June 3, 2008

Alameda County Environmental Health Services
Mr. Jerry Wickham
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Subject: Remedial Action Report
461 McGraw Avenue, Livermore, California 94550
EIS Project # 717-4

Dear Mr. Wickham,

On behalf of Whitney Newland, Administrator of the Estate of the late Crandal Mackey, and Probate Court-authorized agent for Call Mac Transportation Company, Environmental Investigation Services Inc. (EIS) is submitting this Remedial Action Report to document the remediation of tetrachloroethene (PCE) impacted soil and groundwater at 461 McGraw Avenue, Livermore, California (the site). This report documents the following activities conducted at the site between April and May 2008:

- Overexcavation of PCE impacted soil and groundwater capture trenches
- Excavation confirmation soil sampling and stockpile sampling
- Remedial action of pumping and treating of PCE impacted groundwater from the groundwater capture trenches
- Survey of an existing water supply well (WW-1) and resurvey of remedial excavation area
- Geotechnical soil sampling for porosity test
- Groundwater monitoring event for wells MW-1 through MW-6 and water well WW-1
- Sensitive receptor well survey
- Slug tests at MW-2 and MW-3 and analysis of slug test data

The site is located northeast of the intersection of McGraw Avenue and Preston Avenue in Livermore, Alameda County, California. The nearest surface water creek is Arroyo Seco, located approximately ½ mile south of the site. Surface water in Arroyo Seco flows to the northwest. The site location is shown on Figure 1. Figure 2 depicts the site plan, including various features of concern. The site is currently vacant, but was formerly used by Call Mac Transportation as a truck and trailer storage yard.

REGIONAL GEOLOGY AND HYDROGEOLOGY

The Livermore Valley lies about 40 miles east of San Francisco and 30 miles southwest of Stockton within a structural trough of the Diablo Range. Regional geology consists of Plio-Pleistocene Livermore Formations, primarily exposed over the south and southwest regions of the Livermore Valley groundwater basin, but occurs almost everywhere beneath the surface at depths up to 400 ft. These deposits consist of unconsolidated to semi-consolidated beds of gravel, sand, silt and clay. The water yields are adequate for most irrigation, industrial and municipal purposes.

The Pliocene-age Tassajara Formations surfaces the uplands to the north of Livermore Valley. Beds of Tassajara are composed of sandstone, siltstone, shale, conglomerate and limestone. Wells tapping the Tassajara Formations yield only sufficient for domestic purposes.

Surface drainage features include Arroyo Valle, Arroyo Mocho, and Arroyo las Positas. The general groundwater gradient is to the west. The average annual precipitation ranges between 16 - 20 inches.

Deep wells in the eastern half of the basin produce from the Livermore Formations. Clay deposits up to 40 feet thick cap the water bearing materials in the Valley; where deep wells draw groundwater from underlying aquifer material. The domestic wells in this area are typically installed to depths between 100 to 350 feet deep and the Municipal/Irrigation wells were drilled to a depth range of 315 to 810 feet bgs (***Bulletin 118, California's Groundwater, 2006).***

The site is located in the eastern portion of the Livermore Valley groundwater basin. During the soil boring assessment and previous filed investigations, it was determined that vadose zone and saturated zone of the site composed predominantly of clay. The deepest exploratory boring drilled at site was 45 feet bgs which encountered lean clay formation throughout the explored depths. Shallow groundwater typically occurs at depths between approximately 10 and 15 feet bgs. Groundwater gradient calculated from the groundwater elevation data from monitoring wells appears to flow towards northwest.

SITE BACKGROUND

The site background has been discussed extensively in previous reports; therefore only background information related to delineating and remediating the PCE contamination is presented in this report.

On August 30, 2007, EIS submitted *Site Investigation and Remedial Action Workplan* to address Alameda County Environmental Health Services' (ACEHS) request for additional work.

ACEHS' September 7, 2007 letter was issued in response to EIS' *Site Investigation and Remedial Action Workplan*. In this letter, ACEHS requested a historic review of the property, a well survey of the site vicinity, and a workplan for a soil gas survey. ACEHS concurred with the proposed excavation and disposal of arsenic-impacted soil from the building pad; excavation and disposal of soil from excavation DO3; reuse plan of loading dock soil; decommissioning of water supply well

in excavation T-4 and the plan to install and sample three groundwater monitoring wells (MW-1 through MW-3) as presented in the August 30, 2007 workplan.

EIS conducted a historical review of the property and documented the findings in *Historical Review Report* dated October 31, 2007. Based on the historic review of the property, EIS prepared *Soil Gas Survey Workplan* dated November 2, 2007 to install four soil gas probes (SG-1 through SG-4) that was approved by the ACEHS in a letter dated November 8, 2007 with the condition that two of the soil gas borings be placed in the approximate locations of former waste oil and polymer resin drums. The limited soil gas survey indicated the presence of low concentrations of VOCs in the subsurface. None of the compounds detected (including PCE and benzene) were at concentrations above the respective Regional Water Quality Control Board-San Francisco Bay Region (RWQCB) Environmental Screening Levels (ESLs) for shallow soil gas (collected less than 1.5 meters [5 feet] below a building foundation or the ground surface) intended for evaluation of potential indoor-air impacts for residential land use. The results were reported to ACEH on December 3, 2007 in EIS' report entitled *Site Investigation Results and Workplan for Further Site Investigation* and also in EIS' report entitled *Further Site Investigation and Remedial Action Report* dated January 14, 2008.

EIS conducted more extensive soil gas testing on December 14 and 15, 2007. Twenty soil gas samples from a depth of 4 feet bgs were collected around the central portion of the site, plus two deeper samples collected from 8 feet bgs in the two locations where the highest PCE concentrations were found in groundwater. PCE was detected in twenty of the twenty-two soil gas probes at concentrations ranging between 45 micrograms per cubic meter ($\mu g/m^3$) to 40,000 $\mu g/m^3$. Samples from six of the 4-foot deep probes exceeded the California Human Health Screening Level (CHHSL) for PCE in soil gas. The locations where elevated soil gas concentrations were detected did not reveal elevated concentrations of VOCs. The pattern of PCE distribution in soil gas closely resembled the results of the PCE groundwater plume which suggests that the source of the PCE in soil gas is the groundwater plume.

On November 5, 2007 EIS installed three monitoring wells (MW-1 through MW-3). The monitoring wells were used to assess groundwater quality, and determine the groundwater flow direction and gradient at the site. Groundwater samples were collected from the wells on November 9, 2007 and analyzed for total petroleum hydrocarbons as gasoline (TPH-g), total petroleum hydrocarbons as diesel (TPH-d), benzene, toluene, ethylbenzene, and xylenes (BTEX), and volatile organic compounds (VOCs). The groundwater sample collected from monitoring well MW-1 contained 10 micrograms per liter (µg/L) of PCE. No TPH-g, TPH-d, BTEX compounds, or other VOCs were detected in any of the three wells. The California Department of Public Health (CDPH) maximum contaminant level (MCL) for PCE in drinking water is 5 µg/L. The monitoring wells were sampled again on November 27, 2007, and results of the analysis revealed concentrations of PCE at 7.3 µg/L in MW-1. Groundwater elevation measurements indicate groundwater is flowing to the northwest with a gradient of 0.011 feet per foot.

Between November 21, 2007 and December 17, 2007, thirty-two groundwater grab samples from borings B-7 through B-36 were collected in an effort to characterize the PCE groundwater plume. PCE was detected at concentrations ranged from 0.86 µg/L to 1,800 µg/L in grab

groundwater samples collected from borings B-7 through B-36. The results of the PCE groundwater characterization were presented in EIS' *Additional Site Characterization Report* dated January 18, 2008.

The investigation also showed that the concentration of PCE attenuates with depth. The vertical extent of PCE on the east side of the plume was defined by a discrete-level groundwater sample collected from boring B-20 from a depth interval of 26 to 32 feet bgs. PCE was not detected in this sample. Additional work was performed on January 25, 2008 to delineate the vertical extent of PCE on the west side of the plume near boring B-26. EIS installed a 36-foot deep continuously-cored pilot boring (B-37) and four discrete-level groundwater sampling probes to 28, 33, 38, and 45 feet bgs on January 25, 2008. Low PCE concentrations were detected from grab groundwater samples B-26@28 and B26@38 (1.2 µg/L and 0.68 µg/L respectively). No PCE was detected in the samples from 33 and 45 feet bgs. The results indicated that the vertical extent of PCE in groundwater was below the MCL of 5 µg/L at 28 feet bgs on the western side of the plume. The results were presented in EIS' February 5, 2008 report entitled *PCE Vertical Characterization Report*.

Having defined the groundwater plume both horizontally and vertically, EIS developed an effective approach to reduce the overall mass of PCE in groundwater and address areas where elevated PCE concentrations were detected in soil gas. On February 25, 2008, EIS submitted *Revised Remedial Excavation Workplan*, which proposed excavating unsaturated soils where elevated PCE in soil gas was detected, and digging trenches into the shallow aquifer to enable pumping and treating of contaminated groundwater.

On February 28, 2008, Macoy Resources Corp. (MRC) of Paso Robles, California, excavated to a depth of approximately 10 feet bgs and removed approximately 1,550 cubic yards (1,826 tons) of PCE impacted soil from an area of approximately 6,000 sq. feet.

EIS collected twelve excavation sidewall and six bottom (EXSW-1 through EXSW-12 and EXB-1 through EXB-6) soil samples from the remedial excavation. The samples were analyzed for volatile organic compounds (VOCs) using EPA Method 8260 by McCampbell Analytical, Inc., of Pittsburg, California. No VOCs were detected in any of the sidewall samples. Low concentrations of PCE at 0.052, 0.047, 0.029, 0.073 mg/kg were detected in bottom samples EXB-2 through EXB-4 and EXB-6 respectively. None of the values exceeded the ESLs for PCE.

On February 28, 2008, monitoring wells MW-4, MW-5 and MW-6 were installed around the perimeter of the remedial excavation. The monitoring wells were installed to 1) establish baseline conditions for PCE concentrations, groundwater elevations and groundwater flow direction before initiating the groundwater extraction, 2) monitor PCE concentrations and groundwater elevations during the groundwater extraction phase to measure the local effect of groundwater withdrawal on PCE concentrations and enable an estimation of the groundwater capture zone, 3) provide an additional measure of success besides trench water samples that PCE concentrations in the PCE plume have been reduced, and, 4) provide a means to monitor groundwater quality for a period of time after the groundwater extraction phase is over.

On February 29, 2008, MRC excavated three 4-foot-wide intersecting trenches to a depth of approximately 20 feet bgs to capture the PCE contaminated groundwater. The trenches, which were up to 120 feet long, were dug within the larger 10 foot deep pit. The bottom of the trench system was sloped slightly to the northwest where the extraction pump was installed. MRC excavated approximately 450 cubic yards (663 tons) of soil from the trenches.

On March 3, 2008, EIS used a disposable bailer to collect one groundwater sample from the northwest end of the trench for laboratory analysis. The sample (designated WT-1) was analyzed by McCampbell Analytical, Inc., of Pittsburg, California using EPA Method 8260 for VOCs. Sample WT-1 contained 49 µg/L of PCE. No BTEX compounds or other VOCs were detected.

The excavation soil stockpiles were sampled in order to characterize the soil for possible reuse as onsite fill material. Four soil samples from the stockpile of approximately 100 cubic yards were collected and field screened to select one of the four discrete soil samples for laboratory analysis. Ten discrete soil samples were collected from the northeast stockpile (NESP-1, 4, 6, 9, 14, 18, 22, 29, 33 and 40), which originated from the vadose zone. Five discrete soil samples were collected from southwest stockpile (SWSP-3, 9, 13, 15 and 18) which also originated from the vadose zone. Five discrete soil samples were collected from the southeast stockpile (SESP-2, 5, 7, 9 and 11) which originated from the saturated zone. Low concentrations of n-butyl benzene at 0.043 mg/kg, 1,2,4-trimethyl benzene at 0.066 mg/kg, sec-butyl benzene at 0.016 mg/kg, naphthalene at 0.19 mg/kg and 1,3,5-trimethyl benzene at 0.04 mg/kg were detected in northeast stockpile sample NESP-14. None of the values exceeded the RWQCB ESLs or the ACEHS' reuse target of 0.087 mg/kg for PCE.

On March 25 and 26, 2008, four pre-aerated soil samples (GT-3 through GT-6) were collected from the southeast stockpile which originated from the saturated zone, and tested for moisture & density by the American Society for Testing and Materials (ASTM) Method D2937. The laboratory reported the moisture content in the four samples to be approximately 23 to 26%. The wet density of the soils ranged from 87.7 pounds per cubic foot (pcf) to 121.3 pcf. The dry density ranged from 71.5 pcf to 96 pcf. The target for moisture content is less than 6% before the soil can be reused as fill.

On March 19, 2008, MRC initiated groundwater extraction from the groundwater capture trenches. Prior to pumping, the groundwater level in the trenches was found to have stabilized at approximately 10.5 to 11.0 feet bgs. The groundwater was pumped from the trenches into temporary holding tanks. The water in the holding tanks was gravity-fed through granular activated carbon at a flow rate of about 5 gallons per minute to achieve the recommended 10-minute retention time in the carbon vessel to remove the PCE. A sample of treated water (WT-2) was analyzed to verify that PCE concentrations were within acceptable limits for discharge. No PCE was detected in the effluent sample.

From March 19, 2008 to April 4, 2008, a total of approximately 444,000 gallons of groundwater were extracted from the trenches and treated through the carbon vessel and discharged to sanitary sewer. The depth-to-water levels were measured from wells MW-1 and MW-4 through MW-6,

on February 29, March 3, and April 7, 2008. The water levels dropped 1.5 to 3 feet in wells MW-5 and MW-6 after the trench water was pumped down.

On April 7, 2008, EIS conducted the first groundwater monitoring event approximately 3 weeks after the groundwater extraction had been initiated. Groundwater samples were collected from monitoring wells MW-1, MW-4, MW-5 and MW-6. Prior to groundwater sampling, the depth to groundwater and the total well depths were measured and recorded for all six monitoring wells (MW-1 through MW-6).

All groundwater samples collected from monitoring wells MW-1, MW-4, MW-5 and MW-6 were submitted to McCampbell Analytical, Inc, of Pittsburg, California for analysis of VOCs using EPA Method 8260B.

The groundwater samples collected from monitoring wells MW-1, MW-4, MW-5 and MW-6 contained 7.7 µg/L, 90 µg/L, 260 µg/L and 430 µg/L of PCE, respectively. The MCL for PCE is 5 µg/L. A low concentration of MTBE (0.7 µg/L) was detected in MW-1. The MCL for MTBE is 5 µg/L. No BTEX compounds or other VOCs were detected in any of the wells from the April 7, 2008 groundwater monitoring event.

On April 7, 2008, EIS used a disposable bailer to collect two groundwater samples from the eastern and western ends of the trench for laboratory analysis. The samples (designated WT-E for the eastern sample and WT-W for the western sample) were analyzed by McCampbell Analytical, Inc., of Pittsburg, California using EPA Method 8260 for VOCs. The trench groundwater samples WT-E and WT-W contained 46 and 47 µg/L of PCE, respectively. No BTEX compounds or other VOCs were detected.

This report documents the further remedial action intended to reduce the PCE contamination at the site between April and May, 2008. The indicator for the success of the groundwater remediation is the PCE concentrations between the initial and the final grab groundwater samples from the trenches are significantly reduced.

OVEREXCAVATION DETAILS

PCE Impacted Soil Excavation

On April 29 and 30, 2008, EIS coordinated with MRC to complete the expansion of the existing excavation to remove additional soil from areas that showed elevated concentrations of PCE in soil gas. The extent of overexcavation and the limits of the original excavation are shown in Figure 3. The over-excavation was conducted to comply with the request of Mr. Jerry Wickham of ACEHS to remove additional site soils from beneath the proposed building footprint where elevated PCE concentrations in soil gas were previously reported (Figure 4) .

MRC excavated to a depth of approximately 10 feet bgs and removed approximately 450 cubic yards (675 tons) of impacted soil in areas around the existing excavation. Soils encountered in the excavation were typically dark brown clay as seen before. The excavated soil was stockpiled on a plastic sheeting onsite pending characterization.

Groundwater Capture Trenches Excavation

In an effort to expedite the groundwater remediation MRC expanded the groundwater extraction trenches. On April 29 and 30, 2008, MRC excavated a 30 feet long by 5-foot-wide trench to a depth of approximately 20 feet bgs. The trench was dug outward from the existing excavation in a northwest direction towards well MW-5. MRC also widened the existing excavation to the north and south and removed the center island that was present in the middle of the trenches (Figure 3). The bottom of the trench system was sloped slightly to the northwest where the extraction pump was installed. Through this effort MRC excavated approximately 250 cubic yards (375 tons) of saturated soil from the trenches. The excavated soil was stockpiled on plastic sheet onsite pending aeration and characterization.

Confirmation Soil Sampling and Analysis

EIS collected eight excavation sidewall confirmation soil samples (EXSW-13 through EXSW-20) and nine bottom samples (EXB-7 through EXB-15) from the April 30, 2008 excavation. Soil samples were collected from the excavation sidewalls and bottom with the assistance of the backhoe bucket. All soil samples were placed into clean 2-inch-diameter by 6-inch-long stainless-steel sleeves. The stainless-steel sleeves were sealed with Teflon sheets and plastic caps, labeled, logged onto a chain-of-custody document, and placed into a chilled ice chest for transport to the laboratory. Soil samples (EXSW-13 through EXSW-20) were collected from the side wall surface of the excavation at five to six feet below the ground surface. Soil samples (EXB-7 through EXB-15) were collected from the bottom of the excavation at a depth of sixteen to twenty feet bgs (Figure 5).

The eight sidewall and nine bottom (EXSW-13 through EXSW-20 and EXB-7 through EXB-15) soil samples collected from the excavation were analyzed by McCampbell Analytical, Inc., of Pittsburg, California (a California certified laboratory for hazardous water analyses), using EPA Method 8260 for PCE.

Confirmation Soil Sample Analytical Results

The analytical results for the excavation confirmation samples are summarized in Table 1, and the laboratory analytical reports are included in Attachment A.

No PCE was detected in the sidewall samples EXSW-17 through EXSW-20. Low concentrations of PCE at 0.011, 0.011, 0.049, 0.014 mg/Kg were detected in confirmation soil samples EXSW-13 through EXSW-16, respectively. None of the values exceeded the ESLs for PCE.

No PCE was detected in the bottom samples EXB-10 through EXB-13 and EXB-8. Low concentrations of PCE at 0.018, 0.012, 0.0064 mg/Kg were detected in bottom samples EXB-9, EXB-14 and EXB-15 respectively. None of the values exceeded the ESLs for PCE.

The bottom and sidewall samples were collected at the top of the water table which would account for the presence of PCE in groundwater.

Stockpile Soil Sampling and Analysis

The excavation soil stockpiles were sampled on May 2, 2008 in order to characterize the soil for possible reuse as onsite fill material. Seven soil samples from the stockpile of approximately 100 cubic yards were collected and field screened to select one of the four discrete soil samples for laboratory analysis. The frequency of soil stockpile sample collection (one sample for every 100 cubic yards) was designed to comply with reuse soil characterization requirements set by ACEHS *(Wickham, Jerry e-mail comments on February 28, 2008).*

Four discrete soil samples were collected from the north stockpile (SPN-1 through SPN-4), which originated from the vadose zone. Three discrete soil samples were collected from south stockpile (SPS-1 and SPS-3) which originated from the saturated zone.

All soil samples were collected six inches below the stockpile surface. Soil samples were contained in clean 2-inch diameter by 6-inch long stainless steel sleeves sealed with Teflon sheets and plastic caps. Soil samples were screened using the headspace screening method. A small amount of additional soil from each sample location was placed in a zip lock plastic bag and shaken for 30 seconds. The bag was then kept under the heat of the sun for approximately 15 minutes to allow soil vapor accumulate in the air space within the zip lock bag. Finally, the tip of a photoionization detector (PID) probe was inserted into the zip lock bag to obtain a reading of the accumulated vapor. The soil sample represented by the highest PID reading of the headspace screening was then selected for laboratory analyses. Selected soil samples were labeled, logged onto a chain of custody document, and placed into a chilled ice chest for transport to McCampbell Analytical, Inc, of Pittsburg, California. McCampbell Analytical is certified by the CDHS for the analysis of hazardous waste. The soil sample with the highest PID reading was submitted for VOCs analysis using EPA method 8260.

Stockpile Soil Sample Analytical Results

The stockpile soil sample analytical results are summarized in Table 2, and the laboratory analytical reports are included in Attachment B.

No VOCs was detected in any of the stockpile soil samples SPN-1 through SPN-4 and SPS-1. Low concentrations of Acetone at 0.57 and 0.099 mg/Kg were detected in samples SPS-2 and SPS-3 respectively.

There was no PCE, TCE, BTEX, or MTBE detected in any of the excavation stockpile confirmation soil samples.

REMEDIAL ACTION

Pumping, Treating and Disposal of PCE Impacted Groundwater

MRC extracted approximately 865,000 gallons of PCE impacted groundwater from the trenches from March 24, 2008 to May 8, 2008 (Table 3). Prior to initial pumping, the groundwater level in the trenches was found to have stabilized at approximately 10.5 to 11.0 feet bgs. During

extraction the groundwater levels were measured and recorded approximately once per hour to evaluate the effect of pumping on the monitoring wells and to calculate other hydrogeological parameters (Table 4). The groundwater was pumped from the trenches into temporary holding tanks. The water in the holding tanks was gravity-fed through a vessel containing granular activated carbons at a flow rate of about 5 gallons per minute to achieve the recommended 10-minute retention time in the carbon vessel to remove the PCE. The water was subsequently discharged into the sanitary sewer as wastewater under a Groundwater Discharge Permit from the City of Livermore Water Resources Division (Attachment C).

Survey of Water Well and Resurvey of Excavation Area

Mid Coast Engineers, a California-licensed surveying firm, surveyed the existing water supply well which is planned to be used for groundwater monitoring and excavation area on May 22, 2008 using the California State Plane Coordinate System, Zone III, NAD 83 datum and NGVD 29 vertical datum. The accuracy range of the horizontal positions is +/- 1 centimeter, and the range, of the elevation measurements is +/- 0.5 cm. All figures were derived from the Mid Coast Engineers survey data.

Stockpile Soil Geotechnical Sampling Analysis

Considering the volatility of PCE, aerating soil containing low concentrations of PCE is an effective method of remediating the soil. This approach was used for soil excavated from the saturated zone in order to reuse it as fill material after aeration. On May 21, 2008, EIS staff geologist Mr. Emlyn Stokes collected two pre-aerated soil samples and four post-aerated soil samples from the stockpile soil for moisture and density testing.

The two pre-aerated soil samples (SW-1 and SW-2) were collected from the southwest stockpile, which originated from the April 29 and 30, 2008 overexcavation of saturated zone.

Four post-aerated soil samples (SE-1 through SE-4) were collected from the southeast stockpile, which was originated from the February 29, 2008 trench saturated zone excavation and had been aerating on site since then.

All the soil samples were tested for moisture and density by the American Society for Testing and Materials (ASTM) Method D2937 and D2216. All soil samples were collected one foot below the stockpile surface.

The soil samples were collected using a clean 2-inch diameter by 6-inch long stainless steel sleeve. The stainless steel sleeve was sealed with Teflon sheets and plastic caps, labeled, logged onto a chain of custody document, and placed into a chilled ice chest for transport to Keantan Laboratories in Diamond Bar, California.

Stockpile Soil Geotechnical Sample Analytical Results

The soil moisture and density test results for the two pre-aerated (SW-1 and SW-2) and four post-aerated soil samples (SE-1 through SE-4) are summarized in Table 5. The laboratory reports and chain-of-custody documents are included in Attachment D.

The laboratory reported the moisture content in the four post-aerated samples (SE-1 through SE-4 from the southeast stockpile) as 4.6 %, 3.5%, 2.9% and 4.1%. Since the target moisture content for stockpiled soil to be reused as fill material is less than 6%, the southeast stockpile meets the reuse requirement while the southwest stockpile still needs further aeration.

The laboratory reported the moisture content in the two pre-aerated samples (SW-1 and SW-2 from the southwest stockpile) as 23.0 % and 21.9 %. The dry density of the two pre-aerated soil samples was reported as 87.9 pounds per cubic foot (pcf) and 76.8 pcf, respectively.

The southwest stockpile soil will be resampled and tested for moisture content approximately 30 to 45 days after soil aeration for its suitability for reuse as fill material. The laboratory results of the sampling will be discussed in a forth coming addendum letter.

GROUNDWATER SAMPLING

Monitoring Well Sample Collection

On May 13, 2008, EIS conducted the second groundwater monitoring event approximately two weeks after the groundwater extraction had been initiated. Groundwater samples were collected from monitoring wells MW-1, MW-4, MW-5 and MW-6. Prior to groundwater sampling, the depth to groundwater and the total well depth were measured and recorded in all monitoring wells (MW-1 through MW-6 and WW-1). Each depth measurement was measured using the top of casing (TOC) as a reference point.

Prior to conducting the initial sampling event, all purging and sampling equipment were properly decontaminated. Each of the four groundwater monitoring wells were purged of a minimum of three casing volumes using a submergible pump before sampling. During purging, pH, electrical conductivity (EC), and temperature of the purged water were monitored. The wells were sampled using a dedicated disposable bailer after these parameters were shown to have stabilized (i.e., consecutive readings were within 10%). Each sample was collected and sealed within EPA-approved containers provided by the laboratory. The water samples were then labeled, logged onto chain-of-custody documentation, and transported on ice to the laboratory. Purge water was temporarily stored onsite in a 55-gallon drum. Groundwater sampling field logs documenting EIS' sample collection activities are presented in Attachment E.

Monitoring Well Sample Analyses

All groundwater samples collected from monitoring wells MW-1, MW-4, MW-5 and MW-6 were submitted to McCampbell Analytical, Inc, of Pittsburg, California for analysis of PCE using EPA Method 8260B. McCampbell Analytical is certified by the CDPH for the analysis of hazardous waste.

Groundwater Elevation, Flow Direction and Flow Gradient

Current and previous groundwater elevation measurements are summarized on Table 6. Elevations of shallow groundwater table ranged from 508.63 feet above sea level in well MW-6 to 515.52 feet

above sea level in well MW-2. The fluctuations in groundwater levels of this magnitude were due to the remedial action of pumping the groundwater through the trenches.

Groundwater elevation measurements from May 13, 2008 were used to construct a groundwater elevation contour map (Figure 6). Based on the May 13, 2008 data, groundwater appears to flow toward the northwest. The groundwater flow gradient is about 0.024 feet per foot.

The groundwater elevations in the onsite water well (WW-1) remained fairly constant throughout the remedial action period between 514.03 and 514.07 feet above sea level. This data confirmed that the onsite water well is screened in the deeper aquifer beneath the shallow groundwater zone and there is no significant vertical gradient between the deeper aquifer and the shallow groundwater.

Monitoring Well Groundwater Sample Analytical Results

The laboratory analytical report and chain-of-custody document for the groundwater samples are included in Attachment F. The groundwater samples collected from monitoring wells MW-1, MW-4, MW-5 and MW-6 contained 5.1 µg/L, 77 µg/L, 230 µg/L and 320 µg/L of PCE, respectively (Figure 7). There is a reduction of 15% to 30% of PCE in groundwater when comparing to the previous groundwater monitoring event (Table 7).

Round Three Trench Groundwater Sample Analytical Results

On May 13, 2008, EIS conducted the third round of trench groundwater sampling. There were two previous rounds of trench groundwater sampling conducted on March 3, 2008 and April 7, 2008. For the initial (round 1) trench groundwater sampling EIS collected one sample (WT-1) from the western side of the trench where the highest PCE concentrations were expected. This round 1 sample was found to contain 49 µg/L of PCE. For the second round of trench groundwater sampling EIS collected two samples (WT-E and WT-W) form the east and west ends of the trench. Analytical results indicate the samples WT-E and WT-W contained 46 µg/L and 47 µg/L of PCE, respectively.

During the third round of trench groundwater sampling, EIS used disposable bailers to collect two groundwater samples from the eastern and western ends of the trench for laboratory analysis. The disposable bailer was discarded after each sample was collected. The samples (designated WT-E for the eastern sample and WT-W for the western sample) were analyzed by McCampbell Analytical, Inc., of Pittsburg, California using EPA Method 8260 for VOCs.

The third round trench groundwater samples WT-E and WT-W contained 10 and 13 µg/L of PCE, respectively. These results represent a three-fold reduction in PCE concentrations from the previous two rounds of trench water samples. The analytical results for this and the previous two rounds of trench groundwater sampling are summarized in Table 8. The laboratory analytical reports and chain-of-custody document are included in Attachment F.

SENSITIVE RECEPTOR WELL SURVEY

To address the concern of PCE-contaminated groundwater migrating off site to existing water supply wells, EIS conducted a well survey to identify active water wells within 2,000 feet of the site. The well survey consisted of acquiring well data from California Department of Water Resources (DWR) and Alameda County Zone 7 Water District (Zone 7), reviewing well data to identify down-gradient wells within 2,000 feet of the site, and evaluating the potential of PCE site groundwater reaching those identified wells.

Based on the gathered well data, there are 34 recorded wells within the survey radius. Thirty of the wells are shallow groundwater monitoring wells. Only 4 wells are water supply wells for irrigation or domestic purpose (Figure 8).

One of the four water wells on record (3S/2E 3H4) is the onsite water supply well (WW-1) up-gradient of the PCE groundwater plume (Figure 8). The second water well (3S/2E 3H1) is a PG&E irrigation well located southeast and cross-gradient from the site. The third water well (3S/2E 3K1) is located southwest of the site and also cross-gradient. Furthermore, this well was destroyed according to the well data. The fourth well (3S/2E 3H2) is located east and down-gradient from the site. This well was also destroyed in 1986. Therefore, there are no active water wells down-gradient from the site.

Of the 30 groundwater monitoring wells, 20 have been destroyed. The remaining 10 active groundwater monitoring wells are not used for water supply and have no associated sensitive receptors. A copy of the Zone 7 well data is presented in Table 9.

SLUG TESTING

The purpose of the slug testing was to determine the approximate hydraulic conductivity of the shallow water-bearing zone. This data would be used in conjunction with soil porosity testing and groundwater gradient information to determine the approximate rate of groundwater flow beneath the site. This would help to evaluate the potential of future migration of the PCE groundwater plume at the site. The test consists of three components: field slug test, soil porosity test, and data analysis.

Slug Test Field Procedures

Slug tests (Raising Head/Bail Out) were performed at two monitoring wells MW-2 and MW-3 (Figure 9) to estimate the hydraulic properties of the aquifer. All required general information about the wells, such as well diameter, total depth, screen depth and well completion details were obtained before starting the test. The methodologies of performing slug tests in the field followed by methods used to analyze the test data are discussed below.

On May 12, 2008, EIS conducted a slug test at monitoring well MW-3 using the bailout methodology. The depth to groundwater and the total depth of the well were measured and recorded three times with a five minute interval before inserting the submergible pump into the well. The water levels were measured using the top of casing (TOC) as a reference point. The

static water level in the monitoring well was approximately 11.66 feet below TOC. An estimated quantity of 50% of groundwater in the well casing was pumped out from the well and the recording of recovery water levels in the well was started immediately. The groundwater levels in the well were measured and recorded at every 30 seconds interval. The test was stopped when the water level had recharged to its original static condition. The slug test was repeated in MW-3 to make sure consistency of the collected data. The bailed out water from the well was stored in a temporary holding bucket and later transferred into an existing 55-gallon drum.

On May 14, 2008, EIS conducted a slug test at monitoring well MW-2 using the bailout method (although this time using a bailer of known volume instead of a pump).. The bailer was first lowered into the well to fill its entire volume with the groundwater within the well casing. After the groundwater level in the well reached equilibrium, the bailer was swiftly hoisted from the well to remove a known volume of groundwater (the slug) from the well. The groundwater level within the well was then measured at incremental intervals (5-second, 10-second, 30-second, 1-minute, 2-minute, etc) until it reached the initial level recorded prior to the slug test.

Soil Porosity Tests

On May 8, 2008 EIS collected three soil samples from the site with a hand auger and a slide-hammer soil sampler. At each soil sampling location, EIS first drilled a soil boring to the target depth using a hand auger. After the soil boring was completed, a slide-hammer soil sampler containing a clean 2-inch diameter and 6-inch long stainless-steel tube was driven into the bottom of the boring for six inches. Upon retrieval of the sampler, a soil sample was contained inside the stainless-steel tube and recovered for laboratory analysis. The sample tube was then sealed with Teflon sheets and plastic caps at both ends, labeled, and recorded in a soil sampling log.

The three soil samples, designated as GTEX-1, GTEX-2 and GTEX-3, were collected from the saturated zone at depths between 10 and 16 feet below ground surface. The samples were submitted to Keantan Laboratories of Diamond Bar, California for total porosity testing by ASTM D-2937 method. The laboratory results indicate the total porosity of the samples is 0.50, 0.58 and 0.55 respectively. A copy of the laboratory report is included as Attachment G.

Slug Test Data Analysis

The field data are plotted on a graph as the ratio h/h_o verses log of time and analyzed using Bouwer and Rice methods. The data plots and the data tables are in Attachment H. From the data plots, the K value (hydraulic conductivity) at MW-3 is estimated as 1.07 ft/day and at MW-2 it is estimated as 0.392 ft/day. The average hydraulic conductivity (K) in the area is estimated as 0.731 ft/day.

Hydrogeologic literatures suggest this range of hydraulic conductivity values are within and toward the lower end of the classification of “semi-pervious”. The representative soil types of this classification are very fine sand, very fine silt, and layered clay. The soil types resemble the site soil conditions observed during excavation and well installation activities.

To evaluate the potential of future migration of the PCE groundwater plume, seepage velocity of the site is estimated using the average K value from the slug test, the average soil porosity value from the porosity test, and the groundwater flow gradient from groundwater elevation measurements in monitoring wells. Seepage velocity is the product of K value times gradient divided by porosity. The estimated seepage velocity at the site is 0.032 feet per day (ft/day). This seepage velocity suggests that the PCE groundwater plume, if uncontrolled and un-attenuated, would take 171 years to migrate 2,000 feet beyond the site.

CONCLUSIONS

Based on the site activities, analytical data, and documentation presented in this report, EIS has reached the following conclusions:

- On April 29, 2008, MRC expanded the existing excavation by excavating approximately 450 cubic yards (675 tons) of unsaturated soil in areas that previous showed elevated concentrations of PCE in soil gas. This excavation addressed ACEH's concern of site soils with elevated concentrations of PCE soil gas potentially impacting the proposed building on the site.
- On April 30, 2008, MRC expanded the groundwater capture trench by removing approximately 250 cubic yards (375 tons) of saturated soil and extending the trench approximately 30 feet to the northwest. This enables a greater zone of capture for groundwater extraction while also directly removing PCE-impacted source material to expedite remediation.
- EIS collected eight sidewall and nine bottom (EXSW-13 through EXSW-20 and EXB-7 through EXB-15) confirmation soil samples from the April 29 and 30, 2008 excavation. No PCE was detected in the confirmation soil samples EXSW-17 through EXSW-20 and EXB-10 through EXB-13 and EXB-8. Low concentrations of PCE at 0.011, 0.011, 0.049, 0.014, 0.018, 0.012, 0.0064 mg/Kg were detected in confirmation soil samples EXSW-13 through EXSW-16, EXB-9, EXB-14 and EXB-15 respectively. None of the values exceeded the ESLs for PCE.
- No VOCs were detected in any of the stockpile soil samples SPN-1 through SPN-4 and SPS-1. Low concentrations of acetone at 0.57 and 0.099 mg/Kg were detected in stockpile soil samples SPS-2 and SPS-3 respectively.
- From March 19, 2008 to May 8, 2008, a total of approximately 865,000 gallons of groundwater were extracted from the groundwater capture trenches, treated through a carbon vessel, and then discharged to the sanitary sewer.
- On May 13, 2008, EIS conducted the second groundwater monitoring event after the remedial action was initiated. The groundwater samples collected from monitoring wells MW-1, MW-4, MW-5 and MW-6 contained 5.1 µg/L, 77 µg/L, 230 µg/L and 320 µg/L of PCE, respectively (the MCL for PCE is 5 µg/L). A reduction of 15% to 30% in PCE concentrations is found when compared to the initial groundwater sampling results.
- Third round of sampling of water from the groundwater capture trenches were conducted on May 13, 2008. The trench groundwater samples WT-E and WT-W contained 10 and 13 µg/L

of PCE, respectively. This represents a three-fold reduction in PCE concentrations in the from the previous rounds of trench water sampling where PCE concentrations were 46 µg/L, 47 µg/L and 49 µg/L.

- Both the groundwater monitoring well sampling results and trench groundwater sampling results indicate a substantial reduction (30% to 300%) in PCE concentrations in site groundwater. Based on the confirmation sampling results, EIS concludes the remedial activities performed at the site to date have achieved the remedial objective.
- Groundwater elevation measurements taken on May 13, 2008 from all the site wells indicate the groundwater extraction from the trench has a radius of influence about 150 feet. In general the groundwater appears to flow toward the northwest. The groundwater flow gradient is about 0.024 feet per foot.
- Slug tests were performed at two monitoring wells MW-2 and MW-3 to estimate the hydraulic properties of the aquifer. From the data plots, the K value (hydraulic conductivity) at MW-3 is estimated as 1.07 ft/day and at MW-2 it is estimated as 0.392 ft/day. The average hydraulic conductivity (K) in the area is estimated as 0.731 ft/day. This range of K values is considered semi-pervious.
- Soil porosity tests performed on three site soil samples resulted in total porosity values between 0.50 and 0.58. A seepage velocity of 0.032 ft/day is calculated based on the average K value, the average porosity value, and the measured groundwater flow gradient at the site. This seepage velocity value suggests that the PCE groundwater plume, if uncontrolled and un-attenuated, could migrate 2,000 feet beyond the site in 171 years.
- A well survey for a 2,000-foot radius in the vicinity of the site was performed. No active water well down-gradient from the site was identified from the survey. The existing PCE containing shallow groundwater at the site is considered unlikely to impact any down-gradient sensitive receptor.
- The site lies within the Livermore Valley Groundwater Basin. Water supply wells in the Livermore Valley Groundwater Basin for domestic or municipal use are typically screened from a depth of 100 feet or more. The PCE plume on site has been delineated vertically to a depth of approximately 26 feet beneath the site. A comparison of groundwater elevations measured in the onsite deep well (WW-1) and the monitoring wells onsite does not indicate that a significant vertical gradient exists between the shallow saturated zone and the deeper aquifer.
- The moisture content of the four post-aerated soil samples (SE-1 through SE-4) collected from the soil in the southeast stockpile that was excavated on February 29, 2008 were at 4.6 %, 3.5%, 2.9% and 4.1%. These moisture content results are lower than the target of 6% set for reusing the soil as fill material. This soil stockpile had been previously tested clean for PCE.
- The moisture content analysis of the two pre-aerated soil samples (SW-1 and SW-2) from the southwest stockpile established that the moisture of the stockpile was at 23.0 % and 21.9 % at the beginning of the aeration process. Additional aeration effort is required to bring the stockpile moisture down to the target level of 6%.

RECOMMENDATIONS

The indicator for the success of the groundwater remediation is the PCE concentrations between the initial and the final grab groundwater samples from the trenches are significantly reduced. Based on remedial activities performed to date, field data, laboratory analysis, and earlier site characterization work, EIS recommends the following:

- Closure of the site based on significant reduction in PCE levels in soil and groundwater.
- Aeration of the southwest soil stockpile should continue until a target for moisture content of less than 6% is achieved for reuse as fill material.

LIMITATIONS

This report includes analytical results for samples taken during the course of the work. The number and location of samples were chosen to provide information on shallow soil and on groundwater in selected areas of the site, but it cannot be assumed that they are representative of areas not sampled. The variations that may exist between sampling points cannot be anticipated, nor can they be entirely accounted for, in spite of exhaustive additional testing. Conclusions beyond those stated and reported herein should not be inferred from this document. All reports and findings are based on the conditions and practices observed and information made available to Environmental Investigation Services, Inc.

Should you have any questions or comments concerning this report, please do not hesitate to contact the undersigned at 408-871-1470.

Sincerely,

Environmental Investigation Services, Inc.

Panindhar R. Krishnamraju, Ph.D.
Hydrogeologist

Long Ching, PE #C39467
Senior Engineer

TABLES, FIGURES and ATTACHMENTS

Table 1 - Summary of Excavation Confirmation Soil Sample Analytical Results
Table 2 - Summary of Stockpile Soil Sample Analytical Results
Table 3 - Summary of Groundwater Pumping and Treatment
Table 4 - Summary of Groundwater Elevation Measurements During Pumping
Table 5 - Summary of Stockpile Soil Sample Geotechnical Analytical Results
Table 6 - Summary of Groundwater Elevation Measurements in Monitoring Wells
Table 7 - Summary of Groundwater Sample Analytical Results
Table 8 - Summary of Trench Groundwater Sample Analytical Results
Table 9 – Well Survey Data

Figure 1 - Vicinity Map
Figure 2 - Site Map
Figure 3 - Over-Excavation Map
Figure 4 - Building Plan and Soil Gas
Figure 5 - Confirmation Sample Location Map
Figure 6 - Groundwater Elevation Contour Map
Figure 7 – PCE Concentrations and Contours Map
Figure 8 – Well Survey Map
Figure 9 – Building Plan with Monitoring wells

Attachment A - Excavation Confirmation Soil Sample Laboratory Data
Attachment B - Stockpile Soil Laboratory Data
Attachment C – Livermore Groundwater Discharge Permit
Attachment D - Stockpile Soil Geotechnical Laboratory Data
Attachment E - Groundwater Sampling Records
Attachment F - Groundwater and Trench water Sampling Laboratory Analytical Reports
Attachment G - Soil Porosity Laboratory Data
Attachment H- Slug Test Analytical Data

REFERENCES

Alameda County Environmental Health Department. *Workplan Approval for 461 McGraw Ave, Livermore, 94550*. December 27, 1995.

Alameda County Environmental Health Department. *Fuel Leak Case No. RO0000311 and Geotracker Global ID T06001602204, Call Mac Transportation, 461 McGraw Avenue, Livermore, CA 94550*. April 11, 2007.

Alameda County Environmental Health Department. *Fuel Leak Case No. RO0000311 and Geotracker Global ID T06001602204, Call Mac Transportation, 461 McGraw Avenue, Livermore, CA 94550 – Work Plan Approval*. May 23, 2007.

Applied Remedial Technologies. *Proposed Work Plan to Conduct Soil Removal and Confirmation Sampling of Impacted Soils at the Former Diesel UST Dispenser Island, Below the Former Above Ground Storage Tanks, and at the Recent Diesel Spill Areas, 461 McGraw Avenue, Livermore, California 94550*. April 2, 2007.

Applied Remedial Technologies. *Work Plan to Remove the Three Remaining Storage Tanks, 461 McGraw Avenue, Livermore, California 94550*. April 2, 2007.

California Department of Water Resources, *Bulletin No. 118, California's Groundwater, Livermore Valley Groundwater Basin*, January 2006.

California Environmental Protection Agency. *Use of California Human Health Screening Levels in Evaluation of Contaminated Properties*, January 2005.

Department of Toxic Substances Control. *Inspection Report, Call Mac Transportation, 461 McGraw Road, Livermore, California 94551*. December 2, 2003.

Department of Toxic Substances Control. *Sampling Report, Call Mac Transportation, 461 McGraw Road, Livermore, California 94551*. January 6, 2004.

Environmental Investigation Services, Inc. *Revised Workplan for Site Investigation and Remedial Action, 461 McGraw Avenue, Livermore, California 94550*. May 18, 2007.

Environmental Investigation Services, Inc. *Aboveground Storage Tank Closure Report, 461 McGraw Avenue, Livermore, California*. July 24, 2007.

Environmental Investigation Services, Inc. *Site Investigation and Remedial Action Workplan,, 461 McGraw Avenue, Livermore, California 94550*. August 30, 2007.

Environmental Investigation Services, Inc. *Historical Review Report, 461 McGraw Avenue, Livermore, California*. October 31, 2007.

Environmental Investigation Services, Inc. *Site Investigation Results and Workplan for Further Site Investigation and Soil Remediation.* December 3, 2007.

Environmental Investigation Services, Inc. *Further Site Investigation and Remedial Action Report,, 461 McGraw Avenue, Livermore, California*. January 14, 2008.

Livermore-Pleasanton Fire Department. *Hazardous Materials Inspection Report Narrative, Call Mac Transportation, 461 McGraw Ave., Livermore*. July 17, 2003.

Livermore-Pleasanton Fire Department. *Plan Check Number DEM07014, Workplan to Remove Three Aboveground Storage Tanks, 461 McGraw Avenue, Livermore*, April 10, 2007.

Regional Water Quality Control Board, San Francisco Bay Region. *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*. November 2007.

Remediation Risk Management, Inc., *Underground and Above Ground Storage Tank Removal and Sampling Report, 461 McGraw Avenue, Livermore, California*. October 17, 1995.

Remediation Risk Management, Inc., *Workplan to Excavate Diesel Impacted Soil Adjacent to the Former Diesel Dispenser, 461 McGraw Avenue, Livermore, California*. December 21, 1995.

Remedy Environmental Services, LLC. *Preliminary Site Assessment, Phase I (Modified)*. June 7, 2006.

United States Environmental Protection Agency, Region 9. *Preliminary Remediation Goals Table*. October 2004.

Wilson, S.A. et al. *Analysis of soil samples from the San Joaquin Valley of California*. Open File Report 90-214. United States Geological Survey, 1990.

Table 1 - Summary of Excavation Confirmation Soil Sample Analytical Results
461 McGraw Avenue, Livermore, California

Sample ID	Depth (feet)	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	PCE	Other VOCs	Other Oxygenates
EXSW-1	5.0	2/28/2008	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
EXSW-2	5.0	2/28/2008	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
EXSW-3	5.0	2/28/2008	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
EXSW-4	5.0	2/28/2008	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
EXSW-5	5.0	2/28/2008	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
EXSW-6	5.0	2/28/2008	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
EXSW-7	5.0	2/28/2008	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
EXSW-8	5.0	2/28/2008	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
EXSW-9	5.0	2/28/2008	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
EXSW-10	5.0	2/28/2008	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
EXSW-11	5.0	2/28/2008	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
EXSW-12	5.0	2/28/2008	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
EXSW-13	15.0	4/30/2008	NA	NA	NA	NA	NA	0.011	NA	NA
EXSW-14	15.0	4/30/2008	NA	NA	NA	NA	NA	0.011	NA	NA
EXSW-15	15.0	4/30/2008	NA	NA	NA	NA	NA	0.049	NA	NA
EXSW-16	15.0	4/30/2008	NA	NA	NA	NA	NA	0.014	NA	NA
EXSW-17	10.0	4/30/2008	NA	NA	NA	NA	NA	<0.005	NA	NA
EXSW-18	6.0	4/30/2008	NA	NA	NA	NA	NA	<0.005	NA	NA
EXSW-19	6.0	4/30/2008	NA	NA	NA	NA	NA	<0.005	NA	NA
EXSW-20	6.0	4/30/2008	NA	NA	NA	NA	NA	<0.005	NA	NA
EXB-1	10.0	2/28/2008	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
EXB-2	10.0	2/28/2008	<0.005	<0.005	<0.005	<0.005	<0.005	0.052	ND	ND
EXB-3	10.0	2/28/2008	<0.005	<0.005	<0.005	<0.005	<0.005	0.047	ND	ND
EXB-4	10.0	2/28/2008	<0.005	<0.005	<0.005	<0.005	<0.005	0.029	ND	ND
EXB-5	10.0	2/28/2008	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
EXB-6	10.0	2/28/2008	<0.005	<0.005	<0.005	<0.005	<0.005	0.0073	ND	ND

Table 1 - Summary of Excavation Confirmation Soil Sample Analytical Results
461 McGraw Avenue, Livermore, California

Sample ID	Depth (feet)	Date	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	PCE	Other VOCs	Other Oxygenates
EXB-7	20.0	4/30/2008	NA	NA	NA	NA	NA	0.0059	NA	NA
EXB-8	20.0	4/30/2008	NA	NA	NA	NA	NA	<0.005	NA	NA
EXB-9	20.0	4/30/2008	NA	NA	NA	NA	NA	0.018	NA	NA
EXB-10	10.0	4/30/2008	NA	NA	NA	NA	NA	<0.005	NA	NA
EXB-11	10.0	4/30/2008	NA	NA	NA	NA	NA	<0.005	NA	NA
EXB-12	10.0	4/30/2008	NA	NA	NA	NA	NA	<0.005	NA	NA
EXB-13	10.0	4/30/2008	NA	NA	NA	NA	NA	<0.005	NA	NA
EXB-14	16.0	4/30/2008	NA	NA	NA	NA	NA	0.012	NA	NA
EXB-15	16.0	4/30/2008	NA	NA	NA	NA	NA	0.0064	NA	NA
RWQCB ESL			0.023	0.044	2.9	3.3	2.3	0.34	--	--
USEPA PRG			32	0.64	520	400	270	0.48	--	--

Notes:

Data is reported in milligrams per kilogram (mg/kg)

Method 8260B for VOCs and Fuel Oxygenates

MTBE = Methyl tert-butyl ether

BTEX = Benzene, Toluene, Ethylbenzene, Xylenes

VOCs = Volatile Organic Compounds

PCE = Tetrachloroethene

ND = Not Detected

NA = Not Analyzed

RWQCB ESL = Regional Water Quality Control Board's Shallow Soil Environmental Screening Level for Residential Property where groundwater is currently or potentially a drinking water resource. (Nov 2007)

USEPA PRG = United States Environmental Protection Agency's Preliminary Remediation Goal for residential soil. (2004)

Table 2 - Summary of Stockpile Soil Sample Analytical Results
461 McGraw Avenue, Livermore, California

Stockpile Sample	Date	Acetone	Benzene	PCE	TCE	cis-1,2-dichloroethene	n-Butyl benzene	1,2,4-Trimethyl benzne	sec-Butyl benzene	Naphthalene	1,3,5-Trimethyl benzene	Other VOCs	Other Oxygenates
NESP-1	3/3/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
NESP-4	3/3/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
NESP-6	3/3/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
NESP-9	3/3/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
NESP-14	3/3/2008	<0.05	<0.010	<0.010	<0.010	<0.010	0.043	0.066	0.016	0.19	0.04	ND	ND
NESP-18	3/3/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
NESP-22	3/3/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
NESP-29	3/3/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
NESP-33	3/3/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
NESP-40	3/3/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
SWSP-3	3/3/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
SWSP-9	3/3/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
SWSP-13	3/3/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
SWSP-15	3/3/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
SWSP-18	3/3/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
SESP-2	3/3/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
SESP-5	3/3/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
SESP-7	3/3/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
SESP-9	3/3/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
SESP-11	3/3/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND

Table 2 - Summary of Stockpile Soil Sample Analytical Results
461 McGraw Avenue, Livermore, California

Stockpile Sample	Date	Acetone	Benzene	PCE	TCE	cis-1,2-dichloroethene	n-Butyl benzene	1,2,4-Trimethyl benzne	sec-Butyl benzene	Naphthalene	1,3,5-Trimethyl benzene	Other VOCs	Other Oxygenates
SPN-1	5/2/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
SPN-2	5/2/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
SPN-3	5/2/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
SPN-4	5/2/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
SPS-1	5/2/2008	<0.05	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
SPS-2	5/2/2008	0.57	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
SPS-3	5/2/2008	0.099	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	ND	ND
RWQCB ESL		--	0.044	0.34	--	--	--	--	--	1.3	--	--	--
ACEH SLRS		--	0.18	0.087	0.26	0.18	--	--	--	--	--	--	--

Notes:

Data are reported in milligrams per kilogram (mg/kg)

Method 8260B for VOCs and Fuel Oxygenates

PCE = Tetrachloroethene

TCE = Trichloroethene

VOCs = Volatile Organic Compounds

RWQCB ESL = Regional Water Quality Control Board's Shallow Soil Environmental Screening Level for Residential Property where groundwater is currently or potentially a drinking water resource. (Nov 2007)

ACEH SLRS = Alameda County Environmental Health Screening Levels for Soil Reuse

Table 3 - Groundwater Pumping and Treatment Summary
461 McGraw Avenue, Livermore, California

Date	Pumping Hours	Quantity Pumped	Comments
03-24-2008	3:00 PM-7:00 PM	24,000 Gallons	Pumped Water Accumulated at Excavation Base
03-25-2008	7:00 AM-7:00 PM	72,000 Gallons	Water Level Dropped 5 Feet, Recharged 2 Feet
03-26-2008	7:00 AM–5:00 PM	60,000 Gallons	Water Level Dropped 4 Feet, Recharged 2 Feet
03-27-2008	7:00 AM-5:00 PM	60,000 Gallons	Water Level Dropped 4 Feet, Recharged 2 Feet
03-28-2008	8:00 AM-5:00 PM	54,000 Gallons	Water Level Dropped 3 Feet, Recharged 2 Feet
03-31-2008	7:00 AM-7:00 PM	72,000 Gallons	Water Level Dropped 4 Feet, Recharged 3 Feet
03-31-2008	7:00 PM-6:00 AM	30,000 Gallons	Recharged 2 Feet, Utilized 2” Diameter Pump
04-01-2008	7:00 AM-1:00 PM	36,000 Gallons	Trench Pumped Dry, Recharged 2 Feet
04-01-2008	4:00 PM-6:00 PM	12,000 Gallons	Trench Pumped Dry, Recharged 1 Foot
04-02-2008	6:00 AM-10:00AM	24,000 Gallons	Trench Pumped Dry, Recharged 2 Feet
04-10-2008	8:30 AM-7:30 PM	66,000 Gallons	Water Level Dropped 4 Feet, Recharged 2 Feet
04-11-2008	6:30 AM-4:30 PM	60,000 Gallons	Water Level Dropped 3 Feet, Recharged 2 Feet
04-15-2008	10:00 AM-3:00 PM	30,000 Gallons	Trench Pumped Dry, Recharged 2 Feet
04-16-2008	4:00 AM-7:00 AM	18,000 Gallons	Trench Pumped Dry, Recharged 2 Feet
04-18-2008	1:00 PM-4:30 PM	22,000 Gallons	Trench Pumped Dry from 3.4 Feet
04-21-2008	8:30 AM-1:00 PM	24,000 Gallons	Trench Pumped Dry from 3.8 Feet
04-24-2008	1:30 PM-5:00 PM	25,000 Gallons	Trench Pumped Dry from 4.1 Feet
04-25-2008	9:00 AM-12:30 PM	8,000 Gallons	Trench Pumped Dry from 1.5 Feet
04-26-2008	1:00 PM-3:30PM	12,000 Gallons	Trench Pumped Dry from 2.1 Feet
04-28-2008	9:30AM-1:00PM	14,000 Gallons	Trench Pumped Dry from 2.5 Feet
04-29-2008	7:00AM-9:00AM	10,000 Gallons	Trench Pumped Dry from 2.0 Feet
05-02-2008	11:00AM-3:30PM	36,000 Gallons	Trench Pumped to 2.0 Feet from 3.5 Feet
05-04-2008	9:30AM-2:00PM	30,000 Gallons	Trench Pumped Dry from 3.1 Feet
05-05-2008	1:00PM-3:30PM	18,000 Gallons	Trench Pumped Dry from 2.5 Feet
05-06-2008	2:00PM-4:30PM	18,000 Gallons	Trench Pumped Dry from 2.5 Feet
05-08-2008	9:30AM-4:00PM	30,000 Gallons	Trench Pumped Dry from 3.0 Feet
Total Quantity Pumped & Treated:		**865,000 Gallons**	Nineteen (19) Cumulative Days of Pumping

Note: Estimate of Original Trench Volume is 100,000 Gallons (5’ Wide by 260’ Long by 10.5’ Deep).
Note: Estimate of Updated Trench Water Volume is 280,000 Gallons. Completed after 4-29-08 Pumping

Table 4 - Groundwater Levels During Pumping
461 McGraw Avenue, Livermore, California

Date / Time **4/10/2008**	Trench (feet of water)	MW-1	MW-4 (depth to water, feet)	MW-5	MW-6
4/10/08 9:16	7.3	11.11	11.92	11.29	12.00
4/10/08 10:16	7.0	11.15	12.02	11.20	12.07
4/10/08 11:16	6.6	11.20	12.11	11.21	12.19
4/10/08 12:16	6.2	11.26	12.27	11.24	12.33
4/10/08 13:16	6.0	11.32	12.40	11.29	12.46
4/10/08 14:16	5.6	11.39	12.52	11.31	12.60
4/10/08 15:16	5.3	11.46	12.67	11.34	12.74
4/10/08 16:16	5.0	11.54	12.81	11.40	12.91
4/10/08 17:22	4.8	11.65	12.98	11.43	13.10
4/10/08 18:22	4.4	11.70	13.12	11.49	13.20
4/10/08 19:28	4.0	11.79	13.29	11.50	13.35
Average rate of water level reduction (ft/hr)	0.325	0.066	0.134	0.021	0.132

Date / Time **4/11/2008**	Trench (feet of water)	MW-1	MW-4 (depth to water, feet)	MW-5	MW-6
4/11/08 8:22	3.8	12.06	13.67	11.88	13.70
4/11/08 9:24	3.5	12.10	13.74	11.90	13.76
4/11/08 10:23	3.2	12.12	13.81	11.91	13.83
4/11/08 11:17	3.0	12.17	13.90	11.92	13.91
4/11/08 12:17	2.7	12.24	14.00	11.96	14.03
4/11/08 13:23	2.2	12.29	14.15	11.99	14.16
4/11/08 14:20	2.0	12.34	14.26	12.02	14.28
4/11/08 15:20	1.8	12.40	14.38	12.06	14.38
4/11/08 16:30	1.6	12.42	14.94	12.10	14.45
Average rate of water level reduction (ft/hr)	0.269	0.045	0.149	0.027	0.093

Date / Time **4/18/2008**	Trench (feet of water)	MW-1	MW-4 (depth to water, feet)	MW-5	MW-6
4/18/08 13:15	3.4	12.51	14.19	12.19	14.14
4/18/08 14:15	2.1	12.56	14.23	12.20	14.23
4/18/08 15:15	0.8	12.68	14.51	12.25	14.45
4/18/08 16:15	0.0	12.78	14.67	12.31	14.60
Average rate of water level reduction (ft/hr)	1.133	0.090	0.160	0.040	0.153

Date / Time **4/21/2008**	Trench (feet of water)	MW-1	MW-4 (depth to water, feet)	MW-5	MW-6
4/21/08 8:50	3.8	12.46	13.93	12.22	13.98
4/21/08 9:50	2.9	12.50	14.02	12.24	14.04
4/21/08 10:50	1.9	12.57	14.21	12.29	14.20
4/21/08 11:50	0.8	12.71	14.48	12.34	14.43
4/21/08 12:50	0.0	12.82	14.69	12.41	14.65
Average rate of water level reduction (ft/hr)	0.950	0.090	0.190	0.048	0.168

Table 4 - Groundwater Levels During Pumping
461 McGraw Avenue, Livermore, California

Date / Time **4/24/2008**	Trench (feet of water)	MW-1	MW-4 (depth to water, feet)	MW-5	MW-6
4/24/08 13:55	4.1	12.41	13.80	12.21	13.85
4/24/08 14:55	2.9	12.45	13.93	12.21	13.92
4/24/08 15:55	1.7	12.56	14.13	12.23	14.10
4/24/08 16:55	0.0	12.74	14.46	12.30	14.41
Average rate of water level reduction (ft/hr)	1.367	0.110	0.220	0.030	0.187

Date / Time **4/25/2008**	Trench (feet of water)	MW-1	MW-4 (depth to water, feet)	MW-5	MW-6
4/25/08 9:25	1.5	13.06	14.85	12.60	14.95
4/25/08 10:25	0.0	13.09	14.95	12.61	15.01
4/25/08 11:25	0.4	13.11	15.03	12.64	15.11
4/25/08 12:25	0.0	13.13	15.06	12.66	15.18
Average rate of water level reduction (ft/hr)	0.500	0.023	0.070	0.020	0.077

Date / Time **4/26/2008**	Trench (feet of water)	MW-1	MW-4 (depth to water, feet)	MW-5	MW-6
4/26/08 13:15	2.1	13.02	14.76	12.55	14.85
4/26/08 14:15	1.0	13.05	14.85	12.60	14.88
4/26/08 15:15	0.1	13.09	14.98	12.61	15.00
Average rate of water level reduction (ft/hr)	1.000	0.035	0.110	0.030	0.075

Date / Time **4/28/2008**	Trench (feet of water)	MW-1	MW-4 (depth to water, feet)	MW-5	MW-6
4/28/08 9:45	2.5	12.83	14.49	12.50	14.51
4/28/08 10:45	1.8	12.85	14.53	12.47	14.52
4/28/08 11:45	1.0	12.91	14.72	12.51	14.63
4/28/08 12:45	0.0	--	--	--	--
Average rate of water level reduction (ft/hr)	0.750	0.040	0.115	0.005	0.060

Date / Time **4/29/2008**	Trench (feet of water)	MW-1	MW-4 (depth to water, feet)	MW-5	MW-6
4/29/08 7:00	2.0	--	--	--	--
4/29/08 8:00	1.0	--	--	--	--
4/29/08 9:00	0.1	--	--	--	--
Average rate of water level reduction (ft/hr)	0.950	--	--	--	--

Table 4 - Groundwater Levels During Pumping
461 McGraw Avenue, Livermore, California

Date / Time **5/2/2008**	Trench (feet of water)	MW-1	MW-4 (depth to water, feet)	MW-5	MW-6
5/2/08 11:20	3.2	13.48	15.15	14.61	17.00
5/2/08 12:20	2.9	13.48	15.15	14.61	17.01
5/2/08 13:20	2.6	13.51	15.17	14.64	17.07
5/2/08 14:20	2.3	13.53	15.21	14.68	17.12
5/2/08 15:20	2.0	13.57	15.27	14.74	17.20
Average rate of water level reduction (ft/hr)	0.300	0.023	0.030	0.033	0.050

Date / Time **5/4/2008**	Trench (feet of water)	MW-1	MW-4 (depth to water, feet)	MW-5	MW-6
5/4/08 9:45	3.1	13.41	14.95	14.40	16.75
5/4/08 10:45	2.8	13.41	14.97	14.43	16.80
5/4/08 11:45	2.5	13.41	14.98	14.46	16.84
5/4/08 12:45	1.8	13.47	15.05	14.59	16.92
5/4/08 13:45	1.0	13.53	15.11	14.72	17.00
Average rate of water level reduction (ft/hr)	0.525	0.030	0.040	0.080	0.063

Date / Time **5/5/2008**	Trench (feet of water)	MW-1	MW-4 (depth to water, feet)	MW-5	MW-6
5/5/08 13:30	2.5	13.61	15.24	14.71	17.15
5/5/08 14:30	1.7	13.63	15.25	14.79	17.20
Average rate of water level reduction (ft/hr)	0.800	0.020	0.010	0.080	0.050

Date / Time **5/6/2008**	Trench (feet of water)	MW-1	MW-4 (depth to water, feet)	MW-5	MW-6
5/6/08 15:00	2.5	13.60	15.23	14.70	17.14
5/6/08 16:00	2.0	13.63	15.23	14.74	17.18
Average rate of water level reduction (ft/hr)	0.500	0.030	0.000	0.040	0.040

Date / Time **5/5/2008**	Trench (feet of water)	MW-1	MW-4 (depth to water, feet)	MW-5	MW-6
5/5/08 13:30	2.5	13.61	15.24	14.71	17.15
5/5/08 14:30	1.7	13.63	15.25	14.79	17.20
Average rate of water level reduction (ft/hr)	0.800	0.020	0.010	0.080	0.050

Date / Time **5/8/2008**	Trench (feet of water)	MW-1	MW-4 (depth to water, feet)	MW-5	MW-6
5/8/08 9:40	3.0	13.51	15.08	14.50	16.83
5/8/08 15:40	0.0	--	--	--	--
Average rate of water level reduction (ft/hr)	0.500	--	-	--	--

Table 5 - Summary of Stockpile Soil Sample Geotechnical Analytical Results
461 McGraw Avenue, Livermore, California

Sample ID	Date	Depth (ft)	Wet Density (pcf)	Dry Density (pcf)	Moisture Content (%)
GT-3	3/31/2008	3	87.70	71.53	22.60
SE-1	5/28/2008	3	--	--	**4.60**
GT-4	3/31/2008	3	108.81	87.18	24.81
SE-2	5/28/2008	3	--	--	**3.50**
GT-5	3/31/2008	3	121.30	95.98	26.39
SE-3	2/28/2008	3	--	--	**2.90**
GT-6	3/31/2008	3	118.87	94.31	26.94
SE-4	5/28/2008	3	118.87	94.31	**4.10**
SW-1	5/28/2008	3	108.08	87.90	23.00
SW-2	5/28/2008	3	93.62	76.80	21.90

Bold indicates the stockpile moisture content down to the target level of 6%

Notes: Method ASTM D 2937 -- = Not Analyzed

PCF = Pounds per Cubic Foot

Table 6 - Summary of Groundwater Elevation Measurements
461 McGraw Avenue, Livermore, California

Well	Date	Measuring Point Elevation	Total Well Depth	Depth to Water	Groundwater Elevation
MW-1	11/9/2007	524.66	19.41	10.05	514.61
	11/27/2007	"	19.40	9.92	514.74
	3/3/2008	"	19.40	11.07	513.59
	4/7/2008	"	19.50	11.62	513.04
	5/13/2008	"	19.39	12.99	511.67
MW-2	11/9/2007	527.15	19.52	11.21	515.94
	11/27/2007	"	19.52	11.19	515.96
	3/3/2008	"	19.52	10.07	517.08
	4/7/2008	"	19.52	10.92	516.23
	5/13/2008	"	19.50	11.63	515.52
MW-3	11/9/2007	526.99	19.85	11.27	515.72
	11/27/2007	"	19.81	11.22	515.77
	3/3/2008	"	19.85	10.17	516.82
	4/7/2008	"	19.85	11.00	515.99
	5/13/2008	"	19.60	11.69	515.30
MW-4	2/29/2008	524.48	19.24	12.62	511.86
	3/3/2008	"	19.25	12.79	511.69
	4/7/2008	"	19.35	12.98	511.50
	5/13/2008	"	19.25	14.36	510.12
MW-5	2/29/2008	523.96	19.54	9.90	514.06
	3/3/2008	"	19.55	11.01	512.95
	4/7/2008	"	19.66	11.56	512.40
	5/13/2008	"	19.56	13.81	510.15
MW-6	2/29/2008	524.34	19.45	9.87	514.47
	3/3/2008	"	19.45	12.97	511.37
	4/7/2008	"	19.54	12.80	511.54
	5/13/2008	"	19.45	15.71	508.63
WW-1	5/31/2007	524.23	151.23	10.16	514.07
	5/13/2008	"	151.00	10.20	514.03

Notes:

Depth measurements are reported in feet below the measuring point.
Elevations are reported in feet above mean sea level.
Measuring Point Elevations were surveyed by Mid Coast Engineers
NS = Not Surveyed

Table 7 - Summary of Groundwater Sample Analytical Results
461 McGraw Avenue, Livermore, California

Boring	Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	PCE	Other VOCs	Other Oxygenates
MW-1	4/7/2008	<0.5	<0.5	<0.5	<0.5	0.7	**7.7**	ND	ND
	5/13/2008	NA	NA	NA	NA	NA	**5.1**	NA	NA
MW-4	4/7/2008	<1.7	<1.7	<1.7	<1.7	<1.7	**90**	ND	ND
	5/13/2008	NA	NA	NA	NA	NA	**77**	NA	NA
MW-5	4/7/2008	<5.0	<5.0	<5.0	<5.0	<5.0	**260**	ND	ND
	5/13/2008	NA	NA	NA	NA	NA	**230**	NA	NA
MW-6	4/7/2008	<10	<10	<10	<10	<10	**430**	ND	ND
	5/13/2008	NA	NA	NA	NA	NA	**320**	NA	NA
CDHS MCL		1.0	150	300	1,750	5[(a)]	5.0	--	--
Drinking Water ESLs		1.0	150	300	1,800	13	5.0	--	--

Notes:

Data is reported in micrograms per liter (μg/L)

VOCs = Volatile Organic Compounds

MTBE = Methyl tert-Butyl Ether

PCE = Tetrachloroethene

Bold = results which are greater than the CDHS MCL

Method 8260B for VOCs

-- = Not Established

ND = Not Detected

(a) = This is the secondary MCL for MTBE, which is based on qualitative factors such as taste and odor. The primary MCL for MTBE, the value that has been determined to be protective of human health, is 13 micrograms per liter.

Drinking Water ESLs = Regional Water Quality Control Board's Environmental Screening Levels for drinking water. (Nov 2007)

CDHS MCL = California Department of Health Services' Maximum Contaminant Level for Drinking Water, CCR, Title 22, 2005

Table 8 - Summary of Trench Water and Remediation Sample Analytical Results
461 McGraw Avenue, Livermore, California

Sampling	Boring	Date	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	PCE	Other VOCs	Other Oxygenates
Round I	WT-1 (trench water)	3/3/2008	<1.2	<1.2	<1.2	<1.2	<1.2	**49**	ND	ND
	WT-2 (after treatment)	3/25/2008	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND	ND
	CC-1 (charcoal filter)	3/25/2008	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	ND	ND
Round II	WT-E (trench water)	4/7/2008	<1.0	<1.0	<1.0	<1.0	<1.0	**46**	ND	ND
	WT-W (trench water)	4/7/2008	<1.0	<1.0	<1.0	<1.0	<1.0	**47**	ND	ND
Round III	WT-E (trench water)	5/13/2008	NA	NA	NA	NA	NA	**10**	NA	NA
	WT-W (trench water)	5/13/2008	NA	NA	NA	NA	NA	**13**	NA	NA
CDHS MCL			1.0	150	300	1,750	5[(a)]	5.0	--	--
Drinking Water ESLs			1.0	150	300	1,800	13	5.0	--	--

Notes:

Data is reported in micrograms per liter (μg/L)

Bold = results which are greater than the CDHS MCL

VOCs = Volatile Organic Compounds

Method 8260B for VOCs; TCLP Extraction used for CC-1

MTBE = Methyl tert-Butyl Ether

-- = Not Established

PCE = Tetrachloroethene

ND = Not Detected

NA = Not Analyzed

(a) = This is the secondary MCL for MTBE, which is based on qualitative factors such as taste and odor. The primary MCL for MTBE, the value that has been determined to be protective of human health, is 13 micrograms per liter.

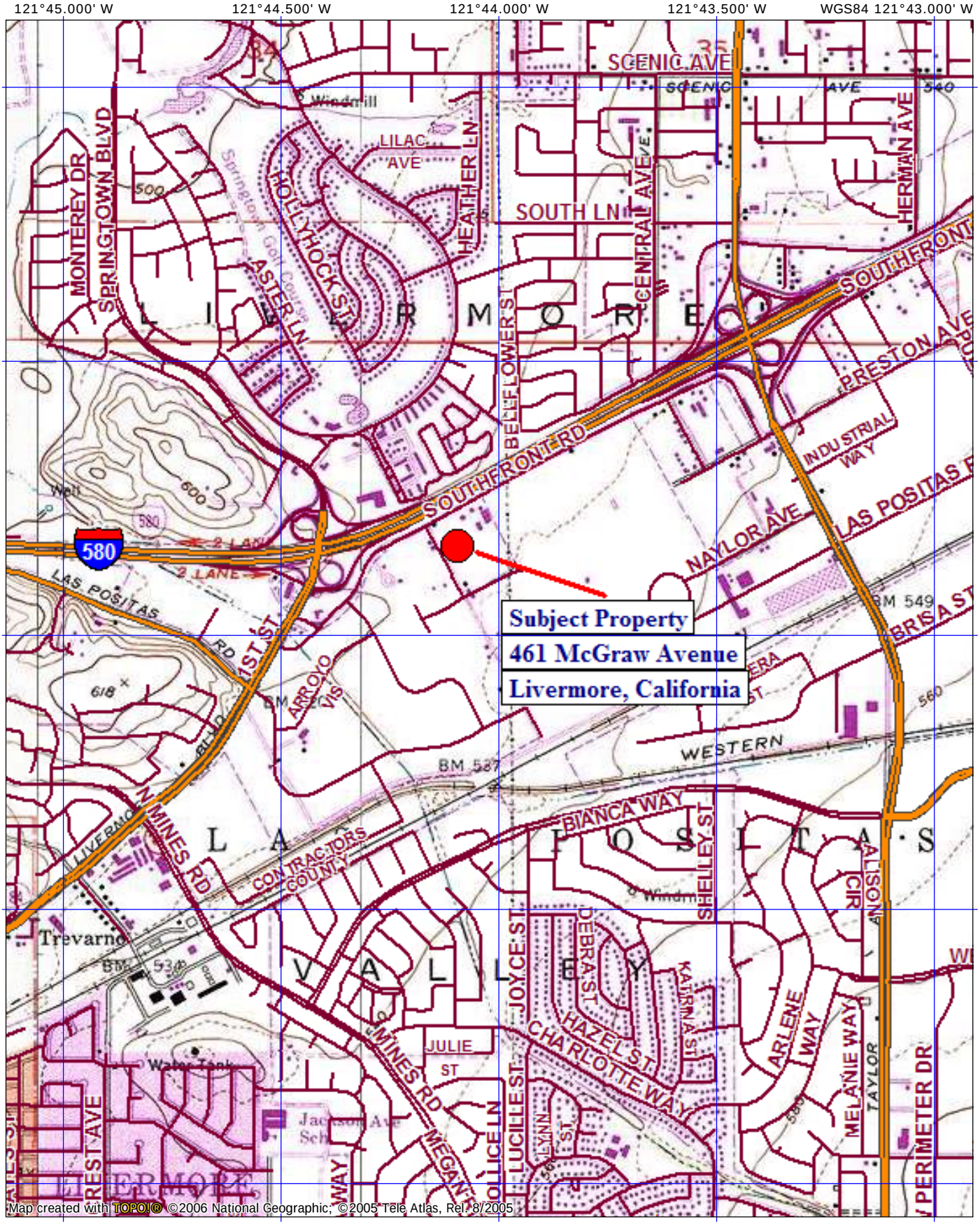
Drinking Water ESLs = Regional Water Quality Control Board's Environmental Screening Levels for drinking water. (Nov 2007)

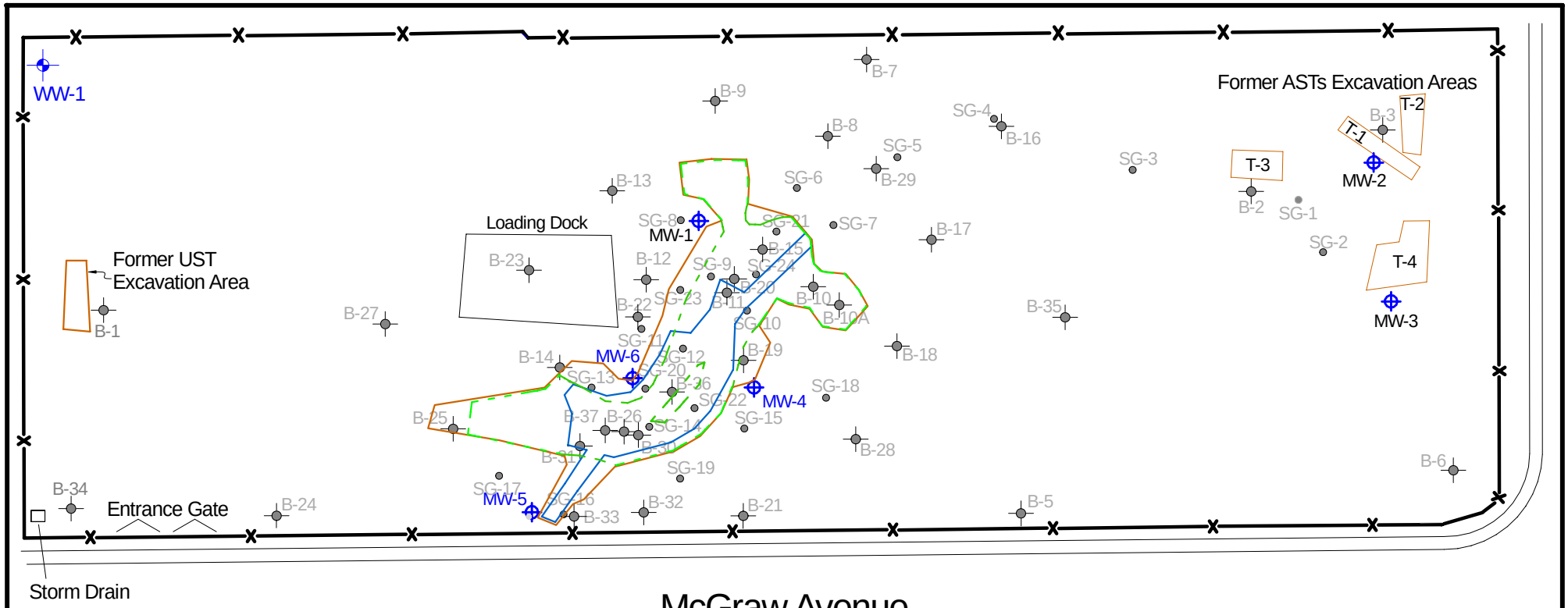
CDHS MCL = California Department of Health Services' Maximum Contaminant Level for Drinking Water, CCR, Title 22, 2005

Table 9
Zone 7 Well Data Particulars within 2000 feet radius
461 McGraw Avenue, Livermore, California
EIS Project # 717-4

S.NO.	WELL #	DEPTH	DIAM	USE	ADDRESS	CITY	OWNER	COMPLETED	DESTROYED	STATUS
1	3S/2E 2F 2	17.0	2.0	monitor	5605 S.FRONT ST, LIVERMORE	LIVERMORE	BAY-CAL EQUIPMENT CO.	2/2/1989		
2	3S/2E 3A 1	54.0	2.5	monitor	BLUEBELL DR	LIVERMORE	Z7-MON			JD
3	3S/2E 3H 2	208.0	11.0	domestic	5153 SOUTH FRONT RD	LIVERMORE	ERNST FAGUNDES	3/25/1956	4/18/1986	destroyed
4	3S/2E 3H 3	20.0	2.0	monitor	5237 SOUTH FRONT ROAD	LIVERMORE	ERNEST JONES	6/7/1994	8/10/1995	des #95470
5	3S/2E 3K 1	491.0	12.0	supply	DESTROYED		GRAHAM NISSEN	4/20/1956		des
6	3S/2E 3K 3	60.0	2.5	monitor	S. FRONT NR FIRST ST.	LIVERMORE	Z7-MON			JD
7	3S/2E 3K32	25.0	2.0	monitor	4904 SOUTHFRONT RD	LIVERMORE	CHEVRON	10/2/1995	12/11/2006	des #26201
8	3S/2E 3K33	25.0	2.0	monitor	4904 SOUTHFRONT RD	LIVERMORE	CHEVRON	10/2/1995	12/11/2006	des #26201
9	3S/2E 3H 1	202.0	8.0	irrigation	MCGRAW AVE & PRESTON AVE	LIVERMORE	PG&E	6/19/1973		
10	3S/2E 3K 4	35.0	0.0	monitor	FIRST ST & FRONT RD	LIVERMORE	MOBIL			des #21205
11	3S/2E 3K 5	30.0	0.0	monitor	FIRST ST & FRONT RD	LIVERMORE	MOBIL		12/11/2006	des #26201
12	3S/2E 3K 6	0.0	0.0	monitor	4904 SOUTHFRONT RD	LIVERMORE	CHEVRON	10850103	11/29/2001	des #21205
13	3S/2E 3K 7	32.0	12.0	monitor	4904 SOUTHFRONT RD	LIVERMORE	CHEVRON	1/16/1985		
14	3S/2E 3K 9	25.0	8.0	monitor	FIRST ST & FRONT RD	LIVERMORE	CHEVRON	3/29/1985	11/29/2001	des #21205
15	3S/2E 3K10	0.0	0.0	monitor	4904 SOUTHFRONT RD	LIVERMORE	CHEVRON			
16	3S/2E 3K11	26.5	3.0	monitor	4904 SOUTHFRONT RD	LIVERMORE	CHEVRON	12/21/1984	11/29/2001	des #21205
17	3S/2E 3K12	21.5	3.0	monitor	4904 SOUTHFRONT RD	LIVERMORE	CHEVRON	12/21/1984	11/29/2001	des #21205
18	3S/2E 3K13	21.0	3.0	monitor	4904 SOUTHFRONT RD	LIVERMORE	CHEVRON	12/21/1984	11/29/2001	des #21205
19	3S/2E 3K14	22.0	3.0	monitor	4904 SOUTHFRONT RD	LIVERMORE	CHEVRON	1/3/1985	11/29/2001	des #21205
20	3S/2E 3K15	22.0	3.0	monitor	4904 SOUTHFRONT RD	LIVERMORE	CHEVRON	1/3/1985	12/11/2006	des #26201
21	3S/2E 3K16	23.0	3.0	monitor	4904 SOUTHFRONT RD	LIVERMORE	CHEVRON	1/3/1985		
22	3S/2E 3K17	0.0	0.0	monitor	4904 SOUTHFRONT RD	LIVERMORE	CHEVRON		12/11/2006	des #26201
23	3S/2E 3K19	22.0	3.0	unknown	4904 SOUTHFRONT RD	LIVERMORE	CHEVRON	1/10/1985	11/29/2001	des #21205
24	3S/2E 3K20	20.0	3.0	monitor	4904 SOUTHFRONT RD	LIVERMORE	CHEVRON	1/15/1985	11/29/2001	des #21205
25	3S/2E 3K21	21.5	3.0	monitor	4904 SOUTHFRONT RD	LIVERMORE	CHEVRON	1/15/1985		
26	3S/2E 3K22	21.0	3.0	monitor	FIRST ST & FRONT RD	LIVERMORE	MOBIL	1/15/1985	11/29/2001	des #21205
27	3S/2E 3K23	0.0	0.0	monitor	4904 SOUTHFRONT RD	LIVERMORE	CHEVRON		12/11/2006	des #26201
28	3S/2E 3G11	20.0	2.0	monitor	909 BLUEBELL DR.	LIVERMORE	JAMES & ANGIE MCATEE	7/11/1996	8/23/1999	des #99148
29	3S/2E 3G12	20.0	2.0	monitor	909 BLUEBELL DR.	LIVERMORE	JAMES & ANGIE MCATEE	7/12/1996	8/23/1999	des #99148
30	3S/2E 3G13	20.0	2.0	monitor	909 BLUEBELL DR.	LIVERMORE	JAMES & ANGIE MCATEE	7/12/1996	8/23/1999	des #99148
31	3S/2E 3H 4	160.4	6.0	supply	461 MCGRAW AVE	LIVERMORE	CRANDAL MACKEY			abandoned
32	3S/2E 3G16	0.0	0.0	monitor	909 BLUEBELL DR	LIVERMORE	MASOOD AMINI FILABADI			
33	3S/2E 3G17	0.0	0.0	monitor	909 BLUEBELL DR	LIVERMORE	MASOOD AMINI FILABADI			
34	3S/2E 3G18	0.0	0.0	monitor	909 BLUEBELL DR	LIVERMORE	MASOOD AMINI FILABADI			

Figure 1 : Site Location Map





N

Scale:
1" = 60'

0 60

LEGEND

- PCE Contaminated Soil Excavation Area
- Groundwater Capture Trench Excavation Area
- Original Excavation Area
- B-26 Soil Boring Location
- SG-3 Soil Gas Sample Location
- MW-3 Monitoring Well Location
- WW-1 Water Supply Well

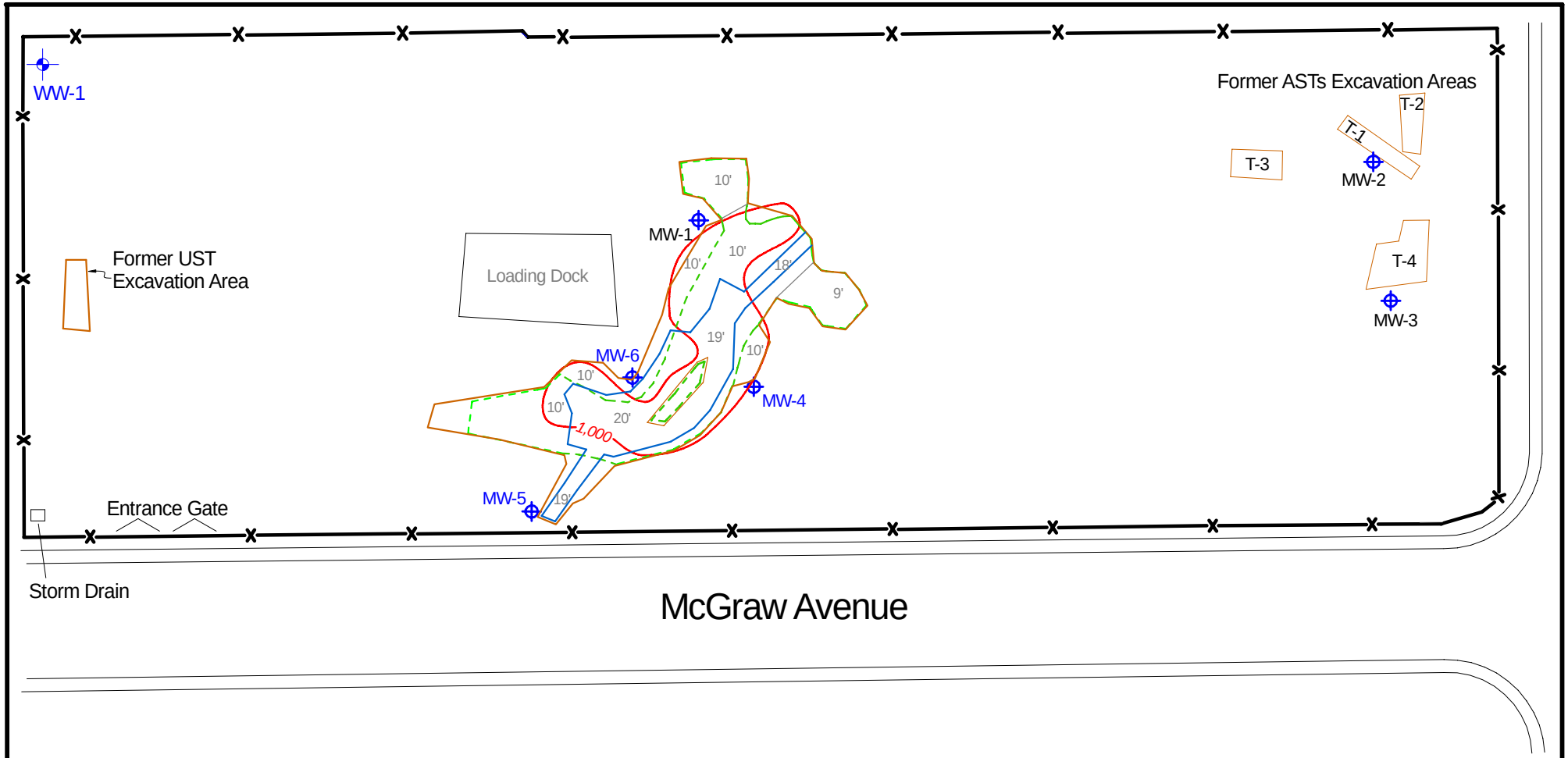
Environmental Investigation Services, Inc.
170 Knowles Drive, Suite 212, Los Gatos, California 95032
Phone: (408) 871-1470 Fax: (408) 871-1520

Project Number 717-4

May 29, 2008

Figure 2

Site Map
461 McGraw Avenue
Livermore, California



N

Scale:
1" = 60'

0 60

LEGEND

- PCE Contaminated Soil Excavation Area
- Original Excavation Area
- Groundwater Capture Trench Excavation Area
- PCE in Soil Gas (ug/L)
- B-26 Soil Boring Location
- MW-3 Monitoring Well Location
- SG-3 Soil Gas Sample Location
- WW-1 Water Supply Well

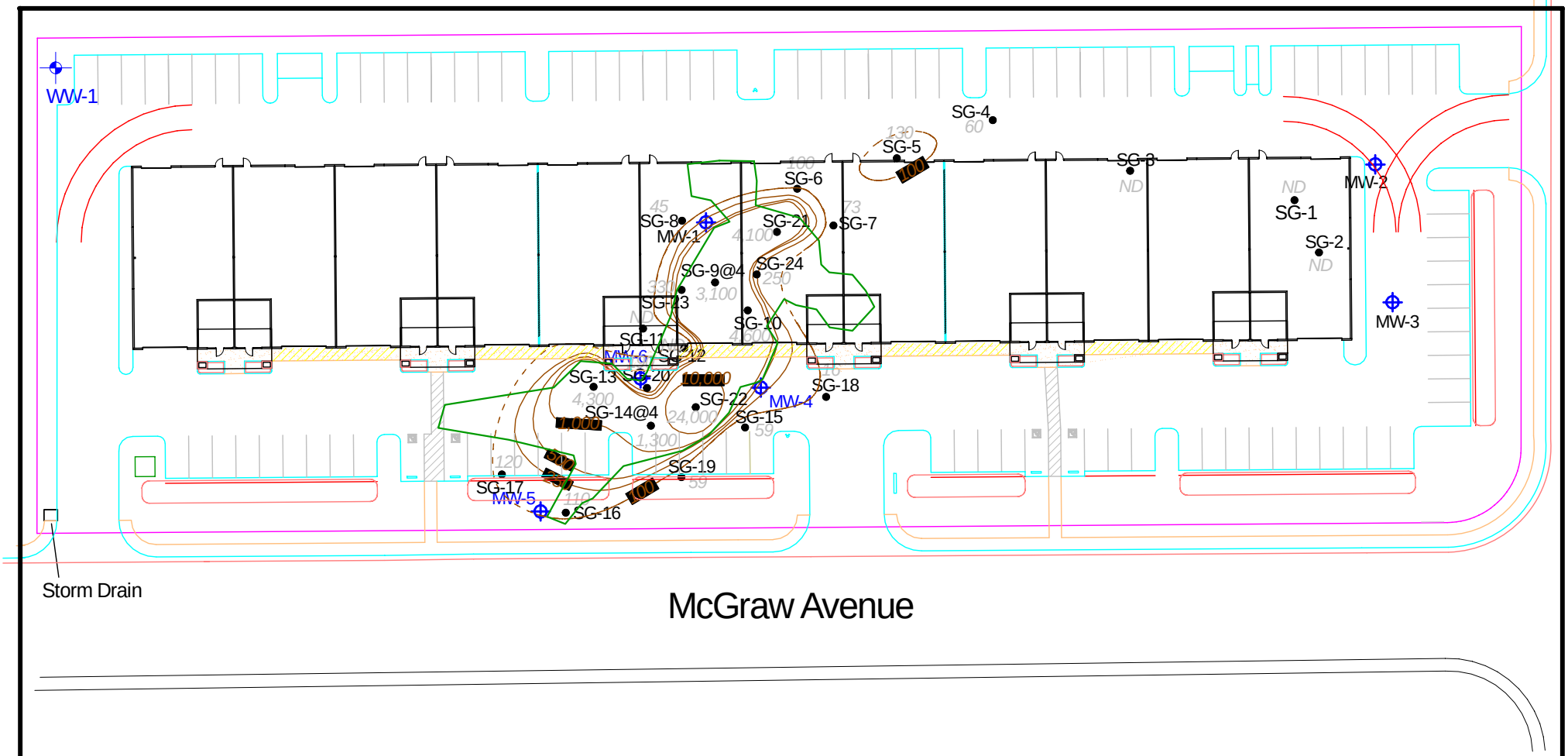
Environmental Investigation Services, Inc.
170 Knowles Drive, Suite 212, Los Gatos, California 95032
Phone: (408) 871-1470 Fax: (408) 871-1520

Project Number 717-4

June 3, 2008

Figure 3

Over-Excavation
Along Soil Gas PCE Contour
461 McGraw Avenue
Livermore, California



LEGEND

- PCE Contaminated Soil Excavation Area
- PCE Concentration Contour (µg/m^3) dashed where inferred
- SG-3 — Soil Gas Sample Location
- 170 — PCE Concentration (µg/m^3)
- ND — PCE Not Detected
- MW-3 — Monitoring Well Location
- WW-1 — Water Supply Well

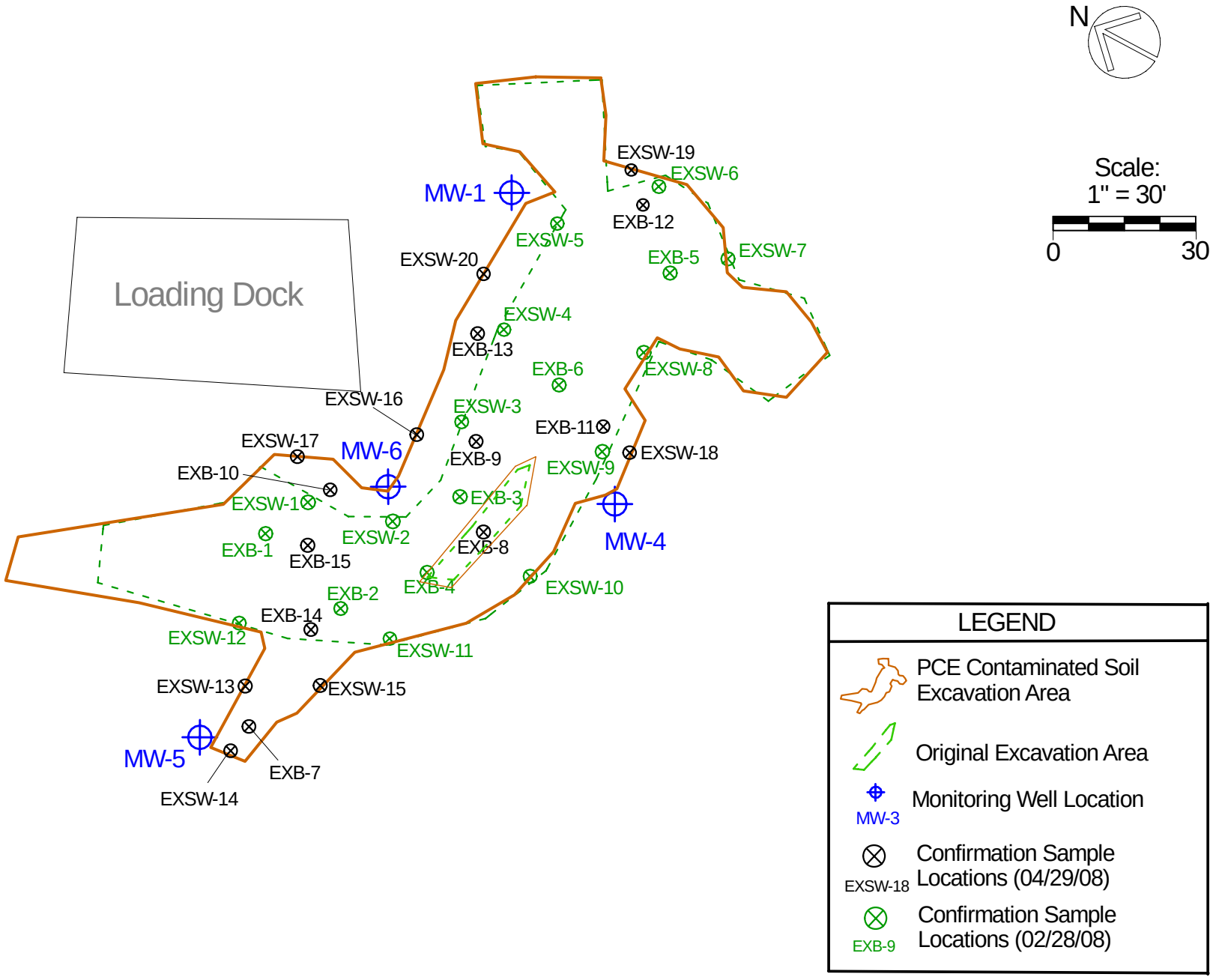
Environmental Investigation Services, Inc.
170 Knowles Drive, Suite 212, Los Gatos, California 95032
Phone: (408) 871-1470 Fax: (408) 871-1520

Project Number 717-4

June 03, 2008

Figure 4

Building Plan with Soil Gas Contours
461 McGraw Avenue
Livermore, California



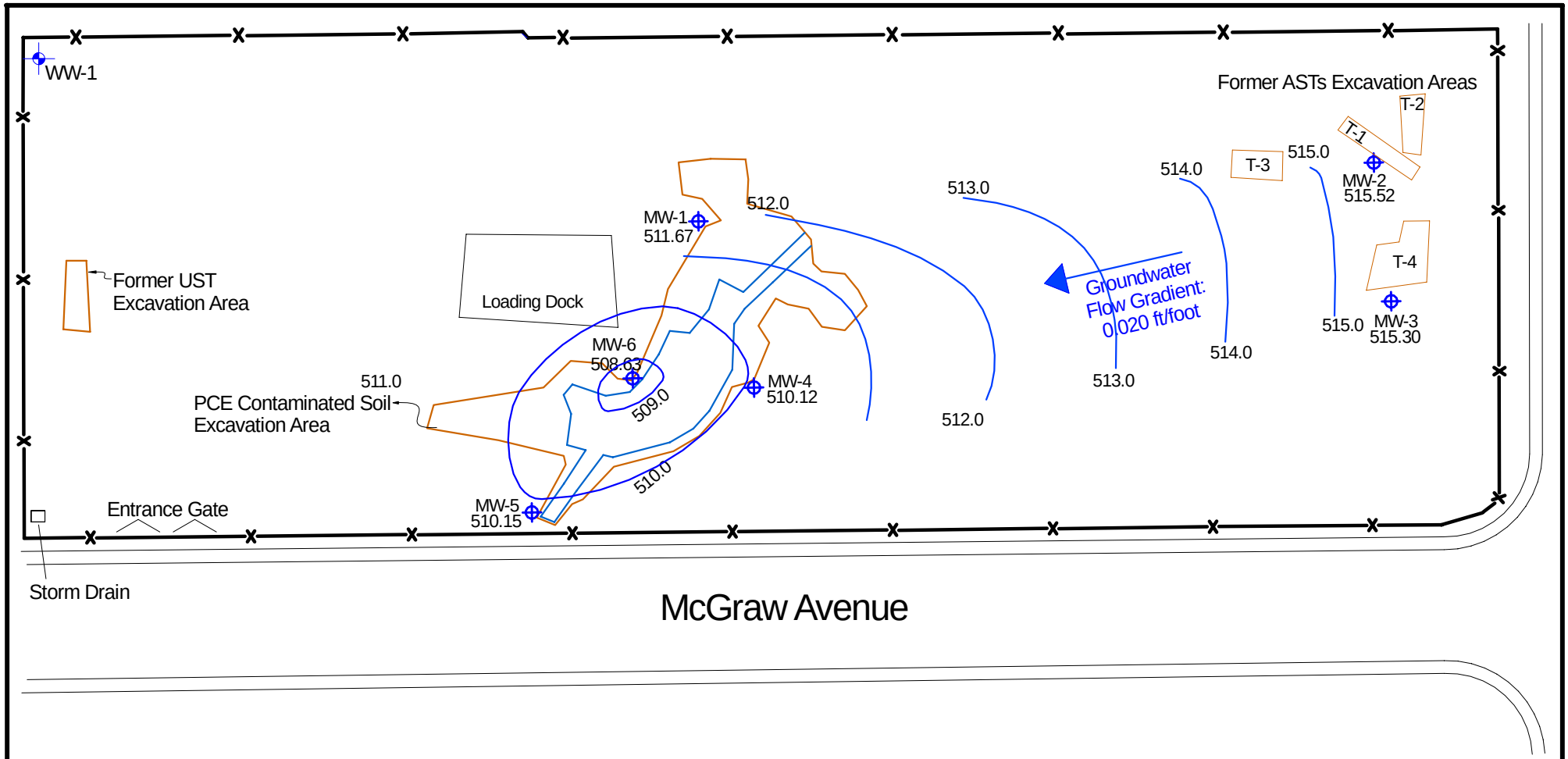
Environmental Investigation Services, Inc.
170 Knowles Drive, Suite 212, Los Gatos, California 95032
Phone: (408) 871-1470 Fax: (408) 871-1520

Project Number 717-4

June 03, 2008

Figure 5

Confirmation Sample Locations
461 McGraw Avenue
Livermore, California



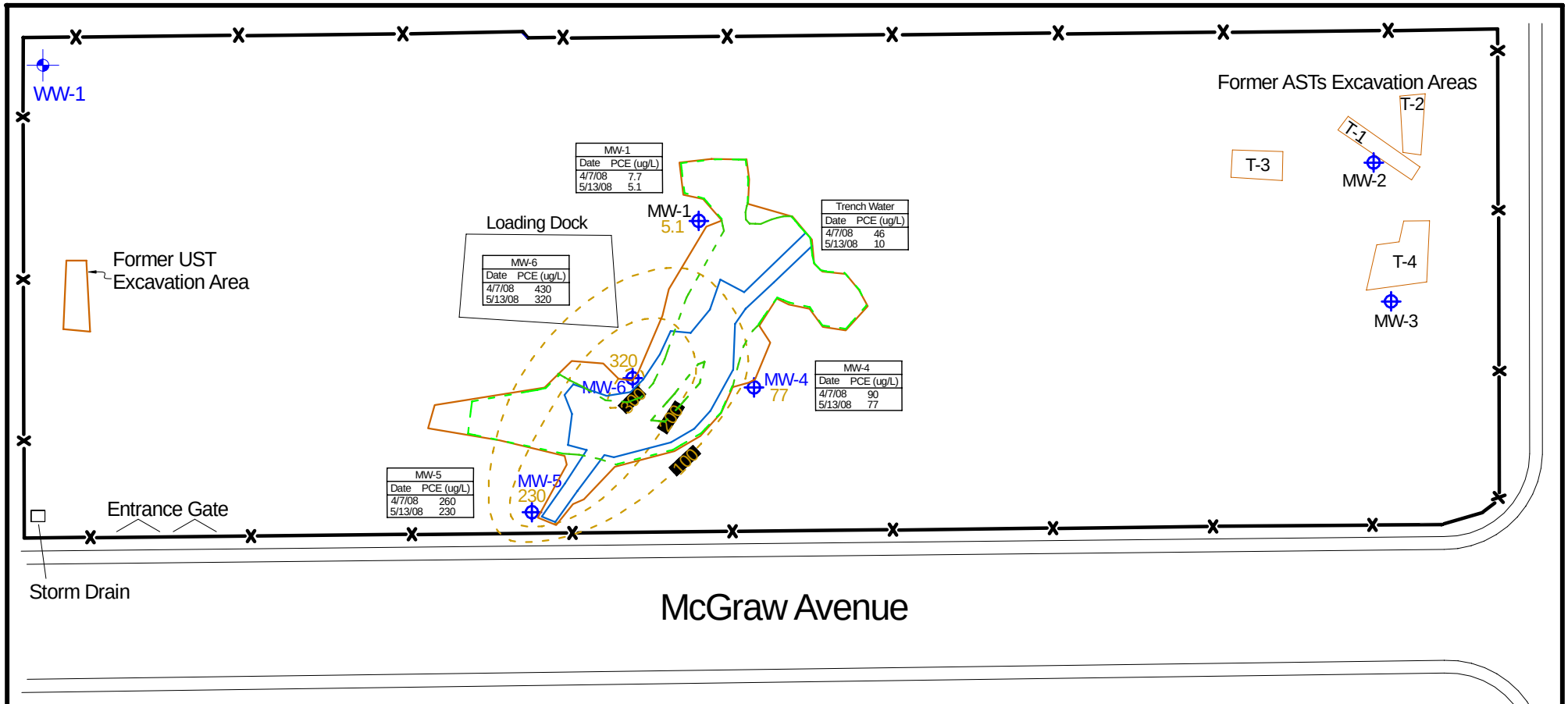
Environmental Investigation Services, Inc.
170 Knowles Drive, Suite 212, Los Gatos, California 95032
Phone: (408) 871-1470 Fax: (408) 871-1520

Project Number 717-4

June 03, 2008

Figure 6

Groundwater Elevation
Contour Map (05/13/2008)
461 McGraw Avenue
Livermore, California



N

Scale:
1" = 60'

0 60

LEGEND

- PCE Contaminated Soil Excavation Area
- Groundwater Capture Trench Excavation Area
- Original Excavation Area
- MW-3 Monitoring Well Location
- PCE Concentration Contours (ug/L) dashed where infered
- 170 PCE Concentration (µg/L)
- WW-1 Water Supply Well

Environmental Investigation Services, Inc.
170 Knowles Drive, Suite 212, Los Gatos, California 95032
Phone: (408) 871-1470 Fax: (408) 871-1520

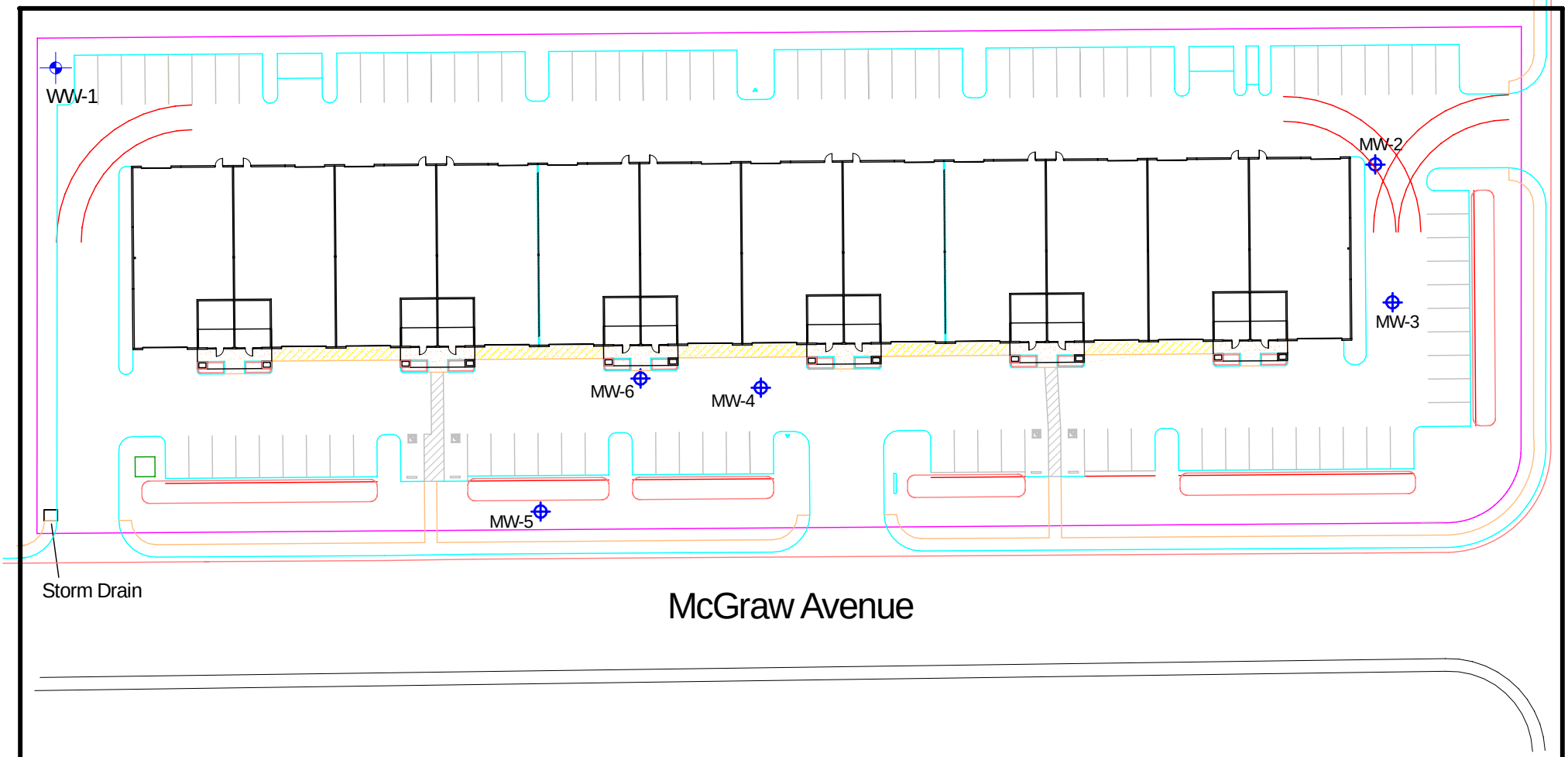
Project Number 717-4

June 03, 2008

Figure 7

PCE Concentrations and Contour Map
461 McGraw Avenue
Livermore, California

Environmental Investigation Services, Inc. 170 Knowles Drive, Suite 212, Los Gatos, California 95032 Phone: (408) 871-1470 Fax: (408) 871-1520	Project Number 717-4 June 03, 2008	Figure 8 — Well Survey Map 461 McGraw Avenue Livermore, California



N

Scale:
1" = 60'

0 60

LEGEND

MW-3 Monitoring Well Location

WW-1 Water Supply Well

Environmental Investigation Services, Inc. 170 Knowles Drive, Suite 212, Los Gatos, California 95032 Phone: (408) 871-1470 Fax: (408) 871-1520	Project Number 717-4 June 03, 2008	Figure 9	Building Plan with Monitoring Wells 461 McGraw Avenue Livermore, California

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

Environmental Investigation Servi 170 Knowles Drive, Suite 212 Los Gatos, CA 95032	Client Project ID: #717-4; Cal Mac Transportation, 461 McGraw Ave	Date Sampled: 04/30/08
		Date Received: 04/30/08
	Client Contact: Peter Littman	Date Reported: 05/05/08
	Client P.O.:	Date Completed: 05/02/08

WorkOrder: 0804759

May 05, 2008

Dear Peter:

Enclosed within are:

1) The results of the **17** analyzed samples from your project: **#717-4; Cal Mac Transportation, 461**
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.

OBU4107

1/2

McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD
PITTSBURG, CA 94565-1701
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (877) 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) ☐

☐ Check if sample is effluent and "J" flag is required

Report To: Peter Littman Bill To: EIS

Company: Environmental Investigation Services
170 Los Gatos, California

E-Mail: plittman@sbcglobal.net

Tele: (408) 871-1471 Fax: (408) 871-1520

Project #: 717-4 Project Name: Cal Mac Transfer

Project Location: 461 McGlincy Avenue, Livermore, CA

Sampler Signature: Peter Littman

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 / 8021) / MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	MTBE / BTEX ONLY (EPA 602 / 8021)	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic Cl Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)	Lead (200.7 / 200.8 / 6010 / 6020)	Other: EPA 8260 PCE ONLY	Comments
EXB-7	Bottom	4/30/08	9:40	1	SS		X				X																				X	X	
EXSW-13	Sidewall	"	9:45	1	SS		X				X																				X	X	
EXSW-14	"	"	9:50	1	SS		X				X																				X	X	
EXSW-15	"	"	9:55	1	SS		X				X																				X	X	
EXB-8	Bottom	"	10:00	1	SS		X				X																				X	X	
EXB-9	"	"	10:10	1	SS		X				X																				X	X	
EXSW-16	Sidewall	"	10:12	1	SS		X				X																				X	X	
EXB-10	Bottom	"	10:45	1	SS		X				X																				X	X	
EXSW-17	Sidewall	"	10:50	1	SS		X				X																				X	X	
EXSW-18	"	"	13:30	1	SS		X				X																				X	X	
EXB-11	Bottom	"	13:40	1	SS		X				X																				X	X	
EXSW-19	Sidewall	"	13:51	1	SS		X				X																				X	X	
EXB-12	Bottom	"	13:55	1	SS		X				X																				X	X	
EXB-13	"	"	14:00	1	SS		X				X																				X	X	

Relinquished By:	Date:	Time:	Received By:
P. Littman	4/30/08		
P. Littman	4/30/08	1600	
	4/30/08	1735	

ICE/t° 5.8 ✓ COMMENTS:
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

	VOAS	O&G	METALS	OTHER
PRESERVATION			pH<2	

2/2

McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD
PITTSBURG, CA 94565-1701
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (877) 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) ☐

☐ Check if sample is effluent and "J" flag is required

Report To: Peter Littman Bill To: EIS

Company: Environmental Investigation Services

170 Knowles drive Los Gatos CA

E-Mail: PLittman@EISI.net

Tele: (408) 871-1470 Fax: (408) 871-1520

Project #: 717-4 Project Name: Cal Mac Transfer

Project Location: 461 McGraw Av. Livermore, CA

Sampler Signature: Peter Lm

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
EXB-14	Bottom	4/30/08	15:00	1	SS		X				X			
EXB-15	"	"	15:25	1	SS		X				X			
OXSW-20		4/30	20		OS	X					X			

Analysis Request

BTEX & TPH as Gas (602 / 8021 / 8015) / MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	MTBE / BTEX ONLY (EPA 602 / 8021)	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic Cl Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)	Lead (200.7 / 200.8 / 6010 / 6020)

Other: EPA 8260 PCE only

Comments: Filter Samples for Metals analysis: Yes / No

X		
X		
(X)		extra sample added 5/1/08

Relinquished By:	Date:	Time:	Received By:
Peter Lm	4/30/08		
Peter Lm	4/30/08	1602	
	4/30/08	1735	

ICE/t° 5-8

COMMENTS:

GOOD CONDITION ✓

HEAD SPACE ABSENT

DECHLORINATED IN LAB

APPROPRIATE CONTAINERS ✓

PRESERVED IN LAB

	VOAS	O&G	METALS	OTHER
PRESERVATION			pH<2	

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0804759 **ClientCode: EISI**

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

Report to:
Peter Littman
Environmental Investigation Services,
170 Knowles Drive, Suite 212
Los Gatos, CA 95032

(408) 871-1470 FAX (408) 871-1520

Email: plittman@eis1.net, katie@eis1.net, pan
cc:
PO:
ProjectNo: #717-4; Cal Mac Transportation, 461 McGraw Ave

Bill to:
Barbara
Environmental Investigation Services
170 Knowles Drive, Suite 212
Los Gatos, CA 95032

barbara@eis1.net

Requested TAT: 5 days

Date Received: **04/30/2008**
Date Printed: **05/01/2008**

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
0804759-001	EXB-7	Soil	4/30/2008 9:40	☐	A											
0804759-002	EXSW-13	Soil	4/30/2008 9:45	☐	A											
0804759-003	EXSW-14	Soil	4/30/2008 9:50	☐	A											
0804759-004	EXSW-15	Soil	4/30/2008 9:55	☐	A											
0804759-005	EXB-8	Soil	4/30/2008 10:00	☐	A											
0804759-006	EXB-9	Soil	4/30/2008 10:10	☐	A											
0804759-007	EXSW-16	Soil	4/30/2008 10:12	☐	A											
0804759-008	EXB-10	Soil	4/30/2008 10:45	☐	A	A										
0804759-009	EXSW-17	Soil	4/30/2008 10:50	☐	A											
0804759-010	EXSW-18	Soil	4/30/2008 13:30	☐	A											
0804759-011	EXB-11	Soil	4/30/2008 13:40	☐	A											
0804759-012	EXSW-19	Soil	4/30/2008 13:51	☐	A											
0804759-013	EXB-12	Soil	4/30/2008 13:55	☐	A											
0804759-014	EXB-13	Soil	4/30/2008 14:00	☐	A											

Test Legend:

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

Prepared by: Ana Venegas

Comments: Sample EXSW-20 added to c.o.c 5/1/08

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

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0804759 **ClientCode: EISI**

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

Report to:
Peter Littman
Environmental Investigation Services,
170 Knowles Drive, Suite 212
Los Gatos, CA 95032

(408) 871-1470 FAX (408) 871-1520

Email: plittman@eis1.net, katie@eis1.net, pan
cc:
PO:
ProjectNo: #717-4; Cal Mac Transportation, 461 McGraw Ave

Bill to:
Barbara
Environmental Investigation Services
170 Knowles Drive, Suite 212
Los Gatos, CA 95032

barbara@eis1.net

Requested TAT: 5 days

Date Received: **04/30/2008**
Date Printed: **05/01/2008**

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
0804759-015	EXB-14	Soil	4/30/2008 15:00	☐	A											
0804759-016	EXB-15	Soil	4/30/2008 15:25	☐	A											
0804759-017	EXSW-20	Soil	4/30/2008 14:05	☐	A											

Test Legend:

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

Prepared by: Ana Venegas

Comments: Sample EXSW-20 added to c.o.c 5/1/08

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

McCampbell Analytical, Inc.
"When Quality Counts"

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

Sample Receipt Checklist

Client Name: **Environmental Investigation Services, Inc.** Date and Time Received: **04/30/08 7:09:34 PM**

Project Name: **#717-4; Cal Mac Transportation, 461 McGraw Ave** Checklist completed and reviewed by: Ana Venegas

WorkOrder N°: **0804759** 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: 5.8°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	No VOA vials submitted ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
TTLC Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑

Client contacted: Date contacted: Contacted by:

Comments:

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

Environmental Investigation Services, In	Client Project ID: #717-4; Cal Mac Transportation, 461 McGraw Ave	Date Sampled: 04/30/08
170 Knowles Drive, Suite 212		Date Received: 04/30/08
Los Gatos, CA 95032	Client Contact: Peter Littman	Date Extracted: 04/30/08-05/01/08
	Client P.O.:	Date Analyzed 05/01/08-05/02/08

Tetrachloroethene by P&T and GC/MS*

Extraction method SW5030B Analytical methods SW8260B Work Order: 0804759

Lab ID	Client ID	Matrix	Tetrachloroethene	DF	% SS
001A	EXB-7	S	0.0059	1	103
002A	EXSW-13	S	0.011	1	99
003A	EXSW-14	S	0.011	1	100
004A	EXSW-15	S	0.049	1	97
005A	EXB-8	S	ND	1	97
006A	EXB-9	S	0.018	1	100
007A	EXSW-16	S	0.014	1	98
008A	EXB-10	S	ND	1	96
009A	EXSW-17	S	ND	1	97
010A	EXSW-18	S	ND	1	96
011A	EXB-11	S	ND	1	95
012A	EXSW-19	S	ND	1	95
013A	EXB-12	S	ND	1	91
014A	EXB-13	S	ND	1	92
015A	EXB-14	S	0.012	1	90
016A	EXB-15	S	0.0064	1	87

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA
	S	0.005	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 coelutes with another peak; &) low surrogate due to matrix interference.

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 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

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

Environmental Investigation Services, In 170 Knowles Drive, Suite 212 Los Gatos, CA 95032	Client Project ID: #717-4; Cal Mac Transportation, 461 McGraw Ave	Date Sampled: 04/30/08
		Date Received: 04/30/08
	Client Contact: Peter Littman	Date Extracted: 04/30/08-05/01/08
	Client P.O.:	Date Analyzed 05/01/08-05/02/08

Tetrachloroethene by P&T and GC/MS*

Extraction method SW5030B Analytical methods SW8260B Work Order: 0804759

Lab ID	Client ID	Matrix	Tetrachloroethene	DF	% SS
017A	EXSW-20	S	ND	1	91

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	NA	NA
	S	0.005	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 coelutes with another peak; &) low surrogate due to matrix interference.

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 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

McCampbell Analytical, Inc.
"When Quality Counts"

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

QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder: 0804759

EPA Method SW8260B	Extraction SW5030B	BatchID: 35308	Spiked Sample ID: 0804759-009a

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	106	108	1.83	107	112	4.13	60 - 130	30	60 - 130	30
Benzene	ND	0.050	109	107	1.19	114	115	0.966	60 - 130	30	60 - 130	30
t-Butyl alcohol (TBA)	ND	0.25	107	108	0.832	109	118	7.29	60 - 130	30	60 - 130	30
Chlorobenzene	ND	0.050	102	100	1.56	106	106	0	60 - 130	30	60 - 130	30
1,2-Dibromoethane (EDB)	ND	0.050	106	107	0.0462	105	110	4.36	60 - 130	30	60 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	0.050	117	117	0	119	123	3.00	60 - 130	30	60 - 130	30
Diisopropyl ether (DIPE)	ND	0.050	100	101	0.626	102	105	3.06	60 - 130	30	60 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	0.050	109	109	0	110	114	3.50	60 - 130	30	60 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	117	117	0	118	122	3.47	60 - 130	30	60 - 130	30
Toluene	ND	0.050	93.1	90.1	3.20	96	95.4	0.595	60 - 130	30	60 - 130	30
Trichloroethene	ND	0.050	95.1	94.6	0.532	101	101	0	60 - 130	30	60 - 130	30
%SS1:	97	0.050	102	102	0	104	103	1.26	70 - 130	30	70 - 130	30
%SS2:	101	0.050	100	100	0	100	99	0.472	70 - 130	30	70 - 130	30
%SS3:	105	0.050	95	95	0	93	93	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 35308 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0804759-001A	04/30/08 9:40 AM	04/30/08	05/01/08 3:05 PM	0804759-002A	04/30/08 9:45 AM	04/30/08	05/01/08 3:43 PM
0804759-003A	04/30/08 9:50 AM	04/30/08	05/01/08 4:22 PM	0804759-004A	04/30/08 9:55 AM	04/30/08	05/01/08 5:00 PM
0804759-005A	04/30/08 10:00 AM	04/30/08	05/01/08 5:40 PM	0804759-006A	04/30/08 10:10 AM	04/30/08	05/01/08 6:18 PM
0804759-007A	04/30/08 10:12 AM	04/30/08	05/01/08 6:56 PM	0804759-008A	04/30/08 10:45 AM	04/30/08	05/01/08 7:34 PM
0804759-009A	04/30/08 10:50 AM	04/30/08	05/01/08 9:29 PM	0804759-010A	04/30/08 1:30 PM	04/30/08	05/01/08 10:08 PM
0804759-011A	04/30/08 1:40 PM	04/30/08	05/01/08 10:46 PM	0804759-012A	04/30/08 1:51 PM	04/30/08	05/01/08 11:24 PM
0804759-013A	04/30/08 1:55 PM	04/30/08	05/02/08 12:03 AM	0804759-014A	04/30/08 2:00 PM	04/30/08	05/02/08 12:41 AM
0804759-015A	04/30/08 3:00 PM	04/30/08	05/02/08 1:19 AM	0804759-016A	04/30/08 3:25 PM	04/30/08	05/02/08 1:56 AM
0804759-017A	04/30/08 2:05 PM	05/01/08	05/02/08 2:34 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

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

Environmental Investigation Servi	Client Project ID: #717-4; Call Mac Trans.	Date Sampled: 05/02/08
170 Knowles Drive, Suite 212		Date Received: 05/02/08
Los Gatos, CA 95032	Client Contact: Peter Littman	Date Reported: 05/08/08
	Client P.O.:	Date Completed: 05/06/08

WorkOrder: 0805074

May 08, 2008

Dear Peter:

Enclosed within are:

1) The results of the **7** analyzed samples from your project: **#717-4; Call Mac Trans.,**
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.

0805074

McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD
PITTSBURG, CA 94565-1701
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (877) 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) ☐

☐ Check if sample is effluent and "J" flag is required

Report To: Peter Littman Bill To: EIS
Company: Environmental Investigation Services
170 Knowles Drive Suite 212
Los Gatos, CA 95060 E-Mail: plittman@eis1.net
Tele: (408) 871 1470 Fax: (408) 871 1520
Project #: 717-4 Project Name: Cal Mac Trans.
Project Location: 461 McGraw Ave Livermore CA
Sampler Signature: [signature]

Analysis Request columns: BTEX & TPH as Gas (602 / 8021 + 8015) / MTBE; TPH as Diesel (8015); Total Petroleum Oil & Grease (1664 / 5520 E/B&F); Total Petroleum Hydrocarbons (418.1); EPA 502.2 / 601 / 8010 / 8021 (HVOCs); MTBE / BTEX ONLY (EPA 602 / 8021); EPA 505/ 608 / 8081 (Cl Pesticides); EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners; EPA 507 / 8141 (NP Pesticides); EPA 515 / 8151 (Acidic Cl Herbicides); EPA 524.2 / 624 / (8260) (VOCs) [circled]; EPA 525.2 / 625 / 8270 (SVOCs); EPA 8270 SIM / 8310 (PAHs / PNAs); CAM 17 Metals (200.7 / 200.8 / 6010 / 6020); LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020); Lead (200.7 / 200.8 / 6010 / 6020)

Other: EAS

Comments: Filter Samples for Metals analysis: Yes / No

SAMPLE ID	LOCATION/ Field Point Name	Date	Time	# Containers	Type Containers	Water	Soil	Air	Sludge	Other	ICE	HCL	HNO_3	Other	EPA 8260 (VOCs)	Other
SPN-1		05/02/08	1248	1	SS		X				X				X	X
SPN-2		↓	1251	↓	↓		X				X				X	X
SPN-3		↓	1322	↓	↓		X				X				X	X
SPN-4		↓	1325	↓	↓		X				X				X	X
SPS-1		↓	1351	↓	↓		X				X				X	X
SPS-2		↓	1353	↓	↓		X				X				X	X
SPS-3		↓	1355	↓	↓		X				X				X	X

Relinquished By:	Date:	Time:	Received By:
[signature] Emlyn Stos	5/02/08	1320	[signature]
[signature]	5/2/08	1856	[signature]

ICE/t° 1.8°C
GOOD CONDITION ✓
HEAD SPACE ABSENT NA
DECHLORINATED IN LAB NA
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB NA

COMMENTS:

PRESERVATION VOAS O&G METALS OTHER
pH<2

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0805074 **ClientCode: EISI**

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

Report to:
Peter Littman
Environmental Investigation Services,
170 Knowles Drive, Suite 212
Los Gatos, CA 95032
(408) 871-1470 FAX (408) 871-1520

Email: plittman@eis1.net, katie@eis1.net, pan
cc:
PO:
ProjectNo: #717-4; Call Mac Trans.

Bill to:
Barbara
Environmental Investigation Services
170 Knowles Drive, Suite 212
Los Gatos, CA 95032
barbara@eis1.net

Requested TAT: 5 days

Date Received: **05/02/2008**
Date Printed: **05/02/2008**

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
0805074-001	SPN-1	Soil	5/2/2008 12:48	☐	A	A										
0805074-002	SPN-2	Soil	5/2/2008 12:51	☐	A											
0805074-003	SPN-3	Soil	5/2/2008 13:22	☐	A											
0805074-004	SPN-4	Soil	5/2/2008 13:25	☐	A											
0805074-005	SPS-1	Soil	5/2/2008 13:51	☐	A											
0805074-006	SPS-2	Soil	5/2/2008 13:53	☐	A											
0805074-007	SPS-3	Soil	5/2/2008 13:55	☐	A											

Test Legend:

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

Prepared by: Samantha Arbuckle

Comments:

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

McCampbell Analytical, Inc.
"When Quality Counts"

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

Sample Receipt Checklist

Client Name: **Environmental Investigation Services, Inc.** Date and Time Received: **5/2/2008 7:19:27 PM**

Project Name: **#717-4; Call Mac Trans.** Checklist completed and reviewed by: Samantha Arbuckle

WorkOrder N°: **0805074** 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: 1.8°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	No VOA vials submitted ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
TTLC Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑

Client contacted: Date contacted: Contacted by:

Comments:

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

Environmental Investigation Services, In	Client Project ID: #717-4; Call Mac Trans.	Date Sampled: 05/02/08
		Date Received: 05/02/08
170 Knowles Drive, Suite 212	Client Contact: Peter Littman	Date Extracted: 05/02/08
Los Gatos, CA 95032	Client P.O.:	Date Analyzed 05/03/08

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0805074

Lab ID	0805074-001A
Client ID	SPN-1
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	tert-Amyl methyl ether (TAME)	ND	1.0	0.005
Benzene	ND	1.0	0.005	Bromobenzene	ND	1.0	0.005
Bromochloromethane	ND	1.0	0.005	Bromodichloromethane	ND	1.0	0.005
Bromoform	ND	1.0	0.005	Bromomethane	ND	1.0	0.005
2-Butanone (MEK)	ND	1.0	0.02	t-Butyl alcohol (TBA)	ND	1.0	0.05
n-Butyl benzene	ND	1.0	0.005	sec-Butyl benzene	ND	1.0	0.005
tert-Butyl benzene	ND	1.0	0.005	Carbon Disulfide	ND	1.0	0.005
Carbon Tetrachloride	ND	1.0	0.005	Chlorobenzene	ND	1.0	0.005
Chloroethane	ND	1.0	0.005	Chloroform	ND	1.0	0.005
Chloromethane	ND	1.0	0.005	2-Chlorotoluene	ND	1.0	0.005
4-Chlorotoluene	ND	1.0	0.005	Dibromochloromethane	ND	1.0	0.005
1,2-Dibromo-3-chloropropane	ND	1.0	0.004	1,2-Dibromoethane (EDB)	ND	1.0	0.004
Dibromomethane	ND	1.0	0.005	1,2-Dichlorobenzene	ND	1.0	0.005
1,3-Dichlorobenzene	ND	1.0	0.005	1,4-Dichlorobenzene	ND	1.0	0.005
Dichlorodifluoromethane	ND	1.0	0.005	1,1-Dichloroethane	ND	1.0	0.005
1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004	1,1-Dichloroethene	ND	1.0	0.005
cis-1,2-Dichloroethene	ND	1.0	0.005	trans-1,2-Dichloroethene	ND	1.0	0.005
1,2-Dichloropropane	ND	1.0	0.005	1,3-Dichloropropane	ND	1.0	0.005
2,2-Dichloropropane	ND	1.0	0.005	1,1-Dichloropropene	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Diisopropyl ether (DIPE)	ND	1.0	0.005	Ethylbenzene	ND	1.0	0.005
Ethyl tert-butyl ether (ETBE)	ND	1.0	0.005	Freon 113	ND	1.0	0.1
Hexachlorobutadiene	ND	1.0	0.005	Hexachloroethane	ND	1.0	0.005
2-Hexanone	ND	1.0	0.005	Isopropylbenzene	ND	1.0	0.005
4-Isopropyl toluene	ND	1.0	0.005	Methyl-t-butyl ether (MTBE)	ND	1.0	0.005
Methylene chloride	ND	1.0	0.005	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.005
Naphthalene	ND	1.0	0.005	n-Propyl benzene	ND	1.0	0.005
Styrene	ND	1.0	0.005	1,1,1,2-Tetrachloroethane	ND	1.0	0.005
1,1,2,2-Tetrachloroethane	ND	1.0	0.005	Tetrachloroethene	ND	1.0	0.005
Toluene	ND	1.0	0.005	1,2,3-Trichlorobenzene	ND	1.0	0.005
1,2,4-Trichlorobenzene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	1,2,3-Trichloropropane	ND	1.0	0.005
1,2,4-Trimethylbenzene	ND	1.0	0.005	1,3,5-Trimethylbenzene	ND	1.0	0.005
Vinyl Chloride	ND	1.0	0.005	Xylenes	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	104	%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 coelutes with another peak; &) low surrogate due to matrix interference.

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 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.

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

Environmental Investigation Services, In	Client Project ID: #717-4; Call Mac Trans.	Date Sampled: 05/02/08
		Date Received: 05/02/08
170 Knowles Drive, Suite 212	Client Contact: Peter Littman	Date Extracted: 05/02/08
Los Gatos, CA 95032	Client P.O.:	Date Analyzed 05/05/08

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0805074

Lab ID	0805074-002A
Client ID	SPN-2
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	tert-Amyl methyl ether (TAME)	ND	1.0	0.005
Benzene	ND	1.0	0.005	Bromobenzene	ND	1.0	0.005
Bromochloromethane	ND	1.0	0.005	Bromodichloromethane	ND	1.0	0.005
Bromoform	ND	1.0	0.005	Bromomethane	ND	1.0	0.005
2-Butanone (MEK)	ND	1.0	0.02	t-Butyl alcohol (TBA)	ND	1.0	0.05
n-Butyl benzene	ND	1.0	0.005	sec-Butyl benzene	ND	1.0	0.005
tert-Butyl benzene	ND	1.0	0.005	Carbon Disulfide	ND	1.0	0.005
Carbon Tetrachloride	ND	1.0	0.005	Chlorobenzene	ND	1.0	0.005
Chloroethane	ND	1.0	0.005	Chloroform	ND	1.0	0.005
Chloromethane	ND	1.0	0.005	2-Chlorotoluene	ND	1.0	0.005
4-Chlorotoluene	ND	1.0	0.005	Dibromochloromethane	ND	1.0	0.005
1,2-Dibromo-3-chloropropane	ND	1.0	0.004	1,2-Dibromoethane (EDB)	ND	1.0	0.004
Dibromomethane	ND	1.0	0.005	1,2-Dichlorobenzene	ND	1.0	0.005
1,3-Dichlorobenzene	ND	1.0	0.005	1,4-Dichlorobenzene	ND	1.0	0.005
Dichlorodifluoromethane	ND	1.0	0.005	1,1-Dichloroethane	ND	1.0	0.005
1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004	1,1-Dichloroethene	ND	1.0	0.005
cis-1,2-Dichloroethene	ND	1.0	0.005	trans-1,2-Dichloroethene	ND	1.0	0.005
1,2-Dichloropropane	ND	1.0	0.005	1,3-Dichloropropane	ND	1.0	0.005
2,2-Dichloropropane	ND	1.0	0.005	1,1-Dichloropropene	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Diisopropyl ether (DIPE)	ND	1.0	0.005	Ethylbenzene	ND	1.0	0.005
Ethyl tert-butyl ether (ETBE)	ND	1.0	0.005	Freon 113	ND	1.0	0.1
Hexachlorobutadiene	ND	1.0	0.005	Hexachloroethane	ND	1.0	0.005
2-Hexanone	ND	1.0	0.005	Isopropylbenzene	ND	1.0	0.005
4-Isopropyl toluene	ND	1.0	0.005	Methyl-t-butyl ether (MTBE)	ND	1.0	0.005
Methylene chloride	ND	1.0	0.005	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.005
Naphthalene	ND	1.0	0.005	n-Propyl benzene	ND	1.0	0.005
Styrene	ND	1.0	0.005	1,1,1,2-Tetrachloroethane	ND	1.0	0.005
1,1,2,2-Tetrachloroethane	ND	1.0	0.005	Tetrachloroethene	ND	1.0	0.005
Toluene	ND	1.0	0.005	1,2,3-Trichlorobenzene	ND	1.0	0.005
1,2,4-Trichlorobenzene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	1,2,3-Trichloropropane	ND	1.0	0.005
1,2,4-Trimethylbenzene	ND	1.0	0.005	1,3,5-Trimethylbenzene	ND	1.0	0.005
Vinyl Chloride	ND	1.0	0.005	Xylenes	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	97	%SS2:	99
%SS3:	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 coelutes with another peak; &) low surrogate due to matrix interference.

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 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.

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

Environmental Investigation Services, In	Client Project ID: #717-4; Call Mac Trans.	Date Sampled: 05/02/08
		Date Received: 05/02/08
170 Knowles Drive, Suite 212	Client Contact: Peter Littman	Date Extracted: 05/02/08
Los Gatos, CA 95032	Client P.O.:	Date Analyzed 05/05/08

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0805074

Lab ID	0805074-003A
Client ID	SPN-3
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	tert-Amyl methyl ether (TAME)	ND	1.0	0.005
Benzene	ND	1.0	0.005	Bromobenzene	ND	1.0	0.005
Bromochloromethane	ND	1.0	0.005	Bromodichloromethane	ND	1.0	0.005
Bromoform	ND	1.0	0.005	Bromomethane	ND	1.0	0.005
2-Butanone (MEK)	ND	1.0	0.02	t-Butyl alcohol (TBA)	ND	1.0	0.05
n-Butyl benzene	ND	1.0	0.005	sec-Butyl benzene	ND	1.0	0.005
tert-Butyl benzene	ND	1.0	0.005	Carbon Disulfide	ND	1.0	0.005
Carbon Tetrachloride	ND	1.0	0.005	Chlorobenzene	ND	1.0	0.005
Chloroethane	ND	1.0	0.005	Chloroform	ND	1.0	0.005
Chloromethane	ND	1.0	0.005	2-Chlorotoluene	ND	1.0	0.005
4-Chlorotoluene	ND	1.0	0.005	Dibromochloromethane	ND	1.0	0.005
1,2-Dibromo-3-chloropropane	ND	1.0	0.004	1,2-Dibromoethane (EDB)	ND	1.0	0.004
Dibromomethane	ND	1.0	0.005	1,2-Dichlorobenzene	ND	1.0	0.005
1,3-Dichlorobenzene	ND	1.0	0.005	1,4-Dichlorobenzene	ND	1.0	0.005
Dichlorodifluoromethane	ND	1.0	0.005	1,1-Dichloroethane	ND	1.0	0.005
1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004	1,1-Dichloroethene	ND	1.0	0.005
cis-1,2-Dichloroethene	ND	1.0	0.005	trans-1,2-Dichloroethene	ND	1.0	0.005
1,2-Dichloropropane	ND	1.0	0.005	1,3-Dichloropropane	ND	1.0	0.005
2,2-Dichloropropane	ND	1.0	0.005	1,1-Dichloropropene	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Diisopropyl ether (DIPE)	ND	1.0	0.005	Ethylbenzene	ND	1.0	0.005
Ethyl tert-butyl ether (ETBE)	ND	1.0	0.005	Freon 113	ND	1.0	0.1
Hexachlorobutadiene	ND	1.0	0.005	Hexachloroethane	ND	1.0	0.005
2-Hexanone	ND	1.0	0.005	Isopropylbenzene	ND	1.0	0.005
4-Isopropyl toluene	ND	1.0	0.005	Methyl-t-butyl ether (MTBE)	ND	1.0	0.005
Methylene chloride	ND	1.0	0.005	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.005
Naphthalene	ND	1.0	0.005	n-Propyl benzene	ND	1.0	0.005
Styrene	ND	1.0	0.005	1,1,1,2-Tetrachloroethane	ND	1.0	0.005
1,1,2,2-Tetrachloroethane	ND	1.0	0.005	Tetrachloroethene	ND	1.0	0.005
Toluene	ND	1.0	0.005	1,2,3-Trichlorobenzene	ND	1.0	0.005
1,2,4-Trichlorobenzene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	1,2,3-Trichloropropane	ND	1.0	0.005
1,2,4-Trimethylbenzene	ND	1.0	0.005	1,3,5-Trimethylbenzene	ND	1.0	0.005
Vinyl Chloride	ND	1.0	0.005	Xylenes	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	97	%SS2:	99
%SS3:	112		

Comments:

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

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

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

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 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.

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

Environmental Investigation Services, In	Client Project ID: #717-4; Call Mac Trans.	Date Sampled: 05/02/08
		Date Received: 05/02/08
170 Knowles Drive, Suite 212	Client Contact: Peter Littman	Date Extracted: 05/02/08
Los Gatos, CA 95032	Client P.O.:	Date Analyzed 05/05/08

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0805074

Lab ID	0805074-004A
Client ID	SPN-4
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	tert-Amyl methyl ether (TAME)	ND	1.0	0.005
Benzene	ND	1.0	0.005	Bromobenzene	ND	1.0	0.005
Bromochloromethane	ND	1.0	0.005	Bromodichloromethane	ND	1.0	0.005
Bromoform	ND	1.0	0.005	Bromomethane	ND	1.0	0.005
2-Butanone (MEK)	ND	1.0	0.02	t-Butyl alcohol (TBA)	ND	1.0	0.05
n-Butyl benzene	ND	1.0	0.005	sec-Butyl benzene	ND	1.0	0.005
tert-Butyl benzene	ND	1.0	0.005	Carbon Disulfide	ND	1.0	0.005
Carbon Tetrachloride	ND	1.0	0.005	Chlorobenzene	ND	1.0	0.005
Chloroethane	ND	1.0	0.005	Chloroform	ND	1.0	0.005
Chloromethane	ND	1.0	0.005	2-Chlorotoluene	ND	1.0	0.005
4-Chlorotoluene	ND	1.0	0.005	Dibromochloromethane	ND	1.0	0.005
1,2-Dibromo-3-chloropropane	ND	1.0	0.004	1,2-Dibromoethane (EDB)	ND	1.0	0.004
Dibromomethane	ND	1.0	0.005	1,2-Dichlorobenzene	ND	1.0	0.005
1,3-Dichlorobenzene	ND	1.0	0.005	1,4-Dichlorobenzene	ND	1.0	0.005
Dichlorodifluoromethane	ND	1.0	0.005	1,1-Dichloroethane	ND	1.0	0.005
1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004	1,1-Dichloroethene	ND	1.0	0.005
cis-1,2-Dichloroethene	ND	1.0	0.005	trans-1,2-Dichloroethene	ND	1.0	0.005
1,2-Dichloropropane	ND	1.0	0.005	1,3-Dichloropropane	ND	1.0	0.005
2,2-Dichloropropane	ND	1.0	0.005	1,1-Dichloropropene	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Diisopropyl ether (DIPE)	ND	1.0	0.005	Ethylbenzene	ND	1.0	0.005
Ethyl tert-butyl ether (ETBE)	ND	1.0	0.005	Freon 113	ND	1.0	0.1
Hexachlorobutadiene	ND	1.0	0.005	Hexachloroethane	ND	1.0	0.005
2-Hexanone	ND	1.0	0.005	Isopropylbenzene	ND	1.0	0.005
4-Isopropyl toluene	ND	1.0	0.005	Methyl-t-butyl ether (MTBE)	ND	1.0	0.005
Methylene chloride	ND	1.0	0.005	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.005
Naphthalene	ND	1.0	0.005	n-Propyl benzene	ND	1.0	0.005
Styrene	ND	1.0	0.005	1,1,1,2-Tetrachloroethane	ND	1.0	0.005
1,1,2,2-Tetrachloroethane	ND	1.0	0.005	Tetrachloroethene	ND	1.0	0.005
Toluene	ND	1.0	0.005	1,2,3-Trichlorobenzene	ND	1.0	0.005
1,2,4-Trichlorobenzene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	1,2,3-Trichloropropane	ND	1.0	0.005
1,2,4-Trimethylbenzene	ND	1.0	0.005	1,3,5-Trimethylbenzene	ND	1.0	0.005
Vinyl Chloride	ND	1.0	0.005	Xylenes	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	99	%SS2:	100
%SS3:	107		

Comments:

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

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

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

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 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.

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

Environmental Investigation Services, In	Client Project ID: #717-4; Call Mac Trans.	Date Sampled: 05/02/08
		Date Received: 05/02/08
170 Knowles Drive, Suite 212	Client Contact: Peter Littman	Date Extracted: 05/02/08
Los Gatos, CA 95032	Client P.O.:	Date Analyzed 05/05/08

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0805074

Lab ID	0805074-005A
Client ID	SPS-1
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	0.05	tert-Amyl methyl ether (TAME)	ND	1.0	0.005
Benzene	ND	1.0	0.005	Bromobenzene	ND	1.0	0.005
Bromochloromethane	ND	1.0	0.005	Bromodichloromethane	ND	1.0	0.005
Bromoform	ND	1.0	0.005	Bromomethane	ND	1.0	0.005
2-Butanone (MEK)	ND	1.0	0.02	t-Butyl alcohol (TBA)	ND	1.0	0.05
n-Butyl benzene	ND	1.0	0.005	sec-Butyl benzene	ND	1.0	0.005
tert-Butyl benzene	ND	1.0	0.005	Carbon Disulfide	ND	1.0	0.005
Carbon Tetrachloride	ND	1.0	0.005	Chlorobenzene	ND	1.0	0.005
Chloroethane	ND	1.0	0.005	Chloroform	ND	1.0	0.005
Chloromethane	ND	1.0	0.005	2-Chlorotoluene	ND	1.0	0.005
4-Chlorotoluene	ND	1.0	0.005	Dibromochloromethane	ND	1.0	0.005
1,2-Dibromo-3-chloropropane	ND	1.0	0.004	1,2-Dibromoethane (EDB)	ND	1.0	0.004
Dibromomethane	ND	1.0	0.005	1,2-Dichlorobenzene	ND	1.0	0.005
1,3-Dichlorobenzene	ND	1.0	0.005	1,4-Dichlorobenzene	ND	1.0	0.005
Dichlorodifluoromethane	ND	1.0	0.005	1,1-Dichloroethane	ND	1.0	0.005
1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004	1,1-Dichloroethene	ND	1.0	0.005
cis-1,2-Dichloroethene	ND	1.0	0.005	trans-1,2-Dichloroethene	ND	1.0	0.005
1,2-Dichloropropane	ND	1.0	0.005	1,3-Dichloropropane	ND	1.0	0.005
2,2-Dichloropropane	ND	1.0	0.005	1,1-Dichloropropene	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Diisopropyl ether (DIPE)	ND	1.0	0.005	Ethylbenzene	ND	1.0	0.005
Ethyl tert-butyl ether (ETBE)	ND	1.0	0.005	Freon 113	ND	1.0	0.1
Hexachlorobutadiene	ND	1.0	0.005	Hexachloroethane	ND	1.0	0.005
2-Hexanone	ND	1.0	0.005	Isopropylbenzene	ND	1.0	0.005
4-Isopropyl toluene	ND	1.0	0.005	Methyl-t-butyl ether (MTBE)	ND	1.0	0.005
Methylene chloride	ND	1.0	0.005	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.005
Naphthalene	ND	1.0	0.005	n-Propyl benzene	ND	1.0	0.005
Styrene	ND	1.0	0.005	1,1,1,2-Tetrachloroethane	ND	1.0	0.005
1,1,2,2-Tetrachloroethane	ND	1.0	0.005	Tetrachloroethene	ND	1.0	0.005
Toluene	ND	1.0	0.005	1,2,3-Trichlorobenzene	ND	1.0	0.005
1,2,4-Trichlorobenzene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	1,2,3-Trichloropropane	ND	1.0	0.005
1,2,4-Trimethylbenzene	ND	1.0	0.005	1,3,5-Trimethylbenzene	ND	1.0	0.005
Vinyl Chloride	ND	1.0	0.005	Xylenes	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	95	%SS2:	97
%SS3:	112		

Comments:

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

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

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

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 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.

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

Environmental Investigation Services, In	Client Project ID: #717-4; Call Mac Trans.	Date Sampled: 05/02/08
		Date Received: 05/02/08
170 Knowles Drive, Suite 212	Client Contact: Peter Littman	Date Extracted: 05/02/08
Los Gatos, CA 95032	Client P.O.:	Date Analyzed 05/07/08

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0805074

Lab ID	0805074-006A
Client ID	SPS-2
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	0.57	1.0	0.05	tert-Amyl methyl ether (TAME)	ND	1.0	0.005
Benzene	ND	1.0	0.005	Bromobenzene	ND	1.0	0.005
Bromochloromethane	ND	1.0	0.005	Bromodichloromethane	ND	1.0	0.005
Bromoform	ND	1.0	0.005	Bromomethane	ND	1.0	0.005
2-Butanone (MEK)	ND	1.0	0.02	t-Butyl alcohol (TBA)	ND	1.0	0.05
n-Butyl benzene	ND	1.0	0.005	sec-Butyl benzene	ND	1.0	0.005
tert-Butyl benzene	ND	1.0	0.005	Carbon Disulfide	ND	1.0	0.005
Carbon Tetrachloride	ND	1.0	0.005	Chlorobenzene	ND	1.0	0.005
Chloroethane	ND	1.0	0.005	Chloroform	ND	1.0	0.005
Chloromethane	ND	1.0	0.005	2-Chlorotoluene	ND	1.0	0.005
4-Chlorotoluene	ND	1.0	0.005	Dibromochloromethane	ND	1.0	0.005
1,2-Dibromo-3-chloropropane	ND	1.0	0.004	1,2-Dibromoethane (EDB)	ND	1.0	0.004
Dibromomethane	ND	1.0	0.005	1,2-Dichlorobenzene	ND	1.0	0.005
1,3-Dichlorobenzene	ND	1.0	0.005	1,4-Dichlorobenzene	ND	1.0	0.005
Dichlorodifluoromethane	ND	1.0	0.005	1,1-Dichloroethane	ND	1.0	0.005
1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004	1,1-Dichloroethene	ND	1.0	0.005
cis-1,2-Dichloroethene	ND	1.0	0.005	trans-1,2-Dichloroethene	ND	1.0	0.005
1,2-Dichloropropane	ND	1.0	0.005	1,3-Dichloropropane	ND	1.0	0.005
2,2-Dichloropropane	ND	1.0	0.005	1,1-Dichloropropene	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Diisopropyl ether (DIPE)	ND	1.0	0.005	Ethylbenzene	ND	1.0	0.005
Ethyl tert-butyl ether (ETBE)	ND	1.0	0.005	Freon 113	ND	1.0	0.1
Hexachlorobutadiene	ND	1.0	0.005	Hexachloroethane	ND	1.0	0.005
2-Hexanone	ND	1.0	0.005	Isopropylbenzene	ND	1.0	0.005
4-Isopropyl toluene	ND	1.0	0.005	Methyl-t-butyl ether (MTBE)	ND	1.0	0.005
Methylene chloride	ND	1.0	0.005	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.005
Naphthalene	ND	1.0	0.005	n-Propyl benzene	ND	1.0	0.005
Styrene	ND	1.0	0.005	1,1,1,2-Tetrachloroethane	ND	1.0	0.005
1,1,2,2-Tetrachloroethane	ND	1.0	0.005	Tetrachloroethene	ND	1.0	0.005
Toluene	ND	1.0	0.005	1,2,3-Trichlorobenzene	ND	1.0	0.005
1,2,4-Trichlorobenzene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	1,2,3-Trichloropropane	ND	1.0	0.005
1,2,4-Trimethylbenzene	ND	1.0	0.005	1,3,5-Trimethylbenzene	ND	1.0	0.005
Vinyl Chloride	ND	1.0	0.005	Xylenes	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	93	%SS2:	103
%SS3:	108		

Comments:

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

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

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

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 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.

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

Environmental Investigation Services, In	Client Project ID: #717-4; Call Mac Trans.	Date Sampled: 05/02/08
		Date Received: 05/02/08
170 Knowles Drive, Suite 212	Client Contact: Peter Littman	Date Extracted: 05/02/08
Los Gatos, CA 95032	Client P.O.:	Date Analyzed 05/07/08

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0805074

Lab ID	0805074-007A
Client ID	SPS-3
Matrix	Soil

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	0.099	1.0	0.05	tert-Amyl methyl ether (TAME)	ND	1.0	0.005
Benzene	ND	1.0	0.005	Bromobenzene	ND	1.0	0.005
Bromochloromethane	ND	1.0	0.005	Bromodichloromethane	ND	1.0	0.005
Bromoform	ND	1.0	0.005	Bromomethane	ND	1.0	0.005
2-Butanone (MEK)	ND	1.0	0.02	t-Butyl alcohol (TBA)	ND	1.0	0.05
n-Butyl benzene	ND	1.0	0.005	sec-Butyl benzene	ND	1.0	0.005
tert-Butyl benzene	ND	1.0	0.005	Carbon Disulfide	ND	1.0	0.005
Carbon Tetrachloride	ND	1.0	0.005	Chlorobenzene	ND	1.0	0.005
Chloroethane	ND	1.0	0.005	Chloroform	ND	1.0	0.005
Chloromethane	ND	1.0	0.005	2-Chlorotoluene	ND	1.0	0.005
4-Chlorotoluene	ND	1.0	0.005	Dibromochloromethane	ND	1.0	0.005
1,2-Dibromo-3-chloropropane	ND	1.0	0.004	1,2-Dibromoethane (EDB)	ND	1.0	0.004
Dibromomethane	ND	1.0	0.005	1,2-Dichlorobenzene	ND	1.0	0.005
1,3-Dichlorobenzene	ND	1.0	0.005	1,4-Dichlorobenzene	ND	1.0	0.005
Dichlorodifluoromethane	ND	1.0	0.005	1,1-Dichloroethane	ND	1.0	0.005
1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.004	1,1-Dichloroethene	ND	1.0	0.005
cis-1,2-Dichloroethene	ND	1.0	0.005	trans-1,2-Dichloroethene	ND	1.0	0.005
1,2-Dichloropropane	ND	1.0	0.005	1,3-Dichloropropane	ND	1.0	0.005
2,2-Dichloropropane	ND	1.0	0.005	1,1-Dichloropropene	ND	1.0	0.005
cis-1,3-Dichloropropene	ND	1.0	0.005	trans-1,3-Dichloropropene	ND	1.0	0.005
Diisopropyl ether (DIPE)	ND	1.0	0.005	Ethylbenzene	ND	1.0	0.005
Ethyl tert-butyl ether (ETBE)	ND	1.0	0.005	Freon 113	ND	1.0	0.1
Hexachlorobutadiene	ND	1.0	0.005	Hexachloroethane	ND	1.0	0.005
2-Hexanone	ND	1.0	0.005	Isopropylbenzene	ND	1.0	0.005
4-Isopropyl toluene	ND	1.0	0.005	Methyl-t-butyl ether (MTBE)	ND	1.0	0.005
Methylene chloride	ND	1.0	0.005	4-Methyl-2-pentanone (MIBK)	ND	1.0	0.005
Naphthalene	ND	1.0	0.005	n-Propyl benzene	ND	1.0	0.005
Styrene	ND	1.0	0.005	1,1,1,2-Tetrachloroethane	ND	1.0	0.005
1,1,2,2-Tetrachloroethane	ND	1.0	0.005	Tetrachloroethene	ND	1.0	0.005
Toluene	ND	1.0	0.005	1,2,3-Trichlorobenzene	ND	1.0	0.005
1,2,4-Trichlorobenzene	ND	1.0	0.005	1,1,1-Trichloroethane	ND	1.0	0.005
1,1,2-Trichloroethane	ND	1.0	0.005	Trichloroethene	ND	1.0	0.005
Trichlorofluoromethane	ND	1.0	0.005	1,2,3-Trichloropropane	ND	1.0	0.005
1,2,4-Trimethylbenzene	ND	1.0	0.005	1,3,5-Trimethylbenzene	ND	1.0	0.005
Vinyl Chloride	ND	1.0	0.005	Xylenes	ND	1.0	0.005

Surrogate Recoveries (%)

%SS1:	91	%SS2:	102
%SS3:	111		

Comments:

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

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

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

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 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.

McCampbell Analytical, Inc.
"When Quality Counts"

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

QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Soil QC Matrix: Soil WorkOrder 0805074

EPA Method SW8260B	Extraction SW5030B	BatchID: 35321	Spiked Sample ID: 0805013-001A

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	mg/Kg	mg/Kg	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	0.050	105	106	1.40	102	103	1.04	60 - 130	30	60 - 130	30
Benzene	ND	0.050	109	110	0.655	103	103	0	60 - 130	30	60 - 130	30
t-Butyl alcohol (TBA)	ND	0.25	108	109	0.887	108	109	0.275	60 - 130	30	60 - 130	30
Chlorobenzene	ND	0.050	98.4	102	3.32	95.9	95.4	0.611	60 - 130	30	60 - 130	30
1,2-Dibromoethane (EDB)	ND	0.050	101	103	1.96	99.6	101	1.04	60 - 130	30	60 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	0.050	116	119	2.35	112	113	1.45	60 - 130	30	60 - 130	30
Diisopropyl ether (DIPE)	ND	0.050	98.9	100	1.31	95.8	95.6	0.270	60 - 130	30	60 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	0.050	108	108	0	103	105	1.86	60 - 130	30	60 - 130	30
Methyl-t-butyl ether (MTBE)	ND	0.050	115	116	1.02	111	113	1.56	60 - 130	30	60 - 130	30
Toluene	ND	0.050	89.8	91.9	2.23	86.5	87.2	0.801	60 - 130	30	60 - 130	30
Trichloroethene	ND	0.050	96.2	98.5	2.30	89.8	90.9	1.30	60 - 130	30	60 - 130	30
%SS1:	97	0.050	100	99	1.00	101	102	0.989	70 - 130	30	70 - 130	30
%SS2:	99	0.050	99	99	0	100	100	0	70 - 130	30	70 - 130	30
%SS3:	101	0.050	94	94	0	95	96	0.863	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 35321 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0805074-001A	05/02/08 12:48 PM	05/02/08	05/03/08 8:55 AM	0805074-002A	05/02/08 12:51 PM	05/02/08	05/05/08 2:35 PM
0805074-003A	05/02/08 1:22 PM	05/02/08	05/05/08 11:58 AM	0805074-004A	05/02/08 1:25 PM	05/02/08	05/05/08 3:18 PM
0805074-005A	05/02/08 1:51 PM	05/02/08	05/05/08 12:41 PM	0805074-006A	05/02/08 1:53 PM	05/02/08	05/07/08 5:19 AM
0805074-007A	05/02/08 1:55 PM	05/02/08	05/07/08 6:02 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

LIVERMORE
CALIFORNIA

March 5, 2008

Peter Littman
Environmental Investigation Services, Inc.
170 Knowles Dr. STE-212
Los Gatos, CA 95032

Subject: 2008-2009 Groundwater Discharge Permit

Dear Mr. Littman:

Thank you for submitting the Groundwater Discharge Permit Application for Environmental Investigation Services Inc. The City of Livermore has completed its review of your application and the following information has been enclosed:

1. Groundwater Discharge Permit Fee Statement
2. 2008-2009 Groundwater Discharge Permit
3. Self-Monitoring Sample Program (Attachment A-1)
4. Permit Conditions
5. Noncompliance/Accidental Discharge Notification
6. Glossary of Terms
7. Fact Sheet for Generators of Hazardous Waste
8. Groundwater Discharge Permit Application (copy)

This permit covers the discharge of groundwater from trenches related to the clean-up of the Call Mac Transportation site located at 461 McGraw Avenue only. All wastewater generated during sampling events must be discharged at the approved location. The current approved discharge location is the site sanitary sewer line via clean out. The use of City of Livermore sewer manholes and mains for groundwater disposal is strictly prohibited.

As you will notice from Attachment A-1, Environmental Investigation Services, Inc. must conduct a Self-Monitoring Sample Program whenever groundwater is discharged to the sanitary sewer. In order to ensure that Environmental Investigation Services, Inc. is properly invoiced for only the water discharged to the sanitary sewer, Environmental Investigation Services, Inc. must submit groundwater monitoring reports on a monthly basis. Reports are due on the 30th of each month for the preceding month. The reports shall indicate the volume of water discharged and all

relevant analytical results. Every report must be signed by an executive officer and include the following signatory statement:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, and accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Please note that the report due for the permit #1517G (08-09) is due no later than ***September 5, 2009****.*

If you have any questions, please contact me at my direct phone number listed below.

Sincerely,

Lynna Grijalva

Lynna Grijalva
Water Resources Coordinator – Source Control
Water Resources Division, Public Works Department
Direct Phone Number: (925) 960-8143
Fax Number: (925) 960-8105

LIVERMORE
CALIFORNIA

ATTACHMENT A-1 ~ SELF-MONITORING SAMPLE PROGRAM

The permittee, **Environmental Investigation Services, Inc.**, must perform the following Self-Monitoring Sample Program as a condition of the groundwater discharge permit. Samples shall be collected after appropriate treatment and prior to discharge to the sanitary sewer and shall be analyzed using EPA approved methods.

Sampling Locations:
All trenches that are sampled as part of the groundwater clean-up efforts must also be tested for the parameters listed below. All wastewater generated during sampling events must be discharged at approved locations. The current approved discharge location is the site sanitary sewer via clean out.

Treatment Measures
After groundwater is extracted from the subsurface, it must be treated to remove entrained contaminants prior to discharge or disposal of the extracted water. Actual treatment may include a process or a train of processes such as the use of carbon filtration systems tailored to remove total toxic organics.

Sampling Discharge Limits:

SAMPLE PARAMETERS	SAMPLE FREQUENCY	DISCHARGE LIMIT	UNITS
pH	PER EVENT	6.0 - 9.0	S.U.
ARSENIC	N/A	0.06	mg/L
CADMIUM	N/A	0.14	mg/L
CHROMIUM	N/A	0.62	mg/L
COPPER	N/A	1.00	mg/L
LEAD	N/A	0.20	mg/L
MERCURY	N/A	0.01	mg/L
NICKEL	N/A	0.61	mg/L
SILVER	N/A	0.20	mg/L
ZINC	N/A	3.00	mg/L
CYANIDE	N/A	0.04	mg/L
TTO*	PER EVENT	1.00	mg/L

From Sections 13.32.110 & 13.32.120 of the Livermore Municipal Code
* For a Definition of TTO see the Glossary of Terms

LIVERMORE
CALIFORNIA

Reporting Requirements:
All monitoring results shall be summarized in monthly reports submitted on the 30th of the month for the preceding month. Reports must include all monitoring analytical results and the total volume of all groundwater discharged to the sanitary sewer system during the permit period. A disposal fee (currently $6,750.00 per million gallons) will be assessed based on data provided in the monthly report. All reports must be signed by an executive officer and must contain the signatory statement:

"**I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, and accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations**."

Due date for the next annual monitoring report is: **at date of completion of groundwater discharge, or at 6 months from permit issue date, (which ever occurs first).**

Please submit reports to:

City of Livermore
Water Resources Division
101 W. Jack London Blvd.
Livermore, CA 94551
Attn: Lynna Grijalva

KEANTAN LABORATORIES
www.keantanlabs.com
Geotechnical Laboratory and Consulting services

May 28, 2008

Environmental Investigation Services, Inc
15466 Los Gatos Boulevard, Suite 109-062
Los Gatos, California 95032

Attn: Peter Littman

Subject: **Report/Laboratory Test Results**
Project Name: 461 McGraw Ave, Livermore
Project Number: 717-4
KTL Project No.: 07-370-004

To Peter Littman

Enclosed are results of the laboratory testing program conducted on samples from the above referenced project. The testing performed for this program was conducted in general accordance with testing procedures as follows:

TYPE OF TEST	TEST PROCEDURE
Moisture Content & Density	ASTM D 2937
Moisture Content	ASTM D 2216

Attached herewith is Summary of Laboratory Test Result (1), Invoice (1)

We appreciate the opportunity to provide testing services to Environmental Investigation Services. If you have any questions regarding the test results, please contact us.

Very truly yours,
Keantan Laboratories

Jonathan Khaw
Laboratory Manager

Encls.

SUMMERY OF LABORATORY TEST RESULT

For
461 McGraw Avenue, Livermore, CA

PROJECT NAME.: 461 McGraw Ave **KTL NO.:** 07-370-004

PROJECT NO.: 717-4 **CLIENT.:** EIS

DATE.: 5/28/2008 **SUMMARIZED BY.:** K. Tan

Boring NO.	SAMPLE NO. (%)	DEPTH (FT)	MOISTURE CONTENT (%)	DRY DENSITY (pcf)
SW-1	1	n/a	23.0	87.9
SW-2	2	n/a	21.9	76.8
SE-1	3	n/a	4.6	n/a
SE-2	4	n/a	3.5	n/a
SE-3	5	n/a	2.9	n/a
SE-4	6	n/a	4.1	n/a

KeanTan Laboratories

MOISTURE - DENSITY SHEET

ASTM D 2937/2216

PROJECT:	461 McGraw Ave, Livermore	TESTED BY:	jk	DATE:	
		COMPUTED BY:		DATE:	
PROJECT NUMBER:	07-370-004	CHECKED BY:		DATE:	

BORING NUMBER	SW-1	SW-2	SE-1	SE-2	SE-3	SE-4
SAMPLE TYPE	Shelby	Shelby	Shelby	Shelby	Shelby	Shelby
SAMPLE NUMBER	1	2	3	4	5	6
SAMPLE DEPTH (FT)	n/a	n/a	n/a	n/a	n/a	n/a
WET DENSITY (PCF)	108.08	93.62				
MOISTURE CONTENT (%)	23.02	21.90	4.61	3.51	2.86	4.09
DRY DENSITY (PCF)	87.86	76.80				
SOIL DESCRIPTION						
DENSITY						
MOISTURE						
U.S.C.S						
MAXIMUM PARTICLE SIZE						
CONTAINER NUMBER	M326	KB-8	KB-6	KB-13	KB-45	KB-17
WT. WET SOIL + TUBE/RINGS (gm)	698	631.2				
LENGTH OF SAMPLE (IN)	6	6				
WT. WET SOIL + CONT.(gm)	308.4	292.3	371.7	329.58	357.72	496.8
WT. DRY SOIL + CONT. (gm)	285.5	273.2	359.1	321.3	350.2	480.7
WT. CONTAINER (gm)	186	186	85.99	85.3	87.14	86.62
WT. TUBE OR RINGS (gm)	163.85	163.85				
AVG. TUBE OR RING I.D.						
TUBE NUMBER						
SPECIFIC GRAVITY						

Environmental Investigation Services, Inc.

GROUNDWATER SAMPLING RECORD Well ID: MW-1

Project Information

Project Name: Cal Mac Transportation Date: 05/13/08
Site Address: 461 McGrath Avenue Field Personnel: Em + Pam + Larry
Project Number: 717-4 Livermore, CA

Well Information

Well Diameter :	2 inches		
Depth to Water:	12.99 feet	Time Measured:	936
Product Thickness:	— feet	Time Measured:	-
Total Depth:	19.39 feet	Time Measured:	938
Length of Water Column:	6.4 feet		
Well Volume:	1.0 gallons	Sheen:	No
80% Recharge Depth:	14.27 feet	Purge Method:	Submersible Pump

Field Measurements and Observations

Time	Depth to Water (feet)	Volume Purged (gallons)	Temp. (°C)	pH	Cond. (µS/cm)	Turbidity (NTU)	Color	Sheen	Odor
953	—	1.0	17.3	7.06	1390	med	light brn	—	—
954	—	1.0	17.2	7.12	1305	low	"	—	—
955	—	1.0	16.5	7.14	1310	"	"	—	—

Total Purge Volume: 3.0 gallons

Sample Information

Sample ID: MW-1 Sample Time: 1002
Sampling Method: Disposable Bailer Sampled By: P
Sample Containers (number/type): 2 VOAs

Notes

Environmental Investigation Services, Inc.

GROUNDWATER SAMPLING RECORD Well ID: MW-2

Project Information

Project Name: Cal Mac Transport Date: 5/13/08
Site Address: 961 McGraw Avenue Field Personnel: Pam + Emily + Long
Project Number: 717-4 Livermore, CA

Well Information

Well Diameter :	2	inches	
Depth to Water:	11.63'	feet	Time Measured: 1305
Product Thickness:	—	feet	Time Measured: —
Total Depth:	19.50'	feet	Time Measured: 1306
Length of Water Column:	—	feet	
Well Volume:	—	gallons	Sheen: —
80% Recharge Depth:	—	feet	Purge Method: —

Field Measurements and Observations

Time	Depth to Water (feet)	Volume Purged (gallons)	Temp. (°C)	pH	Cond. (µS/cm)	Turbidity (NTU)	Color	Sheen	Odor
		ONLY	WATER	LEVEL					

Total Purge Volume: gallons

Sample Information

Sample ID: Sample Time:
Sampling Method: Sampled By: Pam
Sample Containers (number/type):

Notes

Environmental Investigation Services, Inc.

GROUNDWATER SAMPLING RECORD Well ID: MW-3

Project Information

Project Name: Cal Mae Transportation Date: 5/13/08
Site Address: 461 McGrew Avenue Field Personnel: Pam + Eddy + Long
Project Number: 717-4 Livermore, CA

Well Information

Well Diameter :	2 inches		
Depth to Water:	11.69' feet	Time Measured:	1310
Product Thickness:	— feet	Time Measured:	
Total Depth:	19.60' feet	Time Measured:	1311
Length of Water Column:	— feet		
Well Volume:	— gallons	Sheen:	—
80% Recharge Depth:	— feet	Purge Method:	—

Field Measurements and Observations

Time	Depth to Water (feet)	Volume Purged (gallons)	Temp. (°C)	pH	Cond. (µS/cm)	Turbidity (NTU)	Color	Sheen	Odor
		ONLY	WATER	LEVEL					

Total Purge Volume: gallons

Sample Information

Sample ID: Sample Time:
Sampling Method: Sampled By:
Sample Containers (number/type):

Notes

Environmental Investigation Services, Inc.

GROUNDWATER SAMPLING RECORD Well ID: MW-4

Project Information

Project Name: Cal Mac Transportation Date: 5/13/08
Site Address: 461 McGrath Avenue Field Personnel: Pan + Emlyn + Long
Project Number: 717-4 Livermore, CA

Well Information

Well Diameter :	2"	inches		
Depth to Water:	14.36	feet	Time Measured:	1010
Product Thickness:	—	feet	Time Measured:	—
Total Depth:	19.25	feet	Time Measured:	1012
Length of Water Column:	4.89	feet		
Well Volume:	0.78	gallons	Sheen:	—
80% Recharge Depth:	15.34	feet	Purge Method:	Submersible Pump

Field Measurements and Observations

Time	Depth to Water (feet)	Volume Purged (gallons)	Temp. (°C)	pH	Cond. (µS/cm)	Turbidity (NTU)	Color	Sheen	Odor
1019	—	1.0	19.5	7.29	1140	med	dark brown	—	—
1020	—	1.0	18.6	7.26	1102	"	"	—	—
1023	—	1.0	18.8	7.29	1115	low	"	—	—

Total Purge Volume: 3.0 gallons

Sample Information

Sample ID: MW-4 Sample Time: 1115
Sampling Method: Disposable Bailer Sampled By: Pat Lee
Sample Containers (number/type): 2 VOAs

Notes

Environmental Investigation Services, Inc.

GROUNDWATER SAMPLING RECORD Well ID: MW-5

Project Information

Project Name: Cal Mae Transportation Date: 5/13/08
Site Address: 461 McGraw Avenue Field Personnel: Pam + Emily + Tony
Project Number: 717-4 Livermore, CA

Well Information

Well Diameter :	2	inches		
Depth to Water:	13.81	feet	Time Measured:	11:22
Product Thickness:	—	feet	Time Measured:	—
Total Depth:	19.56	feet	Time Measured:	11:24
Length of Water Column:	5.75'	feet		
Well Volume:	0.92	gallons	Sheen:	—
80% Recharge Depth:	14.96	feet	Purge Method:	Submergible pump

Field Measurements and Observations

Time	Depth to Water (feet)	Volume Purged (gallons)	Temp. (°C)	pH	Cond. (µS/cm)	Turbidity (NTU)	Color	Sheen	Odor
11:27	—	1.0	20.8	7.32	1135	low	light	—	—
11:28	—	1.0	21.8	7.35	1150	low	"	—	—
11:30	—	1.0	19.9	7.36	1165	med	dk brn	—	—
			20.9	7.31					
			21.3	7.33	1150				

Total Purge Volume: 3.0 gallons

Sample Information

Sample ID: MW-5 Sample Time:
Sampling Method: Disposable Bailer Sampled By:
Sample Containers (number/type): 2 VOAs

Notes

Environmental Investigation Services, Inc.

GROUNDWATER SAMPLING RECORD Well ID: MW-6

Project Information

Project Name: Cal Mac Transportation Date: 5/13/98
Site Address: 461 McGraw Avenue Field Personnel: Pan + Em + Long
Project Number: 717-4 Livermore, CA

Well Information

Well Diameter :	2	inches		
Depth to Water:	15.71	feet	Time Measured:	12:34
Product Thickness:	—	feet	Time Measured:	
Total Depth:	19.45	feet	Time Measured:	12:36
Length of Water Column:	3.74	feet		
Well Volume:	0.60	gallons	Sheen:	—
80% Recharge Depth:	16.46	feet	Purge Method:	Submersible pump

Field Measurements and Observations

Time	Depth to Water (feet)	Volume Purged (gallons)	Temp. (°C)	pH	Cond. (µS/cm)	Turbidity (NTU)	Color	Sheen	Odor
1240	—	0.6	21.3	7.20	1214	med	brn	—	—
1241	—	0.6	20.2	7.28	1194	"	"	—	—
1255	—	0.6	20.8	7.37	1222	"	"	—	—

Total Purge Volume: 3.0 gallons

Sample Information

Sample ID: MW-6 Sample Time:
Sampling Method: Disposable bailer Sampled By:
Sample Containers (number/type): 2 VOAs

Notes

Water well

Environmental Investigation Services, Inc.

GROUNDWATER SAMPLING RECORD Well ID: WW-1

Project Information

Project Name: Cal Mat Transportati Date: 5/13/2008
Site Address: 461 McGraw Avenue Field Personnel: Dan + Emily + Long
Project Number: 717-4 Livermore, CA

Well Information

Well Diameter :	6	inches		
Depth to Water:	10.20	feet	Time Measured:	10.30
Product Thickness:	—	feet	Time Measured:	—
Total Depth:	151.20	feet	Time Measured:	10.31
Length of Water Column:	—	feet		
Well Volume:	—	gallons	Sheen:	—
80% Recharge Depth:	—	feet	Purge Method:	—

Field Measurements and Observations

Time	Depth to Water (feet)	Volume Purged (gallons)	Temp. (°C)	pH	Cond. (µS/cm)	Turbidity (NTU)	Color	Sheen	Odor
		ONLY WATER LEVEL							

Total Purge Volume: — gallons

Sample Information

Sample ID: — Sample Time:
Sampling Method: Sampled By:
Sample Containers (number/type):

Notes

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

Environmental Investigation Servi	Client Project ID: # 717-4; Call Mac Trans.	Date Sampled: 05/13/08
170 Knowles Drive, Suite 212		Date Received: 05/13/08
Los Gatos, CA 95032	Client Contact: Peter Littman	Date Reported: 05/20/08
	Client P.O.:	Date Completed: 05/16/08

WorkOrder: 0805338

May 20, 2008

Dear Peter:

Enclosed within are:

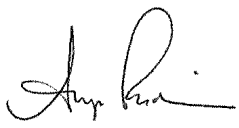
1) The results of the **6** analyzed samples from your project: **# 717-4; Call Mac Trans.,**
2) A QC report for the above samples,
3) A copy of the chain of custody, and
4) An invoice for analytical services.

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

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

McCampbell Analytical Laboratories for your analytical needs.

Best regards,



Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

McCAMPBELL ANALYTICAL, INC.

1534 WILLOW PASS ROAD
PITTSBURG, CA 94565-1701
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (877) 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) ☐

☐ Check if sample is effluent and "J" flag is required

Report To: Peter Littman Bill To: EIS
Company: Environmental Investigation Services, Inc.
710 Knowles Drive Suite 212
Los Gatos CA 95032 E-Mail: plittman@eisi.net
Tele: (408) 871 1470 Fax: (408) 871 1520
Project #: 717-4 Project Name: Cal Mac Trans.
Project Location: 46 McGraw Ave Livermore, CA
Sampler Signature: Evelyn Stig

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	Analysis Request: BTEX & TPH as Gas (602 / 8021 + 8015) / MTBE	Analysis Request: TPH as Diesel (8015)	Analysis Request: Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Analysis Request: Total Petroleum Hydrocarbons (418.1)	Analysis Request: EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	Analysis Request: MTBE / BTEX ONLY (EPA 602 / 8021)	Analysis Request: EPA 505/ 608 / 8081 (Cl Pesticides)	Analysis Request: EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	Analysis Request: EPA 507 / 8141 (NP Pesticides)	Analysis Request: EPA 515 / 8151 (Acidic Cl Herbicides)	Analysis Request: EPA 524.2 / 624 / 8260 (VOCs)	Analysis Request: EPA 525.2 / 625 / 8270 (SVOCs)	Analysis Request: EPA 8270 SIM / 8310 (PAHs / PNAs)	Analysis Request: CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	Analysis Request: LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)	Analysis Request: Lead (200.7 / 200.8 / 6010 / 6020)	Other	Comments
+ MW-1		5/13/08	1002	2	VOA	X					X	X													X					8260 Only	
+ MW-4			1115			X					X	X													X					X	
+ MW-5			1228			X					X	X													X					X	
+ MW-6			1431			X					X	X													X					X	
+ TW-W			1210			X					X	X													X					X	
+ TW-E		▽	1218	▽	▽	X					X	X													X					X	

Relinquished By:	Date:	Time:	Received By:
Evelyn Stig	5/13/08	330	
	Date:	Time:	Received By:
	5/13/08	1655	K. Burks
Relinquished By:	Date:	Time:	Received By:

ICE/t° 6.0
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB

COMMENTS:

	VOAS	O&G	METALS	OTHER
PRESERVATION			pH<2	

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0805338 **ClientCode: EISI**

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

Report to:
Peter Littman
Environmental Investigation Services,
170 Knowles Drive, Suite 212
Los Gatos, CA 95032
(408) 871-1470 FAX (408) 871-1520

Email: plittman@eis1.net, katie@eis1.net, pan
cc:
PO:
ProjectNo: # 717-4; Call Mac Trans.

Bill to:
Barbara
Environmental Investigation Services
170 Knowles Drive, Suite 212
Los Gatos, CA 95032
barbara@eis1.net

Requested TAT: 5 days

Date Received: **05/13/2008**
Date Printed: **05/13/2008**

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
0805338-001	MW-1	Water	5/13/2008 10:02	☐	A	A										
0805338-002	MW-4	Water	5/13/2008 11:15	☐	A											
0805338-003	MW-5	Water	5/13/2008 12:28	☐	A											
0805338-004	MW-6	Water	5/13/2008 14:31	☐	A											
0805338-005	TW-W	Water	5/13/2008 12:10	☐	A											
0805338-006	TW-E	Water	5/13/2008 12:18	☐	A											

Test Legend:

1	8260VOC_W	2	PREDF REPORT	3		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.

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

Sample Receipt Checklist

Client Name: **Environmental Investigation Services, Inc.** Date and Time Received: **5/13/2008 5:06:16 PM**

Project Name: **# 717-4; Call Mac Trans.** Checklist completed and reviewed by: Kimberly Burks

WorkOrder N°: **0805338** 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: 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 ☑

Client contacted: Date contacted: Contacted by:

Comments:

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

Environmental Investigation Services, In 170 Knowles Drive, Suite 212 Los Gatos, CA 95032	Client Project ID: # 717-4; Call Mac Trans.	Date Sampled: 05/13/08
		Date Received: 05/13/08
	Client Contact: Peter Littman	Date Extracted: 05/15/08
	Client P.O.:	Date Analyzed 05/15/08

Tetrachloroethene by P&T and GC/MS*

Extraction method SW5030B Analytical methods SW8260B Work Order: 0805338

Lab ID	Client ID	Matrix	Tetrachloroethene	DF	% SS
001A	MW-1	W	5.1	1	109
002A	MW-4	W	77	3.3	108
003A	MW-5	W	230	10	109
004A	MW-6	W	320	20	108
005A	TW-W	W	13	1	109
006A	TW-E	W	10	1	107

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

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

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~2 vol. % sediment; j) sample diluted due to high organic content.

DHS ELAP Certification N° 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

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

QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water QC Matrix: Water WorkOrder 0805338

EPA Method SW8260B	Extraction SW5030B	BatchID: 35571	Spiked Sample ID: 0805310-006A

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
tert-Amyl methyl ether (TAME)	ND	10	108	105	2.76	106	105	0.713	70 - 130	30	70 - 130	30
Benzene	ND	10	105	102	3.17	98.1	97.4	0.637	70 - 130	30	70 - 130	30
t-Butyl alcohol (TBA)	ND	50	98.5	95.7	2.84	106	110	3.32	70 - 130	30	70 - 130	30
Chlorobenzene	ND	10	99.2	96.9	2.33	94.3	92.8	1.50	70 - 130	30	70 - 130	30
1,2-Dibromoethane (EDB)	ND	10	97.4	94.8	2.71	96.5	95.3	1.26	70 - 130	30	70 - 130	30
1,2-Dichloroethane (1,2-DCA)	ND	10	117	113	2.87	112	111	0.361	70 - 130	30	70 - 130	30
1,1-Dichloroethene	ND	10	89.7	87.7	2.28	85.1	83.8	1.50	70 - 130	30	70 - 130	30
Diisopropyl ether (DIPE)	ND	10	110	108	2.55	105	105	0	70 - 130	30	70 - 130	30
Ethyl tert-butyl ether (ETBE)	ND	10	112	108	2.87	108	107	1.12	70 - 130	30	70 - 130	30
Methyl-t-butyl ether (MTBE)	ND	10	101	98.7	2.71	104	103	0.582	70 - 130	30	70 - 130	30
Toluene	ND	10	90.3	87.8	2.78	86.2	84.2	2.33	70 - 130	30	70 - 130	30
Trichloroethene	ND	10	95.5	93.1	2.59	90.2	89.1	1.30	70 - 130	30	70 - 130	30
%SS1:	111	10	102	102	0	102	101	0.997	70 - 130	30	70 - 130	30
%SS2:	98	10	100	101	0.155	101	100	1.03	70 - 130	30	70 - 130	30
%SS3:	106	10	98	98	0	98	98	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 35571 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0805338-001A	05/13/08 10:02 AM	05/15/08	05/15/08 6:01 AM	0805338-002A	05/13/08 11:15 AM	05/15/08	05/15/08 2:30 PM
0805338-003A	05/13/08 12:28 PM	05/15/08	05/15/08 3:13 PM	0805338-004A	05/13/08 2:31 PM	05/15/08	05/15/08 3:57 PM
0805338-005A	05/13/08 12:10 PM	05/15/08	05/15/08 4:40 PM	0805338-006A	05/13/08 12:18 PM	05/15/08	05/15/08 3:09 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 and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

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

DHS ELAP Certification N° 1644

QA/QC Officer

KEANTAN LABORATORIES
www.keantanlabs.com
Geotechnical Laboratory and Consulting services

May 15, 2008

Environmental Investigation Services, Inc
15466 Los Gatos Boulevard, Suite 109-062
Los Gatos, California 95032

Attn: Peter Littman

Subject: **Report/Laboratory Test Results**
Project Name: 461 McGraw Ave
Project Number: 717-4
KTL Project No.: 07-370-003

To Peter Littman

Enclosed are results of the laboratory testing program conducted on samples from the above referenced project. The testing performed for this program was conducted in general accordance with testing procedures as follows:

TYPE OF TEST	TEST PROCEDURE
Total Porosity	ASTM D 2937/854

Attached herewith is Summary of Laboratory Test Result (1), Invoice (1)

We appreciate the opportunity to provide testing services to Environmental Investigation Services. If you have any questions regarding the test results, please contact us.

Very truly yours,
Keantan Laboratories

Jonathan Khaw
Laboratory Manager

Encls.

640 North Diamond Bar Boulevard ‡ Diamond Bar ‡ California 91765
(909)-860-1896 ‡ fax (909) 860-5315

KEANTAN LABORATORIES
www.keantanlabs.com
Geotechnical Laboratory and Consulting services

SUMMERY OF LABORATORY TEST RESULT

For
Cal Mac Transportation

PROJECT NAME.: 461 McGraw Ave **KTL NO.:** 07-370-003

PROJECT NO.: 717-4 **CLIENT.:** EIS

DATE.: 5/15/2008 **SUMMARIZED BY.:** K. Tan

Boring NO.	SAMPLE NO. (%)	DEPTH (FT_	TOTAL POROSITY
GTEX-1	1	n/a	.50
GTEX-2	2	n/a	.58
GTEX-3	3	n/a	.55

640 North Diamond Bar Boulevard ǂ Diamond Bar ǂ California 91765
(909)-860-1896 ǂ fax (909) 860-5315

KeanTan Laboratories

Total Porosity

ASTM D 854/2937

Project Number:	07-370-003	Prepared By	jk	Date:	5/15/2008
Project Name:	461 McGraw Ave	Tested by		Date:	5/15/2008
		Checked by		Date:	5/15/2008

Boring Number	GTEX-1	GTEX-2	GTEX-3			
Sample Number	1	2	3			
Depth (ft)						
Specfic Gravity of Soil (ASTM D 854)	2.69	2.68	2.71			
Weight of Soil (Wt)+ring	685.10	594.80	619.70			
Weight of Ring (Wr)	162.95	162.95	162.95			
Weight of Soil (Wt)	522.15	431.85	456.75			
Moisture content of soil	26.74	25.28	20.83			
Weight of Soil (Dry) (Ws)	411.99	344.71	378.01			
Unit weight of of water (yw) (g/cm3)	1	1	1			
Volume of Soil (Vs)	153.15	128.62	139.49			
Diameter (cm)	5.08	5.08	5.08			
Height (cm)	15.24	15.24	15.24			
Volume	308.73	308.73	308.73			
Total Porosity	0.50	0.58	0.55			
wet density dry density						
Degree of Saturation						

Slug Test Data Sheet
461 McGraw Ave.
Livermore, California

Environmental
Investigation Services

Field Tech: Panindhar & Emlyn Date: 05/08/2008 Well Number: MW-2

Test Method:	Bailout – Submersible pump

Measurement Method:	Electronic Well Measureing Tape

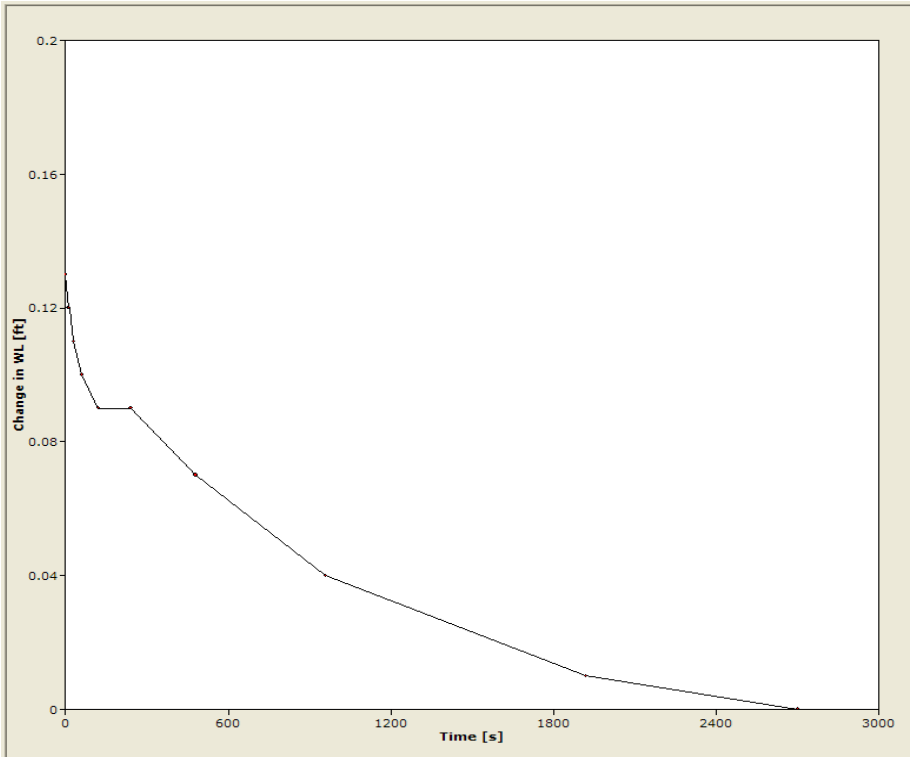
Time of Measurement	Elapsed Time (seconds)	Depth to Water (feet)	Time of Measurement	Elapsed Time (seconds)	Depth to Water (feet)
14:55:00	0:00:00	11.61			
14:55:05	0:00:05	11.74			
14:55:10	0:00:10	11.73			
14:55:15	0:00:15	11.73			
14:55:30	0:00:30	11.72			
14:56:30	0:01:00	11.71			
14:58:30	0:02:00	11.70			
15:02:30	0:04:00	11.70			
15:10:30	0:08:00	11.68			
15:26:30	0:16:00	11.65			
15:58:00	0:32:00	11.62			
16:17:30	0:45:00	11.61			

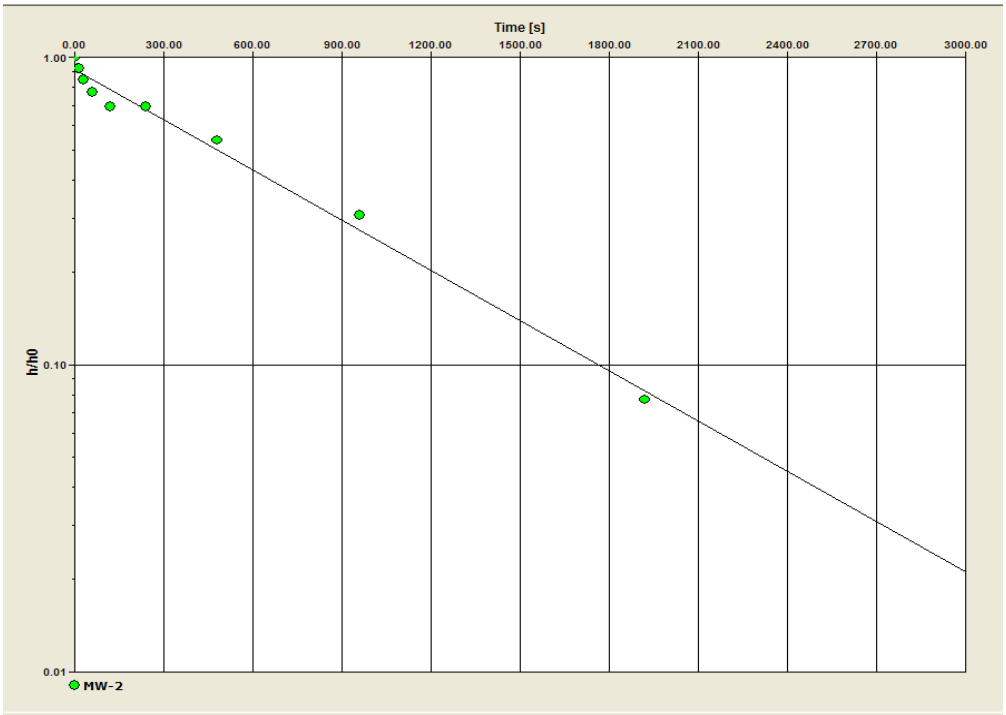
SLUG TEST ANALYSIS

Project Name : Cal Mac Transportation
Location : 561 McGraw Avenue Livermore CA
Project No. 717-4
Test Date: 5/19/2008
Static Water Level: 11.61 feet
Water Level at t = 0 : 11.74 feet
Slug Test Conducted by: Panindhar R Krishnamraju
Long Ching and Emlyn Stokes

Test Well: MW-2
Aquifer Thickness: 20 feet
Aquifer Type: Unconfined
Radius of Well: 0.167 feet
Soil Porosity: 0.55
Time in seconds
Dimensions in feet

	Time (s)	Water Level (ft)	Change in WL (ft)
1	0	11.74	0.13
2	10	11.73	0.12
3	15	11.73	0.12
4	30	11.72	0.11
5	60	11.71	0.1
6	120	11.7	0.09
7	240	11.7	0.09
8	480	11.68	0.07
9	960	11.65	0.04
10	1920	11.62	0.01
11	2700	11.61	0





Calculation after Bouwer & Rice:

Hydraulic Conductivity (K) = 3.92×10^{-1}

Slug Test Data Sheet
461 McGraw Ave.
Livermore, California

Environmental
Investigation Services

Field Tech: Panindhar & Emlyn Date: 05/08/2008 Well Number: MW-3

Test Method:	Bailout – Submersible pump

Measurement Method:	Electronic Well Measureing Tape

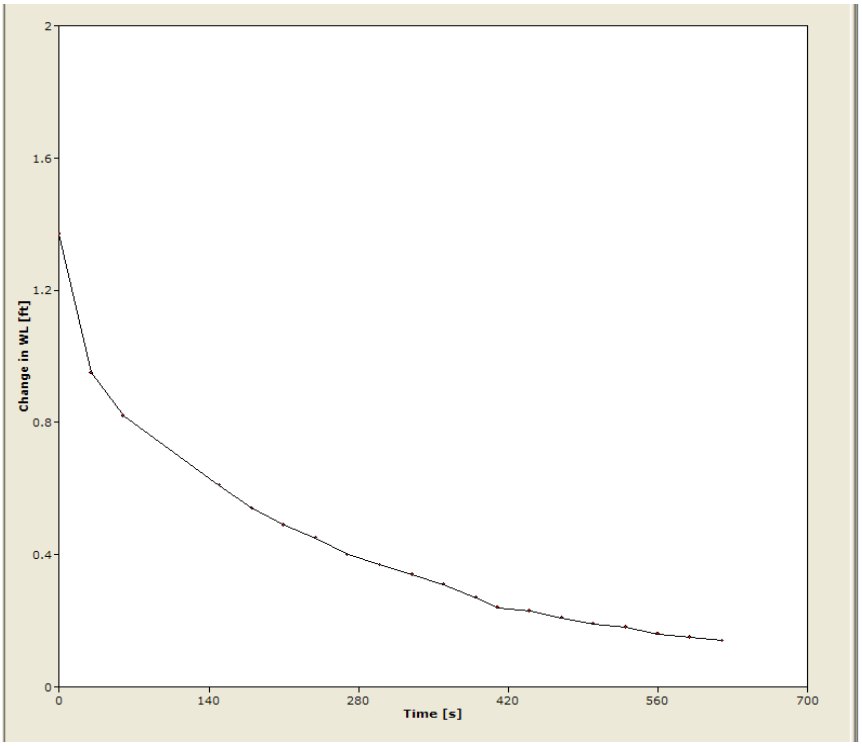
Time of Measurement	Elapsed Time (seconds)	Depth to Water (feet)	Time of Measurement	Elapsed Time (seconds)	Depth to Water (feet)
14:30:00	0:00:00	11.66	14:47:00	0:17:00	11.70
14:30:30	0:00:30	13.03	14:47:30	0:17:30	11.70
14:31:00	0:01:00	12.61	14:48:00	0:18:00	11.70
14:31:30	0:01:30	12.48	14:48:30	0:18:30	11.70
14:32:00	0:02:00	12.39	14:49:00	0:19:00	11.69
14:32:30	0:02:30	12.32	14:49:30	0:19:30	11.69
14:33:00	0:03:00	12.27	14:50:00	0:20:00	11.69
14:33:30	0:03:30	12.20	14:50:30	0:20:30	11.69
14:34:00	0:04:00	12.15	14:51:00	0:21:00	11.69
14:34:30	0:04:30	12.11	14:51:30	0:21:30	11.68
14:35:00	0:05:00	12.06	14:52:00	0:22:00	11.68
14:35:30	0:05:30	12.03	14:52:30	0:22:30	11.68
14:36:00	0:06:00	12.00	14:53:00	0:23:00	11.68
14:36:30	0:06:30	11.97	14:53:30	0:23:30	11.68
14:37:00	0:07:00	11.92	14:54:00	0:24:00	11.68
14:37:30	0:07:30	11.90	14:54:30	0:24:30	11.67
14:38:00	0:08:00	11.89	14:55:00	0:25:00	11.67
14:38:30	0:08:30	11.87	14:55:30	0:25:30	11.67
14:39:00	0:09:00	11.85	14:56:00	0:26:00	11.66
14:39:30	0:09:30	11.84	14:56:30	0:26:30	11.66
14:40:00	0:10:00	11.82	14:57:00	0:27:00	11.66
14:40:30	0:10:30	11.81	14:57:30	0:27:30	11.66
14:41:00	0:11:00	11.80			
14:41:30	0:11:30	11.78			
14:42:00	0:12:00	11.77			
14:42:30	0:12:30	11.76			
14:43:00	0:13:00	11.75			
14:43:30	0:13:30	11.75			
14:44:00	0:14:00	11.74			
14:44:30	0:14:30	11.73			
14:45:00	0:15:00	11.73			
14:45:30	0:15:30	11.72			
14:46:00	0:16:00	11.71			
14:46:30	0:16:30	11.71			

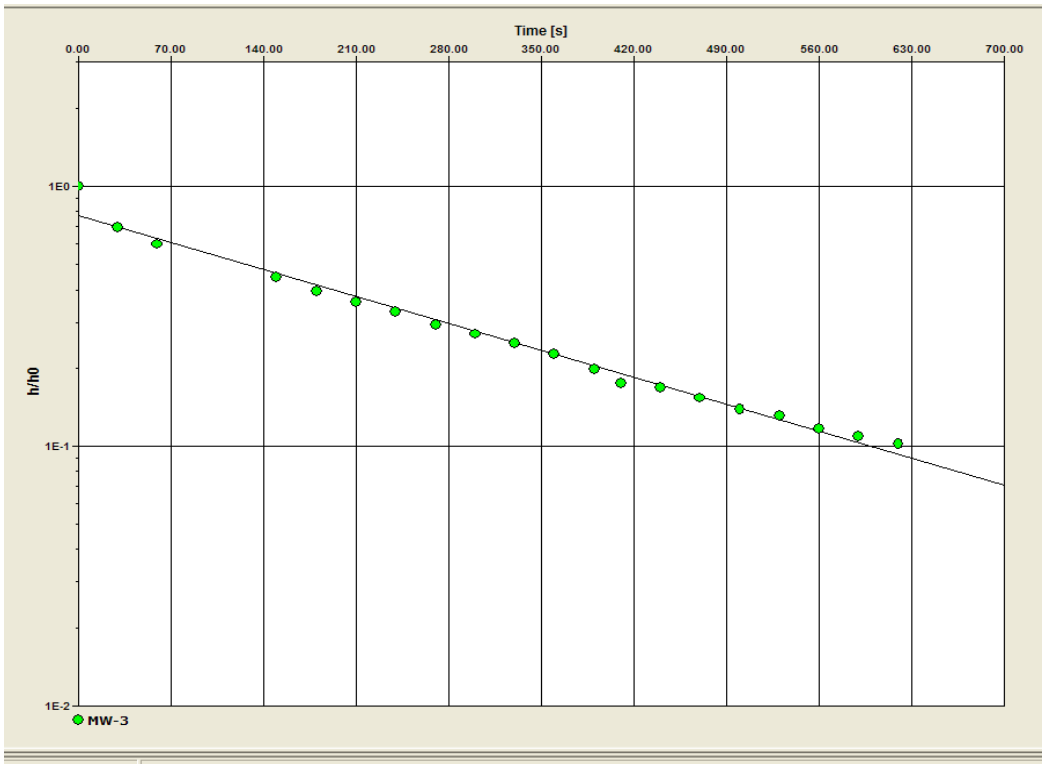
SLUG TEST ANALYSIS

Project Name : Cal Mac Transportation
Location : 561 McGraw Avenue Livermore CA
Project No. 717-4
Test Date: 5/18/2008
Static Water Level: 11.66 feet
Water Level at t = 0 : 13.03 feet
Slug Test Conducted by: Panindhar R Krishnamraju
Long Ching and Emlyn Stokes

Test Well: MW-3
Aquifer Thickness: 20 feet
Aquifer Type: Unconfined
Radius of Well: 0.167 feet
Soil Porosity: 0.55
Time in seconds
Dimensions in feet

	Time (s)	Water Level (ft)	Change in WL (ft)
1	0	13.03	1.37
2	30	12.61	0.95
3	60	12.48	0.82
4	90	12.27	0.61
5	120	12.2	0.54
6	150	12.15	0.49
7	180	12.11	0.45
8	210	12.06	0.4
9	240	12.03	0.37
10	270	12	0.34
11	300	11.97	0.31
12	330	11.93	0.27
13	360	11.9	0.24
14	390	11.89	0.23
15	420	11.87	0.21
16	450	11.85	0.19
17	480	11.84	0.18
18	510	11.82	0.16
19	540	11.81	0.15
20	570	11.8	0.14





Calculation after Bouwer & Rice:

Hydraulic Conductivity (K) = 1.07 X 10 ^{0}