/26/2008 10:30	☐		A		A	A	A		A	A			
0811887-013	DDP-3-10	Soil	11/26/2008 11:15	☐		A		A	A	A		A	A			
0811887-019	DDP-3-26	Soil	11/26/2008 12:10	☐	A		A									
0811887-022	DDP-3-35.5	Soil	11/26/2008 12:40	☐	A		A									
0811887-025	DDP-4-7.5	Soil	11/26/2008 14:00	☐	A		A									
0811887-026	DDP-4-10.5	Soil	11/26/2008 14:05	☐	A		A									
0811887-029	DDP-4-20.5	Soil	11/26/2008 14:30	☐	A		A									
0811887-032	DDP-4-29.5	Soil	11/26/2008	☐	A		A									

Test Legend:

1	9-OXYS_S	2	Density_S	3	G-MBTEX_S	4	Hydrometer	5	IC(C)_S
6	Moisture_S	7	PREDF REPORT	8	Sieve Analysis	9	TOC_S	10	
11		12							

Prepared by: Rosa 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.

McCampbell Analytical, Inc.
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Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Sample Receipt Checklist

Client Name: **AEI Consultants**

Date and Time Received: **11/26/08**

Project Name: **#280346; Alaska Gas**

Checklist completed and reviewed by: Rosa Venegas

WorkOrder N°: **0811887** Matrix Soil

Carrier: EnviroTech

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 ☐	
Container/Temp Blank temperature	Cooler Temp: 2.6°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	No VOA vials submitted ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
TTLC Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

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

Client contacted: Date contacted: Contacted by:

Comments:

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Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/26/08
		Date Received: 11/26/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 11/28/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed 12/02/08-12/04/08

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0811887

Lab ID	0811887-001A	0811887-002A	0811887-005A	0811887-009A	Reporting Limit for DF =1	
Client ID	DDP-2-5	DDP-2-7.5	DDP-2-20.5	DDP-2-35.5		
Matrix	S	S	S	S		
DF	20	40	10	1	S	W
Compound	**Concentration**				mg/kg	ug/L
tert-Amyl methyl ether (TAME)	0.23	0.58	ND<0.050	ND	0.005	NA
t-Butyl alcohol (TBA)	2.3	3.4	ND<0.50	ND	0.05	NA
1,2-Dibromoethane (EDB)	ND<0.080	ND<0.16	ND<0.040	ND	0.004	NA
1,2-Dichloroethane (1,2-DCA)	ND<0.080	ND<0.16	ND<0.040	ND	0.004	NA
Diisopropyl ether (DIPE)	ND<0.10	ND<0.20	ND<0.050	ND	0.005	NA
Ethanol	ND<10	ND<20	ND<5.0	ND	0.5	NA
Ethyl tert-butyl ether (ETBE)	ND<0.10	ND<0.20	ND<0.050	ND	0.005	NA
Methanol	ND<100	ND<200	ND<50	ND	5.0	NA
Methyl-t-butyl ether (MTBE)	3.4	7.9	0.86	0.039	0.005	NA
Surrogate Recoveries (%)						
%SS1:	94	91	91	92		
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/26/08
		Date Received: 11/26/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 11/28/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed 12/02/08-12/04/08

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0811887

Lab ID	0811887-010A	0811887-019A	0811887-022A	0811887-025A	Reporting Limit for DF =1	
Client ID	DDP-3-5	DDP-3-26	DDP-3-35.5	DDP-4-7.5		
Matrix	S	S	S	S		
DF	50	1	1	4	S	W
Compound	**Concentration**				mg/kg	ug/L
tert-Amyl methyl ether (TAME)	0.38	ND	ND	ND<0.020	0.005	NA
t-Butyl alcohol (TBA)	6.6	ND	ND	ND<0.20	0.05	NA
1,2-Dibromoethane (EDB)	ND<0.20	ND	ND	ND<0.016	0.004	NA
1,2-Dichloroethane (1,2-DCA)	ND<0.20	ND	ND	ND<0.016	0.004	NA
Diisopropyl ether (DIPE)	ND<0.25	ND	ND	ND<0.020	0.005	NA
Ethanol	ND<25	ND	ND	ND<2.0	0.5	NA
Ethyl tert-butyl ether (ETBE)	ND<0.25	ND	ND	ND<0.020	0.005	NA
Methanol	ND<250	ND	ND	ND<20	5.0	NA
Methyl-t-butyl ether (MTBE)	6.3	0.022	0.020	0.11	0.005	NA
Surrogate Recoveries (%)						
%SS1:	92	95	95	97		
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

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Angela Rydelius, Lab Manager

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Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/26/08
		Date Received: 11/26/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 11/28/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed 12/02/08-12/04/08

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0811887

Lab ID	0811887-026A	0811887-029A	0811887-032A		Reporting Limit for DF =1	
Client ID	DDP-4-10.5	DDP-4-20.5	DDP-4-29.5			
Matrix	S	S	S			
DF	1	1	1		S	W
Compound	**Concentration**				mg/kg	ug/L
tert-Amyl methyl ether (TAME)	ND	ND	ND		0.005	NA
t-Butyl alcohol (TBA)	ND	ND	ND		0.05	NA
1,2-Dibromoethane (EDB)	ND	ND	ND		0.004	NA
1,2-Dichloroethane (1,2-DCA)	ND	ND	ND		0.004	NA
Diisopropyl ether (DIPE)	ND	ND	ND		0.005	NA
Ethanol	ND	ND	ND		0.5	NA
Ethyl tert-butyl ether (ETBE)	ND	ND	ND		0.005	NA
Methanol	ND	ND	ND		5.0	NA
Methyl-t-butyl ether (MTBE)	0.0093	ND	ND		0.005	NA
Surrogate Recoveries (%)						
%SS1:	95	95	96			
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

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AEI Consultants	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/26/08
		Date Received: 11/26/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/01/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed 12/01/08

Density

Analytical Method: APIRP40_BD modified Work Order: 0811887

Lab ID	Client ID	Matrix	Density	DF
0811887-011A	DDP-3-5.5	S	1.9	1
0811887-013A	DDP-3-10	S	1.9	1

Method Accuracy and Reporting Units	W	NA	
	S	±0.01 g/ml	

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Angela Rydelius, Lab Manager

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Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/26/08
		Date Received: 11/26/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 11/28/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed 12/02/08-12/05/08

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method SW5030B Analytical methods SW8021B/8015Cm Work Order: 0811887

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	DDP-2-5	S	5.8,d1	8.5	0.010	0.054	0.0063	0.057	1	93
002A	DDP-2-7.5	S	850,d2	14	0.78	4.0	6.8	63	33	---#
005A	DDP-2-20.5	S	ND	1.1	ND	ND	ND	ND	1	83
009A	DDP-2-35.5	S	ND	0.11	ND	ND	ND	ND	1	111
010A	DDP-3-5	S	170,d2	9.7	ND<0.10	1.6	0.81	20	20	117
019A	DDP-3-26	S	ND	0.093	ND	ND	ND	ND	1	107
022A	DDP-3-35.5	S	ND	0.12	ND	ND	ND	ND	1	101
025A	DDP-4-7.5	S	180,d2,d9	ND<0.25	0.040	0.84	0.26	2.5	5	---#
026A	DDP-4-10.5	S	ND	ND	ND	ND	ND	ND	1	97
029A	DDP-4-20.5	S	ND	ND	ND	ND	ND	ND	1	93
032A	DDP-4-29.5	S	ND	ND	ND	ND	ND	ND	1	80

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	ug/L
	S	1	0.05	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

d1) weakly modified or unmodified gasoline is significant
d2) heavier gasoline range compounds are significant (aged gasoline?)
d9) no recognizable pattern

Angela Rydelius, Lab Manager

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Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/26/08
		Date Received: 11/26/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/03/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed 12/03/08

Inorganic Carbon as Carbon*

Analytical Method: SM5310B Work Order: 0811887

Lab ID	Client ID	Matrix	IC as C	DF
0811887-011A	DDP-3-5.5	S	6700	1
0811887-013A	DDP-3-10	S	ND	1

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	NA	
	S	200 mg/Kg	

* water samples are reported in mg/L, soil/sludge/solid samples in mg/kg.

* Non-Purgeable Organic Carbon=NPOC; TOC=Total Organic Carbon; DOC=Dissolved Organic Carbon; POC=Purgeable Organic Cabon; IC=Inorganic Carbon.

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Angela Rydelius, Lab Manager

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AEI Consultants	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/26/08
		Date Received: 11/26/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/02/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed 12/03/08

Percent Moisture

Analytical Method: ASTMD2216-92 Work Order: 0811887

Lab ID	Client ID	Matrix	% Moisture	DF
0811887-011A	DDP-3-5.5	S	13.1	1
0811887-013A	DDP-3-10	S	14.8	1

Method Accuracy and Reporting Units	W	NA	
	S	±0.1, wet wt%	

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/26/08
		Date Received: 11/26/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/03/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed 12/03/08

Total Organic Carbon (TOC)*

Analytical Method: SM5310B Work Order: 0811887

Lab ID	Client ID	Matrix	TOC	DF
0811887-011A	DDP-3-5.5	S	10,000	1
0811887-013A	DDP-3-10	S	900	1

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	NA	
	S	200 mg/Kg	

* water samples are reported in mg/L, soil/sludge/solid samples in mg/kg.

* Non-Purgeable Organic Carbon=NPOC; TOC=Total Organic Carbon; DOC=Dissolved Organic Carbon; POC=Purgeable Organic Cabon; IC=Inorganic Carbon.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 39918 WorkOrder 0811887

EPA Method SW8260B **Extraction SW5030B** **Spiked Sample ID: 0811800-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	0.050	76.8	78.1	1.65	76.5	79.7	4.07	60 - 130	30	60 - 130	30
t-Butyl alcohol (TBA)	ND	0.25	88.2	95.3	7.73	83.1	85	2.27	60 - 130	30	60 - 130	30
1,2-Dibromoethane (EDB)	ND	0.050	97	99.7	2.83	85.9	89.6	4.22	60 - 130	30	60 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	0.050	99.3	101	2.17	98.3	98.6	0.238	60 - 130	30	60 - 130	30
Diisopropyl ether (DIPE)	ND	0.050	101	103	2.18	96.5	99.8	3.30	60 - 130	30	60 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	0.050	101	104	2.19	99.6	102	2.26	60 - 130	30	60 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	92.5	94.5	2.14	88.7	89.9	1.34	60 - 130	30	60 - 130	30
%SS1:	92	0.12	88	88	0	95	95	0	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 39918 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811887-001A	11/26/08	11/28/08	12/02/08 5:33 PM	0811887-002A	11/26/08 7:45 AM	11/28/08	12/03/08 11:39 PM
0811887-005A	11/26/08 8:05 AM	11/28/08	12/04/08 6:07 PM	0811887-009A	11/26/08 8:30 AM	11/28/08	12/02/08 6:58 PM
0811887-010A	11/26/08 10:10 AM	11/28/08	12/04/08 6:50 PM	0811887-019A	11/26/08 12:10 PM	11/28/08	12/02/08 9:49 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS ELAP Certification 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 39981 WorkOrder 0811887

EPA Method SW8260B **Extraction SW5030B** **Spiked Sample ID: 0812001-003A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	0.050	82.1	78.9	4.05	81.8	82.9	1.29	60 - 130	30	60 - 130	30
t-Butyl alcohol (TBA)	ND	0.25	81.4	76.9	5.61	78.9	81.3	2.99	60 - 130	30	60 - 130	30
1,2-Dibromoethane (EDB)	ND	0.050	84.6	82.7	2.17	87.7	84.6	3.59	60 - 130	30	60 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	0.050	88	85.9	2.38	88.2	88.8	0.718	60 - 130	30	60 - 130	30
Diisopropyl ether (DIPE)	ND	0.050	104	103	0.994	104	105	1.37	60 - 130	30	60 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	0.050	94	92.6	1.57	95.6	97.1	1.63	60 - 130	30	60 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	82.2	80.3	2.39	82.9	82.6	0.349	60 - 130	30	60 - 130	30
%SS1:	83	0.12	95	96	0.321	97	97	0	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 39981 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811887-022A	11/26/08 12:40 PM	11/28/08	12/03/08 2:08 AM	0811887-025A	11/26/08 2:00 PM	11/28/08	12/02/08 11:17 PM
0811887-026A	11/26/08 2:05 PM	11/28/08	12/03/08	0811887-029A	11/26/08 2:30 PM	11/28/08	12/03/08 12:43 AM
0811887-032A	11/26/08	11/28/08	12/03/08 1:25 AM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS ELAP Certification 1644

QA/QC Officer

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QC SUMMARY REPORT FOR WET CHEMISTRY TESTS

Test Method: Density of Soil **Matrix: S** **WorkOrder: 0811887**

Method Name: APIRP40_BD modified Units ± g/ml BatchID: 39935

Lab ID	Sample	DF	Dup / Ser. Dil.	DF	% RPD	Acceptance Criteria (%)
0811887-011A	1.9	1	1.9	1	0	<20
0811887-013A	1.9	1	1.9	1	0	<20

BATCH 39935 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811887-011A	1/26/08 10:30 AM	12/01/08	12/01/08 3:20 PM	0811887-013A	1/26/08 11:15 AM	12/01/08	12/01/08 3:30 PM

Test Method: Percent Moisture **Matrix: S** **WorkOrder: 0811887**

Method Name: ASTMD2216-92 Units ±, wet wt% BatchID: 39905

Lab ID	Sample	DF	Dup / Ser. Dil.	DF	% RPD	Acceptance Criteria (%)
0811887-011A	13.1	1	13.7	1	4.76	<15
0811887-013A	14.8	1	15.2	1	2.89	<15

BATCH 39905 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811887-011A	1/26/08 10:30 AM	12/02/08	12/03/08 2:20 PM	0811887-013A	1/26/08 11:15 AM	12/02/08	12/03/08 2:30 PM

Dup = Duplicate; Ser. Dil. = Serial Dilution; MS = Matrix Spike; RD = Relative Difference; RPD = Relative Percent Deviation.

Precision = Absolute Value (Sample - Duplicate)

RPD = 100 * (Sample - Duplicate) / [(Sample + Duplicate) / 2]

%RPD is calculated using results of up to 10 significant figures, however the reported results are rounded to 2 or 3 significant figures. Therefore there may be a slight discrepancy between the %RPD displayed above and %RPD calculated using the reported results. MAI considers %RPD based upon more significant figures to be more accurate.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 39933 WorkOrder 0811887

EPA Method SW8021B/8015Cm **Extraction SW5030B** **Spiked Sample ID: 0811829-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	0.60	101	98.8	2.47	95.1	110	14.7	70 - 130	20	70 - 130	20
MTBE	ND	0.10	88	87.4	0.658	84.1	87.4	3.80	70 - 130	20	70 - 130	20
Benzene	ND	0.10	91.1	83.4	8.91	84.1	87.3	3.77	70 - 130	20	70 - 130	20
Toluene	ND	0.10	94.5	87.4	7.80	92	92	0	70 - 130	20	70 - 130	20
Ethylbenzene	ND	0.10	101	94.1	7.37	99.7	97.9	1.88	70 - 130	20	70 - 130	20
Xylenes	ND	0.30	116	106	8.46	115	112	2.75	70 - 130	20	70 - 130	20
%SS:	86	0.10	115	107	6.92	115	110	4.00	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 39933 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811887-001A	11/26/08	11/28/08	12/02/08 3:11 AM	0811887-001A	11/26/08	11/28/08	12/03/08 5:38 AM
0811887-002A	11/26/08 7:45 AM	11/28/08	12/03/08 7:38 PM	0811887-005A	11/26/08 8:05 AM	11/28/08	12/03/08 8:45 PM
0811887-009A	11/26/08 8:30 AM	11/28/08	12/02/08 5:52 AM	0811887-010A	11/26/08 10:10 AM	11/28/08	12/03/08 6:59 AM
0811887-019A	11/26/08 12:10 PM	11/28/08	12/02/08 6:22 AM	0811887-022A	11/26/08 12:40 PM	11/28/08	12/02/08 5:22 AM
0811887-025A	11/26/08 2:00 PM	11/28/08	12/03/08 7:49 AM	0811887-026A	11/26/08 2:05 PM	11/28/08	12/04/08 11:54 PM
0811887-029A	11/26/08 2:30 PM	11/28/08	12/02/08 9:53 AM	0811887-032A	11/26/08	11/28/08	12/05/08 5:47 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SM5310B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 39840 WorkOrder 0811887

EPA Method SM5310B **Extraction SM5310B** **Spiked Sample ID: 0811698-004A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TOC	230	8200	103	104	1.22	101	99.8	1.55	70 - 130	20	80 - 120	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 39840 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811887-011A	11/26/08 10:30 AM	12/03/08	12/03/08 8:47 PM	0811887-011A	11/26/08 10:30 AM	12/03/08	12/03/08 9:40 PM
0811887-013A	11/26/08 11:15 AM	12/03/08	12/03/08 9:01 PM	0811887-013A	11/26/08 11:15 AM	12/03/08	12/03/08 9:56 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not applicable to this method.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification 1644

QA/QC Officer

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Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/26/08
		Date Received: 11/26/08
	Client Contact: Jeremy Smith	Date Reported: 12/05/08
	Client P.O.: WC081040	Date Completed: 12/15/08

WorkOrder: 0811887

December 15, 2008

Dear Jeremy:

Enclosed within are:

1) The results of the **6** analyzed samples from your project: **#280346; Alaska Gas,**
2) A QC report for the above samples,
3) A copy of the chain of custody, and
4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

0811887

Pg. 1 of 3

McCAMPBELL ANALYTICAL INC.

1534 Willow Pass Road
Pittsburg, CA 94565
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAY

EDF Required? ☑ Yes ☐ No

Report To: Jeremy Smith Bill To: same P.O. # WC081040

Company: AEI Consultants

2500 Camino Diablo

Walnut Creek, CA 94597 E-Mail: jasmith@aeiconsultants.com

Tele: (925) 944-2899 Fax: (925) 944-2895

Project #: 280346 Project Name: Alaska Gas

Project Location: 6211 San Pablo Avenue, Oakland, California

Sampler Signature:

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	BTEX / MTBE 8021B	TPH - gasoline (8015)	Total Petroleum Oil & Grease (413.1) w/ Silica	Total Petroleum Hydrocarbons (418.1)	Fuel Oxys (8260) – MTBE, DIPE, ETBE, TAME, TBA, 1,2-DCA, EDB	Nitrate/Nitrite	EPA 608 / 8080 PCB's ONLY	VOCs 8260	SVOCs (with PAHs) 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals (Cd, Cr, pb,,Ni,zinc (6010C).	Lead (field filtered 200.8)	RCI	Other: HOLD	Other: Sieve + Hydrometer ASTM D422	Other: Moisture + Density ASTM D 2937	Other: TOC / TIC 5m 531013	Comments
DDP-2-5		11/26/08	740	1	Liner		X				X				X	X			X														
DDP-2-7.5			745												X	X			X														
DDP-2-10.5			750												X	X			X											X			OFF HOLD 12/8/08 DEP
DDP-2-14.5			800																										X			
DDP-2-20.5			805												X	X			X														
DDP-2-23.5			807																										X			
DDP-2-26.5			810												X	X			X										X			OFF HOLD 12/8/08 DEP J.S
DDP-2-32.5			820																										X			
DDP-2-35.5			830												X	X			X														
DDP-3-5			1010												X	X			X														
DDP-3-5.5			1020																											X	X	X	
DDP-3-7.5			1030												X	X			X										X				OFF HOLD ON 12/08/08 DEP J.S
DDP-3-10			1110																											X	X	X	
DDP-3-10.5			1115																										X				

Relinquished By:	Date:	Time:	Received By:
	11/26/08	17:00	Enviro Tech T.L
Enviro-Tech SR.	11/26	2030	
	11-26	8:50 P.M.	

ICE/t° 2.6
GOOD CONDITION yes
HEAD SPACE ABSENT
DECHLORINATED IN LAB
PRESERVED IN LAB

PRESERVATION	VOAS	O&G	METALS	OTHER
APPROPRIATE				
CONTAINERS	yes			

McCAMPBELL ANALYTICAL INC.
1534 Willow Pass Road
Pittsburg, CA 94565
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAY

EDF Required? ☑ Yes ☐ No

Report To: Jeremy Smith Bill To: same P.O. # WC081040
Company: AEI Consultants
2500 Camino Diablo
Walnut Creek, CA 94597 E-Mail: jasmith@aeiconsultants.com
Tele: (925) 944-2899 Fax: (925) 944-2895
Project #: 280346 Project Name: Alaska Gas
Project Location: 6211 San Pablo Avenue, Oakland, California
Sampler Signature: [illegible signature]

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	BTEX / MTBE 8021B	TPH - gasoline (8015)	Total Petroleum Oil & Grease (413.1) w/ Silica	Total Petroleum Hydrocarbons (418.1)	Fuel Oxys (8260) – MTBE, DIPE, ETBE, TAME, TBA, 1,2-DCA, EDB	GAS BTEX & 4 OXY ADDED ON 12/8/08 STD TAT PER J.S.	Nitrate/Nitrite	EPA 608 / 8080 PCB's ONLY	VOCs 8260	SVOCs (with PAHs) 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals (Cd, Cr, pb,,Ni,zinc (6010C).	Lead (field filtered 200.8)	RCI	Other: HOLD				Comments
DDP-3-12.5		11/26/08	1120	1	Liner		X				X				X	X			X	X										X				OFF HOLD 12/8/08 PER J.S.
DDP-3-17.5			1130																											X				
DDP-3-20.5			1140												X	X			X	X										X				OFF HOLD 12/8/08 PER J.S.
DDP-3-23.5			1150																											X				
DDP-3-26			1200												X	X			X															
DDP-3-28			1210																											X				
DDP-3-32.5			1220																											X				
DDP-3-35.5			1230												X	X			X															
DDP-3-39.5			1240																											X				
DDP-4-3.5			150												X	X			X	X										X				OFF HOLD 12/8/08 PER J.S.
DDP-4-7.5			155												X	X			X															
DDP-4-10.5			200												X	X			X															
DDP-4-14.5			205																											X				
DDP-4-17.5			210																											X				

Relinquished By:	Date:	Time:	Received By:
[illegible signature]	11/26/08	17:26	Envirotech T.L
Enviro-Tech SR.	11/26	2030	[illegible signature]
[illegible signature]	11-26	9:50 PM	[illegible signature]

ICE/t° 2.6
GOOD CONDITION yes
HEAD SPACE ABSENT ____
DECHLORINATED IN LAB ____

	VOAS	O&G	METALS	OTHER
PRESERVATION				

APPROPRIATE CONTAINERS yes
PERSERVED IN LAB ____

McCAMPBELL ANALYTICAL INC.
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Pittsburg, CA 94565
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☑ 5 DAY

EDF Required? ☑ Yes ☐ No

Report To: Jeremy Smith	**Bill To:** same	**P.O. #** WC081040
Company: AEI Consultants		
2500 Camino Diablo		
Walnut Creek, CA 94597	**E-Mail:** jasmith@aeiconsultants.com	
Tele: (925) 944-2899	**Fax:** (925) 944-2895	
Project #: 280346	**Project Name:** Alaska Gas	
Project Location: 6211 San Pablo Avenue, Oakland, California		
Sampler Signature:		

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED Ice	METHOD PRESERVED HCl	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	BTEX / MTBE 8021B	TPH - gasoline (8015)	Total Petroleum Oil & Grease (413.1) w/ Silica	Total Petroleum Hydrocarbons (418.1)	Fuel Oxys (8260) – MTBE, DIPE, ETBE, TAME, TBA, 1,2-DCA, EDB	Nitrate/Nitrite	EPA 608 / 8080 PCB's ONLY	VOCs 8260	SVOCs (with PAHs) 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals (Cd, Cr, pb,,Ni,zinc (6010C).	Lead (field filtered 200.8)	RCI	Other: HOLD	Comments
DDP-4-20.5		11/26/08	220	1	Liner		X				X				X	X			X											
DDP-4-23.5		"	230	"	"		"				"					YES													X	
DDP-4-26.5		"	240	"	"		"				"																		X	
DDP-4-29.5		"	250	"	"		"				"				X	x			x											

Relinquished By:	**Date:** 11/26/08	**Time:** 17:26	**Received By:** Enviro Tech T.C.
Relinquished By: Enviro-Tech SR	**Date:** 11/26	**Time:** 2030	**Received By:**
Relinquished By:	**Date:** 11-26	**Time:** 9:50 PM	**Received By:**

ICE/t° 2-6
GOOD CONDITION yes
HEAD SPACE ABSENT ____
DECHLORINATED IN LAB ____ PERSERVED IN LAB ____

PRESERVATION APPROPRIATE	VOAS	O&G	METALS	OTHER
CONTAINERS yes				

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 081188 A **ClientCode: AEL**

☐ WriteOn ☑ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Jeremy Smith
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
(925) 944-2899 FAX (925) 944-2895

Email: jasmith@aeiconsultants.com
cc:
PO: WC081040
ProjectNo: #280346; Alaska Gas

Bill to:
Denise Mockel
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
dmockel@aeiconsultants.com

Requested TAT: 5 days
Date Received: **11/26/2008**
Date Add-On: **12/08/2008**
Date Printed: **12/08/2008**

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
0811887-003	DDP-2-10.5	Soil	11/26/2008 7:50	☐	A	A										
0811887-007	DDP-2-26.5	Soil	11/26/2008 8:10	☐	A	A										
0811887-012	DDP-3-7.5	Soil	11/26/2008 11:10	☐	A	A										
0811887-015	DDP-3-12.5	Soil	11/26/2008 11:30	☐	A	A										
0811887-017	DDP-3-20.5	Soil	11/26/2008 11:50	☐	A	A										
0811887-024	DDP-4-3.5	Soil	11/26/2008 13:55	☐	A	A										

Test Legend:

1	9-OXYS_S	2	G-MBTEX_S	3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Rosa Venegas

Comments: Gmbtex and 9 oxys added on 12/08/08 on a std tat per J.S/ Fax

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.

McCampbell Analytical, Inc.
"When Quality Counts"

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Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/26/08
		Date Received: 11/26/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/08/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed: 12/10/08-12/13/08

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0811887

Lab ID	0811887-003A	0811887-007A	0811887-012A	0811887-015A	Reporting Limit for DF =1	
Client ID	DDP-2-10.5	DDP-2-26.5	DDP-3-7.5	DDP-3-12.5		
Matrix	S	S	S	S		
DF	100	1	100	20	S	W
Compound	**Concentration**				mg/kg	ug/L
tert-Amyl methyl ether (TAME)	ND<0.50	ND	1.1	ND<0.10	0.005	NA
t-Butyl alcohol (TBA)	12	ND	ND<5.0	12	0.05	NA
1,2-Dibromoethane (EDB)	ND<0.40	ND	ND<0.40	ND<0.080	0.004	NA
1,2-Dichloroethane (1,2-DCA)	ND<0.40	ND	ND<0.40	ND<0.080	0.004	NA
Diisopropyl ether (DIPE)	ND<0.50	ND	ND<0.50	ND<0.10	0.005	NA
Ethanol	ND<50	ND	ND<50	ND<10	0.5	NA
Ethyl tert-butyl ether (ETBE)	ND<0.50	ND	ND<0.50	ND<0.10	0.005	NA
Methanol	ND<500	ND	ND<500	ND<100	5.0	NA
Methyl-t-butyl ether (MTBE)	8.0	0.14	11	0.78	0.005	NA
Surrogate Recoveries (%)						
%SS1:	105	103	103	87		
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/26/08
		Date Received: 11/26/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/08/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed: 12/10/08-12/13/08

Oxygenated Volatile Organics + EDB and 1,2-DCA by P&T and GC/MS*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0811887

Lab ID	0811887-017A	0811887-024A			Reporting Limit for DF =1	
Client ID	DDP-3-20.5	DDP-4-3.5				
Matrix	S	S				
DF	2	1			S	W
Compound	**Concentration**				mg/kg	ug/L
tert-Amyl methyl ether (TAME)	ND<0.010	ND			0.005	NA
t-Butyl alcohol (TBA)	ND<0.10	ND			0.05	NA
1,2-Dibromoethane (EDB)	ND<0.0080	ND			0.004	NA
1,2-Dichloroethane (1,2-DCA)	ND<0.0080	ND			0.004	NA
Diisopropyl ether (DIPE)	ND<0.010	ND			0.005	NA
Ethanol	ND<1.0	ND			0.5	NA
Ethyl tert-butyl ether (ETBE)	ND<0.010	ND			0.005	NA
Methanol	ND<10	ND			5.0	NA
Methyl-t-butyl ether (MTBE)	0.18	0.055			0.005	NA
Surrogate Recoveries (%)						
%SS1:	108	106				
Comments						

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or coelutes with another peak; &) low surrogate due to matrix interference.

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants	Client Project ID: #280346; Alaska Gas	Date Sampled: 11/26/08
		Date Received: 11/26/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/08/08
Walnut Creek, CA 94597	Client P.O.: WC081040	Date Analyzed 12/09/08-12/12/08

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0811887

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
003A	DDP-2-10.5	S	14,d1	20	0.045	0.13	0.040	0.14	1	104
007A	DDP-2-26.5	S	ND	0.14	ND	ND	ND	ND	1	97
012A	DDP-3-7.5	S	930,d1	ND<15	1.7	23	11	73	50	---#
015A	DDP-3-12.5	S	ND	1.8	ND	0.0075	ND	0.013	1	91
017A	DDP-3-20.5	S	ND	0.26	ND	ND	ND	ND	1	77
024A	DDP-4-3.5	S	ND	0.067	ND	ND	ND	ND	1	97

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	ug/L
	S	1	0.05	0.005	0.005	0.005	0.005	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

d1) weakly modified or unmodified gasoline is significant

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 40126 WorkOrder 0811887

EPA Method SW8260B **Extraction SW5030B** **Spiked Sample ID: 0812203-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	0.050	85.3	83.5	2.09	88.6	89.6	1.07	60 - 130	30	60 - 130	30
t-Butyl alcohol (TBA)	ND	0.25	85.3	84.1	1.49	93.1	89.9	3.46	60 - 130	30	60 - 130	30
1,2-Dibromoethane (EDB)	ND	0.050	87.5	84.6	3.35	91.4	92.5	1.17	60 - 130	30	60 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	0.050	93.9	92.7	1.30	98.9	97.2	1.78	60 - 130	30	60 - 130	30
Diisopropyl ether (DIPE)	ND	0.050	114	114	0	118	118	0	60 - 130	30	60 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	0.050	101	99	1.48	105	104	0.331	60 - 130	30	60 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	86.4	85.3	1.27	90.3	89	1.48	60 - 130	30	60 - 130	30
%SS1:	84	0.12	91	90	0.787	90	90	0	70 - 130	30	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 40126 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811887-003A	11/26/08 7:50 AM	12/08/08	12/13/08 2:53 PM	0811887-007A	11/26/08 8:10 AM	12/08/08	12/12/08 11:16 PM
0811887-012A	11/26/08 11:10 AM	12/08/08	12/13/08 3:36 PM	0811887-015A	11/26/08 11:30 AM	12/08/08	12/10/08 1:43 AM
0811887-017A	11/26/08 11:50 AM	12/08/08	12/13/08 12:42 AM	0811887-024A	11/26/08 1:55 PM	12/08/08	12/13/08 1:25 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS ELAP Certification 1644

QA/QC Officer

McCampbell Analytical, Inc.
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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil BatchID: 40140 WorkOrder: 0811887

EPA Method SW8021B/8015Cm **Extraction SW5030B** **Spiked Sample ID: 0812281-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	0.60	97.2	96.5	0.803	118	99.9	16.2	70 - 130	20	70 - 130	20
MTBE	ND	0.10	102	96.5	5.14	104	116	11.2	70 - 130	20	70 - 130	20
Benzene	ND	0.10	86.2	89	3.09	94	103	8.89	70 - 130	20	70 - 130	20
Toluene	ND	0.10	78.4	80.3	2.31	84.4	91.9	8.52	70 - 130	20	70 - 130	20
Ethylbenzene	ND	0.10	92.5	95.7	3.47	97.8	104	6.38	70 - 130	20	70 - 130	20
Xylenes	ND	0.30	91.2	94.5	3.52	97	102	5.40	70 - 130	20	70 - 130	20
%SS:	89	0.10	93	102	9.30	96	96	0	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 40140 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0811887-003A	11/26/08 7:50 AM	12/08/08	12/10/08 11:53 PM	0811887-003A	11/26/08 7:50 AM	12/08/08	12/12/08 10:03 AM
0811887-007A	11/26/08 8:10 AM	12/08/08	12/11/08 8:38 PM	0811887-012A	11/26/08 11:10 AM	12/08/08	12/09/08 11:39 AM
0811887-015A	11/26/08 11:30 AM	12/08/08	12/11/08 6:30 PM	0811887-017A	11/26/08 11:50 AM	12/08/08	12/12/08 9:30 AM
0811887-024A	11/26/08 1:55 PM	12/08/08	12/11/08 9:08 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification 1644

QA/QC Officer

Particle Size Distribution Report

% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	4.4	58.5	26.9	10.2

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4 in.	100.0		
3/8 in.	99.0		
#4	95.6		
#10	88.7		
#30	81.3		
#40	75.7		
#50	66.4		
#100	49.6		
#200	37.1		
0.0461 mm.	27.7		
0.0334 mm.	23.2		
0.0215 mm.	20.2		
0.0126 mm.	16.8		
0.0090 mm.	15.3		
0.0064 mm.	14.1		
0.0046 mm.	12.6		
0.0032 mm.	11.1		
0.0023 mm.	10.5		
0.0014 mm.	9.3		

* (no specification provided)

Soil Description

Gray Clayey SAND

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.938 D_{60}= 0.236 D_{50}= 0.153
D_{30}= 0.0522 D_{15}= 0.0083 D_{10}= 0.0018
C_u= 131.21 C_c= 6.41

Classification

USCS= AASHTO=

Remarks

Sample No.: 0811807-021A **Source of Sample:** SB-12-11.5 **Date:**
Location: **Elev./Depth:**

COOPER TESTING LABORATORY

Client: McCampbell Analytical, Inc.
Project: Alaska Gas, 6211 San Pablo Avenue - 280346

Project No: 385-042 **Figure**

Particle Size Distribution Report

% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	18.5	45.6	21.1	14.8

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4 in.	100.0		
3/8 in.	89.3		
#4	81.5		
#10	66.6		
#30	57.2		
#40	54.2		
#50	50.5		
#100	45.6		
#200	35.9		
0.0409 mm.	32.1		
0.0299 mm.	28.9		
0.0197 mm.	25.0		
0.0117 mm.	22.1		
0.0084 mm.	20.4		
0.0060 mm.	18.8		
0.0043 mm.	17.5		
0.0031 mm.	15.9		
0.0022 mm.	15.1		
0.0014 mm.	13.1		

* (no specification provided)

Soil Description

Olive Gray Clayey SAND w/ Gravel

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 6.36 D_{60}= 0.958 D_{50}= 0.282
D_{30}= 0.0331 D_{15}= 0.0021 D_{10}=
C_u= C_c=

Classification

USCS= AASHTO=

Remarks

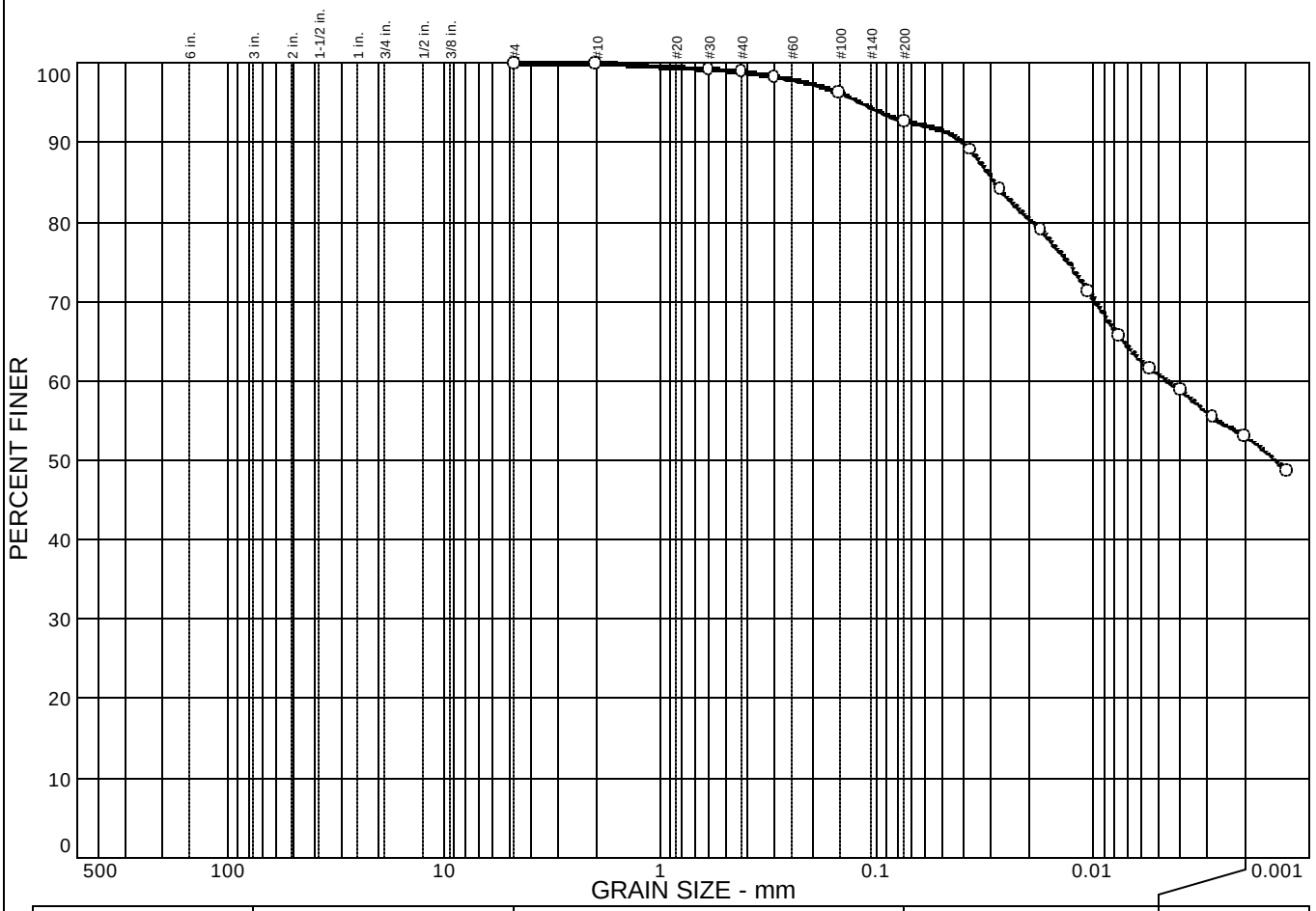
Sample No.: 0811807-009A **Source of Sample:** DDP-1-10 **Date:**
Location: **Elev./Depth:**

COOPER TESTING LABORATORY

Client: McCampbell Analytical, Inc.
Project: Alaska Gas, 6211 San Pablo Avenue - 280346

Project No: 385-040 **Figure**

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	7.3	39.6	53.1

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	100.0		
#30	99.2		
#40	98.9		
#50	98.3		
#100	96.3		
#200	92.7		
0.0371 mm.	89.1		
0.0270 mm.	84.1		
0.0176 mm.	79.0		
0.0105 mm.	71.2		
0.0077 mm.	65.7		
0.0055 mm.	61.6		
0.0039 mm.	58.8		
0.0028 mm.	55.4		
0.0020 mm.	53.1		
0.0013 mm.	48.6		

* (no specification provided)

Soil Description

Gray CLAY

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.0286 D_{60}= 0.0046 D_{50}= 0.0014
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= AASHTO=

Remarks

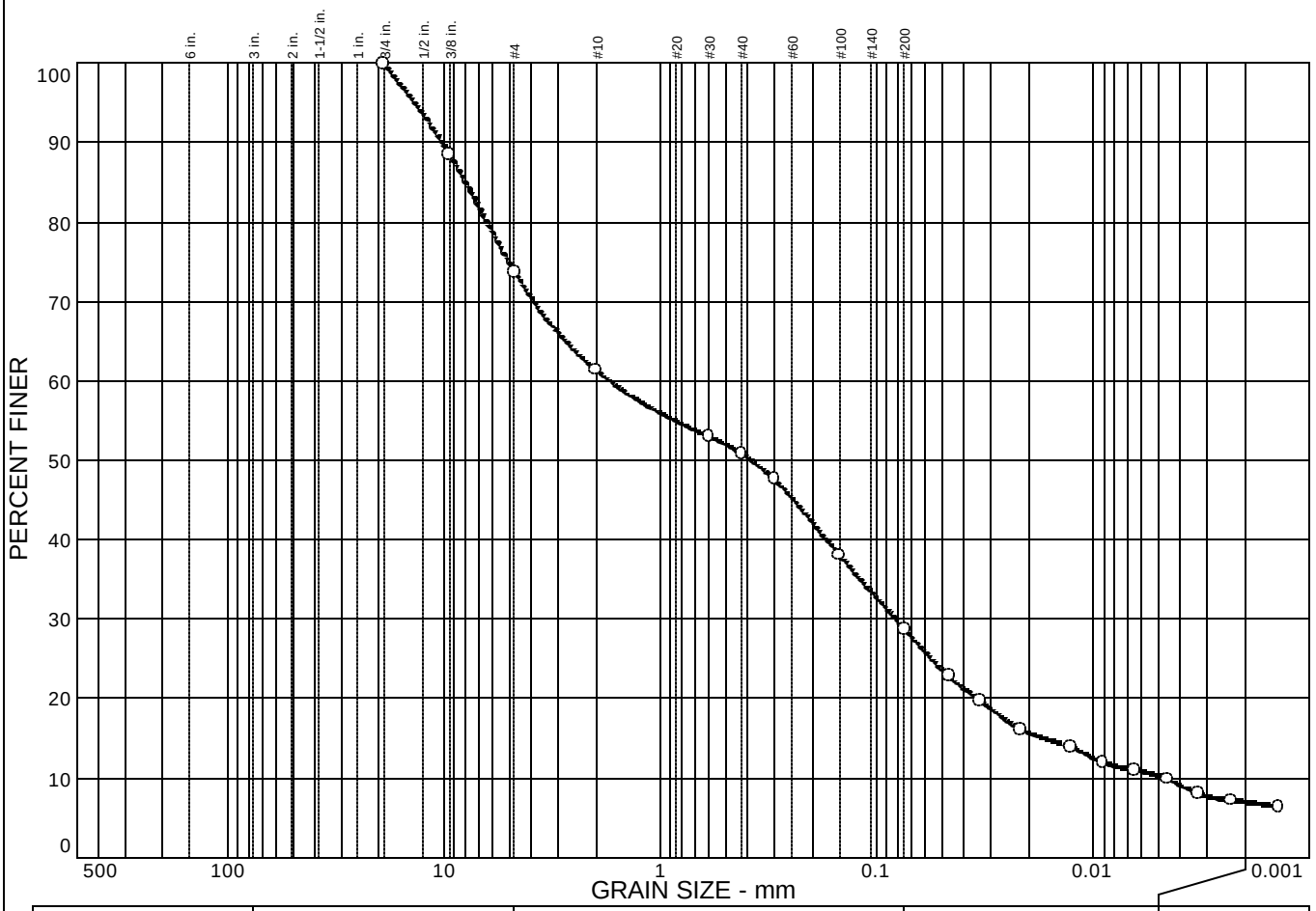
Sample No.: 0811807-007A **Source of Sample:** DDP-1-6 **Date:**
Location: **Elev./Depth:**

COOPER TESTING LABORATORY

Client: McCampbell Analytical, Inc.
Project: Alaska Gas, 6211 San Pablo Avenue - 280346

Project No: 385-040 **Figure**

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	26.3	44.9	21.8	7.0

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
3/4 in.	100.0		
3/8 in.	88.6		
#4	73.7		
#10	61.4		
#30	53.0		
#40	50.9		
#50	47.6		
#100	38.1		
#200	28.8		
0.0466 mm.	22.8		
0.0336 mm.	19.8		
0.0217 mm.	16.1		
0.0127 mm.	13.9		
0.0091 mm.	12.0		
0.0065 mm.	11.0		
0.0046 mm.	9.9		
0.0033 mm.	8.0		
0.0023 mm.	7.2		
0.0014 mm.	6.4		

* (no specification provided)

Soil Description

MOttled Olive Clayey SAND w/ Gravel

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 8.01 D_{60}= 1.72 D_{50}= 0.380
D_{30}= 0.0820 D_{15}= 0.0170 D_{10}= 0.0047
C_u= 367.81 C_c= 0.83

Classification

USCS= AASHTO=

Remarks

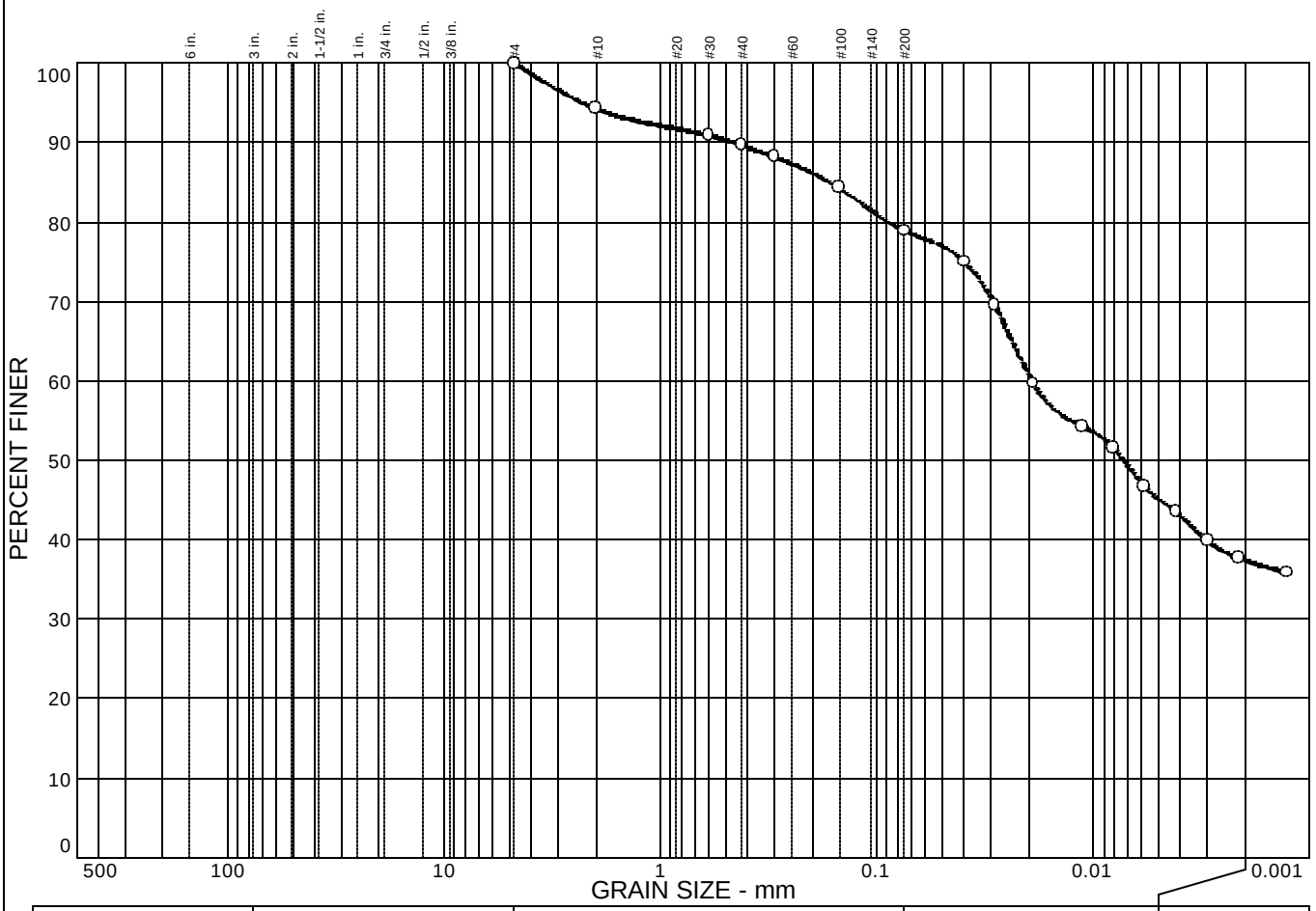
Sample No.: 0811887-013A **Source of Sample:** DDP-3-10 **Date:**
Location: **Elev./Depth:**

COOPER TESTING LABORATORY

Client: McCampbell Analytical, Inc.
Project: Alaska Gas - 280346

Project No: 385-041 **Figure**

Particle Size Distribution Report



% COBBLES	% GRAVEL	% SAND	% SILT	% CLAY
0.0	0.0	21.1	41.5	37.4

SIEVE SIZE	PERCENT FINER	SPEC.* PERCENT	PASS? (X=NO)
#4	100.0		
#10	94.3		
#30	90.9		
#40	89.7		
#50	88.2		
#100	84.3		
#200	78.9		
0.0396 mm.	75.0		
0.0288 mm.	69.6		
0.0191 mm.	59.7		
0.0113 mm.	54.3		
0.0081 mm.	51.6		
0.0058 mm.	46.7		
0.0042 mm.	43.5		
0.0030 mm.	39.9		
0.0021 mm.	37.7		
0.0013 mm.	35.9		

* (no specification provided)

Soil Description

Gray CLAY w/ Sand & CaCO3

Atterberg Limits

PL= LL= PI=

Coefficients

D_{85}= 0.165 D_{60}= 0.0194 D_{50}= 0.0072
D_{30}= D_{15}= D_{10}=
C_u= C_c=

Classification

USCS= AASHTO=

Remarks

Sample No.: 0811887-011A **Source of Sample:** DDP-3-5.5 **Date:**
Location: **Elev./Depth:**

COOPER TESTING LABORATORY

Client: McCampbell Analytical, Inc.
Project: Alaska Gas - 280346

Project No: 385-041 **Figure**

McCampbell Analytical, Inc.
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1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #280346; Alaska Gasoline	Date Sampled: 12/03/08
		Date Received: 12/03/08
	Client Contact: Jeremy Smith	Date Reported: 12/12/08
	Client P.O.: #WC081083	Date Completed: 12/12/08

WorkOrder: 0812127

December 12, 2008

Dear Jeremy:

Enclosed within are:

1) The results of the **7** analyzed samples from your project: **#280346; Alaska Gasoline,**
2) A QC report for the above samples,
3) A copy of the chain of custody, and
4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

McCAMPBELL ANALYTICAL INC.

1534 Willow Pass Road
Pittsburg, CA 94565-1701
www.main@mccampbell.com
Telephone: (925) 252-9262 Fax: (925) 252-9269

0812127

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAY ☑

EDF Required? Coelt (Normal) No **Write On (DW)** No

Report To: Jeremy Smith	**Bill To:** P.O. No. WC081083
Company: AEI Consultants	
2500 Camino Diablo	
Walnut Creek, CA	**E-Mail:** jasmith@aeiconsultants.com
Tele: (925) 746-6028	**Fax:** (925) 944-2895
Project #: 280346	**Project Name:** Alaska Gasoline
Project Location: 6211 San Pablo Avenue, Oakland, CA	
Sampler Signature: John Sigg	

Lab Use Only

Pressurized By	Date	Pressurization Gas	
		N2	He

Notes: Isopropyl Alcohol as Leak Check Compound – report as detected or not detected at 10 ug/L

Field Sample ID (Location)	Collection Date	Collection Time	Canister SN#	Sampler Kit SN#	Analysis Requested	Indoor Air	Soil Gas	Canister Pressure/Vacuum Initial	Final	Receipt	Final (psi)
SG-1-3	12/3	0837	5803	MAN316-715	TO3 (TPHg) TO15 (BTEX MTBE)		X				
SG-1-6	"	0859	5800	MAN316-722	"						
SG-2-3	"	1011	5801	MAN316-717	"						
SG-2-6	"	1037	5809	MAN316-721	"						
SG-3-3	"	1130	5806	MAN316-720	"						
SG-3-6	"	1146	5802	MAN316-725	"						
SG-3-6-DUP	"	1200	5804	MAN316-714	"						

Relinquished By:	Date:	Time:	Received By:
John Sigg	12/3/08	1355	K. Burton

Temp (°C): N/A Work Order #: 0812127

Condition: Good

Custody Seals Intact?: Yes ____ No ____ None ✓

Shipped Via: Client DROP-IN

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0812127 **ClientCode: AEL**

☐ WriteOn ☑ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Jeremy Smith
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
(925) 944-2899 FAX (925) 944-2895

Email: jasmith@aeiconsultants.com
cc:
PO: #WC081083
ProjectNo: #280346; Alaska Gasoline

Bill to:
Denise Mockel
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
dmockel@aeiconsultants.com

Requested TAT: 5 days

Date Received: **12/03/2008**
Date Printed: **12/08/2008**

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
0812127-001	SG-1-3	Soil Vapor	12/3/2008 8:37	☐	A		A									
0812127-002	SG-1-6	Soil Vapor	12/3/2008 8:59	☐		A										
0812127-003	SG-2-3	Soil Vapor	12/3/2008 10:11	☐		A										
0812127-004	SG-2-6	Soil Vapor	12/3/2008 10:37	☐		A										
0812127-005	SG-3-3	Soil Vapor	12/3/2008 11:30	☐		A										
0812127-006	SG-3-6	Soil Vapor	12/3/2008 11:46	☐		A										
0812127-007	SG-3-6-Dup	Soil Vapor	12/3/2008 12:00	☐		A										

Test Legend:

1	PREDF REPORT	2	TO15-GMBTEX_SOILGAS	3	TO3_SOILGAS	4		5	
6		7		8		9		10	
11		12							

The following SampIDs: 001A, 002A, 003A, 004A, 005A, 006A, 007A contain testgroup.

Prepared by: Samantha Arbuckle

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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Sample Receipt Checklist

Client Name: **AEI Consultants**

Date and Time Received: **12/3/08 10:28:16 PM**

Project Name: **#280346; Alaska Gasoline**

Checklist completed and reviewed by: Samantha Arbuckle

WorkOrder N°: **0812127** Matrix Soil Vapor

Carrier: Client Drop-In

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 ☐	
Container/Temp Blank temperature	Cooler Temp:		NA ☑
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	No VOA vials submitted ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
TTLC Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☐	No ☑	

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

Client contacted: Date contacted: Contacted by:

Comments:

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AEI Consultants 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #280346; Alaska Gasoline	Date Sampled: 12/03/08
		Date Received: 12/03/08
	Client Contact: Jeremy Smith	Date Reported: 12/12/08
	Client P.O.: #WC081083	Date Completed: 12/16/08

Work Order: 0812127

December 17, 2008

RE: Leak Check Compound (Isopropyl Alcohol) for MAI Lab ID# 0812127-002A and -004A.

These two samples have a huge gas pattern that interfered with Isopropyl Alcohol's quantitation therefore, IPA was reported as an estimated..

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AEI Consultants	Client Project ID: #280346; Alaska Gasoline	Date Sampled: 12/03/08
		Date Received: 12/03/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/08/08-12/09/08
Walnut Creek, CA 94597	Client P.O.: #WC081083	Date Analyzed 12/08/08-12/09/08

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction Method: SW5030B Analytical Method: SW8021B/8015Cm Work Order: 0812127

Lab ID	0812127-002A	0812127-004A	0812127-005A	0812127-006A	Reporting Limit for DF =1 and Pressure Ratio (Final/Initial) = 2	
Client ID	SG-1-6	SG-2-6	SG-3-3	SG-3-6		
Matrix	Soil Vapor	Soil Vapor	Soil Vapor	Soil Vapor		
Initial Pressure (psia)	11.38	11.5	12.86	11.8		
Final Pressure (psia)	22.7	23	25.7	23.58		
DF	20	20	1	1	Soil Vapor	W
Compound	**Concentration**				µg/m³	ug/L
TPH(g)	43,000,000	38,000,000	470,000	1,200,000	50000	NA
MTBE	ND<110,000	ND<290,000	ND<1200	ND<15,000	5000	NA
Benzene	12,000	41,000	ND<140	890	500	NA
Toluene	480,000	370,000	10,000	26,000	500	NA
Ethylbenzene	ND<7600	ND<5400	ND<120	ND<1.5	500	NA
Xylenes	21,000	ND<8000	750	2300	500	NA
Surrogate Recoveries (%)						
%SS:	94	119	102	123		
Comments	a3	a3	a3	a3		

*vapor samples in µg/m³.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

a3) sample diluted due to high organic content / matrix interference.

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AEI Consultants	Client Project ID: #280346; Alaska Gasoline	Date Sampled: 12/03/08
		Date Received: 12/03/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/08/08-12/09/08
Walnut Creek, CA 94597	Client P.O.: #WC081083	Date Analyzed 12/08/08-12/09/08

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction Method: SW5030B Analytical Method: SW8021B/8015Cm Work Order: 0812127

Lab ID	0812127-007A				Reporting Limit for DF =1 and Pressure Ratio (Final/Initial) = 2		
Client ID	SG-3-6-Dup						
Matrix	Soil Vapor						
Initial Pressure (psia)	11.45						
Final Pressure (psia)	22.8						
DF	1					Soil Vapor	W
Compound	**Concentration**					µg/m³	ug/L
TPH(g)	440,000					50000	NA
MTBE	ND<17,000					5000	NA
Benzene	570					500	NA
Toluene	8800					500	NA
Ethylbenzene	ND<390					500	NA
Xylenes	1100					500	NA
Surrogate Recoveries (%)							
%SS:	104						
Comments	a3						

*vapor samples in µg/m³.

cluttered chromatogram; sample peak coelutes with surrogate peak.

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a3) sample diluted due to high organic content / matrix interference.

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AEI Consultants	Client Project ID: #280346; Alaska Gasoline	Date Sampled: 12/03/08
		Date Received: 12/03/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/08/08-12/09/08
Walnut Creek, CA 94597	Client P.O.: #WC081083	Date Analyzed 12/08/08-12/09/08

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction Method: SW5030B Analytical Method: SW8021B/8015Cm Work Order: 0812127

Lab ID	0812127-002A	0812127-004A	0812127-005A	0812127-006A	Reporting Limit for DF =1 and Pressure Ratio (Final/Initial) = 2	
Client ID	SG-1-6	SG-2-6	SG-3-3	SG-3-6		
Matrix	Soil Vapor	Soil Vapor	Soil Vapor	Soil Vapor		
Initial Pressure (psia)	11.38	11.5	12.86	11.8		
Final Pressure (psia)	22.7	23	25.7	23.58		
DF	20	20	1	1	Soil Vapor	W
Compound	**Concentration**				nL/L	ug/L
TPH(g)	12,000,000	11,000,000	130,000	340,000	14000	NA
MTBE	ND<29,000	ND<77,000	ND<330	ND<4200	1400	NA
Benzene	3600	13,000	ND<44	270	160	NA
Toluene	130,000	97,000	2700	6800	130	NA
Ethylbenzene	ND<1,800	ND<1200	ND<29	ND<0.36	120	NA
Xylenes	4700	ND<1900	170	520	120	NA
Surrogate Recoveries (%)						
%SS:	94	119	102	123		
Comments	a3	a3	a3	a3		

*vapor samples in nL/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

a3) sample diluted due to high organic content / matrix interference.

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Angela Rydelius, Lab Manager

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AEI Consultants	Client Project ID: #280346; Alaska Gasoline	Date Sampled: 12/03/08
		Date Received: 12/03/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/08/08-12/09/08
Walnut Creek, CA 94597	Client P.O.: #WC081083	Date Analyzed 12/08/08-12/09/08

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction Method: SW5030B Analytical Method: SW8021B/8015Cm Work Order: 0812127

Lab ID	0812127-007A				Reporting Limit for DF =1 and Pressure Ratio (Final/Initial) = 2		
Client ID	SG-3-6-Dup						
Matrix	Soil Vapor						
Initial Pressure (psia)	11.45						
Final Pressure (psia)	22.8						
DF	1					Soil Vapor	W
Compound	**Concentration**					nL/L	ug/L
TPH(g)	120,000					14000	NA
MTBE	ND<4400					1400	NA
Benzene	170					160	NA
Toluene	2300					130	NA
Ethylbenzene	ND<89					120	NA
Xylenes	240					120	NA
Surrogate Recoveries (%)							
%SS:	104						
Comments	a3						

*vapor samples in nL/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

a3) sample diluted due to high organic content / matrix interference.

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AEI Consultants	Client Project ID: #280346; Alaska Gasoline	Date Sampled: 12/03/08
		Date Received: 12/03/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/04/08-12/12/08
Walnut Creek, CA 94597	Client P.O.: #WC081083	Date Analyzed 12/04/08-12/12/08

Leak Check Compound*

Extraction method: TO15 Analytical methods: TO15 Work Order: 0812127

Lab ID	Client ID	Matrix	Initial Pressure	Final Pressure	Isopropyl Alcohol	DF	% SS
001A	SG-1-3	Soil Vapor	12.56	25.1	ND	1	N/A
002A	SG-1-6	Soil Vapor	11.38	22.7	ND,j1	1	N/A
003A	SG-2-3	Soil Vapor	10.44	20.88	ND	4	N/A
004A	SG-2-6	Soil Vapor	11.5	23	ND,j1	1	N/A
005A	SG-3-3	Soil Vapor	12.86	25.7	ND	1	N/A
006A	SG-3-6	Soil Vapor	11.8	23.58	ND	1	N/A
007A	SG-3-6-Dup	Soil Vapor	11.45	22.8	ND	1	N/A

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	psia	psia	NA	NA
	Soil Vapor	psia	psia	10	µg/L

* leak check compound is reported in µg/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

The IPA reference is:

DTSC, Advisory-Active Soil Gas Investigations, January 28, 2003, page 10, section 2.4.2:

"Tracer compounds, such as ...isopropanol..., may be used as leak check compounds, if a detection limit of 10 ug/L or less can be achieved."
This implies that 10 µg/L is the cut off definition for a leak, which equals 10,000 µg/m³.
The other low IPA hits may be due to extremely small leaks or may be naturally occuring in soil gas, particularly at biologically active sites.

j1) see attached narrative

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AEI Consultants	Client Project ID: #280346; Alaska Gasoline	Date Sampled: 12/03/08
		Date Received: 12/03/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/04/08-12/12/08
Walnut Creek, CA 94597	Client P.O.: #WC081083	Date Analyzed 12/04/08-12/12/08

Volatile Organic Compounds in µg/m³*

Extraction Method: TO15 Analytical Method: TO15 Work Order: 0812127

Lab ID	0812127-001A	0812127-003A			Reporting Limit for DF =1 and Pressure Ratio (Final/Initial) = 2	
Client ID	SG-1-3	SG-2-3				
Matrix	Soil Vapor	Soil Vapor				
Initial Pressure (psia)	12.56	10.44				
Final Pressure (psia)	25.1	20.88				
DF	1	4			Soil Vapor	W
Compound	**Concentration**				µg/m³	ug/L
Benzene	ND	ND<26			6.5	NA
Ethylbenzene	10	ND<35			8.8	NA
Methyl-t-butyl ether (MTBE)	ND	470			7.3	NA
Toluene	25	ND<31			7.7	NA
Xylenes	39	ND<110			27	NA
Surrogate Recoveries (%)						
%SS1:	77	94				
%SS2:	70	97				
%SS3:	76	96				
Comments						

*vapor samples are reported in µg/m³.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

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AEI Consultants	Client Project ID: #280346; Alaska Gasoline	Date Sampled: 12/03/08
		Date Received: 12/03/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/04/08-12/12/08
Walnut Creek, CA 94597	Client P.O.: #WC081083	Date Analyzed 12/04/08-12/12/08

Volatile Organic Compounds in nL/L*

Extraction Method: TO15 Analytical Method: TO15 Work Order: 0812127

Lab ID	0812127-001A	0812127-003A			Reporting Limit for DF =1 and Pressure Ratio (Final/Initial) = 2	
Client ID	SG-1-3	SG-2-3				
Matrix	Soil Vapor	Soil Vapor				
Initial Pressure (psia)	12.56	10.44				
Final Pressure (psia)	25.1	20.88				
DF	1	4			Soil Vapor	W
Compound	**Concentration**				nL/L	ug/L
Benzene	ND	ND<8.0			2.0	NA
Ethylbenzene	2.4	ND<8.0			2.0	NA
Methyl-t-butyl ether (MTBE)	ND	130			2.0	NA
Toluene	6.6	ND<8.0			2.0	NA
Xylenes	8.8	ND<24			6.0	NA
Surrogate Recoveries (%)						
%SS1:	77	94				
%SS2:	70	97				
%SS3:	76	96				
Comments						

*vapor samples are reported in nL/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

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AEI Consultants	Client Project ID: #280346; Alaska Gasoline	Date Sampled: 12/03/08
		Date Received: 12/03/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/10/08-12/11/08
Walnut Creek, CA 94597	Client P.O.: #WC081083	Date Analyzed 12/10/08-12/11/08

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline in µg/m³*

Extraction method TO3 Analytical methods TO3 Work Order: 0812127

Lab ID	Client ID	Matrix	Initial Pressure	Final Pressure	TPH(g)	DF	% SS
001A	SG-1-3	Soil Vapor	12.56	25.1	20,000	1	N/A
003A	SG-2-3	Soil Vapor	10.44	20.88	18,000	1	N/A

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	psia	psia	NA	NA
	Soil Vapor	psia	psia	1800	µg/m³

*soil vapor samples are reported in µg/m³.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

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AEI Consultants	Client Project ID: #280346; Alaska Gasoline	Date Sampled: 12/03/08
		Date Received: 12/03/08
2500 Camino Diablo, Ste. #200	Client Contact: Jeremy Smith	Date Extracted: 12/10/08-12/11/08
Walnut Creek, CA 94597	Client P.O.: #WC081083	Date Analyzed 12/10/08-12/11/08

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline in nL/L*

Extraction method TO3 Analytical methods TO3 Work Order: 0812127

Lab ID	Client ID	Matrix	Initial Pressure	Final Pressure	TPH(g)	DF	% SS
001A	SG-1-3	Soil Vapor	12.56	25.1	5500	1	N/A
003A	SG-2-3	Soil Vapor	10.44	20.88	4900	1	N/A

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	psia	psia	NA	NA
	Soil Vapor	psia	psia	500	nL/L

*soil vapor samples are reported in nL/L.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

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Angela Rydelius, Lab Manager

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"When Quality Counts"

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Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil Vapor QC Matrix: Water BatchID: 40135 WorkOrder 0812127

EPA Method SW8021B/8015Cm **Extraction SW5030B** **Spiked Sample ID: 0812226-001A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
MTBE	ND	10	112	103	8.55	114	113	0.687	70 - 130	20	70 - 130	20
Benzene	ND	10	97.2	104	6.77	101	100	0.385	70 - 130	20	70 - 130	20
Toluene	ND	10	108	115	6.10	111	111	0	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	105	111	5.13	109	109	0	70 - 130	20	70 - 130	20
Xylenes	ND	30	116	122	4.83	120	120	0	70 - 130	20	70 - 130	20
%SS:	94	10	95	97	2.47	100	96	4.31	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 40135 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0812127-002A	12/03/08 8:59 AM	12/08/08	12/08/08 6:45 PM	0812127-004A	12/03/08 10:37 AM	12/08/08	12/08/08 7:53 PM
0812127-005A	12/03/08 11:30 AM	12/09/08	12/09/08 7:49 PM	0812127-006A	12/03/08 11:46 AM	12/09/08	12/09/08 8:23 PM
0812127-007A	12/03/08 12:00 PM	12/09/08	12/09/08 10:38 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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QA/QC Officer

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QC SUMMARY REPORT FOR TO15

W.O. Sample Matrix: Soil Vapor QC Matrix: Soil Vapor BatchID: 40081 WorkOrder 0812127

EPA Method TO15 **Extraction TO15** **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Acrylonitrile	N/A	25	N/A	N/A	N/A	90.2	86.4	4.32	N/A	N/A	70 - 130	30
tert-Amyl methyl ether (TAME)	N/A	25	N/A	N/A	N/A	95.1	110	14.2	N/A	N/A	70 - 130	30
Benzene	N/A	25	N/A	N/A	N/A	98.2	112	12.8	N/A	N/A	70 - 130	30
Benzyl chloride	N/A	25	N/A	N/A	N/A	94.6	110	15.4	N/A	N/A	70 - 130	30
Bromodichloromethane	N/A	25	N/A	N/A	N/A	102	120	16.0	N/A	N/A	70 - 130	30
Bromoform	N/A	25	N/A	N/A	N/A	93.3	98.2	5.11	N/A	N/A	70 - 130	30
1,3-Butadiene	N/A	25	N/A	N/A	N/A	112	99.5	11.6	N/A	N/A	70 - 130	30
t-Butyl alcohol (TBA)	N/A	25	N/A	N/A	N/A	70.5	81.1	14.1	N/A	N/A	70 - 130	30
Carbon Disulfide	N/A	25	N/A	N/A	N/A	88.4	97.4	9.60	N/A	N/A	70 - 130	30
Carbon Tetrachloride	N/A	25	N/A	N/A	N/A	84.6	97.5	14.3	N/A	N/A	70 - 130	30
Chlorobenzene	N/A	25	N/A	N/A	N/A	96.6	105	8.23	N/A	N/A	70 - 130	30
Chloroform	N/A	25	N/A	N/A	N/A	91.8	101	9.60	N/A	N/A	70 - 130	30
Chloromethane	N/A	25	N/A	N/A	N/A	92.1	90	2.36	N/A	N/A	70 - 130	30
Dibromochloromethane	N/A	25	N/A	N/A	N/A	79.9	88.1	9.83	N/A	N/A	70 - 130	30
1,2-Dibromo-3-chloropropane	N/A	25	N/A	N/A	N/A	85.2	94.1	9.84	N/A	N/A	70 - 130	30
1,2-Dibromoethane (EDB)	N/A	25	N/A	N/A	N/A	92.7	106	13.2	N/A	N/A	70 - 130	30
1,2-Dichlorobenzene	N/A	25	N/A	N/A	N/A	89.7	98.1	8.90	N/A	N/A	70 - 130	30
1,3-Dichlorobenzene	N/A	25	N/A	N/A	N/A	94	101	7.40	N/A	N/A	70 - 130	30
1,4-Dichlorobenzene	N/A	25	N/A	N/A	N/A	95.5	103	7.77	N/A	N/A	70 - 130	30
Dichlorodifluoromethane	N/A	25	N/A	N/A	N/A	92.9	105	12.2	N/A	N/A	70 - 130	30
1,1-Dichloroethane	N/A	25	N/A	N/A	N/A	92.1	98.6	6.83	N/A	N/A	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	N/A	25	N/A	N/A	N/A	86.8	96.7	10.8	N/A	N/A	70 - 130	30
1,1-Dichloroethene	N/A	25	N/A	N/A	N/A	89.9	98.8	9.45	N/A	N/A	70 - 130	30
cis-1,2-Dichloroethene	N/A	25	N/A	N/A	N/A	98.4	104	5.29	N/A	N/A	70 - 130	30
trans-1,2-Dichloroethene	N/A	25	N/A	N/A	N/A	101	110	8.97	N/A	N/A	70 - 130	30
1,2-Dichloropropane	N/A	25	N/A	N/A	N/A	85.9	99.5	14.7	N/A	N/A	70 - 130	30
cis-1,3-Dichloropropene	N/A	25	N/A	N/A	N/A	90.3	104	13.7	N/A	N/A	70 - 130	30
trans-1,3-Dichloropropene	N/A	25	N/A	N/A	N/A	94	104	10.3	N/A	N/A	70 - 130	30
1,2-Dichloro-1,1,2,2-tetrafluoroetha	N/A	25	N/A	N/A	N/A	101	108	6.72	N/A	N/A	70 - 130	30
Diisopropyl ether (DIPE)	N/A	25	N/A	N/A	N/A	103	94.1	8.60	N/A	N/A	70 - 130	30
1,4-Dioxane	N/A	25	N/A	N/A	N/A	74.2	86.7	15.5	N/A	N/A	70 - 130	30

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

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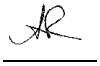
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QC SUMMARY REPORT FOR TO15

W.O. Sample Matrix: Soil Vapor QC Matrix: Soil Vapor BatchID: 40081 WorkOrder 0812127

EPA Method TO15 **Extraction TO15** **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Ethyl acetate	N/A	25	N/A	N/A	N/A	105	100	4.55	N/A	N/A	70 - 130	30
Ethyl tert-butyl ether (ETBE)	N/A	25	N/A	N/A	N/A	95.4	98.6	3.34	N/A	N/A	70 - 130	30
Ethylbenzene	N/A	25	N/A	N/A	N/A	102	113	9.95	N/A	N/A	70 - 130	30
4-Ethyltoluene	N/A	25	N/A	N/A	N/A	109	113	3.61	N/A	N/A	70 - 130	30
Freon 113	N/A	25	N/A	N/A	N/A	103	107	4.01	N/A	N/A	70 - 130	30
Hexachlorobutadiene	N/A	25	N/A	N/A	N/A	87.9	103	15.8	N/A	N/A	70 - 130	30
4-Methyl-2-pentanone (MIBK)	N/A	25	N/A	N/A	N/A	95.3	94.3	1.12	N/A	N/A	70 - 130	30
Methyl-t-butyl ether (MTBE)	N/A	25	N/A	N/A	N/A	97.8	107	8.97	N/A	N/A	70 - 130	30
Methylene chloride	N/A	25	N/A	N/A	N/A	78.4	85.2	8.20	N/A	N/A	70 - 130	30
Naphthalene	N/A	25	N/A	N/A	N/A	95.4	106	10.7	N/A	N/A	70 - 130	30
Styrene	N/A	25	N/A	N/A	N/A	90	96.4	6.90	N/A	N/A	70 - 130	30
1,1,1,2-Tetrachloroethane	N/A	25	N/A	N/A	N/A	102	110	7.90	N/A	N/A	70 - 130	30
1,1,2,2-Tetrachloroethane	N/A	25	N/A	N/A	N/A	90.4	100	10.1	N/A	N/A	70 - 130	30
Tetrachloroethene	N/A	25	N/A	N/A	N/A	98.9	106	7.27	N/A	N/A	70 - 130	30
Tetrahydrofuran	N/A	25	N/A	N/A	N/A	77	92.5	18.3	N/A	N/A	70 - 130	30
Toluene	N/A	25	N/A	N/A	N/A	92.7	103	10.4	N/A	N/A	70 - 130	30
1,2,4-Trichlorobenzene	N/A	25	N/A	N/A	N/A	80.3	90.4	11.8	N/A	N/A	70 - 130	30
1,1,1-Trichloroethane	N/A	25	N/A	N/A	N/A	98.1	114	14.8	N/A	N/A	70 - 130	30
1,1,2-Trichloroethane	N/A	25	N/A	N/A	N/A	89.1	100	11.8	N/A	N/A	70 - 130	30
Trichloroethene	N/A	25	N/A	N/A	N/A	99.5	110	10.1	N/A	N/A	70 - 130	30
Trichlorofluoromethane	N/A	25	N/A	N/A	N/A	93.7	99.7	6.19	N/A	N/A	70 - 130	30
1,2,4-Trimethylbenzene	N/A	25	N/A	N/A	N/A	98.9	109	9.74	N/A	N/A	70 - 130	30
1,3,5-Trimethylbenzene	N/A	25	N/A	N/A	N/A	97.7	110	11.8	N/A	N/A	70 - 130	30
Vinyl Chloride	N/A	25	N/A	N/A	N/A	111	117	5.28	N/A	N/A	70 - 130	30
Xylenes	N/A	75	N/A	N/A	N/A	103	110	6.33	N/A	N/A	70 - 130	30
%SS1:	N/A	500	N/A	N/A	N/A	75	83	10.3	N/A	N/A	70 - 130	30
%SS2:	N/A	500	N/A	N/A	N/A	78	85	9.09	N/A	N/A	70 - 130	30
%SS3:	N/A	500	N/A	N/A	N/A	73	84	14.7	N/A	N/A	70 - 130	30

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

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QC SUMMARY REPORT FOR TO15

W.O. Sample Matrix: Soil Vapor QC Matrix: Soil Vapor BatchID: 40081 WorkOrder 0812127

EPA Method TO15 **Extraction TO15** **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	nL/L	nL/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD

BATCH 40081 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0812127-001A	12/03/08 8:37 AM	12/04/08	12/04/08 6:40 PM	0812127-003A	12/03/08 10:11 AM	12/12/08	12/12/08 11:38 AM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

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