September 25 2008

CONFIRMATION INVESTIGATION REPORT

Cruise America, Inc.
796 66th Avenue
Oakland, California

Project No. 278361
ACEHS Toxics Case # RO0002449

Prepared On Behalf Of

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1.0 INTRODUCTION

AEI Consultants (AEI) has prepared this report on behalf of Cruise America Inc. (Cruise America), for the property located at 796 66th Avenue, Oakland, California (Figure 1: Site Location Map). AEI has been retained by Cruise America to provide environmental engineering and consulting services associated with the release of gasoline from a former UST on the property. Since 2002, the release has been investigated under the regulatory oversight of Alameda County Environmental Health Services (ACEHS) under Toxics case # RO0002449.

This report summarizes the Confirmation Investigation at the above referenced site, which was designed to evaluate this site for case closure.

2.0 SITE DESCRIPTION

The site is currently occupied by Cruise America, a recreational vehicle (RV) rental facility. The property is approximately five acres in size. Currently, two buildings exist on the site, surrounded by paved vehicle storage areas. The buildings consist of an office building located on the eastern side of the property and a service building located centrally on the property (Figure 2). Cruise America acquired the property from McGuire Hester, a construction company, in August 1988.

2.1 Initial Investigation

In July 2001, AEI performed a Phase II investigation on the site that included advancing six (6) soil borings (SB-1 through SB-6). The investigation was performed to assess whether the soil or groundwater beneath the site was impacted in the areas of two former UST holds that were utilized by McGuire Hester. Refer to historical documents and summary reference in the April 23, 2008 *Response to Comment*s – Confirmation Investigation Work Plan for additional information pre-Cruise America site conditions. These USTs were removed prior to occupancy of the site by Cruise America. The former location of these UST holds are shown on Figure 2. Although low concentrations of Total Petroleum Hydrocarbons as gasoline (TPH-g) and diesel (TPH-d) were reported in the groundwater, high levels of Methyl tertiary-Butyl Ether (MTBE) were detected in boring SB-1.

In September of 2001, AEI advanced five (5) additional soil borings (SB-7 through SB-11) in order to determine the source of the high levels of MTBE found in SB-1. Samples collected from SB-7 and SB-8 did not contain MTBE above laboratory reporting limits. MTBE concentrations ranged from 630 micrograms per liter (µg/L) in SB-9 to 13,000 µg/L in SB-10. These data indicated a leak in the remaining 10,000-gallon gasoline UST on the southern portion of the property as the most likely source of the MTBE.

Soil and groundwater sample analytical data from the 2001 work is presented in Tables 1 and 3, respectively.

2.2 Tank Removal

AEI removed the 10,000-gallon gasoline UST in November of 2001. Concentrations of TPH-g in four of the five soil samples ranged from 4.1 milligrams per kilogram (mg/kg) to 280 mg/kg. Concentrations of MTBE and Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) were also detected in the five soil samples. The highest concentrations of MTBE and Benzene detected in the soil during the tank removal were 53 mg/kg and 13 mg/kg, respectively, detected along the southern and eastern sidewalls of the excavation at approximately 6.5 feet below ground surface (bgs). Elevated concentrations of TPH-g and MTBE were present in the groundwater sample at concentrations of 44,000 µg/L and 42,000 µg/L, respectively.

Soil and groundwater sample analytical data from the tank removal is presented in Tables 1 and 3, respectively.

2.3 Groundwater Investigation

Following removal of the tank, the Alameda County Health Care Services Agency (ACHCSA) requested further investigation of the release from the 10,000 gallon UST. On September 6, 2002, six (6) soil borings (SB-12 through SB-17) were advanced. The data from these soil borings was used to determine the locations of five (5) groundwater monitoring wells, which were installed on September 19, 2002. These five wells (MW-1 through MW-5) have been monitored on a quarterly basis since installation.

The locations of these borings and wells are shown on Figure 2. Soil and groundwater analytical data from the September 2002 investigation is presented in Tables 1 and 2, respectively. Historical groundwater monitoring data is presented in Table 4 and 5.

2.4 Groundwater Treatment Activities

Based on the findings of the investigation and monitoring activities, the ACHCSA required that corrective action be undertaken. AEI prepared and submitted an *Interim Corrective Action Plan*, dated April 5, 2004, outlining an evaluation and scope of work to implement ozone sparging technology to begin corrective action. The approach was selected to reduce contaminant concentrations, particularly MTBE and other gasoline contaminants, in the groundwater and capillary fringe soils. A KVA twelve-point ozone sparging system was installed around the release area during May – July, 2004. Implementation of the system was documented in the *Interim Corrective Action Progress Report*, dated February 11, 2005, to which the reader is referred for more detailed information.

The sparge wells were placed in and around the former tank hold, between the release area and the nearby Damon Slough, and in the areas of the most highly impacted groundwater. During the first several months of operation, selected monitoring wells were sampled on a monthly basis in addition to the regular quarterly monitoring,.

The sparging system operated through July, 2006, at which time an electrical switch overheated. Based on the significant reduction in contaminant concentrations, it was elected that several months of downtime be allowed to monitor for possible rebound.

On September 26, 2006 a *Site Summary Report* was submitted ACHCSA. This report summarized past investigative and remediation activities at the subject site and requested regulatory review of current site conditions to evaluate this site for case closure. In a letter dated January 28, 2007 the ACHCSA requested a workplan to address their technical comments.

AEI prepared a *Confirmation Investigation Workplan* dated March 27, 2007. The workplan outlined the proposed scope of work which included advancing five (5) soil borings for collection of soil and groundwater samples. Following the assignment of a new case worker the ACHCSA requested copies of the reports of several historical investigations and a modified work plan in a letter dated February 15, 2008.

On April 23, 2008 submitted *Response to Comments – Confirmation Investigation Work Plan* which included the requested reports and a response to the request to modify boring locations and sample analyses. The modifications to the workplan were approved by the ACHCSA in a letter dated June 5, 2008.

3.0 GEOLOGY AND HYDROGEOLOGY

The site is located at an elevation approximately 10 feet above mean sea level (msl). The Damon Slough is located approximately 150 feet south of the former UST location. The site is level, and the local topography slopes very gently to the southwest. The surface sediments at the front (north) half of the site are mapped as Holocene basin deposits (Qhb, OF 97-97, E.J. Helley and R.W. Graymer). The Basin Deposits (Holocene) are described as "Very fine silty clay to clay deposits occupying flat-floored basins at the distal edge of alluvial fans adjacent to the bay mud (Qhbm)". The back (south) half of the site along Damon slough is mapped as artificial fill (af).

The area included in this investigation is in the south half of the site on artificial fill along the slough. The upper 3 to 8 feet of soil consists of imported fill which is typically variable clayey gravels, gravelly clay, sand, and clay with scattered brick, wood and other debris. The fill ranges in color from yellowish brown to brown to olive to dark gray to black. The lower portions of the fill are commonly dark gravelly clay or gravelly fine clayey sands that appear to be a mixture of fill and fine grained native material. Beneath this fill, native sediments encountered have consisted of soft plastic silty clay and soft plastic clayey silty sand. Groundwater has been observed at the time of drilling soil borings at between approximately 5 and 13 feet bgs. Below approximately 16 feet bgs in boring SB-22, the sediments become less plastic with lower water content, becoming firm, moist silty clay at 19.5 feet bgs. Firm to hard wet gravel was encountered at a depth of 23 feet bgs in SB-22. The gravel was underlain to a depth of 27.5 feet bgs by fine grained poorly graded sand. Clayed was encountered at a depth of 27.5 feet bgs.

Water level measurements collected since monitoring began have indicated that the water table is present at between 4 to 6 feet bgs. Based on these measurements, it the groundwater beneath

the site generally flows in a southeasterly direction, with a hydraulic gradient of 10^{-2} to 10^{-3} feet/feet. This flow direction is consistent with information AEI reviewed for a site on the north side of 66th Avenue. Despite these flow direction measurements, the MTBE plume appears to have migrated primarily in a northerly direction from the former UST location. MW-2 and MW-3, located south and southeast of the UST hold (apparently down-gradient) have been relatively free of MTBE. Groundwater in these wells has been measured to have significantly higher conductivity, indicative of salt water, which may be acting to retard the spread of MTBE or inhibiting the flow of groundwater in the expected flow direction.

4.0 CONFIRMATION SAMPLING

Soil and groundwater samples were collected from five (5) soil borings and from the existing five (5) wells. A summary of the soil borings, rationale for their locations, and sample analyses is presented in the following exhibit. Refer to Figure 1 of this workplan for locations of the proposed borings.

Exhibit 1: Soil Borings

ID	*Location / Purpose*	*Depth*	*Sample Analyses*
SB-18	Adjacent to SB-13, just north of former UST, to verify treatment of previous hotspot (per comment 1 and 2)	10	Soil from CF & groundwater: TPH-g, BTEX, MTBE & TBA
SB-19	South of former UST, near sidewall sample, to verify treatment of previous hotspot (per comment 1)	8	Soil from CF: TPH-g, BTEX, MTBE & TBA
SB-20	East end of former UST, near sidewall sample, to verify treatment of previous hotspot (per comment 1)	8	Soil from CF: TPH-g, BTEX, MTBE & TBA
SB-21	Adjacent to the existing waste oil UST to evaluate previous reports of possible hydrocarbon contamination reported at the time of the installation of the waste oil tank	11	Soil from CF & groundwater: TPH-g, BTEX, TPH-d/mo, VOCs, PCBs and Luft metals.
SB-22	At the northern edge of the boundary of the property, east of the previous boring SB-8 to assess whether the plume has intersected the sanitary sewer line trench as it deepens northward	28	Soil & groundwater: TPH-g, BTEX, MTBE & TBA

CF = capillary fringe, approximately 4 to 6 feet bgs.

Detailed field procedures for the soil borings, sampling, and groundwater monitoring activities are presented in the following sections.

4.1 Soil boring activities

4.1.1 Permits and Clearances

Drilling permit W2008-0360 was obtained from Alameda County Public Works. Underground Service Alert was notified more than 48 hours prior to mobilization to identify public underground utilities in the area. All borings in the vicinity of onsite underground utilities were hand cleared with a hand auger to a depth of 5 feet prior to drilling with direct push equipment, except where shallow soil samples were collected above 5.0 feet bgs.

4.1.2 Drilling

Borings were advanced by ECA, a California C57 contractor, with a truck-mounted 6410 Geoprobe™ direct-push drilling rig.

4.1.3 Soil Sample Collection

Soil was continuously cored to the target depth in 1¾ inch diameter acrylic liners within an approximately 2-inch diameter sampling barrel and logged by the onsite geologist. A 5-inch long sample was retained at intervals of no more than 3.5 feet and at changes in soil types or at depths of suspected impact, and within the capillary fringe. The selected samples were cut from the liners and their ends sealed with Teflon film and plastic end caps. A photo-ionization device (PID) was used to screen soil samples in the field, and PID readings for each sample were included on boring logs.

4.1.4 Soil Boring Groundwater Sample Collection

Water samples from the shallow groundwater were collected from soil borings SB-18, and SB-21. Upon penetrating the groundwater a new ¾-inch diameter PVC casing was placed in the boring with 5 feet of 0.010 factory slotted casing at the bottom. A 1/4-inch polyethylene tube was extended to the bottom of the casing and then withdrawn approximately 1 foot. Approximately two liters of water were purged from the casing/Hydropunch® then a groundwater sample was collected using the peristaltic pump. Groundwater samples were collected into 40 ml volatile organic analysis (VOA) vials. The containers were sealed so that no head-space or air bubbles are visible within the containers. Samples for PCBs, metals and TPH-d were collected into appropriate containers.

The groundwater sample at boring SB-22 was collected by advancing a hydropunch® at a location approximately 24-inches from the original soil boring to a depth of 27 feet bgs. The Geoprobe rods were then withdrawn 4 feet to expose the screen over an approximate interval of 23 to 27 feet bgs. A ¼-inch poly tube was extended to the total depth and a groundwater sample was collected using a peristaltic pump as described above.

4.1.5 Sample Storage

All samples were sealed and labeled immediately upon collection then entered on the chain of custody document. Samples were placed in a cooler on water ice pending transportation to a state certified laboratory.

4.1.6 Soil and Purge Water Storage and Disposal

Soil cores not retained for analysis were placed and sealed in an open top 55 gallon drum pending characterization and disposal at an appropriate disposal site. Water purged from the soil borings was temporarily stored in a 5-gallon bucket and used to mix grout to seal the borings.

4.1.7 Sample Analyses

The samples were delivered to a California DHS certified laboratory under chain of custody. The selected soil and groundwater samples were analyzed for the following:

- TPH-g, MBTEX by EPA Method 8021B/8015Cm
- MTBE and TBA by EPA method 8260
- Soil Samples from boring SB-21 were also analyzed for TPH-d by method 8015C, Luft metals, Halogenated VOCs by Method 8260B, and PCBs by Method 8080.
- Samples from soil borings SB-18, SB-19, SB-20 and SB-22 were analyzed for Total Lead by Method 6010.

The groundwater samples were analyzed for the following:

- All samples for TPH-g, MBTEX by EPA Method 8021B/8015Cm
- All samples for MTBE and TBA by EPA method 8260
- The water sample from boring SB-21 was also analyzed for TPH-d by method 8015C, Halogenated VOCs by Method 8260B, and PCBs by Method 8080.
- Analysis of sample SB-21-W for LUFT metals was not done due the bottle being broken during transportation to the Lab.

4.1.8 Analytical Results

Soil - Boring SB-18

Analysis of the soil sample from a depth of 3.5 bgs in soil boring SB-18, located north of MW-1 just outside of the former UST excavation, for TPH-g/MBTEX reported concentrations of 1,500 mg/kg, ND<5.0 mg/kg, ND<0.50 mg/kg, 6.5 mg/kg, 19 mg/kg, and 88 mg/kg, respectively. Analysis for MTBE and TBA reported concentrations of ND<0.25 mg/kg and 2.5 mg/kg, respectively. Total Lead was reported a concentration of 230 mg/kg.

Analysis of the soil sample from a depth of 5.0 bgs, in the transition zone, reported TPH-g/MBTEX in soil sample SB-18-3.5 at concentrations of 21 mg/kg, 13 mg/kg, 0.21 mg/kg, 0.22 mg/kg, 0.92 mg/kg, and 3.6 mg/kg, respectively. Analysis for MTBE and TBA reported concentrations of 12 mg/kg and ND<3.3 mg/kg, respectively. Lead was reported at a concentration of 17 mg/kg.

Soil - Boring SB-19

Analysis of the soil sample from a depth of 3.5 bgs in soil boring SB-19, located southwest of MW-1 just outside of the former UST excavation, reported TPH-g/MBTEX at concentrations of ND<1.0 mg/kg, ND<0.5 mg/kg, ND<0.005 mg/kg, ND<0.005 mg/kg, ND<0.005 mg/kg, and ND<0.005 mg/kg, respectively. Analysis by Method 8260 for MTBE and TBA reported concentrations of ND<0.024 mg/kg and ND<0.05 mg/kg, respectively. Lead was reported at a concentration of 16 mg/kg.

Analysis of the deeper soil sample from 6.0 bgs, from the transition zone, reported TPH-g/MBTEX at concentrations of 17 mg/kg, 6.8 mg/kg, 0.79 mg/kg, 0.31 mg/kg, 0.2 mg/kg, and 1.6 mg/kg,

respectively. Analysis by Method 8260 for MTBE and TBA reported concentrations of 6.5 mg/kg and ND<3.3 mg/kg, respectively. Lead was reported at a concentration of 190 mg/kg.

Soil - Boring SB-20

Analysis of the soil sample from a depth of 3.5 bgs in soil boring SB-20, located just outside of the east end of the former UST excavation, near earlier boring SB-15, reported TPH-g/MBTEX at concentrations of ND<1.0 mg/kg, ND<0.05 mg/kg, ND<0.005 mg/kg, ND<0.005 mg/kg, ND<0.005 mg/kg, and ND<0.05 mg/kg, respectively. Analysis by Method 8260 for MTBE and TBA reported concentrations of 0.023 mg/kg and ND<0.05 mg/kg, respectively. Lead was reported at a concentration of 9.7 mg/kg.

Analysis of the deeper soil sample from a depth of 5.5 bgs, from the transition zone, reported TPH-g/MBTEX at concentrations of ND<1.0 mg/kg, ND<0.05 mg/kg, ND<0.005 mg/kg, ND<0.005 mg/kg, ND<0.005 mg/kg, and ND<0.005 mg/kg, respectively. Analysis by Method 8260 for MTBE and TBA reported concentrations of ND<0.005 mg/kg and ND<0.05 mg/kg, respectively. Lead was reported at a concentration of 230 mg/kg.

Soil - Boring SB-21

Analysis of the soil sample from a depth of 3.5 bgs in soil boring SB-21, located just south of the waste oil tank reported TPH-g and TPH-d at concentrations of ND<1.0 mg/kg and ND<1.0 mg/kg, respectively. MTBE and BTEX was reported at concentrations of ND<0.5 mg/kg, ND<0.005 mg/kg, ND<0.005 mg/kg, ND<0.005 mg/kg, and ND<0.005 mg/kg, respectively. Analysis by Method 8260 for MTBE and TBA reported concentrations of ND<0.005 and ND<0.05, respectively. Lead was reported at a concentration of ND<5.0 mg/kg. Analysis for HVOCs reported all analytes below standard detection limits. Analysis for LUFT metals, Cadmium, Chromium, Nickel, and Zinc, reported those metals at concentrations of ND<1.5 mg/kg, 7.2 mg/kg, ND<1.5 mg/kg, 6.1 mg/kg, 85 mg/kg, respectively.

Analysis of soil sample from a depth of 6.0 bgs, in the transition zone, reported TPH-g and TPH-d at concentrations of ND<16 mg/kg and 180 mg/kg, respectively. MTBE and BTEX was reported at concentrations of ND<0.5 mg/kg, ND<0.005 mg/kg, ND<0.005 mg/kg, ND<0.005 mg/kg, and ND<0.041 mg/kg, respectively. Analysis by Method 8260 for MTBE and TBA reported concentrations of ND<0.005 and ND<0.05, respectively. Lead was reported at a concentration of 14 mg/kg. Analysis for HVOCs reported all analytes below standard detection limits. Analysis for LUFT metals, Cadmium, Chromium, Nickel, and Zinc, reported those metals at concentrations of ND<1.5 mg/kg, 54 mg/kg, 14 mg/kg, 83 mg/kg, 46 mg/kg, respectively.

Soil - Boring SB-22

Analysis of soil sample from a depth of 4.0 bgs in soil boring SB-22, located west of well MW-2 reported TPH-g/MBTEX at concentrations of ND<1.0 mg/kg, ND<0.05 mg/kg, ND<0.005 mg/kg, ND<0.005 mg/kg, ND<0.005 mg/kg, and ND<0.05 mg/kg, respectively. Analysis by Method 8260 for MTBE and TBA reported concentrations of 0.005 mg/kg and ND<0.05 mg/kg, respectively.

Analysis of the soil sample from a depth of 23.5 bgs, reported TPH-g/MBTEX at concentrations of ND<1.0 mg/kg, ND<0.05 mg/kg, ND<0.005 mg/kg, ND<0.005 mg/kg, ND<0.005 mg/kg, and

ND<0.005 mg/kg, respectively. Analysis by Method 8260 for MTBE and TBA reported concentrations of ND<0.005 mg/kg and ND<0.05 mg/kg, respectively.

Water - Boring SB-18
Analysis of the water sample from boring SB-18 reported TPH-g/MBTEX at concentrations of 8,500 µg/L, 1,100 µg/L, 44 µg/L, 270 µg/L, and 240 µg/L, respectively. Analysis by Method 8260 for MTBE and TBA reported concentrations of 1,300 µg/L and 6,800 µg/L, respectively.

Water - Boring SB-21
Analysis of the water sample from boring SB-21 reported TPH-g and TPH-d at concentrations of ND<50 µg/L, 180 µg/L, and 1,000 µg/L, respectively. MTBE and BTEX were reported at concentrations of 11 µg/L, 40 µg/L, 270 µg/L, 240 µg/L, and 1,000 µg/L, respectively. Analysis by Method 8260 for MTBE and TBA reported concentrations of 11 µg/L and 160 µg/L, respectively. Analysis for PCBs and HVOCs reported all analytes below standard detection limits.

Water - Boring SB-22
Analysis of the water sample from boring SB-21 reported TPH-g at a concentration of ND<50 µg/L. MTBE and BTEX were reported at concentrations of 8 µg/L, ND <0.5 µg/L, ND <0.5 µg/L, ND <0.5 µg/L, and ND <0.5 µg/L, respectively. Analysis by Method 8260 for MTBE and TBA reported concentrations of ND <0.5 µg/L and ND <2.0 µg/L, respectively.

4.2 Groundwater Monitoring

4.2.1 Monitoring Activities
Groundwater monitoring wells MW-1 through MW-5 were sampled on March 13, 2008. Prior to sampling, the well cap was removed from each well and the water levels allowed to equilibrate for at least 15 minutes. Water levels were then measured to the nearest 0.001 foot in each well in each well prior to purging. Wells were purged of at least 3 well volumes of water prior to sample collection. During purging the water parameters of temperature, pH, specific conductivity, dissolved oxygen (DO) and oxidation-reduction potential (ORP) were recorded on field data sheets. Copies of the field data sheets are attached as Appendix C.

Groundwater samples were collected with new, unused disposable bailers into 40 ml volatile organic analysis (VOA) vials. All samples were sealed and labeled immediately upon collection then entered on the chain –of custody document. Samples were placed in a cooler on water ice pending transportation to a state certified laboratory.

4.2.2 Sample Analyses

The samples were delivered to a California DHS certified laboratory under chain of custody. The groundwater samples were analyzed for the following:

- TPH-g by EPA Method 8015
- BTEX and MTBE by EPA Method 8021B
- MTBE and TBA by EPA method 8260

4.2.3 Analytical Results

Analysis of all groundwater sampled from the monitoring wells reported TPH-g and BTEX by methods 8012B/8015Cm at concentrations of ND<1.0 µg/L, ND<0.5 µg/L, ND<0.5 µg/L, ND<0.5 µg/L, and ND<0.5 µg/L, respectively. Analysis by Method 8260 for MTBE and TBA reported concentrations of 1,300 µg/L and 6,800 µg/L, respectively.

In well MW-1, analysis for MTBE by Method 8021B, MTBE and TBA by Method 8260B were reported concentrations of 5.5 µg/L, ND<10 µg/L, and 780 µg/L, respectively.

In well MW-2, analysis for MTBE by Method 8021B, MTBE and TBA by Method 8260B were reported concentrations of ND<5.0 µg/L, 3.0 µg/L, and ND<2.0 µg/L, respectively.

In well MW-3, analysis for MTBE by Method 8021B, MTBE and TBA by Method 8260B were reported concentrations of ND<5.0 µg/L, 0.77 µg/L, and ND<2.0 µg/L, respectively.

In well MW-4, analysis for MTBE by Method 8021B, MTBE and TBA by Method 8260B were reported concentrations of 19 µg/L, 22 µg/L, and 69 µg/L, respectively.

In well MW-5, analysis for MTBE by Method 8021B, MTBE and TBA by Method 8260B were reported concentrations of 10 µg/L, 11 µg/L, and 750 µg/L, respectively.

4.2.4 Waste Storage

Drill cuttings and other investigation-derived waste (IDW) generated during the soil boring and monitoring activities were stored onsite in sealed 55-gallon drums, pending the results of sample analyses. Equipment rinse water and well purge water was stored in 55-gallon drums. Upon receipt of necessary analytical results, the waste was profiled for disposal and transported from the site under appropriate manifest to approved disposal or recycling facility(s).

5.0 CONCLUSIONS

The results of groundwater monitoring confirm that MTBE and hydrocarbon concentrations have been reduced to below RWQCB ESLs for Commercial/Industrial with non-drinking water use.

Analysis of deeper zone water sample from a depth of 23 feet bgs in soil boring SB-22 reported MTBE at a concentration of 9.2 µg/L, below the drinking water toxicity ESL of 13 µg/L. This low concentration is not considered significant.

Analysis of soil samples from soil borings SB-19 and SB-20, on the south and east sides of the former UST excavation, found no significant residual hydrocarbons.

Soil samples from boring SB-18 located (near the previous location of a fuel dispenser) on the north side of the former UST excavation encountered significant residual hydrocarbons (1,500 mg/kg TPH-g) at a depth of 3.5 feet bgs in the vadose. At a depth of 5.0 feet bgs, in the transition zone, the TPH-g concentration decreased to 21 mg/kg. MTBE by method 8260 which was reported at a concentration of ND<0.25mg/kg at 3.5 bgs, increased to 13 mg/kg slightly above the commercial industrial ESL of 8.4 mg/kg. Based on the shallow depth of this soil, it is believed that is soil represents localized release related to the former dispenser.

Analysis of the groundwater sample (SB-18-W) collected from this boring reported significant hydrocarbon, BTEX and fuel oxygenates concentrations. Given the lack of impact in nearby monitoring well MW-1, this impacted groundwater appears to be localized and related to the overlying impacted soil in the vadose zone. It is likely that a significant percentage of the hydrocarbons seen in the soil boring water sample is due to mixing of soil from above the transition zone and the groundwater resulting from the advancement of the soil boring.

Soil samples from boring SB-21, located adjacent to the waste oil tank low concentrations of TPH and xylenes at or below the commercial/industrial non drinking water ESLs. Analysis for HVOCs, and PCBs reported all analytes as non-detectable. LUFT metals were reported in normal and acceptable ranges.

Analysis of groundwater sample SB-21-W reported low levels of TPH and fuel oxygenates. TPH-mo was reported at 360 µg/L slightly above the non drinking water ESL of 210 µg/L. No HVOCs were reported in water sample SB-21-W

6.0 COMPARATIVE RISK EVALUATION

The following comparative risk evaluation has been made in an effort to help determine the potential risk posed by remaining contaminants in the groundwater. The most recent site specific analytical data is compared with environmental screening level (ESL) values presented in the RWQCB document *Screening for Environmental Concerns at Site with Contaminated Soil and Groundwater*, May 2008. The ESLs are risk-based values that have been prepared to evaluate whether a particular contaminant presents possible threat to human health or the environment.

The highest detected concentrations of contaminants of concern (COCs) in groundwater are compared against the screening levels for the following exposure routes: gross contamination ceiling values where groundwater is a current source of drinking water and not a drinking water source, aquatic toxicity, drinking water toxicity, and vapor intrusion from groundwater. A summary of the screening levels and site concentrations are presented below.

6.1 Contaminants of Concern

The primary remaining contaminants of concern detected in groundwater from existing groundwater monitoring wells are MTBE and TBA. Maximum concentrations of MTBE and TBA, as well as TPH-g and BTEX (benzene, toluene, ethylbenzene, and total xylenes), detected during the most recent monitoring event (07/11/2006) are summarized in the following table.

Contaminant	Well	Maximum Detected (3/13/06) (µg/L)
TPH-g	All	<50
Benzene	All	<0.5
Toluene	All	<0.5
Ethylbenzene	All	<0.5
Xylenes (Total)	All	<0.5
MTBE (by 8260B)	MW-4	22
TBA	MW-1	780

Maximum concentrations of TPH, BTEX, MTBE and TBA, detected in ground water from the confirmation sampling soil borings (07/01/2008) are summarized in the following table.

Contaminant	Soil Boring	Maximum Detected (7/1/08) (µg/L)
TPH-g	SB-18	8,500
TPH-d	SB-21	180
TPH-mo	SB-21	360
Benzene	SB-18	40
Toluene	SB-18	270
Ethylbenzene	SB-18	240
Xylenes (Total)	SB-18	1,000
MTBE (by 8260B)	SB-18	1,300
TBA	SB-18	6,800

6.2 ESL Comparison

The recent maximum concentrations of the detected contaminants in groundwater monitoring are presented in the following table along with the five ESL values for the exposure pathways outlined above.

Contaminant	Maximum Detected in wells	Volatilization ESL *	Ceiling Value (NDW) ***	Aquatic Toxicity **	Ceiling Value (DW) **	Drinking Water Toxicity **
MTBE	22	24,000	**1,800**	8,000	~~5.0~~	~~13~~
TBA	780	-	50,000	**18,000**	~~50,000~~	~~12~~

All values in micrograms per liter (µg/l)
All ESL from RWQCB (Feb 2005)
* From Table E-1 (residential)
** From Tables F-1a *** From Table F-1b
NDW = non-drinking water, DW = drinking water
ESL values shown in strikethrough (~~strikethrough)~~ are from incomplete pathways.
ESL values shown in bold (**bold**) are the lowest for each contaminant, considering all potentially complete exposure pathways.

Significant concentrations of TPH-g and MBTWX were reported in soil boring SB-18 which is located immediately adjacent to MW-1. The only COCs reported in well MW-1 are low levels of MTBE and TBA. AEI believes that the COCs reported in boring SB-18 represent a localized impact associated with shall impacted soil and that is local impact can be remediated by removal of the impacted soil remediated by removal of the impacted soil in that location.

The maximum concentrations of the detected contaminants in soil borings SB-21 are presented in the following table along with the five ESL values for the exposure pathways outlined above.

Contaminant	Maximum Detected Borings 21	Volatilization ESL *	Ceiling Value (NDW) ***	Aquatic Toxicity **	Ceiling Value (DW) **	Drinking Water Toxicity **
TPH-d	180	-	**2,500**	210	~~100~~	~~210~~
TPH-mo	360	-	**2,500**	210	~~100~~	~~210~~
MTBE	11	24,000	**1,800**	8,000	~~5.0~~	~~13~~
TBA	160	-	50,000	**18,000**	~~50,000~~	~~12~~

All values in micrograms per liter (µg/l)
All ESL from RWQCB (Feb 2005)
From Table E-1 (residential)
** From Tables F-1a
*** From Table F-1b
NDW = non-drinking water, DW = drinking water
ESL values shown in strikethrough (~~strikethrough)~~ are from incomplete pathways.
ESL values shown in bold (**bold**) are the lowest for each contaminant, considering all potentially complete exposure pathways.

The maximum concentrations of the detected contaminants in soil borings SB-22 are presented in the following table along with the five ESL values for the exposure pathways outlined above.

Contaminant	Maximum Detected Borings 22	Volatilization ESL *	Ceiling Value (NDW) ***	Aquatic Toxicity **	Ceiling Value (DW) **	Drinking Water Toxicity **
MTBE	11	24,000	**1,800**	8,000	~~5.0~~	~~13~~

All values in micrograms per liter (µg/l)
All ESL from RWQCB (Feb 2005)
From Table E-1 (residential)
** From Tables F-1a
*** From Table F-1b
NDW = non-drinking water, DW = drinking water
ESL values shown in strikethrough (~~strikethrough)~~ are from incomplete pathways.
ESL values shown in bold (**bold**) are the lowest for each contaminant, considering all potentially complete exposure pathways.

The groundwater in the area of the site is considered of beneficial use in accordance with the RWQCB Basin Plan and although not formally de-designated, the shallow impacted groundwater around the fuel release area is of low quality (brackish to saline) due to the proximity to the tidal slough and is not present in a high yielding formation. Based on this, the Drinking Water Toxicity and Drinking Water Ceiling Value ESLs are considered overly conservative for this site. Due to the proximity of the release to the Damon Slough, the aquatic toxicity ESL value would be protective of aquatic receptors. In addition, as is currently required, the volatilization ESL is considered potentially complete. The non-drinking water ceiling value will also be considered relevant as representative of nuisance conditions. The lowest ESL for each contaminant is shown in bold in the table above.

The residual contaminant concentrations do not exceed the lowest of the ESL values of the potentially complete exposure pathways. All site concentrations are over one to several orders of magnitude lower that these ESL values. Based on this, no indication of a potential for vapor intrusion from groundwater, of groundwater discharge to nearby aquatic habitat, or of exceeding gross contaminant levels for groundwater are present around the former release area.

7.0 RECOMMENDATIONS

AEI recommends the following actions:

- Area of SB-18 - Excavate the shallow impacted soil in the area of boring SB-18 to a depth of five feet bgs, characterize and dispose of soil, then request case closure
- Waste Oil tank – No immediate action necessary
- Following case closure, decommission groundwater and sparge wells.

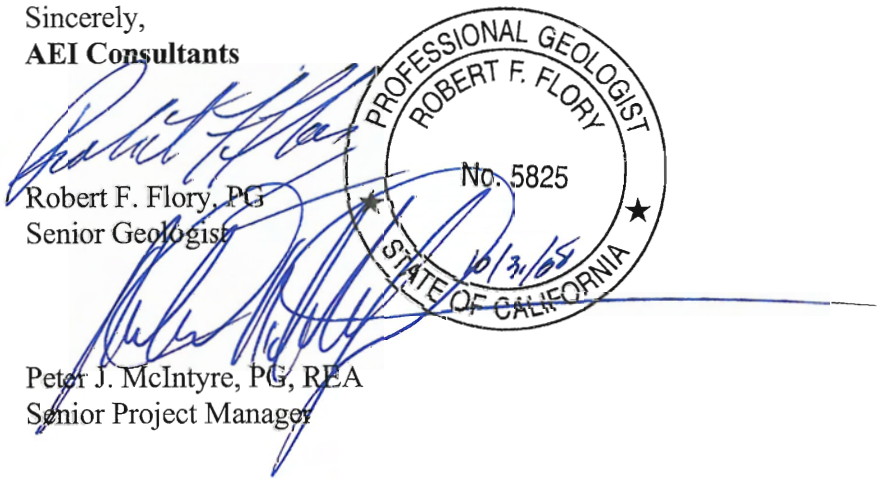
AEI will prepare and submit a work plan to the ACEHS for the excavation of impacted soil adjacent to boring SB-18. The scope of work will include excavation to a depth of approximately 5 feet bgs, de-watering of the excavation, and confirmation sampling of the sides of the excavation and groundwater from the excavation.

8.0 CLOSING STATEMENT AND SIGNATURES

This report has been prepared by AEI on behalf of Cruise America relating to the release of petroleum hydrocarbons on the property located at 796 66th Avenue in the City of Oakland, Alameda County, California. The discussion rendered in this report was based on field investigations and laboratory testing of material samples. This report does not reflect subsurface variations that may exist between sampling points. These variations cannot be anticipated, nor could they be entirely accounted for, in spite of exhaustive additional testing. This report should not be regarded as a guarantee that no further contamination, beyond that which could have been detected within the scope of past investigations is present beneath the property or that all contamination present at the site were identified, treated, or removed. Undocumented, unauthorized releases of hazardous material(s), the remains of which are not readily identifiable by visual inspection and/or are of different chemical constituents, are difficult and often impossible to detect within the scope of a chemical specific investigation and may or may not become apparent at a later time. All specified work was performed in accordance with generally accepted practices in environmental engineering, geology, and hydrogeology and were performed under the direction of appropriate registered professional(s).

Should you need additional information, please contact me at (925) 944.2899 ext 122.

Sincerely,
AEI Consultants



Robert F. Flory, PG
Senior Geologist

Peter J. McIntyre, PG, REA
Senior Project Manager

AEI

Referenced Documents

1. *Underground Storage Tank Removal Report*, October 27, 1998, prepared by W.A. Craig, Inc.
2. *Workplan*, April 27, 2001, prepared by AEI Consultants
3. *Phase II Subsurface Investigation*, June 2001, prepared by AEI Consultants
4. *Workplan*, August 6, 2001, prepared by AEI Consultants
5. *Soil and Groundwater investigation*, December 20, 2001, prepared by AEI Consultants.
6. *Groundwater Monitoring Well Installation and Sampling Report*, May 7, 2002, prepared by AEI Consultants.
7. *Problem Assessment Report*, May 17, 2004, prepared by AEI
8. *Remedial Action Plan*, August 14, 2004, prepared by AEI
9. *Maps showing the Quaternary Geology and Liquefaction Susceptibility, Napa, California, 1:100,000 Quadrangle, A Digital Database*, 1998, Prepared by Janet Sowers, et al., USGS

Distribution:

Mr. Cory Kauffman
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Mesa, AZ 85210

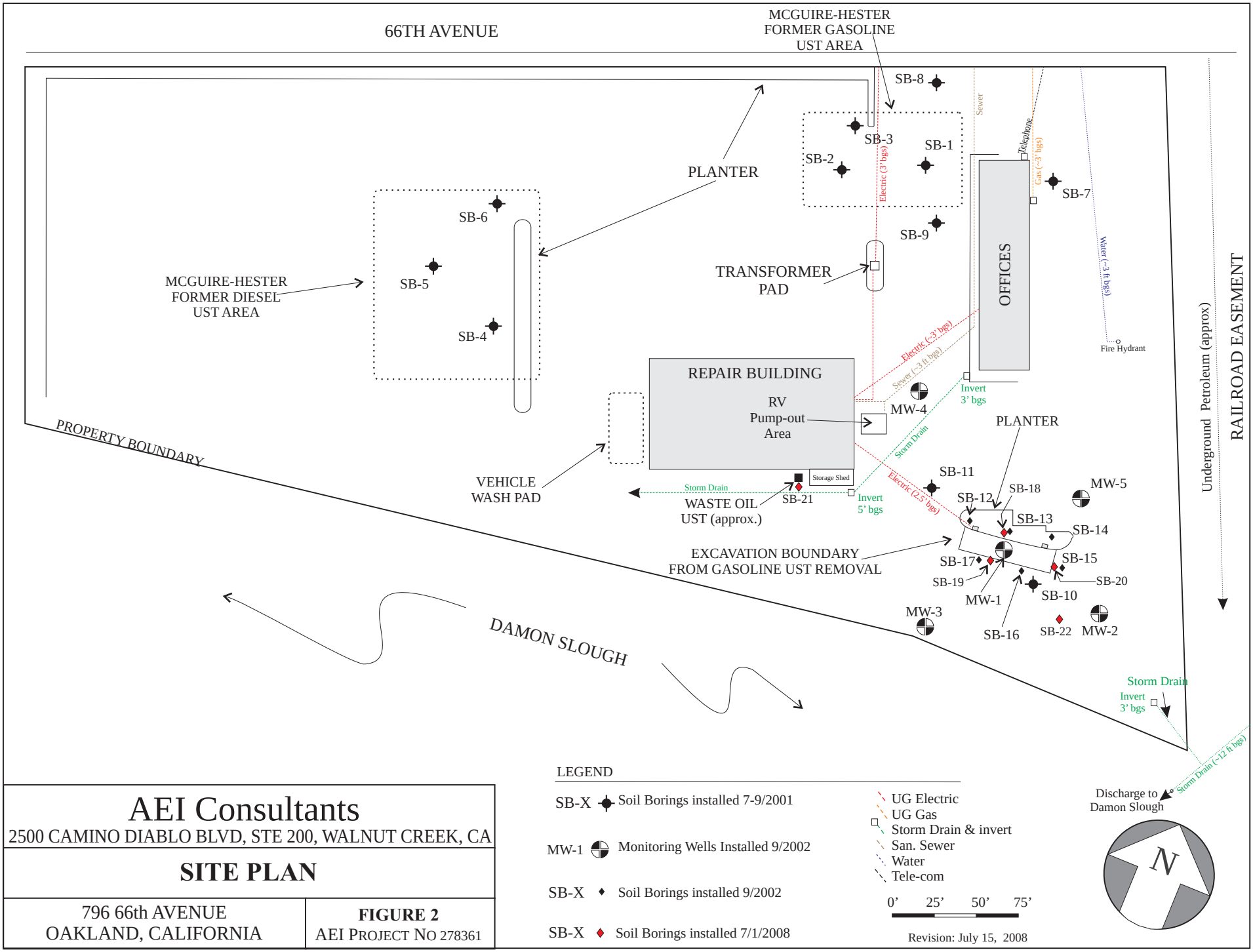
Hard Copy

Mr. Jerry Wickham
ACHCSA

(submitted via email and to ACHCSA FTP site)

FIGURES

AEI CONSULTANTS	
SITE LOCATION MAP	
796 66th AVENUE OAKLAND, CALIFORNIA	**FIGURE 1** PROJECT NO. 278361



AEI Consultants

2500 CAMINO DIABLO BLVD, STE 200, WALNUT CREEK, CA

SITE PLAN

796 66th AVENUE
OAKLAND, CALIFORNIA

FIGURE 2
AEI PROJECT NO 278361

TABLES

Table 1

Historical Soil Analytical Data

796 66th Avenue, Oakland, California

Sample ID	Date	TPH-g	TPH-d	TPH-mo	MTBE	TBA	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes	Lead
			8015		8260				8021B			TTLC
		mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
MW-1 4'	9/19/2002	<1.0	-	-	-	-	<0.05	<0.005	<0.005	<0.005	<0.005	5.9
MW-2 4"	9/19/2002	<1.0	-	-	-	-	<0.05	<0.005	<0.005	<0.005	<0.005	25
MW-3 4'	9/19/2002	<1.0	-	-	-	-	<0.05	<0.005	<0.005	<0.005	<0.005	25
MW-4 4'	9/19/2002	6.2	-	-	-	-	<0.05	<0.005	0.0080	0.0078	0.021	160
MW-5 4'	9/19/2002	<1.0	-	-	-	-	2.0	0.0053	0.0088	<0.005	0.010	190
SB-18-3.5	7/1/2008	**1500**	-	-	<0.25	<2.5	<5.0	<0.50	6.5	19	**88**	230
SB-18-5	7/1/2008	21	-	-	**12**	<3.3	**13**	0.21	0.22	0.92	3.6	17
SB-19-3.5	7/1/2008	<1.0	-	-	0.024	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	16
SB-19-6	7/1/2008	17	-	-	6.5	<3.3	6.8	0.79	0.31	0.2	1.6	190
SB-20-3.5	7/1/2008	<1.0	-	-	0.023	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	9.7
SB-20-5.5	7/1/2008	<1.0	-	-	<0.005	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	320
SB-21-3.5	7/1/2008	<1.0	<1.0	<1.0	<0.005	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	<5.0
SB-21-6	7/1/2008	16	180	110	<0.005	<0.05	<0.05	<0.005	<0.005	<0.005	0.041	14
SB-22-4	7/1/2008	<1.0	-	-	<0.005	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	-
SB-22-23.5	7/1/2008	<1.0	-	-	<0.005	<0.05	<0.05	<0.005	<0.005	<0.005	<0.005	-
RWQCB ESL May 2008		180	180	2500	8.4	110	8.4	0.27	9.3	47	11	720

Commercial/Industrial

Shallow soil, non drinking water

BOLD = Current soil analyticals that Exceed ESL

mg/kg = milligrams per kilogram (ppm)

- = Sample not analyzed by this method

Table 2a
Soil Analytical Data - Luft Metals - TTLC
796 66th Avenue, Oakland, California

Sample ID	Date	Cadmium mg/kg	Chromium mg/kg	Lead mg/kg	Nickel mg/kg	Zinc mg/kg
SB-21-3.5	7/1/2008	<1.5	7.2	<5.0	6.1	85
SB-21-6	7/1/2008	<1.5	54	14	83	46
RWQCB ESL May 2008 Commercial/Industrial Shallow soil, non drinking water		7.4	2500	750	1500	600

MDL = Method Detection Limit
mg/kg = milligrams per kilogram (ppm)

Table 2b
Soil Analytical Data - HVOCs amd PCBs

	HVOCs by 8260B	PCBs by SW8082A
SB-21-3.5	**All ND**	**All ND**
SB-21-6	**All ND**	**All ND**

Table 3
Historical Soil Boring Groundwater Sample Analytical Data
796 66th Avenue, Oakland, California

Sample ID	Date	TPH-g	TPH-d	TPH-mo	MTBE	TBA	MTBE	Benzene	Toluene	Ethyl benzene	Xylenes	Lead
					(EPA 8260)		(EPA 8021B)					
		µg/L	µg/L		µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	mg/L
SB-1 W	7/17/2001	<50	-	-	-	-	650	0.63	<0.5	<0.5	<0.5	-
SB-2 W	7/17/2001	<50	-	-	-	-	<5.0	<0.5	<0.5	<0.5	<0.5	-
SB-3 W	7/17/2001	120	-	-	-	-	<5.0	<0.5	4.6	<0.5	<0.5	-
SB-4 W	7/17/2001	<50	990	-	-	-	<5.0	<0.5	<0.5	<0.5	<0.5	-
SB-5 W	7/17/2001	68	410	-	-	-	<5.0	<0.5	0.66	<0.5	<0.5	-
SB-6 W	7/17/2001	240	590	-	-	-	<5.0	<0.5	2.9	<0.5	<0.5	-
SB-7 W	9/28/2001	<50	-	-	<0.5	-	<5.0	<0.5	0.74	<0.5	<0.5	-
SB-9 W	9/28/2001	<50	-	-	630	-	670	<0.5	1.0	<0.5	<0.5	-
SB-10 W	9/28/2001	<500	-	-	13,000	-	15,000	<2.0	<2.0	2.5	<2.0	-
SB-11 W	9/28/2001	58	-	-	1,700	-	1,900	2.4	1.8	<0.5	0.79	-
GW*	11/30/2001	44,000	-	-	-	-	42,000	590	5100	640	3500	-
SB-12	9/6/2002	<1000	-	-	32,000	-	31,000	44	<10	<10	<10	<0.005
SB-13	9/6/2002	13,000	-	-	49,000	-	51,000	300	1700	320	1,800	<0.005
SB-14	9/6/2002	<500	-	-	9,500	-	11,000	<5.0	<5.0	<5.0	<5.0	<0.005
SB-15	9/6/2002	300	-	-	770	-	730	<0.5	3.2	0.71	3.5	0.039
SB-16	9/6/2002	<200	-	-	2,700	-	3,900	<1	2.1	<1	2.5	<0.005
SB-17	9/6/2002	<200	-	-	5,500	-	5,900	<1.7	3.8	<1.7	4.2	<0.005
SB-17-W 47'	9/6/2002	90	-	-	120	-	150	1.7	3.5	1.9	3.5	-
SB-18-W	**7/1/2008**	**8,500**	**-**	**-**	**1300**	**6,800**	**1,100**	**40**	**270**	**240**	**1,000**	**-**
SB-21-W	**7/1/2008**	**<50**	**180**	**360**	**11**	**160**	**11**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**-**
SB-22-W	**7/1/2008**	**<50**	**-**	**-**	**9.2**	**<2.0**	**8.3**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**-**
RWQCB ESL May 2008		210	210	210	1,800	18,000	1,800	46	130	43	100	
Table F-1b Commercial/Industrial Non drinking water												

Additional analyses VOCs all ND, PCBs all ND, Metals bottle broken in transit, no analysis

MDL = Method Detection Limit

µg/L = micrograms per liter (ppb)

- = Sample not analyzed by this method

* Sample GW was collected from standing water within the tank excavation

Table 4
Historical Groundwater Monitoring Analytical Data
796 66th Avenue, Oakland, California

Well ID (screen interval in	Date Sampled	Well Elevation (ft amsl)	Depth to Water (ft from TOC	Water Table Elevation (ft amsl)	TPH-g *(8015Cm)* µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE *(8021B)* µg/L	MTBE *(8260B)* µg/L	TBA *(8260B)* µg/L
						(EPA method 8021B)						
MW-1	9/30/2002	10.88	5.41	5.47	1,800	50	15	16	18	19,000	13,000	<5,000
(4-14)	1/2/2003	10.88	4.77	6.11	660	24	6.4	<2.5	<2.5	7,800	8,900	-
	3/31/2003	10.88	4.95	5.93	660	11	6.4	<5.0	<5.0	16,000	20,000	-
	6/30/2003	10.88	4.54	6.34	830	<5.0	6.8	<5.0	<5.0	16,000	17,000	-
	10/1/2003	10.88	4.66	6.22	720	<5.0	<5.0	<5.0	<5.0	14,000	13,000	-
	1/5/2004	10.88	4.07	6.81	<300	7.8	2.9	<3.0	<3.0	-	8,700	-
	4/5/2004	10.88	4.33	6.55	100	2.8	3.0	<1.0	<1.0	2,300	3,000	<500
	7/7/2004	10.88	4.97	5.91	190	<1.7	2.0	<1.7	<1.7	4,900	5,500	<1,000
	7/19/2004	10.88	5.12	5.76	340	<2.5	4.0	<2.5	<2.5	8,000	9,200	<1,700
	8/6/2004	10.88	5.13	5.75	280	<0.5	5.6	<0.5	<0.5	7,200	5,900	<1,000
	8/20/2004	10.88	5.31	5.57	<250	<2.5	<2.5	<2.5	<2.5	4,600	-	-
	9/3/2004	10.88	5.22	5.66	<250	<2.5	<2.5	<2.5	<2.5	5,700	4,700	<1,000
	10/13/2004	10.88	5.23	5.65	170	<0.5	4.8	<0.5	<0.5	3,700	4,400	-
	1/11/2005	10.88	4.69	6.19	110	8.8	4.2	<0.5	<0.5	880	990	910
	4/13/2005	10.88	5.02	5.86	230	<0.5	9.0	<0.5	<0.5	140	100	2,600
	7/6/2005	10.88	5.06	5.82	200	<0.5	8.3	<0.5	<0.5	<75	50	1,600
	10/6/2005	10.88	4.92	5.96	110	<0.5	6.8	<0.5	<0.5	<20	8.4	640
	1/9/2006	10.88	3.90	6.98	<50	<0.5	1.8	<0.5	<0.5	260	280	560
	4/10/2006	10.88	3.97	6.91	80	<0.5	3.1	<0.5	<0.5	100	70	160
	7/11/2006	10.88	4.63	6.25	<50	<0.5	2.8	<0.5	<0.5	<5.0	5.3	240
	10/18/2006	-	-	-	79	<0.5	3.7	<0.5	2.3	7.0	6.8	320
	3/13/2008	**10.88**	**4.80**	**6.08**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**5.5**	**<10**	**780**
MW-2	9/30/2002	10.77	8.00	2.77	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.84	<5.0
(4-14)	1/2/2003	10.77	5.91	4.86	<50	<0.5	<0.5	<0.5	<0.5	19	20	-
	3/31/2003	10.77	5.15	5.62	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.9	-
	6/30/2003	10.77	5.91	4.86	<50	<0.5	<0.5	<0.5	<0.5	7.0	9.6	-
	10/1/2003	10.77	6.69	4.08	<50	<0.5	<0.5	<0.5	<0.5	7.7	6.7	-
	1/5/2004	10.77	6.18	4.59	71	4.7	13	2.7	12	-	7.8	-
	4/5/2004	10.77	7.22	3.55	210	14	39	6.6	27	16	13	<5.0
	7/7/2004	10.77	6.83	3.94	<50	<0.5	<0.5	<0.5	<0.5	5.7	5.6	<5.0
	10/13/2004	10.77	7.18	3.59	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.6	-
	1/11/2005	10.77	7.27	3.50	74	2.6	11	2.1	10	<5.0	4.4	<5.0
	4/13/2005	10.77	6.66	4.11	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0
	7/6/2005	10.77	6.83	3.94	<50	<0.5	0.77	<0.5	<0.5	<5.0	2.9	<5.0
	10/6/2005	10.77	7.05	3.72	<50	<0.5	0.81	<0.5	0.54	<5.0	2.1	<5.0

Table 4
Historical Groundwater Monitoring Analytical Data
796 66th Avenue, Oakland, California

Well ID (screen interval in	Date Sampled	Well Elevation (ft amsl)	Depth to Water (ft from TOC	Water Table Elevation (ft amsl)	TPH-g *(8015Cm)* µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE *(8021B)* µg/L	MTBE *(8260B)* µg/L	TBA *(8260B)* µg/L
						(EPA method 8021B)						
MW-2 continued	1/9/2006	10.77	6.18	4.59	<50	<0.5	<0.5	<0.5	<0.5	6.1	7.6	<5.0
	4/10/2006	10.77	6.27	4.50	50	<0.5	8.0	1.5	6.1	<5.0	1.1	<5.0
	7/11/2006	10.77	6.97	3.80	<50	<0.5	0.72	<0.5	<0.5	<5.0	4.1	<5.0
	10/18/2006	-	-	-	53	<0.5	2.6	1.2	4.3	<5.0	1.7	<5.0
	3/13/2008	**10.77**	**6.66**	**4.11**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**3.0**	**<2.0**
MW-3	9/30/2002	10.20	5.21	4.99	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0
(4-14)	1/2/2003	10.20	5.31	4.89	<50	0.89	0.50	<0.5	0.72	15	14	-
	3/31/2003	10.20	4.58	5.62	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.62	-
	6/30/2003	10.20	3.83	6.37	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.6	-
	10/1/2003	10.20	4.02	6.18	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	-
	1/5/2004	10.20	6.18	4.02	71	4.7	13	2.7	12	-	7.8	-
	4/5/2004	10.20	3.79	6.41	120	8.8	22	3.2	13	<5.0	<0.5	<5.0
	7/7/2004	10.20	3.76	6.44	<50	<0.5	<0.5	<0.5	<0.5	<5.0	4.0	<5.0
	10/13/2004	10.20	4.45	5.75	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	-
	1/11/2005	10.20	5.21	4.99	68	2.2	9.0	1.7	8.5	<5.0	<0.5	<5.0
	4/13/2005	10.20	4.44	5.76	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0
	7/6/2005	10.20	3.91	6.29	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0
	10/6/2005	10.20	4.16	6.04	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0
	1/9/2006	10.20	4.44	5.76	<50	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5	<5.0
	4/10/2006	10.20	4.02	6.18	<50	<0.5	4.0	0.78	3.3	<5.0	<0.5	<5.0
	7/11/2006	10.20	3.53	6.67	<50	<0.5	0.51	<0.5	1.1	<5.0	0.67	<5.0
	10/18/2006	-	-	-	<50	<0.5	2.2	0.76	3.1	<5.0	<0.5	<5.0
	3/13/2008	**10.20**	**4.45**	**5.75**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**0.77**	**<2.0**
MW-4	9/30/2002	11.07	5.50	5.57	<100	<0.5	<0.5	<0.5	<0.5	790	750	<100
(4-14)	1/2/2003	11.07	4.90	6.17	<50	<0.5	<0.5	<0.5	<0.5	420	460	-
	3/31/2003	11.07	4.81	6.26	<50	<0.5	<0.5	<0.5	<0.5	1,500	1,400	-
	6/30/2003	11.07	4.61	6.46	<50	<0.5	<0.5	<0.5	<0.5	1,600	1,200	-
	10/1/2003	11.07	4.76	6.31	<50	<0.5	<0.5	<0.5	<0.5	1,800	1,400	-
	1/5/2004	11.07	4.32	6.75	<50	3.0	6.7	1.4	6.1	-	1,200	-
	4/5/2004	11.07	4.43	6.64	<50	0.79	2.0	<0.5	2.2	800	840	<250
	7/7/2004	11.07	5.08	5.99	<50	<0.5	<0.5	<0.5	<0.5	1,400	2,100	<250
	7/19/2004	11.07	5.19	5.88	<50	<0.5	<0.5	<0.5	<0.5	1,200	1,300	<500
	8/6/2004	11.07	5.20	5.87	<50	0.76	<0.5	<0.5	<0.5	1,300	1,200	<500
	8/20/2004	11.07	5.37	5.70	<50	<0.5	<0.5	<0.5	<0.5	460	-	-
	9/3/2004	11.07	5.35	5.72	<50	<0.5	<0.5	<0.5	<0.5	440	370	<50
	10/13/2004	11.07	5.35	5.72	<50	<0.5	<0.5	<0.5	<0.5	330	360	-
	1/11/2005	11.07	4.99	6.08	<50	1.0	2.1	<0.5	1.8	450	430	<100

Table 4
Historical Groundwater Monitoring Analytical Data
796 66th Avenue, Oakland, California

Well ID (screen interval in	Date Sampled	Well Elevation (ft amsl)	Depth to Water (ft from TOC	Water Table Elevation (ft amsl)	TPH-g *(8015Cm)* µg/L	Benzene µg/L	Toluene µg/L	Ethylbenzene µg/L	Xylenes µg/L	MTBE *(8021B)* µg/L	MTBE *(8260B)* µg/L	TBA *(8260B)* µg/L
						(EPA method 8021B)						
MW-4	4/13/2005	11.07	5.17	5.90	<50	<0.5	<0.5	<0.5	<0.5	340	200	<50
continued	7/6/2005	11.07	5.18	5.89	<50	<0.5	<0.5	<0.5	<0.5	300	290	330
	10/6/2005	11.07	5.03	6.04	<50	<0.5	<0.5	<0.5	<0.5	380	350	430
	1/9/2006	11.07	4.11	6.96	<50	<0.5	<0.5	<0.5	<0.5	140	150	200
	4/10/2006	11.07	4.13	6.94	<50	<0.5	1.0	<0.5	1.1	52	39	120
	7/11/2006	11.07	4.72	6.35	<50	<0.5	<0.5	<0.5	<0.5	56	66	120
	10/18/2006	-	-	-	<50	<0.5	0.74	0.55	2.5	87	67	160
	3/13/2008	**11.07**	**4.95**	**6.12**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**19**	**22**	**69**
MW-5	9/30/2002	11.18	5.62	5.56	<2,000	<5.0	<5.0	<5.0	<5.0	19,000	18000	<2,500
(4-14)	1/2/2003	11.18	5.12	6.06	<50	<0.5	<0.5	<0.5	<0.5	7,000	7,000	-
	3/31/2003	11.18	4.93	6.25	<500	<5.0	<5.0	<5.0	<5.0	14,000	12,000	-
	6/30/2003	11.18	4.75	6.43	<500	<5.0	<5.0	<5.0	<5.0	13,000	15,000	-
	10/1/2003	11.18	4.88	6.30	<500	<5.0	<5.0	<5.0	<5.0	12,000	11,000	-
	1/5/2004	11.18	4.19	6.99	<1,000	<10	<10	<10	<10	-	11,000	-
	4/5/2004	11.18	4.57	6.61	<250	<2.5	<2.5	<2.5	<2.5	9,400	13,000	<2,500
	7/7/2004	11.18	5.19	5.99	<500	<5.0	<5.0	<5.0	<5.0	15,000	19,000	<2,000
	7/19/2004	11.18	5.32	5.86	<500	<5.0	<5.0	<5.0	<5.0	16,000	14,000	<2,500
	8/6/2004	11.18	5.33	5.85	110	<0.5	<0.5	<0.5	<0.5	12,000	11,000	<2,500
	8/20/2004	11.18	5.49	5.69	<500	<5.0	<5.0	<5.0	<5.0	7,200	-	-
	9/3/2004	11.18	5.48	5.70	<500	<2.5	<2.5	<2.5	<2.5	8,500	7,200	<1,700
	10/13/2004	11.18	5.49	5.69	<250	<2.5	<2.5	<2.5	<2.5	6,700	7,700	-
	1/11/2005	11.18	5.08	6.10	<100	1.5	3.3	<1.0	2.3	3,000	4,800	1,200
	4/13/2005	11.18	5.24	5.94	<50	<0.5	<0.5	<0.5	<0.5	510	320	2,600
	7/6/2005	11.18	5.27	5.91	<50	<0.5	<0.5	<0.5	<0.5	43	51	4,900
	10/6/2005	11.18	5.14	6.04	<50	<0.5	<0.5	<0.5	<0.5	25	<25	1,900
	1/9/2006	11.18	4.23	6.95	<50	<0.5	<0.5	<0.5	<0.5	70	84	2,000
	4/10/2006	11.18	4.24	6.94	<50	<0.5	0.59	<0.5	<0.5	13	11	860
	7/11/2006	11.18	4.85	6.33	<50	<0.5	<0.5	<0.5	<0.5	20	24	1,200
	10/18/2006	-	-	-	<50	<0.5	1.6	0.51	1.8	17	12	1,300
	3/13/2008	**11.18**	**5.04**	**6.14**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**10**	**11**	**750**
RWQCB ESL May 2008					210	46	130	43	100	1,800	1,800	18,000
Commercial/Industrial - Non drinking water												

Notes:

bgs = below ground surface

ft amsl = feet above mean sea level

TOC = Top of Casing; all well elevations and depths to water are measured from TOC

TPH-g = Total Petroleum Hydrocarbons as gasoline

µg/L = micrograms per liter

MTBE = Methyl tertiary-Butyl Ether

TBA = tertiary-Butyl Alcohol

- = Sample not analyzed by this method

Table 5
Groundwater Elevation Data Summary
796 66th Avenue, Oakland, California

Episode	Date Sampled	Average Water Table Elevation*	Change From Previous Episode	Gradient (direction)
1	9/30/2002	4.87	-	0.005 (S)
2	1/2/2003	5.62	0.75	0.022 (SSE)
3	3/31/2003	5.94	0.32	0.006 (SSE)
4	6/30/2003	6.09	0.16	0.020 (SE)
5	10/1/2003	5.82	-0.27	0.029-0.001 (SE)
6	1/5/2004	6.06	0.24	0.03 (SE)
7	4/5/2004	5.95	-0.11	0.02 (E)
8	7/7/2004	5.65	-0.30	0.02 (E)
9	7/19/2004	5.83	0.18	nc
10	8/6/2004	5.82	-0.01	nc
11	8/20/2004	5.65	-0.17	nc
12	9/3/2004	5.69	0.04	nc
13	10/13/2004	5.28	-0.41	0.02 (E)
14	1/11/2005	5.37	0.09	0.02 (E)
15	4/13/2005	5.51	0.14	0.02 (E)
16	7/6/2005	5.57	0.06	0.024 (E)
17	10/6/2005	5.56	-0.01	0.03 (E)
18	1/9/2006	6.25	0.69	0.04 (ESE)
19	4/10/2006	6.29	0.05	0.03 (ESE)
20	7/11/2006	5.88	-0.41	0.03 (ESE)
21	**3/13/2008**	**5.64**	**-0.24**	**0.03 (ESE)**

Notes:
*Average Water Table Elevation value calculated in Microsoft Excel
nc = not calculated

APPENDIX A

Soil Boring Permit

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: 06/17/2008 By jamesy

Permit Numbers: W2008-0360
Permits Valid from 07/01/2008 to 07/01/2008

Application Id: 1213658373636
City of Project Site: Oakland
Site Location: Cruise America
796 66th Avenue
Oakland, CA 94621
Project Start Date: 07/01/2008
Completion Date: 07/01/2008
Requested Inspection: 07/01/2008
Scheduled Inspection: 07/01/2008 at 2:00 PM (Contact your inspector, Vicky Hamlin at (510) 670-5443, to confirm.)

Applicant: AEI Consultants - Robert Flory
2500 Camino Diablo, Walnut creek, CA 94597
Phone: 925-944-2899

Property Owner: Cruise America
11 West Hampton Ave., Mesa, AZ 85210
Phone: 480-464-7300

Client: Cory Kauffman
11 West Hampton Ave., Mesa, AZ 85210
Phone: 480-464-7300

Contact: Robert Flory
Phone: 925-944-2899
Cell: 925-457-7517

Total Due: $200.00
Receipt Number: WR2008-0212 **Total Amount Paid:** $200.00
Payer Name : Robert F Flory Paid By: VISA **PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Geo Probes-Sampling 24 to 72 hours only - 6 Boreholes
Driller: ECA - Lic #: 695970 - Method: DP **Work Total: $200.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2008-0360	06/17/2008	09/29/2008	6	2.00 in.	30.00 ft

Specific Work Permit Conditions

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

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

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

4. 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.

PROGRAMS AND SERVICES

Well Standards Program

The Alameda County Public Works Agency, Water Resources is located at:
399 Elmhurst Street
Hayward, CA 94544
For Driving Directions or General Info, Please Contact 510-670-5480 or wells@acpwa.org
For Drilling Permit information and process contact James Yoo at
Phone: 510-670-6633
FAX: 510-782-1939
Email: Jamesy@acpwa.org

Alameda County Public Works is the administering agency of General Ordinance Code, Chapter 6.88 . The purpose of this chapter is to provide for the regulation of groundwater wells and exploratory holes as required by California Water Code. The provisions of these laws are administered and enforced by Alameda County Public Works Agency through its Well Standards Program.

Drilling Permit Jurisdictions in Alameda County: There are four jurisdictions in Alameda County.

Location: Agency with Jurisdiction Contact Number

Berkeley City of Berkeley Ph: 510-981-7460
Fax: 510-540-5672

Fremont, Newark, Union City Alameda County Water District Ph: 510-668-4460
Fax: 510-651-1760

Pleasanton, Dublin, Livermore, Sunol Zone 7 Water Agency Ph: 925-454-5000
Fax: 510-454-5728

The Alameda County Public Works Agency, Water Resources has the responsibility and authority to issue drilling permits and to enforce the County Water Well Ordinance 73-68. This jurisdiction covers the western Alameda County area of **Oakland**, **Alameda**,**Piedmont**, **Emeryville**, **Albany**, **San Leandro**, **San Lorenzo**, **Castro Valley**, and **Hayward** . The purpose of the drilling permits are to ensure that any new well or the destruction of wells, including geotechnical investigations and environmental sampling within the above jurisdiction and within Alameda County will not cause pollution or contamination of ground water or otherwise jeopardize the health, safety or welfare of the people of Alameda County.

Permits are required for all work pertaining to wells and exploratory holes at any depth within the jurisdiction of the Well Standards Program. A completed permit application *(30 Kb)** , along with a site map, should be submitted at least **ten (10) working days prior to the planned start of work**. Submittals should be sent to the address or fax number provided on the application form. When submitting an application via fax, please use a high resolution scan to retain legibility.

Fees
Beginning April 11, 2005 , the following fees shall apply:

A permit to construct, rehabilitate, or destroy wells, including cathodic protection wells, but excluding dewatering wells (*Horizontal hillside dewatering and dewatering for construction period only), shall cost $300.00 per well.

A permit to bore exploratory holes, including temporary test wells, shall cost $200 per site. A site includes the project parcel as well as any adjoining parcels.

Please make checks payable to: **Treasurer, County of Alameda**

Permit Fees are exempt to State & Federal Projects
Applicants shall submit a letter from the agency requesting the fee exemption.

Scheduling Work/Inspections:
Alameda County Public Works Agency (ACPWA), Water Resources Section requires scheduling and inspection of permitted work. All drilling activities must be scheduled in advance. Availability of inspections will vary from week to week and will come on a first come, first served bases. To ensure inspection availability on your desired or driller scheduled date, the following procedures are required:

Please contact **James Yoo at 510-670-6633** to schedule the inspection date and time (You must have drilling permit approved prior to scheduling).

Schedule the work as far in advance as possible (at least 5 days in advance); and confirm the scheduled drilling date(s) at least 24 hours prior to drilling.

Once the work has been scheduled, an ACPWA Inspector will coordinate the inspection requirements as well as how the Inspector can be reached if they are not at the site when Inspection is required. Expect for special circumstances given, all work will require the inspection to be conducted during the working hours of 8:30am to 2:30pm., Monday to Friday, excluding holidays.

Request for Permit Extension:
Permits are only valid from the start date to the completion date as stated on the drilling permit application and Conditions of Approval. To request an extension of a drilling permit application, applicants must request in writing prior to the completion date as set forth in the Conditions of Approval of the drilling permit application. Please send fax or email to Water Resources Section, Fax 510-782-1939 or email at wells@acpwa.org. There are no additional fees for permit extensions or for re-scheduling inspection dates. You may not extend your drilling permit dates beyond 90 days from the approval date of the permit application. **NO refunds** shall be given back after 90 days and the permit shall be deemed voided.

Cancel a Drilling Permit:
Applicants may cancel a drilling permit only in writing by mail, fax or email to Water Resources Section, Fax 510-782-1939 or email at wells@acpwa.org. If you do not cancel your drilling permit application before the drilling completion date or notify in writing within 90 days, Alameda County Public Works Agency, Water Resources Section may void the permit and No refunds may be given back.

Refunds/Service Charge:
A service charge of $25.00 dollars for the first check returned and $35.00 dollars for each subsequent check returned.

Applicants who cancel a drilling permit application **before** we issue the approved permit(s), will receive a **FULL** refund (at any amount) and will be mailed back within two weeks.

Applicants who cancel a drilling permit application **after** a permit has been issued will then be charged a service fee of $50.00 (fifty Dollars).

To collect the remaining funds will be determined by the amount of the refund to be refunded (see process below).

Board of Supervisors Minute Order, File No. 9763, dated January 9, 1996, gives blanket authority to the Auditor-Controller to process claims, from all County departments for the refund of fees which do not exceed $500 (Five Hundred Dollars)(with the exception of the County Clerk whose limit is $1,500).

Refunds over the amounts must be authorized by the Board of Supervisors Minute Order, File No. 9763 require specific approval by the Board of Supervisors. The forms to request for refunds under $500.00 (Five Hundred Dollars) are available at this office or any County Offices. If the amount is exceeded, a Board letter and Minute Order must accompany the claim. Applicant shall fill out the request form and the County Fiscal department will process the request.

Enforcement
Penalty. Any person who does any work for which a permit is required by this chapter and who fails to obtain a permit shall be guilty of a misdemeanor punishable by fine not exceeding Five Hundred Dollars ($500.00) or by imprisonment not exceeding six months, or by both such fine and imprisonment, and such person shall be deemed guilty of a separate offense for each and every day or portion thereof during which any such

violation is committed, continued, or permitted, and shall be subject to the same punishment as for the original offense. (Prior gen. code §3-160.6)

Enforcement actions will be determined by this office on a case-by-case basis
Drilling without a permit shall be the cost of the permit(s) and a fine of $500.00 (Five Hundred Dollars).

Well Completion Reports (State DWR-188 forms) must be filed with the Well Standards Program within 60 days of completing work. Staff will review the report, assign a state well number, and then forward it to the California Department of Water Resources (DWR). Drillers should not send completed reports to DWR directly. Failure to file a Well Completion Report or deliberate falsification of the information is a misdemeanor; it is also grounds for disciplinary action by the Contractors' State License Board. Also note that filed Well Completion Reports are considered private record protected by state law and can only be released to the well owner or those specifically authorized by government agencies.

See our website (www.acgov.org/pwa/wells/index.shtml) for links to additional forms.

APPENDIX B

Boring Logs

Project: Cruise America
Project Location: 796 66th Ave., Oakland, CA
Project Number: 278361

Log of Boring SB-18

Sheet 1 of 1

Date(s) Drilled **July 1, 2008**	Logged By **Robert F. Flory**	Checked By **Leah Levine-Goldberg**
Drilling Method **Direct Push**	Drill Bit Size/Type **2 inch**	Total Depth of Borehole **10 feet bgs**
Drill Rig Type **GeoProbe 5410**	Drilling Contractor **ECA**	Approximate Surface Elevation **11 feet MSL**
Groundwater Level and Date Measured **4.1 feet ATD**	Sampling Method(s) **Tube**	Permit # **W2008-0360**
Borehole Backfill **Cement Slurry**	Location	

Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
0			GP		Crushed Rock, gray 6N/, underlain by geotextile sheet		
			GC-CL		Clayey Gravel- Gravelly Clay, dark yellowish brown - dark grayish brown 10YR 4/4 - 4/2, moderately firm, slightly moist (FILL)		
		SB-18-3.5	CL		Gravelly Clay, very dark gray 10YR 3/1, moderately firm, moist, gasoline odor (FILL) (ATD)	95	
5		SB-18-5					
		SB-18-6					
		SB-18-7	GC-CL		Clayey Gravel- Gravelly Clay, grayish green 5G 4/2 - dark greenish gray 5GY 4/1, wood fragments, moderately firm, very moist (FILL)		
			Unused CL		Woody Peat, black 2.5/, firm		
					Gravelly Clay, very dark greenish gray 5GY 3/1, moderately firm, - moderately soft, wet (FILL)		
					Silty Clay, very dark greenish gray 5GY 3/1 - black N 2.5/, moderately soft, wet (FILL)		
10					Bottom of Boring at 10 feet bgs		
15							
20							

Figure

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X:\PROJECTS\CHARACTERIZATION & REMEDIATION\ADVANCED REMEDIATION\Cruise America - Oakland - PJM\2008 Drilling\Borings\Boring 18_22.bgs [DP Boring 20.tpl]

Project: Cruise America
Project Location: 796 66th Ave., Oakland, CA
Project Number: 278361

Log of Boring SB-19

Sheet 1 of 1

Date(s) Drilled **July 1, 2008**	Logged By **Robert F. Flory**	Checked By **Leah Levine-Goldberg**
Drilling Method **Direct Push**	Drill Bit Size/Type **2 inch**	Total Depth of Borehole **8 feet bgs**
Drill Rig Type **GeoProbe 5410**	Drilling Contractor **ECA**	Approximate Surface Elevation **11 feet MSL**
Groundwater Level and Date Measured **Not Encountered ATD**	Sampling Method(s) **Tube**	Permit # **W2008-0360**
Borehole Backfill **Cement Slurry**	Location	

Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
0			Asphalt		Asphalt, 3"		
			GC-CL		Clayey Gravel- Gravelly Clay, dark gray - dark grayish brown 10YR 4/1 - 4/2, moderately firm, slightly moist (FILL) No odor		
		SB-19-3.5	CL		Gravelly Clay, dark greenish gray 5G 4/1, moderately firm, moist, no odor (FILL)		
			GM-GC		Sandy Gravel, dark greenish gray 5G 4/1, clayey, moderately firm, moist, no odor (FILL)		
5		SB-19-6			No recovery		
					Bottom of Boring at 8 feet bgs		
10							
15							
20							

Figure

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ENVIRONMENTAL & CIVIL ENGINEERING

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Project: Cruise America
Project Location: 796 66th Ave., Oakland, CA
Project Number: 278361

Log of Boring SB-20

Sheet 1 of 1

Date(s) Drilled **July 1, 2008**	Logged By **Robert F. Flory**	Checked By **Leah Levine-Goldberg**
Drilling Method **Direct Push**	Drill Bit Size/Type **2 inch**	Total Depth of Borehole **8 feet bgs**
Drill Rig Type **GeoProbe 5410**	Drilling Contractor **ECA**	Approximate Surface Elevation **11 feet MSL**
Groundwater Level and Date Measured **Not Encountered ATD**	Sampling Method(s) **Tube**	Permit # **W2008-0360**
Borehole Backfill **Cement Slurry**	Location	

Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
0			Asphalt		Asphalt, 3"		
			GC-CL		Clayey Gravel- Gravelly Clay, dark gray - dark grayish brown 10YR 4/1 - 4/2, moderately firm, slightly moist (FILL) No odor		
			CL		Gravelly Clay, brown 10YR 4/3, moderately firm, moist, no odor (FILL)		
	☒	SB-20-3.5					
			GC-CL		Sandy Gravelly Clay, black 10YR 2/1, abundant wood fragments, firm, moist, no odor		
5	☒	SB-20-5.5					
					No recovery		
					Bottom of Boring at 8 feet bgs		
10							
15							
20							

Figure

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ENVIRONMENTAL & CIVIL ENGINEERING

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Project: Cruise America Project Location: 796 66th Ave., Oakland, CA Project Number: 278361	**Log of Boring SB-22** Sheet 1 of 2

Date(s) Drilled **July 1, 2008**	Logged By **Robert F. Flory**	Checked By **Leah Levine-Goldberg**
Drilling Method **Direct Push**	Drill Bit Size/Type **2 inch**	Total Depth of Borehole **28 feet bgs**
Drill Rig Type **GeoProbe 5410**	Drilling Contractor **ECA**	Approximate Surface Elevation **11 feet MSL**
Groundwater Level and Date Measured **Not Encountered ATD**	Sampling Method(s) **Tube**	Permit # **W2008-0360**
Borehole Backfill **Cement Slurry**	Location	

Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
0			Asphalt		Asphalt, 3"		
			GC-CL		Clayey Gravel- Gravelly Clay, brown - yellowish btrown 10YR 4/3 - 5/4, moderately firm, slightly moist (FILL)		
			CL		Gravelly Clay, olive 5Y 5/3 - 5/4, moderately firm, slightly moist (FILL)		
		SB-22-4	CL		Peat, Black		
5					Sandy Clay, dark olive gray - olive gray 5Y 3/2 - 5/2 - grayish brown 10YR 5/2, streaks gravelly, firm, moist, no odor		
			SC-CL		Clayey Sand - Sandy Clay, very dark greenish gray 5G 3/1, soft, plastic, wet		
10		SB-22-9.5					
			SC		Very Clayey Sand, dark greenish gray - very dark greenish gray 10GY 4/1 - 3/1, soft, plastic, wet		
					Peat, black, woody, interbedded with clay partings		
15			SC-CL		Very Clayey Sand - Sandy Clay, very dark greenish gray 10GY 3/1, soft, plastic, wet		
		BS-22-15.5	SP-SC-CL		Oyster Sand, light gray 10YR 7/1, 1/4" streak, clayey, soft		
			CL		Very Clayey Sand - Sandy Clay, very dark greenish gray 10GY 3/1, soft, plastic, wet		
			SC-CL		Sandy Clay, very dark greenish gray 10GY 3/1, soft, plastic, wet		
					Clayey Gravel streak		
					Sandy Clay, very dark greenish gray 10GY 3/1, soft, plastic, wet		
20			CL		Silty Clay, grayish green 5G 5/2 - 4/2, firm, moist		

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AEI CONSULTANTS
ENVIRONMENTAL & CIVIL ENGINEERING

Figure

Project: Cruise America
Project Location: 796 66th Ave., Oakland, CA
Project Number: 278361

Log of Boring SB-22

Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
20			CL		Silty Clay, grayish green 5G 5/2 - 4/2, firm, moist (cont.)		
			CL		Silty Clay, grayish green 5G 5/2 - 4/2, becoming sandy, firm, moist		
			ML		Sandy Silt, olive 5Y 5/6 - grenish gray 5G 5/1 mottled, firm, moist		
			GW		Sandy Gravel - Gravelly Sand, dark brown - very dark brown 10YR 3/3 - 3/2, slightly clayey, firm - hard, wet		
		SB-22-23.5	SW		Gravelly Sand, yellowish brown 10YR 5/6, firm - hard, wet		
			SP		Sand, very dark gray - very dark grayish brown 10YR 3/1 - 3/1, fine grained, poorly graded, firm, wet		
25			SP		Sand, very dark gray - very dark grayish brown 10YR 3/1 - 3/2, clayey, fine grained, poorly graded, firm, wet clay increasing downward		
		SB-22-27.5	CL		Clay, very dark grayish brown 10YR 3/2, firm, wet slightly sandy at top		
					Bottom of Boring at 28 feet bgs		
30							
35							
40							

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AEI CONSULTANTS
ENVIRONMENTAL & CIVIL ENGINEERING

Figure

Project: Cruise America
Project Location: 796 66th Ave., Oakland, CA
Project Number: 278361

Log of Boring SB-21

Sheet 1 of 1

Date(s) Drilled **July 1, 2008**	Logged By **Robert F. Flory**	Checked By **Leah Levine-Goldberg**
Drilling Method **Direct Push**	Drill Bit Size/Type **2 inch**	Total Depth of Borehole **11 feet bgs**
Drill Rig Type **GeoProbe 5410**	Drilling Contractor **ECA**	Approximate Surface Elevation **11 feet MSL**
Groundwater Level and Date Measured **6.3 feet ATD**	Sampling Method(s) **Tube**	Permit # **W2008-0360**
Borehole Backfill **Cement Slurry**	Location	

Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
0			Asphalt		Asphalt, 3"		
			GC		Clayey Gravel, brown - dark brown 10YR 4/4-4/3, moderately firm, slightly moist (FILL) No odor		
			GC		Clayey Gravel, very dark greenish gray - dark greenish gray 5G 3/1-4/1, moderately firm, moist, ? trace odor (FILL)		
		SB-21-3.5					
5			GC-CL		Sandy Gravel - Gravelly Clay, black N 2.5/, sandy, firm, moist - wet, slight oily odor		
		SB-21-6			(ATD) ▽		
			GC		Clayey Gravel, black N 2.5/, sandy, firm, wet, slight oily odor		
			CL		Very Clayey Sand, dark greenish gray - grayish green 10GY 4/1 - 5G 4/2, soft, wet		
		SB-21-7.5					
10					No recovery		Boring caved to 9.7', water at 6.3'
					Bottom of Boring at 11 feet bgs		
15							
20							

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\ADVANCED REMEDIATION\Cruise America - Oakland - PJM\2008 Drilling\Borings\Boring 18_22.bgs [DP Boring 20.tpl]

Figure

AEI CONSULTANTS
ENVIRONMENTAL & CIVIL ENGINEERING

APPENDIX C

Groundwater Sampling
Field Sampling Forms

APPENDIX D

Soil Laboratory Analyses
with
Chain of Custody Documentation

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: #278361; Cruise America, 796 66th Ave, Oakland	Date Sampled: 07/01/08
		Date Received: 07/03/08
	Client Contact: Robert Flory	Date Reported: 07/11/08
	Client P.O.:	Date Completed: 07/11/08

WorkOrder: 0807101

July 11, 2008

Dear Robert:

Enclosed within are:

1) The results of the **10** analyzed samples from your project: **#278361; Cruise America, 796 66th**
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.

0807101

1/2

McCampbell Analytical, Inc.

1534 WILLOW PASS ROAD
PITTSBURG, CA 94565-1701
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

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

GeoTracker EDF ☒ PDF ☒ Excel ☐ Write On (DW) ☐

Report To: Robert Flory	Bill To: Same
Company: AEI Consultants	
2500 Camino Diablo	
Walnut Creek, CA 94597	E-Mail: rflory@aeiconsultants.com
Tel: (925) 944-2899, extension 122	Fax: (925) 944-2895
Project #: 278361	Project Name: Cruise America
Project Location: 796 66th Ave, Oakland	
Sampler Signature:	

SAMPLE ID	LOCATION (Field Point Name)	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	Soil	Air	Sludge	Other	METHOD PRESERVED Ice	HCl	HNO_3	Other	BTEX & TPH as Gas (602/8021B + 8015)/MTBE	EPA 624 / 8260 MTBE& TBA Only	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	HVOCs EPA 8260 – 8010 basic list	BTEX ONLY (EPA 602 / 8020)	Pesticides EPA 608 / 8080	PCBs EPA 608 / 8080	EPA 624 / 8260 9 Fuel oxygenates	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	Other	Comments
SB-21-3.5		7-1	0755	1	2x4g										X	X			X			X					X		X	* full scan
SB-21-7.5			0800	1																						HOLD				except TPH-d only
SB-21-6			0800	1											X	X			X			X					X		X	
SB-19-3.5			0820	1											X	X														
SB-19-6			0850	1											X	X														
SB-20-3.5			0830												X	X														
SB-20-5.5			0835												X	X														
SB-18-3.5			0945												X	X														
SB-16-5			1003												X	X														
SB-18-6			1005																											
SB-18-7			1010																											

Relinquished By:	Date:	Time:	Received By:
	7/2/08	420	Chromatech Inc. 1622
Relinquished By:	Date:	Time:	Received By:
FAXED - Tech SR.	7/2/08	1822	
Relinquished By:	Date:	Time:	Received By:
	7/2/08	1840	

	VOAS	O&G	METALS	OTHER
ICE/t° 11.2				
GOOD CONDITION	PRESERVATION			
HEAD SPACE ABSENT	APPROPRIATE			
DECHLORINATED IN LAB	CONTAINERS			
	PERSERVED IN LAB			

7.2

McCampbell Analytical, Inc.	CHAIN OF CUSTODY RECORD
1534 WILLOW PASS ROAD PITTSBURG, CA 94565-1701 Telephone: (925) 252-9262 Fax: (925) 252-9269	TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ■ 5 DAY GeoTracker EDF ☒ PDF ☒ Excel ☐ Write On (DW) ☐

Report To: Robert Flory Bill To: Same
Company: AEI Consultants
2500 Camino Diablo
Walnut Creek, CA 94597 E-Mail: rflory@aeiconsultants.com
Tel: (925) 944-2899, extension 122 Fax: (925) 944-2895
Project #: 278361 Project Name: Cruise America
Project Location: 796 66th Ave, Oakland
Sampler Signature: [signature]

SAMPLE ID	LOCATION (Field Point Name)	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 & TPH as Gas (602/8021B + 8015)/MTBE	EPA 624 / 8260 MTBE& TBA Only	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	HVOCs EPA 8260 – 8010 basic list	BTEX ONLY (EPA 602 / 8020)	Pesticides EPA 608 / 8080	PCBs EPA 608 / 8080	EPA 624 / 8260 9 Fuel oxygenates	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	Other	Comments
SB-22-4		7-1	1040	1	2x5		〃								+	X														
SB-22-9.5		〃	1045	1	〃		〃																							
SB-22-15.5		〃	1050	1	〃		〃																							
SB-22-19.5		〃	1055	1	〃		〃																							
SB-22-23.5		〃	1105	1	〃		〃								+	X														
SB-22-27.5		〃	1115	1	〃		〃																							

Comments: Filter Samples for Metals Analysis: Yes / No

Relinquished By:	Date:	Time:	Received By:
[signature]	7/2/08	420	Envirotech [signature] 1622
Enviro-Tech SR	7/2/08	1835	X [signature]
[signature]	7/2/08	1840	[signature]

ICE/t° 7.2
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 Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0807101 **ClientCode: AEL**

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

Report to:
Robert Flory
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
(925) 944-2899 FAX (925) 944-2895
Email: rflory@aeiconsultants.com
cc:
PO:
ProjectNo: #278361; Cruise America, 796 66th Ave, Oakland

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

Requested TAT: 5 days

Date Received: **07/03/2008**
Date Printed: **07/03/2008**

					Requested Tests (See legend below)											
Lab ID	Client ID	Matrix	Collection Date	Hold	1	2	3	4	5	6	7	8	9	10	11	12
0807101-001	SB-21-3.5	Soil	7/1/2008 7:55	☐	A	A	A	A	A		A	A				
0807101-003	SB-21-6	Soil	7/1/2008 8:00	☐	A	A	A	A	A			A				
0807101-004	SB-19-3.5	Soil	7/1/2008 8:20	☐	A			A		A						
0807101-005	SB-19-6	Soil	7/1/2008 8:50	☐	A			A		A						
0807101-006	SB-20-3.5	Soil	7/1/2008 8:30	☐	A			A		A						
0807101-007	SB-20-5.5	Soil	7/1/2008 8:35	☐	A			A		A						
0807101-008	SB-18-3.5	Soil	7/1/2008 9:45	☐	A			A		A						
0807101-009	SB-18-5	Soil	7/1/2008 10:03	☐	A			A		A						
0807101-012	SB-22-4	Soil	7/1/2008 10:40	☐	A			A								
0807101-016	SB-22-23.5	Soil	7/1/2008 11:05	☐	A			A								

Test Legend:

1	5-OXYS_S	2	8010BMS_S	3	8082A_PCB_S	4	G-MBTEX_S	5	LUFT_S
6	PB_S	7	PREDF REPORT	8	TPH(D)WSG_S	9		10	
11		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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Telephone: 877-252-9262 Fax: 925-252-9269

Sample Receipt Checklist

Client Name: **AEI Consultants** Date and Time Received: **7/3/08 2:12:33 PM**

Project Name: **#278361; Cruise America, 796 66th Ave, Oakland** Checklist completed and reviewed by: Ana Venegas

WorkOrder N°: **0807101** Matrix Soil Carrier: Michael Hernandez (MAI Courier)

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: 7.2°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 ☑

** 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: #278361; Cruise America, 796 66th Ave, Oakland	Date Sampled: 07/01/08
		Date Received: 07/03/08
2500 Camino Diablo, Ste. #200	Client Contact: Robert Flory	Date Extracted: 07/03/08
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed: 07/10/08-07/11/08

Oxygenated Volatile Organics by P&T and GC/MS*

Extraction method SW5030B Analytical methods SW8260B Work Order: 0807101

Lab ID	Client ID	Matrix	Methyl-t-butyl ether (MTBE)	t-Butyl alcohol (TBA)	DF	% SS
0807101-001A	SB-21-3.5	S	ND	ND	1	98
0807101-003A	SB-21-6	S	ND	ND	1	96
0807101-004A	SB-19-3.5	S	0.024	ND	1	94
0807101-005A	SB-19-6	S	6.5	ND<3.3	67	102
0807101-006A	SB-20-3.5	S	0.023	ND	1	94
0807101-007A	SB-20-5.5	S	ND	ND	1	94
0807101-008A	SB-18-3.5	S	ND<0.25,a3	ND<2.5	50	95
0807101-009A	SB-18-5	S	12	ND<3.3	67	102
0807101-012A	SB-22-4	S	ND	ND	1	92
0807101-016A	SB-22-23.5	S	ND	ND	1	94

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA	NA
	S	0.005	0.05	mg/kg

* 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 surrogate coelutes with another peak.

a3) sample diluted due to high organic content

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
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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: #278361; Cruise America, 796 66th Ave, Oakland	Date Sampled: 07/01/08
		Date Received: 07/03/08
2500 Camino Diablo, Ste. #200	Client Contact: Robert Flory	Date Extracted: 07/03/08
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed 07/11/08

Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0807101

					Reporting Limit for DF =1	
Lab ID	0807101-001A	0807101-003A				
Client ID	SB-21-3.5	SB-21-6				
Matrix	S	S			S	W
DF	1	1				
Compound	**Concentration**				mg/kg	µg/L
Bromodichloromethane	ND	ND			0.005	NA
Bromoform	ND	ND			0.005	NA
Bromomethane	ND	ND			0.005	NA
Carbon Tetrachloride	ND	ND			0.005	NA
Chlorobenzene	ND	ND			0.005	NA
Chloroethane	ND	ND			0.005	NA
Chloroform	ND	ND			0.005	NA
Chloromethane	ND	ND			0.005	NA
Dibromochloromethane	ND	ND			0.005	NA
1,2-Dibromoethane (EDB)	ND	ND			0.004	NA
1,2-Dichlorobenzene	ND	ND			0.005	NA
1,3-Dichlorobenzene	ND	ND			0.005	NA
1,4-Dichlorobenzene	ND	ND			0.005	NA
Dichlorodifluoromethane	ND	ND			0.005	NA
1,1-Dichloroethane	ND	ND			0.005	NA
1,2-Dichloroethane (1,2-DCA)	ND	ND			0.004	NA
1,1-Dichloroethene	ND	ND			0.005	NA
cis-1,2-Dichloroethene	ND	ND			0.005	NA
trans-1,2-Dichloroethene	ND	ND			0.005	NA
1,2-Dichloropropane	ND	ND			0.005	NA
cis-1,3-Dichloropropene	ND	ND			0.005	NA
trans-1,3-Dichloropropene	ND	ND			0.005	NA
Freon 113	ND	ND			0.1	NA
Methylene chloride	ND	ND			0.005	NA
1,1,1,2-Tetrachloroethane	ND	ND			0.005	NA
1,1,2,2-Tetrachloroethane	ND	ND			0.005	NA
Tetrachloroethene	ND	ND			0.005	NA
1,1,1-Trichloroethane	ND	ND			0.005	NA
1,1,2-Trichloroethane	ND	ND			0.005	NA
Trichloroethene	ND	ND			0.005	NA
Trichlorofluoromethane	ND	ND			0.005	NA
Vinyl Chloride	ND	ND			0.005	NA
Surrogate Recoveries (%)						
%SS1:	98	96				
%SS2:	105	105				
%SS3:	119	110				
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 surrogate coelutes with another peak.

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

AEI Consultants	Client Project ID: #278361; Cruise America, 796 66th Ave, Oakland	Date Sampled: 07/01/08
		Date Received: 07/03/08
2500 Camino Diablo, Ste. #200	Client Contact: Robert Flory	Date Extracted: 07/03/08
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed 07/06/08

Polychlorinated Biphenyls (PCBs) Aroclors by GC-ECD*

Extraction Method: SW3550C Analytical Method: SW8082A Work Order: 0807101

Lab ID	0807101-001A	0807101-003A			Reporting Limit for DF =1	
Client ID	SB-21-3.5	SB-21-6				
Matrix	S	S				
DF	1	1			S	W
Compound	**Concentration**				mg/kg	ug/L
PCBs, total, as DCB	ND	ND			0.025	NA
Aroclor1016	ND	ND			0.025	NA
Aroclor1221	ND	ND			0.025	NA
Aroclor1232	ND	ND			0.025	NA
Aroclor1242	ND	ND			0.025	NA
Aroclor1248	ND	ND			0.025	NA
Aroclor1254	ND	ND			0.025	NA
Aroclor1260	ND	ND			0.025	NA
Surrogate Recoveries (%)						
%SS:	95	95				
Comments	h4					

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

h4) sulfuric acid permanganate (EPA 3665) cleanup

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: #278361; Cruise America, 796 66th Ave, Oakland	Date Sampled: 07/01/08
		Date Received: 07/03/08
2500 Camino Diablo, Ste. #200	Client Contact: Robert Flory	Date Extracted: 07/03/08
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed 07/03/08-07/10/08

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0807101

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	SB-21-3.5	S	ND	ND	ND	ND	ND	ND	1	104
003A	SB-21-6	S	16,d7	ND	ND	ND	ND	0.041	1	91
004A	SB-19-3.5	S	ND	ND	ND	ND	ND	ND	1	109
005A	SB-19-6	S	17,d1	6.8	0.79	0.31	0.20	1.6	1	115
006A	SB-20-3.5	S	ND	ND	ND	ND	ND	ND	1	106
007A	SB-20-5.5	S	ND	ND	ND	ND	ND	ND	1	81
008A	SB-18-3.5	S	1500,d2,d9	ND<5.0	ND<0.50	6.5	19	88	100	124
009A	SB-18-5	S	21,d1	13	0.21	0.22	0.92	3.6	1	103
012A	SB-22-4	S	ND	ND	ND	ND	ND	ND	1	92
016A	SB-22-23.5	S	ND	ND	ND	ND	ND	ND	1	90

Reporting Limit for DF =1; ND means not detected at or	W	50	5.0	0.5	0.5	0.5	0.5	ug/L
	S	1.0	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?)
d7) strongly aged gasoline or diesel range compounds are significant in the TPH(g) chromatogram
d9) no recognizable pattern

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AEI Consultants	Client Project ID: #278361; Cruise America, 796 66th Ave, Oakland	Date Sampled: 07/01/08
		Date Received: 07/03/08
2500 Camino Diablo, Ste. #200	Client Contact: Robert Flory	Date Extracted: 07/03/08
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed: 07/07/08

LUFT 5 Metals*

Extraction method SW3050B Analytical methods 6010C Work Order: 0807101

Lab ID	Client ID	Matrix	Extraction Type	Cadmium	Chromium	Lead	Nickel	Zinc	DF	% SS
001A	SB-21-3.5	S	TOTAL	ND	7.2	ND	6.1	85	1	102
003A	SB-21-6	S	TOTAL	ND	54	14	83	46	1	99

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TOTAL	NA	NA	NA	NA	NA	NA	
	S	TOTAL	1.5	1.5	5.0	1.5	5.0	mg/Kg	

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

means surrogate diluted out of range; ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

TOTAL = acid digestion.
WET = Waste Extraction Test (STLC).
DI WET = Waste Extraction Test using de-ionized water.

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AEI Consultants	Client Project ID: #278361; Cruise America, 796 66th Ave, Oakland	Date Sampled: 07/01/08
		Date Received: 07/03/08
2500 Camino Diablo, Ste. #200	Client Contact: Robert Flory	Date Extracted: 07/03/08
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed 07/07/08-07/09/08

Lead by ICP*

Extraction method SW3050B Analytical methods 6010C Work Order: 0807101

Lab ID	Client ID	Matrix	Extraction Type	Lead	DF	% SS
0807101-004A	SB-19-3.5	S	TOTAL	16	1	98
0807101-005A	SB-19-6	S	TOTAL	190	1	101
0807101-006A	SB-20-3.5	S	TOTAL	9.7	1	101
0807101-007A	SB-20-5.5	S	TOTAL	320	1	102
0807101-008A	SB-18-3.5	S	TOTAL	230	1	101
0807101-009A	SB-18-5	S	TOTAL	17	1	99

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	TOTAL	NA	µg/L
	S	TOTAL	5.0	mg/Kg

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

means surrogate diluted out of range; ND means not detected above the reporting limit; N/A means not applicable to this sample or instrument.

TOTAL = acid digestion.
WET = Waste Extraction Test (STLC).
DI WET = Waste Extraction Test using de-ionized water.

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AEI Consultants	Client Project ID: #278361; Cruise America, 796 66th Ave, Oakland	Date Sampled: 07/01/08
		Date Received: 07/03/08
2500 Camino Diablo, Ste. #200	Client Contact: Robert Flory	Date Extracted: 07/03/08
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed: 07/08/08

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3550C/3630C Analytical methods: SW8015C Work Order: 0807101

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	TPH-Motor Oil (C18-C36)	DF	% SS
0807101-001A	SB-21-3.5	S	ND	ND	1	118
0807101-003A	SB-21-6	S	180,e1	110	1	117

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA	ug/L
	S	1.0	5.0	mg/Kg

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

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract.

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

e1) unmodified or weakly modified diesel is significant

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder 0807101

EPA Method SW8260B	Extraction SW5030B	BatchID: 36729	Spiked Sample ID: 0807114-002A

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	80.8	80.4	0.404	102	99.3	2.60	60 - 130	30	60 - 130	30
t-Butyl alcohol (TBA)	ND	0.25	70.7	71.2	0.625	93.7	95.4	1.81	60 - 130	30	60 - 130	30
Diisopropyl ether (DIPE)	ND	0.050	76.6	76.3	0.466	97.3	95.4	1.97	60 - 130	30	60 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	0.050	78.9	78.8	0.211	99.5	97.7	1.83	60 - 130	30	60 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	84.7	84.3	0.404	107	104	2.70	60 - 130	30	60 - 130	30
%SS1:	99	0.12	95	95	0	94	95	1.06	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 36729 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0807101-001A	07/01/08 7:55 AM	07/03/08	07/11/08 12:19 AM	0807101-003A	07/01/08 8:00 AM	07/03/08	07/11/08 12:59 AM
0807101-004A	07/01/08 8:20 AM	07/03/08	07/11/08 1:37 AM	0807101-005A	07/01/08 8:50 AM	07/03/08	07/10/08 6:15 PM
0807101-006A	07/01/08 8:30 AM	07/03/08	07/11/08 2:15 AM	0807101-007A	07/01/08 8:35 AM	07/03/08	07/11/08 2:56 AM
0807101-008A	07/01/08 9:45 AM	07/03/08	07/11/08 3:34 AM	0807101-009A	07/01/08 10:03 AM	07/03/08	07/10/08 6:58 PM
0807101-012A	07/01/08 10:40 AM	07/03/08	07/11/08 4:13 AM	0807101-016A	07/01/08 11:05 AM	07/03/08	07/11/08 4:52 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 SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder 0807101

EPA Method SW8260B **Extraction SW5030B** **BatchID: 36729** **Spiked Sample ID: 0807114-002A**

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
Chlorobenzene	ND	0.050	92.2	90.6	1.74	109	102	6.16	60 - 130	30	60 - 130	30
1,2-Dibromoethane (EDB)	ND	0.050	103	103	0	123	117	5.39	60 - 130	30	60 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	0.050	80.9	80.3	0.782	99.4	96.7	2.70	60 - 130	30	60 - 130	30
Trichloroethene	ND	0.050	98.9	97	1.93	117	109	7.04	60 - 130	30	60 - 130	30
%SS1:	99	0.12	95	95	0	94	95	1.06	70 - 130	30	70 - 130	30
%SS2:	105	0.12	99	98	0.543	98	97	0.556	70 - 130	30	70 - 130	30
%SS3:	110	0.12	100	99	1.37	97	96	0.299	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 36729 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0807101-001A	07/01/08 7:55 AM	07/03/08	07/11/08 12:19 AM	0807101-003A	07/01/08 8:00 AM	07/03/08	07/11/08 12:59 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 freon 113 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 SW8082A

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder 0807101

EPA Method SW8082A	Extraction SW3550C	BatchID: 36643	Spiked Sample ID: 0807055-013A

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
Aroclor1260	ND	0.075	111	113	1.16	106	107	1.15	70 - 130	20	70 - 130	20
%SS:	123	0.050	117	116	0.481	115	115	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 36643 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0807101-001A	07/01/08 7:55 AM	07/03/08	07/06/08 5:17 PM	0807101-003A	07/01/08 8:00 AM	07/03/08	07/06/08 4:19 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.

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QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder 0807101

EPA Method SW8015C	Extraction SW3550C/3630C	BatchID: 36692	Spiked Sample ID: 0807052-003A

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
TPH-Diesel (C10-C23)	ND	20	92.4	90.5	2.09	91.6	90.2	1.57	70 - 130	30	70 - 130	30
%SS:	116	50	90	90	0	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 36692 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0807101-001A	07/01/08 7:55 AM	07/03/08	07/08/08 7:16 PM	0807101-003A	07/01/08 8:00 AM	07/03/08	07/08/08 8:25 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.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder: 0807101

EPA Method SW8021B/8015Cm	Extraction SW5030B	BatchID: 36691	Spiked Sample ID: 0807052-003A

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
TPH(btex)£	ND	0.60	78.3	79.3	1.23	82.9	77.1	7.25	70 - 130	20	70 - 130	20
MTBE	ND	0.10	93.4	95.3	2.03	92.6	98.2	5.84	70 - 130	20	70 - 130	20
Benzene	ND	0.10	88	91.3	3.71	88.7	92.3	4.03	70 - 130	20	70 - 130	20
Toluene	ND	0.10	75.9	76.9	1.31	78.1	81.3	3.96	70 - 130	20	70 - 130	20
Ethylbenzene	ND	0.10	88.3	90.7	2.70	88.1	89.5	1.64	70 - 130	20	70 - 130	20
Xylenes	ND	0.30	82.2	83.5	1.52	81.4	78.8	3.28	70 - 130	20	70 - 130	20
%SS:	101	0.10	93	95	1.57	85	94	9.83	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 36691 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0807101-001A	07/01/08 7:55 AM	07/03/08	07/04/08 5:42 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 SW8021B/8015Cm

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder: 0807101

EPA Method SW8021B/8015Cm	Extraction SW5030B	BatchID: 36708	Spiked Sample ID: 0807114-001A

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	103	6.18	90.5	93.4	3.16	70 - 130	20	70 - 130	20
MTBE	ND	0.10	95.5	93.8	1.83	106	113	5.92	70 - 130	20	70 - 130	20
Benzene	ND	0.10	93.4	91.5	2.12	105	111	4.80	70 - 130	20	70 - 130	20
Toluene	ND	0.10	108	106	1.92	93.5	97.6	4.34	70 - 130	20	70 - 130	20
Ethylbenzene	ND	0.10	111	109	1.76	104	107	3.15	70 - 130	20	70 - 130	20
Xylenes	ND	0.30	121	121	0	96.3	100	3.69	70 - 130	20	70 - 130	20
%SS:	110	0.10	97	94	3.08	80	83	4.12	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 36708 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0807101-003A	07/01/08 8:00 AM	07/03/08	07/04/08 6:12 AM	0807101-004A	07/01/08 8:20 AM	07/03/08	07/04/08 2:43 AM
0807101-005A	07/01/08 8:50 AM	07/03/08	07/09/08 8:23 AM	0807101-005A	07/01/08 8:50 AM	07/03/08	07/10/08 2:19 PM
0807101-006A	07/01/08 8:30 AM	07/03/08	07/04/08 1:13 AM	0807101-007A	07/01/08 8:35 AM	07/03/08	07/10/08 1:48 PM
0807101-008A	07/01/08 9:45 AM	07/03/08	07/09/08 6:41 AM	0807101-009A	07/01/08 10:03 AM	07/03/08	07/03/08 11:43 PM
0807101-009A	07/01/08 10:03 AM	07/03/08	07/07/08 8:03 PM	0807101-012A	07/01/08 10:40 AM	07/03/08	07/09/08 8:57 AM
0807101-016A	07/01/08 11:05 AM	07/03/08	07/03/08 11:47 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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QA/QC Officer

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QC SUMMARY REPORT FOR 6010C

W.O. Sample Matrix: Soil/Soil QC Matrix: Soil WorkOrder 0807101

EPA Method 6010C **Extraction SW3050B** **BatchID: 36734** **Spiked Sample ID 0807097-004A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	Spiked	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	mg/Kg	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
Cadmium	ND	50	99.4	99.6	0.151	10	98.2	98.9	0.634	75 - 125	20	80 - 120	20
Chromium	32	50	93.3	92.6	0.443	10	103	99.4	3.12	75 - 125	20	80 - 120	20
Lead	5.2	50	94.6	92.7	1.87	10	97.9	103	5.22	75 - 125	20	80 - 120	20
Nickel	21	50	102	101	0.591	10	102	102	0	75 - 125	20	80 - 120	20
Zinc	61	500	98.5	103	3.89	100	103	104	0.963	75 - 125	20	80 - 120	20
%SS:	98	250	98	99	0.467	250	100	104	3.92	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 36734 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0807101-001A	07/01/08 7:55 AM	07/03/08	07/07/08 8:30 PM	0807101-003A	07/01/08 8:00 AM	07/03/08	07/07/08 8:35 PM
0807101-004A	07/01/08 8:20 AM	07/03/08	07/07/08 4:54 PM	0807101-005A	07/01/08 8:50 AM	07/03/08	07/09/08 12:05 PM
0807101-006A	07/01/08 8:30 AM	07/03/08	07/07/08 4:56 PM	0807101-007A	07/01/08 8:35 AM	07/03/08	07/07/08 4:58 PM
0807101-008A	07/01/08 9:45 AM	07/03/08	07/07/08 5:01 PM	0807101-009A	07/01/08 10:03 AM	07/03/08	07/07/08 5:07 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.

APPENDIX E

Soil Boring Water Laboratory Analyses
with
Chain of Custody Documentation

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: #278361; Cruise America	Date Sampled: 07/01/08
		Date Received: 07/02/08
	Client Contact: Robert Flory	Date Reported: 07/10/08
	Client P.O.:	Date Completed: 07/10/08

WorkOrder: 0807132

July 10, 2008

Dear Robert:

Enclosed within are:

1) The results of the **3** analyzed samples from your project: **#278361; Cruise America,**
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.

0807132

McCampbell Analytical, Inc.
1534 WILLOW PASS ROAD
PITTSBURG, CA 94565-1701
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

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

GeoTracker EDF ☒ PDF ☒ Excel ☐ Write On (DW) ☐

Report To: Robert Flory	Bill To: Same
Company: AEI Consultants	
2500 Camino Diablo	
Walnut Creek, CA 94597	E-Mail: rflory@aeiconsultants.com
Tel: (925) 944-2899, extension 122	Fax: (925) 944-2895
Project #: 278361	Project Name: Cruise America
Project Location: 796 66th Ave, Oakland	
Sampler Signature: [signature]	

Margin	SAMPLE ID	LOCATION (Field Point Name)	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-21-W		7-1-08	1000	6	2 Ltr, 4 VOA	|								
+2	SB-18-W		7-1-08	1015	4	VOA	|								
+	SB-22-W		7-1-08	1355	3	VOA	|								

Analysis Request

SAMPLE ID	BTEX & TPH as Gas (602/8021B + 8015)/MTBE	EPA 624 / 8260 MTBE& TBA Only	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	HVOCs EPA 8260 – 8010 basic list	BTEX ONLY (EPA 602 / 8020)	Pesticides EPA 608 / 8080	PCBs EPA 608 / 8080	EPA 624 / 8260 9 Fuel oxygenates	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	~~LUFT-5 Metals~~	Lead (7240/7421/239.2/6010)	8015-diesel silica gel / TTLC [illegible] report diesel only	Other	Other	Other	Comments: Filter Samples for Metals Analysis: Yes / No
SB-21-W	X	X			X			X					X		X				part bottle sample broken
SB-18-W	X	X																	
SB-22-W	X	X																	

Relinquished By:	Date:	Time:	Received By:
[signature]	7/2	4:20	Enviotech [illegible] 1622
Enviro-Tech SR [signature]	7/2/08	1822	[signature]
[signature]	7/2/08	1840	[signature]

ICE/t° 7.6 °C
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB NA

	VOAS	O&G	METALS	OTHER
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: 0807132 **ClientCode: AEL**

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

Report to:
Robert Flory
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
(925) 283-6000 FAX (925) 283-6121

Email: rflory@aeiconsultants.com
cc:
PO:
ProjectNo: #278361; Cruise America

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

Requested TAT: 5 days

Date Received: **07/02/2008**
Date Printed: **07/07/2008**

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
0807132-001	SB-21-W	Water	7/1/2008 10:00	☐	B	C	D	A	A	E						
0807132-002	SB-18-W	Water	7/1/2008 10:15	☐	B			A								
0807132-003	SB-22-W	Water	7/1/2008 13:55	☐	B			A								

Test Legend:

1	5-OXYS_W	2	8010BMS_W	3	8082A_PCB_W	4	G-MBTEX_W	5	PREDF REPORT
6	TPH(D)WSG_W	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.

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Sample Receipt Checklist

Client Name: **AEI Consultants**

Date and Time Received: **7/2/2008 6:40:00 PM**

Project Name: **#278361; Cruise America**

Checklist completed and reviewed by: Samantha Arbuckle

WorkOrder N°: **0807132** Matrix Water

Carrier: Michael Hernandez (MAI Courier)

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: 7.6°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 ☑

** 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: #278361; Cruise America	Date Sampled: 07/01/08
		Date Received: 07/02/08
2500 Camino Diablo, Ste. #200	Client Contact: Robert Flory	Date Extracted: 07/08/08-07/09/08
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed: 07/08/08-07/09/08

Volatile Organics by P&T and GC/MS*

Extraction method SW5030B Analytical methods SW8260B Work Order: 0807132

Lab ID	Client ID	Matrix	t-Butyl alcohol (TBA)	Methyl-t-butyl ether (MTBE)	DF	% SS
0807132-001B	SB-21-W	W	160	11	2.5	85
0807132-002B	SB-18-W	W	6800,b1	1300	100	84
0807132-003B	SB-22-W	W	ND	9.2	1	102
Reporting Limit for DF =1; ND means not detected at or above the reporting limit		W	2.0	0.5	µg/L	
		S	NA	NA	NA	

* 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 surrogate coelutes with another peak.

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

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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AEI Consultants	Client Project ID: #278361; Cruise America	Date Sampled: 07/01/08
		Date Received: 07/02/08
2500 Camino Diablo, Ste. #200	Client Contact: Robert Flory	Date Extracted: 07/08/08
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed 07/08/08

Halogenated Volatile Organics by P&T and GC-MS (8010 Basic Target List)*

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0807132

					Reporting Limit for DF =1	
Lab ID	0807132-001C					
Client ID	SB-21-W					
Matrix	W				S	W
DF	1					

Compound	Concentration				µg/kg	µg/L
Bromodichloromethane	ND				NA	0.5
Bromoform	ND				NA	0.5
Bromomethane	ND				NA	0.5
Carbon Tetrachloride	ND				NA	0.5
Chlorobenzene	ND				NA	0.5
Chloroethane	ND				NA	0.5
Chloroform	ND				NA	0.5
Chloromethane	ND				NA	0.5
Dibromochloromethane	ND				NA	0.5
1,2-Dibromoethane (EDB)	ND				NA	0.5
1,2-Dichlorobenzene	ND				NA	0.5
1,3-Dichlorobenzene	ND				NA	0.5
1,4-Dichlorobenzene	ND				NA	0.5
Dichlorodifluoromethane	ND				NA	0.5
1,1-Dichloroethane	ND				NA	0.5
1,2-Dichloroethane (1,2-DCA)	ND				NA	0.5
1,1-Dichloroethene	ND				NA	0.5
cis-1,2-Dichloroethene	ND				NA	0.5
trans-1,2-Dichloroethene	ND				NA	0.5
1,2-Dichloropropane	ND				NA	0.5
cis-1,3-Dichloropropene	ND				NA	0.5
trans-1,3-Dichloropropene	ND				NA	0.5
Freon 113	ND				NA	10
Methylene chloride	ND				NA	0.5
1,1,1,2-Tetrachloroethane	ND				NA	0.5
1,1,2,2-Tetrachloroethane	ND				NA	0.5
Tetrachloroethene	ND				NA	0.5
1,1,1-Trichloroethane	ND				NA	0.5
1,1,2-Trichloroethane	ND				NA	0.5
Trichloroethene	ND				NA	0.5
Trichlorofluoromethane	ND				NA	0.5
Vinyl Chloride	ND				NA	0.5

Surrogate Recoveries (%)					
%SS1:	100				
%SS2:	102				
%SS3:	105				
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 surrogate coelutes with another peak.

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: #278361; Cruise America	Date Sampled: 07/01/08
		Date Received: 07/02/08
2500 Camino Diablo, Ste. #200	Client Contact: Robert Flory	Date Extracted: 07/07/08
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed 07/08/08

Polychlorinated Biphenyls (PCBs) Aroclors by GC-ECD*

Extraction Method: SW3510C Analytical Method: SW8082A Work Order: 0807132

					Reporting Limit for DF =1	
Lab ID	0807132-001D					
Client ID	SB-21-W					
Matrix	W					
DF	1				S	W
Compound	**Concentration**				ug/kg	µg/L
Aroclor1016	ND				NA	0.5
Aroclor1221	ND				NA	0.5
Aroclor1232	ND				NA	0.5
Aroclor1242	ND				NA	0.5
Aroclor1248	ND				NA	0.5
Aroclor1254	ND				NA	0.5
Aroclor1260	ND				NA	0.5
PCBs, total	ND				NA	0.5
Surrogate Recoveries (%)						
%SS:	127					
Comments						

* water samples in µg/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, filter samples in µg/filter, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/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: #278361; Cruise America	Date Sampled: 07/01/08
		Date Received: 07/02/08
2500 Camino Diablo, Ste. #200	Client Contact: Robert Flory	Date Extracted: 07/07/08-07/14/08
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed 07/07/08-07/14/08

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

Extraction method SW5030B Analytical methods SW8021B/8015Cm Work Order: 0807132

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	SB-21-W	W	ND	11	ND	ND	ND	ND	1	99
002A	SB-18-W	W	8500,d1,b1	1100	40	270	240	1000	10	102
003A	SB-22-W	W	ND	8.3	ND	ND	ND	ND	1	107

Reporting Limit for DF =1; ND means not detected at or	W	50	5.0	0.5	0.5	0.5	0.5	µg/L
	S	1.0	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

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AEI Consultants	Client Project ID: #278361; Cruise America	Date Sampled: 07/01/08
		Date Received: 07/02/08
2500 Camino Diablo, Ste. #200	Client Contact: Robert Flory	Date Extracted: 07/07/08
Walnut Creek, CA 94597	Client P.O.:	Date Analyzed: 07/08/08

Total Extractable Petroleum Hydrocarbons with Silica Gel Clean-Up*

Extraction method: SW3510C/3630C Analytical methods: SW8015C Work Order: 0807132

Lab ID	Client ID	Matrix	TPH-Diesel (C10-C23)	TPH-Motor Oil (C18-C36)	DF	% SS
0807132-001E	SB-21-W	W	180,e7,e2	360	1	104

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	250	µg/L
	S	NA	NA	mg/Kg

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

cluttered chromatogram resulting in coeluted surrogate and sample peaks, or; surrogate peak is on elevated baseline, or; surrogate has been diminished by dilution of original extract/matrix interference.

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

e2) diesel range compounds are significant; no recognizable pattern
e7) oil range compounds are significant

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Angela Rydelius, Lab Manager

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

QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder: 0807132

EPA Method: SW8260B	Extraction: SW5030B	BatchID: 36752	Spiked Sample ID: 0807174-002A

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
t-Butyl alcohol (TBA)	ND	50	90.2	85.4	5.43	89.9	92.6	3.00	70 - 130	30	70 - 130	30
Chlorobenzene	ND	10	91	91.9	0.983	107	108	1.08	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	98.5	98.5	0	121	122	1.19	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	113	115	1.66	93.5	95.3	1.87	70 - 130	30	70 - 130	30
1,1-Dichloroethene	ND	10	102	103	1.06	96.6	99.7	3.16	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	115	114	0.222	101	102	0.897	70 - 130	30	70 - 130	30
Trichloroethene	ND	10	100	101	0.942	113	116	2.55	70 - 130	30	70 - 130	30
%SS1:	97	25	102	102	0	96	96	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 36752 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0807132-001B	07/01/08 10:00 AM	07/09/08	07/09/08 2:11 AM	0807132-001C	07/01/08 10:00 AM	07/08/08	07/08/08 5:30 AM
0807132-002B	07/01/08 10:15 AM	07/09/08	07/09/08 1:32 AM	0807132-003B	07/01/08 1:55 PM	07/08/08	07/08/08 6:54 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"

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QC SUMMARY REPORT FOR SW8082A

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder 0807132

EPA Method SW8082A **Extraction SW3510C** **BatchID: 36619** **Spiked Sample ID: N/A**

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
Aroclor1260	N/A	3.75	N/A	N/A	N/A	121	122	0.796	N/A	N/A	70 - 130	20
%SS:	N/A	2.5	N/A	N/A	N/A	112	113	0.831	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

BATCH 36619 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0807132-001D	07/01/08 10:00 AM	07/07/08	07/08/08 12:44 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.

DHS ELAP Certification 1644

QA/QC Officer

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

QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder 0807132

EPA Method SW8015C **Extraction SW3510C/3630C** **BatchID: 36636** **Spiked Sample ID: N/A**

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-Diesel (C10-C23)	N/A	1000	N/A	N/A	N/A	94.5	95.4	0.914	N/A	N/A	70 - 130	30
%SS:	N/A	2500	N/A	N/A	N/A	106	107	0.723	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

BATCH 36636 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0807132-001E	07/01/08 10:00 AM	07/07/08	07/08/08 1:55 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.

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 WorkOrder 0807132

EPA Method SW8021B/8015Cm Extraction SW5030B BatchID: 36735 Spiked Sample ID: 0807109-003A

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	95.6	92.4	3.35	98	94.9	3.21	70 - 130	20	70 - 130	20
MTBE	ND	10	107	120	11.4	110	99.4	9.65	70 - 130	20	70 - 130	20
Benzene	ND	10	95.5	108	12.0	95	99.6	4.80	70 - 130	20	70 - 130	20
Toluene	ND	10	86.9	95.8	9.79	95.5	97.1	1.63	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	95.9	106	10.3	98.3	103	4.70	70 - 130	20	70 - 130	20
Xylenes	ND	30	95.3	102	7.21	115	114	0.960	70 - 130	20	70 - 130	20
%SS:	92	10	95	96	1.14	86	85	1.30	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 36735 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0807132-001A	07/01/08 10:00 AM	07/07/08	07/07/08 7:56 PM	0807132-002A	07/01/08 10:15 AM	07/09/08	07/09/08 12:29 AM
0807132-003A	07/01/08 1:55 PM	07/07/08	07/07/08 8:58 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.

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder 0807132

EPA Method SW8021B/8015Cm Extraction SW5030B BatchID: 36735 Spiked Sample ID: 0807109-003A

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	95.6	92.4	3.35	98	94.9	3.21	70 - 130	20	70 - 130	20
MTBE	ND	10	107	120	11.4	110	99.4	9.65	70 - 130	20	70 - 130	20
Benzene	ND	10	95.5	108	12.0	95	99.6	4.80	70 - 130	20	70 - 130	20
Toluene	ND	10	86.9	95.8	9.79	95.5	97.1	1.63	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	95.9	106	10.3	98.3	103	4.70	70 - 130	20	70 - 130	20
Xylenes	ND	30	95.3	102	7.21	115	114	0.960	70 - 130	20	70 - 130	20
%SS:	92	10	95	96	1.14	86	85	1.30	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 36735 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0807132-001A	07/01/08 10:00 AM	07/07/08	07/07/08 7:56 PM	0807132-001A	07/01/08 10:00 AM	07/14/08	07/14/08 3:33 PM
0807132-002A	07/01/08 10:15 AM	07/09/08	07/09/08 12:29 AM	0807132-003A	07/01/08 1:55 PM	07/07/08	07/07/08 8:58 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.

APPENDIX F

Groundwater Laboratory Analyses
with
Chain of Custody Documentation

McCampbell Analytical, Inc.
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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: #110566; Cruise Am Q108	Date Sampled: 03/13/08
		Date Received: 03/14/08
	Client Contact: Peter McIntyre	Date Reported: 03/24/08
	Client P.O.:	Date Completed: 03/24/08

WorkOrder: 0803373

March 24, 2008

Dear Peter:

Enclosed within are:

1) The results of the **5** analyzed samples from your project: **#110566; Cruise Am Q108,**
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.

0803373

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

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

EDF Required? ☒ Yes ☐ No | Email PDF Report ☒ Yes ☐ No

Report To: Peter McIntyre	Bill To: same
Company: AEI Consultants	
2500 Camino Diablo, Suite 200	
Walnut Creek, CA 94597	E-Mail: pmcintyre@aeiconsultants.com
Tele: (925) 944-2899	Fax: (925) 944-2895
Project #: 110566	Project Name: Chevron Am 9189
Project Location: 796 66th Avenue Oakland, Ca.	
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 & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	HVOCs EPA 8260 (8010 list)	BTEX ONLY (EPA 602 / 8020)	Pesticides EPA 608 / 8080	PCBs EPA 608 / 8080	VOCs EPA 624 / 8260	EPA 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals	LUFT 5 Metals	Lead (7240/7421/239.2/6010)	RCI	Other: MTBE + TBA (8260)				Comments
+ MW-1		3/13/08	12:19	3	VL	X					X	X			X												•			X				
+ MW-2		"	12:30	1	1	X					X	X			X															X				
+ MW-3		"	1:12	1	1	X					X	X			X															X				
+ MW-4		"	1:20	1	1	X					X	X			X															X				
+ MW-5		"	1:25	1	1	X					X	X			X															X				

Relinquished By:	Date:	Time:	Received By:
	3/13/08	5:50	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° 5.7
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB _____ PERSERVED IN LAB _____

PRESERVATION APPROPRIATE ✓ CONTAINERS ✓

VOAS	O&G	METALS	OTHER

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0803373 **ClientCode: AEL**

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

Report to:
Peter McIntyre
AEI Consultants
2500 Camino Diablo, Ste. #200
Walnut Creek, CA 94597
Email: pmcintyre@aeiconsultants.com
TEL: (925) 283-6000 FAX: (925) 283-6121
PO:
ProjectNo: #110566; Cruise Am Q108

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

Requested TAT: 5 days

Date Received: **03/14/2008**
Date Printed: **03/14/2008**

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
0803373-001	MW-1	Water	3/13/2008 12:19	☐	B	A	A									
0803373-002	MW-2	Water	3/13/2008 12:30	☐	B	A										
0803373-003	MW-3	Water	3/13/2008 1:12	☐	B	A										
0803373-004	MW-4	Water	3/13/2008 1:20	☐	B	A										
0803373-005	MW-5	Water	3/13/2008 1:25	☐	B	A										

Test Legend:

1	5-OXYS_W	2	G-MBTEX_W	3	PREDF REPORT	4		5	
6		7		8		9		10	
11		12							

Prepared by: Kimberly Burks

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

Sample Receipt Checklist

Client Name: **AEI Consultants**

Date and Time Received: **3/14/2008 6:34:14 PM**

Project Name: **#110566; Cruise Am Q108**

Checklist completed and reviewed by: Kimberly Burks

WorkOrder N°: **0803373** Matrix Water

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: 5.7°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 ☑

Client contacted: Date contacted: Contacted by:

Comments:

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AEI Consultants	Client Project ID: #110566; Cruise Am Q108	Date Sampled: 03/13/08
2500 Camino Diablo, Ste. #200		Date Received: 03/14/08
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 03/18/08
	Client P.O.:	Date Analyzed: 03/18/08

Methyl-t-butyl ether and t-Butyl alcohol by P&T and GC/MS*

Extraction method SW5030B Analytical methods SW8260B Work Order: 0803373

Lab ID	Client ID	Matrix	Methyl-t-butyl ether (MTBE)	t-Butyl alcohol (TBA)	DF	% SS
0803373-001B	MW-1	W	ND<10	780	20	107
0803373-002B	MW-2	W	3.0	ND	1	107
0803373-003B	MW-3	W	0.77	ND	1	110
0803373-004B	MW-4	W	22	69	1	107
0803373-005B	MW-5	W	11	750	10	107

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	0.5	2.0	µg/L
	S	NA	NA	NA

* 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 surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

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

AEI Consultants	Client Project ID: #110566; Cruise Am Q108	Date Sampled: 03/13/08
2500 Camino Diablo, Ste. #200		Date Received: 03/14/08
Walnut Creek, CA 94597	Client Contact: Peter McIntyre	Date Extracted: 03/17/08-03/20/08
	Client P.O.:	Date Analyzed 03/17/08-03/20/08

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

Extraction method SW5030B Analytical methods SW8021B/8015Cm Work Order: 0803373

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	ND	5.5	ND	ND	ND	ND	1	116
002A	MW-2	W	ND	ND	ND	ND	ND	ND	1	93
003A	MW-3	W	ND	ND	ND	ND	ND	ND	1	89
004A	MW-4	W	ND	19	ND	ND	ND	ND	1	92
005A	MW-5	W	ND	10	ND	ND	ND	ND	1	90

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	1	µg/L
	S	NA	NA	NA	NA	NA	NA	1	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: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request; p) see attached narrative.

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder 0803373

EPA Method SW8260B	Extraction SW5030B	BatchID: 34390	Spiked Sample ID: 0803363-005B

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
t-Butyl alcohol (TBA)	ND	50	106	95.9	10.2	113	111	1.64	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	114	110	3.49	90.6	89.6	1.06	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 34390 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0803373-001B	03/13/08 12:19 PM	03/18/08	03/18/08 2:14 AM	0803373-002B	03/13/08 12:30 PM	03/18/08	03/18/08 3:41 PM
0803373-003B	03/13/08 1:12 AM	03/18/08	03/18/08 3:43 AM	0803373-004B	03/13/08 1:20 AM	03/18/08	03/18/08 4:25 PM
0803373-005B	03/13/08 1:25 AM	03/18/08	03/18/08 5:13 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).

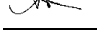
MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the 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 N° 1644


QA/QC Officer

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QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder 0803373

EPA Method SW8021B/8015Cm Extraction SW5030B BatchID: 34395 Spiked Sample ID: 0803374-005A

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	95.2	104	8.49	92.3	101	8.58	70 - 130	20	70 - 130	20
MTBE	ND	10	95.5	97.9	2.49	95.4	100	4.82	70 - 130	20	70 - 130	20
Benzene	ND	10	97.7	99.5	1.84	95.3	98.1	2.85	70 - 130	20	70 - 130	20
Toluene	ND	10	95.6	98.5	3.06	93.1	96.6	3.66	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	95.9	98.4	2.66	98.4	97.9	0.558	70 - 130	20	70 - 130	20
Xylenes	ND	30	89.4	92.3	3.25	87.8	90.8	3.41	70 - 130	20	70 - 130	20
%SS:	86	10	107	108	0.303	105	105	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 34395 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0803373-001A	03/13/08 12:19 PM	03/20/08	03/20/08 9:25 PM	0803373-002A	03/13/08 12:30 PM	03/17/08	03/17/08 4:39 PM
0803373-003A	03/13/08 1:12 AM	03/17/08	03/17/08 5:14 PM	0803373-004A	03/13/08 1:20 AM	03/17/08	03/17/08 5:50 PM
0803373-005A	03/13/08 1:25 AM	03/17/08	03/17/08 6:25 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, or inconsistency in sample containers.

DHS ELAP Certification N° 1644 QA/QC Officer