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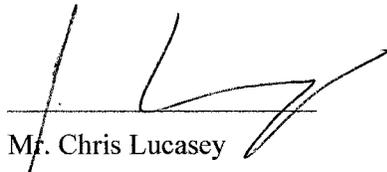
Mr. Jerry Wickham
Hazardous Materials Specialist
Alameda County Health Care Services Agency
Environmental Health Services
Environmental Protection
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

RE: Lucasey Manufacturing
2744 East 11th Street
Oakland, California 94601
SLIC Case RO0002902
Clearwater Group Project # FB022G

Dear Mr. Wickham,

As the legally authorized representative of the above-referenced project location I have reviewed the *Soil and Groundwater Investigation Report* prepared by my consultant of record, Clearwater Group, Inc. I declare, under penalty of perjury, that the information and/or recommendations contained in this report are true and correct to the best of my knowledge.

Sincerely,



Mr. Chris Lucasey



**SOIL AND GROUNDWATER
INVESTIGATION REPORT**

Lucasey Manufacturing Corporation
2744 East 11th Street
Oakland, California 94601

ACEH Case No. RO0002902
Clearwater Group Project # FB022G

Prepared for:

Mr. Chris Lucasey
Lucasey Manufacturing Corporation
P.O. Box 14023
Oakland, CA 94614-2023

Prepared by:

Clearwater Group
229 Tewksbury Avenue
Point Richmond, CA 94801

March 7, 2007



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1 INTRODUCTION

Clearwater Group (Clearwater) has been retained by the property owner, Mr. Chris Lucasey, of the Lucasey Manufacturing Company, 2744 East 11th Street, Oakland, California (the Subject Property) to perform an additional subsurface investigation to better define the impacted soil and groundwater detected in previous site investigations per the April 25, 2006, Work Plan. These tasks were modified by a May 12, 2006, letter response from ACEH with attached map (see **Appendix A**).

The results of the investigation proposed in the workplan are summarized in this *Soil and Groundwater Investigation Report (SGIR)*. The contents of the SGIR include background information, investigation objectives and results, an updated site conceptual model (SCM), discussions and findings, and recommendations for further investigation.

2 BACKGROUND

2.1 Site Description

The Subject Property is located in a mixed light industrial, regional transportation corridor (rail and highway) and residential area of Oakland, at the north and southeast corner of the intersection of Lisbon Avenue and East 11th Street (**Figure 1** – Site Vicinity Map). The Subject Property occupies about 2.32 acres and is improved with one building, which measures approximately 100,000 square feet (**Figure 2** – Site Locality Map). The property is owned and occupied by the Lucasey Manufacturing Corporation, a fabricator of television mounting systems.

2.2 Site History

The 1903 Sanborn Fire Insurance (Sanborn) map of the Subject Property shows the site to be improved with eight residences and the warehouse and cannery buildings of the Code-Portwood Canning Company. On the 1950 Sanborn map, the entire property, the adjacent property to the south, and some of the property to the east were used by the California Packing Corporation as a cannery as well as a canned goods warehouse.



2.3 Site Investigation History

Phase I Environmental Site Assessment

The results of an initial site environmental study of the Subject Property were reported by AEI Consultants (AEI) of Walnut Creek, California, in its *Phase I, Environmental Site Assessment, 2744 East 11th Street, Oakland, California*, dated August 24, 2004. This site assessment revealed two related property improvements designated as “oil house” and “oil tank in ground.” These improvements were noted due south of the Subject Property building, and within the “L” of the building footprint adjacent to the current loading dock area (1911 and 1950 Sanborn maps). A machine shop was also noted in the vicinity of the “oil house” and “oil tank in ground.” No other on-site fuel storage tanks were identified in the AEI Phase I environmental site assessment.

AEI recommended a Phase II Subsurface Investigation to determine whether the historic documented underground storage tank (UST) and the nearby shop areas had experienced petroleum hydrocarbon releases, which could have impacted the subsurface of the Subject Property.

Initial Phase II Environmental Site Assessment

An initial Phase II subsurface investigation was performed by AEI on August 31, 2004. The results were reported in AEI's, September 14, 2004, *Phase II Subsurface Investigation Report, 2744 East 11th Street, Oakland, California*. Five soil borings (SB-1 through SB-4 and SB-6) were drilled on-site (**Figure 3**). Boring SB-5 was attempted but abandoned, owing to drill refusal. Boring logs from this event are attached in **Appendix B**. The locations of the borings were chosen to identify a release, if any, from the target area identified on the Sanborn maps. The borings were advanced to 16 feet below ground surface (bgs), and soil samples were collected at 4-foot intervals. Significant staining and hydrocarbon odor were observed during the drilling of borings SB-1, SB-2, SB-4, and SB-6. The soil staining was described as black sludge dispersed throughout the clays, beginning at approximately 12 feet bgs and extending to the bottom of the boring at 16 feet bgs.

Groundwater was encountered at approximately 13 feet bgs in the soil borings, and grab groundwater samples were collected from the five borings. AEI staff noted that free product (free phase petroleum hydrocarbons) was observed in borings SB-1, SB-2, SB-4, and SB-6.



The groundwater samples were analyzed for total petroleum hydrocarbons (TPH) as gasoline, diesel, and motor oil by EPA Method 8015 and for volatile organic compounds (VOCs) by EPA Method 8260.

The results of the groundwater sample analyses indicated that the site groundwater is impacted by petroleum hydrocarbons. Total petroleum hydrocarbons as gasoline (TPH-g) in water concentrations ranged from 130 micrograms per liter ($\mu\text{g/L}$) in the sample from boring SB-6 to 3,800 $\mu\text{g/L}$ in the sample from boring SB-2, while the sample from boring SB-3 was non-detect for TPH compounds. VOCs were detected at very low levels in the grab groundwater samples. The soil samples were placed on hold and were not analyzed, because the results indicated significant groundwater contamination.

Second Phase II Subsurface Investigation

A second Phase II Subsurface Investigation was performed by Terra Firma, of Mill Valley, California, on July 9, 2005. Six soil borings, BH-1 through BH-6 (**Figure 3** and attached in **Appendix B**), were driven in the area of the highest known concentration of petroleum hydrocarbons in groundwater established by the first Phase II investigation. The boring logs indicated that the soil underlying the site is predominantly silty clay to clay with layers of fine sand and gravel. Groundwater was encountered at approximately 12 feet bgs in boring BH-2 and 11 feet bgs in boring BH-4. The soil sample results indicated that high concentrations of petroleum hydrocarbons occurred in the Subject Property soil (8,900 mg/kg of TPH-d and 7,500 mg/kg of TPH-mo in sample number 50603-2-12). These concentrations are indicative of free product.

Grab groundwater samples were collected from 3 of the 6 borings. All the grab groundwater samples contained petroleum hydrocarbons. TPH as diesel (TPH-d) concentrations ranged from 670 $\mu\text{g/L}$ (boring BH-5) to 580,000 $\mu\text{g/L}$ (boring BH-2). TPH-motor oil (mo) concentrations were comparable, ranging from 2,800 $\mu\text{g/L}$ (BH-5) to 510,000 $\mu\text{g/L}$ (BH-2). Methyl tertiary butyl ether (MTBE) and benzene, toluene, ethylbenzene, and xylenes (BTEX) concentrations were below the laboratory reporting limits.



Ground Penetrating Radar Survey

Clearwater subcontracted with Norcal Geophysical of Cotati, California, to perform a ground penetrating radar (GPR) and electro-magnetic survey of a target area for possible USTs on November 15, 2005. No large metal or other buried objects (e.g., USTs) were detected during the radar search. The GPR survey target area is shown on **Figure 4**.

On November 20, 2006, Clearwater contracted Subtronic Corporation of Concord, California, to conduct a detailed utility location survey. Each manhole and trench on the Subject Property was investigated with various electromagnetic detection tools. The results of this investigation are illustrated on **Figure 4**.

Sensitive Receptor Survey

A sensitive receptor survey was conducted by Clearwater within a 500-foot radius search area of the Subject Property. There are no hospitals, clinics, schools, or public facilities within the search area. The area directly to the south and west of the Subject Property is used for residential purposes. The Oakland Animal Shelter is located adjacent to the southeast of the Subject Property. A multi-track rail line with associated fuel transportation pipelines and commercial storage units are located adjacent to the northeast of the site. The 500-foot radius search area is fully developed. There is no land in a native state, nor wetlands, streams, ponds, or sensitive habitats within the search area. The closest distance to San Francisco Bay (channel between Oakland and Alameda) is approximately 2,200 feet to the west.

3 SOIL AND GROUNDWATER INVESTIGATION

3.1 Objectives

The objectives of this soil and groundwater investigation were:

- To obtain lithologic and hydrologic information;
- To delineate the vertical and horizontal extents of the soil contamination and the contaminated groundwater plume.

3.2 Scope

The scope of this soil and groundwater investigation included the following tasks:

- Driving Electrical Conductivity logs at seven soil boring locations;

- Driving 13 soil borings using a direct-push drill rig to collect continuous soil cores;
- Analyzing selected soil and grab groundwater samples: A mobile analytical laboratory was used to analyze soil and groundwater samples to determine (in real time) the degree of soil and groundwater contamination. Samples with free product were sent to a conventional (non-mobile) analytical laboratory, because the conventional laboratory was better equipped to conduct the sample dilutions required to avoid time delays caused by saturation of the chromatographic columns.
- Survey the soil boring locations using GPS equipment.

3.3 Electrical conductivity logging

On December 8, 2006, Electrical Conductivity (EC) logging was conducted at the Subject Property. Fast-Tek Engineering Support Services (Fast-Tek) of Point Richmond, California, used a Geoprobe[®] 5400 direct-push drill rig equipped with an EC-probe to collect logs at 7 locations. EC logging was conducted at borings SB-8, SB-9, SB-13, and SB-14 to a depth of 24 feet bgs and boring locations SB-12, SB-16, and SB-17 to a depth of 32.5, 27.5, and 36 feet bgs, respectively. The logs were recorded using Geoprobe[®] Direct Image[®] hardware and software. The data was stored on a laptop computer and downloaded at the end of the field event.

The following is a brief description of EC logging from the Geoprobe[®] Systems Tool Catalog, 2003.

“EC logs are made using a four-pole Wenner array, where current is passed through the soil from the outer contacts of the array and voltage is measured at the inner two contacts. The units used for electrical conductivity are milliSiemens/meter (mS/m).”

“A change in electrical conductivity indicates a change in soil material or pore water. The electrical conductivity of unconsolidated soils and sediments is primarily a function of their grain size. Fine-grained materials such as clays have a higher conductivity than silty materials, which in turn have a higher conductivity than sands or gravels. Most soils and sediments are mixtures of clays, silts, and sands and the conductivity of any bulk soil or sediment will be influenced by this fact. Some other

major factors influencing the conductivity of unconsolidated materials are the chemical composition, moisture content, and salinity of the pore fluids. Because clay minerals are ionically active they will conduct well even if only slightly moist.”

Because the conductivity varies for a given soil type between sample locations, comparing the conductivity log with a soil boring log is essential to properly interpret the conductivity log. Changes in conductivity are also caused by changes in soil or groundwater contamination.

The electrical conductivity (EC) logs show a correlatable pattern between borings SB-8, SB-9, SB-13, and SB-14. At soil boring SB-16 (at the intersection of Lisbon Avenue and 11th Street, in the raised yard), the upper 8 feet does not match nearby EC logs, most probably because of various historic excavations and the placement of fill soils. At soil boring SB-12, the EC does not match other EC logs, also possibly due to the excavation and placement of fill. Five of these EC locations (SB-8, SB-9, SB-12, SB-13, and SB-14) were later drilled, logged, and sampled. The soil borings were located within 2 feet of the respective EC borehole location. The soil boring logs (**Appendix B**) for these borings include the EC logs at the same depth scale.

3.4 Soil Borings

Between January 8 and January 12, 2007, Clearwater supervised the driving of 13 soil borings (SB-7 through SB-15 and SB-21 through SB-24, **Figure 3**). Proposed borings SB-16 through SB-20 were not drilled, due to time and budget constraints, as the focus of this site investigation was to define the extent of the groundwater contaminant plume. The borings were driven by Fast-Tek Engineering Support Services, using a Geoprobe® 5400 direct-push drill rig. The boring depths ranged from 24 to 36 feet bgs. Continuous soil cores were collected from each soil boring. **Table 1** presents the boring details. A California Professional Geologist logged the soil borings. Soil samples were collected according to Clearwater’s Standard Operating Procedure (**Appendix C**). A Photo-Ionization Detector (PID) was used to screen the soil cores to locate contaminated zones. Where possible, soil samples were selected for analysis from the following depths:

- 5 ft bgs;
- Capillary fringe;
- First lithologic change below first encountered groundwater;



- Any other locations where staining, odor, or elevated PID readings were observed.

Grab groundwater samples were collected at the following zones:

- First encountered groundwater;
- Permeable water-bearing zones below first encountered groundwater.

3.5 Grab Groundwater Sample Collection

Grab groundwater samples were collected from the top of the groundwater after groundwater was encountered in each boring. In order to collect depth discrete groundwater samples from below the top of the groundwater, a temporary well consisting of a 5-foot long section of 1-inch diameter slotted PVC well screen set below PVC blank casing was lowered down the borehole to the desired depth, and then a disposable bailer was slowly lowered to the screened interval.

3.6 Global Positioning System (GPS) Survey

At the conclusion of the soil-boring event, all soil-boring locations were surveyed using a Trimble GPS locator. The GPS coordinates for the soil borings are included as **Table 4**.

GPS coordinates for historic boreholes (SB-1 through SB-6 and BH-1 through BH-5) have not been provided. The soil boring locations could not be accurately identified on the ground. The placement of these borings on site plans is based on site plans from the consultants that conducted these borings. By extension, due to the lack of coordinates, these soil borings will not be uploaded to Geotracker; they will only be uploaded in the body of this report.

3.7 Soil and Groundwater Analyses

The soil and groundwater samples that did not exhibit signs of being highly contaminated were analyzed on-site in a mobile laboratory provided and operated by Transglobal Environmental Geochemistry (TEG), a California DHS-certified laboratory from Rancho Cordova, California (see **Appendix D** – Report # 70108E).

Soil sample tubes (acetate liners) that showed staining or free product, or reported high PID readings, were sealed at each end with Teflon® film and plastic end caps. These samples



were stored on ice and then transported in an ice chest to Kiff Analytical LLC (Kiff), in Davis, California, for analysis. Kiff is a California Department of Health (DHS)-certified laboratory (see **Appendix E** – Kiff Report numbers 54390 through 54393).

Both laboratories used the following methods to analyze the soil and groundwater samples:

- Total Petroleum Hydrocarbons as Diesel (TPH-d), by EPA Method 8015m.

The following analyses were performed by EPA Method 8260B:

- Total Petroleum Hydrocarbons as Motor Oil (TPH-mo);
- Benzene, Toluene, Ethylbenzene, Xylenes (BTEX);
- Methyl tertiary butyl ether (MTBE);
- Ethylene Dibromide;
- 1,2-dichloroethane.

Kiff Reports #54390 and #54391 had the following case narrative: “Because the sample matrix is clay, the samples are not conducive to normal homogenization. Each TPH as Diesel and TPH as Motor Oil result is from a composite of randomly selected amounts within the sample sleeve after removing the top inch of soil.” This narrative pertains to samples SB22-11.5, SB14-11.5, SB14-17, SB21-11, SB21-13.5, and SB24-11.5.

Kiff Report #54393 reported the following case narrative: “For sample SB13-W, repeated analysis by EPA Method 8260B yielded inconsistent results for Total Xylenes and TPH as Gasoline. Affected results are flagged with a "J" to indicate that they should be considered estimates. The highest concentration valid results were reported. Visual inspection of the samples revealed the presence of distinct phases within the sample bottles, indicating the possible presence of undissolved hydrocarbons. This inhomogeneity is probably the cause of the inconsistent results.”

Analytical Laboratory Results from the *2004 AEI Phase II Subsurface Investigation* (McC Campbell Analytical Report No. 0408441) and the *2005 Terra Firma Soil and*



Groundwater Investigation (McCampbell Analytical Report No. 0507132) are included as **Appendix F**.

4 INVESTIGATION RESULTS

4.1 Regional and Site Geology

The Subject Property is located on the East Bay Plain in the San Francisco Bay region. This highly urbanized area is a gently sloping alluvial plain formed by sediment eroded out of the East Bay Hills. Creeks that drained the hills carried sediment toward the bay and built up the plain.

The site lithology consists primarily of interbedded clayey sediments (lean clays to fat clays, sandy clays) with thin interbeds of relatively more permeable clayey sands and clayey gravels, typical of alluvial deposits along the bay margin. There are no readily apparent distinct lithological horizons. An uppermost zone of clayey silt to silty clay extends to a depth of approximately 8 to 10 feet bgs. Below the silty clay/clayey silt zone is lean clay to fat clay with interbeds of clayey sands and clayey gravels. Below are coarser closely interbedded clayey gravels, clayey sands, lean clays, and silty sands within a clayey matrix to at least 36 feet, the deepest depth explored by drilling.

Due to the heterogeneity of the site's soil, there is a weak correlation between the EC logs and lithology. The EC logs generally peak in the more conductive clay soil and confirm that the site lithology is primarily fine grained. The grab groundwater samples were not analyzed to determine their salinity. The site is located on the flat-lying margins of San Francisco Bay, and saline or brackish groundwater may have affected the EC readings. In addition, the effect of free product (presumably an electrical insulator) on the soils' electrical conductivity is unknown.

4.2 Site Hydrology

The soil borings indicate that the site's groundwater may be under confined or semi-confined conditions. For example, at boring SB-14, groundwater was encountered at 17 feet when a 6-inch wide clayey sand with gravel layer (within sandy lean clay to sandy fat clay) was encountered. The water in the boring then rose to approximately 10.0 feet. A similar situation occurred at borings SB-7 (8.7 feet change) and SB-15 (7.0 feet change).

An alternative hypothesis is that the site groundwater is not confined and the clayey soil is saturated below approximately 10 feet, but that the degree of saturation of the clayey soil is not apparent. The soil samples were not analyzed to determine their moisture content or degree of (water) saturation.

The site groundwater level appears to be at approximately 9 feet bgs, the shallowest free product was noted at about 10 feet bgs. However, the site's depth to groundwater, gradient, and flow direction cannot be accurately determined without the installation of a groundwater monitoring well network.

The known site utility trenches extend to a depth of approximately 8–13.3 feet bgs and are therefore in contact with the site groundwater and are at the approximate free product depth. There are three possible scenarios, which follow: 1) the contaminant entered the pipeline(s) and, with an impermeable trench backfill, mainly flowed down the pipe, 2) with an impermeable backfill, the utilities could be partially obstructing the transport of contaminated groundwater, or 3) if the utility pipes are bedded in gravel or sand, contaminated groundwater could travel preferentially within the backfill of the utility trenches (see **Figures 4 and 16** for utility trench information).

4.3 Level and Range of Soil Impact

The soil cores from all the borings were screened in the field with a photo-ionization detector (PID). After field screening, fifty-three soil samples were analyzed. Forty-one soil samples were analyzed on-site by TEG and twelve samples were sent to Kiff Analytical. Three samples showing free product were not analyzed. The analytical data presented in **Table 2** and **Figure 5** indicate the following:

- A comparison of contaminant distribution with soil lithology and groundwater occurrence indicates that free product occurs primarily at, or near, the top of the site groundwater. Vertical changes in the groundwater level appear to have spread (smeared) the contaminant across a depth of approximately 8–12 feet.
- Soil contamination was predominantly reported as TPH-d and TPH-mo. The highest reported concentrations in soil of TPH-mo (3,400 mg/kg) and TPH-d (5,300 mg/kg) were from boring SB-15 at 15 ft bgs. Based on the current information, this area is thought to be close to the center of the plume.

- Borings SB-11, SB-14, SB-22, and SB-24 also reported elevated concentrations of TPH-mo and TPH-d, ranging from 2,500 to 3,400 mg/kg and from 3,300 to 3,800 mg/kg, respectively.
- Free product also occurs within the deeper, more permeable, clayey gravel zones (borings SB-12 and SB-13) around 24 to 30 feet.
- During drilling, free product was frequently observed filling root burrows (rootlet holes) and fissures in the clay. Open root burrows were observed to a depth of approximately 20 feet, and free product was noted occurring to a depth of 26.5 feet in boring SB-12. Therefore, the free product has a maximum potential thickness of approximately 15 feet.

The root burrows are less than 1/8 inch in diameter and are more commonly 1/16 inch or less in diameter. The fissures in the clay appear to be joints within the clay. These fissures were easily visible without magnification as oil coated semi-planar breaks within the soil. When samples of the clay were separated by hand, the clay tended to split along these oil-coated fissures. Kiff Analytical notes corroborate these findings. At this site the massive clay (non-fissured or without root burrows) appeared to be devoid of free product indicating that the apparently very low permeability of the fine-grained soil (silts and clays) retards migration directly through the fine-grained soils. No determinations have been made of the intrinsic permeability of the site's soils.

During drilling it was commonly noted that the water within the borings would rise suddenly within the borehole when permeable zones were encountered, indicating the site groundwater is probably under confined or semi-confined conditions.

4.4 Loss of Soil Samples Due to Oily Coating

All the soil samples were collected using a single-tube Geoprobe® macrocore soil sampler with acetate liners and core catchers. There was no recovery of soil samples from borings SB-12 at a depth of 16 to 20 feet, SB-13 at a depth of 20 to 24 feet, and SB-24 at a depth of 16.5 to 18 feet. In these borings the soil from these depths, below the top of the free product, was observed to be coated with oil from the sampler pushing through the free product layer. The oil appeared to cause the soil samples to slip out of the core barrel during sample retrieval. In other areas of the site, without free product, the sample recovery rate

was good using the same sampling method. When soil samples coated on the exterior with oil were retrieved, the oil coating was shaved off of the sample, to remove the oil coating, before submitting the samples to the laboratory.

Borings SB-22 and SB-24 were terminated after unsuccessful attempts to retrieve soil samples at 25 feet, because of the slippery oily coating. Termination of the borehole occurred only after several unsuccessful attempts were made to clear the dropped soil samples from the borehole and to resume soil sampling.

4.5 Level and Range of Groundwater Impact

Grab groundwater samples were collected from 13 of the soil borings. In five cases, two samples were collected from one boring. A total of 13 groundwater samples were analyzed, 10 samples were analyzed on-site by TEG, and 3 samples were sent to Kiff Analytical. Five samples showing free product were not analyzed. The analytical data presented in **Table 3** and **Figure 6** indicate the following:

- The highest concentration of TPH-mo and TPH-d in groundwater was reported from sample SB13-W (sampled at 18 ft bgs, the first encountered water level). This sample contained 5,800,000 µg/L TPH-d and 3,000,000 µg/L TPH-mo.
- The sample from SB24-W reported the second highest concentrations with 430,000 µg/L TPH-d and 210,000 µg/L TPH-mo in groundwater.
- Low concentrations of tetrachloroethene (PCE) and trichloroethene (TCE) were detected across the southern half of the site and across the intersection to the west (**Figure 6** and **Table 3**). TCE was detected in five grab groundwater samples at concentrations ranging from 1.5 µg/L (boring SB-23) to 16 µg/L (boring SB-10). PCE was detected in the grab groundwater samples from borings SB-7 and SB-21 (water from 17 foot depth) at 6.6 and 0.5 µg/L, respectively.
- Low concentrations of MTBE (methyl tertiary butyl ether) and the BTEX components toluene and total xylenes were detected in the grab groundwater samples collected from boring SB-21 at a depth of 26 feet bgs. Low concentrations of MTBE were detected in SB-13 at a depth of 26 ft bgs.

Figure 14 and **Figure 15** show the occurrence of known free product along with TPH-mo and TPH-d concentrations, respectively. The limits of the plume were not fully determined,

due to the limits of this investigation. The western (front of plume) and northern (side of plume) edges of the plume have not been located. Fieldwork stopped when the drilling reached the budgetary and geographic limits of the permitted investigation. Additional subsurface investigation will require access agreements from private landowners, additional drilling permits from the Alameda County Public Works Agency, and encroachment permits from the City of Oakland.

Currently the contaminant mass of the plume cannot be calculated, as the horizontal and vertical extent of contamination has not been fully determined.

4.6 Historical Underground Utilities

Figure 16 shows the location of the historic sewer lines. Based on the information on the City of Oakland Public Works Department Map, a sewer ran across the site in-line with Lisbon Avenue and then joined the main sewer line that ran northwest to southeast along East 11th Street. This map shows that the sewer line southeast from the corner of Lisbon Avenue and East 11th Street was closed (abandoned); however, it is unknown whether the pipe was removed. The elevation of the sewer line was approximately 13.5 feet Above Mean Sea Level (AMSL); the manhole at ground surface is 29.31 ft AMSL. Thus, the line is at 13.3 ft bgs. It is possible that the 12" vitreous clay pipe was not removed and has provided a preferential migration path along East 11th Street. A detailed SCM table is attached as **Appendix G**.

5 SITE CONCEPTUAL MODEL

A former (possibly concrete) underground fuel storage tank (50 ft long by 10 ft wide) was installed to an unknown depth. Leaking free product from the tank spread through the shallow soil to the groundwater, which flows to the west, based on the apparent plume direction (**Figure 14** and **Figure 15**). Groundwater level changes smeared the free product on the soil in the 8- to 12-foot bgs range. The root holes and soil fissures served as preferential pathways through the very low permeability clayey soil. In the deeper zones the relatively more permeable clayey gravels and clayey sands also served as preferential pathways. Another pathway for migration may have been the historic sewer lines.



6 RECOMMENDATIONS FOR ADDITIONAL SOIL AND GROUNDWATER INVESTIGATION

The extent of soil and groundwater contamination has not been fully determined. Clearwater recommends that the following actions be taken, toward the ultimate goal of remediating the contaminant plume and obtaining site closure:

- Further define the extent of on-site and off-site contamination. The currently available data indicate that the free product plume may extend underneath the loading dock, adjacent warehouse, site offices, and off-site residences.
- Evaluate the risks associated with soil vapor intrusion into the on-site and off-site buildings and residences;
- Perform an on-site and off-site soil vapor survey (Gore-Sorber[®] survey or similar) to help define the lateral extent of contamination;
- Define the vertical and lateral extent of contamination off-site. In particular, define the extent of contamination toward the north, along 11th Street and under the residential area west of the intersection of Lisbon Avenue and 11th Street.
- Establish a network of on-site and off-site groundwater monitoring wells and implement a Groundwater Monitoring Program;
- Establish Remediation Goals for obtaining site closure with ACEH;
- Develop remedial options;
- Implement the remedial options.

6.1 Acquisition of UST Records

Clearwater has attempted to obtain UST records from a previous owner, Del Monte Corporation, without success. Clearwater suggests that these records would be useful to further this investigation. Such records would include documents such as site maps, utility maps, permit documents, and building plans. The information available at the City of Oakland is incomplete.



7 LICENSED PROFESSIONALS

In-house licensed professionals direct all projects. These professionals, including geologists or engineers, shall be guided by the highest standards of ethics, honesty, integrity, fairness, personal honor, and professional conduct. To the fullest extent possible, the licensed professional shall protect the public health and welfare and property in carrying out professional duties. In the course of normal business, recommendations by the in-house professional may include the use of equipment, services, or products in which the Company has an interest. Therefore, the Company is making full disclosure of potential or perceived conflicts of interest to all parties.

8 CERTIFICATION

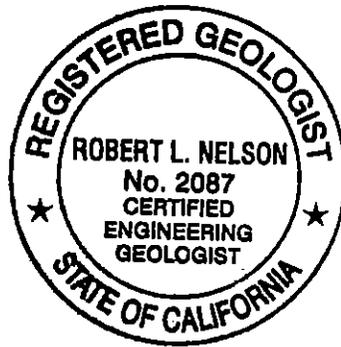
This report was prepared under the supervision of a State of California-licensed Professional Geologist at Clearwater Group. All statements, conclusions, and recommendations are based solely upon published results from previous consultants, field observations by Clearwater Group, and laboratory analysis performed by California DHS-certified laboratories related to the work performed by Clearwater Group. Information and interpretation presented herein are for the sole use of the client and regulating agency. A third party should not rely upon the information and interpretation contained in this document. The service performed by Clearwater Group has been conducted in a manner consistent with the level of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the area of the site. No other warranty, expressed or implied, is made.

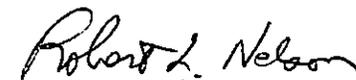
Sincerely,
CLEARWATER GROUP

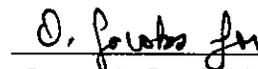
Prepared by:


Matthew Ryder-Smith
Environmental Scientist

Reviewed by:




Robert L. Nelson, P.G. #6270, CEG #2087
Senior Geologist


James A. Jacobs, P.G. #4815, CHG #88
Chief Hydrogeologist

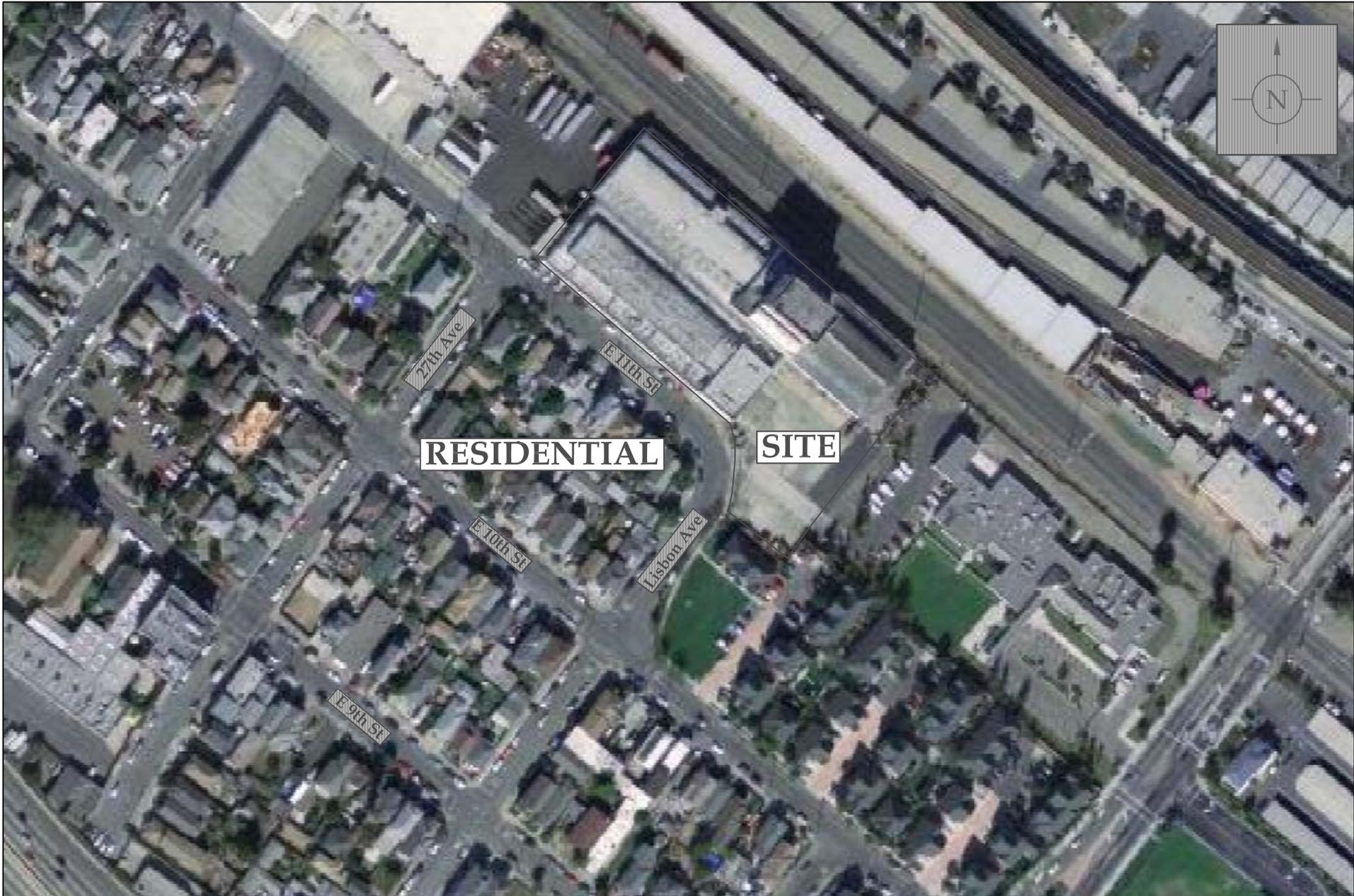
FIGURES



SITE VICINITY MAP
 Lucasey Manufacturing
 2744 E 11th Street
 Oakland, California

CLEARWATER GROUP

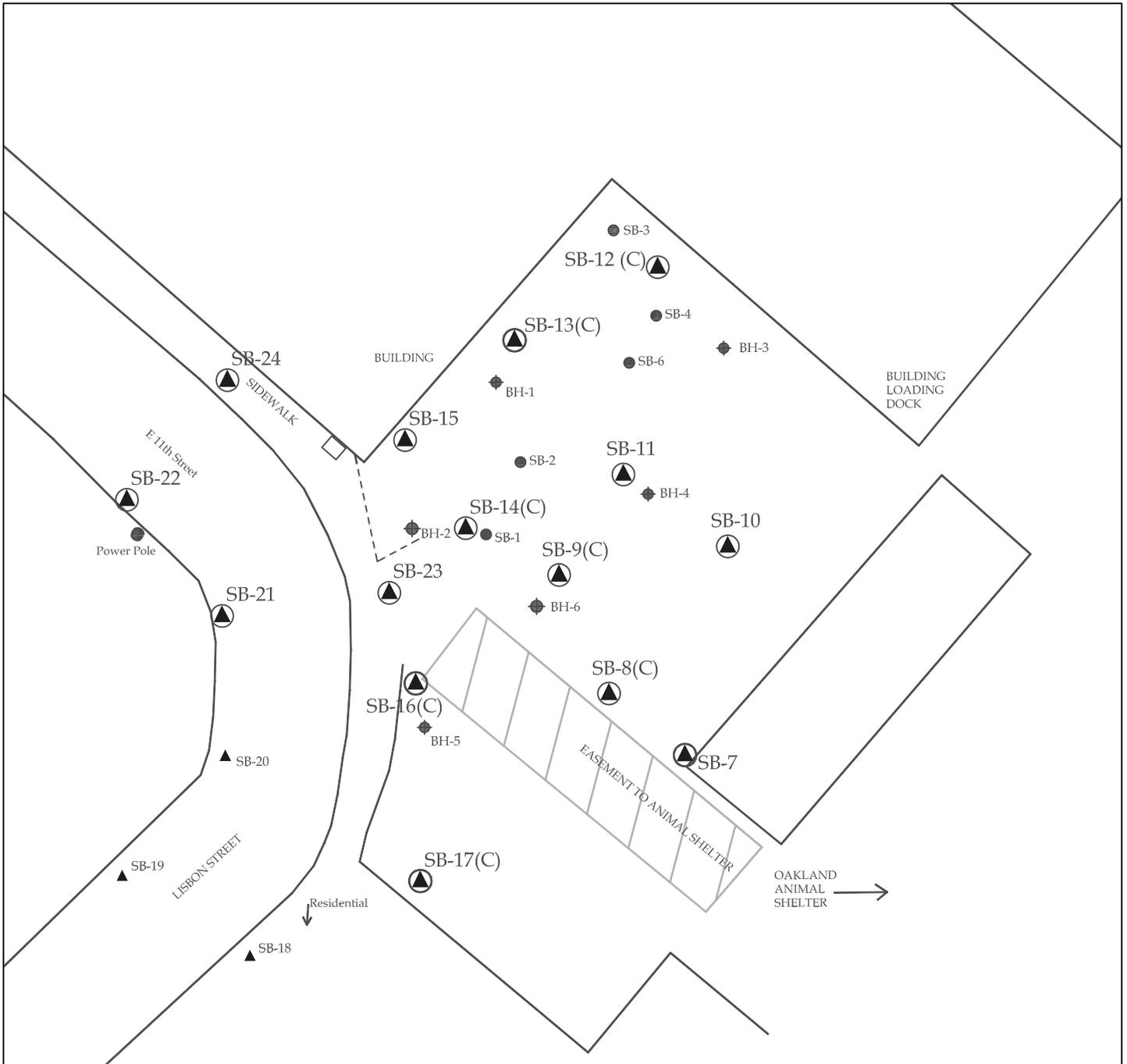
Project No. FB022G	Figure Date 4/06	Figure 1
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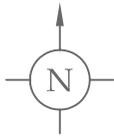
SITE LOCALITY PLAN
 Lucasey Manufacturing
 2744 East 11th Street
 Oakland, California

CLEARWATER GROUP

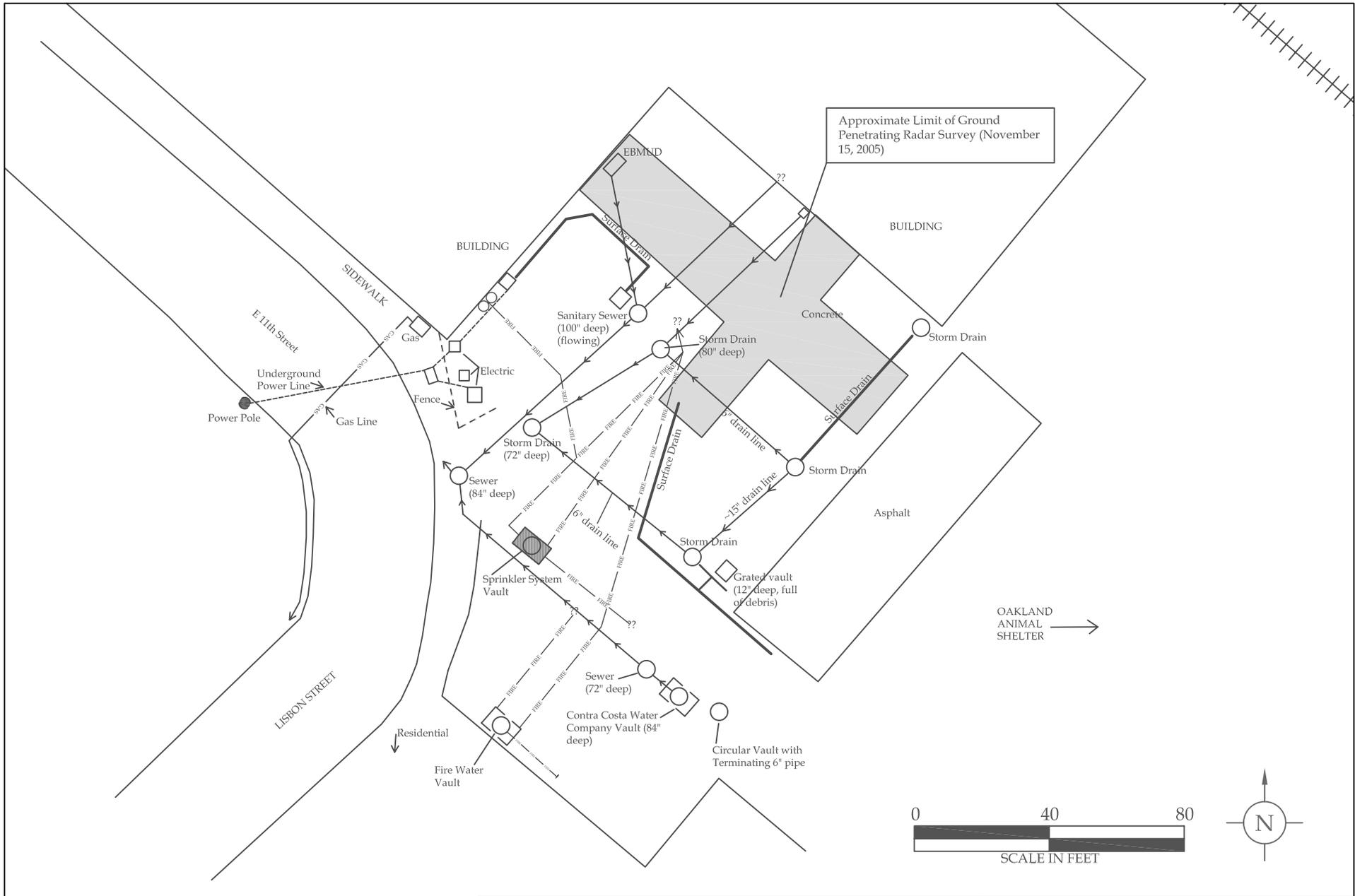
Project No. FB022G	Figure Date 02/20	Figure 2
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LEGEND	
	Clearwater Soil Boring Locations
	Proposed Soil Boring Locations (Not Drilled and Sampled)
	Soil Electrical Conductivity Logs Performed
	Terra Firma Soil Borings 7/9/2005
	BH-5
	AEI Soil Borings 8/31/2004
	SB-1



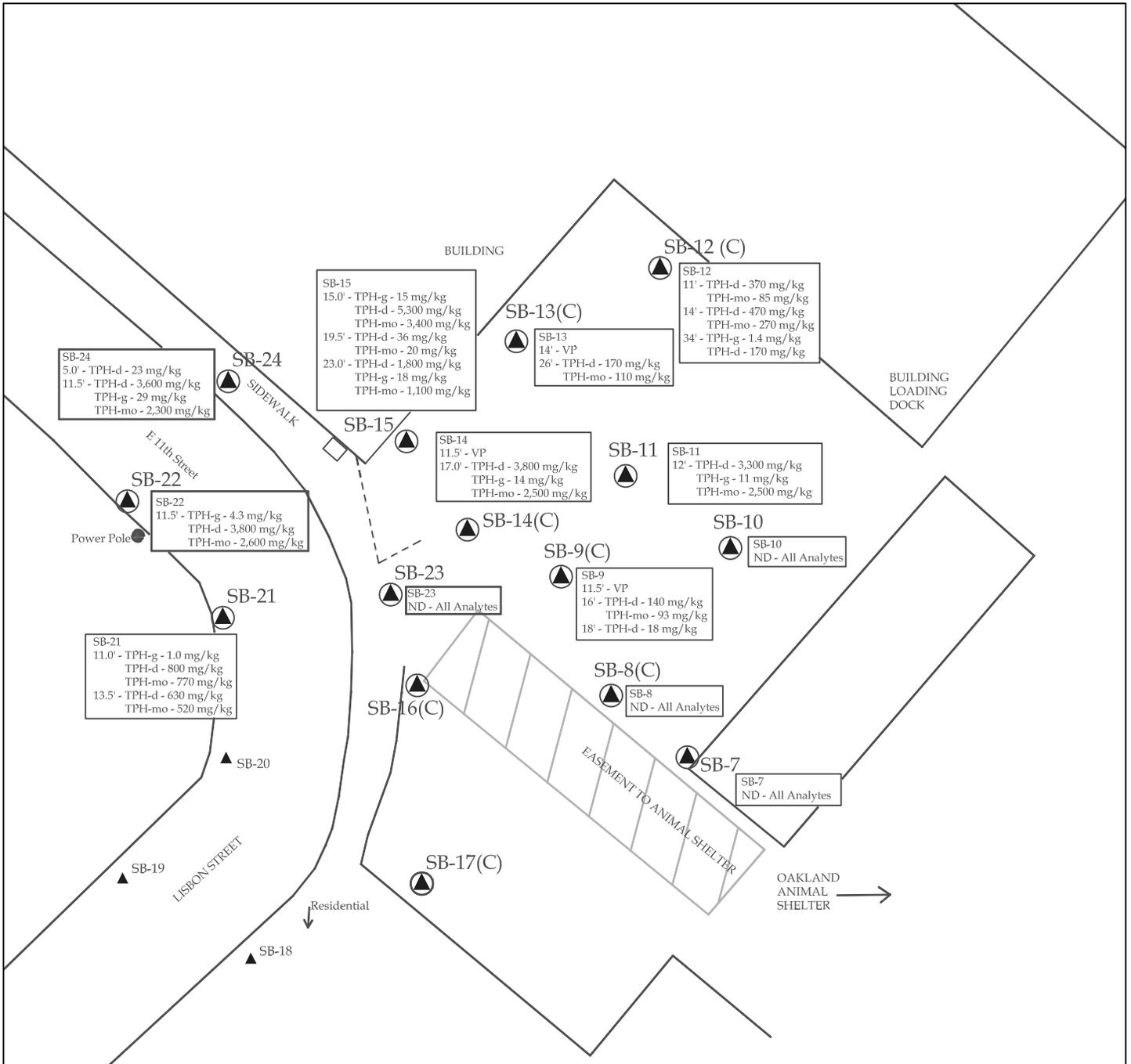
SITE PLAN Lucasey Manufacturing 2744 East 11th Street Oakland, California	CLEARWATER GROUP		
	Project No. FB022G	Figure Date 2/07	Figure 3



LEGEND	
	Fire-water Line
	PG&E Gas Line
	Manhole

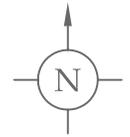
UTILITY SURVEY MAP SHOWING GPR
SURVEY AREA
 Lucasey Manufacturing
 2744 East 11th Street
 Oakland, California

CLEARWATER GROUP		
Project No. FB022G	Figure Date 02/07	Figure 4



LEGEND

- ▲ Clearwater Soil Boring Locations
- ▲ Proposed Soil Boring Locations (Not Drilled and Sampled)
- C Soil Electrical Conductivity Logs Performed
- ND Not Detected
- TPH-d Total Petroleum Hydrocarbons as Diesel
- TPH-mo Total Petroleum Hydrocarbons as Motor Oil
- mg/kg milligrams per kilogram
- VP Not Analyzed due to Visible Free Product



SOIL SAMPLE ANALYTICAL RESULTS

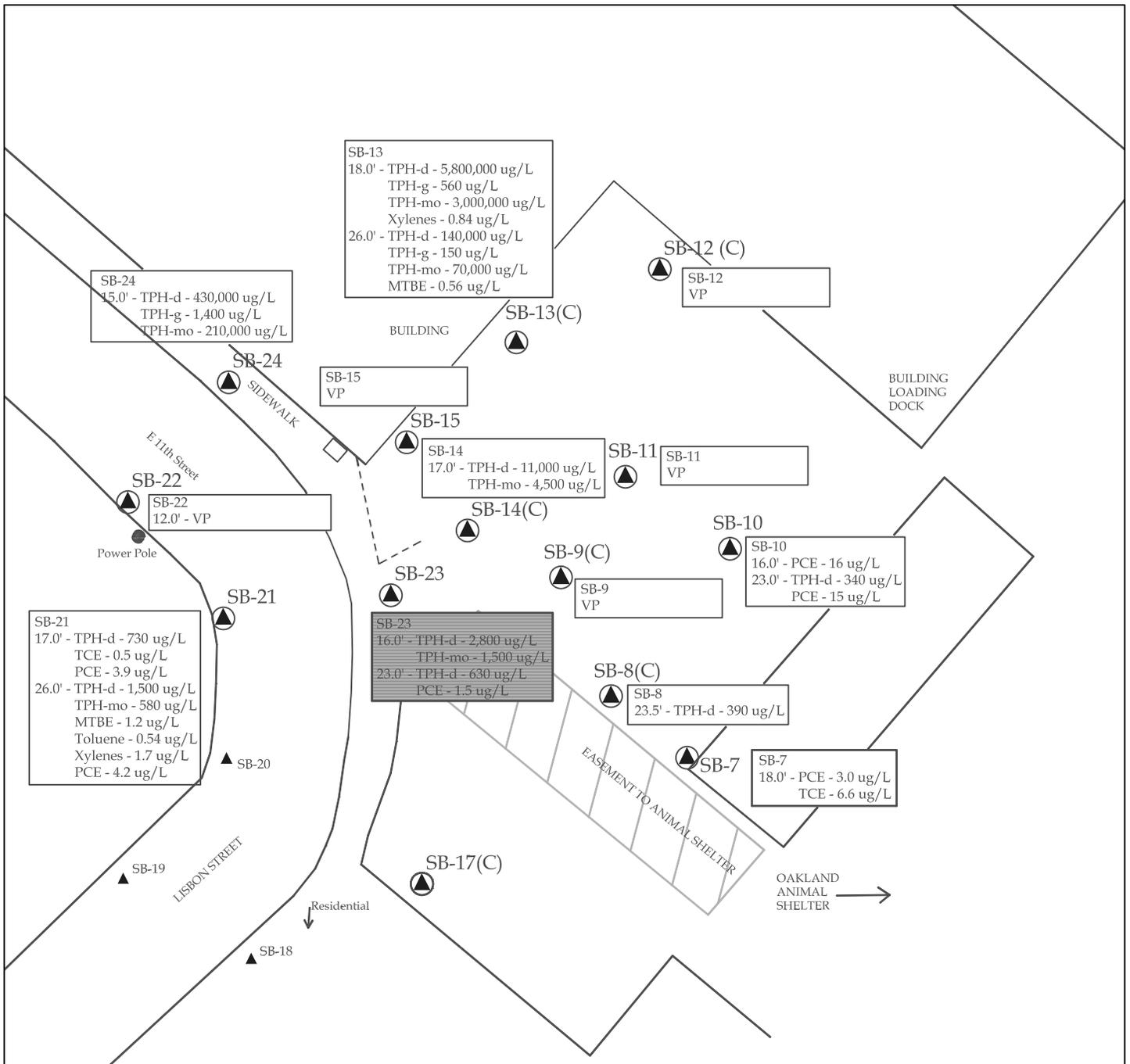
Lucasey Manufacturing
2744 East 11th Street
Oakland, California

CLEARWATER GROUP

Project No.
FB022G

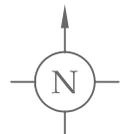
Figure Date
2/07

Figure
5



LEGEND

- ▲ Clearwater Soil Boring Locations
- ▲ Proposed Soil Boring Locations (Not Drilled and Sampled)
- C Soil Electrical Conductivity Logs Performed
- ND Not Detected
- TPH-d Total Petroleum Hydrocarbons as Diesel
- TPH-mo Total Petroleum Hydrocarbons as Motor Oil
- ug/L micrograms per liter
- VP Not Analyzed due to Visible Free Product



GRAB GROUNDWATER SAMPLE ANALYTICAL RESULTS

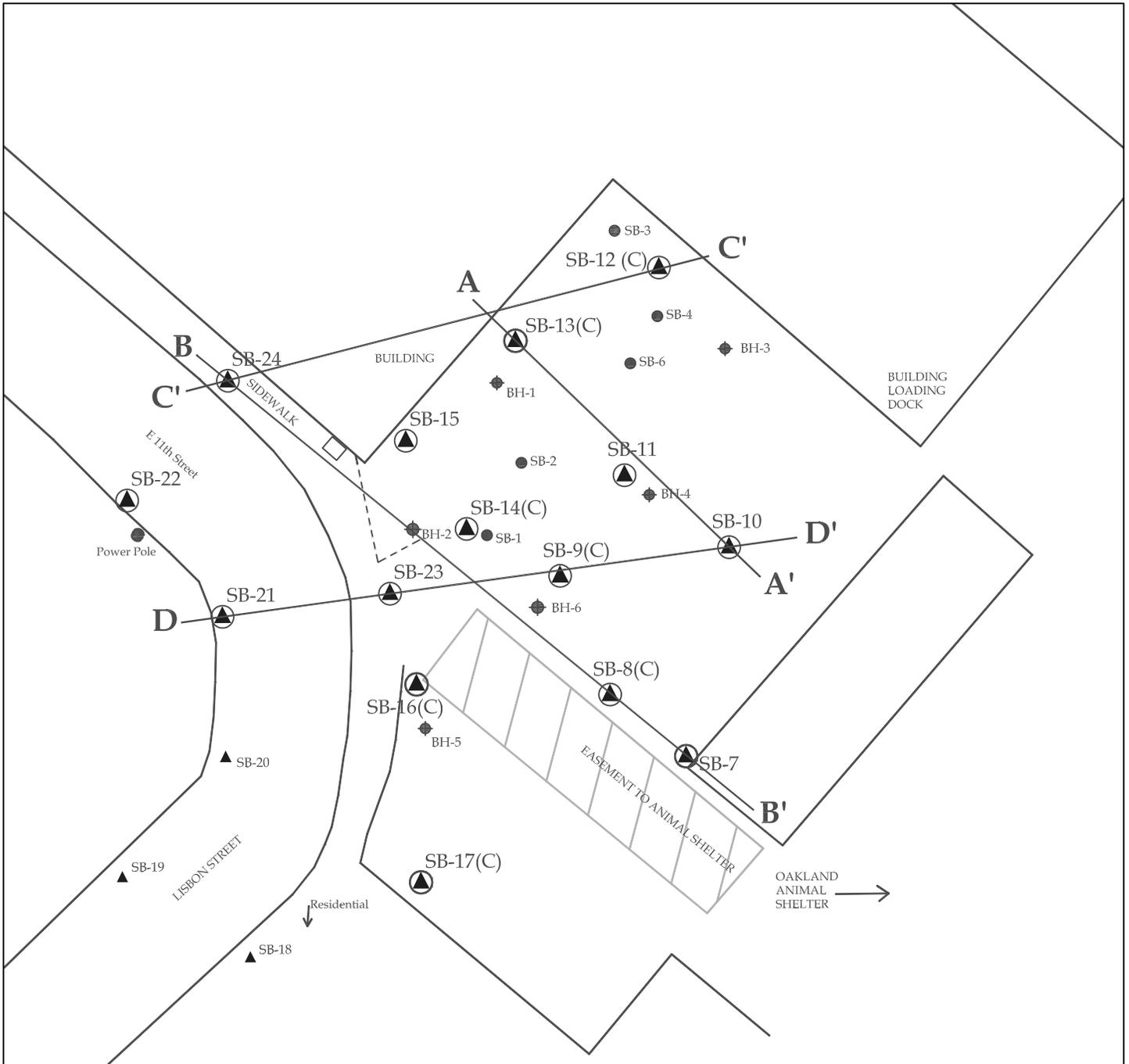
Lucasey Manufacturing
 2744 East 11th Street
 Oakland, California

CLEARWATER GROUP

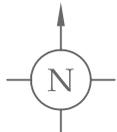
Project No.
FB022G

Figure Date
2/07

Figure
6



LEGEND	
	Clearwater Soil Boring Locations
	Proposed Soil Boring Locations (Not Drilled and Sampled)
	Soil Electrical Conductivity Logs Performed
	Terra Firma Soil Borings 7/9/2005
	BH-5
	AEI Soil Borings 8/31/2004
	SB-1



Cross Section

Lucasey Manufacturing
 2744 East 11th Street
 Oakland, California

CLEARWATER GROUP

Project No.
FB022G

Figure Date
2/07

Figure
7

Building

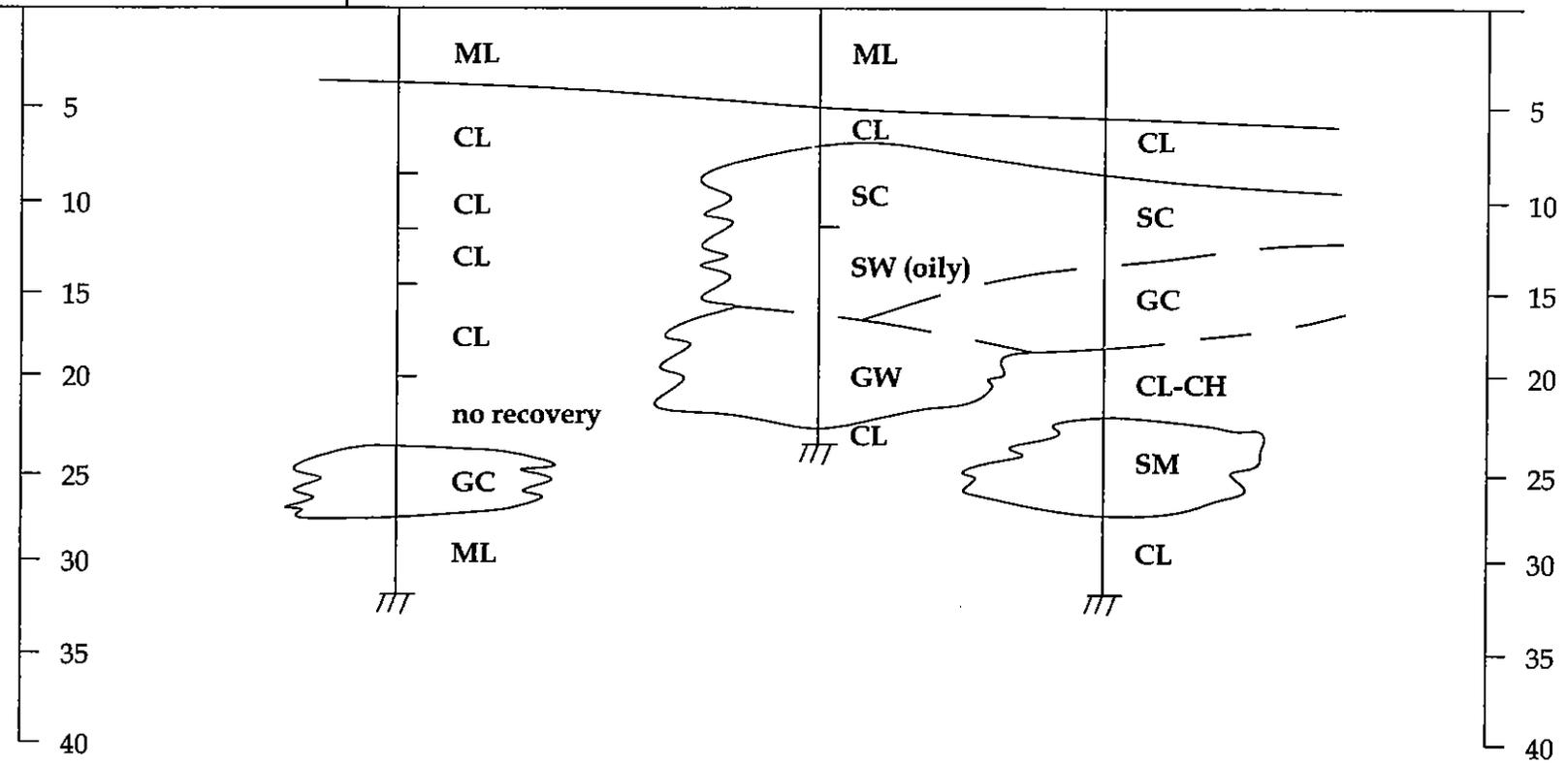
A

SB-13

SB-11

A'

SB-10



Legend

- GW - Well Graded Gravel
- GM - Silty Gravel
- GC - Clayey Gravel
- SM - Silty Sand
- SC - Clayey Sand
- ML - Silt, Clayey Silt
- CL - Lean Clay
- CH - Fat Clay

Cross Section A-A'

Lucasey Manufacturing
 2744 East 11th Street
 Oakland, California

CLEARWATER GROUP

Project No. FB022G	Figure Date 2/07	Figure 8
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B

B'

SB-24

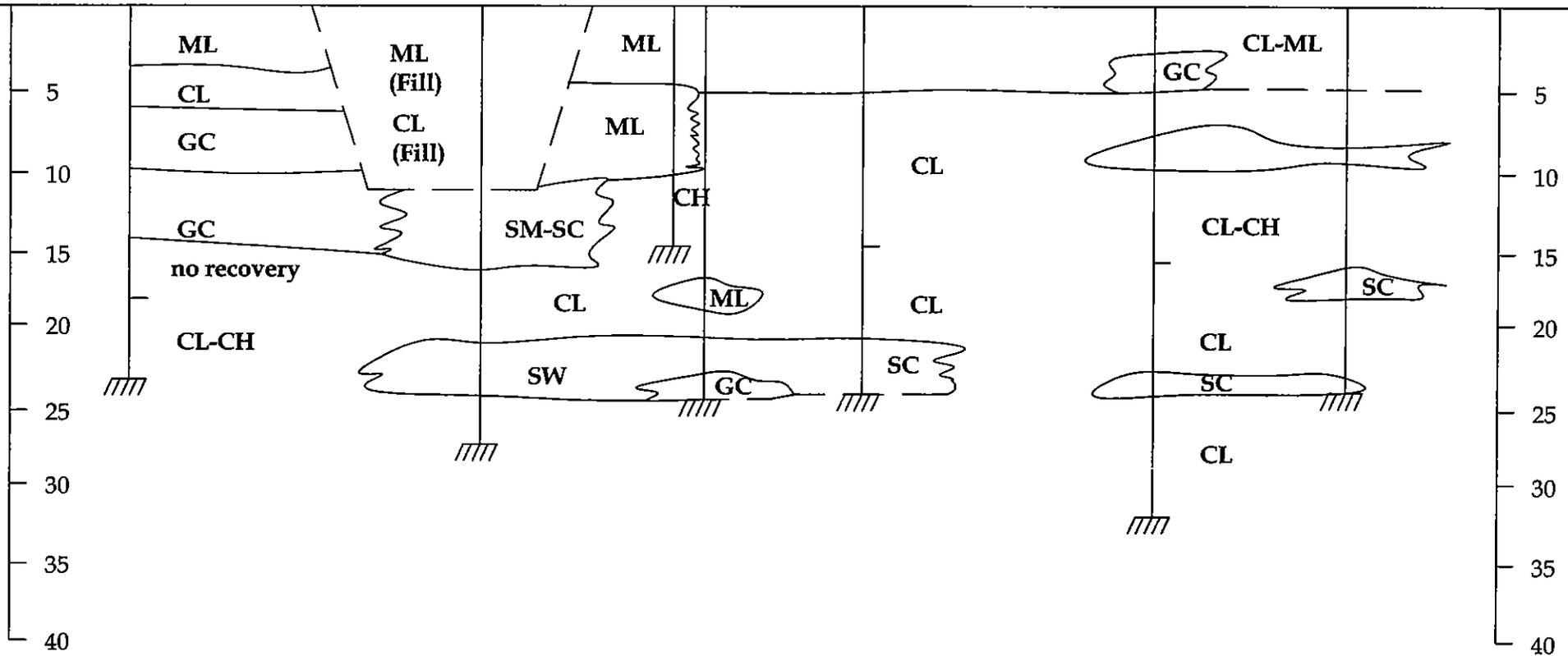
SB-15

BH-2 SB-14

SB-9

SB-8

SB-7



Legend

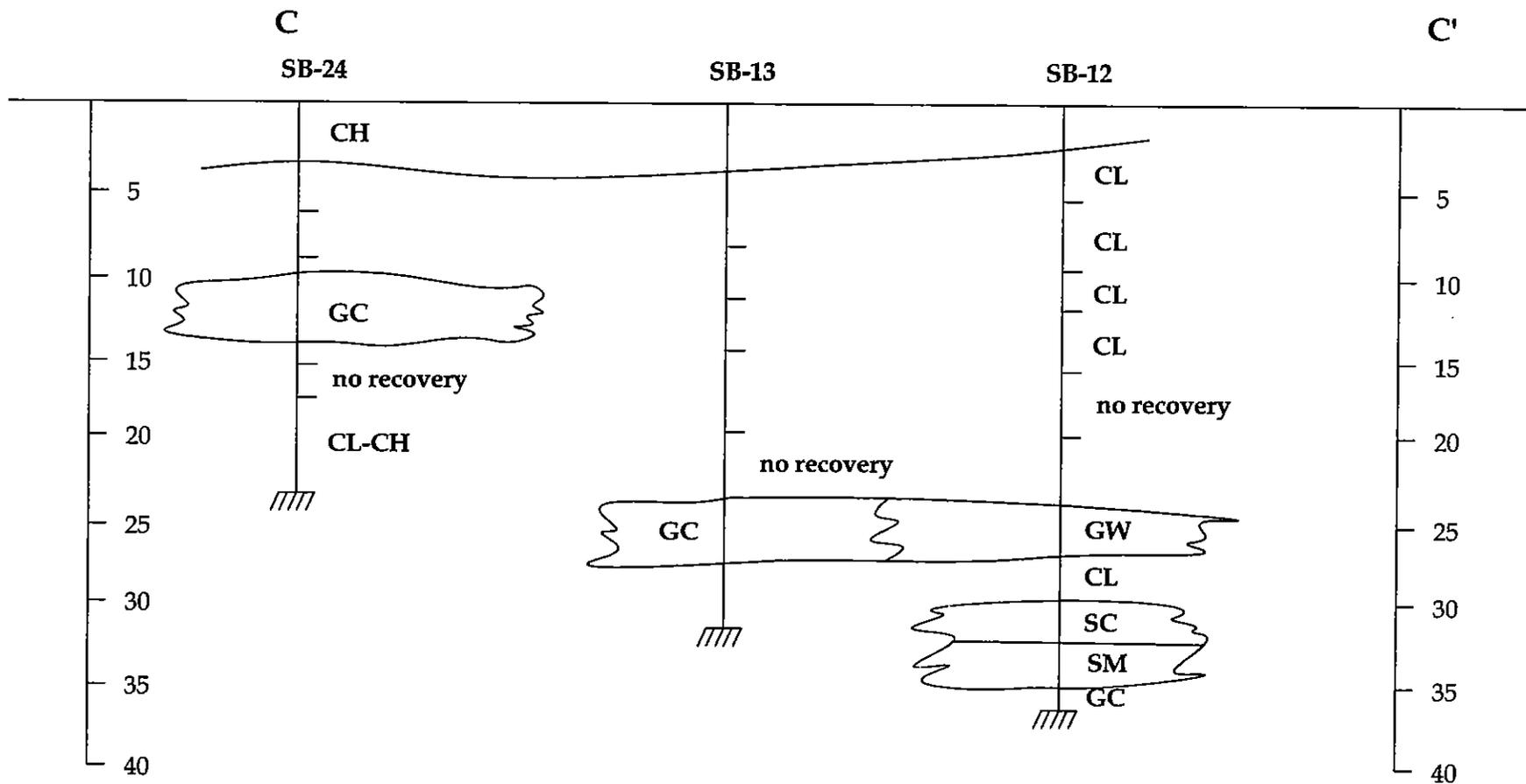
- GW - Well Graded Gravel
- GM - Silty Gravel
- GC - Clayey Gravel
- SM - Silty Sand
- SC - Clayey Sand
- ML - Silt, Clayey Silt
- CL - Lean Clay
- CH - Fat Clay

Cross Section B-B'

Lucasey Manufacturing
 2744 East 11th Street
 Oakland, California

CLEARWATER GROUP

Project No. FB022G	Figure Date 2/07	Figure 9
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Legend

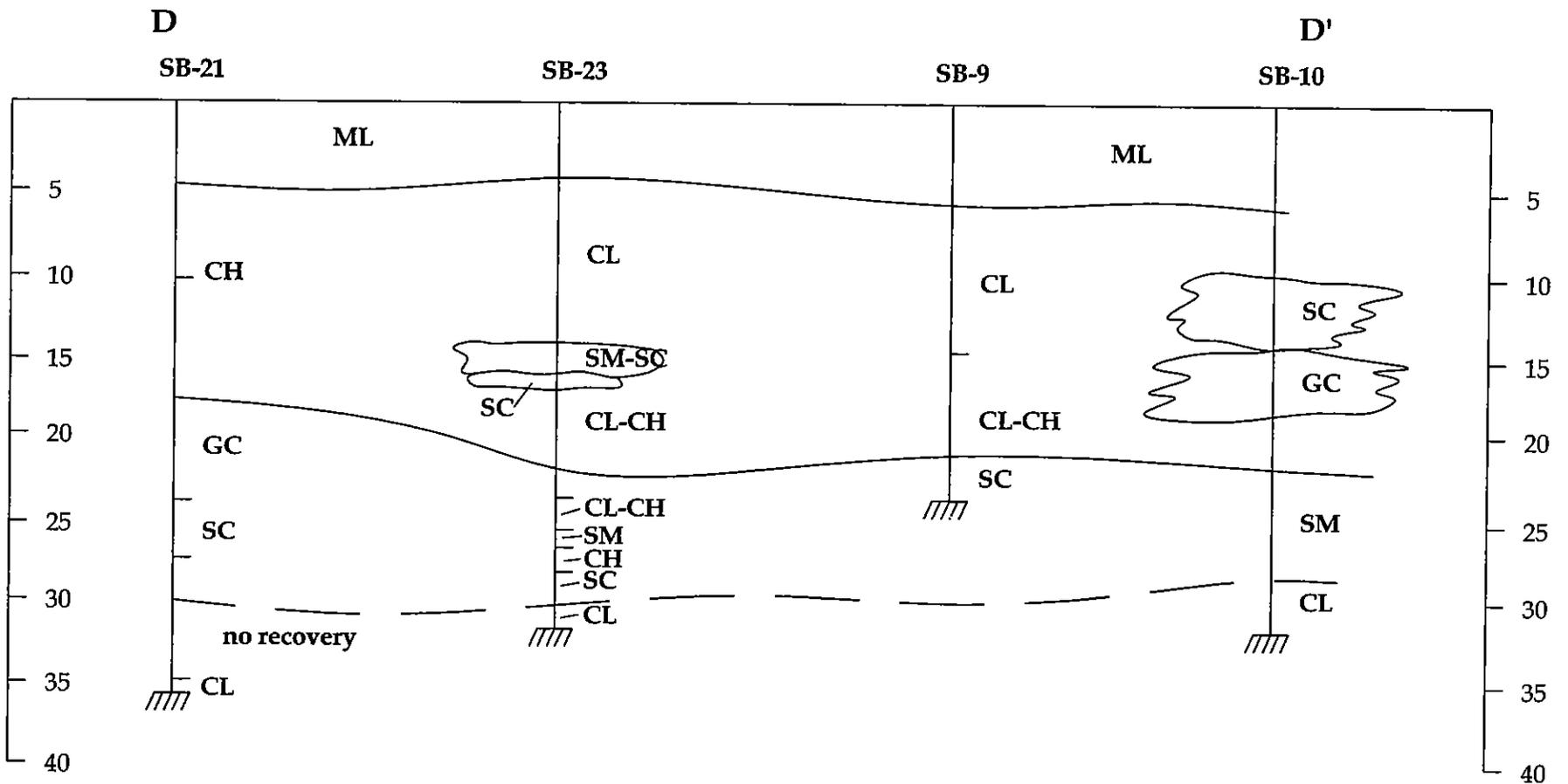
- GW - Well Graded Gravel
- GM - Silty Gravel
- GC - Clayey Gravel
- SM - Silty Sand
- SC - Clayey Sand
- ML - Silt, Clayey Silt
- CL - Lean Clay
- CH - Fat Clay

Cross Section C-C'

Lucasey Manufacturing
 2744 East 11th Street
 Oakland, California

CLEARWATER GROUP

Project No. FB022G	Figure Date 2/07	Figure 10
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Legend

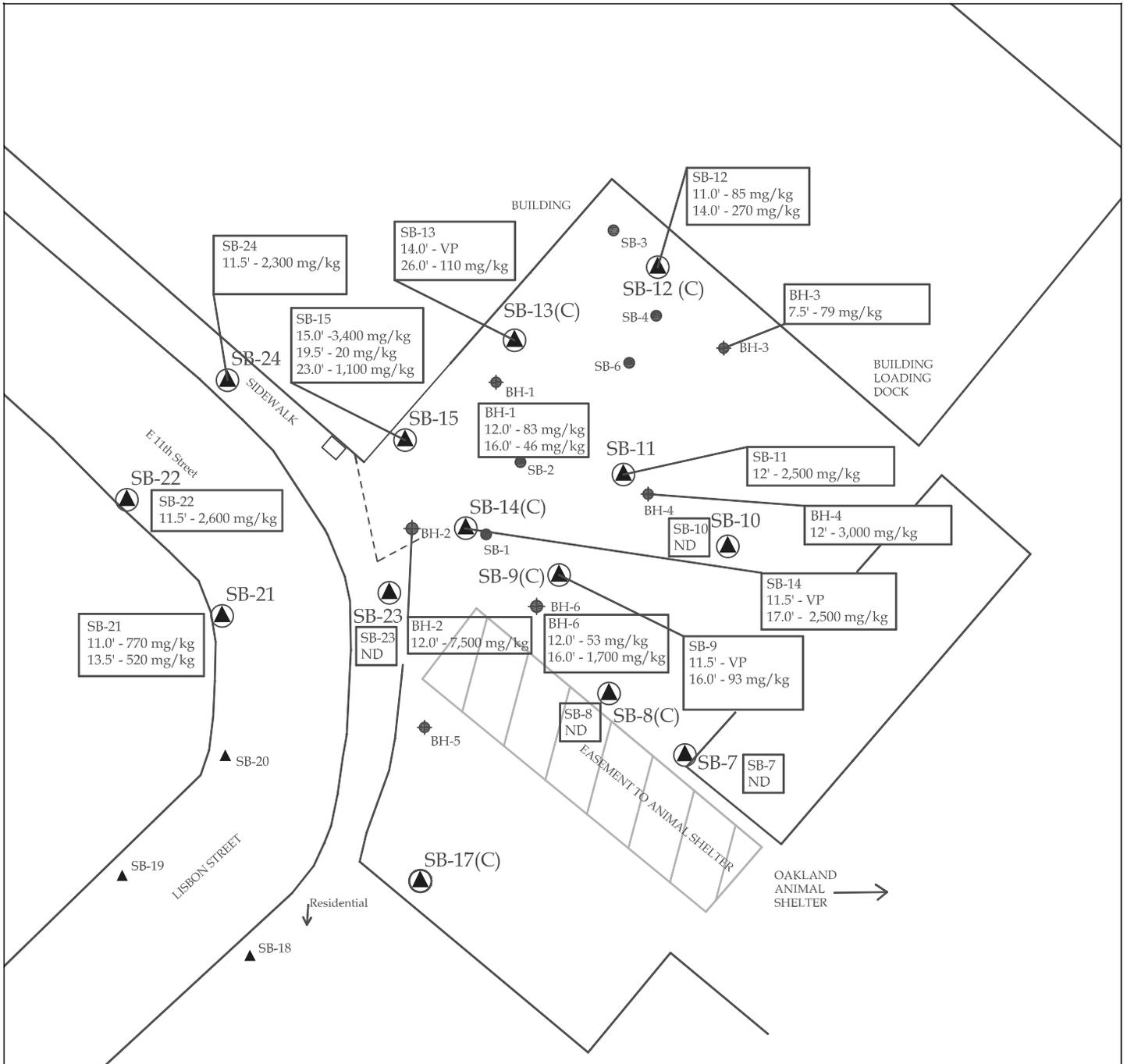
- | | |
|-------------------------|------------------------|
| GW - Well Graded Gravel | SC - Clayey Sand |
| GM - Silty Gravel | ML - Silt, Clayey Silt |
| GC - Clayey Gravel | CL - Lean Clay |
| SM - Silty Sand | CH - Fat Clay |

Cross Section D-D'

Lucasey Manufacturing
 2744 East 11th Street
 Oakland, California

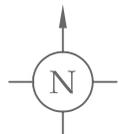
CLEARWATER GROUP

Project No. FB022G	Figure Date 2/07	Figure 11
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LEGEND

- ▲ Clearwater Soil Boring Locations
- ▲ Proposed Soil Boring Locations (Not Drilled and Sampled)
- C Soil Electrical Conductivity Logs Performed
- ND Not Detected
- TPH-d Total Petroleum Hydrocarbons as Diesel
- TPH-mo Total Petroleum Hydrocarbons as Motor Oil
- mg/kg milligrams per kilogram
- VP Not Analyzed due to Visible Free Product
- ◆ BH-5 Terra Firma Soil Borings 7/9/2005
- SB-1 AEI Soil Borings 8/31/2004 (samples not analyzed)



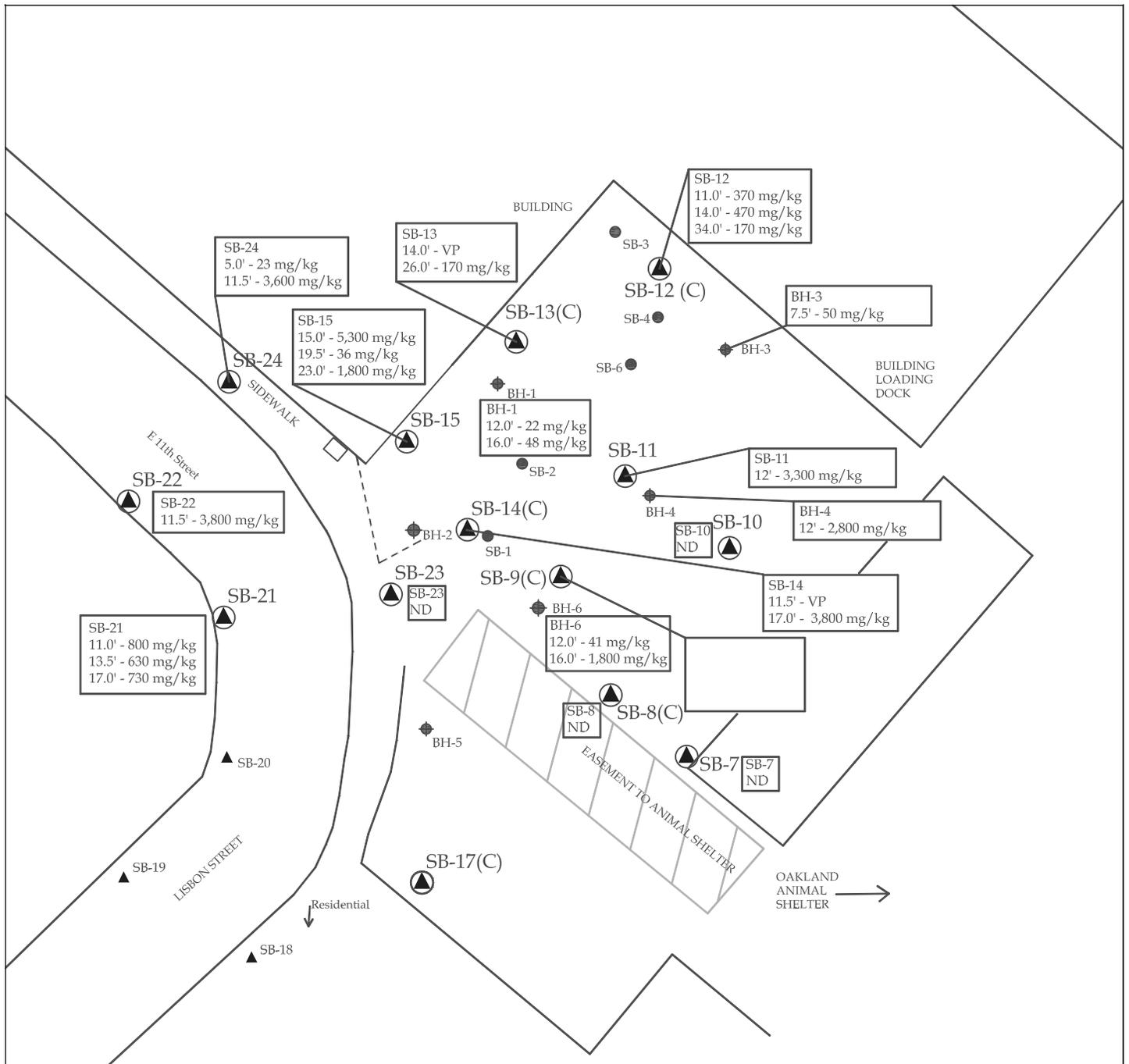
TPH-motor oil SOIL CONCENTRATIONS MAP (ALL INVESTIGATIONS)
 Lucasey Manufacturing
 2744 East 11th Street
 Oakland, California

CLEARWATER GROUP

Project No.
FB022G

Figure Date
2/07

Figure
12



LEGEND

- ▲ Clearwater Soil Boring Locations
- ▲ Proposed Soil Boring Locations (Not Drilled and Sampled)
- C Soil Electrical Conductivity Logs Performed
- ND Not Detected
- TPH-d Total Petroleum Hydrocarbons as Diesel
- TPH-mo Total Petroleum Hydrocarbons as Motor Oil
- mg/kg milligrams per kilogram
- VP Not Analyzed due to Visible Free Product
- ◆ BH-5 Terra Firma Soil Borings 7/9/2005
- SB-1 AEI Soil Borings 8/31/2004 (samples not analyzed)

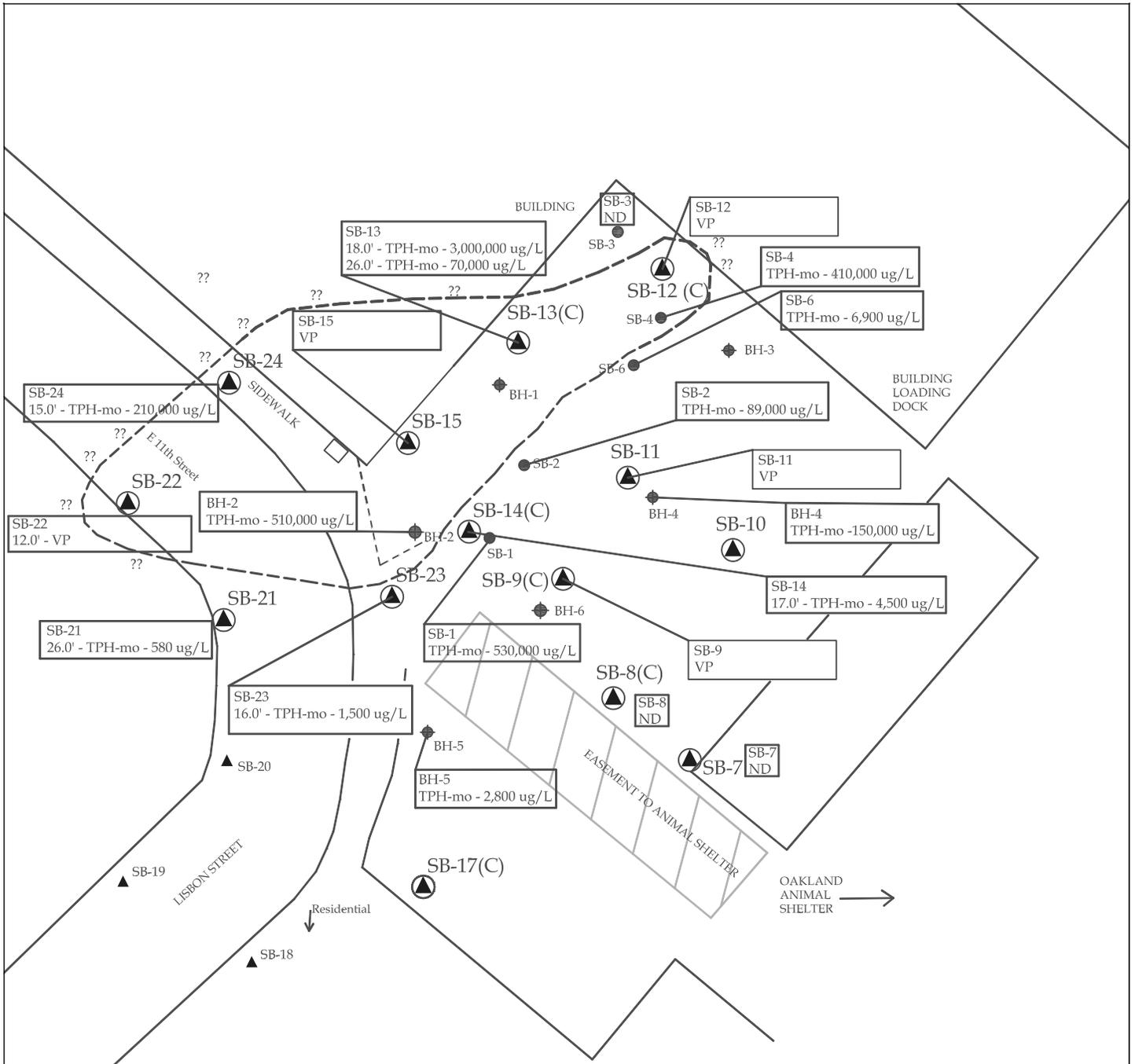


TPH-diesel SOIL CONCENTRATIONS MAP (ALL INVESTIGATIONS)

Lucasey Manufacturing
 2744 East 11th Street
 Oakland, California

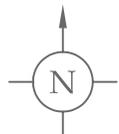
CLEARWATER GROUP

Project No. FB022G	Figure Date 2/07	Figure 13
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LEGEND

- ▲ Clearwater Soil Boring Locations
- ▲ Proposed Soil Boring Locations (Not Drilled and Sampled)
- C Soil Electrical Conductivity Logs Performed
- ND Not Detected
- TPH-d Total Petroleum Hydrocarbons as Diesel
- TPH-mo Total Petroleum Hydrocarbons as Motor Oil
- ug/L micrograms per liter
- VP Not Analyzed due to Visible Free Product
- ◆ BH-5 Terra Firma Soil Borings 7/9/2005
- SB-1 AEI Soil Borings 8/31/2004
- - - Estimated Free Product Boundary



TPH-motor oil GROUNDWATER PLUME MAP (ALL INVESTIGATIONS)

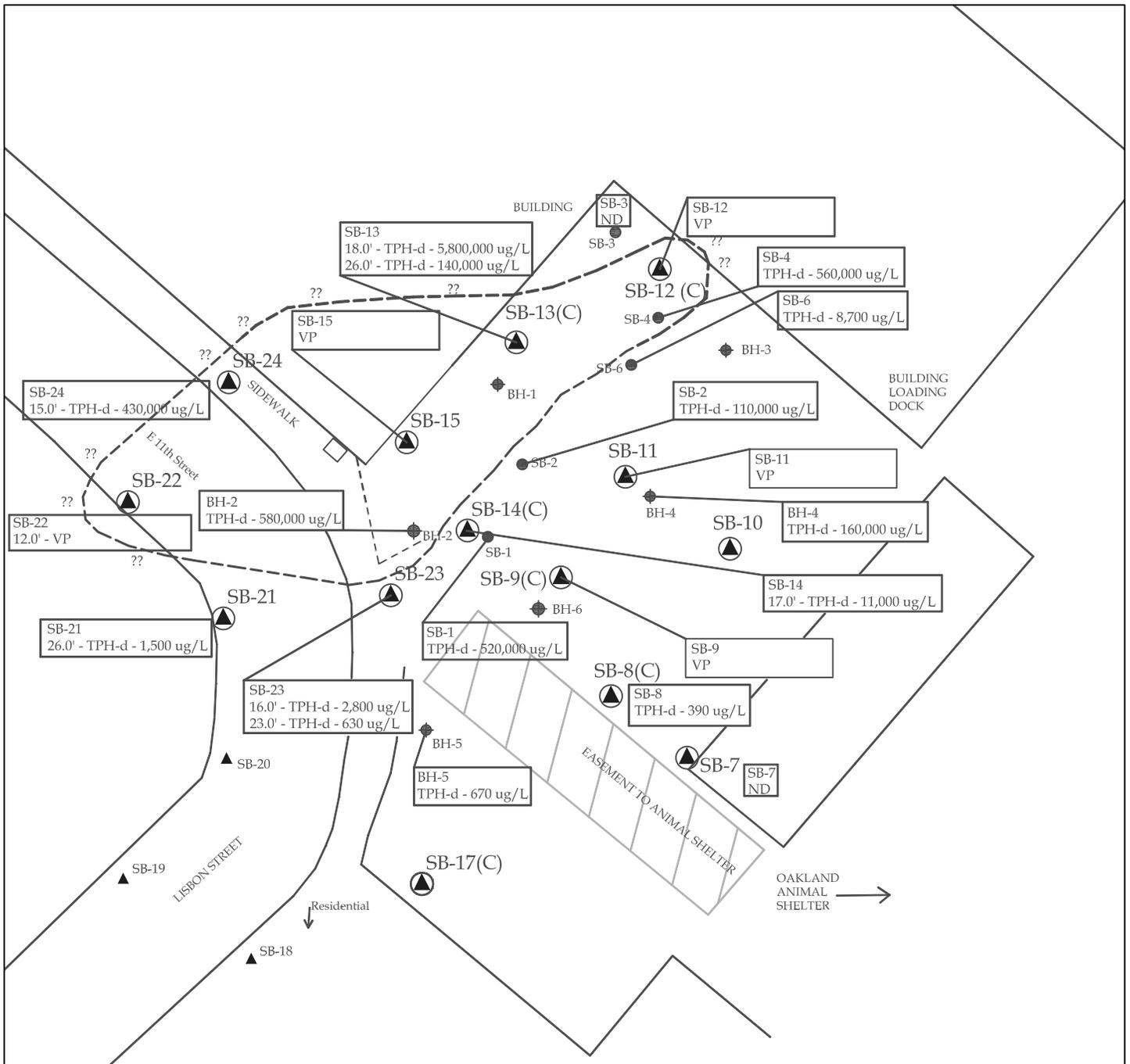
Lucasey Manufacturing
2744 East 11th Street
Oakland, California

CLEARWATER GROUP

Project No.
FB022G

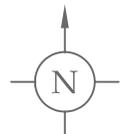
Figure Date
2/07

Figure
14



LEGEND

- ▲ Clearwater Soil Boring Locations
- ▲ Proposed Soil Boring Locations (Not Drilled and Sampled)
- C Soil Electrical Conductivity Logs Performed
- ND Not Detected
- TPH-d Total Petroleum Hydrocarbons as Diesel
- TPH-mo Total Petroleum Hydrocarbons as Motor Oil
- ug/L micrograms per liter
- VP Not Analyzed due to Visible Free Product
- ◆ BH-5 Terra Firma Soil Borings 7/9/2005
- SB-1 AEI Soil Borings 8/31/2004
- Estimated Free Product Boundary



TPH-diesel GROUNDWATER PLUME MAP (ALL INVESTIGATIONS)

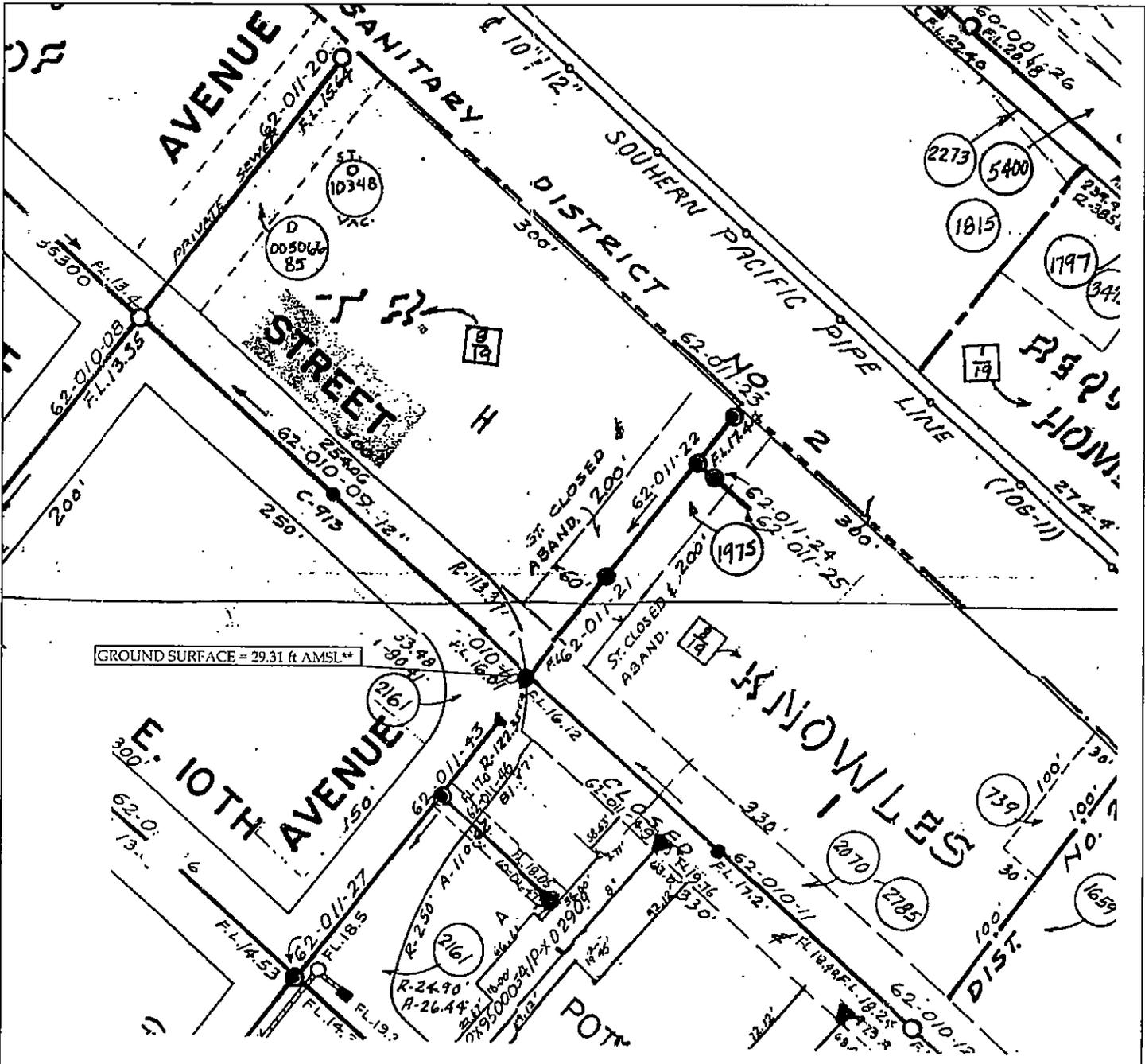
Lucasey Manufacturing
 2744 East 11th Street
 Oakland, California

CLEARWATER GROUP

Project No.
FB022G

Figure Date
2/07

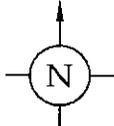
Figure
15



LEGEND

F.L. 16.12 Flow Line (16.12 ft Above Mean Sea Level)

**Data Source: USGS MAP - NED CONTIGUOUS U. S. 1/3W ARC SECOND ELEVATION DATA



CITY OF OAKLAND PUBLIC WORKS DEPARTMENT - SEWER AND STORM DRAIN LINES
 Lucasey Manufacturing
 2744 East 11th Street
 Oakland, California

CLEARWATER GROUP

Project No. FB022G	Figure Date 2/07	Figure 16
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TABLES

Table 1 - Soil Boring Details

Lucasey Manufacturing
2744 East 11th Street
Oakland, CA

Boring No.	Date Drilled	Depth (ft bgs)	Electrical Conductivity Logging	Depth to Water* (ft bgs)
SB-7	1/10/2007	24	No	18
SB-8	1/10/2007	32	Yes - 24'	16
SB-9	1/9/2007	24	Yes - 24'	17.1
SB-10	1/10/2007	32	No	15
SB-11	1/10/2007	24	No	12
SB-12	1/8/2007	36	Yes - 32.5'	9
SB-13	1/8/2007	32	Yes - 24.0'	24
SB-14	1/12/2007	24	Yes - 24.0'	17
SB-15	1/9/2007	28	No	16
SB-16	12/8/2006	27.5	Yes - 27.5'	^
SB-17	12/8/2006	36	Yes - 36'	^
SB-21	1/11/2007	36	No	17
SB-22	1/12/2007	32	No	15.5
SB-23	1/11/2007	32	No	16
SB-24	1/12/2007	24	No	15

* First encountered water

^ EC log only, no soil logging conducted

TABLE 2. SOIL SAMPLE ANALYTICAL RESULTS
 2744 East 11th Street, Oakland, California 94601
 Clearwater Group Project No. FB022G

Sample/ Borehole ID	Soil Sampling Interval (ft bgs)	Sample Date (mmddyy)	TPH-d (mg/Kg)	TPH-g (mg/Kg)	TPH-M (mg/Kg)	MTBE (ug/Kg)	Benzene (ug/Kg)	Toluene (ug/Kg)	Ethylbenzene (ug/Kg)	Total Xylenes (ug/Kg)	EDB (ug/Kg)	1,2-DCA (ug/Kg)	Trichloroethene (ug/Kg)	Tetrachloroethene (ug/Kg)	Results from
SB7-5	5	1/10/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	TEG Mobile Lab
SB7-17.5	17.5	1/11/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	TEG Mobile Lab
SB7-23	23	1/11/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	TEG Mobile Lab
SB8-5	5	1/10/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB8-15	15	1/10/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB8-23.5	23.5	1/10/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB8-26.5	26.5	1/10/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB9-5	5	1/09/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB9-10	10	1/09/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB9-11.5	11.5	1/09/2007	VP												
SB9-16	16	1/22/2007	140	<1.0	93	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	Kiff
SB9-18	18	1/09/2007	18	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB9-22	22	1/09/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB10-5	5	1/10/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB10-12	12	1/10/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB10-23	23	1/10/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB11-5	5	1/09/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB11-12	12	1/19/2007	3300	11	2500	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	Kiff
SB11-22	22	1/09/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB11-23.5	23.5	1/09/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB12-5	5	1/08/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB12-11	11	1/08/2007	370	ND	85	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB12-14	14	1/19/2007	470	<1.0	270	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	Kiff
SB12-26	26	1/08/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB12-34	34	1/08/2007	170	1.4	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB13-5	5	1/08/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB13-10	10	1/08/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB13-14	14	1/08/2007	VP												
SB13-18	18	1/08/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB13-26	26	1/22/2007	170	<1.0	110	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	Kiff
SB13-30	30	1/08/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB14-10.5	10.5	1/12/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB14-11.5	11.5	1/12/2007	VP												
SB14-13.5	13.5	1/12/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB14-17	17	1/24/2007	3800	14	2500	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	Kiff
SB14-23	23	1/12/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB15-5	5	1/09/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB15-15	15	1/19/2007	5300	21	3400	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	Kiff
SB15-19.5	19.5	1/22/2007	36	<1.0	20	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	Kiff
SB15-23	23	1/19/2007	1800	18	1100	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	Kiff
SB15-27	27	1/09/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB21-5	5	1/11/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB21-10	10	1/11/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB21-11	11	1/19/2007	800	1	770	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	Kiff

TABLE 2. SOIL SAMPLE ANALYTICAL RESULTS

2744 East 11th Street, Oakland, California 94601

Clearwater Group Project No. FB022G

Sample/ Borehole ID	Soil		TPH-d (mg/Kg)	TPH-g (mg/Kg)	TPH-M (mg/Kg)	MTBE (ug/Kg)	Benzene (ug/Kg)	Toluene (ug/Kg)	Ethylbenzene (ug/Kg)	Total Xylenes (ug/Kg)	EDB (ug/Kg)	1,2-DCA (ug/Kg)	Trichloroethene (ug/Kg)	Tetrachloroethene (ug/Kg)	Results from
	Sampling Interval (ft bgs)	Sample Date (mmddyy)													
SB21-13.5	13.5	1/19/2007	630	<1.0	520	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	Kiff
SB21-22	22	1/11/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB22-10	10	1/12/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB22-11.5	11.5	1/24/2007	3800	4.3	2600	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	Kiff
SB22-15	15	1/12/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB23-5	5	1/11/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	TEG Mobile Lab
SB23-15	15	1/11/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	TEG Mobile Lab
SB23-23	23	1/11/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	TEG Mobile Lab
SB23-29	29	1/11/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB24-5	5	1/12/2007	23	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab
SB24-11.5	11.5	1/19/2007	3600	29	2300	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	---	---	Kiff
SB24-18	18	1/12/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	---	---	TEG Mobile Lab

NOTES:

- TPH-d Total petroleum hydrocarbons as diesel by EPA Method 8015 (modified)
- TPH-g Total petroleum hydrocarbons as gasoline by EPA Method 8260B
- TPH-M Total petroleum hydrocarbons as motor oil by EPA Method 8260B
- BTEX Benzene, toluene, ethylbenzene, total xylenes by EPA Method 8260B
- MTBE Methyl tertiary butyl ether by EPA Method 8260B
- EDB Ethylene dibromide by EPA Method 8260B
- 1,2-DCA 1, 2-Dichloroethane by EPA Method 8260B
- mg/Kg Micrograms per liter
- ug/Kg Not detected in concentrations above laboratory reporting limit
- ND Not detected in concentrations above laboratory reporting limit
- Analysis not requested
- VP The sample contained visible product and therefore would report a high concentration of TPH. The sample was sent to the lab but not run.

TABLE 3. GROUNDWATER SAMPLE ANALYTICAL RESULTS

2744 East 11th Street, Oakland, California 94601

Clearwater Group Project No. FB022G

Sample/ Borehole ID	Sampling Depth (ft bgs)	Sample Date (mmddyy)	TPH-d (ug/L)	TPH-g (ug/L)	TPH-M (ug/L)	MTBE (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	EDB (ug/L)	1,2-DCA (ug/L)	Trichloroethene (ug/L)	Tetrachloroethene (ug/L)	Results from
SB7-W	18	1/11/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.6	3.0	TEG Mobile Lab
SB8-W	16	1/10/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	—	—	TEG Mobile Lab
SB8-W23.5	23.5	1/10/2007	390	ND	ND	ND	ND	ND	ND	ND	ND	ND	—	—	TEG Mobile Lab
SB9-W		1/9/2007	VP												
SB10-W16	16	1/10/2007	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	16	TEG Mobile Lab
SB10-W23	23	1/10/2007	340	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	15	TEG Mobile Lab
SB11-W		1/9/2007	VP												
SB12-W		1/8/2007	VP												
SB13-W	18	1/22/2007	5,800,000	560 J	3,000,000	<0.50	<0.50	<0.50	<0.50	0.84 J	<0.50	<0.50	—	—	Kiff
SB13-W2	26	1/22/2007	140,000	150	70,000	0.56	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	—	—	Kiff
SB14-W	17	1/12/2007	11,000	ND	4,500	ND	ND	ND	ND	ND	ND	ND	—	—	TEG Mobile Lab
SB15-W		1/9/2007	VP												
SB21-W17	17	1/11/2007	730	ND	ND	ND	ND	ND	ND	ND	ND	ND	0.5	3.9	TEG Mobile Lab
SB21-W26	26	1/11/2007	1,500	ND	580	1.2	ND	0.54	ND	1.7	ND	ND	ND	4.2	TEG Mobile Lab
SB22-W12		1/12/2007	VP												
SB23-W	16	1/11/2007	2,800	ND	1,500	ND	ND	ND	ND	ND	ND	ND	ND	ND	TEG Mobile Lab
SB23-W23	23	1/11/2007	630	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND	1.5	TEG Mobile Lab
SB24-W	15	1/23/2007	430,000	1400	210,000	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	—	—	Kiff

NOTES:

- TPH-d Total petroleum hydrocarbons as diesel by EPA Method 8015 (modified)
- TPH-g Total petroleum hydrocarbons as gasoline by EPA Method 8260B
- TPH-M Total petroleum hydrocarbons as motor oil by EPA Method 8260B
- BTEX Benzene, toluene, ethylbenzene, total xylenes by EPA Method 8260B
- MTBE Methyl tertiary butyl ether by EPA Method 8260B
- EDB Ethylene dibromide by EPA Method 8260B
- 1,2-DCA 1, 2-Dichloroethane by EPA Method 8260B
- ug/L Micrograms per liter
- NA Not analyzed
- ND Not detected in concentration above laboratory reporting limit
- Analysis not requested

J Repeated analysis by EPA Method 8260B yielded inconsistent results for Total Xylenes and TPH as Gasoline. Affected results are flagged with a "J" to indicate that they should be considered estimates. The highest concentration valid results were reported. Visual inspection of the samples revealed the presence of distinct phases within the sample bottles, indicating the possible presence of undissolved hydrocarbons. This inhomogeneity is probably the cause of the inconsistent results.

VP The sample contained visible product and therefore would report a high concentration of TPH. The sample was sent to the lab but not run.

Table 4 - GPS Data

Luacsey Manufacturing
2744 East 11th Street
Oakland, CA

Soil Boring #	Longitude	Latitude
SB-7	-122.2328727	37.7778334
SB-8	-122.2329394	37.7778694
SB-9	-122.2330115	37.7779701
SB-10	-122.2328283	37.7779880
SB-11	-122.2329631	37.7780594
SB-12	-122.2329230	37.7782067
SB-13	-122.2330731	37.7781743
SB-14	-122.2330983	37.7780104
SB-15	-122.2331253	37.7780904
SB-21	-122.2333239	37.7779424
SB-22	-122.2334173	37.7780515
SB-23	-122.2331651	37.7779682
SB-24	-122.2333217	37.7781189

Table 5
Summary of Soil Sample Analytical Petroleum Hydrocarbon Results

Lucasey Manufacturing
 2744 East 11th Street
 Oakland, California
 Clearwater Group Project # FB022E

Sample Name	Boring Name	Sample Date	Depth of Sample (ft)	TPHd ¹ (mg/kg)	TPHmo ¹ (mg/kg)	TPHg ² (mg/kg)	MTBE ² (mg/kg)	Benzene ² (mg/kg)	Toluene ² (mg/kg)	Ethyl-benzene ² (mg/kg)	Total Xylenes ² (mg/kg)
50603-1-12	BH-1	9-Jul-05	12	22 g,b	83	<1.0	<0.05	<0.0050	<0.0050	<0.0050	<0.0050
50603-1-16	BH-1	9-Jul-05	16	48 b,g	46	4.8 g	<0.05	<0.0050	<0.0050	<0.0050	<0.0050
50603-2-12	BH-2	9-Jul-05	12	8,900 b,g	7,500	700 g	<5.0	<0.50	<0.50	<0.50	<0.50
50603-3-7.5	BH-3	9-Jul-05	7.5	50 g,b	79	7.4 g	<0.05	<0.0050	<0.0050	<0.0050	<0.0050
50603-4-12	BH-4	9-Jul-05	12	2,800 g,b	3,000	89 g	<2.0	<0.20	<0.20	<0.20	0.23
50603-6-12	BH-6	9-Jul-05	12	41 g,b	53	<1.0	<0.05	<0.0050	<0.0050	<0.0050	<0.0050
50603-6-16	BH-6	9-Jul-05	16	1,800 b,g	1,700	73 g	<0.50	<0.050	<0.050	<0.050	<0.050

Notes:

1 - SW8015C

2 - SW8021B/8015Cm

b - Heavier gasoline range compounds are significant (aged gasoline?)

g - Strongly aged gasoline or diesel range compounds are significant

mg/kg = milligrams per kilograms

<0.50 = non-detect at indicated detection limit

Table 6
Summary of Soil Sample Analytical Volatile Organics Results

Lucasey Manufacturing
 2744 East 11th Street
 Oakland, California
 Clearwater Group Project # FB022E

Sample Name	Boring Name	Sampling Date	Depth of Sample (ft)	n-Butyl benzene (ug/L)	Chloroform (ug/L)	1,4-Dichlorobenzene (ug/L)	sec-Butyl benzene (ug/L)	cis-1,2 DCE (ug/L)	PCE (ug/L)	Xylenes (ug/L)
50603-2-16	BH-2	9-Jul-05	16	1.5	<0.50	0.75	0.60	0.57	0.68	0.68
50603-4-16	BH-4	9-Jul-05	16	<0.50	<0.50	<0.50	<0.50	1.4	<0.50	<0.50
50603-6-16	BH-6	9-Jul-05	16	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50

Notes: Method SW8260B

cis-1,2 DCE = cis-1,2 Dichloroethene

PCE = tetrachloroethene

ug/L = micrograms per liter

<0.50 = non-detect at indicated detection limit

Table 7
Summary of Groundwater Sample Analytical Results

Lucasey Manufacturing
2744 East 11th Street
Oakland, California
Clearwater Group Project # FB022E

Sample Name	Boring Name	Sample Date	TPHg (ug/L)	TPHd (ug/L)	TPHmo (ug/L)	MTBE (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl-benzene (ug/L)	Total Xylenes (ug/L)	n-Butyl benzene (ug/L)	Chloroform (ug/L)	1,4-Dichloro benzene (ug/L)	sec-Butyl benzene (ug/L)	cis-1,2 DCE (ug/L)	PCE (ug/L)
SB-1W	NA	8/31/2004 ¹	650	500,000	520,000	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50
SB-2W	NA	8/31/2004 ¹	2,200	110,000	89,000	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.71	<0.50
SB-3W	NA	8/31/2004 ¹	<50	<50	<250	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	8.8
SB-4W	NA	8/31/2004 ¹	3,800	560,000	410,000	<0.50	<0.50	<0.50	<0.50	0.72	1.3	<0.50	<0.50	<0.50	<0.50	<0.50
SB-6W	NA	8/31/2004 ¹	130	8,700	6,900	<0.50	<0.50	<0.50	<0.50	<0.50	0.70	6.6	0.75	<0.50	<0.50	<0.50
50603-2-16	BH-2	7/9/2006 ²	310 g,h,l	580,000 b,g,h,l	510,000	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
50603-4-16	BH-4	7/9/2006 ²	<50	160,000 b,g,h,l	150,000	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA
50603-5-20	BH-5	7/9/2006 ²	<50 l	670 g,b,l	2,800	<0.50	<0.50	<0.50	<0.50	<0.50	NA	NA	NA	NA	NA	NA

Notes:

- 1-Data provided by AEI Consultants; EPA method 8015M for TPH; EPA Method 8260 for rest
- 2-Data provided by Terra Firma Consulting, LLC; SW8015C for TPH; SW8021/8016Cm for rest
- TPHg = total petroleum hydrocarbons as gasoline
- TPHd = total petroleum hydrocarbons as diesel
- TPHmo = total petroleum hydrocarbons as motor oil
- MTBE = methyl tertiary butyl ether
- cis-1,2 DCE = cis-1,2 Dichloroethene
- PCE = tetrachloroethene
- b - Heavier gasoline range compounds are significant (aged gasoline?)
- g - Strongly aged gasoline or diesel range compounds are significant
- h - Lighter than water immiscible sheen/product is present
- l - Liquid sample contains greater than 1 vol% sediment
- ug/L = micrograms per liter
- <0.50 = non-detect at indicated detection limit
- NA = not applicable

APPENDIX A

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

May 12, 2006

Mr. Parwez Faizi
Lucasey Manufacturing
2744 East 11th Street
Oakland, CA 94601

Subject: SLIC Case RO0002902, Lucasey Manufacturing, 2744 East 11th Street, Oakland, CA 94601 – Work Plan Review

Dear Mr. Faizi:

Alameda County Environmental Health (ACEH) staff has reviewed the Spills, Leaks, Investigations, and Cleanups (SLIC) case file for the above-referenced site, including the document entitled, "Soil and Groundwater Investigation Workplan," dated April 25, 2006. The Work Plan proposes advancing soil borings to collect soil and groundwater samples and using a mobile laboratory to delineate the extent of contamination. The proposed scope of work is generally acceptable provided that the technical comments below are addressed and incorporated during the field investigation.

We request that you address the following technical comments, perform the proposed work, and send us the reports described below. Please provide 72-hour advance written notification to this office (e-mail preferred to jerry.wickham@acgov.org) prior to the start of field activities.

TECHNICAL COMMENTS

- 1. Base Maps and Plume Extent.** The locations of site features and previous soil borings shown on the Proposed Soil Boring Locations map (Figure 6) differ from the locations of features and previous soil borings shown on Figure 4. Please verify that the locations of site features and previous soil borings on the base map used for Figure 6 are accurate. Please make any necessary revisions prior to conducting the field investigation. If any significant revisions the Proposed Soil Boring Locations map (Figure 6) are necessary, please submit the revised map of boring locations to ACEH for review prior to conducting the field investigation.
- 2. Plume Extent on Figure 6 and Soil Boring Locations.** The "Estimated Extent of Hydrocarbon Plume," which is shown on Figure 6 as a hachured area, significantly underestimates the size of the dissolved phase hydrocarbon plume. The hachured area is approximately the size of the area of probable free product. Several of the proposed borings, particularly those south of the hachured area are north of existing borings where groundwater contamination has already been detected at significant concentrations. Therefore, collecting grab groundwater samples at these proposed locations is not likely to achieve the stated objective of delineating the horizontal extent of the plume. However, these proposed borings are expected to be useful in delineating the extent of free product

and highly elevated concentrations of residual product in soil within the interior portion of the plume. In order to provide delineation of the dissolved phase plume, we have requested additional soil boring locations, which are shown on the attached figure entitled, "Revised Soil Boring Locations." ACEH has no objection to advancing stepout borings based on observed conditions and analytical results from a mobile laboratory. Please advance the additional requested borings shown on the attached figure and present the results in the Soil and Groundwater Investigation Report requested below.

3. **Soil Samples.** We concur with the collection of continuous soil samples for logging purposes in each boring. At a minimum, we request that one soil sample collected from a depth of 5 feet bgs, one soil sample collected from the capillary fringe, and one soil sample collected at the first lithologic change below first-encountered groundwater be submitted for laboratory analyses from each boring. If contamination is observed, soil samples are to be submitted for laboratory analyses for all depth intervals where the staining, odor, or elevated PID readings are observed. If staining, odor, or elevated PID readings are observed over an interval of several feet, a sufficient number of soil samples from this interval should be submitted for laboratory analyses to characterize the fuel hydrocarbon concentrations within this interval. Please present the results in the Soil and Groundwater Investigation Report requested below.
4. **Depth of Soil Borings and Vertical Extent of Contamination.** We concur with the proposal to extend the soil borings deeper than 24 feet bgs if contamination extends below this depth as indicated by analytical results. We also request that the borings be extended below 24 feet bgs if field screening indicates that soil contamination extends more than 24 feet bgs. Regardless of whether contamination is observed in the soils at the bottom of the borings, we request that three soil borings (marked on the attached figure entitled, "Revised Soil Boring Locations") be extended to a depth of 36 feet bgs. Grab groundwater samples are to be collected from the first-encountered groundwater in each of the borings and from all permeable water-bearing zones observed below first-encountered groundwater. A minimum of one grab groundwater sample is to be collected below first-encountered groundwater in each of the borings extended to 36 feet bgs.
5. **Electrical Conductivity Logging.** Conductivity logging is proposed at "select borings." However, the number and locations of borings at which conductivity logging will be conducted is not specified. At a minimum, we request that conductivity logging be conducted along two transects as shown on the attached figure entitled, "Revised Soil Boring Locations," in order to construct hydrogeologic cross sections for the site. Please present the results of the conductivity logging in the Soil and Groundwater Investigation Report requested below.
6. **Laboratory Analyses.** We concur with the proposed laboratory analyses for total petroleum hydrocarbons as gasoline, diesel, and motor oil but request that benzene, toluene, ethylbenzene, xylenes, MTBE, ethylene dibromide, and 1,2-dichloroethane are also included as laboratory analytes.
7. **Geotracker EDF Submittals.** Pursuant to CCR Sections 2729 and 2729.1, beginning July 1, 2005 for SLIC cases, all analytical data, including monitoring well samples, submitted in a report to a regulatory agency as part of the LUFT program, must be transmitted electronically to the SWRCB Geotracker website via the internet. Additionally, all

permanent monitoring points utilized to collect groundwater samples (i.e. monitoring wells) and submitted in a report to a regulatory agency, must be surveyed (top of casing) to mean sea level and latitude and longitude accurate to within 1-meter accuracy, using NAD 83, and transmitted electronically to the SWRCB Geotracker website. Beginning July 1, 2005, electronic submittal of a complete copy of all reports (LUFT or SLIC) is required in Geotracker (in PDF format). Please upload all SLIC analytical data collected after July 1, 2005 to the SWRCB's Geotracker database website in accordance with the above-cited regulation.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **September 29, 2006** – Soil and Groundwater Investigation Report

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

Effective **January 31, 2006**, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program ftp site are provided on the attached "Electronic Report Upload (ftp) Instructions." Please do not submit reports as attachments to electronic mail.

Submission of reports to the Alameda County ftp site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements ([http://www.swrcb.ca.gov/ust/cleanup/electronic reporting](http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting)).

In order to facilitate electronic correspondence, we request that you provide up to date electronic mail addresses for all responsible and interested parties. Please provide current electronic mail addresses and notify us of future changes to electronic mail addresses by sending an electronic mail message to me at jerry.wickham@acgov.org.

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

If you have any questions, please call me at (510) 567-6791.

Sincerely,



Jerry Wickham

Hazardous Materials Specialist

Mr. Parwez Faizi
May 12, 2006
Page 5

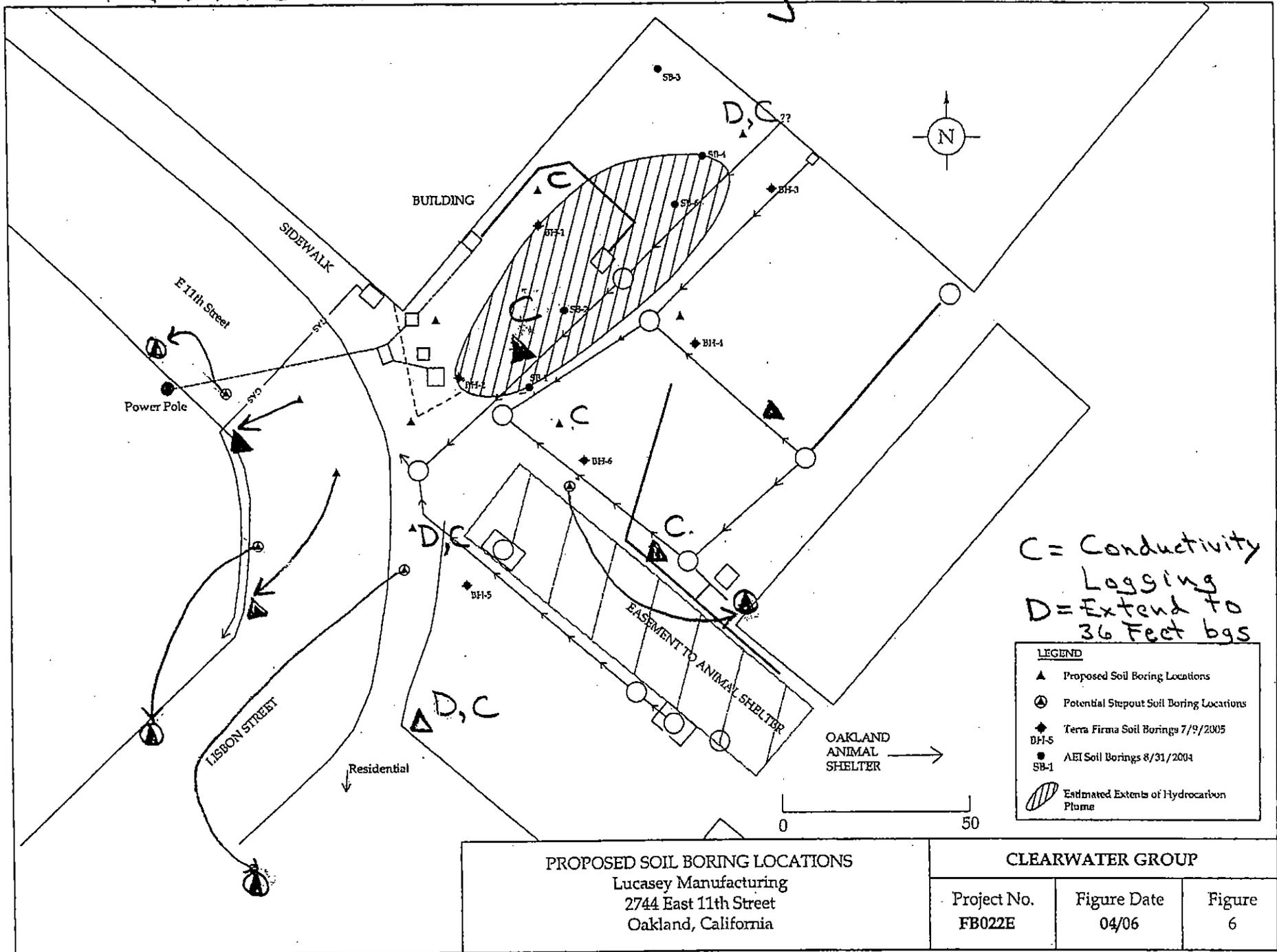
Attachment: Revised Soil Boring Locations Figure

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc:  Matthew Ryder-Smith, Clearwater Group, 229 Tewksbury Avenue, Point Richmond, CA
94801

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

Revised Soil Boring Locations



ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

February 23, 2006

Mr. Peter Faizi
Lucasey Manufacturing
2744 East 11th Street
Oakland, CA 94601

Subject: SLIC Case RO0002902, Lucasey Manufacturing, 2744 East 11th Street, Oakland, CA 94601

Dear Mr. Faizi:

Alameda County Environmental Health (ACEH) staff has reviewed the Spills, Leaks, Investigations, and Cleanups (SLIC) case file for the above-referenced site, including the reports entitled, "Phase I Environmental Site Assessment," dated August 24, 2004, and "Phase II Subsurface Investigation Report," dated September 14, 2004. Both reports were prepared on your behalf by AEI Consultants, Inc. Please see technical comment 1 below regarding some miscellaneous sampling data that is also included in the case files.

Elevated concentrations of petroleum hydrocarbons have been detected in soil and groundwater in the area of a former oil storage house and underground storage tanks (USTs). Based on the highly elevated concentrations detected in groundwater samples, separate phase hydrocarbons (SPH) are likely to exist on top of the water table. The extent of soil and groundwater contamination has not been defined. Further investigation and cleanup of this site will be required in order to proceed toward case closure.

We request that you address the following technical comments, perform the proposed work, and send us the reports described below.

TECHNICAL COMMENTS

- Miscellaneous Sampling Data.** The case file includes a chain of custody form completed by Terra Firma Consulting LLC, laboratory analytical reports from McCampbell Analytical, Inc., and a one page "Site Plan," for soil and groundwater samples collected on July 9, 2005. No other supporting information such as documentation of the field activity, description of sampling protocol, soil boring logs, or survey data is included for these soil and groundwater samples collected on July 9, 2005. The limited information currently available in the files for these soil and groundwater samples is insufficient for these data to be evaluated. Please submit any reports or supporting information for these samples and laboratory analyses with the Work Plan requested below.
- Site History and Sources of Contamination.** Elevated concentrations of petroleum hydrocarbons have been detected in soil and groundwater samples collected in the area of a former oil storage house and USTs. Since no documentation is available to confirm that

the USTs were removed, further investigation is required to confirm that the USTs were removed. In addition, further investigation is necessary to evaluate whether other sources of contamination may exist at the site. Please present plans to investigate the source(s) of soil and groundwater contamination at the site in the Work Plan requested below.

3. **Defining the Horizontal and Vertical Extent of Contamination.** The horizontal and vertical extent of soil and groundwater contamination has not been defined for the site. Please present plans in the Work Plan requested below to conduct a soil and groundwater investigation to define the horizontal and vertical extent of soil and groundwater contamination.
4. **Detailed Well Survey.** We request that you locate all wells (monitoring and production wells: active, inactive, standby, decommissioned, abandoned and dewatering, drainage and cathodic protection wells) within ½ mile of the subject site. We recommend that you obtain well information from both Alameda County Public Works Agency and the State of California Department of Water Resources, at a minimum. Submittal of maps showing the location of all wells identified in your study, and the use of tables to report the data collected as part of your survey are required. Please present your results in the Work Plan requested below.
5. **Utility Survey.** An evaluation of the potential for utility lines and trenches (including sewers, storm drains, pipelines, and trench backfill) to act as preferential pathways for contaminant migration is required. Please present a map in the Work Plan requested below showing the locations of utility lines and trenches within and near the site.
6. **Sensitive Receptors.** Please identify any sensitive receptors such as schools, day care centers, or medical care facilities within 200 feet of the site. Please include this information in the Work Plan requested below.
7. **Corrective Action Plan.** The purpose of the CAP is to use the information obtained during site investigation activities to propose cost-effective final cleanup objectives for the entire contaminant plume and remedial alternatives for soil and groundwater that will adequately protect human health and the environment, eliminate nuisance conditions, and protect water resources. A CAP for the cleanup of contamination in soil and groundwater will be required upon completion of the Soil and Groundwater Investigation in accordance with the schedule specified below. The CAP shall address at least two technically and economically feasible methods to meet the cleanup objectives for each contaminant established in the CAP. The CAP must propose verification monitoring to confirm completion of corrective actions and evaluate CAP implementation effectiveness.
8. **Geotracker EDF Submittals.** Pursuant to CCR Sections 2729 and 2729.1, beginning July 1, 2005 for SLIC cases, all analytical data, including monitoring well samples, submitted in a report to a regulatory agency as part of the LUFT program, must be transmitted electronically to the SWRCB Geotracker website via the internet. Additionally, all permanent monitoring points utilized to collect groundwater samples (i.e. monitoring wells) and submitted in a report to a regulatory agency, must be surveyed (top of casing) to mean sea level and latitude and longitude accurate to within 1-meter accuracy, using NAD 83, and transmitted electronically to the SWRCB Geotracker website. Beginning July 1, 2005, electronic submittal of a complete copy of all reports (LUFT or SLIC) is required in

Geotracker (in PDF format). Please upload all SLIC analytical data collected after July 1, 2005 to the SWRCB's Geotracker database website in accordance with the above-cited regulation.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **April 24, 2006** – Work Plan
- **120 days after ACEH Approval of Work Plan** – Soil and Groundwater Investigation Report
- **60 days after ACEH Comments on Soil and Groundwater Investigation Report** – Corrective Action Plan

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

Effective **January 31, 2006**, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program ftp site are provided on the attached "Electronic Report Upload (ftp) Instructions." Please do not submit reports as attachments to electronic mail.

Submission of reports to the Alameda County ftp site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

In order to facilitate electronic correspondence, we request that you provide up to date electronic mail addresses for all responsible and interested parties. Please provide current electronic mail addresses and notify us of future changes to electronic mail addresses by sending an electronic mail message to me at jerry.wickham@acgov.org.

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

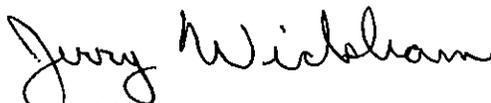
Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to \$10,000 per day for each day of violation.

If you have any questions, please call me at (510) 567-6791.

Sincerely,



Jerry Wickham

Hazardous Materials Specialist

Mr. Peter Faizi
February 23, 2006
Page 5

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

✓
cc: Matthew Ryder-Smith, Clearwater Group, 229 Tewksbury Avenue, Point Richmond, CA
94801

Donna Drogos, ACEH
Jerry Wickham, ACEH
File

APPENDIX B

Project:
Project Location: 2744 East 11th Street
Project Number: 9440

Log of Boring SB-3
 Sheet 1 of 1

Date(s) Drilled August 31, 2004	Logged By LH	Checked By PM
Drilling Method Direct Push	Drill Bit Size/Type 2 1/4 inch	Total Depth of Borehole 16 feet bgs
Drill Rig Type GeoProbe 5410	Drilling Contractor ECA	Approximate Surface Elevation
Groundwater Level 16 feet ATD, 13 feet and Date Measured after 1 minute	Sampling Method(s) Tube (push)	Well Permit
Borehole Backfill Cement Slurry	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
0						Concrete		
				GW		Gravelly sand, loose, slightly moist. 10YR 4/3, dark yellowish brown.		
	4'		SB-3 4'				<1	
	5'			CL		Sandy clay, dark, dense. 10YR 2/1, black.		
	8'		SB-3 8'	SC		Coarse sand and clay, small sized gravel pieces. 10YR 4/3, brown.	<1	
	10'			CL		Sandy clay, moist and soft. 10 YR 4/3, brown.		
	12'		SB-3 12'				<1	
	16'		SB-3 16'				<1	
						Bottom of Boring at 16 feet bgs		

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\INDUE DIL & MISC\9440 PH II (Lucasey) Oakland - LHSS-3.bgs (AB geoprrobe 20.tpi)

Project:
Project Location: 2744 East 11th Street
Project Number: 9440

Log of Boring SB-4
 Sheet 1 of 1

Date(s) Drilled	August 31, 2004	Logged By	LH	Checked By	PM
Drilling Method	Direct Push	Drill Bit Size/Type	2 1/4 inch	Total Depth of Borehole	16 feet bgs
Drill Rig Type	GeoProbe 5410	Drilling Contractor	ECA	Approximate Surface Elevation	
Groundwater Level and Date Measured	16 feet ATD, 13 feet after 1 minute	Sampling Method(s)	Tube (push)	Well Permit.	
Borehole Backfill	Cement Slurry	Location			

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
0						Concrete		
				GW		Sand and gravel, loose, 10YR 4/4, dark yellowish brown.		
				CL		Sandy clay, dark, dense, plastic. 10YR 2/1, black.		
	4'		SB-4 4'	CL		Sandy clay, slightly moist to dry, dense. 10YR 4/3, brown.	<1	
				SC		Coarse sand to gravel with clay mixture. 10YR 4/3 brown.		
	8'		SB-4 8'	SC		Coarse sand to gravel with clay mixture. 10YR 4/3 brown.	<1	
				CL		Sandy clay, slightly moist, veins of black sludge throughout, strong hydrocarbon odor, green coloration. Gley 1 3/10GY, very dark greenish gray.		
	12'		SB-4 12'	CL		Sandy clay, slightly moist, veins of black sludge throughout, strong hydrocarbon odor, green coloration. Gley 1 3/10GY, very dark greenish gray.	23	
						(after 1 minute) ∇		
	16'		SB-4 16'			Bottom of Boring at 16 feet bgs	25	
						(ATD) ∇		
20								

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\OQUE DH & MISC\9440 PH II (Lucasey) Oakland - LH\SB-4.bgs (AE) geoprobe 20.tbl

Project:
Project Location: 2744 East 11th Street
Project Number: 9440

Log of Boring SB-6
 Sheet 1 of 1

Date(s) Drilled August 31, 2004	Logged By LH	Checked By PM
Drilling Method Direct Push	Drill Bit Size/Type 2 1/4 inch	Total Depth of Borehole 12 feet bgs
Drill Rig Type GeoProbe 5410	Drilling Contractor ECA	Approximate Surface Elevation
Groundwater Level 12 feet ATD, 11 feet and Date Measured after 1 minute	Sampling Method(s) Tube (push)	Well Permit
Borehole Backfill Cement Slurry	Location	

Elevation, feet	Depth, feet	Sample Type	Sample Number	USCS Symbol	Graphic Log	MATERIAL DESCRIPTION	PID Reading, ppm	REMARKS AND OTHER TESTS
0						Concrete		
				GM		Sand and gravel, loose, 10YR 4/4, dark yellowish brown.		
	4'		SB-6 4'	CL		Sandy clay, dark, dense, plastic. 10YR 2/1, black.	<1	
	8'		SB-6 8'	CL		Sandy clay, black organic material streaks, no hydrocarbon odor. 10YR 4/3, brown.	<1	
	12'		SB-6 12'	SC		Sandy clay, greenish, plastic, soft and moist. Veins of black sludge throughout. Gley 1 3/10GY, very dark greenish gray. (after 1 minute) ∇	12	
						Bottom of Boring at 12 feet bgs	(ATD) ∇	

X:\PROJECTS\CHARACTERIZATION & REMEDIATION\DUJE DIL & MISC\9440 PH II (Lucasey)\Oakland - LH\SB-6.bgs (AEI geo)probe 20.tpt

SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP

Project No. FB022E
 Sheet 1 of 6

FIELD LOCATION OF BORING:	CLIENT/LOCATION: Lucasey Manufacturing 2744 East 11th Street, Oakland CA	PLANNED USE: Soil Investigation	BORING DEPTH: 16'	BORING/WELL NO.: BH-1
	DRILLING CONTRACTOR: Fasttek	DRILL RIG TYPE: Geoprobe 5400	WELL DEPTH:	BORING DIAMETER: 1.5"
	DRILL RIG OPERATOR: Eric Austin	WELL MATERIAL:	SCREEN SLOT SIZE:	FILTER PACK:
	WET SEAL:	DRILLING DATE: 7/9/05		

SAMPLE	SAMPLING				WATER LEVEL	DEPTH (FEET)	OVM READING (PPM)	ESTIMATED PERCENT			GRAPHIC LOG	SAMPLING METHOD: Direct Push tube
	BLOWS/6" INTERVAL	INTERVAL	RECOVERY	ANALYTICAL				GRAVEL	SAND	FINES		
												FIRST ENCOUNTERED WATER DEPTH: N/A
												STATIC WATER DEPTH - DATE: N/A
						1						0-0.25' Concrete Paving
						2						0.25-3.0' Silty CLAY (CL), dark brown, low plasticity. (FILL)
						3						
						4	0					3.0-10.5' Silty CLAY (CL), medium brown, low plasticity. (FILL)
						5						
						6						
						7						
						8						
						9	0					
						10						
						11						10.5-13.0' CLAY (CH), brown, high plasticity.
50603-1-12'						12						
						13						13.0-16.0' CLAY (CH), grey, high plasticity, hydrocarbon staining and odor from 14' to 16'.
						14						
						15						
50603-1-16'						16	0.5					
						17						Boring Terminated at 16 feet
						18						
						19						
						20						
						21						
						22						
						23						
						24						
						25						
						26						
						27						
						28						
						29						
						30						

FINISH: _____
 DRILLING START: _____
 LOGGED BY: C. Silverthorne
 APPROVED BY: _____

SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP

Project No. FB022E
 Sheet 2 of 6

FIELD LOCATION OF BORING:	CLIENT/LOCATION: Lucasey Manufacturing 2744 East 11th Street, Oakland CA	PLANNED USE: Soil Investigation	BORING DEPTH: 16'	BORING/WELL NO.: BH-2
	DRILLING CONTRACTOR: Fasttek	DRILL RIG TYPE: Geoprobe 5400	WELL DEPTH:	BORING DIAMETER: 1.5"
	DRILL RIG OPERATOR: Eric Austin	WELL MATERIAL:	SCREEN SLOT SIZE:	FILTER PACK:
	WET SEAL:	DRILLING DATE: 7/9/05		

FINISH:	SAMPLE	SAMPLING				WATER LEVEL	DEPTH (FEET)	OVM READING (PPM)	ESTIMATED PERCENT			GRAPHIC LOG	SAMPLING METHOD: Direct Push tube	
		BLOWS/6" INTERVAL	INTERVAL	RECOVERY	ANALYTICAL				GRAVEL	SAND	FINES		MONITORING INSTRUMENT: PID	FIRST ENCOUNTERED WATER DEPTH: 12 ft
														STATIC WATER DEPTH - DATE: N/A
						1								0-0.25' Concrete Paving
						2								0.25-7.0' Silty CLAY (CL), dark brown, low plasticity.
						3								
						4								
						5								
						6								
						7								7.0-8.0' Clayey SILT (ML), medium brown, non-plastic.
						8								8.0-11.0' Clayey SILT (ML), dark brown.
						9								
						10								
						11								11.0-16.0' Silty CLAY (CH), dark grey, high plasticity, hydrocarbon staining and odor from 11' to 16'.
	50603-2-12'					12								
						13								
						14								
						15								
						16								Boring Terminated at 16 feet
						17								
						18								
						19								
						20								
						21								
						22								
						23								
						24								
						25								
						26								
						27								
						28								
						29								
						30								

DRILLING START: _____
 LOGGED BY: C. Silverthorne
 APPROVED BY: _____

SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP

Project No. FB022E
 Sheet 3 of 6

FIELD LOCATION OF BORING:	CLIENT/LOCATION: Lucasey Manufacturing 2744 East 11th Street, Oakland CA	PLANNED USE: Soil Investigation	BORING DEPTH: 16'	BORING/WELL NO.: BH-3
	DRILLING CONTRACTOR: Fasttek	DRILL RIG TYPE: Geoprobe 5400	WELL DEPTH:	BORING DIAMETER: 1.5"
	DRILL RIG OPERATOR: Eric Austin	WELL MATERIAL:	SCRIBEN SLOT SIZE:	FILTER PACK:
	WET SEAL:	DRILLING DATE: 7/9/05		

FINISH:	SAMPLE	SAMPLING				WATER LEVEL	DEPTH (FEET)	OVM READING (PPM)	ESTIMATED PERCENT			GRAPHIC LOG	SAMPLING METHOD: Direct Push tube	
		BLOWS/6" INTERVAL	INTERVAL	RECOVERY	ANALYTICAL				GRAVEL	SAND	FINES		MONITORING INSTRUMENT: PID	FIRST ENCOUNTERED WATER DEPTH: N/A
													0-0.6' Concrete Paving	STATIC WATER DEPTH - DATE: N/A
						1							0.6-2.0' Gravelly Silt (ML), brown. (FILL)	
						2								
						3							2.0-7.5' Poorly Graded SAND (SP), grey, fine grained.	
						4	0							
						5								
						6								
						7								
	50603-3-7.5'					8	0						7.5-12.0' Silty CLAY (CL), brown, low plasticity.	
						9								
						10								
						11								
						12	0						12.0-16.0' Poorly Graded SAND (SP), grey, fine grained.	
						13								
						14								
						15								
						16	0							
						17							Boring Terminated at 16 feet	
						18								
						19								
						20								
						21								
						22								
						23								
						24								
						25								
						26								
						27								
						28								
						29								
						30								

FINISH:

DRILLING START:

LOGGED BY: C. Silverthorne

APPROVED BY:

SOIL BORING AND WELL CONSTRUCTION LOG: CLEARWATER GROUP

Project No. FB022E
Sheet 4 of 6

FIELD LOCATION OF BORING:	CLIENT/LOCATION: Lucasey Manufacturing 2744 East 11th Street, Oakland CA	PLANNED USE: Soil Investigation	BORING DEPTH: 16'	BORING/WELL NO.: BH-4
	DRILLING CONTRACTOR: Fasttek	DRILL RIG TYPE: Geoprobe 5400	WELL DEPTH:	BORING DIAMETER: 1.5"
	DRILL RIG OPERATOR: Eric Austin	WELL MATERIAL:	SCREEN SLOT SIZE:	FILTER PACK:
	WET SEAL:	DRILLING DATE: 7/9/05		

FINISH: _____
 DRILLING START: _____
 LOGGED BY: C. Silverthorne
 APPROVED BY: _____

SAMPLE	SAMPLING				WATER LEVEL	DEPTH (FEET)	OVM READING (PFM)	ESTIMATED PERCENT			GRAPHIC LOG	SAMPLING METHOD: Direct Push tube	
	BLOWS/6" INTERVAL	INTERVAL	RECOVERY	ANALYTICAL				GRAVEL	SAND	FINES		MONITORING INSTRUMENT: PID	FIRST ENCOUNTERED WATER DEPTH: 11 ft
						1						0-0.6' Concrete Paving	
						2						0.6-7.0' Silty CLAY (CL), dark brown, low plasticity. (FILL)	
						3							
						4	0						
						5							
						6							
						7						7.0-11.0' Clayey Silt (ML), medium brown, low plasticity clay.	
						8	0						
						9							
						10							
						11						11.0-16.0' Sandy GRAVEL (GP), dark grey, hydrocarbon odor and staining from 11' to 16'.	
						12							
						13							
						14							
						15							
						16						Boring Terminated at 16 feet	
						17							
						18							
						19							
						20							
						21							
						22							
						23							
						24							
						25							
						26							
						27							
						28							
						29							
						30							

12'



**SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP**

Project No. FB022E
Sheet 5 of 6

FIELD LOCATION OF BORING:	CLIENT/LOCATION: Lucasey Manufacturing 2744 East 11th Street, Oakland CA	PLANNED USE: Soil Investigation	BORING DEPTH: 20'	BORING/WELL NO.: BH-5
	DRILLING CONTRACTOR: Fasttek	DRILL RIG TYPE: Geoprobe 5400	WELL DEPTH:	BORING DIAMETER: 1.5"
	DRILL RIG OPERATOR: Eric Austin	WELL MATERIAL:	SCREEN SLOT SIZE:	FILTER PACK:
	WET SEAL:	DRILLING DATE: 7/9/05		

FINISH: _____
 DRILLING START: _____
 LOGGED BY: C. Silverman
 APPROVED BY: _____

SAMPLE	SAMPLING				WATER LEVEL	DEPTH (FEET)	OVM READING (PPM)	ESTIMATED PERCENT			GRAPHIC LOG	DESCRIPTION
	BLOWS/6" INTERVAL	INTERVAL	RECOVERY	ANALYTICAL				GRAVEL	SAND	FINES		
						1						0.0-4.0' Silty CLAY (CL), medium to dark brown, low plasticity. (FILL)
						2						
						3						
						4	0					4.0-10.0' Silty CLAY (CL), dark brown, low plasticity.
						5						
						6						
						7						
						8	0					
						9						
						10						10.0-16.5' Silty CLAY (CH), dark green to grey, high plasticity.
						11						
						12	0					
						13						
						14						
						15						
						16	0					
						17						16.5-18.0' Sandy GRAVEL (GP), dark grey with some clay.
						18						18.0-20.0' Silty CLAY (CH), medium brown, high plasticity.
						19						
						20	0					Boring Terminated at 20 feet
						21						
						22						
						23						
						24						
						25						
						26						
						27						
						28						
						29						
						30						

**SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP**

Project No. FB022E
Sheet 1 of 6

FIELD LOCATION OF BORING:	CLIENT/LOCATION: Lucasey Manufacturing 2744 East 11th Street, Oakland CA	PLANNED USE: Soil Investigation	BORING DEPTH: 16'	BORING/WELL NO.: BH-6
	DRILLING CONTRACTOR: Passtek	DRILL RIG TYPE: Geoprobe 5400	WELL DEPTH:	BORING DIAMETER: 1.5"
	DRILL RIG OPERATOR: Eric Austin	WELL MATERIAL:	SCREEN SLOT SIZE:	FILTER PACK:
	WET SEAL:			DRILLING DATE: 7/9/05

SAMPLE	SAMPLING				DEPTH (FEET)	OVM READING (PPM)	ESTIMATED PERCENT			GRAPHIC LOG	SAMPLING METHOD: Direct Push tube
	BLOWS/6" INTERVAL	INTERVAL	RECOVERY	ANALYTICAL			GRAVEL	SAND	FINES		
					1					0-0.2' Asphalt	FIRST ENCOUNTERED WATER DEPTH: N/A
					2					0.2-2.0' Clayey SILT with sand and gravel (MH), medium brown. (FILL)	STATIC WATER DEPTH - DATE: N/A
					3					2.0-3.0' Poorly Graded SAND (SP), grey-green, fine grained.	
					4					3.0-7.0' Silty CLAY (CH), dark brown, high plasticity.	
					5						
					6						
					7					7.0-10.0' Clayey SILT (MH), medium brown, low plasticity.	
					8						
					9						
					10					10.0-16.0' Silty CLAY (CH), dark grey-green, medium to high plasticity. Interlayered at 13' with dark brown silty clay.	
					11						
50603-6-12'					12						
					13						
					14						
					15						
50603-6-16'					16						
					17					Boring Terminated at 16 feet	
					18						
					19						
					20						
					21						
					22						
					23						
					24						
					25						
					26						
					27						
					28						
					29						
					30						

FINISH: _____
DRILLING START: _____
LOGGED BY: C. Silverthorne
APPROVED BY: _____

**SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP**

Project No. FB022

Sheet 1 of 1

FIELD LOCATION OF BORING:	CLIENT/LOCATION: Lucasey Manufacturing	JOB NO#: FB022	PROJ. MANAGER: Matt Ryder Smith	BORING/WELL NO.: SB-7
	DRILLING CONTRACTOR: Fast-Tek	DRILL RIG TYPE: GeoProbe 5400	WELL DEPTH: NA	BORING DIAMETER: 2"
	DRILL RIG OPERATOR: Eric Austin	WELL MATERIAL: NA	BORING DEPTH: 24.0'	FILTER PACK: NA
				DRILLING DATE: 1/10/2007

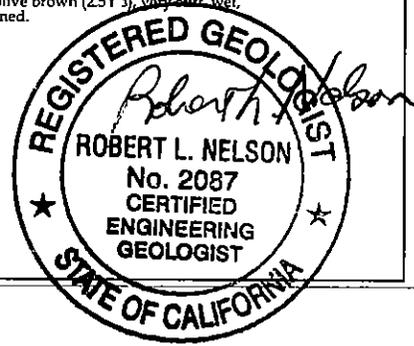
Conductivity (mS/M)	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	Product	ODOR	PID	DEPTH (FBET)	GRAPHIC LOG	SAMPLING METHOD: Continuous Core	
									MONITORING INSTRUMENT: Photoionization Detector	
									FIRST ENCOUNTERED WATER DEPTH: 18.0'	
									STATIC WATER DEPTH - 9.3'	
	48	40	G				1		6" Concrete	
							2		Sandy silt (ML), black (10yr 2.5), dry to moist, 20% very fine sand.	
							3			
					NO	0	4			
	48						5		Gradational color change to very dark gray (5y 7).	
							6			
						0	7			
							8			
	48						9		Clayey gravel with sand (GC), mottled brown (7.5yr 4), and dark greenish gray (5gy 4), soft to medium stiff moist, 30% sand, 40% fine gravel, 30% fat clay.	
							10		Sandy fall clay (CH), very dark greenish gray	
							11			
	48	48	G		NO	0	12		Occasional 2" wide layers of clayey sand.	
							13		Sandy fat clay (CH), very dark greenish gray (10yr 4), soft, moist, 30% very fine sand, 70% clay.	
							14			
					NO	0	15			
							16			
	48	48	G				17			
							18		Clayey sand (SC), dark greenish gray (10y 4), loose, moist to wet, 60% fine sand, 40% lean clay.	
							19		Lean clay (CL) to fat clay (CH), olive brown (2.5Y 4), very stiff, wet, trace of fine sand, iron oxide stained.	
	48	48	G				20		Water at 18.0' - collect sample SB8-W water rose to 9.3' bgs	
							21			
							22			
							23		Clayey sand (SC), dark greenish gray (10y 4), loose, wet, 60% fine sand, 40% lean clay.	
							24		Lean clay (CL) to fat clay (CH), olive brown (2.5Y 4), very stiff, wet, trace of fine sand, iron oxide stained.	
							25			
							26	Total depth 24.0'		
							27			
							28			
							29			
							30			

FINISH: 4:10 pm

DRILLING START:

LOGGED BY: Rob Nelson

APPROVED BY: *Robert L. Nelson*



**SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP**

Project No. **FB022**

Sheet **1** of **2**

FIELD LOCATION OF BORING:		CLIENT/LOCATION: Lucasey Manufacturing		JOB NO#: FB022	PROJ. MANAGER: Matt Ryder Smith	BORING/WELL NO.: SB-8
		DRILLING CONTRACTOR: Fast-Tek		DRILL RIG TYPE: GeoProbe 5400	WELL DEPTH: NA	BORING DIAMETER: 2"
		DRILL RIG OPERATOR: Eric Austin		WELL MATERIAL: NA	BORING DEPTH: 32.0'	FILTER PACK: NA
						DRILLING DATE: 1/10/2007

Conductivity (mS/M)	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	Product	ODOR	PID	DEPTH (FEET)	GRAPHIC LOG	SAMPLING METHOD: Continuous Core	
									MONITORING INSTRUMENT: Photoionization Detector	
									FIRST ENCOUNTERED WATER DEPTH: 16.0'	
									STATIC WATER DEPTH - not determined	
	48	30	30				1	6" Concrete		
							2	Fill: Poorly graded sand (SM).		
							3	Fill: Lean clay (CL), very dark gray (10yr 3/1), medium stiff, moist, abundant root borrows, trace of fine sand, trace fine gravel.		
	48						4	Fill: Clayey gravel (GC), dark gray (10yr 1/2), dense, dry, 60% fine subangular gravel.		
							5			
							6	Fill: Sandy clay (CL), dark brown (10yr 1/2), very stiff, moist, 40% fine sand, trace of fine to coarse subrounded gravel.		
							7			
	48						8			
							9	Fill: Clayey gravel with sand (GC), very dark grayish brown (10yr 1/2), loose, moist to wet, 10% brick fragments, 30% fine to coarse gravel, 20% clay, 40% sand.		
							10			
							11	Lean clay to fat clay (CL-CH), color grades from brown (10yr 1/2), at 10.0' to very dark greenish gray (5gy 1/2), at 12.0', very stiff, moist, trace of fine sand, trace shell fragment.		
							12			
							13			
							14			
							15	At 15.5' (based on small sample) sandy fat clay (CH), very dark greenish gray (5gy 1/2), soft, moist.		
	48						16			
							17	No recovery	Water at 16.0' - collect sample SB8-W	
							18		No recovery 16.0' - 20.0'	
							19			
							20			
							21	Sandy lean clay (CL), brown (10yr 1/2), very stiff, moist to wet, iron oxide stained.		
							22			
							23	Water at 23.5' - collect sample SB8-W23.5		
							24	Clayey sand (SC), dark yellowish brown (10yr 1/2), loose to medium dense, wet, 80% fine to medium sand, 15% clay, 5% silt, trace of fine gravel, iron oxide stained.		
							25	Sandy clay (CL), dark yellowish brown (10yr 1/2), very stiff, wet.		
							26			
							27	Well graded sand (SW), dark yellowish brown (10yr 1/2), loose, wet, 80% fine to coarse subrounded to subangular sand, trace of fine gravel, 20% clay.		
							28			
							29			
							30			

FINISH:

DRILLING START: 11:45 am

LOGGED BY: Rob Nelson

APPROVED BY: *Rob Nelson*

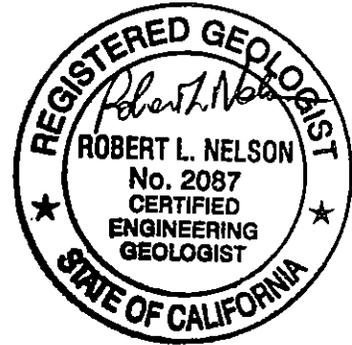
**SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP**

Project No. FB022
Sheet 1 of 1

FIELD LOCATION OF BORING:	CLIENT/LOCATION: Lucasey Manufacturing	JOB NO#: FB022G	PROJ. MANAGER: Matt Ryder Smith	BORING/WELL NO.: SB-9
	DRILLING CONTRACTOR: Fast-Tek	DRILL RIG TYPE: GeoProbe 5400	WELL DEPTH: NA	BORING DIAMETER: 2"
	DRILL RIG OPERATOR: Eric Austin	WELL MATERIAL: NA	BORING DEPTH: 24.0'	FILTER PACK: NA
				DRILLING DATE: 1/09/2007

CONDUCTIVITY (mS/M)	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	Product	ODOR	PID	DEPTH (FEET)	GRAPHIC LOG	SAMPLING METHOD: Continuous Core	
									MONITORING INSTRUMENT: Photoionization Detector	
									FIRST ENCOUNTERED WATER DEPTH: not determined	
									STATIC WATER DEPTH - 17.1'	
	48	30					1	6" Concrete		
							2	Basereck with brick debris		
							3	Sandy silt (ML), black (10yr 1/2), medium stiff, moist, 20% very fine sand, 80% silt.		
							4			
	48	48					5			
							6	Sandy lean clay (CL) very dark grayish brown (10yr 3/4), stiff, moist, 20% fine sand, trace of fine rounded gravel, becoming greener with depth.		
							7			
							8			
	48	48					9	Dark olive gray (5y 3/4) at 9.0'		
							10			
							11			
	48	48					12	Free product from 11.0' to 17.0'		
							13			
							14			
							15			
	48	48					16	Lean clay to fat clay (CL-Cfh), mottled dark yellowish brown (10yr 4/4) and dark olive gray (5y 3/4), free product visible in root holes, moist, wet from 17.1' color change below 17.0' to dark yellowish brown (10yr 4/4)		
							17			
							18			
							19			
	48	48					20			
							21	Clayey sand (SC), dark yellowish brown (10yr 4/4), soft, wet, 70% medium fine sand, 30% lean clay, iron oxide stained.		
							22			
							23			
							24			
							25			
							26			
							27			
							28			
							29			
							30			

FINISH:
DRILLING START: 10:50 am
LOGGED BY: Rob Nelson
APPROVED BY: *Robert Nelson*



**SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP**

Project No. FB022

Sheet 1 of 2

FIELD LOCATION OF BORING:		CLIENT/LOCATION: Lucasey Manufacturing		JOB NO#: FB022G		PROJ. MANAGER: Matt Ryder Smith		BORING/WELL NO.: SB-10	
		DRILLING CONTRACTOR: Fast-Tek		DRILL RIG TYPE: GeoProbe 5400		WELL DEPTH: NA		BORING DIAMETER: 2"	
		DRILL RIG OPERATOR: Eric Austin		WELL MATERIAL: NA		BORING DEPTH: 32.0'		FILTER PACK: NA	
								DRILLING DATE: 1/10/2007	
Conductivity (mS/M)	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	Product	ODOR	PID	DEPTH (FEET)	GRAPHIC LOG	SAMPLING METHOD: Continuous Core
									MONITORING INSTRUMENT: Photoionization Detector
									FIRST ENCOUNTERED WATER DEPTH: not determined
									STATIC WATER - 15.0'
	48	36	G				1		6" Concrete
							2		(Fill) Lean clay (CL), very dark gray (10yr 3), very stiff, moist, trace of roots, trace of fine sand, trace of fine gravel.
					NO	0	3		
							4		
	40	36	F		NO	1000	5		(Fill) Gravelly clay with sand (CL), dark brown (10yr 4), very stiff, moist, trace roots, 20% fine gravel - primary sandstone - deeply weathered, 20% sand, 60% lean clay, trace of brick.
							6		
							7		
	40	36	F		NO	0	8		
							9		
							10		Clayey sand (SC), dark yellowish brown (10yr 4), stiff, moist, from 11.5' color change to dark greenish gray (5gy 1).
							11		
		36				700	12		
							13		
							14		
							15		Clayey gravel with sand (GC), dark yellowish brown (10yr 4), stiff, wet, 20% fine gravel, 20% sand, 60% clay.
	48	40	G		NO		16		Water at 15.0' - collect sample SB10-W16
							17		
					NO		18		
							19		
	48	30	F				20		Sandy lean clay to sandy fat clay (CL-CH), dark yellowish brown (10yr 4), soft, wet, 30% fine sand.
							21		
							22		
							23		
					NO		24		
	48	40	G				25		Silty sand (SM), dark yellowish brown (10yr 4), 25% silt, 75% medium to fine sand, loose, wet.
							26		
							27		
					NO	0	28		
	48	40					29		Sandy lean clay (CL), light olive brown (2.5y 3), very stiff, moist.
							30		

FINISH:

DRILLING START: 1:00 pm

LOGGED BY: Rob Neilson

APPROVED BY: *Rob Neilson*

SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP

Project No. FB022

Sheet 1 of 1

FIELD LOCATION OF BORING:		CLIENT/LOCATION:		JOB NO#:	PROJ. MANAGER:	BORING/WELL NO.:
		Lucasey Manufacturing		FB022G	Matt Ryder Smith	SB-11
		DRILLING CONTRACTOR:		DRILL RIG TYPE:	WELL DEPTH:	BORING DIAMETER:
		Fast-Tek		GeoProbe 5400	NA	2"
		DRILL RIG OPERATOR:		WELL MATERIAL:	BORING DEPTH:	FILTER PACK:
		Eric Austin		NA	24.0'	NA
						DRILLING DATE:
						1/10/2007

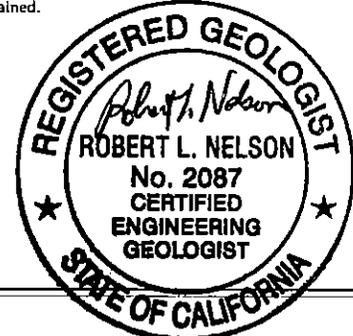
Conductivity (mS/M)	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	Product	ODOR	PID	DEPTH (FEET)	GRAPHIC LOG	SAMPLING METHOD: Continuous Core	
									MONITORING INSTRUMENT: Photoionization Detector	
									FIRST ENCOUNTERED WATER DEPTH: 12.0'	
									STATIC WATER DEPTH - not determined	
	48	30	G		NO	0	1	[Diagonal Hatching]	6" Concrete Baserock	
							2		(Fill) Sandy lean clay with gravel (CL), very dark grayish brown (10yr 4), soft, wet, 25% fine sand, 15% gravel, 60% clay, trace of brick fragment.	
					NO	0	3			
							4			
	48	40	G				5	[Diagonal Hatching]	(Fill) Sandy lean clay with gravel (CL), dark yellowish brown (10yr 4), stiff, moist, 30% fine to very fine sand, iron oxide stained.	
							6			
					NO	0	7			
					NO		8			
	48	45	G				9	[Cross Hatching]	(Fill) Clayey sand (SC), dark yellowish brown (10yr 4), soft, moist to wet, 60% medium to coarse sand, trace of brick fragment.	
							10			
							11			
							12			
							13	[Stippled]	Color change at 12.0', free product and wet from 12.0', well graded sand (SW), very dark greenish gray (5gy 7), loose, wet (oily), strong odor.	
							14			
							15		STRONG OVER RANGE	
							16			
	48	46	G				17	[Circular Pattern]	Well graded gravel to sand (GW), very dark greenish gray (5g 7), free product, loose, wet, strong odor, 60% fine subrounded to subangular gravel, 30% fine to medium sand, 10% silt.	
							18			
							19			
							20		STRONG OVER RANGE	
	48	40	G				21	[Circular Pattern]		
							22			
							23			
							24	[Diagonal Hatching]	Sandy clay (CL), dark yellowish brown (10yr 4), very stiff, moist, 30% very fine to fine sand, 70% lean clay, iron oxide stained.	
							25		Total depth 24.0'	
							26			
							27			
							28			
							29			
							30			

FINISH

DRILLING START: 1:00 pm

LOGGED BY: Rob Nelson

APPROVED BY: *Robert L. Nelson*



**SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP**

Project No. FB022

Sheet 1 of 2

FIELD LOCATION OF BORING:		CLIENT/LOCATION:		JOB NO#:	PROJ. MANAGER:	BORING/WELL NO.:
		Lucasey Manufacturing		FB022G	Matt Ryder Smith	SB-12
		DRILLING CONTRACTOR:		DRILL RIG TYPE:	WELL DEPTH:	BORING DIAMETER:
		Fast-Tek		GeoProbe 5400	NA	2"
		DRILL RIG OPERATOR:		WELL MATERIAL:	BORING DEPTH:	FILTER PACK:
		Eric Austin		NA	36.0'	NA
						DRILLING DATE:
						1/08/2007

CONDUCTIVITY (mS/M)	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	Product	ODOR	PID	DEPTH (FEET)	GRAPHIC LOG	SAMPLING METHOD: Continuous Core	
									MONITORING INSTRUMENT: Photoionization Detector	
									FIRST ENCOUNTERED WATER DEPTH: 9.0'	
									STATIC WATER DEPTH - 9.9'	
							1	8" Concrete		
	48	30	G		NO	0	2	(Fill) Clayey gravel with sand (GC), brown (10yr 1/2), loose, wet, 50% fine gravel, 20% clay, 30% fine to medium sand.		
							3	(Fill) Sandy lean clay (CL), dark grayish brown (10yr 1/2), stiff, moist, 30% fine sand, 70% lean clay, iron oxide stained.		
	48	45	G		NO	0	4			
							5			
							6			
							7			
	48	40	G		NO	0	8	(Fill) Sandy lean clay (CL), yellowish brown (10yr 1/2), soft, moist to wet, 10% brick fragment, 40% fine sand, 50% lean clay.		
							9	Water encountered at 9.0'		
							10	Petroleum odor from 10.0'		
					FAINT	0	11	Sandy lean clay (CL), yellowish brown (10yr 1/2), soft, moist, 60% clay, 40% fine sand, iron oxide stained, faint odor.		
	48	45	P				12	12.5' - 26.5' black, free product.		
							13	Free product on sandy lean clay (CL), dark olive gray (5y 1/2), soft, moist to wet, 40% very fine to fine sand, strong odor.		
					STRONG	OVER RANGE	14			
							15			
	48	12	P				16			
							17			
							18	No recovery		
							19			
	48	18	P		STRONG	OVER RANGE	20			
							21			
							22			
							23			
	48	24	P		STRONG		24			
							25	Well graded gravel with sand (GW), dark yellowish brown (10yr 4/4), loose, wet, 10% clay, 40% fine to medium sand, 50% fine subangular to subrounded gravel, sheen, trace of free product.		
							26			
							27	Lean clay (CL), brown (10yr 4/3) with black specks (5%), very stiff, moist to wet, trace of very deeply weathered fine gravel.		
	48	30	F-P				28			
							29			
							30			

FINISH:

DRILLING START: 8:00 am

LOGGED BY: Rob Nelson

APPROVED BY: *Robert T. Nelson*

SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP

Project No. FB022

Sheet 2 of 2

FIELD LOCATION OF BORING:		CLIENT/LOCATION: Lucasey Manufacturing		JOB NO#: FB022G	PROJ. MANAGER: Matt Ryder Smith	BORING/WELL NO.: SB-12
		DRILLING CONTRACTOR: Fast-Tek		DRILL RIG TYPE: GeoProbe 5400	WELL DEPTH: NA	BORING DIAMETER: 2"
		DRILL RIG OPERATOR: Eric Austin		WELL MATERIAL: NA	BORING DEPTH: 36.0'	FILTER PACK: NA
				DRILLING DATE: 1/11/2007		

Conductivity (mS/M)		INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	Product	ODOR	PID	DEPTH (FEET)	GRAPHIC LOG	SAMPLING METHOD: Continuous Core			
											MONITORING INSTRUMENT: Photoionization Detector		
												FIRST ENCOUNTERED WATER DEPTH: 9.0'	
												STATIC WATER DEPTH - not encountered	
SIZE 0.5E 0.1E 0.075E 0.05E 0.025E 0.01E 0.0075E 0.005E 0.0025E 0.001E 0.00075E 0.0005E 0.00025E 0.0001E								OVER RANGE			Clayey sand (SC), dark yellowish brown (10yr 4/4), dense, wet, 60% fine to very fine sand, 40% lean clay, iron oxide stained, trace of very deeply weathered fine gravel.		
		48	40	G		FAINT	1000				Silty Sand (SM), loose, wet, 30% silt, 70% medium sand.		
						FAINT	400				Clayey gravel with sand (GC), dark yellowish brown (10yr 4/4), loose, wet, 40% fine subangular to subrounded gravel, 35% fine to coarse sand, 25% clay.		
											Total depth 36.0'		

FINISH:

DRILLING START: 10:00 am

LOGGED BY: Rob Nelson

APPROVED BY: *Robert L. Nelson*

SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP

Project No. FB022

Sheet 1 of 2

FIELD LOCATION OF BORING:		CLIENT/LOCATION:		JOB NO#:	PROJ. MANAGER:	BORING/WELL NO.:
		Lucasey Manufacturing		FB022G	Matt Ryder Smith	SB-13
		DRILLING CONTRACTOR:		DRILL RIG TYPE:	WELL DEPTH:	BORING DIAMETER:
		Fast-Tek		GeoProbe 5400	NA	2"
		DRILL RIG OPERATOR:		WELL MATERIAL:	BORING DEPTH:	FILTER PACK:
		Eric Austin		NA	32.0'	NA
						DRILLING DATE:
						1/08/2007

CONDUCTIVITY (mS/M)	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	Product	ODOR	PID	DEPTH (FEET)	GRAPHIC LOG	SAMPLING METHOD: Continuous Core	
									MONITORING INSTRUMENT: Photoionization Detector	
									FIRST ENCOUNTERED WATER DEPTH: 24.0'	
									STATIC WATER DEPTH - not determined	
0.0	48	30	F				1	6" Concrete		
2.0							2		Sandy silt (ML), black (10yr 2/1), soft, moist, 20% very fine sand, 10% clay, 70% silt.	
4.0							3			
6.0	48	36	F-G				4	Sandy lean clay (CL), very dark grayish brown (10yr 3/2), stiff, moist, 40% fine to medium sand, trace deeply weathered fine gravel, light iron oxide stained.		
8.0							5			
10.0							6			
12.0							7			
14.0							8			
16.0							9			
18.0							10			
20.0							11			
22.0							12			
24.0							13			
26.0							14			
28.0							15			
30.0	48	30	G		STRONG	OVER RANGE	16	15.0' Color change to dark brown (10yr 4).		
							17			
							18			
							19			
							20			
	48	0					21	No recovery		
							22		20.0' - 24.0' No recovery	
							23			
							24			
	48				STRONG	OVER RANGE	25	Clayey gravel with sand (GC), dark olive gray (5y 3/4), loose, wet, 50% fine gravel, 35% sand, 13% clay, oily sheen and free product, thin (2") interbeds of dark yellow brown, sandy clay.		
							26			
							27		Water at 24' - collect sample SB13-W2 (temporary screen set 26.0' - 28.0').	
							28			
							29			
							30		Sandy lean clay (CL), dark yellowish brown (10yr 4), soft, wet, 40% fine sand, 60% clay, becoming sandier with depth.	

FINISH:

DRILLING START: 11:20 am

LOGGED BY: Rob Nelson

APPROVED BY: *Robert Nelson*

**SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP**

Project No. FB022

Sheet 1 of 1

FIELD LOCATION OF BORING:	CLIENT/LOCATION: Lucasey Manufacturing	JOB NO#: FB022G	PROJ. MANAGER: Matt Ryder Smith	BORING/WELL NO.: SB-14
	DRILLING CONTRACTOR: Fast-Tek	DRILL RIG TYPE: GeoProbe 5400	WELL DEPTH: NA	BORING DIAMETER: 2"
	DRILL RIG OPERATOR: Eric Austin	WELL MATERIAL: NA	BORING DEPTH: 24.0'	FILTER PACK: NA
				DRILLING DATE: 1/12/2007

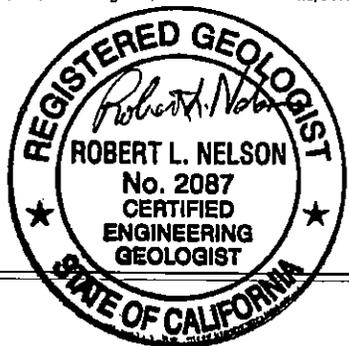
CONDUCTIVITY (mS/M)	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	Product	ODOR	PID	DEPTH (FEET)	GRAPHIC LOG	SAMPLING METHOD: Continuous Core	
									MONITORING INSTRUMENT: Photoionization Detector	
									FIRST ENCOUNTERED WATER DEPTH: 17.0'	
									STATIC WATER DEPTH - 10.0'	
	48	20	P				1	7" Concrete		
							2	Sandy silt (ML), dark gray (10yr $\frac{1}{2}$), soft, moist, trace of fine sand.		
							3			
							4			
	48	30	F				5	Sandy lean clay (CL), mottled brown (10yr $\frac{1}{2}$), stiff, moist, 30% fine sand, 70% clay, iron oxide stained.		
							6			
							7			
							8	Color change to dark brown (10yr $\frac{1}{2}$).		
	48	20	P				9			
							10			
							11	Color change to very dark greenish gray (10y 3/1) free product in rootlets.		
							12			
	48	40	C				13			
							14	Sandy lean clay to fat clay (CL-CH), dark yellowish brown (10yr $\frac{1}{2}$), 30% very fine to fine sand, very stiff, moist, iron oxide stained.		
							15			
							16			
							17	16.0' color change to very dark greenish gray (10y $\frac{1}{2}$). Water encountered 17.0', water rose to 10.0' in borehole.		
							18			
							19			
							20	Clayey sand with gravel (SC), very dark greenish gray (10y $\frac{1}{2}$), loose, wet, 65% medium sand, 15% fine gravel, 20% clay, strong odor, visible free product.		
							21			
	48	24					22			
							23	17.5' Sandy fat clay (CH), mottled and streaked very dark greenish gray (10y $\frac{1}{2}$) and dark yellowish brown (10yr $\frac{1}{2}$), soft, wet, 30% very fine sand, trace of free product along fissures and rootlets.		
							24			
							25			
							26	Clayey gravel with sand (GC), mottled greenish gray (10y $\frac{1}{2}$) and dark yellowish brown (10yr $\frac{1}{2}$), loose, wet, 40% fine gravel, 30% fine to coarse sand, 30% clay, no odor.		
							27			
							28			
							29	Total depth 24.0'		
							30			

FINISH:

DRILLING START:

LOGGED BY: Rob Nelson

APPROVED BY: *Robert Nelson*



**SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP**

Project No. FB022

Sheet 1 of 1

FIELD LOCATION OF BORING:		CLIENT/LOCATION:		JOB NO.:	PROJ. MANAGER:	BORING/WELL NO.:
		Lucasey Manufacturing		FB022G	Matt Ryder Smith	SB-15
		DRILLING CONTRACTOR:		DRILL RIG TYPE:	WELL DEPTH:	BORING DIAMETER:
		Fast-Tek		GeoProbe 5400	NA	2"
		DRILL RIG OPERATOR:		WELL MATERIAL:	BORING DEPTH:	FILTER PACK:
		Eric Austin		NA	28.0'	NA
						DRILLING DATE:
						1/09/2007

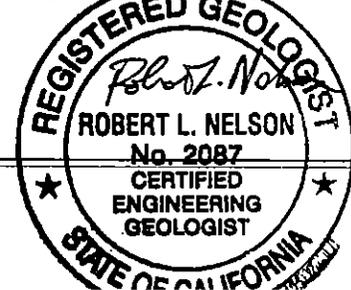
CONDUCTIVITY (mS/M)	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	Product	ODOR	PTD	DEPTH (FEET)	GRAPHIC LOG	SAMPLING METHOD: Continuous Core	
									MONITORING INSTRUMENT: Photoionization Detector	
									FIRST ENCOUNTERED WATER DEPTH: 16.0'	
									STATIC WATER DEPTH - 9.0'	
	48	30	F				1		6" Concrete	
							2		(Fill) Sandy silt (ML), black (10yr 1/2) grading to dark yellowish brown (10yr 1/2) at 2.5', soft to medium stiff, dry to moist, 20% fine sand, 5% fine gravel.	
							3			
						NO 0	4			
	48	48	G				5			
						NO 0	6			
							7		(Fill) Silt sand with gravel (SM), brown (7.5 yr 1/2), loose, dry to moist, 50% fine to medium fine sand, 15% fine rounded to subrounded gravel, 35% silt.	
						NO 0	8			
	48	30	F				9		Sandy lean clay (CL), black (10yr 1/2) to dark brown (10yr 1/2), stiff, moist, slightly plastic.	
							10			
							11			
							12			
	48	30	F		STRONG	OVER RANGE	13		Silty sand to clayey sand with gravel (SM-SC), soft, loose, wet, 60% fine to coarse sand, 15% fine gravel, sheen and free product visible, strong odor.	
							14			
							15			
						STRONG	16		Water at 16.0' - collect sample SB15-W	
						OVER RANGE	17			
							18			
							19		Sandy lean clay to sandy fat clay (CL-CH), mottled yellowish brown (10yr 1/2), and dark greenish gray (5gy 1/2), soft, wet, 70% lean to fat clay, 30% very fine sand, product along rooflets, strong odor.	
							20			
							21			
	48	6			STRONG	OVER RANGE	22		Well graded sand with silt (SW), dark greenish gray (5gy 1/2), loose, wet, 80% fine to coarse sand, 20% silt, trace of fine gravel, sheen, strong odor.	
							23			
							24		Water at 23.0' - Attempted to collect sample SB15-W, hole collapse to 18.0'.	
	48	30	F				25			
							26			
						NO	27		Sandy lean clay (CL), dark yellowish brown (10yr 1/2) with 20% black flecks, very stiff, moist to wet, 40% fine to coarse sand, trace of fine gravel, appears to be very deeply weathered rock.	
							28	Total depth 28.0'		
							29			
							30			

FINISH:

DRILLING START: 8:00 am

LOGGED BY: Rob Nelson

APPROVED BY: *Robert L. Nelson*



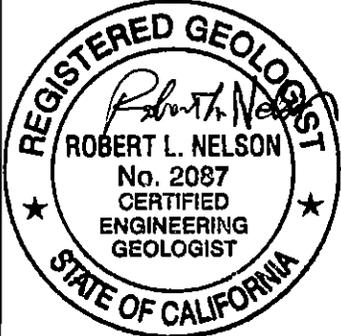
**SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP**

Project No. FB022

Sheet 1 of 1

FIELD LOCATION OF BORING:	CLIENT/LOCATION: Lucasey Manufacturing	JOB NO#: FB022G	PROJ. MANAGER: Matt Ryder Smith	BORING/WELL NO.: SB-16
	DRILLING CONTRACTOR: Fast-Tek	DRILL RIG TYPE: GeoProbe 5400	WELL DEPTH: NA	BORING DIAMETER: 2"
	DRILL RIG OPERATOR: Eric Austin	WELL MATERIAL: NA	BORING DEPTH: 27.5'	FILTER PACK: NA
	EC Log only			DRILLING DATE: 12/8/2006

FINISH:	Conductivity (mS/M)	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	Product	ODOR	PID	DEPTH (FEET)	GRAPHIC LOG	SAMPLING METHOD: N/A				
										MONITORING INSTRUMENT: N/A				
										FIRST ENCOUNTERED WATER DEPTH: N/A				
										STATIC WATER DEPTH - N/A				
0.0								1						
0.02								2						
0.04								3						
0.06								4						
0.08								5						
0.001								6						
0.001								7						
0.001								8						
0.001								9						
0.001								10						
0.001								11						
0.001								12						
0.001								13						
0.001								14						
0.001								15						
0.001								16						
0.001								17						
0.001								18						
0.001								19						
0.001								20						
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0.001								22						
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0.001								24						
0.001								25						
0.001								26						
0.001								27						
0.001								28						
0.001								29						
0.001								30						



APPROVED BY: *Robert L. Nelson*

LOGGED BY: Rob Nelson

DRILLING START: 8:00 am

FINISH:

SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP

Project No. FB022

Sheet 1 of 2

FIELD LOCATION OF BORING:		CLIENT/LOCATION: Lucasey Manufacturing	JOB NO#: FB022G	PROJ. MANAGER: Matt Ryder Smith	BORING/WELL NO.: SB-17
		DRILLING CONTRACTOR: Fast-Tek	DRILL RIG TYPE: GeoProbe 5400	WELL DEPTH: NA	BORING DIAMETER: 2"
		DRILL RIG OPERATOR: Eric Austin	WELL MATERIAL: NA	BORING DEPTH: 36.0'	FILTER PACK: 12/8/2006
		EC Log only			DRILLING DATE: 1/09/2007

FINISH DRILLING START: 8:00 am LOGGED BY: Rob Nelson APPROVED BY: <i>Robert L. Nelson</i>	Conductivity (mS/M)	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	Product	ODOR	PID	DEPTH (FEET)	GRAPHIC LOG	SAMPLING METHOD: N/A
										MONITORING INSTRUMENT: N/A
										FIRST ENCOUNTERED WATER DEPTH: N/A
										STATIC WATER DEPTH - N/A

**SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP**

Project No. FB022

Sheet 2 of 2

FIELD LOCATION OF BORING:		CLIENT/LOCATION: Lucasey Manufacturing		JOB NO#: FB022G		PROJ. MANAGER: Matt Ryder Smith		BORING/WELL NO.: SB-17												
		DRILLING CONTRACTOR: Fast-Tek		DRILL RIG TYPE: GeoProbe 5400		WELL DEPTH: NA		BORING DIAMETER: 2"												
		DRILL RIG OPERATOR: Eric Austin		WELL MATERIAL: NA		BORING DEPTH: 36.0'		FILTER PACK: NA												
		EC Log only							DRILLING DATE: 12/8/2006											
Conductivity (mS/M)		INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	Product	ODOR	PID	DEPTH (FEET)	GRAPHIC LOG											
									SAMPLING METHOD: N/A											
									MONITORING INSTRUMENT: N/A											
									FIRST ENCOUNTERED WATER DEPTH: N/A											
		<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%; text-align: center;">0.00</td> <td style="width:10%; text-align: center;">0.02</td> <td style="width:10%; text-align: center;">0.04</td> <td style="width:10%; text-align: center;">0.06</td> <td style="width:10%; text-align: center;">0.08</td> <td style="width:10%; text-align: center;">0.0001</td> <td style="width:10%; text-align: center;">0.021</td> <td style="width:10%; text-align: center;">0.041</td> <td style="width:10%; text-align: center;">0.081</td> </tr> </table>		0.00	0.02	0.04	0.06	0.08	0.0001	0.021	0.041	0.081	<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:10%; text-align: center;">31</td> <td style="width:10%; text-align: center;">32</td> <td style="width:10%; text-align: center;">33</td> <td style="width:10%; text-align: center;">34</td> <td style="width:10%; text-align: center;">35</td> <td style="width:10%; text-align: center;">36</td> </tr> </table>		31	32	33	34	35	36
				0.00	0.02	0.04	0.06	0.08	0.0001	0.021	0.041	0.081								
				31	32	33	34	35	36											
				STATIC WATER DEPTH - N/A																

FINISH:

DRILLING START: 10:00 am

LOGGED BY: Rob Nelson

APPROVED BY:

**SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP**

Project No. FB022

Sheet 1 of 2

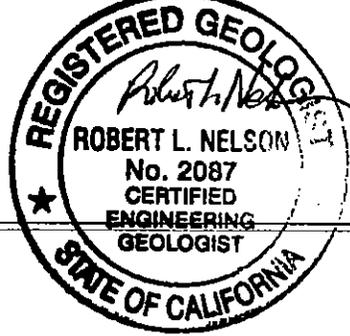
FIELD LOCATION OF BORING:		CLIENT/LOCATION: Lucasey Manufacturing		JOB NO#: FB022G	PROJ. MANAGER: Matt Ryder Smith	BORING/WELL NO.: SB-21			
		DRILLING CONTRACTOR: Fast-Tek		DRILL RIG TYPE: GeoProbe 5400	WELL DEPTH: NA	BORING DIAMETER: 2"			
		DRILL RIG OPERATOR: Eric Austin		WELL MATERIAL: NA	BORING DEPTH: 36.0'	FILTER PACK: NA			
				DRILLING DATE: 1/11/2007					
Conductivity (mS/M)	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	Product	ODOR	PID	DEPTH (FEET)	GRAPHIC LOG	SAMPLING METHOD: Continuous Core
									FIRST ENCOUNTERED WATER DEPTH: 17.0'
									STATIC WATER DEPTH - not determined
					NO	0	1		Asphalt (2")
							2		Sandy Silt (ML), black (10yr 2/1) grading to brown (10yr 4/3) at 3.0', soft to medium stiff, moist. Trace chert and sandstone gravel.
					NO		3		
							4		
					NO		5		Clayey gravel with sand (GC), mottled dark greyish brown (10yr 4) and dark yellowish brown (10yr 8) silt, moist. 50% fine subrounded gravel, 25% lean clay, 25% fine to medium sand.
							6		
							7		
							8		
							9		
							10		
	48	30		↑ weak			11		11.0' Sandy fat clay (CH), dark greenish grey (10yr 4) grading to dark yellowish (10yr 8) brown at 15.0', soft, moist. 30% fine sand, sandy interbeds at 11.5-12.5, oil visible on soil from 10.5', iron oxide staining.
							12		
					strong		13		
							14		
					strong		15		
							16		
	48	20					17		Encountered water at 17.0' - collect sample SB21-W17
							18		
							19		Clayey gravel with sand (GC), yellowish brown (10yr 5) very dense, wet. 40% fine gravel, 40% fine to medium sand, 20% clay, thin (<1") interbeds of silty sand.
							20		
	48	24			NO		21		
							22		
							23		
							24		
	48	30					25		Clayey sand (SC) with gravel, yellowish brown (10yr 5), dense, wet. 60% fine to coarse sand, 15% fine gravel, 25% clay.
							26		
							27		
							28		No recovery at 28.0' - 35.0'
	48	0					29	No recovery	
							30		

FINISH:

DRILLING START: 10:00 am

LOGGED BY: Rob Nelson

APPROVED BY: *Robert L. Nelson*



SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP

Project No. FB022

Sheet 1 of 2

FIELD LOCATION OF BORING:		CLIENT/LOCATION:		JOB NO#:	PROJ. MANAGER:	BORING/WELL NO.:
		Lucasey Manufacturing		FB022G	Matt Ryder Smith	SB-22
		DRILLING CONTRACTOR:		DRILL RIG TYPE:	WELL DEPTH:	BORING DIAMETER:
		Fast-Tek		GeoProbe 5400	NA	2"
		DRILL RIG OPERATOR:		WELL MATERIAL:	BORING DEPTH:	FILTER PACK:
		Eric Austin		NA	32.0'	NA
						DRILLING DATE:
						1/12/2007

Conductivity (mS/M)	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	Product	ODOR	PID	DEPTH (FEET)	GRAPHIC LOG	SAMPLING METHOD: Continuous Core	
									MONITORING INSTRUMENT: Photoionization Detector	
									FIRST ENCOUNTERED WATER DEPTH: 15.5'	
									STATIC WATER DEPTH - not determined	
	48	40	G		NO	0	1	Asphalt		
							2	Baserock		
					NO		3	Sandy Silt (ML), black (10yr 2/1) grading to brown (10yr 4/3) at 4.0', soft to medium stiff, moist.		
							4			
	48				NO		5	Sandy lean clay to silty lean clay (CL), dark yellowish brown (10yr 4), stiff, moist, 30% fine sand, iron oxide stained, sand content increases with depth.		
							6			
							7			
							8			
	48						9			
							10	Clayey sand (SC), dark yellowish brown (10yr 4), loose, moist, 70% fine to medium sand, no odor.		
							11	Clayey gravel with sand (GC), dark yellowish brown (10yr 4), 60% fine subangular gravel.		
							12			
							13	11.5' - 14.5' Free product		
							14	Clayey sand with gravel (SC), dark greenish gray (10y 4), loose, moist to wet, 60% medium to coarse sand, 20% clay, 20% fine gravel, free product, strong odor.		
							15	13.0' Sandy clay (CL), dark olive gray (5y 4), soft, wet.		
							16	14.5' Clayey gravel with sand (GC), dark olive gray (5y 4) changes to olive brown (2.5 y 4) at 15.0'.		
							17	15.5' Sandy fat clay (CH), dark yellowish brown (10yr 4), soft, wet, no odor.		
							18			
							19			
							20			
							21	Encounter water at 15.5' - collect sample SB22-W		
							22			
							23	No recovery at 16.0' - 27.0'		
							24			
							25			
							26			
							27			
							28	Sandy lean clay to sandy fat clay (CL-CH), olive brown (2.5 y 4), very soft, moist to wet, iron oxide stained.		
	48	18					29			
							30			

FINISH:

DRILLING START: 10:00 am

LOGGED BY: Rob Nelson

APPROVED BY: *Rob Nelson*

**SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP**

Project No. FB022

Sheet 1 of 2

FIELD LOCATION OF BORING:		CLIENT/LOCATION:		JOB NO#:	PROJ. MANAGER:	BORING/WELL NO.:
		Lucasey Manufacturing		FB022G	Matt Ryder Smith	SB-23
		DRILLING CONTRACTOR:		DRILL RIG TYPE:	WELL DEPTH:	BORING DIAMETER:
		Fast-Tek		GeoProbe 5400	NA	2"
		DRILL RIG OPERATOR:		WELL MATERIAL:	BORING DEPTH:	FILTER PACK:
		Eric Austin		NA	32.0'	NA
						DRILLING DATE:
						1/11/2007

Conductivity (mS/M)	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	Product	ODOR	PID	DEPTH (FEET)	GRAPHIC LOG	SAMPLING METHOD: Continuous Core	
									MONITORING INSTRUMENT: Photoionization Detector	
									FIRST ENCOUNTERED WATER DEPTH: 16.0'	
									STATIC WATER DEPTH - not determined	
	48	30	F				1	7" Concrete		
							2	Sandy silt (ML), color grades from black (10yr 1/2) to dark brown (10yr 1/2) at 4.0', stiff, moist.		
							3			
					NO	0	4			
	48	48	G				5	Sandy lean clay (CL), brown (10yr 1/2), stiff, moist, iron oxide stained, 30% fine to medium sand, 70% clay.		
					NO		6			
					NO	0	7			
							8	Sandy lean clay to sandy fat clay (CL-CH), dark yellowish brown (10yr 1/2), very stiff, moist, 30% fine to very fine sand.		
	48	48	G				9			
					NO	0	10			
							11	Clayey gravel layer 2" at 12.5' - 12.7'		
							12			
	48	48	G		NO	0	13			
							14	Sandy lean clay to sandy fat clay (CL-CH), dark yellowish brown (10yr 1/2), very stiff, moist, 30% fine to very fine sand.		
							15			
					NO		16			
	48	48	G				17	Silty sand to clayey sand (SM-SC), olive gray (5y 1/2), loose, wet, 70% medium sand, 5% fine gravel, 25% clay, moderately plastic, iron oxide stained. Water at 16.0' - collect sample SB23-W		
							18			
							19	Sandy lean clay to sandy fat clay (CL-CH), dark yellowish brown (10yr 1/2), very stiff, moist, 30% fine to very fine sand.		
					NO	0	20			
	48	30	F				21			
							22	Clayey gravel with sand (GC), dark yellowish brown (10yr 1/2), very stiff, wet, 50% fine gravel, 25% clay, 25% fine to coarse sand.		
							23			
	48	36	F				24	Sandy fat clay to lean clay (CH-CL), brown (10yr 4/3), soft, wet, trace of fine sand.		
							25			
							26	Silty sand with gravel (SM), brown (10yr 1/2), loose, wet, 50% fine to medium sand, 25% fine gravel, 25% silt, no odor.		
							27			
							28	Clayey sand with gravel (SC), dark yellowish brown (10yr 1/2), wet, medium dense.		
					NO	0	29			
							30			

FINISH:
DRILLING START: 10:00 am
LOGGED BY: Rob Nelson
APPROVED BY: Robert Nelson

**SOIL BORING AND WELL CONSTRUCTION LOG:
CLEARWATER GROUP**

Project No. FB022

Sheet 1 of 1

FIELD LOCATION OF BORING:	CLIENT/LOCATION: Lucasey Manufacturing	JOB NO#: FB022G	PROJ. MANAGER: Matt Ryder Smith	BORING/WELL NO.: SB-24
	DRILLING CONTRACTOR: Fast-Tek	DRILL RIG TYPE: GeoProbe 5400	WELL DEPTH: NA	BORING DIAMETER: 2"
	DRILL RIG OPERATOR: Eric Austin	WELL MATERIAL: NA	BORING DEPTH: 24.0'	FILTER PACK: NA
	DRILLING DATE: 1/12/2007			

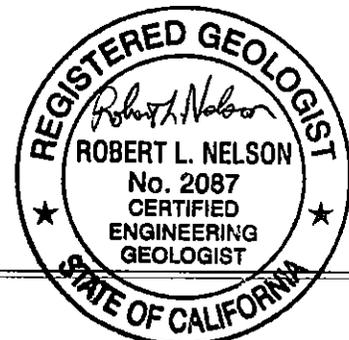
FINISH:

DRILLING START:

LOGGED BY: Rob Nelson

APPROVED BY: *Robert L. Nelson*

Conductivity (mS/M)	INCHES DRIVEN	INCHES RECOVERED	SAMPLE CONDITION	Product	ODOR	PID	DEPTH (FEET)	GRAPHIC LOG	SAMPLING METHOD: Continuous Core	
									MONITORING INSTRUMENT: Photoionization Detector	
									FIRST ENCOUNTERED WATER DEPTH: 15.0'	
									STATIC WATER DEPTH - not determined.	
							1	[Hatched]	Hand auger to 5.0' Drilled into soil between curb and walkway	
					NO		2	[Hatched]	Sandy silt (ML), black (10yr 2/3), grading to dark brown (10yr 1/2).	
					NO		3	[Hatched]		
					NO		4	[Hatched]		
	36	30	G				5	[Dotted]	Clayey sand (SC), dark yellowish brown (10yr 1/2), stiff, moist, 40% fine sand, iron oxide stained.	
					NO		6	[Dotted]		
					NO		7	[Dotted]		
	48	46	G				8	[Diagonal]	Clayey gravel with sand (GC), dark yellowish brown (10yr 1/2), stiff, moist, 40% fine gravel, 40% fine sand, 20% clay.	
					NO		9	[Diagonal]		
							10	[Diagonal]		
							11	[Diagonal]	Clayey gravel with sand (GC), greenish black (5gy 2/3), loose, wet, oily coating and free product, 40% fine gravel, 40% fine to coarse sand, 20% clay.	
	48	44	G				12	[Diagonal]		
					STRONG OVER RANDED		13	[Diagonal]		
							14	[Diagonal]		
							15	[Diagonal]	Sandy lean clay to sandy fat clay (CL-CH), dark yellowish brown (10yr 1/2), soft, wet, iron oxide stained, trace of fine gravel.	
	48	24					16	[Diagonal]		
							17	[Hatched]	No Recovery	
							18	[Hatched]		
							19	[Hatched]		
	48	40					20	[Hatched]		
							21	[Hatched]		
							22	[Hatched]		
							23	[Hatched]		
							24	[Hatched]	Attempted to collect water sample from 24.0' hole collapsed to 15.0'. Total depth 24.0'	
							25	[Hatched]		
							26	[Hatched]		
							27	[Hatched]		
							28	[Hatched]		
							29	[Hatched]		
							30	[Hatched]		



APPENDIX C

CLEARWATER GROUP

Direct-Push Drilling Investigation Procedures

The direct push method of soil boring has several advantages over hollow-stem auger drill rigs. The direct push method produces no drill cuttings, is capable of 150 to 200 feet of boring or well installation per work day. Direct push can be used for soil gas surveys, soil sampling, groundwater sampling, installation of small-diameter monitoring wells, and components of remediation systems such as air sparge points. The equipment required to perform direct push work is varied ranging from a roto-hammer and operator to a pickup truck-mounted rig capable of substantial static downward force combined with percussive force. This method allows subsurface investigation work to be performed in areas inaccessible to conventional drill rigs such as in basements, beneath canopies, or below power lines. Direct push equipment is ideal at sites with unconsolidated soil or overburden, and sampling depths of less than 30 feet. This method is not appropriate for boring through bedrock or gravelly soils.

Permitting and Site Preparation

Prior to direct push boring work, Clearwater Group will obtain all necessary permits and locate all underground and above ground utilities through Underground Service Alert (USA) and a thorough site inspection. All drilling equipment will be inspected daily and will be maintained in safe operating condition. All down-hole drilling equipment will be cleaned prior to arriving on-site. Working components of the rig near the borehole, as well as driven casing and sampling equipment will be thoroughly decontaminated between each boring location by either steam cleaning or washing with an Alconox solution. All drilling and sampling methods will be consistent with ASTM Method D-1452-80 and county, state and federal regulations.

Boring Installation and Soil Sampling

Direct push uses a 1.5-inch outer barrel with an inner rod held in place during pushing. Soil samples are collected by penetrating to the desired depth, retracting the inner rod and attaching a spoon sampler. The sampler is then thrust beyond the outer barrel into native soil. Soil samples are recovered in brass or stainless containers lining the spoon.

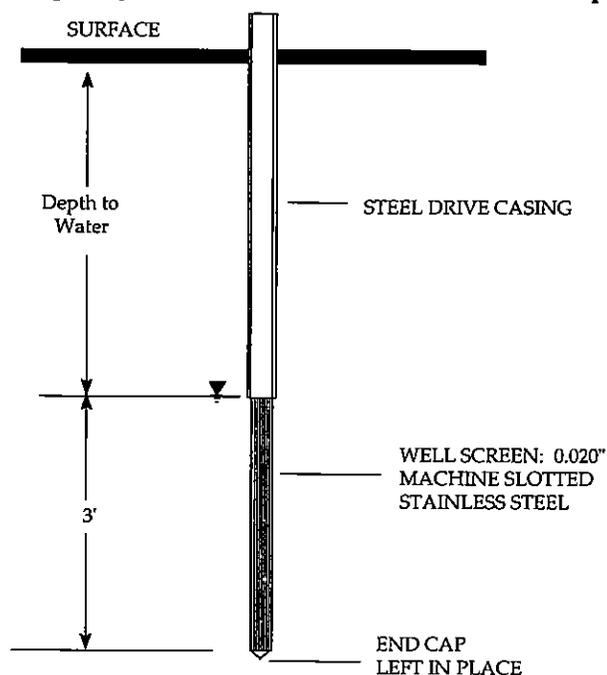
Soil removed from the upper tube section is used for lithologic descriptions (according to the unified soil classification system) and for organic vapor field analysis. If organic vapors will be analyzed in the field, a portion of each soil sample will be placed in a plastic zip-lock bag. The bag will be sealed and warmed for approximately 10 minutes to allow vapors to be released from the soil sample and diffuse into the head space of the bag. The bag is then pierced with the probe of a calibrated organic vapor detector. The results of the field testing will be noted with the lithologic descriptions on field exploratory soil boring log. Soil samples selected for laboratory analysis will be covered on both ends with Teflon™ tape and plastic end caps. The samples will then be labeled, documented on a chain-of-custody form and placed in a cooler for transport to a state certified analytical laboratory.

Groundwater samples are collected by removing the inner rod and attaching a 4 foot stainless steel screen with a drive point at the end (Figure 1). The screen and rod is then inserted in the outer barrel and driven to the desired depth where the outer rod is retracted to expose the screen. If the stainless well screen does not produce enough water for sampling a 1-inch PVC screen can be installed in the boring and the outer rod retracted to leave a temporary well point for collecting groundwater samples or water levels.

Monitoring Well Installation and Development

Permanent small-diameter monitoring wells are installed by driving the outer barrel and inner rod as described above. Upon reaching the desired depth the system is removed and 2-inch OD (1/2-inch ID) pre-packed PCV piping is installed. The well plug is created using granular bentonite. The well seal is constructed of cement and sealed at the surface with a conventional "Christy Box" or similar vault. Monitoring wells are developed by surging the well with a small diameter bailer and removing 3 to 5 volumes until the produced water is clear.

Temporary Well Installation and Groundwater Sampling



Groundwater Sample Collection and Water Level Measurement

Prior to collecting groundwater from the wells the water levels are measured in all wells using an electronic water level gauge. Monitoring wells are prepared for sampling by purging three well bore volumes. Water is removed using small diameter bailers, a peristaltic pump, or manually using tubing with a check valve at the bottom. Once, during removal of each volume the temperature, pH and conductivity are checked and noted on the field sampling form. Successive well volumes are removed until the parameters have stabilized or the well has gone dry. Prior to sampling the well is allowed to recover to within 90% of the stabilized water levels.

Groundwater samples¹ are collected using small diameter bailers. Groundwater samples are decanted into laboratory supplied containers, labeled, noted on a chain-of-custody form and placed on ice for transport to a laboratory.

¹ Small diameter wells often produce small quantity samples and are appropriate for analysis of volatile and aromatic compounds using VOA vials and dissolved metals analysis. Obtaining liter samples can be difficult and time consuming. Monitoring wells installed by the direct push method are most effective at sites where the subsurface soils are more coarse than silt, gasoline components are the key contaminants of concern, and water levels are not more than 25 feet below ground surface.

CLEARWATER GROUP

Grab Groundwater Sample Collection Protocol

Permits, Site Safety Plan, Utility Clearance

Clearwater Group obtains all the required permits, unless otherwise contractually directed. Clearwater prepares a site specific Site Safety Plan detailing site hazards, site safety and control, decontamination procedures, and emergency response procedures to be employed throughout the work. At least 48 hours prior to drilling, Underground Service Alert (USA) or an equivalent agency will be notified of the planned work. Clearwater, attempts to locate all underground and aboveground utilities by site inspection (in conjunction with its subcontractors and knowledgeable site managers, if available), and review of site as-built drawings. Clearwater may employ a private, professional utility locator, or ground penetrating survey subcontractor, to refine the site utility inspection. Some agencies may require notification prior to drilling in order to schedule a grouting inspection.

Drilling Equipment

All soil borings are drilled using a truck-mounted Geoprobe® drill rig, unless site conditions warrant a different drilling method. Subsurface conditions permitting, the first five feet of each boring is advanced using a hand-auger or post-hole digger. All drilling equipment will be inspected daily and maintained in safe working condition by the operator. All down-hole drilling equipment will be steam cleaned prior to arriving on site. Working components of the drill rig near the borehole, as well as probe rods, will be thoroughly steam cleaned between each boring location. All Clearwater drilling and sampling methods will be consistent with local, state and federal regulations.

Grab Groundwater Sample Collection

- Drive the soil boring to the depth zone(s) of interest. For petroleum hydrocarbons and floating compounds, the primary zone of interest is the top of static groundwater. For dense non-aqueous phase liquid (DNAPL) compounds the zone of interest will be below the top of static groundwater and above an aquitard.
- Retract the Geoprobe® rods from the boring and insert a short (5 foot long or less), 1" diameter PVC temporary well screen. Attach enough blank well casing above the well screen to reach the target depth.
- If the boring was drilled with a hollow stem auger it may be possible to collect the sample from within the augers without setting temporary well casing
- Lower a clean disposable bailer down the temporary well casing to collect a grab groundwater sample
- Decant the sample into laboratory provided containers
- Seal and label the containers and record the sample information on a Chain of Custody document
- Store the samples in a cooler chilled with ice
- Remove the temporary well casing
- Grout the boring with bentonite chips or cement grout according to agency regulations
- Hydrate the bentonite chips with clean water
- Patch the ground surface with concrete, asphalt cold patch, or other material to match the ground surface
- Measure sample location from known landmarks using a tape measure and/or a global positioning system (GPS). If a GPS is used, located nearby landmarks with the GPS and confirm the locations with a tape measure
- Sketch the sample location in the field notes with dimensions.
- Photograph the sample location with nearby landmarks visible in the photograph's background

Recordkeeping

Proper record keeping consists of recording the following information, at a minimum:

- Sample identification information (location, depth, sample identifiers, data and time)
- Field personnel
- Weather conditions (temperature, wind speed, precipitation, etc.)
- Sampling method, devices and equipment used
- Shipment information, including chain of custody protocols and records.

Quality Assurance Procedures

To prevent contamination of the samples, Clearwater personnel adhere to the following procedures in the field:

- A new, clean pair of latex gloves will be put on prior to collecting each sample
- Samples will be collected in the expected order of increasing degree of contamination based on historical analytical results
- All sampling equipment will be thoroughly decontaminated between each boring.

Soil Waste Management

Soil cuttings are stockpiled on and covered with plastic sheeting to control runoff, or contained in 55-gallon D.O.T.-approved drums on site. Waste soil will be sampled to chemically profile it for disposal, and hauled by a licensed waste hauler to an appropriate landfill. All waste stored on site is properly labeled at the time of production.

APPENDIX D



2 February 2007

Mr. Mathew Ryder-Smith
Clearwater Group
229 Tewksbury Avenue
Point Richmond, CA 94801

SUBJECT: DATA REPORT - Clearwater Group Project # FB022G
Lucasey Manufacturing / 2744 East 11th Street, Oakland, California

TEG Project # 70108E

Mr. Ryder-Smith:

Please find enclosed a data report for the samples analyzed from the above referenced project for Clearwater Group. The samples were analyzed on site in TEG's DHS certified mobile laboratory (#2012). TEG conducted a total of 110 analyses on 10 water and 41 soil samples.

- 44 analyses on soils for aromatic volatile hydrocarbons (BTEX), methyl-t-butyl ether (MTBE), volatile organic hydrocarbons, and total petroleum hydrocarbons-gasoline by EPA method 8260B.
- 44 analyses on soils for total petroleum hydrocarbons-diesel and motor oil by EPA method mod8015.
- 11 analyses on waters for aromatic volatile hydrocarbons (BTEX), methyl-t-butyl ether (MTBE), volatile organic hydrocarbons, and total petroleum hydrocarbons-gasoline by EPA method 8260B.
- 11 analyses on waters for total petroleum hydrocarbons-diesel and motor oil by EPA method mod8015.

The results of the analyses are summarized in the enclosed tables. Applicable detection limits and QA/QC data are included in the tables.

TEG appreciates the opportunity to have provided analytical services to Clearwater Group on this project. If you have any further questions relating to these data or report, please do not hesitate to contact us.

Sincerely,

Mark Jerpbak
Director, TEG-Northern California



Clearwater Group Project # FB022G
 Lucasey Manufacturing, 2744 East 11th Street
 Oakland, California

TEG Project #70108E

BTEX, MTBE, 1,2 DCA, EDB, TCE, PCE, & TPH-gasoline (EPA method 8260B) Analyses of SOIL
TPH-diesel & motor oil (EPA method 8015m) Analyses of SOIL

SAMPLE NUMBER:			Blank	Blank	Blank	Blank	Blank
COLLECTION DATE:							
ANALYSIS DATE:			1/08/07	1/09/07	1/10/07	1/11/07	1/12/07
DILUTION FACTOR (VOC's):			1	1	1	1	1
		RL					
Benzene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Toluene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Ethylbenzene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Total Xylenes	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Methyl-t-butyl ether (MTBE)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Trichloroethene	(ug/Kg)	5.0	-	-	-	nd	nd
Tetrachloroethene	(ug/Kg)	5.0	-	-	-	nd	nd
1,2 Dichloroethane (1,2 DCA)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
1,2 Dibromoethane (EDB)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
TPH-gasoline range (C5-C11)	(mg/Kg)	1.0	nd	nd	nd	nd	nd
TPH-diesel range (C12-C24)	(mg/Kg)	10	nd	nd	nd	nd	nd
TPH-Motor Oil range (C25-C30)	(mg/Kg)	50	nd	nd	nd	nd	nd
Surrogate Recovery:							
	DBFM		126%	125%	111%	111%	110%
	Toluene-d8		120%	120%	109%	108%	106%
	1,4-BFB		109%	104%	96%	92%	94%

'nd' Indicates not detected at listed reporting limits
 'RL' Indicates reporting limit at a dilution factor of 1
 '-' Analysis not requested

Analyses performed in TEG-Northern California's lab
 Analyses performed by: Mr. Leif Jonsson



Clearwater Group Project # FB022G
 Lucasey Manufacturing, 2744 East 11th Street
 Oakland, California

TEG Project #70108E

BTEX, MTBE, 1,2 DCA, EDB, TCE, PCE, & TPH-gasoline (EPA method 8260B) Analyses of SOIL
TPH-diesel & motor oil (EPA method 8015m) Analyses of SOIL

SAMPLE NUMBER:			SB7-5	SB7-17.5	SB7-23	SB8-5	SB8-15
COLLECTION DATE:			1/11/07	1/11/07	1/11/07	1/10/07	1/10/07
ANALYSIS DATE:			1/11/07	1/11/07	1/11/07	1/10/07	1/10/07
DILUTION FACTOR (VOC's):			1	1	1	1	1
RL							
Benzene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Toluene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Ethylbenzene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Total Xylenes	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Methyl-t-butyl ether (MTBE)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Trichloroethene	(ug/Kg)	5.0	nd	nd	nd	--	--
Tetrachloroethene	(ug/Kg)	5.0	nd	nd	nd	--	--
1,2 Dichloroethane (1,2 DCA)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
1,2 Dibromoethane (EDB)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
TPH-gasoline range (C5-C11)	(mg/Kg)	1.0	nd	nd	nd	nd	nd
TPH-diesel range (C12-C24)	(mg/Kg)	10	nd	nd	nd	nd	nd
TPH-Motor Oil range (C25-C30)	(mg/Kg)	50	nd	nd	nd	nd	nd
Surrogate Recovery:							
	DBFM		109%	108%	116%	107%	108%
	Toluene-d8		120%	119%	121%	116%	116%
	1,4-BFB		86%	91%	91%	75%	83%

'nd' Indicates not detected at listed reporting limits
 'RL' Indicates reporting limit at a dilution factor of 1
 '--' Analysis not requested

Analyses performed in TEG-Northern California's lab
 Analyses performed by: Mr. Leif Jonsson



Clearwater Group Project # FB022G
 Lucasey Manufacturing, 2744 East 11th Street
 Oakland, California

TEG Project #70108E

BTEX, MTBE, 1,2 DCA, EDB, TCE, PCE, & TPH-gasoline (EPA method 8260B) Analyses of SOIL
TPH-diesel & motor oil (EPA method 8015m) Analyses of SOIL

SAMPLE NUMBER:			SB8-23.5	SB8-26.5	SB9-5	SB9-10	SB9-18
COLLECTION DATE:			1/10/07	1/10/07	1/09/07	1/09/07	1/09/07
ANALYSIS DATE:			1/10/07	1/10/07	1/09/07	1/09/07	1/09/07
DILUTION FACTOR (VOC's):			1	1	1	1	1
RL							
Benzene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Toluene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Ethylbenzene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Total Xylenes	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Methyl-t-butyl ether (MTBE)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Trichloroethene	(ug/Kg)	5.0	-	-	-	-	-
Tetrachloroethene	(ug/Kg)	5.0	-	-	-	-	-
1,2 Dichloroethane (1,2 DCA)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
1,2 Dibromoethane (EDB)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
TPH-gasoline range (C5-C11)	(mg/Kg)	1.0	nd	nd	nd	nd	nd
TPH-diesel range (C12-C24)	(mg/Kg)	10	nd	nd	nd	nd	18
TPH-Motor Oil range (C25-C30)	(mg/Kg)	50	nd	nd	nd	nd	nd
Surrogate Recovery:							
	DBFM		103%	108%	108%	105%	110%
	Toluene-d8		115%	114%	115%	112%	117%
	1,4-BFB		84%	84%	84%	82%	89%

'nd' Indicates not detected at listed reporting limits
 'RL' Indicates reporting limit at a dilution factor of 1
 '-' Analysis not requested

Analyses performed in TEG-Northern California's lab
 Analyses performed by: Mr. Leif Jonsson



Clearwater Group Project # FB022G
 Lucasey Manufacturing, 2744 East 11th Street
 Oakland, California

TEG Project #70108E

BTEX, MTBE, 1,2 DCA, EDB, TCE, PCE, & TPH-gasoline (EPA method 8260B) Analyses of SOIL
TPH-diesel & motor oil (EPA method 8015m) Analyses of SOIL

SAMPLE NUMBER:			SB9-18	SB9-22	SB10-5	SB10-12	SB10-23
			dup				
COLLECTION DATE:			1/09/07	1/09/07	1/10/07	1/10/07	1/10/07
ANALYSIS DATE:			1/09/07	1/09/07	1/10/07	1/10/07	1/10/07
DILUTION FACTOR (VOC's):			1	1	1	1	1
RL							
Benzene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Toluene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Ethylbenzene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Total Xylenes	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Methyl-t-butyl ether (MTBE)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Trichloroethene	(ug/Kg)	5.0	-	-	-	-	-
Tetrachloroethene	(ug/Kg)	5.0	-	-	-	-	-
1,2 Dichloroethane (1,2 DCA)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
1,2 Dibromoethane (EDB)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
TPH-gasoline range (C5-C11)	(mg/Kg)	1.0	nd	nd	nd	nd	nd
TPH-diesel range (C12-C24)	(mg/Kg)	10	21	nd	nd	nd	nd
TPH-Motor Oil range (C25-C30)	(mg/Kg)	50	nd	nd	nd	nd	nd
Surrogate Recovery:							
	DBFM		108%	106%	116%	113%	111%
	Toluene-d8		118%	113%	121%	117%	120%
	1,4-BFB		88%	85%	91%	91%	89%

'nd' Indicates not detected at listed reporting limits
 'RL' Indicates reporting limit at a dilution factor of 1
 '-' Analysis not requested

Analyses performed in TEG-Northern California's lab
 Analyses performed by: Mr. Leif Jonsson



Clearwater Group Project # FB022G
 Lucasey Manufacturing, 2744 East 11th Street
 Oakland, California

TEG Project #70108E

BTEX, MTBE, 1,2 DCA, EDB, TCE, PCE, & TPH-gasoline (EPA method 8260B) Analyses of SOIL
TPH-diesel & motor oil (EPA method 8015m) Analyses of SOIL

SAMPLE NUMBER:			SB10-23	SB11-5	SB11-22	SB11-23.5	SB12-5
			dup				
COLLECTION DATE:			1/10/07	1/09/07	1/09/07	1/09/07	1/08/07
ANALYSIS DATE:			1/10/07	1/09/07	1/10/07	1/09/07	1/08/07
DILUTION FACTOR (VOC's):			1	1	1	1	1
			RL				
Benzene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Toluene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Ethylbenzene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Total Xylenes	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Methyl-t-butyl ether (MTBE)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Trichloroethene	(ug/Kg)	5.0	-	-	-	-	-
Tetrachloroethene	(ug/Kg)	5.0	-	-	-	-	-
1,2 Dichloroethane (1,2 DCA)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
1,2 Dibromoethane (EDB)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
TPH-gasoline range (C5-C11)	(mg/Kg)	1.0	nd	nd	nd	nd	nd
TPH-diesel range (C12-C24)	(mg/Kg)	10	nd	nd	nd	nd	nd
TPH-Motor Oil range (C25-C30)	(mg/Kg)	50	nd	nd	nd	nd	nd
Surrogate Recovery:							
	DBFM		110%	108%	105%	115%	107%
	Toluene-d8		117%	114%	113%	116%	117%
	1,4-BFB		90%	88%	83%	93%	84%
<p>'nd' Indicates not detected at listed reporting limits 'RL' Indicates reporting limit at a dilution factor of 1 '-' Analysis not requested</p>							

Analyses performed in TEG-Northern California's lab
 Analyses performed by: Mr. Leif Jonsson



Clearwater Group Project # FB022G
 Lucasey Manufacturing, 2744 East 11th Street
 Oakland, California

TEG Project #70108E

BTEX, MTBE, 1,2 DCA, EDB, TCE, PCE, & TPH-gasoline (EPA method 8260B) Analyses of SOIL
 TPH-diesel & motor oil (EPA method 8015m) Analyses of SOIL

SAMPLE NUMBER:			SB12-11	SB12-26	SB12-34	SB13-5	SB13-10
COLLECTION DATE:			1/08/07	1/08/07	1/08/07	1/08/07	1/08/07
ANALYSIS DATE:			1/08/07	1/08/07	1/08/07	1/08/07	1/08/07
DILUTION FACTOR (VOC's):			5	1	1	1	1
		RL					
Benzene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Toluene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Ethylbenzene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Total Xylenes	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Methyl-t-butyl ether (MTBE)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Trichloroethene	(ug/Kg)	5.0	--	--	--	--	--
Tetrachloroethene	(ug/Kg)	5.0	--	--	--	--	--
1,2 Dichloroethane (1,2 DCA)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
1,2 Dibromoethane (EDB)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
TPH-gasoline range (C5-C11)	(mg/Kg)	1.0	nd	nd	1.4	nd	nd
TPH-diesel range (C12-C24)	(mg/Kg)	10	370	nd	170	nd	nd
TPH-Motor Oil range (C25-C30)	(mg/Kg)	50	85	nd	nd	nd	nd
Surrogate Recovery:							
	DBFM		116%	112%	112%	112%	121%
	Toluene-d8		121%	118%	111%	118%	120%
	1,4-BFB		84%	86%	70%	86%	103%
<p>'nd' Indicates not detected at listed reporting limits 'RL' Indicates reporting limit at a dilution factor of 1 '--' Analysis not requested</p>							

Analyses performed in TEG-Northern California's lab
 Analyses performed by: Mr. Leif Jonsson



Clearwater Group Project # FB022G
 Lucasey Manufacturing, 2744 East 11th Street
 Oakland, California

TEG Project #70108E

*BTEX, MTBE, 1,2 DCA, EDB, TCE, PCE, & TPH-gasoline (EPA method 8260B) Analyses of SOIL
 TPH-diesel & motor oil (EPA method 8015m) Analyses of SOIL*

SAMPLE NUMBER:			SB13-18	SB13-30	SB14-10.5	SB14-13.5	SB14-23
COLLECTION DATE:			1/08/07	1/08/07	1/12/07	1/12/07	1/12/07
ANALYSIS DATE:			1/08/07	1/08/07	1/12/07	1/12/07	1/12/07
DILUTION FACTOR (VOC's):			1	1	1	1	1
		RL					
Benzene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Toluene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Ethylbenzene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Total Xylenes	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Methyl-t-butyl ether (MTBE)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Trichloroethene	(ug/Kg)	5.0	--	--	--	--	--
Tetrachloroethene	(ug/Kg)	5.0	--	--	--	--	--
1,2 Dichloroethane (1,2 DCA)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
1,2 Dibromoethane (EDB)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
TPH-gasoline range (C5-C11)	(mg/Kg)	1.0	nd	nd	nd	nd	nd
TPH-diesel range (C12-C24)	(mg/Kg)	10	nd	nd	nd	nd	nd
TPH-Motor Oil range (C25-C30)	(mg/Kg)	50	nd	nd	nd	nd	nd
Surrogate Recovery:							
	DBFM		108%	115%	110%	103%	108%
	Toluene-d8		116%	117%	116%	116%	115%
	1,4-BFB		88%	89%	87%	90%	90%
'nd' Indicates not detected at listed reporting limits							
'RL' Indicates reporting limit at a dilution factor of 1							
'--' Analysis not requested							

Analyses performed in TEG-Northern California's lab
 Analyses performed by: Mr. Leif Jonsson



Clearwater Group Project # FB022G
 Lucasey Manufacturing, 2744 East 11th Street
 Oakland, California

TEG Project #70108E

BTEX, MTBE, 1,2 DCA, EDB, TCE, PCE, & TPH-gasoline (EPA method 8260B) Analyses of SOIL
TPH-diesel & motor oil (EPA method 8015m) Analyses of SOIL

SAMPLE NUMBER:			SB14-23	SB15-5	SB15-27	SB21-5	SB21-10
			dup				
COLLECTION DATE:			1/12/07	1/09/07	1/09/07	1/11/07	1/11/07
ANALYSIS DATE:			1/12/07	1/09/07	1/09/07	1/11/07	1/11/07
DILUTION FACTOR (VOC's):			1	1	1	1	1
			RL				
Benzene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Toluene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Ethylbenzene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Total Xylenes	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Methyl-t-butyl ether (MTBE)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Trichloroethene	(ug/Kg)	5.0	-	-	-	-	-
Tetrachloroethene	(ug/Kg)	5.0	-	-	-	-	-
1,2 Dichloroethane (1,2 DCA)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
1,2 Dibromoethane (EDB)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
TPH-gasoline range (C5-C11)	(mg/Kg)	1.0	nd	nd	nd	nd	nd
TPH-diesel range (C12-C24)	(mg/Kg)	10	nd	nd	nd	nd	nd
TPH-Motor Oil range (C25-C30)	(mg/Kg)	50	nd	nd	nd	nd	nd
Surrogate Recovery:							
	DBFM		108%	112%	108%	112%	112%
	Toluene-d8		117%	115%	114%	120%	120%
	1,4-BFB		82%	83%	87%	88%	89%

'nd' Indicates not detected at listed reporting limits
 'RL' Indicates reporting limit at a dilution factor of 1
 '--' Analysis not requested

Analyses performed in TEG-Northern California's lab
 Analyses performed by: Mr. Leif Jonsson



Clearwater Group Project # FB022G
 Lucasey Manufacturing, 2744 East 11th Street
 Oakland, California

TEG Project #70108E

*BTEX, MTBE, 1,2 DCA, EDB, TCE, PCE, & TPH-gasoline (EPA method 8260B) Analyses of SOIL
 TPH-diesel & motor oil (EPA method 8015m) Analyses of SOIL*

SAMPLE NUMBER:			SB21-22	SB22-10	SB22-15	SB23-5	SB23-15
COLLECTION DATE:			1/11/07	1/12/07	1/12/07	1/11/07	1/11/07
ANALYSIS DATE:			1/11/07	1/12/07	1/12/07	1/11/07	1/11/07
DILUTION FACTOR (VOC's):			1	1	1	1	1
		RL					
Benzene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Toluene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Ethylbenzene	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Total Xylenes	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Methyl-t-butyl ether (MTBE)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
Trichloroethene	(ug/Kg)	5.0	-	-	-	nd	nd
Tetrachloroethene	(ug/Kg)	5.0	-	-	-	nd	nd
1,2 Dichloroethane (1,2 DCA)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
1,2 Dibromoethane (EDB)	(ug/Kg)	5.0	nd	nd	nd	nd	nd
TPH-gasoline range (C5-C11)	(mg/Kg)	1.0	nd	nd	nd	nd	nd
TPH-diesel range (C12-C24)	(mg/Kg)	10	nd	nd	nd	nd	nd
TPH-Motor Oil range (C25-C30)	(mg/Kg)	50	nd	nd	nd	nd	nd
Surrogate Recovery:							
	DBFM		112%	107%	111%	115%	108%
	Toluene-d8		119%	118%	120%	116%	116%
	1,4-BFB		89%	84%	93%	97%	91%

'nd' Indicates not detected at listed reporting limits
 'RL' Indicates reporting limit at a dilution factor of 1
 '-' Analysis not requested

Analyses performed in TEG-Northern California's lab
 Analyses performed by: Mr. Leif Jonsson



Clearwater Group Project # FB022G
 Lucasey Manufacturing, 2744 East 11th Street
 Oakland, California

TEG Project #70108E

BTEX, MTBE, 1,2 DCA, EDB, TCE, PCE, & TPH-gasoline (EPA method 8260B) Analyses of SOIL
TPH-diesel & motor oil (EPA method 8015m) Analyses of SOIL

SAMPLE NUMBER:			SB23-23	SB23-29	SB24-5	SB24-18
COLLECTION DATE:			1/11/07	1/11/07	1/12/07	1/12/07
ANALYSIS DATE:			1/11/07	1/11/07	1/12/07	1/12/07
DILUTION FACTOR (VOC's):			1	1	1	1
		RL				
Benzene	(ug/Kg)	5.0	nd	nd	nd	nd
Toluene	(ug/Kg)	5.0	nd	nd	nd	nd
Ethylbenzene	(ug/Kg)	5.0	nd	nd	nd	nd
Total Xylenes	(ug/Kg)	5.0	nd	nd	nd	nd
Methyl-t-butyl ether (MTBE)	(ug/Kg)	5.0	nd	nd	nd	nd
Trichloroethene	(ug/Kg)	5.0	nd	--	--	--
Tetrachloroethene	(ug/Kg)	5.0	nd	--	--	--
1,2 Dichloroethane (1,2 DCA)	(ug/Kg)	5.0	nd	nd	nd	nd
1,2 Dibromoethane (EDB)	(ug/Kg)	5.0	nd	nd	nd	nd
TPH-gasoline range (C5-C11)	(mg/Kg)	1.0	nd	nd	nd	nd
TPH-diesel range (C12-C24)	(mg/Kg)	10	nd	nd	23	nd
TPH-Motor Oil range (C25-C30)	(mg/Kg)	50	nd	nd	nd	nd
Surrogate Recovery:						
	DBFM		109%	106%	106%	109%
	Toluene-d8		119%	116%	118%	116%
	1,4-BFB		87%	85%	92%	86%

'nd' Indicates not detected at listed reporting limits
 'RL' Indicates reporting limit at a dilution factor of 1
 '--' Analysis not requested

Analyses performed in TEG-Northern California's lab
 Analyses performed by: Mr. Leif Jonsson



Clearwater Group Project # FB022G
Lucasey Manufacturing, 2744 East 11th Street
Oakland, California

TEG Project #70108E

QA/QC DATA - MATRIX SPIKE ANALYSES - SOIL

SAMPLE NUMBER	DATE ANALYZED	Benzene ug/kg	Toluene ug/kg	o-Xylene ug/kg	Diesel mg/kg	Motor Oil mg/kg
SB13-5						
Spiked Conc.	1/08/06	50.0	50.0	50	50.0	250
Measured Conc.		53.9	55.3	62.5	48.1	247
% Recovery		108%	111%	125%	96%	99%
Spiked Conc.	1/08/06	50.0	50.0	50	50.0	250
Measured Conc.		49.2	51.5	54.9	41.2	221
% Recovery		98%	103%	110%	82%	86%
RPD		9.1%	7.1%	12.9%	15.5%	11.1%
SB8-5						
Spiked Conc.	1/10/06	50.0	50.0	50	50.0	250
Measured Conc.		54.0	56.2	61.2	52.7	240
% Recovery		108%	112%	122%	105%	96%
Spiked Conc.	1/10/06	50.0	50.0	50	50.0	250
Measured Conc.		55.4	58.1	64.6	46.3	211
% Recovery		111%	116%	129%	93%	84%
RPD		2.6%	3.3%	5.4%	12.9%	12.9%
SB22-10						
Spiked Conc.	1/12/06	50.0	50.0	50	50.0	250
Measured Conc.		42.6	44.0	47.7	51.2	198
% Recovery		85%	88%	95%	102%	79%
Spiked Conc.	1/12/06	50.0	50.0	50	50.0	250
Measured Conc.		48.4	51.0	54.5	43.6	191
% Recovery		97%	102%	109%	87%	76%
RPD		12.7%	14.7%	13.3%	16.0%	3.6%

ACCEPTABLE RPD LIMIT = 25%

Analyses performed in TEG-Northern California's lab
Analyses performed by: Mr. Leif Jonsson



Clearwater Group Project # FB022G
 Lucasey Manufacturing, 2744 East 11th Street
 Oakland, California

TEG Project #70108E

BTEX, MTBE, 1,2 DCA, EDB, TCE, PCE, & TPH-gasoline (EPA method 8260B) Analyses of WATER
 TPH-diesel & motor oil (EPA method 8015m) Analyses of WATER

SAMPLE NUMBER:			Blank	Blank	Blank	SB7-W	SB8-W
COLLECTION DATE:						1/11/07	1/10/07
ANALYSIS DATE:			1/10/07	1/11/07	1/12/07	1/11/07	1/10/07
DILUTION FACTOR:			1	1	1	1	1
		RL					
Benzene	(ug/L)	0.50	nd	nd	nd	nd	nd
Toluene	(ug/L)	0.50	nd	nd	nd	nd	nd
Ethylbenzene	(ug/L)	0.50	nd	nd	nd	nd	nd
Total Xylenes	(ug/L)	0.50	nd	nd	nd	nd	nd
Methyl-t-butyl ether (MTBE)	(ug/L)	0.50	nd	nd	nd	nd	nd
Trichloroethene	(ug/L)	0.50	nd	nd	nd	6.6	--
Tetrachloroethene	(ug/L)	0.50	nd	nd	nd	3.0	--
1,2 Dichloroethane (1,2 DCA)	(ug/L)	0.50	nd	nd	nd	nd	nd
1,2 Dibromoethane (EDB)	(ug/L)	0.50	nd	nd	nd	nd	nd
TPH-gasoline range (C5-C11)	(ug/L)	50	nd	nd	nd	nd	nd
TPH-diesel range (C12-C24)	(ug/L)	50	nd	nd	nd	nd	nd
TPH-Motor Oil range (C25-C30)	(ug/L)	500	nd	nd	nd	nd	nd
Surrogate Recovery:							
	DBFM		111%	111%	110%	110%	107%
	Toluene-d8		109%	108%	106%	105%	106%
	1,4-BFB		96%	92%	94%	95%	90%
<p>'nd' Indicates not detected at listed reporting limits 'RL' Indicates reporting limit at a dilution factor of 1 '--' Analysis not requested</p>							

Analyses performed in TEG-Northern California's lab
 Analyses performed by: Mr. Leif Jonsson



Clearwater Group Project # FB022G
 Lucasey Manufacturing, 2744 East 11th Street
 Oakland, California

TEG Project #70108E

BTEX, MTBE, 1,2 DCA, EDB, TCE, PCE, & TPH-gasoline (EPA method 8260B) Analyses of WATER
 TPH-diesel & motor oil (EPA method 8015m) Analyses of WATER

SAMPLE NUMBER:			SB8-W23.5	SB10-W16	SB10-W23	SB14-W	SB21-W17
COLLECTION DATE:			1/10/07	1/10/07	1/10/07	1/12/07	1/11/07
ANALYSIS DATE:			1/10/07	1/10/07	1/10/07	1/12/07	1/11/07
DILUTION FACTOR:			1	1	1	1	1
		RL					
Benzene	(ug/L)	0.50	nd	nd	nd	nd	nd
Toluene	(ug/L)	0.50	nd	nd	nd	nd	nd
Ethylbenzene	(ug/L)	0.50	nd	nd	nd	nd	nd
Total Xylenes	(ug/L)	0.50	nd	nd	nd	nd	nd
Methyl-t-butyl ether (MTBE)	(ug/L)	0.50	nd	nd	nd	nd	nd
Trichloroethene	(ug/L)	0.50	-	nd	nd	-	0.50
Tetrachloroethene	(ug/L)	0.50	-	16	15	-	3.9
1,2 Dichloroethane (1,2 DCA)	(ug/L)	0.50	nd	nd	nd	nd	nd
1,2 Dibromoethane (EDB)	(ug/L)	0.50	nd	nd	nd	nd	nd
TPH-gasoline range (C5-C11)	(ug/L)	50	nd	nd	nd	nd	nd
TPH-diesel range (C12-C24)	(ug/L)	50	390	nd	340	11000	730
TPH-Motor Oil range (C25-C30)	(ug/L)	500	nd	nd	nd	4500	nd
Surrogate Recovery:							
	DBFM		108%	111%	107%	106%	111%
	Toluene-d8		104%	107%	106%	105%	106%
	1,4-BFB		93%	97%	96%	92%	92%
<p>'nd' Indicates not detected at listed reporting limits 'RL' Indicates reporting limit at a dilution factor of 1 '-' Analysis not requested</p>							

Analyses performed in TEG-Northern California's lab
 Analyses performed by: Mr. Leif Jonsson

page 2



Clearwater Group Project # FB022G
 Lucasey Manufacturing, 2744 East 11th Street
 Oakland, California

TEG Project #70108E

BTEX, MTBE, 1,2 DCA, EDB, TCE, PCE, & TPH-gasoline (EPA method 8260B) Analyses of WATER
TPH-diesel & motor oil (EPA method 8015m) Analyses of WATER

SAMPLE NUMBER:			SB21-W26	SB23-W	SB23-W23	SB23-W23 dup
COLLECTION DATE:			1/11/07	1/11/07	1/11/07	1/11/07
ANALYSIS DATE:			1/11/07	1/11/07	1/11/07	1/11/07
DILUTION FACTOR:			1	1	1	1
		RL				
Benzene	(ug/L)	0.50	nd	nd	nd	nd
Toluene	(ug/L)	0.50	0.54	nd	nd	nd
Ethylbenzene	(ug/L)	0.50	nd	nd	nd	nd
Total Xylenes	(ug/L)	0.50	1.7	nd	nd	nd
Methyl-t-butyl ether (MTBE)	(ug/L)	0.50	1.2	nd	nd	nd
Trichloroethene	(ug/L)	0.50	nd	nd	nd	nd
Tetrachloroethene	(ug/L)	0.50	4.2	nd	1.5	1.4
1,2 Dichloroethane (1,2 DCA)	(ug/L)	0.50	nd	nd	nd	nd
1,2 Dibromoethane (EDB)	(ug/L)	0.50	nd	nd	nd	nd
TPH-gasoline range (C5-C11)	(ug/L)	50	nd	nd	nd	nd
TPH-diesel range (C12-C24)	(ug/L)	50	1500	2800	630	640
TPH-Motor Oil range (C25-C30)	(ug/L)	500	580	1500	nd	nd
Surrogate Recovery:						
	DBFM		109%	107%	110%	113%
	Toluene-d8		106%	105%	105%	106%
	1,4-BFB		91%	91%	90%	96%
<p>'nd' Indicates not detected at listed reporting limits 'RL' Indicates reporting limit at a dilution factor of 1 '-' Analysis not requested</p>						

Analyses performed in TEG-Northern California's lab
 Analyses performed by: Mr. Leif Jonsson



Cleanwater Group Project # FB022G
Lucasey Manufacturing, 2744 East 11th Street
Oakland, California

TEG Project #70108E

QA/QC DATA - LCS/LCSD - WATER

	DATE ANALYZED	Benzene ug/l	Toluene ug/l	o-Xylene ug/l	Diesel ug/l	Motor Oil ug/l
Spiked Conc.	1/11/07	25.0	25.0	25.0	500	5000
Measured Conc.		27.5	28.3	27.3	520	4200
% Recovery		110%	113%	109%	104%	84%
Spiked Conc.	1/11/07	25.0	25.0	25.0	500	5000
Measured Conc.		26.1	26.5	26.0	490	4500
% Recovery		104%	106%	104%	98%	90%
RPD		5.2%	6.6%	4.9%	5.9%	6.9%

ACCEPTABLE RPD LIMIT = 25%

Analyses performed in TEG-Northern California's lab
Analyses performed by: Mr. Leif Jonsson

TEG Northern California Inc.

Chain of Custody Record

11350 Monier Park Place Ph: 916.853.8010
 Rancho Cordova, CA 95742 Fax: 916.853.8020

Page: 1 of 1

Client: Clearwater Group
 Address: 229 Tewksbury Ave
Point Richmond, CA 94801
 Phone: 510-307-9943 Fax: 510-232-2823

Project Manager: Matthew Ryan Smith E-Mail: _____
 TEG Project #: 70108E Client Project #: FBO22G
 Location: Hexagon Manufacturing 2744 E 11th St, Oakland, CA
 Collector: Robert Nelson Date of Collection: 1-8-2007

Sample Designation	Depth	Time	Sample Matrix	Container Type	Analytes											Field Notes	# of containers	
					EPA 8260B (Full List)	EPA 8260B (DTSC List)	EPA 8260B (BTEX & MTBE)	5 Oxygenates, BTEX (8260B)	TPH gasoline (8260)	EPA 8021 (BTEX)	TPH 8021 (HVOCs)	TPH 8015mod (gas)	TPH 8015mod (diesel)	BTEX + MTBE (motor oil)	13 DCA + EPA 8260B			
SB12-5	5	0820	Soil	Acetate liner					X			X	X	X	X			
SB12-11	11	0845	Soil	↓					X			X	X	X	X			
SB12-26	26	1010	Soil						X			X	X	X	X			
SB12-34	34	1050	Soil						X			X	X	X	X			
SB13-5	5	1145	Soil						X			X	X	X	X			
SB13-10	10	1200	Soil						X			X	X	X	X			
SB13-18	18	1230	Soil						X			X	X	X	X			
SB13-30	30	1430	Soil						X			X	X	X	X			
END																		

Relinquished by: <u>Robert Nelson</u>	Date / Time: <u>1-8-2007 17:00</u>	Received by: <u>Leif Johnson</u>	Date / Time: <u>1-8-07 1700</u>	Sample Receipt:	Remarks:
Relinquished by:	Date / Time:	Received by:	Date / Time:	Good Condition?	<u>good</u>
				Cold?	<u>NA</u>
				Seals Intact?	<u>NA</u>
				Total Number of Containers	

Distribution: White - Lab, Yellow - File, Pink - Originator

Sample disposal instructions: TEG disposal @ \$4.00 ea. Return to client Pickup

TEG Northern California Inc.

Chain of Custody Record

11350 Monier Park Place Ph: 916.853.8010
 Rancho Cordova, CA 95742 Fax: 916.853.8020

Page: 1 of 1

Client: Clearwater Group

Project Manager: Mathew Ryder Smith E-Mail: _____

Address: 229 Teaksbury Ave
Point Richmond, CA 94801

TEG Project #: 70108E Client Project #: FB 022G

Phone: 510-307-9943 Fax: 510-232-2823

Location: 2744 E 11th Street Oakland Lucasey Manufacturing

Collector: Robert L. Nelson Date of Collection: 1-9-07

Sample Designation	Depth	Time	Sample Matrix	Container Type	Analytes											Field Notes	# of containers	
					EPA 8260B (Full List)	EPA 8260B (D/SC List)	EPA 8260B (BTEX & MTBE)	5 Oxygenates, BTEX (8260B)	TPH gasoline (8260)	EPA 8021 (BTEX)	TPH 8015mod (HVOCs)	TPH 8015mod (gas)	TPH 8015mod (diesel)	BTEX + MTBE (motor oil)	Lead			Selenium
SB15-5	5	0840	Soil					X				X	X	X	X			
SB15-27	27	1010	Soil					X				X	X	X	X			
SB9-5	5	1100	Soil					X				X	X	X	X			
SB9-10	10	1115	Soil					X				X	X	X	X			
SB9-22 10 in	22	1140	Soil					X				X	X	X	X			
SB9-22	22	1200	Soil					X				X	X	X	X			
SB11-5	5	1315	Soil					X				X	X	X	X			
SB11-23.5	23.5	1410	Soil					X				X	X	X	X			
SB11-22	22	1400	Soil					X				X	X	X	X			
END																		

Relinquished by: <u>Robert L. Nelson</u>	Date / Time <u>1-9-2007 1530</u>	Received by: <u>[Signature]</u>	Date / Time <u>1/9/07 1530</u>	Sample Receipt:	Remarks:
Relinquished by:	Date / Time	Received by:	Date / Time	Good Condition?	<u>good</u>
				Cold?	<u>NA</u>
Relinquished by:	Date / Time	Received by:	Date / Time	Seals Intact?	<u>NA</u>
				Total Number of Containers	

Distribution: White - Lab, Yellow - File, Pink - Originator

Sample disposal instructions: TEG disposal @ \$4.00 ea. Return to client Pickup

TEG Northern California Inc.

Chain of Custody Record

11350 Monier Park Place Ph: 916.853.8010
 Rancho Cordova, CA 95742 Fax: 916.853.8020

Page: 1 of 1

Client: Clearwater Group
 Address: 229 Tewksbury Ave
Point Richmond CA 94801
 Phone: 510-307-9943 Fax: 510-232-2823

Project Manager: Matthew Ryder Smith E-Mail: _____
 TEG Project #: 70108E Client Project #: FB 022G
 Location: 2744 E 11th St. Oakland, CA Lucasey Manufacturing
 Collector: Robert Nelson Date of Collection: 1-10-07

Sample Designation	Depth	Time	Sample Matrix	Container Type	Analytes											Field Notes	# of containers
					EPA 8260B (Full List)	EPA 8260B (DTSC List)	EPA 8260B (BTEX & MTBE)	5 Oxygenates, BTEX & MTBE	TPH gasoline (8260B)	EPA 8021 (BTEX)	TPH 8015 (HVOCs)	TPH 8015mod (gas)	TPH 8015mod (diesel)	BTEX 1+MTBE	bad Scorpers 8260		
SB8-5	5	0905	Soil					X			X	X	X	X			
SB8-15	15	0930	Soil					X			X	X	X	X			
SB8-W		0940	Water	6VOA				X			X	X	X	X			
SB8-23.5	23.5	1000	Soil					X			X	X	X	X			
SB8-26.5	26.5	1045	Soil					X			X	X	X	X			
SB8-W23.5		1115	Water					X			X	X	X	X			
SB10-5	5	1215	Soil					X			X	X	X	X			
SB10-W10		1240	Water	6VOA				X			X	X	X	X	X		
SB10-12	12	1230	Soil					X			X	X	X	X			
SB10-23	23	1315	Soil					X			X	X	X	X			
SB10-W23		1325	Water	6VOA				X			X	X	X	X	X		
END																	

Relinquished by: <u>Robert Nelson</u>	Date / Time <u>1510 1-10-07</u>	Received by: <u>Jd Finn</u>	Date / Time <u>1510 1/10/07</u>	Sample Receipt:	Remarks:
Relinquished by:	Date / Time	Received by:	Date / Time	Good Condition?	<u>good</u>
Relinquished by:	Date / Time	Received by:	Date / Time	Cold?	<u>NA</u>
Relinquished by:	Date / Time	Received by:	Date / Time	Seals Intact?	<u>NA</u>
				Total Number of Containers	<u>1</u>

Distribution: White - Lab, Yellow - File, Pink - Originator

Sample disposal instructions: TEG disposal @ \$4.00 ea. Return to client Pickup

TEG Northern California Inc.

Chain of Custody Record

11350 Monier Park Place Ph: 916.853.8010
 Rancho Cordova, CA 95742 Fax: 916.853.8020

Page: 1 of 1

Client: Clearwater Group
 Address: 229 Tewksbury Ave
Sea Point Richmond, CA
 Phone: 510.307.9943 Fax: 510.232.2823

Project Manager: Matthew Ryder Smith E-Mail: _____
 TEG Project #: 7D108E Client Project #: FB0226
 Location: 2744 E. 11th St. Oakland, CA Lucasey Manufacturing
 Collector: Robert Nelson Date of Collection: 1-11-07

Sample Designation	Depth	Time	Sample Matrix	Container Type	Analytes											Field Notes	# of containers	
					EPA 8260B (Full List)	EPA 8260B (DTSC List)	EPA 8260B (BTEX & MTBE)	5 Oxygenates, BTEX (8260B)	TPH gasoline (8260)	EPA 8021 (BTEX)	TPH 8015 (HVOCS)	TPH 8015mod (gas)	TPH 8015mod (diesel)	BTEX + MTBE (motor oil)	Lead Scavengers 8260			PCE, TCE by 8260
SB7-5	5	0900	Soil	Acetate				X				X	X	X	X			
SB7-17.5	17.5	0920	Soil	↓				X				X	X	X	X			
SB7-W		0930	Water	6 VOA's				X				X	X	X	X			
SB7-23	23	0945	Soil	Acetate				X				X	X	X	X			
SB23-5	5	1030	Soil	↓				X				X	X	X	X			
SB23-15	15	1040	Soil	↓				X				X	X	X	X			
SB23-W		1050	Water	6 VOAs				X				X	X	X	X			
SB23-23	23	1115	Soil	Acetate				X				X	X	X	X			
SB23-W23		1130	Water	6 VOAs				X				X	X	X	X			
SB23-29	29	1320	Soil	Acetate				X				X	X	X	X			
SB21-5	5	1310	Soil	↓				X				X	X	X	X			
SB21-10	10	1315	Soil	↓				X				X	X	X	X			
SB21-W17		1330	Water	6 VOAs				X				X	X	X	X			
SB21-22	22	1410	Soil	Acetate				X				X	X	X	X			
SB21-W26		1500	Water	VOAs				X				X	X	X	X			
END																		

Relinquished by: <u>Robert Nelson</u>	Date / Time: <u>1700 1-11-2007</u>	Received by: <u>Jeff Johnson</u>	Date / Time: <u>1-11-07 1700</u>	Sample Receipt:	Remarks:
Relinquished by:	Date / Time:	Received by:	Date / Time:	Good Condition?	<u>good</u>
Relinquished by:	Date / Time:	Received by:	Date / Time:	Cold?	<u>NA</u>
Relinquished by:	Date / Time:	Received by:	Date / Time:	Seals Intact?	<u>NA</u>
				Total Number of Containers	

Distribution: White - Lab, Yellow - File, Pink - Originator

Sample disposal instructions: TEG disposal @ \$4.00 ea. Return to client Pickup

TEG Northern California Inc.

Chain of Custody Record

11350 Monier Park Place Ph: 916.853.8010
 Rancho Cordova, CA 95742 Fax: 916.853.8020

Page: 1 of 1

Client: Clearwater Group
 Address: 229 Tewksbury Ave.
Point Richmond, CA
 Phone: 510-307-9943 Fax: 510-232-2823

Project Manager: Matthew Ryder Smith E-Mail: _____
 TEG Project #: 70108E Client Project #: FB022G
 Location: 2744 E. 11th St. Oakland CA - Lucasey Manufacturing
 Collector: Robert Nelson Date of Collection: 1-12-07

Sample Designation	Depth	Time	Sample Matrix	Container Type	Analytes											Field Notes	# of containers	
					EPA 8260B (Full List)	EPA 8260B (DTSC List)	EPA 8260B (BTEX & MTBE)	5 Oxygenates, BTEX (8260B)	TPH gasoline (8260)	EPA 8021 (BTEX)	TPH 8021 (HVOCS)	TPH 8015mod (gas)	TPH 8015mod (diesel)	BTEX MTBE by S260	Low Sulfur by S260			PLC + TCE
SB22-10	10	0840	Soil	Acetate					X			X	X	X	X	X		
SB22-15	15	090	Soil	↓					X			X	X	X	X	X		
SB14-10.5	10.5	1050	Soil	↓					X			X	X	X	X	X		
SB14-13.5	13.5	1110	Soil	↓					X			X	X	X	X	X		
SB14-W		1120	Water	Vials					X			X	X	X	X	X		
SB14-23	23	1145	Soil	Acetate					X			X	X	X	X	X		
SB24-5	5	1330	Soil	↓					X			X	X	X	X	X		
SB24-18	18	1350	Soil	↓					X			X	X	X	X	X		
END																		

Relinquished by: <u>Robert L. Nelson</u>	Date / Time <u>1700 1-12-2007</u>	Received by: <u>[Signature]</u>	Date / Time <u>1700 1/12/07</u>	Sample Receipt:	Remarks:
Relinquished by:	Date / Time:	Received by:	Date / Time:	Good Condition?	<u>good</u>
				Cold?	<u>NA</u>
Relinquished by:	Date / Time:	Received by:	Date / Time:	Seals Intact?	<u>NA</u>
				Total Number of Containers	

Distribution: White - Lab, Yellow - File, Pink - Originator

Sample disposal instructions: TEG disposal @ \$4.00 ea. Return to client Pickup

APPENDIX E



Report Number : 54390

Date : 1/24/2007

Matthew Ryder-Smith
Clearwater Group, Inc.
229 Tewksbury Avenue
Point Richmond, CA 94801

Subject : 3 Soil Samples and 1 Water Sample
Project Name : Lucasey Manufacturing
Project Number : FB022G

Dear Mr. Ryder-Smith,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

A handwritten signature in black ink, appearing to read "Joel Kiff".

Joel Kiff



Report Number : 54390

Date : 1/24/2007

Subject : 3 Soil Samples and 1 Water Sample
Project Name : Lucasey Manufacturing
Project Number : FB022G

Case Narrative

Because the sample matrix is clay, the samples are not conducive to normal homogenization. Each TPH as Diesel and TPH as Motor Oil result is from a composite of randomly selected amounts within the sample sleeve after removing the top inch of soil.

Approved By: _____

A handwritten signature in black ink, appearing to read "Joel Kiff", is written over a horizontal line. The signature is stylized and cursive.

Joel Kiff

Project Name : **Lucasey Manufacturing**

Project Number : **FB022G**

Sample : **SB22-11.5**

Matrix : Soil

Lab Number : 54390-01

Sample Date :1/12/2007

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/24/2007
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/24/2007
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/24/2007
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/24/2007
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/24/2007
TPH as Gasoline	4.3	1.0	mg/Kg	EPA 8260B	1/24/2007
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/24/2007
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/24/2007
Toluene - d8 (Surr)	99.8		% Recovery	EPA 8260B	1/24/2007
4-Bromofluorobenzene (Surr)	97.3		% Recovery	EPA 8260B	1/24/2007
1,2-Dichloroethane-d4 (Surr)	97.3		% Recovery	EPA 8260B	1/24/2007
TPH as Diesel	3800	10	mg/Kg	M EPA 8015	1/22/2007
TPH as Motor Oil	2600	100	mg/Kg	M EPA 8015	1/22/2007
1-Chlorooctadecane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	1/22/2007

Approved By:  Joel Kiff

Project Name : **Lucasey Manufacturing**

Project Number : **FB022G**

Sample : **SB14-17**

Matrix : Soil

Lab Number : 54390-04

Sample Date :1/12/2007

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/24/2007
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/24/2007
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/24/2007
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/24/2007
Methyi-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/24/2007
TPH as Gasoline	14	1.0	mg/Kg	EPA 8260B	1/24/2007
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/24/2007
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/24/2007
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	1/24/2007
4-Bromofluorobenzene (Surr)	93.4		% Recovery	EPA 8260B	1/24/2007
1,2-Dichloroethane-d4 (Surr)	98.7		% Recovery	EPA 8260B	1/24/2007
TPH as Diesel	3800	10	mg/Kg	M EPA 8015	1/22/2007
TPH as Motor Oil	2500	100	mg/Kg	M EPA 8015	1/22/2007
1-Chlorooctadecane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	1/22/2007

Approved By:

Joel Kiff

Project Name : **Lucasey Manufacturing**

Project Number : **FB022G**

Sample : **SB24-11.5**

Matrix : Soil

Lab Number : 54390-05

Sample Date :1/12/2007

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
TPH as Gasoline	29	1.0	mg/Kg	EPA 8260B	1/19/2007
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Toluene - d8 (Surr)	105		% Recovery	EPA 8260B	1/19/2007
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	1/19/2007
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	1/19/2007
TPH as Diesel	3600	10	mg/Kg	M EPA 8015	1/22/2007
TPH as Motor Oil	2300	100	mg/Kg	M EPA 8015	1/22/2007
1-Chlorooctadecane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	1/22/2007

Approved By:

Joel Kiff



Project Name : **Lucasey Manufacturing**

Project Number : **FB022G**

Sample : **SB24-W**

Matrix : Water

Lab Number : 54390-06

Sample Date :1/12/2007

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	1/23/2007
Toluene	< 0.50	0.50	ug/L	EPA 8260B	1/23/2007
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	1/23/2007
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	1/23/2007
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	1/23/2007
TPH as Gasoline	1400	50	ug/L	EPA 8260B	1/23/2007
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	1/23/2007
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	1/23/2007
Toluene - d8 (Surr)	96.5		% Recovery	EPA 8260B	1/23/2007
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	1/23/2007
1,2-Dichloroethane-d4 (Surr)	99.0		% Recovery	EPA 8260B	1/23/2007
TPH as Diesel	430000	2500	ug/L	M EPA 8015	1/23/2007
TPH as Motor Oil	210000	5000	ug/L	M EPA 8015	1/23/2007
Octacosane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	1/23/2007

Approved By:

Joel Kiff

QC Report : Method Blank Data

Project Name : **Lucasey Manufacturing**Project Number : **FB022G**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	1/20/2007
TPH as Motor Oil	< 10	10	mg/Kg	M EPA 8015	1/20/2007
1-Chlorooctadecane (Diesel Surrogate)	82.8		%	M EPA 8015	1/20/2007
TPH as Diesel	< 50	50	ug/L	M EPA 8015	1/22/2007
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	1/22/2007
Octacosane (Diesel Surrogate)	98.1		%	M EPA 8015	1/22/2007
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	1/19/2007
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Toluene - d8 (Surr)	97.9		%	EPA 8260B	1/19/2007
4-Bromofluorobenzene (Surr)	107		%	EPA 8260B	1/19/2007
1,2-Dichloroethane-d4 (Surr)	104		%	EPA 8260B	1/19/2007
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	1/22/2007
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
Toluene - d8 (Surr)	98.4		%	EPA 8260B	1/22/2007
4-Bromofluorobenzene (Surr)	106		%	EPA 8260B	1/22/2007
1,2-Dichloroethane-d4 (Surr)	101		%	EPA 8260B	1/22/2007

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	1/22/2007
Toluene	< 0.50	0.50	ug/L	EPA 8260B	1/22/2007
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	1/22/2007
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	1/22/2007
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	1/22/2007
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	1/22/2007
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	1/22/2007
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	1/22/2007
Toluene - d8 (Surr)	99.0		%	EPA 8260B	1/22/2007
4-Bromofluorobenzene (Surr)	106		%	EPA 8260B	1/22/2007
1,2-Dichloroethane-d4 (Surr)	99.9		%	EPA 8260B	1/22/2007
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	1/24/2007

Approved By:  _____

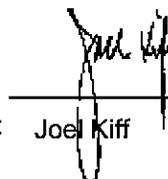
KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **Lucasey Manufacturing**Project Number : **FB022G**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH as Diesel	54285-07	<1.0	20.0	20.0	17.7	17.3	mg/Kg	M EPA 8015	1/23/07	88.5	86.6	2.18	60-140	25
TPH as Diesel	Blank	<50	1000	1000	974	1030	ug/L	M EPA 8015	1/22/07	97.4	103	5.81	70-130	25
Benzene	54393-04	<0.0050	0.0391	0.0381	0.0334	0.0326	mg/Kg	EPA 8260B	1/19/07	85.3	85.7	0.440	70-130	25
Toluene	54393-04	<0.0050	0.0391	0.0381	0.0337	0.0324	mg/Kg	EPA 8260B	1/19/07	86.0	85.1	1.02	70-130	25
Tert-Butanol	54393-04	<0.0050	0.196	0.190	0.150	0.151	mg/Kg	EPA 8260B	1/19/07	76.4	79.2	3.47	70-130	25
Methyl-t-Butyl Ether	54393-04	<0.0050	0.0391	0.0381	0.0352	0.0340	mg/Kg	EPA 8260B	1/19/07	89.8	89.3	0.520	70-130	25
Benzene	54438-01	<0.0050	0.0389	0.0389	0.0349	0.0349	mg/Kg	EPA 8260B	1/23/07	89.8	89.6	0.175	70-130	25
Toluene	54438-01	<0.0050	0.0389	0.0389	0.0356	0.0355	mg/Kg	EPA 8260B	1/23/07	91.4	91.3	0.138	70-130	25
Tert-Butanol	54438-01	<0.0050	0.194	0.194	0.162	0.168	mg/Kg	EPA 8260B	1/23/07	83.0	86.2	3.70	70-130	25
Methyl-t-Butyl Ether	54438-01	<0.0050	0.0389	0.0389	0.0381	0.0385	mg/Kg	EPA 8260B	1/23/07	97.9	98.9	0.995	70-130	25
Benzene	54405-01	<0.50	39.8	39.9	38.0	38.8	ug/L	EPA 8260B	1/22/07	95.3	97.2	2.00	70-130	25
Toluene	54405-01	<0.50	39.8	39.9	38.6	39.3	ug/L	EPA 8260B	1/22/07	97.0	98.5	1.57	70-130	25
Tert-Butanol	54405-01	<5.0	199	200	185	196	ug/L	EPA 8260B	1/22/07	93.1	98.4	5.54	70-130	25
Methyl-t-Butyl Ether	54405-01	<0.50	39.8	39.9	41.8	41.6	ug/L	EPA 8260B	1/22/07	105	104	0.503	70-130	25
Benzene	54285-09	<0.0050	0.0392	0.0399	0.0356	0.0377	mg/Kg	EPA 8260B	1/24/07	90.7	94.4	4.02	70-130	25
Toluene	54285-09	<0.0050	0.0392	0.0399	0.0365	0.0384	mg/Kg	EPA 8260B	1/24/07	93.1	96.1	3.20	70-130	25
Tert-Butanol	54285-09	<0.0050	0.196	0.200	0.174	0.182	mg/Kg	EPA 8260B	1/24/07	88.8	91.4	2.83	70-130	25

Approved By:  Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 54390

Date : 1/24/2007

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **Lucasey Manufacturing**

Project Number : **FB022G**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Methyl-t-Butyl Ether	54285-09	<0.0050	0.0392	0.0399	0.0386	0.0424	mg/Kg	EPA 8260B	1/24/07	98.3	106	7.79	70-130	25

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Approved By:  _____
Joel Kiff

QC Report : Laboratory Control Sample (LCS)

Project Name : **Lucasey Manufacturing**Project Number : **FB022G**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
TPH as Diesel	20.0	mg/Kg	M EPA 8015	1/20/07	95.6	70-130
Benzene	0.0399	mg/Kg	EPA 8260B	1/19/07	88.1	70-130
Toluene	0.0399	mg/Kg	EPA 8260B	1/19/07	88.8	70-130
Tert-Butanol	0.200	mg/Kg	EPA 8260B	1/19/07	81.7	70-130
Methyl-t-Butyl Ether	0.0399	mg/Kg	EPA 8260B	1/19/07	93.6	70-130
Benzene	0.0398	mg/Kg	EPA 8260B	1/22/07	94.9	70-130
Toluene	0.0398	mg/Kg	EPA 8260B	1/22/07	96.6	70-130
Tert-Butanol	0.199	mg/Kg	EPA 8260B	1/22/07	89.2	70-130
Methyl-t-Butyl Ether	0.0398	mg/Kg	EPA 8260B	1/22/07	101	70-130
Benzene	40.0	ug/L	EPA 8260B	1/22/07	98.9	70-130
Toluene	40.0	ug/L	EPA 8260B	1/22/07	101	70-130
Tert-Butanol	200	ug/L	EPA 8260B	1/22/07	94.1	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	1/22/07	106	70-130
Benzene	0.0391	mg/Kg	EPA 8260B	1/24/07	95.0	70-130
Toluene	0.0391	mg/Kg	EPA 8260B	1/24/07	96.1	70-130
Tert-Butanol	0.196	mg/Kg	EPA 8260B	1/24/07	89.3	70-130
Methyl-t-Butyl Ether	0.0391	mg/Kg	EPA 8260B	1/24/07	109	70-130

KIFF ANALYTICAL, LLC

Approved By:



 Joe Kiff



Report Number : 54391

Date : 1/25/2007

Matthew Ryder-Smith
Clearwater Group, Inc.
229 Tewksbury Avenue
Point Richmond, CA 94801

Subject : 2 Soil Samples
Project Name : Lucasey Manufacturing
Project Number : FB022G

Dear Mr. Ryder-Smith,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

A handwritten signature in black ink that reads "Joel Kiff". The signature is stylized and cursive.

Joel Kiff



Report Number : 54391

Date : 1/25/2007

Subject : 2 Soil Samples
Project Name : Lucasey Manufacturing
Project Number : FB022G

Case Narrative

Because the sample matrix is clay, the samples are not conducive to normal homogenization. Each TPH as Diesel and TPH as Motor Oil result is from a composite of randomly selected amounts within the sample sleeve after removing the top inch of soil.

Approved By: _____

A handwritten signature in black ink, appearing to read "Joel Kiff", is written over a horizontal line. The signature is stylized and cursive.

Joel Kiff



Report Number : 54391

Date : 1/25/2007

Project Name : **Lucasey Manufacturing**

Project Number : **FB022G**

Sample : **SB21-11**

Matrix : Soil

Lab Number : 54391-01

Sample Date :1/11/2007

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
TPH as Gasoline	1.0	1.0	mg/Kg	EPA 8260B	1/19/2007
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	1/19/2007
4-Bromofluorobenzene (Surr)	104		% Recovery	EPA 8260B	1/19/2007
1,2-Dichloroethane-d4 (Surr)	98.9		% Recovery	EPA 8260B	1/19/2007
TPH as Diesel	800	10	mg/Kg	M EPA 8015	1/24/2007
TPH as Motor Oil	770	80	mg/Kg	M EPA 8015	1/24/2007
1-Chlorooctadecane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	1/24/2007

Approved By:

Joel Kiff

Project Name : **Lucasey Manufacturing**

Project Number : **FB022G**

Sample : **SB21-13.5**

Matrix : Soil

Lab Number : 54391-02

Sample Date :1/11/2007

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	1/19/2007
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	1/19/2007
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	1/19/2007
1,2-Dichloroethane-d4 (Surr)	99.4		% Recovery	EPA 8260B	1/19/2007
TPH as Diesel	630	5.0	mg/Kg	M EPA 8015	1/19/2007
TPH as Motor Oil	520	50	mg/Kg	M EPA 8015	1/19/2007
1-Chlorooctadecane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	1/19/2007

Approved By:

Joel Kiff



QC Report : Method Blank Data

Project Name : **Lucasey Manufacturing**

Project Number : **FB022G**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	1/19/2007
TPH as Motor Oil	< 10	10	mg/Kg	M EPA 8015	1/19/2007
1-Chlorooctadecane (Diesel Surrogate)	78.6		%	M EPA 8015	1/19/2007
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	1/22/2007
TPH as Motor Oil	< 10	10	mg/Kg	M EPA 8015	1/22/2007
1-Chlorooctadecane (Diesel Surrogate)	102		%	M EPA 8015	1/22/2007
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/18/2007
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/18/2007
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/18/2007
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/18/2007
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/18/2007
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	1/18/2007
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/18/2007
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/18/2007
Toluene - d8 (Surr)	101		%	EPA 8260B	1/18/2007
4-Bromofluorobenzene (Surr)	104		%	EPA 8260B	1/18/2007
1,2-Dichloroethane-d4 (Surr)	101		%	EPA 8260B	1/18/2007
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	1/19/2007
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Toluene - d8 (Surr)	97.9		%	EPA 8260B	1/19/2007
4-Bromofluorobenzene (Surr)	107		%	EPA 8260B	1/19/2007
1,2-Dichloroethane-d4 (Surr)	104		%	EPA 8260B	1/19/2007

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
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Approved By:  _____
 Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

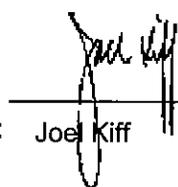
Report Number : 54391

Date : 1/25/2007

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **Lucasey Manufacturing**Project Number : **FB022G**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH as Diesel	54398-02	<1.0	20.0	20.0	20.8	21.6	mg/Kg	M EPA 8015	1/19/07	104	108	3.61	60-140	25
TPH as Diesel	54398-03	7.9	20.0	20.0	23.0	20.7	mg/Kg	M EPA 8015	1/22/07	82.4	74.2	10.4	60-140	25
Benzene	54398-02	<0.0050	0.0371	0.0365	0.0362	0.0357	mg/Kg	EPA 8260B	1/19/07	97.6	97.9	0.258	70-130	25
Toluene	54398-02	<0.0050	0.0371	0.0365	0.0383	0.0378	mg/Kg	EPA 8260B	1/19/07	103	104	0.366	70-130	25
Tert-Butanol	54398-02	<0.0050	0.186	0.182	0.174	0.165	mg/Kg	EPA 8260B	1/19/07	93.6	90.4	3.42	70-130	25
Methyl-t-Butyl Ether	54398-02	<0.0050	0.0371	0.0365	0.0361	0.0366	mg/Kg	EPA 8260B	1/19/07	97.4	100	2.84	70-130	25
Benzene	54393-04	<0.0050	0.0391	0.0381	0.0334	0.0326	mg/Kg	EPA 8260B	1/19/07	85.3	85.7	0.440	70-130	25
Toluene	54393-04	<0.0050	0.0391	0.0381	0.0337	0.0324	mg/Kg	EPA 8260B	1/19/07	86.0	85.1	1.02	70-130	25
Tert-Butanol	54393-04	<0.0050	0.196	0.190	0.150	0.151	mg/Kg	EPA 8260B	1/19/07	76.4	79.2	3.47	70-130	25
Methyl-t-Butyl Ether	54393-04	<0.0050	0.0391	0.0381	0.0352	0.0340	mg/Kg	EPA 8260B	1/19/07	89.8	89.3	0.520	70-130	25

Approved By:  Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

QC Report : Laboratory Control Sample (LCS)

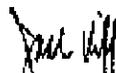
Project Name : **Lucasey Manufacturing**

Project Number : **FB022G**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
TPH as Diesel	20.0	mg/Kg	M EPA 8015	1/19/07	87.7	70-130
TPH as Diesel	20.0	mg/Kg	M EPA 8015	1/22/07	94.5	70-130
Benzene	0.0381	mg/Kg	EPA 8260B	1/18/07	95.2	70-130
Toluene	0.0381	mg/Kg	EPA 8260B	1/18/07	97.2	70-130
Tert-Butanol	0.190	mg/Kg	EPA 8260B	1/18/07	89.4	70-130
Methyl-t-Butyl Ether	0.0381	mg/Kg	EPA 8260B	1/18/07	95.5	70-130
Benzene	0.0399	mg/Kg	EPA 8260B	1/19/07	88.1	70-130
Toluene	0.0399	mg/Kg	EPA 8260B	1/19/07	88.8	70-130
Tert-Butanol	0.200	mg/Kg	EPA 8260B	1/19/07	81.7	70-130
Methyl-t-Butyl Ether	0.0399	mg/Kg	EPA 8260B	1/19/07	93.6	70-130

KIFF ANALYTICAL, LLC

Approved By:



 Joel Kiff

Project Contact (Hardcopy or PDF To):
Matthew Ryder Smith

California EDF Report? Yes No

Chain-of-Custody Record and Analysis Request

Company / Address:
Clearwater Group

Sampling Company Log Code:
CWGO

Phone #: *50-307-9943* Fax #: *510-262-2823*

Global ID:
1911-TP660133151

Project #: *FB0226*

EDF Deliverable To (Email Address):
IPROC@clearwatergroup.com

P.O. #:

Sampler Signature:
Robert Nelson

Project Name:
Lucan Manufacturing

Project Address:
*2744 11th Street
 Oakland*

Sample Designation	Sampling		Container				Preservative			Matrix			MTBE (EPA 8260B) per EPA 8021 level @ 5.0 ppb	MTBE (EPA 8260B) @ 0.5 ppb	BTEX (EPA 8260B)	TPH Gas (EPA 8260B)	5 Oxygenates (EPA 8260B)	7 Oxygenates (EPA 8260B)	Lead Scav. (1,2 DCA & 1,2 EDB-EPA 8260B)	Volatile Halocarbons (EPA 8260B)	Volatile Organics Full List (EPA 8260B)	Volatile Organics (EPA 824.2 Drinking Water)	TPH as Diesel (EPA 8015M)	TPH as Motor Oil (EPA 8015M)	Total Lead (EPA 8010)	W.E.T. Lead (STLC)	Ethylene Dibromide	1,2-Dichloroethane	R=RUN H=Hold	TAT	
	Date	Time	40 ml VOA	Sieve	Poly	Glass	Tedlar	HCl	HNO ₃	None	Water	Soil																		Air	12 hr
<i>SB21-11</i>	<i>1-17-2007</i>	<i>1316</i>													X	X	X							X	X						<input type="checkbox"/>
<i>SB21-13.5</i>	<i>↓</i>	<i>1320</i>													X	X	X							X	X						<input type="checkbox"/>
<i>REN 1-17-2007</i>																															

Relinquished by:
Robert Nelson

Date: *1-17-2007* Time: _____ Received by: _____

Remarks:
check run/held column

Relinquished by:

Date: _____ Time: _____ Received by: _____

Non-petroleum soil samples - Talk to Tony Ernst

Relinquished by:

Date: *011807* Time: *1420* Received by Laboratory: *Chris Alford*

Bill to: _____

Relinquished by:

Date: _____ Time: _____ Received by Laboratory: *KIFF Analytical LLC*

For Lab Use Only: Sample Receipt

Temp °C	Initials	Date	Time	Therm. ID #	Coolant Present
<i>3.6</i>	<i>TJA</i>	<i>011807</i>	<i>1745</i>	<i>7205</i>	<input checked="" type="checkbox"/> Yes / <input type="checkbox"/> No



Report Number : 54392

Date : 1/25/2007

Matthew Ryder-Smith
Clearwater Group, Inc.
229 Tewksbury Avenue
Point Richmond, CA 94801

Subject : 5 Soil Samples
Project Name : Lucasey Manufacturing
Project Number : FB022G

Dear Mr. Ryder-Smith,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

A handwritten signature in black ink, appearing to read "Joel Kiff".

Joel Kiff

Project Name : **Lucasey Manufacturing**

Project Number : **FB022G**

Sample : **SB15-15**

Matrix : Soil

Lab Number : 54392-01

Sample Date :1/9/2007

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
TPH as Gasoline	21	1.0	mg/Kg	EPA 8260B	1/19/2007
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Toluene - d8 (Surr)	99.6		% Recovery	EPA 8260B	1/19/2007
4-Bromofluorobenzene (Surr)	99.3		% Recovery	EPA 8260B	1/19/2007
1,2-Dichloroethane-d4 (Surr)	102		% Recovery	EPA 8260B	1/19/2007
TPH as Diesel	5300	10	mg/Kg	M EPA 8015	1/20/2007
TPH as Motor Oil	3400	100	mg/Kg	M EPA 8015	1/20/2007
1-Chlorooctadecane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	1/20/2007

Approved By:

Joel Kiff

Project Name : **Lucasey Manufacturing**

Project Number : **FB022G**

Sample : **SB15-19.5**

Matrix : Soil

Lab Number : 54392-02

Sample Date :1/9/2007

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
Methyi-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	1/22/2007
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
Toluene - d8 (Surr)	97.6		% Recovery	EPA 8260B	1/22/2007
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	1/22/2007
1,2-Dichloroethane-d4 (Surr)	97.0		% Recovery	EPA 8260B	1/22/2007
TPH as Diesel	36	1.0	mg/Kg	M EPA 8015	1/20/2007
TPH as Motor Oil	20	10	mg/Kg	M EPA 8015	1/20/2007
1-Chlorooctadecane (Diesel Surrogate)	93.3		% Recovery	M EPA 8015	1/20/2007

Approved By:  Joel Kiff

Project Name : **Lucasey Manufacturing**

Project Number : **FB022G**

Sample : **SB15-23**

Matrix : Soil

Lab Number : 54392-03

Sample Date :1/9/2007

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
TPH as Gasoline	18	1.0	mg/Kg	EPA 8260B	1/19/2007
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Toluene - d8 (Surr)	99.2		% Recovery	EPA 8260B	1/19/2007
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	1/19/2007
1,2-Dichloroethane-d4 (Surr)	97.9		% Recovery	EPA 8260B	1/19/2007
TPH as Diesel	1800	50	mg/Kg	M EPA 8015	1/23/2007
TPH as Motor Oil	1100	500	mg/Kg	M EPA 8015	1/23/2007
1-Chlorooctadecane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	1/23/2007

Approved By:

Joel Kiff

Project Name : **Lucasey Manufacturing**

Project Number : **FB022G**

Sample : **SB9-16**

Matrix : Soil

Lab Number : 54392-05

Sample Date :1/9/2007

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	1/22/2007
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
Toluene - d8 (Surr)	95.6		% Recovery	EPA 8260B	1/22/2007
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	1/22/2007
1,2-Dichloroethane-d4 (Surr)	96.3		% Recovery	EPA 8260B	1/22/2007
TPH as Diesel	140	1.0	mg/Kg	M EPA 8015	1/20/2007
TPH as Motor Oil	93	10	mg/Kg	M EPA 8015	1/20/2007
1-Chlorooctadecane (Diesel Surrogate)	105		% Recovery	M EPA 8015	1/20/2007

Approved By:

Joel Kiff

Project Name : **Lucasey Manufacturing**

Project Number : **FB022G**

Sample : **SB11-12**

Matrix : Soil

Lab Number : 54392-08

Sample Date :1/9/2007

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
TPH as Gasoline	11	1.0	mg/Kg	EPA 8260B	1/19/2007
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Toluene - d8 (Surr)	99.6		% Recovery	EPA 8260B	1/19/2007
4-Bromofluorobenzene (Surr)	96.4		% Recovery	EPA 8260B	1/19/2007
1,2-Dichloroethane-d4 (Surr)	100		% Recovery	EPA 8260B	1/19/2007
TPH as Diesel	3300	10	mg/Kg	M EPA 8015	1/20/2007
TPH as Motor Oil	2500	100	mg/Kg	M EPA 8015	1/20/2007
1-Chlorooctadecane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	1/20/2007

Approved By:

Joel Kiff



QC Report : Method Blank Data

Project Name : **Lucasey Manufacturing**

Project Number : **FB022G**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	1/20/2007
TPH as Motor Oil	< 10	10	mg/Kg	M EPA 8015	1/20/2007
1-Chlorooctadecane (Diesel Surrogate)	82.8		%	M EPA 8015	1/20/2007
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	1/22/2007
TPH as Motor Oil	< 10	10	mg/Kg	M EPA 8015	1/22/2007
1-Chlorooctadecane (Diesel Surrogate)	102		%	M EPA 8015	1/22/2007
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	1/19/2007
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/19/2007
Toluene - d8 (Surr)	97.9		%	EPA 8260B	1/19/2007
4-Bromofluorobenzene (Surr)	107		%	EPA 8260B	1/19/2007
1,2-Dichloroethane-d4 (Surr)	104		%	EPA 8260B	1/19/2007
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	1/22/2007
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	1/22/2007
Toluene - d8 (Surr)	98.3		%	EPA 8260B	1/22/2007
4-Bromofluorobenzene (Surr)	107		%	EPA 8260B	1/22/2007
1,2-Dichloroethane-d4 (Surr)	99.3		%	EPA 8260B	1/22/2007

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
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Approved By:  _____

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **Lucasey Manufacturing**Project Number : **FB022G**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH as Diesel	54285-07	<1.0	20.0	20.0	17.7	17.3	mg/Kg	M EPA 8015	1/23/07	88.5	86.6	2.18	60-140	25
TPH as Diesel	54398-03	7.9	20.0	20.0	23.0	20.7	mg/Kg	M EPA 8015	1/22/07	82.4	74.2	10.4	60-140	25
Benzene	54393-04	<0.0050	0.0391	0.0381	0.0334	0.0326	mg/Kg	EPA 8260B	1/19/07	85.3	85.7	0.440	70-130	25
Toluene	54393-04	<0.0050	0.0391	0.0381	0.0337	0.0324	mg/Kg	EPA 8260B	1/19/07	86.0	85.1	1.02	70-130	25
Tert-Butanol	54393-04	<0.0050	0.196	0.190	0.150	0.151	mg/Kg	EPA 8260B	1/19/07	76.4	79.2	3.47	70-130	25
Methyl-t-Butyl Ether	54393-04	<0.0050	0.0391	0.0381	0.0352	0.0340	mg/Kg	EPA 8260B	1/19/07	89.8	89.3	0.520	70-130	25
Benzene	54438-02	<0.0050	0.0391	0.0393	0.0359	0.0356	mg/Kg	EPA 8260B	1/23/07	91.9	90.7	1.29	70-130	25
Toluene	54438-02	<0.0050	0.0391	0.0393	0.0365	0.0361	mg/Kg	EPA 8260B	1/23/07	93.4	91.9	1.64	70-130	25
Tert-Butanol	54438-02	<0.0050	0.195	0.196	0.172	0.168	mg/Kg	EPA 8260B	1/23/07	87.9	85.4	2.82	70-130	25
Methyl-t-Butyl Ether	54438-02	<0.0050	0.0391	0.0393	0.0391	0.0388	mg/Kg	EPA 8260B	1/23/07	100	98.7	1.44	70-130	25

Approved By:  Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

QC Report : Laboratory Control Sample (LCS)Project Name : **Lucasey Manufacturing**Project Number : **FB022G**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
TPH as Diesel	20.0	mg/Kg	M EPA 8015	1/20/07	95.6	70-130
TPH as Diesel	20.0	mg/Kg	M EPA 8015	1/22/07	94.5	70-130
Benzene	0.0399	mg/Kg	EPA 8260B	1/19/07	88.1	70-130
Toluene	0.0399	mg/Kg	EPA 8260B	1/19/07	88.8	70-130
Tert-Butanol	0.200	mg/Kg	EPA 8260B	1/19/07	81.7	70-130
Methyl-t-Butyl Ether	0.0399	mg/Kg	EPA 8260B	1/19/07	93.6	70-130
Benzene	0.0393	mg/Kg	EPA 8260B	1/22/07	93.2	70-130
Toluene	0.0393	mg/Kg	EPA 8260B	1/22/07	95.0	70-130
Tert-Butanol	0.196	mg/Kg	EPA 8260B	1/22/07	87.4	70-130
Methyl-t-Butyl Ether	0.0393	mg/Kg	EPA 8260B	1/22/07	97.2	70-130

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Approved By:



 Joel Kiff



Report Number : 54393

Date : 01/25/2007

Matthew Ryder-Smith
Clearwater Group, Inc.
229 Tewksbury Avenue
Point Richmond, CA 94801

Subject : 2 Soil Samples and 2 Water Samples
Project Name : Lucasey Manufacturing
Project Number : FB022G

Dear Mr. Ryder-Smith,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

A handwritten signature in black ink, appearing to read "Joel Kiff".

Joel Kiff



Report Number : 54393

Date : 01/25/2007

Subject : 2 Soil Samples and 2 Water Samples
Project Name : Lucasey Manufacturing
Project Number : FB022G

Case Narrative

For sample SB13-W, repeated analysis by EPA Method 8260B yielded inconsistent results for Total Xylenes and TPH as Gasoline. Affected results are flagged with a "J" to indicate that they should be considered estimates. The highest concentration valid results were reported. Visual inspection of the samples revealed the presence of distinct phases within the sample bottles, indicating the possible presence of undissolved hydrocarbons. This inhomogeneity is probably the cause of the inconsistent results.

Approved By: _____

A handwritten signature in black ink, appearing to read "Joe Kiff", is written over a horizontal line. The signature is stylized and somewhat cursive.

Joe Kiff

Project Name : **Lucasey Manufacturing**

Project Number : **FB022G**

Sample : **SB12-14**

Matrix : Soil

Lab Number : 54393-02

Sample Date :01/08/2007

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/19/2007
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/19/2007
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/19/2007
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/19/2007
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/19/2007
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	01/19/2007
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/19/2007
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/19/2007
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	01/19/2007
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	01/19/2007
1,2-Dichloroethane-d4 (Surr)	99.3		% Recovery	EPA 8260B	01/19/2007
TPH as Diesel	470	1.0	mg/Kg	M EPA 8015	01/20/2007
TPH as Motor Oil	270	10	mg/Kg	M EPA 8015	01/20/2007
1-Chlorooctadecane (Diesel Surrogate)	106		% Recovery	M EPA 8015	01/20/2007

Approved By:

Joel Kiff

Project Name : **Lucasey Manufacturing**

Project Number : **FB022G**

Sample : **SB13-W**

Matrix : Water

Lab Number : 54393-03

Sample Date :01/08/2007

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2007
Toluene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2007
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2007
Total Xylenes	0.84 J	0.50	ug/L	EPA 8260B	01/22/2007
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	01/22/2007
TPH as Gasoline	560 J	90	ug/L	EPA 8260B	01/22/2007
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	01/22/2007
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	01/22/2007
Toluene - d8 (Surr)	108		% Recovery	EPA 8260B	01/22/2007
4-Bromofluorobenzene (Surr)	99.9		% Recovery	EPA 8260B	01/22/2007
1,2-Dichloroethane-d4 (Surr)	104		% Recovery	EPA 8260B	01/22/2007
TPH as Diesel	5800000	25000	ug/L	M EPA 8015	01/23/2007
TPH as Motor Oil	3000000	50000	ug/L	M EPA 8015	01/23/2007
Octacosane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	01/23/2007

Approved By:

Joel Kiff



Project Name : **Lucasey Manufacturing**

Project Number : **FB022G**

Sample : **SB13-26**

Matrix : Soil

Lab Number : 54393-05

Sample Date :01/08/2007

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/22/2007
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/22/2007
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/22/2007
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/22/2007
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/22/2007
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	01/22/2007
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/22/2007
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/22/2007
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	01/22/2007
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	01/22/2007
1,2-Dichloroethane-d4 (Surr)	95.6		% Recovery	EPA 8260B	01/22/2007
TPH as Diesel	170	1.0	mg/Kg	M EPA 8015	01/20/2007
TPH as Motor Oil	110	10	mg/Kg	M EPA 8015	01/20/2007
1-Chlorooctadecane (Diesel Surrogate)	87.7		% Recovery	M EPA 8015	01/20/2007

Approved By:

Joel Kiff

Project Name : **Lucasey Manufacturing**

Project Number : **FB022G**

Sample : **SB13-W2**

Matrix : Water

Lab Number : 54393-06

Sample Date :01/08/2007

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2007
Toluene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2007
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2007
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	01/22/2007
Methyl-t-butyl ether (MTBE)	0.56	0.50	ug/L	EPA 8260B	01/22/2007
TPH as Gasoline	150	50	ug/L	EPA 8260B	01/22/2007
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	01/22/2007
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	01/22/2007
Toluene - d8 (Surr)	103		% Recovery	EPA 8260B	01/22/2007
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	01/22/2007
1,2-Dichloroethane-d4 (Surr)	107		% Recovery	EPA 8260B	01/22/2007
TPH as Diesel	140000	1000	ug/L	M EPA 8015	01/23/2007
TPH as Motor Oil	70000	2000	ug/L	M EPA 8015	01/23/2007
Octacosane (Diesel Surrogate)	Diluted Out		% Recovery	M EPA 8015	01/22/2007

Approved By:

Joel Kiff

QC Report : Method Blank Data

Project Name : **Lucasey Manufacturing**

Project Number : **FB022G**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	< 1.0	1.0	mg/Kg	M EPA 8015	01/20/2007
TPH as Motor Oil	< 10	10	mg/Kg	M EPA 8015	01/20/2007
1-Chlorooctadecane (Diesel Surrogate)	82.8		%	M EPA 8015	01/20/2007
TPH as Diesel	< 50	50	ug/L	M EPA 8015	01/22/2007
TPH as Motor Oil	< 100	100	ug/L	M EPA 8015	01/22/2007
Octacosane (Diesel Surrogate)	98.1		%	M EPA 8015	01/22/2007
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/19/2007
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/19/2007
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/19/2007
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/19/2007
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/19/2007
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	01/19/2007
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/19/2007
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/19/2007
Toluene - d8 (Surr)	97.9		%	EPA 8260B	01/19/2007
4-Bromofluorobenzene (Surr)	107		%	EPA 8260B	01/19/2007
1,2-Dichloroethane-d4 (Surr)	104		%	EPA 8260B	01/19/2007
Benzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/22/2007
Toluene	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/22/2007
Ethylbenzene	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/22/2007
Total Xylenes	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/22/2007
Methyl-t-butyl ether (MTBE)	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/22/2007
TPH as Gasoline	< 1.0	1.0	mg/Kg	EPA 8260B	01/22/2007
1,2-Dichloroethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/22/2007
1,2-Dibromoethane	< 0.0050	0.0050	mg/Kg	EPA 8260B	01/22/2007
Toluene - d8 (Surr)	98.3		%	EPA 8260B	01/22/2007
4-Bromofluorobenzene (Surr)	107		%	EPA 8260B	01/22/2007
1,2-Dichloroethane-d4 (Surr)	99.3		%	EPA 8260B	01/22/2007

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2007
Toluene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2007
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	01/22/2007
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	01/22/2007
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	01/22/2007
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	01/22/2007
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	01/22/2007
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	01/22/2007
Toluene - d8 (Surr)	98.1		%	EPA 8260B	01/22/2007
4-Bromofluorobenzene (Surr)	107		%	EPA 8260B	01/22/2007
1,2-Dichloroethane-d4 (Surr)	98.6		%	EPA 8260B	01/22/2007
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	01/22/2007

Approved By:  _____

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **Lucasey Manufacturing**Project Number : **FB022G**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH as Diesel	54285-07	<1.0	20.0	20.0	17.7	17.3	mg/Kg	M EPA 8015	1/23/07	88.5	86.6	2.18	60-140	25
TPH as Diesel	Blank	<50	1000	1000	974	1030	ug/L	M EPA 8015	1/22/07	97.4	103	5.81	70-130	25
Benzene	54393-04	<0.0050	0.0391	0.0381	0.0334	0.0326	mg/Kg	EPA 8260B	1/19/07	85.3	85.7	0.440	70-130	25
Toluene	54393-04	<0.0050	0.0391	0.0381	0.0337	0.0324	mg/Kg	EPA 8260B	1/19/07	86.0	85.1	1.02	70-130	25
Tert-Butanol	54393-04	<0.0050	0.196	0.190	0.150	0.151	mg/Kg	EPA 8260B	1/19/07	76.4	79.2	3.47	70-130	25
Methyl-t-Butyl Ether	54393-04	<0.0050	0.0391	0.0381	0.0352	0.0340	mg/Kg	EPA 8260B	1/19/07	89.8	89.3	0.520	70-130	25
Benzene	54438-02	<0.0050	0.0391	0.0393	0.0359	0.0356	mg/Kg	EPA 8260B	1/23/07	91.9	90.7	1.29	70-130	25
Toluene	54438-02	<0.0050	0.0391	0.0393	0.0365	0.0361	mg/Kg	EPA 8260B	1/23/07	93.4	91.9	1.64	70-130	25
Tert-Butanol	54438-02	<0.0050	0.195	0.196	0.172	0.168	mg/Kg	EPA 8260B	1/23/07	87.9	85.4	2.82	70-130	25
Methyl-t-Butyl Ether	54438-02	<0.0050	0.0391	0.0393	0.0391	0.0388	mg/Kg	EPA 8260B	1/23/07	100	98.7	1.44	70-130	25
Benzene	54384-01	2.0	40.0	40.0	42.2	42.1	ug/L	EPA 8260B	1/22/07	101	100	0.367	70-130	25
Toluene	54384-01	16	40.0	40.0	56.5	55.8	ug/L	EPA 8260B	1/22/07	101	99.0	1.74	70-130	25
Tert-Butanol	54384-01	<5.0	200	200	189	190	ug/L	EPA 8260B	1/22/07	94.3	94.8	0.502	70-130	25
Methyl-t-Butyl Ether	54384-01	<0.50	40.0	40.0	40.4	42.3	ug/L	EPA 8260B	1/22/07	101	106	4.52	70-130	25
Benzene	54405-01	<0.50	39.8	39.9	38.0	38.8	ug/L	EPA 8260B	1/22/07	95.3	97.2	2.00	70-130	25
Toluene	54405-01	<0.50	39.8	39.9	38.6	39.3	ug/L	EPA 8260B	1/22/07	97.0	98.5	1.57	70-130	25
Tert-Butanol	54405-01	<5.0	199	200	185	196	ug/L	EPA 8260B	1/22/07	93.1	98.4	5.54	70-130	25

Approved By:  Joel Kiff

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **Lucasey Manufacturing**

Project Number : **FB022G**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Methyl-t-Butyl Ether	54405-01	<0.50	39.8	39.9	41.8	41.6	ug/L	EPA 8260B	1/22/07	105	104	0.503	70-130	25

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Approved By: Joel Kiff



QC Report : Laboratory Control Sample (LCS)

Project Name : **Lucasey Manufacturing**Project Number : **FB022G**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
TPH as Diesel	20.0	mg/Kg	M EPA 8015	1/20/07	95.6	70-130
Benzene	0.0399	mg/Kg	EPA 8260B	1/19/07	88.1	70-130
Toluene	0.0399	mg/Kg	EPA 8260B	1/19/07	88.8	70-130
Tert-Butanol	0.200	mg/Kg	EPA 8260B	1/19/07	81.7	70-130
Methyl-t-Butyl Ether	0.0399	mg/Kg	EPA 8260B	1/19/07	93.6	70-130
Benzene	0.0393	mg/Kg	EPA 8260B	1/22/07	93.2	70-130
Toluene	0.0393	mg/Kg	EPA 8260B	1/22/07	95.0	70-130
Tert-Butanol	0.196	mg/Kg	EPA 8260B	1/22/07	87.4	70-130
Methyl-t-Butyl Ether	0.0393	mg/Kg	EPA 8260B	1/22/07	97.2	70-130
Benzene	40.0	ug/L	EPA 8260B	1/22/07	98.6	70-130
Toluene	40.0	ug/L	EPA 8260B	1/22/07	100	70-130
Tert-Butanol	200	ug/L	EPA 8260B	1/22/07	95.2	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	1/22/07	106	70-130
Benzene	40.0	ug/L	EPA 8260B	1/22/07	98.9	70-130
Toluene	40.0	ug/L	EPA 8260B	1/22/07	101	70-130
Tert-Butanol	200	ug/L	EPA 8260B	1/22/07	94.1	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	1/22/07	106	70-130

KIFF ANALYTICAL, LLC

Approved By:



 Joe Kiff

APPENDIX F

 McC Campbell Analytical, Inc.	110 2nd Avenue South, #D7, Pacheco, CA 94553-5560 Telephone: 925-798-1620 Fax: 925-798-1622 Website: www.mcccampbell.com E-mail: main@mcccampbell.com
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All Environmental, Inc. 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #9440	Date Sampled: 08/31/04
		Date Received: 08/31/04
	Client Contact: Lawrence Hollins	Date Extracted: 08/31/04
	Client P.O.:	Date Analyzed: 08/31/04

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0408441

Lab ID	0408441-021B
Client ID	SB-1W
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Acrolein (Propenal)	ND	1.0	5.0
Acrylonitrile	ND	1.0	2.0	tert-Amyl methyl ether (TAME)	ND	1.0	0.5
Benzene	ND	1.0	0.5	Bromobenzene	ND	1.0	0.5
Bromochloromethane	ND	1.0	0.5	Bromodichloromethane	ND	1.0	0.5
Bromoform	ND	1.0	0.5	Bromomethane	ND	1.0	0.5
2-Butanone (MEK)	ND	1.0	2.0	t-Butyl alcohol (TBA)	ND	1.0	5.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Diisopropyl ether (DIPE)	ND	1.0	0.5
Ethylbenzene	ND	1.0	0.5	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5
Freon 113	ND	1.0	10	Hexachlorobutadiene	ND	1.0	0.5
Hexachloroethane	ND	1.0	0.5	2-Hexanone	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Isopropyl toluene	ND	1.0	0.5
Methyl-t-butyl ether (MTBE)	ND	1.0	0.5	Methylene chloride	ND	1.0	0.5
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5	Naphthalene	ND	1.0	0.5
Nitrobenzene	ND	1.0	10	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Chloride	ND	1.0	0.5	Xylenes	ND	1.0	0.5

Surrogate Recoveries (%)

%SS1:	104	%SS2:	91.5
%SS3:	88.0		

Comments: h,i

* 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 ~1 vol. % sediment; j) sample diluted due to high organic content.

DF = Dilution Factor



McC Campbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
 Telephone : 925-798-1620 Fax : 925-798-1622
 Website: www.mccampbell.com E-mail: main@mccampbell.com

All Environmental, Inc. 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #9440	Date Sampled: 08/31/04
	Client Contact: Lawrence Hollins	Date Received: 08/31/04
	Client P.O.:	Date Extracted: 08/31/04
		Date Analyzed: 08/31/04

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0408441

Lab ID	0408441-022B						
Client ID	SB-2W						
Matrix	Water						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Acrolein (Propenal)	ND	1.0	5.0
Acrylonitrile	ND	1.0	2.0	tert-Amyl methyl ether (TAME)	ND	1.0	0.5
Benzene	ND	1.0	0.5	Bromobenzene	ND	1.0	0.5
Bromo-chloromethane	ND	1.0	0.5	Bromodichloromethane	ND	1.0	0.5
Bromoform	ND	1.0	0.5	Bromomethane	ND	1.0	0.5
2-Butanone (MBK)	ND	1.0	2.0	t-Butyl alcohol (TBA)	ND	1.0	5.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromo-chloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	0.71	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Diisopropyl ether (DIPE)	ND	1.0	0.5
Ethylbenzene	ND	1.0	0.5	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5
Freon 113	ND	1.0	10	Hexachlorobutadiene	ND	1.0	0.5
Hexachloroethane	ND	1.0	0.5	2-Hexanone	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Isopropyl toluene	ND	1.0	0.5
Methyl-t-butyl ether (MTBE)	ND	1.0	0.5	Methylene chloride	ND	1.0	0.5
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5	Naphthalene	ND	1.0	0.5
Nitrobenzene	ND	1.0	10	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Chloride	ND	1.0	0.5	Xylenes	ND	1.0	0.5

Surrogate Recoveries (%)

%SS1:	102	%SS2:	96.1
%SS3:	96.8		

Comments: h, j

* 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 ~1 vol. % sediment; j) sample diluted due to high organic content.

DF = Dilution Factor

 Angela Rydelius, Lab Manager

 McC Campbell Analytical, Inc.	110 2nd Avenue South, #D7, Pacheco, CA 94553-5560 Telephone : 925-798-1620 Fax : 925-798-1622 Website: www.mccampbell.com E-mail: main@mccampbell.com
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All Environmental, Inc. 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #9440	Date Sampled: 08/31/04
		Date Received: 08/31/04
	Client Contact: Lawrence Hollins	Date Extracted: 08/31/04
	Client P.O.:	Date Analyzed: 08/31/04

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0408441

Lab ID	0408441-023B
Client ID	SB-3W
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Acrolein (Propenal)	ND	1.0	5.0
Acrylonitrile	ND	1.0	2.0	tert-Amyl methyl ether (TAME)	ND	1.0	0.5
Benzene	ND	1.0	0.5	Bromobenzene	ND	1.0	0.5
Bromochloromethane	ND	1.0	0.5	Bromodichloromethane	ND	1.0	0.5
Bromoform	ND	1.0	0.5	Bromomethane	ND	1.0	0.5
2-Butanone (MEK)	ND	1.0	2.0	t-Butyl alcohol (TBA)	ND	1.0	5.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	DiBromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Diisopropyl ether (DIPE)	ND	1.0	0.5
Ethylbenzene	ND	1.0	0.5	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5
Freon 113	ND	1.0	10	Hexachlorobutadiene	ND	1.0	0.5
Hexachloroethane	ND	1.0	0.5	2-Hexanone	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Isopropyl toluene	ND	1.0	0.5
Methyl-1-butyl ether (MTBE)	ND	1.0	0.5	Methylene chloride	ND	1.0	0.5
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5	Naphthalene	ND	1.0	0.5
Nitrobenzene	ND	1.0	10	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,1,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	8.8	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Chloride	ND	1.0	0.5	Xylenes	ND	1.0	0.5

Surrogate Recoveries (%)

%SS1:	107	%SS2:	98.7
%SS3:	100		

Comments: i

* 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 ~1 vol. % sediment; j) sample diluted due to high organic content.

DF = Dilution Factor

Angela Rydelius, Lab Manager

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All Environmental, Inc. 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #9440	Date Sampled: 08/31/04
		Date Received: 08/31/04
	Client Contact: Lawrence Hollins	Date Extracted: 08/31/04
	Client P.O.:	Date Analyzed: 08/31/04

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

Extraction Method: SW50308 Analytical Method: SW8260B Work Order: 0408441

Lab ID	0408441-024B
Client ID	SB-4W
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Acrolein (Propenal)	ND	1.0	5.0
Acrylonitrile	ND	1.0	2.0	tert-Amyl methyl ether (TAME)	ND	1.0	0.5
Benzene	ND	1.0	0.5	Bromobenzene	ND	1.0	0.5
Bromochloromethane	ND	1.0	0.5	Bromodichloromethane	ND	1.0	0.5
Bromoform	ND	1.0	0.5	Bromomethane	ND	1.0	0.5
2-Butanone (MEK)	ND	1.0	2.0	t-Butyl alcohol (TBA)	ND	1.0	5.0
n-Butyl benzene	1.3	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
Ethylbenzene	ND	1.0	0.5	Diisopropyl ether (DIPE)	ND	1.0	0.5
Freon 113	ND	1.0	10	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5
Hexachloroethane	ND	1.0	0.5	Hexachlorobutadiene	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	2-Hexanone	ND	1.0	0.5
Methyl-t-butyl ether (MTBE)	ND	1.0	0.5	4-Isopropyl toluene	ND	1.0	0.5
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5	Methylene chloride	ND	1.0	0.5
Nitrobenzene	ND	1.0	10	Naphthalene	ND	1.0	0.5
Styrene	ND	1.0	0.5	n-Propyl benzene	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
Toluene	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
Vinyl Chloride	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
				Xylenes	0.72	1.0	0.5

Surrogate Recoveries (%)			
%SS1:	108	%SS2:	99.1
%SS3:	95.6		

Comments: h,i

* 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 ~1 vol. % sediment; j) sample diluted due to high organic content.

DF = Dilution Factor

Angela Rydelius, Lab Manager

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All Environmental, Inc. 2500 Camino Diablo, Ste. #200 Walnut Creek, CA 94597	Client Project ID: #9440	Date Sampled: 08/31/04
		Date Received: 08/31/04
	Client Contact: Lawrence Hollins	Date Extracted: 08/31/04
	Client P.O.:	Date Analyzed: 08/31/04

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0408441

Lab ID	0408441-025B
Client ID	SB-6W
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Acrolein (Propenal)	ND	1.0	5.0
Acrylonitrile	ND	1.0	2.0	tert-Butyl methyl ether (TAME)	ND	1.0	0.5
Benzene	ND	1.0	0.5	Bromobenzene	ND	1.0	0.5
Bromochloromethane	ND	1.0	0.5	Bromodichloromethane	ND	1.0	0.5
Bromoform	ND	1.0	0.5	Bromomethane	ND	1.0	0.5
2-Butanone (MEK)	ND	1.0	2.0	t-Butyl alcohol (TBA)	ND	1.0	5.0
n-Butyl benzene	0.70	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloromethyl Vinyl Ether	ND	1.0	1.0
Chloroform	6.6	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	0.75	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Diisopropyl ether (DIPE)	ND	1.0	0.5
Ethylbenzene	ND	1.0	0.5	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5
Freon 113	ND	1.0	10	Hexachlorobutadiene	ND	1.0	0.5
Hexachloroethane	ND	1.0	0.5	2-Hexanone	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Isopropyl toluene	ND	1.0	0.5
Methyl-t-butyl ether (MTBE)	ND	1.0	0.5	Methylene chloride	ND	1.0	0.5
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5	Naphthalene	ND	1.0	0.5
Nitrobenzene	ND	1.0	10	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Chloride	ND	1.0	0.5	Xylenes	ND	1.0	0.5

Surrogate Recoveries (%)

%SS1:	109	%SS2:	98.0
%SS3:	98.3		

Comments: h,i

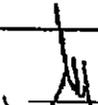
* water and vapor samples and all TCLP & SPLP extracts are reported in µg/L, soil / sludge / solid samples in µg/kg, wipe samples in µg/wipe, product / oil / non-aqueous liquid samples in mg/L.

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; f) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content.

DF = Dilution Factor


 Angela Rydelius, Lab Manager

McCAMPBELL ANALYTICAL INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560

Telephone: (925) 798-1620

Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME

RUSH
 24 HR 48 HR 72 HR 5 DAY

EDF Required? Yes No

Report To: Lawrence Hollins Bill To:
Company: AEI Consultants
2500 Camino Diablo, Suite 200
Walnut Creek, CA 94597 E-Mail:
Tele: (925) 944-2899 Fax: (925) 944-2895
Project #: 9440 Project Name:
Project Location: 2744 E. 11th Street Oakland
Sampler Signature: [Signature]

Analysis Request

Other Comments

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING		# Containers	Type Containers	MATRIX					METHOD PRESERVED							
		Date	Time			Water	Soil	Air	Sludge	Other	Ice	HCl	HNO ₃	Other				
SB-1 3.5'		8/31	8:50															
SB-1 7'			8:55															
SB-1 11'			9:00															
SB-1 15'			9:08															
SB-1 18'			9:22															
SB-2 4'			9:42															
SB-2 8'			9:46															
SB-2 12'			9:50															
SB-2 16'			9:57															
SB-3 4'			10:12															
SB-3 8'			10:30															
SB-3 12'			10:40															
SB-3 16'			10:46															
SB-4 4'			11:09															

BTEX & TPH as Gas (602/8020 + 8015)/MTBE	
TPH as Diesel (8015)/TPH-G/TPH-H	
Total Petroleum Oil & Grease (5520 E&P/B&F)	
Total Petroleum Hydrocarbons (418.1)	
EPA 601 / 3010	
BTEX ONLY (EPA 602 / 8020)	
EPA 608 / 8080	
EPA 608 / 8080 PCB's ONLY	
EPA 624 / 8240 / 8250	
EPA 625 / 8270	
PAH's / PNA's by EPA 625 / 8270 / 8310	
CAM-17 Metals	
LUFT 5 Metals	
Lead (7240/7421/239-2/6010)	
RCI	

Other	
Comments	

Relinquished By: [Signature] Date: 8/31 Time: 2:28 Received By: [Signature]
Relinquished By: Date: Time: Received By:
Relinquished By: Date: Time: Received By:

ICE/° _____ PRESERVATION _____
GOOD CONDITION _____ APPROPRIATE _____
HEAD SPACE ABSENT _____ CONTAINERS _____
DECLORINATED IN LAB _____ PERSERVED IN LAB _____

VOAS O&G METALS OTHER

McC Campbell Analytical, Inc.



110 Second Avenue South, #D7
 Pacheco, CA 94553-5560
 (925) 798-1620

CHAIN-OF-CUSTODY R

WorkOrder: 0507132

ClientID: TFCL

Report to:

Cabe Silverhame
 Terra Firma Consulting, LLC
 20 Sunnyside Avenue #14-418
 Mill Valley, CA 94941

TEL: (408) 868-0855
 FAX: (415) 868-0858
 ProjectNo: #E50603; Lucasey
 PO:

Bill to

Gabe Silverhame
 Terra Firma Consulting, LLC
 20 Sunnyside Avenue #14-418
 Mill Valley, CA 94941

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See leg								
					1	2	3	4	5	6	7	8	
0507132-001	50603-1-12	Soil	07/09/2005	<input type="checkbox"/>		A		A					
0507132-002	50603-1-16	Soil	07/09/2005	<input type="checkbox"/>		A		A					
0507132-003	50603-2-12	Soil	07/09/2005	<input type="checkbox"/>		A		A					
0507132-004	50603-2-16	Water	07/09/2005	<input type="checkbox"/>	C		A		B				
0507132-005	50603-3-7.5	Soil	07/09/2005	<input type="checkbox"/>		A		A					
0507132-006	50603-4-12	Soil	07/09/2005	<input type="checkbox"/>		A		A					
0507132-007	50603-4-16	Water	07/09/2005	<input type="checkbox"/>	C		A		B				
0507132-008	50603-6-12	Soil	07/09/2005	<input type="checkbox"/>		A		A					
0507132-009	50603-6-16	Soil	07/09/2005	<input type="checkbox"/>		A		A					
0507132-010	50603-5-20	Water	07/09/2005	<input type="checkbox"/>	C		A		B				

Test Legend:

1	8260B_W
6	
11	

2	G-MBTEX_S
7	
12	

3	G-MBTEX_W
8	
13	

4	TPH(DMO)_S
9	
14	

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client



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Terra Firma Consulting, LLC 20 Sunnyside Avenue #14-418 Mill Valley, CA 94941	Client Project ID: #E50603; Lucasey	Date Sampled: 07/09/05
		Date Received: 07/11/05
	Client Contact: Cabe Silverhame	Date Extracted: 07/14/05
	Client P.O.:	Date Analyzed: 07/14/05

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

Extraction Method: SW5030B Analytical Method: SW8260B Work Order: 0507132

Lab ID	0507132-004C
Client ID	50603-2-16
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Acrolein (Propenal)	ND	1.0	5.0
Acrylonitrile	ND	1.0	2.0	tert-Amyl methyl ether (TAME)	ND	1.0	0.5
Benzene	ND	1.0	0.5	Bromobenzene	ND	1.0	0.5
Bromochloromethane	ND	1.0	0.5	Bromodichloromethane	ND	1.0	0.5
Bromoform	ND	1.0	0.5	Bromomethane	ND	1.0	0.5
2-Butanone (MEK)	ND	1.0	2.0	t-Butyl alcohol (TBA)	ND	1.0	5.0
n-Butyl benzene	1.5	1.0	0.5	sec-Butyl benzene	0.60	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND<1.0	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	0.75	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	0.57	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Diisopropyl ether (DIPE)	ND	1.0	0.5
Ethylbenzene	ND	1.0	0.5	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5
Freon 113	ND	1.0	10	Hexachlorobutadiene	ND	1.0	0.5
Hexachloroethane	ND	1.0	0.5	2-Hexanone	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Isopropyl toluene	ND	1.0	0.5
Methyl-t-butyl ether (MTBE)	ND	1.0	0.5	Methylene chloride	ND	1.0	0.5
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5	Naphthalene	ND	1.0	0.5
Nitrobenzene	ND	1.0	10	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	0.68	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Chloride	ND	1.0	0.5	Xylenes	0.68	1.0	0.5

Surrogate Recoveries (%)

%SS1:	107	%SS2:	96
%SS3:	87		

Comments: h,i

* 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) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



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Terra Firma Consulting, LLC
 20 Sunnyside Avenue #14-418
 Mill Valley, CA 94941

Client Project ID: #E50603; Lucasey
 Client Contact: Cabe Silverhame
 Client P.O.:

Date Sampled: 07/09/05
 Date Received: 07/11/05
 Date Extracted: 07/14/05
 Date Analyzed: 07/14/05

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0507132

Lab ID	0507132-007C						
Client ID	50603-4-16						
Matrix	Water						
Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Acrolein (Propenal)	ND	1.0	5.0
Acrylonitrile	ND	1.0	2.0	tert-Amyl methyl ether (TAME)	ND	1.0	0.5
Benzene	ND	1.0	0.5	Bromobenzene	ND	1.0	0.5
Bromochloromethane	ND	1.0	0.5	Bromodichloromethane	ND	1.0	0.5
Bromoform	ND	1.0	0.5	Bromomethane	ND	1.0	0.5
2-Butanone (MEK)	ND	1.0	2.0	t-Butyl alcohol (TBA)	ND	1.0	5.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND<1.0	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	1.4	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Diisopropyl ether (DIPE)	ND	1.0	0.5
Ethylbenzene	ND	1.0	0.5	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5
Freon 113	ND	1.0	10	Hexachlorobutadiene	ND	1.0	0.5
Hexachloroethane	ND	1.0	0.5	2-Hexanone	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Isopropyl toluene	ND	1.0	0.5
Methyl-t-butyl ether (MTBE)	ND	1.0	0.5	Methylene chloride	ND	1.0	0.5
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5	Naphthalene	ND	1.0	0.5
Nitrobenzene	ND	1.0	10	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Chloride	ND	1.0	0.5	Xylenes	ND	1.0	0.5

Surrogate Recoveries (%)

%SS1:	108	%SS2:	93
%SS3:	89		

Comments: h,i

* 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) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



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Terra Firma Consulting, LLC 20 Sunnyside Avenue #14-418 Mill Valley, CA 94941	Client Project ID: #E50603; Lucasey	Date Sampled: 07/09/05
		Date Received: 07/11/05
	Client Contact: Cabe Silverhame	Date Extracted: 07/14/05
	Client P.O.:	Date Analyzed: 07/14/05

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

Extraction Method: SW5030B

Analytical Method: SW8260B

Work Order: 0507132

Lab ID	0507132-010C
Client ID	50603-5-20
Matrix	Water

Compound	Concentration *	DF	Reporting Limit	Compound	Concentration *	DF	Reporting Limit
Acetone	ND	1.0	5.0	Acrolein (Propenal)	ND	1.0	5.0
Acrylonitrile	ND	1.0	2.0	tert-Amyl methyl ether (TAME)	ND	1.0	0.5
Benzene	ND	1.0	0.5	Bromobenzene	ND	1.0	0.5
Bromochloromethane	ND	1.0	0.5	Bromodichloromethane	ND	1.0	0.5
Bromoform	ND	1.0	0.5	Bromomethane	ND	1.0	0.5
2-Butanone (MEK)	ND	1.0	2.0	t-Butyl alcohol (TBA)	ND	1.0	5.0
n-Butyl benzene	ND	1.0	0.5	sec-Butyl benzene	ND	1.0	0.5
tert-Butyl benzene	ND	1.0	0.5	Carbon Disulfide	ND<1.0	1.0	0.5
Carbon Tetrachloride	ND	1.0	0.5	Chlorobenzene	ND	1.0	0.5
Chloroethane	ND	1.0	0.5	2-Chloroethyl Vinyl Ether	ND	1.0	1.0
Chloroform	ND	1.0	0.5	Chloromethane	ND	1.0	0.5
2-Chlorotoluene	ND	1.0	0.5	4-Chlorotoluene	ND	1.0	0.5
Dibromochloromethane	ND	1.0	0.5	1,2-Dibromo-3-chloropropane	ND	1.0	0.5
1,2-Dibromoethane (EDB)	ND	1.0	0.5	Dibromomethane	ND	1.0	0.5
1,2-Dichlorobenzene	ND	1.0	0.5	1,3-Dichlorobenzene	ND	1.0	0.5
1,4-Dichlorobenzene	ND	1.0	0.5	Dichlorodifluoromethane	ND	1.0	0.5
1,1-Dichloroethane	ND	1.0	0.5	1,2-Dichloroethane (1,2-DCA)	ND	1.0	0.5
1,1-Dichloroethene	ND	1.0	0.5	cis-1,2-Dichloroethene	ND	1.0	0.5
trans-1,2-Dichloroethene	ND	1.0	0.5	1,2-Dichloropropane	ND	1.0	0.5
1,3-Dichloropropane	ND	1.0	0.5	2,2-Dichloropropane	ND	1.0	0.5
1,1-Dichloropropene	ND	1.0	0.5	cis-1,3-Dichloropropene	ND	1.0	0.5
trans-1,3-Dichloropropene	ND	1.0	0.5	Diisopropyl ether (DIPE)	ND	1.0	0.5
Ethylbenzene	ND	1.0	0.5	Ethyl tert-butyl ether (ETBE)	ND	1.0	0.5
Freon 113	ND	1.0	10	Hexachlorobutadiene	ND	1.0	0.5
Hexachloroethane	ND	1.0	0.5	2-Hexanone	ND	1.0	0.5
Isopropylbenzene	ND	1.0	0.5	4-Isopropyl toluene	ND	1.0	0.5
Methyl-t-butyl ether (MTBE)	ND	1.0	0.5	Methylene chloride	ND	1.0	0.5
4-Methyl-2-pentanone (MIBK)	ND	1.0	0.5	Naphthalene	ND	1.0	0.5
Nitrobenzene	ND	1.0	10	n-Propyl benzene	ND	1.0	0.5
Styrene	ND	1.0	0.5	1,1,1,2-Tetrachloroethane	ND	1.0	0.5
1,1,2,2-Tetrachloroethane	ND	1.0	0.5	Tetrachloroethene	ND	1.0	0.5
Toluene	ND	1.0	0.5	1,2,3-Trichlorobenzene	ND	1.0	0.5
1,2,4-Trichlorobenzene	ND	1.0	0.5	1,1,1-Trichloroethane	ND	1.0	0.5
1,1,2-Trichloroethane	ND	1.0	0.5	Trichloroethene	ND	1.0	0.5
Trichlorofluoromethane	ND	1.0	0.5	1,2,3-Trichloropropane	ND	1.0	0.5
1,2,4-Trimethylbenzene	ND	1.0	0.5	1,3,5-Trimethylbenzene	ND	1.0	0.5
Vinyl Chloride	ND	1.0	0.5	Xylenes	ND	1.0	0.5

Surrogate Recoveries (%)

%SS1:	103	%SS2:	95
%SS3:	101		

Comments: i

* 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) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.



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Terra Firma Consulting, LLC 20 Sunnyside Avenue #14-418 Mill Valley, CA 94941	Client Project ID: #E50603; Lucasey	Date Sampled: 07/09/05
		Date Received: 07/11/05
	Client Contact: Cabe Silverhame	Date Extracted: 07/11/05
	Client P.O.:	Date Analyzed: 07/12/05-07/14/05

Diesel (C10-23) and Oil (C18+) Range Extractable Hydrocarbons as Diesel and Motor Oil*

Extraction method: SW3510C/SW3550C

Analytical methods: SW8015C

Work Order: 0507132

Lab ID	Client ID	Matrix	TPH(d)	TPH(mo)	DF	% SS
0507132-001A	50603-1-12	S	22,g,b	83	10	95.0
0507132-002A	50603-1-16	S	48,b,g	46	2	98.0
0507132-003A	50603-2-12	S	8900,b,g	7500	200	--#
0507132-004B	50603-2-16	W	580,000,b,g,h,i	510,000	100	97.0
0507132-005A	50603-3-7.5	S	50,g,b	79	10	105
0507132-006A	50603-4-12	S	2800,g,b	3000	50	101
0507132-007B	50603-4-16	W	160,000,b,g,h,i	150,000	50	95.0
0507132-008A	50603-6-12	S	41,g,b	53	2	103
0507132-009A	50603-6-16	S	1800,b,g	1700	50	100
0507132-010B	50603-5-20	W	670,g,b,i	2800	2	88.0

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	250	µg/L
	S	1.0	5.0	mg/Kg

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

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

+The following descriptions of the TPH chromatogram are cursory in nature and McC Campbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified diesel is significant; b) diesel range compounds are significant; no recognizable pattern; c) aged diesel? is significant; d) gasoline range compounds are significant; e) unknown medium boiling point pattern that does not appear to be derived from diesel (asphalt?); f) one to a few isolated peaks present; g) oil range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; k) kerosene/kerosene range; l) bunker oil; m) fuel oil; n) stoddard solvent/mineral spirit.



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Terra Firma Consulting, LLC 20 Sunnyside Avenue #14-418 Mill Valley, CA 94941	Client Project ID: #E50603; Lucasey	Date Sampled: 07/09/05
		Date Received: 07/11/05
	Client Contact: Cabe Silverhame	Date Extracted: 07/11/05-07/18/05
	Client P.O.:	Date Analyzed: 07/12/05-07/18/05

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

Extraction method: SW5030B

Analytical methods: SW8021B/8015Cm

Work Order: 0507132

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	50603-1-12	S	ND	ND	ND	ND	ND	ND	1	97
002A	50603-1-16	S	4.8,g	ND	ND	ND	ND	ND	1	83
003A	50603-2-12	S	700,g	ND<5.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	100	103
004A	50603-2-16	W	310,g,h,i	ND	ND	ND	ND	ND	1	97
005A	50603-3-7.5	S	4.7,g	ND	ND	ND	ND	ND	1	91
006A	50603-4-12	S	89,g	ND<2.0	ND<0.20	ND<0.20	ND<0.20	0.23	40	87
007A	50603-4-16	W	ND,h,i	ND	ND	ND	ND	ND	1	104
008A	50603-6-12	S	ND	ND	ND	ND	ND	ND	1	88
009A	50603-6-16	S	73,g	ND<0.50	ND<0.050	ND<0.050	ND<0.050	ND<0.050	10	83
010A	50603-5-20	W	ND,i	ND	ND	ND	ND	ND	1	99

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	1	mg/Kg

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

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



QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0507132

EPA Method: SW8015C		Extraction: SW3510C			BatchID: 17044			Spiked Sample ID: N/A		
Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)	
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	LCS / LCSD
TPH(d)	N/A	1000	N/A	N/A	N/A	115	115	0	N/A	70 - 130
%SS:	N/A	2500	N/A	N/A	N/A	88	90	2.77	N/A	70 - 130

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

BATCH 17044 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0507132-004b	7/09/05 3:00 PM	7/11/05	7/12/05 7:46 AM	0507132-007b	7/09/05 3:15 PM	7/11/05	7/12/05 2:42 PM
0507132-010B	7/09/05 3:30 PM	7/11/05	7/14/05 2:29 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.



QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0507132

EPA Method: SW8021B/8015Cm		Extraction: SW5030B			BatchID: 17072			Spiked Sample ID: 0507131-010A		
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	LCS / LCSD
TPH(btex) [£]	ND	60	104	106	1.22	104	103	0.347	70 - 130	70 - 130
MTBE	ND	10	96.9	93.9	3.12	108	100	7.51	70 - 130	70 - 130
Benzene	ND	10	98.5	99.8	1.24	107	106	1.72	70 - 130	70 - 130
Toluene	ND	10	103	103	0	104	104	0	70 - 130	70 - 130
Ethylbenzene	ND	10	110	110	0	109	108	1.16	70 - 130	70 - 130
Xylenes	ND	30	96.7	96.7	0	95.7	95.7	0	70 - 130	70 - 130
%SS:	98	10	103	106	3.02	107	105	1.65	70 - 130	70 - 130

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

BATCH 17072 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0507132-004A	7/09/05 3:00 PM	7/18/05	7/18/05 12:23 PM	0507132-007A	7/09/05 3:15 PM	7/16/05	7/16/05 8:22 AM
0507132-010A	7/09/05 3:30 PM	7/15/05	7/15/05 1:36 AM				

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

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

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

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not applicable or 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.



QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0507132

EPA Method: SW8260B		Extraction: SW5030B			BatchID: 17073			Spiked Sample ID: 0507131-011B		
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	LCS / LCSD
tert-Amyl methyl ether (TAME)	ND	10	109	115	5.82	112	107	4.45	70 - 130	70 - 130
Benzene	ND	10	105	106	0.881	104	104	0	70 - 130	70 - 130
t-Butyl alcohol (TBA)	ND	50	118	115	2.18	99.7	101	1.34	70 - 130	70 - 130
Chlorobenzene	ND	10	112	115	2.37	107	109	1.61	70 - 130	70 - 130
1,2-Dibromoethane (EDB)	ND	10	108	110	1.81	105	106	1.05	70 - 130	70 - 130
1,2-Dichloroethane (1,2-DCA)	ND	10	116	119	2.41	116	118	1.29	70 - 130	70 - 130
1,1-Dichloroethene	ND	10	92.5	93.8	1.34	94.9	94.7	0.202	70 - 130	70 - 130
Diisopropyl ether (DIPE)	ND	10	119	119	0	119	119	0	70 - 130	70 - 130
Ethyl tert-butyl ether (ETBE)	ND	10	108	112	3.13	110	109	0.969	70 - 130	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	106	109	3.21	104	104	0	70 - 130	70 - 130
Toluene	ND	10	103	103	0	99.2	100	1.24	70 - 130	70 - 130
Trichloroethene	ND	10	80.1	80.7	0.800	81.2	80.4	0.976	70 - 130	70 - 130
%SS1:	100	10	93	92	2.01	100	98	2.68	70 - 130	70 - 130
%SS2:	116	10	99	97	2.53	99	98	1.04	70 - 130	70 - 130
%SS3:	115	10	110	115	4.21	109	108	1.30	70 - 130	70 - 130

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:

NONE

BATCH 17073 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0507132-004C	7/09/05 3:00 PM	7/14/05	7/14/05 5:16 PM	0507132-007C	7/09/05 3:15 PM	7/14/05	7/14/05 4:32 PM
0507132-010C	7/09/05 3:30 PM	7/14/05	7/14/05 4:33 PM				

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

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

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

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

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

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



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QC SUMMARY REPORT FOR SW8015C

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder: 0507132

EPA Method: SW8015C		Extraction: SW3550C			BatchID: 17076			Spiked Sample ID: 0507127-001A		
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	LCS / LCSD
TPH(d)	ND	20	103	105	2.27	99.9	101	0.961	70 - 130	70 - 130
%SS:	99	50	94	95	1.15	100	100	0	70 - 130	70 - 130

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

BATCH 17076 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0507132-001A	7/09/05	7/11/05	7/13/05 3:59 PM	0507132-002A	7/09/05 8:55 AM	7/11/05	7/13/05 5:36 AM
0507132-003A	7/09/05 9:15 AM	7/11/05	7/12/05 5:30 AM	0507132-005A	7/09/05 10:20 AM	7/11/05	7/13/05 2:36 PM
0507132-006A	7/09/05 12:10 PM	7/11/05	7/12/05 12:26 PM	0507132-008A	7/09/05 1:50 PM	7/11/05	7/13/05 2:36 PM
0507132-009A	7/09/05 2:05 PM	7/11/05	7/12/05 8:29 PM				

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

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

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

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

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



QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Soil

QC Matrix: Soil

WorkOrder: 0507132

EPA Method: SW8021B/8015Cm		Extraction: SW5030B			BatchID: 17078			Spiked Sample ID: 0507135-011A		
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	LCS / LCSD
TPH(btex) [£]	ND	0.60	94.6	96.8	2.35	94.7	94.8	0.0541	70 - 130	70 - 130
MTBE	ND	0.10	93.8	102	8.26	106	108	1.73	70 - 130	70 - 130
Benzene	ND	0.10	93.1	91.5	1.78	92.3	93.7	1.54	70 - 130	70 - 130
Toluene	ND	0.10	94.3	92.5	1.89	93.1	95.2	2.16	70 - 130	70 - 130
Ethylbenzene	ND	0.10	97.9	97.1	0.828	97.2	99.2	2.04	70 - 130	70 - 130
Xylenes	ND	0.30	100	99.7	0.334	99.7	100	0.334	70 - 130	70 - 130
%SS:	90	0.10	99	98	0.609	94	98	3.75	70 - 130	70 - 130

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

BATCH 17078 SUMMARY

Sample ID	Date Sampled	Date Extracted	Date Analyzed	Sample ID	Date Sampled	Date Extracted	Date Analyzed
0507132-001A	7/09/05	7/11/05	7/12/05 8:55 AM	0507132-002A	7/09/05 8:55 AM	7/11/05	7/12/05 2:00 AM
0507132-003A	7/09/05 9:15 AM	7/11/05	7/12/05 2:56 AM	0507132-005A	7/09/05 10:20 AM	7/11/05	7/12/05 2:33 AM
0507132-006A	7/09/05 12:10 PM	7/11/05	7/12/05 3:06 AM	0507132-008A	7/09/05 1:50 PM	7/11/05	7/12/05 9:57 PM
0507132-009A	7/09/05 2:05 PM	7/11/05	7/12/05 7:05 PM				

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.
 % Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).
 MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.
 £ TPH(btex) = sum of BTEX areas from the FID.
 # cluttered chromatogram; sample peak coelutes with surrogate peak.
 N/A = not enough sample to perform matrix spike and matrix spike duplicate.
 NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

APPENDIX G

LUCASEY MANUFACTURING CORPORATION
SITE CONCEPTUAL MODEL; 2/26/07

SUMMARY: SITE CONCEPTUAL MODEL

Site: Lucasey Manufacturing Case No. RO0002902
2744 East 11th Street, Oakland, CA 94601 Clearwater Proj. No. FB022G

Consultant: Clearwater Group **Date:** 3/7/2007

<u>ITEM</u>	<u>EVALUATION CRITERIA</u>	<u>DESCRIPTION / COMMENTS</u>
1	HYDROCARBON SOURCE	
1.1	Identify and Describe Release Source and Volume (if known)	The highest concentrations of TPH-d, TPH-mo and free product have been detected in the presumed down-gradient direction of the former fuel oil UST. The fate of the former concrete tank, estimated to be 10,000+ gallons is unknown. The fuel was likely a Bunker-C fuel. A geophysical search using ground penetrating radar and electro-magnetic techniques in 2005 did not locate the tank marked on the Sanborn Maps as "Oil Tank in ground" near the "Oil House". The volume of the leak is unknown.
1.2	Discuss Steps Taken to Stop Release or Spill	Clearwater has searched for evidence of the tank removal. The leak was discovered in 2004 during an environmental due diligence study. No direct repairs or action was taken to prevent additional release via groundwater transport; A tank is not believed to be onsite. When the current below grade loading dock improvements were installed, it is likely the former tank was encountered and removed. This likely occurred 35 or more years ago. A replacement tank was not installed. Additional information from previous owners and tenants has been requested.
2	SITE CHARACTERIZATION	
2.1	Current Site Use/Status	Lucasey Manufacturing Corporation fabricates television mounting systems using sheet metal. No current fuel USTs or ASTs are known to exist on the site.

LUCASEY MANUFACTURING CORPORATION
 SITE CONCEPTUAL MODEL; 2/26/07

<u>ITEM</u>	<u>EVALUATION CRITERIA</u>	<u>DESCRIPTION / COMMENTS</u>
2.2	Soil Definition Status	The lateral and vertical extent of hydrocarbons detected in soil has not been determined. Free product was not identified at boring locations SB-3, SB-7, SB-8, SB-10 and SB-23. A typical boring, SB-21, contained a heavy oil free product from 10.5 to 14.0 feet below ground surface.
2.3	Separate-Phase Hydrocarbon	Significant free product has been detected onsite and offsite. The onsite borings with free product or extremely high levels of contaminants include SB-9, SB-11, SB-12, SB-13 and SB-15. The offsite borings with free product or extremely high levels of contaminants include SB-21, SB-22 and SB-24.
2.4	Groundwater Definition Status	Groundwater was typically encountered between 9 and 24 feet below ground surface when drilling; however, static water is about 9 to 10 feet below ground surface, indicating a potential semi-confined or confined aquifer. TPH-d and TPH-mo concentrations have been detected at free product levels. Low concentrations of VOCs were detected on the southern part of the onsite and offsite investigation area.
2.5	Plume Stability and Concentration Trends	No groundwater monitoring or other wells exist on the Subject Property. Groundwater contaminant concentrations have been partially mapped, but plume stability or seasonal and long term trends have not yet been determined. There is no historic information on plume stability and concentration trends due to the lack of groundwater monitoring.
2.6	Groundwater Definition Status	Generally, the lateral and vertical extent of hydrocarbons in groundwater has not been determined through the occurrence of non-detect samples, with the exception of the non-detect soil in the southeast corner of the site (area near soil boring SB-7). The highest TPH-d and TPH-mo concentrations were detected in the core of the plume, consisting of borings SB-9, SB-12, SB-13, SB-15, SB-22 and SB-24.

LUCASEY MANUFACTURING CORPORATION
SITE CONCEPTUAL MODEL; 2/26/07

<u>ITEM</u>	<u>EVALUATION CRITERIA</u>	<u>DESCRIPTION / COMMENTS</u>
2.7	Groundwater Flow Direction, Depth Trends and Gradient Trends	Groundwater gradients, water flow direction, and groundwater elevation trends have not yet been established as fully developed groundwater monitoring wells have not been installed on the Subject Property. The estimated groundwater flow direction is to the west-southwest , toward San Francisco Bay. The free product plume, as currently defined, appears to be moving to the west southwest from the former UST location.
2.8	Stratigraphy and Hydrogeology	The onsite surface is capped with a 7 inch concrete pad, the area explored offsite is capped by asphalt paving. Soils encountered during previous subsurface investigations as well as this investigation have generally encountered silts from below the concrete to about 5 feet below ground surface. Underlying the silt (ML) is a very low permeability clay (CL) with thin interbeds of relatively more permeable clayey sands and clayey gravels. These slightly coarser sediments may be buried stream channels within a general estuarine environment. The slightly coarser sediments may also provide a preferential pathway for contaminant migration.

LUCASEY MANUFACTURING CORPORATION
 SITE CONCEPTUAL MODEL; 2/26/07

ITEM	EVALUATION CRITERIA	DESCRIPTION / COMMENTS
2.9	Preferential Pathways Analysis	An onsite utility survey has been performed and an offsite utility survey is recommended to identify preferential pathways in offsite areas. A variety of potential subsurface conduits or preferred pathways exist on and offsite. The Contra Costa Water District improved East 11th Street with a storm water cistern with valves and pipes to a depth of about 12 feet below ground surface. The cistern is visible, and is believed to have been a temporary storage and collection area for storm water. A fire suppression system with 10 inch diameter pipes, and a PG&E natural gas pipeline are on the Subject Property. A sanitary sewer line, presumably belonging to East Bay Municipal Utility District, runs through the former tank area. Site groundwater is at approximately 10 feet and should intersect some of the utilities. Therefore, shallow groundwater flow may be partially constrained by the utility lines and trenches.
2.10.	Other Pertinent Issues	Soil vapor samples have not been collected.
3	Remediation Status	
3.1	Remedial Actions Taken	No remedial actions have been performed to date. A review of the effectiveness of remedial actions at nearby sites in clay-rich sediments is needed. A Corrective Action Plan (CAP) should be prepared after the vertical and lateral extent of soil and groundwater contamination has been determined.
3.2	Area Remediated	No areas have been remediated.
3.3	Remediation Effectiveness	No remediation has occurred beyond natural attenuation. No determination of how much natural attenuation has occurred has been made.

LUCASEY MANUFACTURING CORPORATION
SITE CONCEPTUAL MODEL; 2/26/07

<u>ITEM</u>	<u>EVALUATION CRITERIA</u>	<u>DESCRIPTION / COMMENTS</u>
4	Well and Sensitive Receptor Survey	
4.1	Designated Beneficial Water Use	Groundwater underlying and adjacent to the site does not qualify as a potential source of drinking water, due to its low yield. Based on lithology and the depth to groundwater, other groundwater parameters such as total dissolved solids (TDS) are likely to exceed drinking water standards. Therefore, Clearwater interprets the beneficial use of the groundwater to be limited and not of drinking water quality or to be a drinking water source .
4.2	Shallow Groundwater Use	Groundwater in the area is not used as a source of municipal water supply. The majority of the homes in the City of Oakland are supplied with municipal water from the East Bay Municipal Utility District. Clearwater performed a water well survey using data supplied by the California Department of Water Resources and other databases in 2006 to identify current or historic (and improperly abandoned) wells within 500 feet of the property and did not identify any use of the shallow groundwater
4.3	Deep Groundwater Use	In 2006, Clearwater performed a database search for deep wells in the area to identify wells within the 1/2 mile radius of the Subject Property. One deep well formerly existed near the site. The well exceeded 600 feet and was abandoned. No other information is available on this well.
4.4	Well / Surface Water Survey Results	Since many of the structures in the area are up to 100 years old, and there are industrial and commercial buildings nearby, it is possible that old, inactive, or abandoned wells might exist.
4.5	Likelihood of Impact to Wells	No active onsite or offsite wells were identified in the 1/2 mile radius search area.

LUCASEY MANUFACTURING CORPORATION
 SITE CONCEPTUAL MODEL; 2/26/07

<u>ITEM</u>	<u>EVALUATION CRITERIA</u>	<u>DESCRIPTION / COMMENTS</u>
4.6	Likelihood of Impact to Surface Water	The primary surface water body is San Francisco Bay, approximately 2,200 feet to the west of the site. No other surface waters are known to be located within 2,000 feet of the site. Based on the currently estimated horizontal extent of the free product plume (approximately 180 feet trending west southwest), no surface water bodies are at risk from this hydrocarbon release.
5	Risk Assessment	
5.1	Site Conceptual Exposure Model (current and future uses)	The site is currently occupied by a manufacturing facility. The surrounding is a mix of industrial, commercial and residential uses. Residences are adjacent to the Subject Property to the south, along Lisbon Street, and northwest along East 11th Street. The Oakland Animal Shelter is located to the southeast of the Subject Property. Based on the current owner's plans, future use of the site is assumed to be similar to current use. A redevelopment of the area is possible and future nearby residential redevelopment can not be ruled out.
5.2	Exposure Pathways	Potential exposure pathways include onsite commercial occupants, or future residential occupants if the site is redeveloped. Exposure is possible by inhalation of vapors from impacted soil and groundwater, dermal exposure, particulate inhalation, and ingestion of impacted soil by onsite construction workers.

LUCASEY MANUFACTURING CORPORATION
 SITE CONCEPTUAL MODEL; 2/26/07

<u>ITEM</u>	<u>EVALUATION CRITERIA</u>	<u>DESCRIPTION / COMMENTS</u>
5.3	Site Receptor Survey and Human Health Risk Assessment Status	A Sensitive Receptor Survey was conducted by Clearwater in 2006 within a 500-foot radius of the Subject Property (search area). There are no hospitals, clinics, schools, or public facilities within the search area. The area directly to the south and west of the Subject Property, is used for residential housing. The Oakland Animal Shelter is located southeast of the Subject Property. A rail line and commercial storage units are located to the north and east of the site. The area within a 500-foot radius is developed (no land in a native state), and there are no wetlands, streams, ponds, or sensitive habitats. The closest distance to San Francisco Bay is approximately 2,200 feet to the west. A Risk Based Corrective Action (RBCA) or other human health risk assessment has not been performed.
5.4	Ecological Risk Assessment Status	An ecological risk assessment has not been performed.
5.5	Exceedences of Risk-Based Concentrations (Human Health)	A soil vapor survey is needed to determine whether soil vapor concentrations exceed residential and commercial Environmental Screening Levels (ESLs). Current soil and groundwater concentrations do exceed appropriate ESLs for shallow soil (<3 meters) where groundwater is not used. The ESLs for the soil are: TPH-d (500 mg/Kg) and TPH-mo for soil (1,000 mg/Kg). For groundwater, where groundwater is not being used, the TPH-d ESL is (640 ug/L) and TPH-mo ESL is also (640 ug/L).

LUCASEY MANUFACTURING CORPORATION
 SITE CONCEPTUAL MODEL; 2/26/07

<u>ITEM</u>	<u>EVALUATION CRITERIA</u>	<u>DESCRIPTION / COMMENTS</u>
5.6	Exceedences of Risk-Based Concentrations (Human Health)	No risk assessment has been performed.
6	Data Gaps or Additional Recommended Data or Tasks	The extent of soil and groundwater contamination is not fully defined. Soil vapor sample data is needed to determine whether indoor air vapors at the Subject Property create a health risk to potential employees or nearby residential occupants.
6.1	Task/Data	Data gaps exist.
7	Proposed Actions	<p>Further define the source and extent of contamination.</p> <p>Define the extent of vertical and lateral offsite contamination</p> <p>Determine the risk due to soil vapor intrusion.</p> <p>Establish a network of onsite and offsite groundwater monitoring wells and implement a groundwater monitoring program.</p> <p>Map offsite subsurface preferential pathways such as sewer lines, storm drains, etc.</p> <p>Develop remedial options.</p> <p>Implement the remedial options and request site closure.</p>