Work Plan for Soil Vapor Sampling and Backfill Soil Sampling:
Former Gas Station
2547 East 27th Street
Oakland, California

Date:
September 10, 2009

Prepared for:
Tomorrow Development
1305 Franklin Street, Suite 500
Oakland, California

Submitted to:
Jerry Wickham
Alameda County Health Care Services Agency
Environmental Health Services
1131 Harbor Bay Parkway
Alameda, California

Prepared by:
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Perjury Statement

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.

Ted Dang, President

7/12/06
Date

ceres ASSOCIATES

920 First Street, Suite 202
Benicia, California 94510
707 748-3170

September 10, 2009

Alameda County Health Care Services Agency (ACHCSA)
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, California
94502-6577

Subject: **Work Plan, Former Service Station, 2547 East 27th Street, Oakland, California (File No. 0396)**

Dear Mr. Wickham:

Ceres has prepared this work plan to address the comments provided by the ACHCSA agency in a letter dated April 10, 2008 for the site located at 2547 East 27th Street, Oakland, California ("Property").

Tomorrow Development and Ceres Associates request that the ACHCSA review and approve the enclosed Work Plan. If you have any questions or comments, please contact Nick Patz at (707) 748-3170 or via email at nickpatz@ceresassociates.com

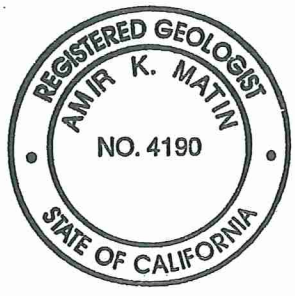
Sincerely,
Ceres Associates

Nick Patz
Project Manager

Amir Kh. Matin

Amir Matin, PG, CHG
Senior Hydrogeologist

cc: Ted Dang
Tomorrow Development
1305 Franklin Boulevard
Oakland, California



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1.0 INTRODUCTION

The Property is located at 2547 East 27th Street, Oakland in Alameda County, California *(refer to Figure 1 – Topographic Map)*. The Property was formerly occupied by a gasoline fueling and service station between 1927 and 1994. In 1994 the fuel and service station was demolished and the Property is currently unoccupied. A chain-link fence is present at the perimeter to secure the Property. The Property is periodically used for storage of building materials for nearby construction sites. The Property is located among single- and multiple- family residences.

In 1994, one 100-gallon waste oil underground storage tank (UST) and four 500-gallon gasoline USTs were excavated and removed from the Property. The 500-gallon USTs were reported to contain gasoline and diesel. After the USTs were removed, the excavation pits were lined with visqueen plastic and backfilled with the excavated material. Through various soil and groundwater assessment activities, it was found that both soil and groundwater have been impacted by leaks from the USTs. Subsequently, removal of contaminated soil and monitoring of groundwater was conducted. These activities are summarized in the following section of this work plan.

This work plan addresses soil vapor sampling as requested by the ACHCSA in their letter, dated April 10, 2008.

The regulatory risk criteria utilized for this report are Environmental Screening Levels (ESLs) established by the San Francisco Bay Regional Water Quality Control Board (RWQCB) for residential sites where groundwater is a potential or current drinking water source.

2.0 SITE CHARACTERISTICS

2.1 Geologic/Hydrogeologic Setting

Based upon geologic maps, the Property is underlain by Pleistocene alluvial fan deposits (Helley & Graymer, 1997). The Property lies at approximately 115 feet above mean sea level. The local topography slopes to the south-southeast.

2.2 Soil

The soils on the Property consist of generally sandy gravel fill from the surface to four feet below ground surface (bgs). From four feet to twelve feet bgs the soil appears to consist of silty clays. Between twelve feet and fifteen feet bgs the soil is generally gravel and sand with some clay. At depths greater than fifteen feet to a depth of twenty-seven feet bgs, the soils are primarily clay with some silts, sands, and gravels. Off-site soils are generally consistent with on-site soils.

Imported fill materials were used to backfill the excavation of petroleum-contaminated soil that occurred in November/December 2006. The bottom approximately three feet of the fill consisted of quarry fines supplied by Curtner Quarry of Milpitas California. This material is then sifted, primarily mineral component from a rock quarry. According to the Curtner Quarry, the fines have a maximum diameter of 9.50 millimeters (0.375 inch), and have at least 50% under 0.3 millimeters (0.012 inches). The quarry fines were compacted using a back-hoe and a "sheeps-foot" compaction attachment on an excavator. The compacted material was then overlain with Mirafi 140N non-woven, polypropylene, 55-mil thickness, geo-textile fabric. The placement of the fabric creates a barrier so that the fill soil placed on top of will be less likely to subside. Clean fill soil from undeveloped land was also acquired from Curtner Quarry to fill the remaining portion of the excavation. The fill material was brought onto the Property then spread out on top of the fabric. At approximately every 18 to 24 inches, the fill material was compacted in the same manner as described above for the quarry fines. A total of 380 tons of soil and base rock were brought on-site for backfill purposes.

2.3 Groundwater

Groundwater has been encountered on the Property between approximately three (3) and fourteen (14) feet bgs. Depths to groundwater are generally within three (3) to five (5) feet of the ground surface.

The groundwater flow direction, based upon historic quarterly monitoring events by Ceres Associates, ranges from east-northeast to south-southeast, with an overall trend toward the southeast, with a gradient of 0.006 ft/ft.

3.0 PREVIOUS PROPERTY INVESTIGATIONS

Several investigations and remedial actions have been conducted at the Property. The following section summarizes those investigations and actions.

3.1 Previous Soil and Groundwater Sampling

Soil and groundwater contamination at the Property appears to have originated from historic uses of underground storage tanks for the purposes of storing gasoline and diesel fuel and waste. The Property has been the subject of several previous assessments, including:

- Tank Removal Report, September 1994, Aqua Science Engineers
- Phase I ESA, May 2001, M.L. River Group
- Soil and Groundwater Sampling, August 2002, Kleinfelder
- Soil and Groundwater Sampling, January 2005, Ceres Associates
- Soil and Groundwater Sampling and Monitoring Well Installation, February 2006, Ceres Associates
- Well Survey, May 2006, Ceres Associates
- Deeper Groundwater Sampling, October 2006, Ceres Associates
- Quarterly Groundwater Monitoring, 2006 – 2007, Ceres Associates
- Soil Excavation Report, August 2007, Ceres Associates
- Soil Vapor Sampling and Backfill Soil Sampling Report, February 2008, Ceres Associates.

Based upon previous soil and groundwater sampling events at the Property, the following target compounds have been identified:

Compound	Abbreviation
Total Petroleum Hydrocarbons as Gasoline	TPHg
Total Petroleum Hydrocarbons as Diesel	TPHd
Total Petroleum Hydrocarbons as Motor Oil/Hydraulic Oil	TPHmo/ho
Benzene	BTEX
Toluene	
Ethylbenzene	
Xylenes	

3.2 September 1994 Aqua Science Engineers – Tank Removal Report

An Underground Storage Tank Removal Report, dated September 15, 1994, was prepared for the Property by Aqua Science Engineers, Inc. According to the report four 500-gallon and one 100-gallon steel underground storage tanks were removed form the Property on August 30 and 31, 1994

(refer to Figure 2 – Previous USTs and Developments. All four of the 500-gallon tanks were reported to have contained gasoline; the 100-gallon tank was reported to have contained waste oil.

Soil Sample Results
Soil samples collected from the bottom of the excavations indicated detectable concentrations of TPHg and BTEX *(refer to Table 1: Soil Sampling during UST Removal – August 1994).* Detectable concentrations of oil and grease were identified in the soil directly beneath the former waste oil tank. Concentrations ranged from a low of 0.2 mg/Kg to a high of 930 mg/Kg of TPHg beneath the four former gasoline USTs. Concentrations of petroleum hydrocarbons were not found beneath the former pump islands above method detection limits.

Upon completion of the soil sample collection, the excavations were lined with visqueen and backfilled immediately with the stockpiled material. According to the report, this re-filling was meant only as a temporary measure and this plan was verbally discussed at the time, and approved by Mr. Barney Chan of the ACHCSA.

Recommendations
Aqua Science Engineers, Inc. recommend removal and stockpiling of the material that had been placed back into the excavations as temporary backfill; collecting samples and analyzing for profiling and acceptance into an off-site recycling facility, then off-hauling; over-excavating, stockpiling and sampling the residual contaminated soil; backfilling the excavation with clean, imported, compactable material to grade; and, conducting subsurface soil and groundwater investigations as requested by local the regulatory agency.

3.3 May 2001 M.L. River Group – Phase I ESA

A Phase I ESA report, dated May 10, 2001, was conducted for the Property by M.L. River Group Environmental Consultants. According to the report, the Property was first developed sometime between 1900 and 1920, and was operated as a gasoline service station and/or garage from 1927 through 1994. At the time of the report, the Property was not occupied and no structures or building materials remained on the site.

Neither hazardous materials nor electrical transformers were observed on the Property. However, the report did summarize the above referenced UST Removal Report, noting that soil sampling conducting during the UST removal indicated subsurface contamination.

No further site study or remediation had been done at the Property between the time of the tank removal and the preparation of this Phase I ESA Report. The case had been referred to the Alameda County District Attorney's Office shortly before the Phase I ESA's publication. Prior to granting closure for the site, the ACHCSA reportedly required remediation of the contaminated soil and additional studies of the soil and groundwater. The Phase I ESA report concluded that "soil remediation and subsurface investigation of the Subject Site must be performed before redeveloping the Property".

3.4 August 2002 Kleinfelder- Soil and Groundwater Sampling

A Soil and Groundwater Sampling report, dated August 2, 2002, was prepared for the Property, by Kleinfelder, Inc. The report cited the Phase I history noted above. Kleinfelder advanced three soil borings (EB-1, EB-2 and EB-3) on the Property on June 19, 2002 *(refer to Figure 3 – Boring Location Map).* At that time, monitoring wells were installed in each of the three borings. According to the boring logs (refer to Appendix for a copy of the boring logs), between two and five feet of screen was inserted into the borings and the remainder of the borings were backfilled with grout. These wells are no longer operational.

Soil Sample Results

According to the report, reported concentrations of TPHg, TPHd, TPHmo and BTEX compounds were detected in at least one of the soil samples collected from each soil boring exceeding regulatory action limits *(refer to Table 2: Kleinfelder Soil and Groundwater Sampling - June 2002).* TPHg was detected at 1,200 mg/Kg in EB-1 and 1,800 mg/Kg in EB-2. TPHd was detected at 650 mg/Kg in a soil sample collected from EB-1 and 1,500 mg/Kg in a soil sample collected from EB-2. TPHmo was detected in concentrations above laboratory reporting limits only in the soil sample from boring EB-1 at 14 mg/Kg. Further, the laboratory described the detected TPHg as strongly aged gasoline, and the TPHd was described as Stoddard solvent. A soil sample collected from EB-1 had reported concentrations of ethylbenzene at 1.6 mg/Kg, toluene at 0.62 mg/Kg, and xylenes of 3.3 mg/Kg. A soil sample collected from EB-2 had reported concentrations of ethylbenzene at 3.1 mg/Kg and xylenes at 4.9 mg/Kg. Concentrations of MTBE were not reported above the method reporting limit for any of the soil samples submitted for analysis.

Groundwater Sample Results

Groundwater samples were collected from each of the three onsite groundwater monitoring wells. Groundwater samples reportedly contained concentrations of TPH from each of the three groundwater wells. TPHd was reported in monitoring well EB-1 at a concentration of 56 micrograms per liter (µg/l). The groundwater sample collected from monitoring well EB-2 was reported to contain TPHg at 82 µg/l, TPHd at 360 µg/L, and TPHmo at 310 µg/l. A groundwater sample from monitoring well EB-3 reportedly contained concentrations of TPHd at 270 µg/l and TPHmo at 540 µg/l. Only EB-2 had reported concentrations of BTEX compounds. This well had concentrations of benzene at 0.97 µg/L, toluene at 1.3 µg/l, and xylenes at 1.3 µg/l. Ethylbenzene and MTBE were not reported above their laboratory reporting limits.

Recommendations

Kleinfelder recommended conducting further soil and groundwater sampling to determine the extent of soil contamination and to confirm the groundwater results from their initial study. Kleinfelder suggested a program of shallow drilling in a grid pattern in order to help delineate the extent of the impacted soil and that additional groundwater samples be collected to further study the potential impacts to groundwater.

3.5 January 2005 Ceres Associates – Soil and Groundwater Sampling

To further access the extent of soil and groundwater impacts at the Property, Ceres Associates collected soil and groundwater samples on January 7, 2005 (project CA1264-1, report dated January 28, 2005) *(refer to Figure 3 – Boring Location Map).* Ten soil borings were drilled at the Property to a

maximum depth of 10 feet bgs (labeled SB-1 through SB-10); soil samples were collected at five and 10 feet bgs from each boring. Grab groundwater samples were collected from each soil boring, and from six additional Hydro-punch® borings (labeled GW-1 through GW-6). Soil and grab groundwater samples were analyzed for TPHg, TPHd, BTEX, and MTBE *(refer to Table 3: Ceres Associates Soil and Groundwater Sampling – January 2005).*

Soil Sample Results

The only soil samples collected from five feet bgs reported to contain concentrations of the target analytes above reporting limits were collected from soil boring SB-6, and had reported concentrations of benzene of 0.024 mg/Kg and ethylbenzene of 0.031 mg/Kg; and SB-9 which had reported concentrations of TPHg of 32 mg/Kg, TPHd of 52 mg/Kg, ethylbenzene of 0.017 mg/Kg ,and xylenes of 0.013 mg/Kg.

The 10-foot bgs samples from SB-1, SB-2, and SB-8 were reported by the laboratory to not contain concentrations of the target analytes above their respective reporting limits. The highest concentrations of the target analytes were reported as 61 mg/Kg of TPHg (sample SB5-10), 46 mg/Kg of TPHd (sample SB5-10), 0.007 mg/Kg of benzene (sample SB5-10), 0.045 mg/Kg of ethylbenzene (sample SB5-10), and 0.027 mg/Kg of xylenes (sample SB5-10).

Although target analytes were detect in several of the analyzed soil samples the reported concentrations of the target analytes in the soil samples analyzed from soil borings SB-1 through SB-10 did not exceed regulatory action limits.

Groundwater Sample Results

Target analytes were reported above method reporting limits in all but one of the grab groundwater samples. Concentrations of TPHg were as high as 90,000 µg/l (SB-9); 750,000 µg/L for TPHd (SB-9); 140 µg/l for benzene (SB-9); 1.5 µg/l for toluene (SB-1); 77 µg/l for ethylbenzene (SB-9); and 20 µg/l for xylenes. MTBE was not reported above the method limits in any grab groundwater samples. Benzene concentrations exceeded the regulatory limit of 1 µg/l in eight of the 16 samples submitted for analysis, set by the State of California Department of Health Services (CDHS) Maximum Contaminant Level (MCL). While the CDHS has not created MCLs for TPHg and TPHd, the RWQCB had established an ESL for both TPHg and TPHd of 100 µg/L.

Recommendations

Based on these results, Ceres Associates recommended the installation of additional monitoring wells both on and off the Property to help define the limits of contamination and to assess groundwater flow direction. This additional work was conducted in February 2006.

3.6 February 2006 Ceres Associates – Soil and Groundwater Sampling

Ceres Associates collected on and off-site soil and groundwater samples on February 16 and 17, 2006 (Ceres Associates Project CA1264-3, report dated February 28, 2006, revised July 2006). A total of 14 borings were advanced in an effort to confirm the concentrations of contaminants at the Property as well as assess off-site migration of target compounds (labeled SB-11 through SB-24). These borings were advanced to between 8 and 20 feet bgs. Soil samples were collected every two feet, and one grab groundwater sample was collected from each boring.

Three soil samples and the grab groundwater sample from each boring were analyzed for target compounds. The soil samples were chosen for analysis according to observed field conditions (odors, colorations, capillary fringe location, and PID readings). Samples were analyzed for TPHg, TPHd, TPHmo, TPHho, VOCs, and lead *(refer to Table 4: Ceres Associates Soil and Groundwater Sampling – February 2006).*

Groundwater Monitoring Well Installation

Additionally, Ceres Associates installed five groundwater monitoring wells (MW-1 through MW-5) and one extraction well that was intended for potential future remediation purposes (EX-1). The groundwater monitoring wells were installed to 15 feet bgs, with screened intervals between 5 and 15 feet bgs (except for MW-2,whlch was installed to 8 feet bgs, with screened interval between 3 and 8 feet bgs, this is because at 8-foot depth the drill rig operator said that there was subsurface concrete obstruction). The extraction well was similarly installed to 15 feet bgs, with a screened interval between 5 and 15 feet bgs. Each monitoring well was installed with two-inch diameter well screen and blank. The extraction well was installed with four-inch diameter well screen and blank.

Soil Sample Results

Laboratory results indicated that target analyte concentrations in soil samples fell below the Residential ESL for TPHg and TPHd in all but two samples: SB12-14 at 250 mg/Kg of TPHg and SB21-12 at 490 mg/Kg of TPHd. Concentrations of TPHg in soil samples ranged from ND to 250 mg/Kg (SB12-14); concentrations of TPHd in soil samples ranged from ND to 490 mg/Kg (SB21-12); and, concentration of TPHho or TPHmo in soil samples ranged from ND to 38 mg/Kg (SB20-12). Concentrations of BTEX compounds were not reported by the laboratory above the method reporting limits, except for one sample (SB14-14) at 0.0074 mg/Kg. Other VOCs were not reported above the method reporting limits for submitted soil samples. Lead concentrations were reported by the laboratory to range from ND to 51 mg/Kg.

Grab Groundwater Sample Results

Hydrocarbon-affected groundwater was detected east of the Property in most of the off-site sample points. Concentrations of TPHg above the method reporting limits were reported in three grab groundwater samples: 1,500 µg/l in SB-21 (on the Property), 74 µg/l in SB-14 (east of the Property), and 51 µg/l in SB-19 (south of the Property). However, points between these sample locations were not reported above ND. The highest concentrations of TPHd were reported off-site at SB-22 at 3,600 µg/l immediately south of the Property; and at SB-13 at 1,300 µg/l, east of the Property. On-site TPHd contamination was reported as high as 910 µg/L at SB-21 located along the southern boundary of the Property. Samples further south and east of SB-21 were also reported above ND at concentrations exceeding the ESL for TPHd. Concentrations of TPHmo were detected both on and off-site (SB-13, SB-15, SB-17, SB-20, and SB-22). The highest concentration detected was 28,000 µg/l in SB-22. Concentrations of VOCs were not reported by the laboratory above their respective method reporting limits. Concentrations of lead were reported by the laboratory between ND and 17 µg/l.

Fuel oxygenates EDB and 1,2-DCA were reported as ND for all grab groundwater and soil samples submitted to the laboratory. Concentrations of BTEX compounds fell below the Maximum Contaminant Levels (MCLs) in all grab groundwater samples collected (SB-11 through SB-24).

Monitoring Well Sample Results
Samples were not collected from the monitoring wells during this sampling event; however, groundwater samples were collected as part of quarterly groundwater monitoring activities *(see Quarterly Groundwater Monitoring Summary below for further information regarding the results of such sampling).*

Recommendations
Based on the concentrations of the target analytes detected during this investigation, it was recommended that one deeper boring be advanced to 40 feet bgs to assess potential vertical contamination migration, preparing a corrective action plan, and preparing a risk assessment. This work was completed in October 2006.

3.7 May 2006 Ceres Associates - Well Survey

Ceres Associates prepared a well survey, dated May 15, 2006 (project CA1264-3). The survey was conducted to locate groundwater wells within a 2,000-foot radius of the Property. A total of 19 wells were identified in the search area, generally located between 1,000 and 2,000 feet from the Property. The Property is located to the west of Sousal Creek; however, all of the wells identified within the search radius are located east of Sousal Creek.

Recommendations were not made in the report, as the well survey was meant to compliment other on-going investigation reports.

3.8 October 2006 Ceres Associates - Deeper Groundwater Sampling

Ceres Associates advanced one soil boring (SB25) at the Property to 27 feet bgs on September 20, 2006 *(refer to Figure 3 – Boring Location Map).* SB25 was placed in close proximity to extraction well EX-1. The sampling was conducted per the request by the ACHCSA in a letter dated May 18, 2006. The purpose of this boring was to assess soil statigraphy beneath the Property and to collect depth-discrete grab groundwater samples to assess the vertical extent of affected groundwater at the site.

Although the initial request by ACHCSA was to sample to 40 feet bgs, the Geoprobe® 6600 met refusal at 27 feet bgs. Other attempts were made in nearby locations (still on the Property) to exceed this depth, however these attempts were unsuccessful and also resulted in shallow borings.

Continuous soil cores were collected during the advancement of SB-25 and analyzed in the field for potential depth-discrete groundwater sampling points. Based upon the soil data, depth-discrete sample locations were planned for 13 and 21 feet bgs. A Hydro-punch® was used to collect grab groundwater samples from these depth-discrete locations.

Groundwater Sample Results
The results of the groundwater sampling indicated that only one concentration of target analytes was reported above the method reporting limits: 0.84 µg/l of benzene at 21 feet bgs. This result falls below the Residential ESL of 1 µg/l for benzene.

3.9 August 2006 to April 2007 Ceres Associates - Quarterly Groundwater Monitoring Results

Ceres Associates has monitored the six groundwater monitoring wells on the Property (five groundwater monitoring and one extraction well) since their installation in February 2006. Wells MW-1, MW-2, MW-3, MW-4, MW-5, and EX-1 have been sampled five times: August 2006, November 2006, January 2007, April 2007, and July 2007. These wells have been sampled using low-flow purging/sampling methods.

Samples have been analyzed for various fuel and fuel related compounds, including TPHg, TPHd, TPHmo, MTBE, and BTEX using US EPA methods 8015 and 8021 *(refer to Table 6: Ceres Associates Quarterly Groundwater Monitoring – August 2006 to April 2007)*. The ACHCSA requested additional compound analysis for samples collected during the Second Quarter 2007 sampling event (per the April 26, 2007 letter to Tomorrow Development) as follows: 1,2-dibromoethane(EDB), ethylene dichloride (EDC), MTBE, tert-amyl methyl ether (TAME), ethyl tert-butyl ether (ETBE), di-isopropyl ether (DIPE), Tertiary Butanol (TBA), chlorinated hydrocarbons, carbon tetrachloride, ethylene dichloride, methylene chloride, tetrachloroethane, trichloroethylene, and chloroform. These additional analytes were reported as ND by the laboratory for the groundwater samples submitted for analysis. Among the new compounds that were required by the ACHCSA during the Second Quarter 2007, only chloroform was detected above the method reporting limits. The only "new" analytes detected were in MW-2 at a concentration of 23 µg/l chloroform, 0.51 µg/l of bromoform, 0.55 µg/l of dichlorobromomethane, and 1.5 µg/l of bromochloromethane.

The source of VOCs in MW-2 is not known. MW-1, located between the Property and MW-2, did not have concentrations of these compounds above the method reporting limits. MW-2 is screened between 3 and 8 feet bgs, in an area of the soil horizon dominated by subsurface utility trenches and lines. It is possible that these minor VOC concentrations are a result of small releases associated with these utility lines, and not that of the Property.

Based upon quarterly groundwater monitoring, elevated concentrations of target compounds in on-site groundwater are generally limited to monitoring well EX-1. Only the two wells closest to the Property, MW-1 and MW-2, have had groundwater sample results reported by the laboratory above the method reporting limits for target analytes TPHg, TPHd, TPHmo, ethylbenzene and xylenes. The highest concentrations of target analytes reported by the laboratory for quarterly groundwater monitoring are in EX-1 at 2,200 µg/l of TPHg; 800 µg/l of TPHd; 270 µg/l of TPHmo *(the ESL of each petroleum compound is 100 µg/L)*; 1.0 µg/l of benzene; 3.9 µg/l of ethylbenzene; and 3.2 µg/l of xylenes.

3.10 Revised Soil Excavation Report

To address the contaminated soil remaining at the site, Ceres Associates observed the excavation and off-haul of the affected soil. At the direction of the ACHCSA, an interim CAP was prepared to remove the contaminated soil (considered a source of petroleum hydrocarbon contamination) and replace with imported fill materials. Excavation activities to remove the contaminated backfill materials and other affected soils were completed on December 1 and 2, 2006. A total of approximately 200 cubic yards of contaminated soil was excavated and removed from the Property.

Two sidewall samples were reported to have concentrations of target compounds above the ESLs remained in place in area I. Concentrations of TPHg were reported at 450 mg/Kg in I-9-W and at 600 mg/Kg in sample I-9-N. Concentrations of TPHd were reported at 420 mg/Kg in I-9-N. These concentrations exceed the ESL of 100 mg/Kg. The sidewall area of sample I-9-W could not feasibly be excavated further because it is adjacent to the public sidewalk of east 27th Street, and would have caused undermining; and, the sidewall area of sample I-9-N could not feasibly be excavated further due to shallow groundwater intrusion issues and stabilization of the excavation wall.

The ACHCSA expressed concern over the extent of excavations and their effectiveness with respect to source removal. Based upon this, Ceres Associates advanced a total of eight borings on the Property to confirm that the excavations were effective in remediating source material both horizontally (in areas I and III) and vertically (all areas), these borings were labeled CS-1 through CS-8.

Vertical Delineation

Each excavation was extended to 9.5 feet bgs. For each excavation area, one confirmation soil sample was collected at approximately 10 feet bgs from near the center of each excavation, in undisturbed soil. These samples were intended to reflect the "floor" of the December 2006 excavations. According to the laboratory report, target analytes were not reported above the method reporting limits. It would appear that the vertical extent the excavations were sufficient for effective source removal.

Horizontal Delineation - Area I

Ceres Associates collected two soil samples from one boring (CS-5) placed within three feet of former sample I-9-N. These two samples were analyzed for TPHg, TPHd, TPHmo, BTEX, and LUFT 5 metals. Only chromium, nickel, and zinc were reported above the method reporting limits; however, the reported concentrations were within anticipated background levels. Given these results, it would appear that the horizontal extent of area I was sufficient to remove affected material. The area of I-9-W is adjacent to an impervious surface in the form of a sidewalk and roadway, therefore it is not anticipated that any residual contamination would adversely impact future surface occupants.

Although petroleum hydrocarbons were identified at slightly elevated concentrations during the excavation and subsequent confirmation sampling, the more volatile compounds (BTEX compounds) were not identified above the ESLs. Further, concentrations of target compounds are not thought to pose a significant soil vapor intrusion risk to future buildings on the Property, based upon a comparison of soil and groundwater concentrations reported on-site to published screening levels. Residual contaminants were anticipated to naturally attenuate over time to concentrations below the ESLs.

Horizontal Delineation - Former Waste Oil Area

The ACHCSA requested additional analysis of the outer walls of excavation Area III, where a former waste-oil UST was located. In complying with the ACHCSA request, the laboratory analyzed the samples submitted from CS1 through CS4 (the 5 and 10-foot sample for each boring) for oil and grease, chlorinated hydrocarbons, 1,4-dioxane, EDB, EDC, MTBE, TAME, ETBE, DIPE, TBE, ethanol, LUFT 5 metals, PCBs, and PNAs. The laboratory did not report concentrations above the method reporting limits for these specified analytes, except for 5.9 mg/Kg of TPHmo at 5 feet bgs in CS-4 (the southwest wall of excavation Area III). That concentration is below the Residential ESL

of 500 mg/Kg for TPHmo. It would appear that the removal of source material in Area III was effective and sufficient.

3.11 February 2008, Soil Vapor Sampling and Backfill Soil Sampling Report

Soil Vapor Sampling

Ceres Associates advanced a total of six borings on the Property in the area of the proposed residences (SV-01 through SV-06); three from the footprint of each planned residence. A duplicate sample was taken of sample SV-04, (SV-04DUP) to verify the laboratory results. Each of the samples was collected from a depth of three feet.

Ceres Associates advanced a total of two borings on the Property using hand auger equipment in the area of the backfilled materials

Soil vapor samples were collected from a depth of three feet below ground surface. The original intent was to collect vapor from five beet bgs, however, it was found that soil was either too "tight" to collect an adequate sample or that groundwater was present at that depth. One vapor sample (SV-02) was reported to contain 8.4 µg/l of TPHg. This concentration falls below the ESL for residential land use scenarios of 10.0 µg/l for TPHg. Concentrations of MTBE, benzene, toluene, ethyl benzene, and total xylenes (MBTEX) and TPHd were reported as ND in all borings advanced on the Property.

The analytical laboratory reported that VOCs (8260B list) were all ND except for SV-04, which was reported to contain 5.7 µg/l of trichloroethene (TCE). This concentration exceeds the ESL for residential land use scenarios of 1.2 µg/l. Based upon initial analysis, Ceres Associates collected a duplicate sample from the same boring, which was reported by the laboratory to contain 3.4 µg/l. Boring SV-04 was placed in close proximity to the former waste oil tank excavation (to the southwest of the former excavation).

Backfill Soil Samples

Using a hand auger, two soil borings were advanced in the backfill material, as requested by ACHCSA. One soil sample was collected in the northern portion of the backfilled material and one in the southern portion. Soil sample results were reported well below their respective ESLs for those analytes requested by ACHCSA for the backfill soil material.

4.0 PROPOSED SOIL VAPOR SAMPLING

ACHCSA has requested that soil vapor sampling be conducted at the Property to delineate the extent of soil vapor found during the previous assessment, and to assess potential impacts to future site residents.

4.1 Soil Vapor Sampling

To take full advantage of having the drill rig and mobile laboratory onsite for a full day, and to properly define the soil vapor concerns at the Property, Ceres Associates will collect approximately 10 samples of soil vapor in the near vicinity of SV-04 from the previous soil vapor sampling assessment *(refer to Figure 2 – Proposed Soil Vapor Sample Location Map).*

Sampling locations will begin in the near vicinity of the location of SV-04 and will step out approximately five to seven feet in each direction. The remaining samples will be located dependent upon the results of the initial samples until the extent of TCE in the soil vapor is delineated or a maximum of 10 samples have been analyzed.

Each sample will be collected from a depth of three feet bgs. The February 2008 soil vapor investigation found that soil at a depth of five feet was too "tight" to collect vapor samples. So samples were collected from a depth of three feet. Ceres Associates will collect samples at three feet bgs during this investigation.

Ceres Associates will subcontract with TEG of Rancho Cordova, California to provide soil vapor sampling and onsite laboratory analysis. TEG will conduct their sampling in strict manner according to DTSC guidelines for soil vapor sampling.

Soil vapor samples will be collected using low-dead volume soil vapor sampling system (performed by TEG), which has been inspected and endorsed by regulatory agencies, including the U.S. EPA and Cal-EPA DTSC. This system effectively eliminates air leakage down the soil vapor probe, ensures sample collection from the tip, and its design supports decontamination between samples. The soil vapor probes are constructed of one-inch outer diameter chrome-moly steel and are equipped with a steel drop-off tip. The STRATAPROBE™ can also use a larger diameter probe if needed. An inert 1/8-inch tube runs through the center of the probe and is attached to the sampling port with a stainless steel post run fitting.

The probe is driven into the ground by the STRATAPROBE™ and once the desired depth is reached, the probe will be retracted slightly, opening the tip and exposing the vapor sampling port. This design prevents clogging and cross-contamination from soil. Once the probe rod is in place, the sample will be collected after the probe equilibrates for at least 20 minutes. The soil gas sample will then be withdrawn from the inert tubing using a calibrated syringe which couples into a sampling valve.

A purge volume test will be conducted by sampling the first soil vapor location three times after sequentially collecting and discarding one, three, and seven tubing volumes of soil gas. The purge volume (i.e., one, three, or seven tubing volumes) corresponding to the highest chemical concentration (which is determined by analyzing samples corresponding to all three purge volumes) will be used for all subsequent sampling.

After purging, the next 20 cubic centimeters (cc) to 50 cc of soil vapor will be withdrawn into the syringe, plugged, and immediately transferred to the mobile lab for analysis within the specified holding time. During sampling, a leak check gas (1,1-difluoroethene) will be used to confirm that the sample train and probe rod are tight and leak free. To minimize the potential for cross-contamination between sampling locations, all external probe components will be cleaned of excess dirt and moisture prior to insertion. The internal inert tubing and sampling syringes will be flushed with large volumes of ambient air between samples or discarded as required. If water, dirt, or any material is observed in the tubing, the tubing will be discarded and replaced with fresh tubing.

The sampling will be done, as best as practical, on a non-rainy day.

4.2 Laboratory Analysis

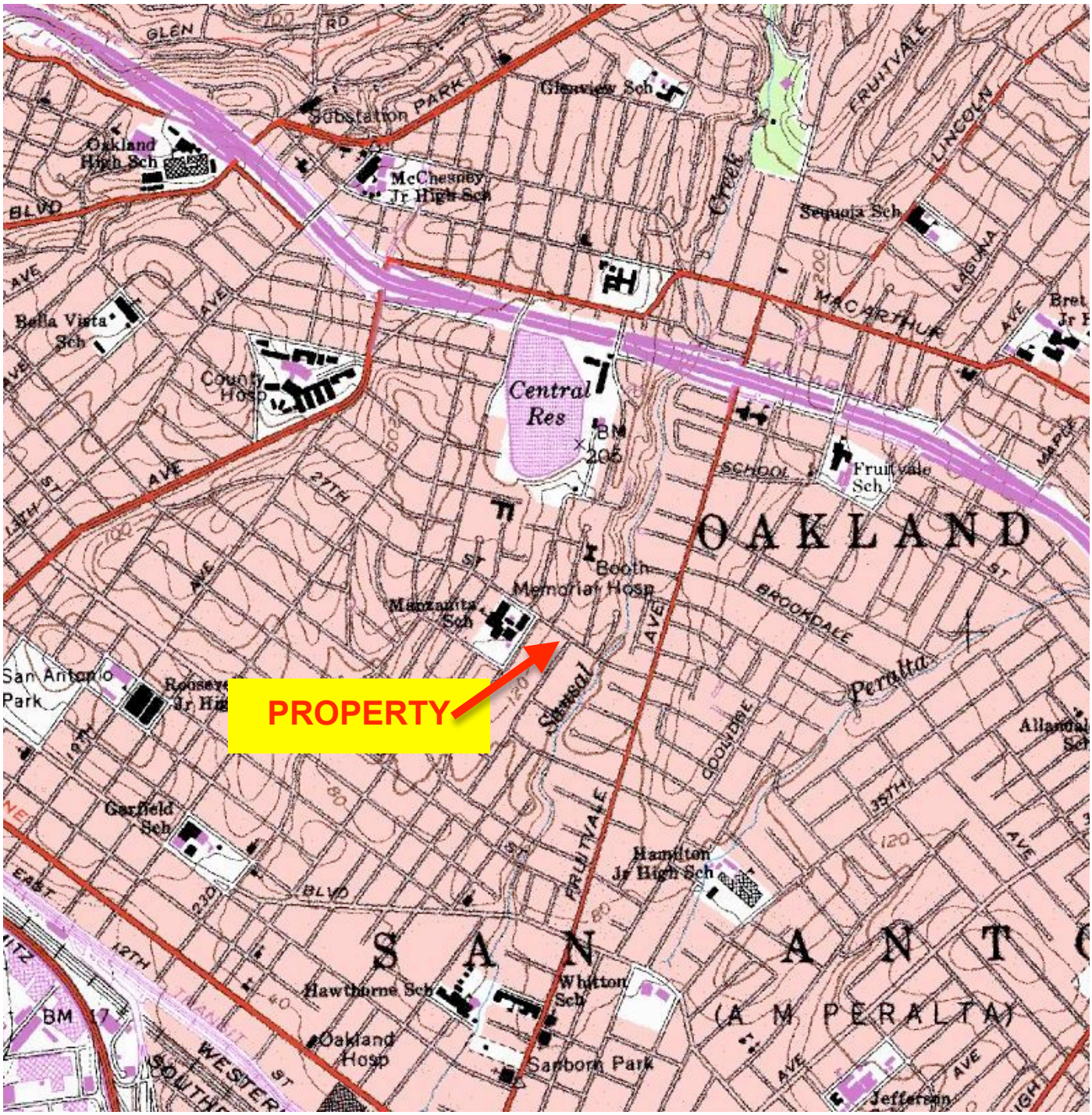
Soil vapor samples collected from each probe will be transferred directly to the state-certified, on-site mobile laboratory and analyzed immediately. There will be minimal lag time between sample collection and analysis, ensuring that the integrity of the sample is maintained. Samples will be analyzed on a gas chromatograph equipped with capillary columns and a combination of mass spectrometer (GC/MS). This combination of columns and detectors ensures compound separation, recognition, and detection at the required levels. These detectors enable on-site analysis for VOCs using U.S. EPA Method 8260B.

TEG will provide Ceres Associates with the results of the sampling immediately upon obtaining results to help choose additional sample locations, or duplicate sample analysis. Ceres Associates will compare the results of the soil vapor sampling with Residential ESL values for assessing potential human health risk.

5.0 Report

Ceres Associates will prepare a report detailing the activities and results of the implementation of this work plan. The report will be submitted to the ACHCSA as well as posted to the Geotracker website. Hard copies of the report will be provided to Tomorrow Development. The report will contain an explanation of the field activities, as well as the results of the activities. The report will provide conclusions concerning the collected data, and appropriate recommendations. Appendices will include suitable maps and photographs, as well as a copy of the report from the analytical laboratory.

The project will be supervised by a California licensed geologist (PG) who will also review and sign the final report.



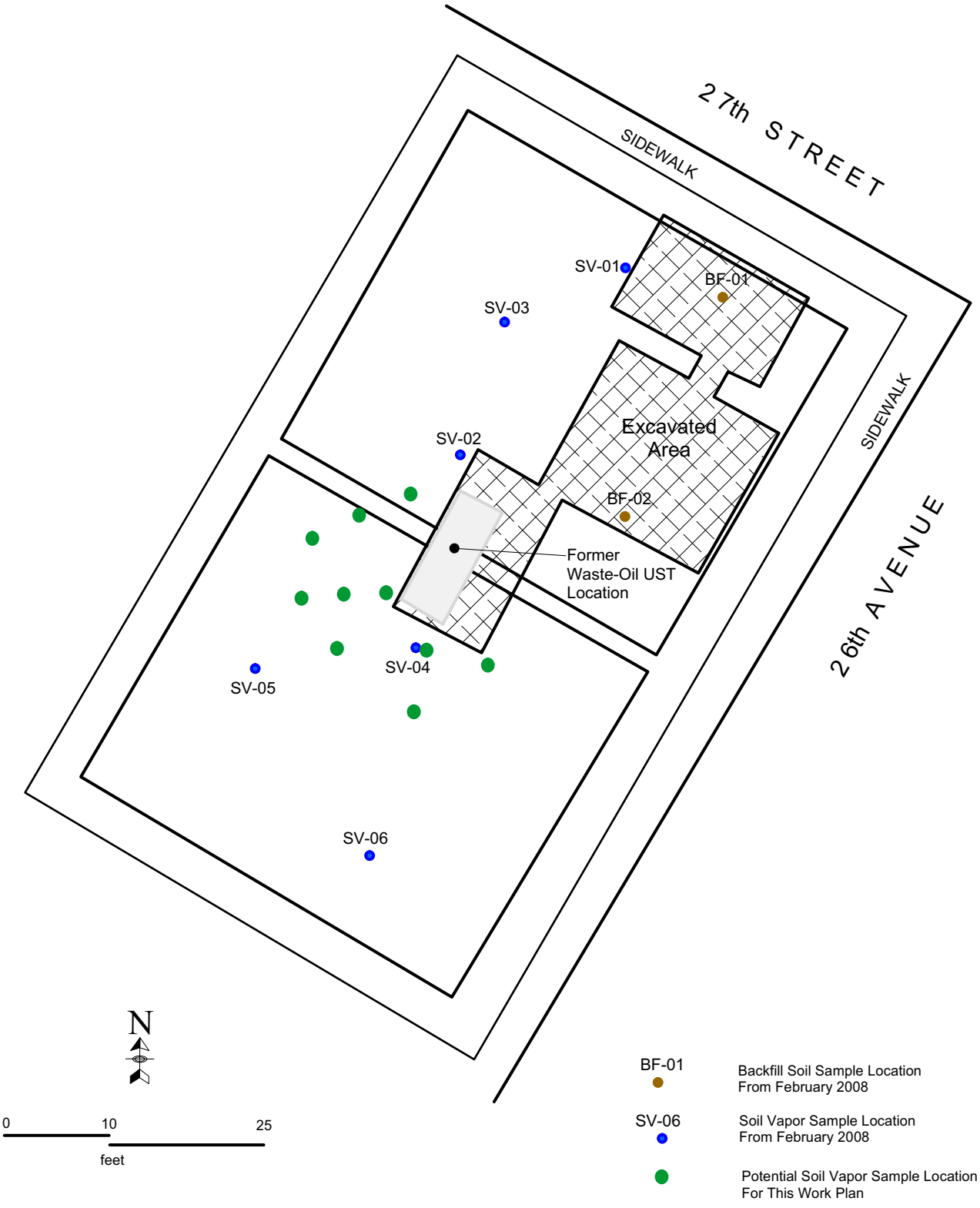
ceres ASSOCIATES

2547 E. 27th Street
Oakland, California

PROPERTY LOCATION MAP

FIGURE 1

Project CA1264-10 September 4, 2009



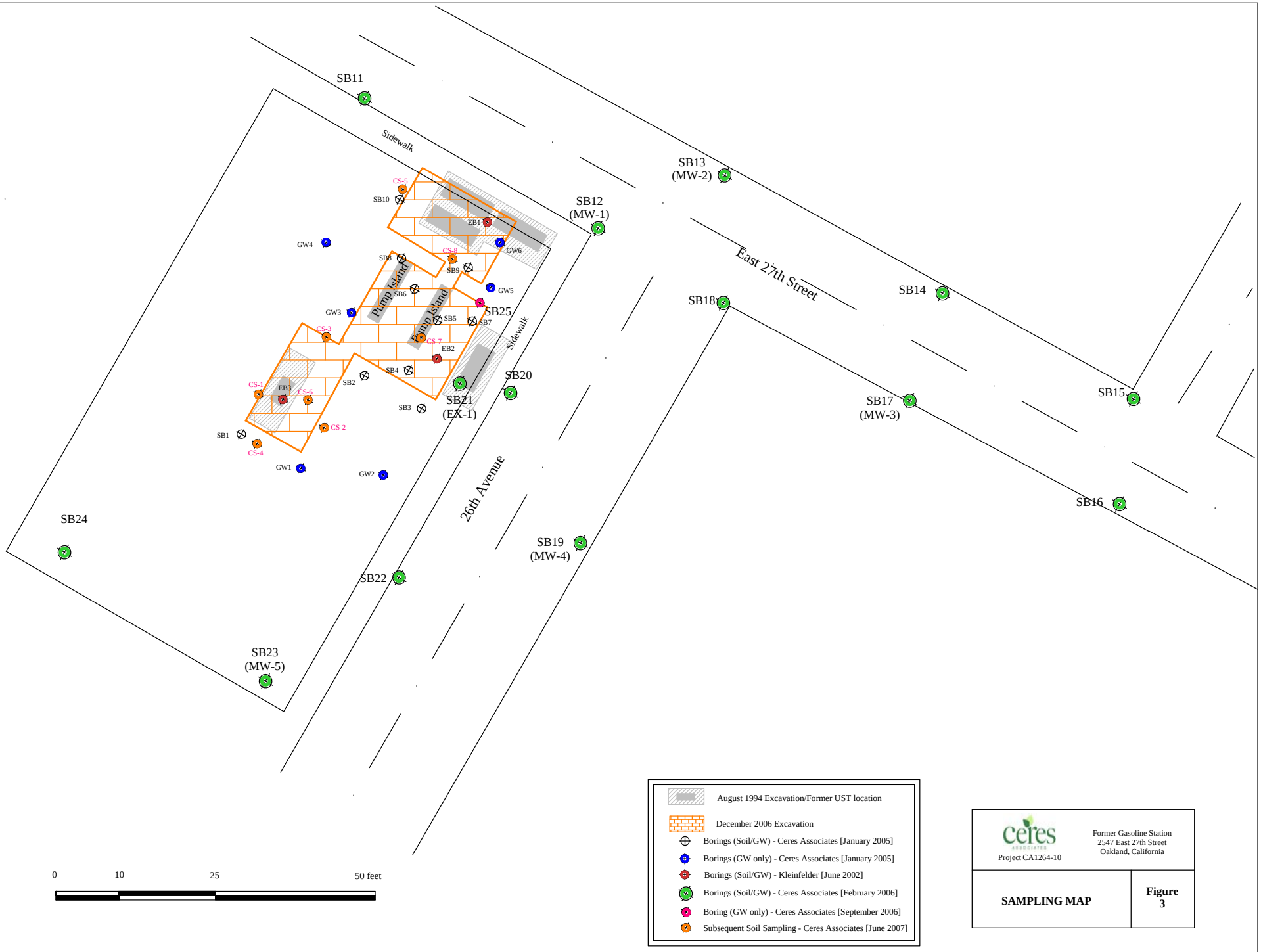
ceres ASSOCIATES

2547 East 27th Street
Oakland, California

SOIL VAPOR SAMPLE LOCATION MAP

FIGURE 2

CA1264-10 September 4, 2009



ceres ASSOCIATES

Project CA1264-10

Former Gasoline Station
2547 East 27th Street
Oakland, California

SAMPLING MAP

Figure 3

Table 1: Soil Sampling During UST Removal - August 1994

Site: 2547 East 27th Street, Oakland, California
Sampling Dates: August 30 and 31, 1994

		Soil Sample Results						
		TPHg	**TPHd**	**Benzene**	**Toluene**	**Ethylbenzene**	**Xylenes**	**Oil & Grease**
ESL (Table A-1): Residential Site, shallow soils, where Groundwater IS a current or potential source of drinking water		*100*	*100*	*0.044*	*2.9*	*3.3*	*2.3*	*500*
Sample	**Sample Location***	*concentrations are reported in milligrams per kilogram, mg/Kg*						
1	Fill end of UST-A	390		0.17	0.35	0.63	0.76	
2	Between UST-A and UST-B	5.4		0.03	0.01	0.03	0.02	
3	Fill end of UST-B	930		2.2	2.2	2.7	3.3	
4	Fill end of UST-C	0.2	NA	ND<0.005	ND<0.005	ND<0.005	ND<0.005	NA
5	Fill end of UST-D	ND<0.2		ND<0.005	ND<0.005	ND<0.005	ND<0.005	
6	Beneath South Pump Island	1		ND<0.1	ND<0.1	ND<0.1	ND<0.1	
7	Beneath North Pump Island	110		ND<0.005	ND<0.005	ND<0.005	ND<0.005	
8	Fill end of UST-E	1.1	ND<10	ND<0.005	ND<0.005	ND<0.005	ND<0.005	170
STKP-East	Stockpiled soil	750	NA	0.36	0.66	1.4	1.8	NA
STKP-West	Stockpiled soil	860		ND<0.005	0.72	1.9	2.1	

Abbreviations and Notes

TPHg	total petroleum hydrocarbons as gasoline using US EPA method 8015C
TPHd	total petroleum hydrocarbons as diesel using US EPA method 8015C
*	Sample locations provided by UST Removal report, dated September 1994, by Aqua Science Engineers
ESL	Environmental Screening Limit, published by San Francisco Bay Regional Water Quality Control Board (Feb. 2005)
ND	not detected below the method reporting limit
ND < X	not detected below an increased method reporting limit (see lab sheets for further details)
NA	not analyzed

Table 2: Kleinfelder Soil and Groundwater Sampling - June 2002

Site: 2547 East 27th Street, Oakland, California
Sampling Dates: June 19, 2002

Soil Sample Results

	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Lead
ESL (Table A-1): Residential Site, shallow soils, where Groundwater IS a current or potential source of drinking water	*100*	*100*	*500*	*0.044*	*2.9*	*3.3*	*2.3*	*0.023*	*150*
Boring	*concentrations reported as milligrams per kilogram, mg/Kg*								
EB-1 @ 4.5 ft bgs	1200	650	14	ND<0.5	0.62	1.6	3.3	ND<5.0	24
EB-2 @ 5.5 ft bgs	1800	1500	ND<500	ND<1	ND<1	3.1	4.9	ND<10	4.4
EB-3 @ 4 ft bgs	ND	ND	ND	ND	0.0054	ND	ND	ND	3.8

Groundwater Sample Results

	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Lead
ESL (Table F-1a): Groundwater IS a current or potential source of drinking water	*100*	*100*	*100*	*1*	*40*	*30*	*20*	*5*	*2.5*
ESL (Table E-1a): Potential Vapor Intrusion; High Permeability Soils, Residential Use	*use soil gas*	*use soil gas*	*use soil gas*	*540*	*380,000*	*170,000*	*160,000*	*24,000*	*NE*
Boring	*concentrations reported as micrograms per liter, µg/L*								
EB-1	ND	56	ND	ND	ND	ND	ND	ND	ND
EB-2	82	360	310	0.97	1.3	ND	1.3	ND	ND
EB-3	ND	270	540	ND	ND	ND	ND	ND	ND

Abbreviations and Notes

TPHg	total petroleum hydrocarbons as gasoline using US EPA method 8015C
TPHd	total petroleum hydrocarbons as diesel using US EPA method 8015C
TPHmo	total petroleum hydrocarbons as motor oil using US EPA method 8015C
MTBE	methyl tertiary butyl ether using US EPA method 8260B and/or 8021B
ESL	Environmental Screening Limit, published by San Francisco Bay Regional Water Quality Control Board (Feb. 2005)
NA	not analyzed
ND	not detected below the method reporting limit
ND < X	not detected below an increased method reporting limit (see lab sheets for further details)
NE	no established value

Table 3: Ceres Associates Soil and Groundwater Sampling - January 2005

Site: 2547 East 27th Street, Oakland, California
Sampling Dates: January 7, 2005

Soil Sample Results

	TPHg	TPHd	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
ESL (Table A-1): Residential Site, shallow soils, where Groundwater IS a current or potential source of drinking water	*100*	*100*	*0.044*	*2.9*	*3.3*	*2.3*	*0.023*
Sample	*concentrations reported as milligrams per kilogram, mg/Kg*						
SB1-5	ND	ND	ND	ND	ND	ND	ND
SB1-10	ND	ND	ND	ND	ND	ND	ND
SB2-5	ND	ND	ND	ND	ND	ND	ND
SB2-10	ND	ND	ND	ND	ND	ND	ND
SB3-5	1.5	ND	ND	ND	ND	ND	ND
SB3-10	3.8	2.3	ND	ND	ND	ND	ND
SB4-5	ND	ND	ND	ND	ND	ND	ND
SB4-8	32	10	ND	ND	0.034	0.011	ND
SB5-5	ND	ND	ND	ND	ND	ND	ND
SB5-10	61	46	0.007	ND	0.045	0.027	ND
SB6-5	ND	ND	ND	ND	ND	ND	ND
SB6-10	41	35	0.024	ND	0.031	ND	ND<0.10
SB7-5	ND	ND	ND	ND	ND	ND	ND
SB7-10	2.3	1.5	ND	ND	ND	ND	ND
SB8-5	ND	ND	ND	ND	ND	ND	ND
SB8-10	ND	ND	ND	ND	ND	ND	ND
SB9-5	32	52	ND	ND	0.017	0.013	ND
SB9-10	1.5	6.6	ND	ND	ND	ND	ND
SB10-5	ND	ND	ND	ND	ND	ND	ND
SB10-10	ND	ND	ND	ND	ND	ND	ND

Groundwater Sample Results

	TPHg	TPHd	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
ESL (Table F-1a): Groundwater IS a current or potential source of drinking water	*100*	*100*	*1*	*40*	*30*	*20*	*5*
ESL (Table E-1a): Potential Vapor Intrusion; High Permeability Soils, Residential Use	*use soil gas*	*use soil gas*	*540*	*380,000*	*170,000*	*160,000*	*24,000*
Sample	*concentrations reported as micrograms per liter, µg/L*						
SB1 GW	ND	ND	1.3	1.5	ND	0.69	ND
SB2 GW	ND	ND	ND	ND	ND	ND	ND
SB3 GW	11,000	42,000	ND<5.0	ND<5.0	8.2	ND<5.0	ND<50
SB4 GW	4,600	24,000	ND<2.5	ND<2.5	4.1	3.8	ND<25
SB5 GW	6,000	12,000	6.8	ND<2.5	4.2	5.8	ND<25
SB6 GW	35,000	560,000	83	ND<10	34	20	ND<100
SB7 GW	21,000	250,000	21	ND<10	19	ND<10	ND<100
SB8 GW	1,000	3,900	ND	ND	ND	1.1	ND
SB9 GW	90,000	750,000	140	ND<50	77	ND<50	ND<500
SB10 GW	600	1,300	ND	ND	ND	0.7	ND
GW1	1,600	2,500	ND	ND	0.95	0.81	ND
GW2	830	620	ND	ND	0.72	ND	ND
GW3	ND	NA	1	0.51	ND	ND	ND
GW4	ND	ND	0.66	ND	ND	ND	ND
GW5	1,900	2,300	4.3	ND	1.7	1.3	ND
GW6	3,900	7,600	1.2	ND	2.3	2.6	ND

Abbreviations and Notes

TPHg	total petroleum hydrocarbons as gasoline using US EPA method 8015C
TPHd	total petroleum hydrocarbons as diesel using US EPA method 8015C
MTBE	methyl tertiary butyl ether using US EPA method 8021B
ESL	Environmental Screening Limit, published by San Francisco Bay Regional Water Quality Control Board (Feb. 2005)
NA	not analyzed
ND	not detected below the method reporting limit
ND < X	not detected below an increased method reporting limit (see lab sheets for further details)

Table 4: Ceres Associates Soil and Groundwater Sampling - February 2006

Site: 2547 East 27th Street, Oakland, California
Sampling Dates: February 16 and 17, 2006

Soil Sample Results

	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	EDB	1,2-DCA	Lead
ESL (Table A-1): Residential Site, shallow soils, where Groundwater IS a current or potential source of drinking water	*100*	*100*	*500*	*0.044*	*2.9*	*3.3*	*2.3*	*0.00033*	*0.0045*	*150*
Sample	*concentrations reported in milligrams per kilogram, mg/Kg*									
SB11-06	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.6
SB11-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.1
SB11-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.9
SB12-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.8
SB12-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB12-14	250	28	ND	ND<0.025	ND<0.025	ND<0.025	ND<0.025	ND<0.025	ND<0.025	6.2
SB13-04	ND	1.1	ND	ND	ND	ND	ND	ND	ND	7.1
SB13-06	ND	1.3	5.1	ND	ND	ND	ND	ND	ND	6.3
SB13-08	ND	4.2	16	ND	ND	ND	ND	ND	ND	16
SB14-06	ND	1.2	ND	ND	ND	ND	ND	ND	ND	10
SB14-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
SB14-14	ND	2.1	ND	ND	ND	ND	0.0075	ND	ND	9.1
SB15-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.9
SB15-12	ND	3.1	17	ND	ND	ND	ND	ND	ND	7.5
SB15-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	7
SB16-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
SB16-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.7
SB16-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.8
SB17-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.2
SB17-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.8
SB17-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.9
SB18-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	14
SB18-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	7.5
SB18-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB19-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.6
SB19-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.6
SB19-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	10
SB20-02	ND	1.1	ND	ND	ND	ND	ND	ND	ND	12
SB20-08	3.6	14	ND	ND	ND	ND	ND	ND	ND	7
SB20-12	5.1	12	38	ND	ND	ND	ND	ND	ND	ND
SB20-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	11
SB21-02	ND	1.4	ND	ND	ND	ND	ND	ND	ND	51
SB21-05	ND	ND	ND	ND	ND	ND	ND	ND	ND	16
SB21-08	ND	1.4	ND	ND	ND	ND	ND	ND	ND	5.9
SB21-10	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.5
SB21-12	18	490	ND	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<0.10	ND<0.10	5.5
SB21-14	ND	2.1	ND	ND	ND	ND	ND	ND	ND	12
SB22-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.6
SB22-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.2

SB22-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB23-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB23-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	17
SB23-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	8.1
SB24-08	ND	ND	ND	ND	ND	ND	ND	ND	ND	9.1
SB24-12	ND	ND	ND	ND	ND	ND	ND	ND	ND	5.1
SB24-14	ND	ND	ND	ND	ND	ND	ND	ND	ND	6.1

Groundwater Sample Results

	TPHg	**TPHd**	**TPHmo**	**Benzene**	**Toluene**	**Ethylbenzene**	**Xylenes**	**EDB**	**1,2-DCA**	**Lead**
ESL (Table F-1a): Groundwater IS a current or potential source of drinking water	*100*	*100*	*100*	*1*	*40*	*30*	*20*	*0.05*	*0.5*	*2.5*
ESL (Table E-1a): Potential Vapor Intrusion; High Permeability Soils, Residential Use	*use soil gas*	*use soil gas*	*use soil gas*	*540*	*380,000*	*170,000*	*160,000*	*150*	*200*	*NE*
Sample	*concentrations reported in micrograms per liter, µg/L*									
SB11-GW	ND	150	730	ND	ND	ND	ND	ND	ND	29
SB12-GW	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
SB13-GW	ND	1300	7900	ND	ND	ND	ND	ND	ND	ND
SB14-GW	74	190	400	ND	ND	ND	1.7	ND	ND	19
SB15-GW	ND	790	4900	ND	ND	ND	ND	ND	ND	19
SB16-GW	ND	ND	310	ND	ND	ND	ND	ND	ND	ND
SB17-GW	ND	ND	ND	ND	1.4	ND	0.51	ND	ND	2.4
SB18-GW	ND	470	2300	ND	ND	ND	ND	ND	ND	17
SB19-GW	51	89	ND	ND	ND	ND	ND	ND	ND	2.5
SB20-GW	ND	280	2200	ND	ND	ND	ND	ND	ND	18
SB21-GW	1500	910	ND	ND	ND	1.3	1.8	ND	ND	16
SB22-GW	ND	3600	28000	ND	ND	ND	ND	ND	ND	19
SB23-GW	ND	ND	ND	ND	ND	ND	ND	ND	ND	13
SB24-GW	ND	ND	ND	ND	ND	ND	ND	ND	ND	10

Abbreviations and Notes

TPHg	total petroleum hydrocarbons as gasoline using US EPA method 8015C
TPHd	total petroleum hydrocarbons as diesel using US EPA method 8015C
TPHmo	total petroleum hydrocarbons as motor oil using US EPA method 8015C
MTBE	methyl tertiary butyl ether using US EPA method 8260B and/or 8021B
	TPH hydraulic oil was reported as the same as TPHmo, therefore only TPHmo is reported here
ESL	Environmental Screening Limit, published by San Francisco Bay Regional Water Quality Control Board (Feb. 2005)
NA	not analyzed
ND	not detected below the method reporting limit
ND < X	not detected below an increased method reporting limit (see lab sheets for further details)
NE	not established

Table 5: Ceres Associates Deeper Groundwater Sampling - September 2006

Site: 2547 East 27th Street, Oakland, California
Sampling Dates: September 20, 2006

	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
ESL (Table F-1a): Groundwater IS a current or potential source of drinking water	*100*	*100*	*100*	*1*	*40*	*30*	*20*	*5*
ESL (Table E-1a): Potential Vapor Intrusion; High Permeability Soils, Residential Use	*use soil gas*	*use soil gas*	*use soil gas*	*540*	*380,000*	*170,000*	*160,000*	*24,000*
Target Depth	*Concentrations reported as micrograms per liter, µg/L*							
13 ft bgs	ND	ND	ND	ND	ND	ND	ND	ND
21 ft bgs	ND	ND	ND	0.84	ND	ND	ND	ND

Abbreviations and Notes

TPHg	total petroleum hydrocarbons as gasoline using US EPA method 8015C
TPHd	total petroleum hydrocarbons as diesel using US EPA method 8015C
TPHmo	total petroleum hydrocarbons as motor oil using US EPA method 8015C
MTBE	methyl tertiary butyl ether using US EPA method 8260B and/or 8021B
ESL	Environmental Screening Limit, published by San Francisco Bay Regional Water Quality Control Board (Feb. 2005)
ND	not detected below the method reporting limit

Table 6: Ceres Associates Quarterly Groundwater Monitoring - August 2006 to April 2007

Site: 2547 East 27th Street, Oakland, California
Sampling Dates: Multiple (see below)

Well	*(TOC)*	Sample Date	Depth to Groundwater (ft)	Groundwater Elevation (ft amsl)	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
					Concentrations reported as micrograms per Liter (µg/L)							
ESL (Table F-1a): Groundwater IS a current or potential source of drinking water					100	100	100	1	40	30	20	5
ESL (Table E-1a): Potential Vapor Intrusion; High Permeability Soils, Residential Use					use soil gas	use soil gas	use soil gas	540	380,000	170,000	160,000	24,000
MW-1		8/24/2006	4.63	104.12	ND	ND	NA	ND	ND	ND	ND	ND
	108.75	11/17/2006	4.50	104.25	ND	ND	ND	ND	ND	ND	ND	ND
		1/30/2007	4.14	104.61	ND	78	280	ND	ND	ND	ND	ND
		4/30/2007	4.04	104.71	ND	ND	ND	ND	ND	ND	ND	ND
MW-2		8/24/2006	4.26	105.29	ND	78	NA	ND	ND	0.65	1.5	ND
	109.55	11/17/2006	4.16	105.39	ND	ND	ND	ND	ND	0.8	1.8	ND
		1/30/2007	4.29	105.26	ND	ND	ND	ND	ND	1	2	ND
		4/30/2007	4.53	105.02	ND	60	ND	ND	ND	ND	ND	ND
MW-3		8/24/2006	4.40	104.00	ND	ND	NA	ND	ND	ND	ND	ND
	108.4	11/17/2006	3.92	104.48	ND	ND	ND	ND	ND	ND	ND	ND
		1/30/2007	4.30	104.10	ND	ND	ND	ND	ND	ND	ND	ND
		4/30/2007	4.22	104.18	ND	ND	ND	ND	ND	ND	ND	ND
MW-4		8/24/2006	4.87	103.02	ND	ND	NA	ND	ND	ND	ND	ND
	107.89	11/17/2006	3.75	104.14	ND	ND	ND	ND	ND	ND	ND	ND
		1/30/2007	3.82	104.07	ND	ND	ND	ND	ND	ND	ND	ND
		4/30/2007	4.50	103.39	ND	ND	ND	ND	ND	ND	ND	ND
MW-5		8/24/2006	5.00	103.65	ND	ND	NA	ND	ND	ND	ND	ND
	108.65	11/17/2006	3.30	105.35	ND	ND	ND	ND	ND	ND	ND	ND
		1/30/2007	3.22	105.43	ND	ND	ND	ND	ND	ND	ND	ND
		4/30/2007	3.20	105.45	ND	ND	ND	ND	ND	ND	ND	ND
EX-1		8/24/2006	4.84	104.62	460	220	NA	ND	ND	ND	ND	ND
	109.46	11/17/2006	4.38	105.08	270	130	ND	ND	ND	ND	1.9	ND
		1/30/2007	4.00	105.46	2,200	800	270	1	ND	3.9	3.2	ND<10
		4/30/2007	4.20	105.26	1,000	740	ND	ND	ND	1.7	2.4	ND

Abbreviations and Notes

µg/L	micrograms per Liter
TOC	elevation of well at the top of the casing, in feet above mean sea level
TPHg	total petroleum hydrocarbons as gasoline using US EPA method 8015C
TPHd	total petroleum hydrocarbons as diesel using US EPA method 8015C
TPHmo	total petroleum hydrocarbons as motor oil using US EPA method 8015C
MTBE	methyl tertiary butyl ether using US EPA method 8260B and/or 8021B
*	benzene, toluene, ethylbenzene, and xylenes were analyzed by US EPA method 8021B and 8260B (only the highest concentration was reported here)
ESL	Environmental Screening Limit, published by San Francisco Bay Regional Water Quality Control Board (Feb. 2005)
NA	not analyzed
ND	not detected below the method reporting limit
ND < X	not detected below an increased method reporting limit (see lab sheets for further details)
NE	not yet an established value

Table 7: Ceres Associates Initial PID readings during Excavation - December 2006

Site: 2547 East 27th Street, Oakland, California
Sampling Dates: December 1 and 2, 2006

PID readings taken of sidewalls and floor during excavation process

Excavation / PID sample location	2 ft bgs	4 ft bgs	6 ft bgs	8 ft bgs	9.5 ft bgs
	(reported as parts per million, ppm)				
I-bottom	0	0	227	114	0
I-east	0	0	0	0	0
I-west	0	0	0	0	0
I-north	0	0	0	0	0
I-south	0	0	0	0	0
II-bottom	0	0	0	0	0
II-east	0	0	0	0	0
II-west	0	0	0	0	0
II-north	0	0	0	0	0
II-south	0	0	0	0	0
III-bottom	0	0	0	0	0
III-east	0	0	0	0	0
III-west	0	0	0	0	0
III-north	0	0	0	0	0
III-south	0	0	0	0	0

Sample	PID Reading	Depth of Sample (ft bgs)
I-9-W	0	9
I-9-E	0	9
I-9-N	0	9
I-9-S	0	9
II-9-W	0	9
II-9-E	0	9
II-9-N	0	9
II-9-S	0	9
III-9-W	0	9
III-8-E	0	9
III-9-N	0	9
III-9-S	0	9

Table 8: Ceres Associates Initial Confirmation Soil Sampling - December 2006

Site: 2547 East 27th Street, Oakland, California
Sampling Dates: December 1 and 2, 2006

Sample	TPHg	TPHd	TPHmo/ho	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes
	Concentrations reported in milligrams per kilogram, mg/Kg							
ESL (Table A-1): Residential Site, shallow soils, where Groundwater IS a current or potential source of drinking water	*100*	*100*	*500*	*0.023*	*0.044*	*2.9*	*3.3*	*2.3*
I-9-W	450	81						ND
I-9-E	1.7	ND						ND
I-9-N	600	420						1.1
I-9-S	7	1.2						0.016
II-9-W*	400	180						1
II-9-E			ND	ND	ND	ND	ND	
II-9-N								
II-9-S								
III-9-W	ND	ND						ND
III-8-E								
III-9-N								
III-9-S								

Key

ESL	Environmental Screening Limit, published by San Francisco Bay Regional Water Quality Control Board (Feb. 2005)
ND	Not detected above the method reporting limit
TPHg	Total petroleum hydrocarbons as gasoline
TPHd	Total petroleum hydrocarbons as diesel
TPHmo	Total petroleum hydrocarbons as motor oil

Table 9: Ceres Associates Additional Soil Sampling PID readings - June 2005

Site: 2547 East 27th Street, Oakland, California
Sampling Dates: June 25, 2007

Sample	PID Reading (ppm)*
CS1-2.5	4
CS1-5	1
CS1-7.5	1
CS2-2.5	3
CS2-5	1
CS2-7.5	2
CS2-10	1
CS3-2.5	2
CS3-5	3
CS3-7.5	1
CS3-10	3
CS4-2.5	9
CS4-5	1
CS4-7.5	1
CS4-10	1
CS5-2.5	7
CS5-5	1
CS5-7.5	2
CS5-10	1
CS6-10	1
CS7-10	1
CS8-10	1

*Note: Background PID readings during sampling were between 1.0 and 3

Table 10: Ceres Associates Additional Soil Sampling - June 2007

Site: 2547 East 27th Street, Oakland, California
Sampling Dates: June 25, 2007

Sample	TPHg	TPHd	TPHmo	Benzene	Toluene	Ethylbenzene	Xylenes	Chromium	Lead	Nickel	Zinc
	Concentrations reported in milligrams per kilogram, mg/Kg										
ESL (Table A-1): Residential Site, shallow soils, where Groundwater IS a current or potential source of drinking water	*100*	*100*	*500*	*0.044*	*2.9*	*3.3*	*2.3*	*58*	*150*	*150*	*600*
CS1-5								52	ND	40	42
CS1-10								31	ND	22	18
CS2-5			ND					33	ND	25	18
CS2-10								46	6.9	55	38
CS3-5								30	ND	19	16
CS3-10								49	9.6	72	53
CS4-5	ND	ND	5.9	ND	ND	ND	ND	40	6.8	26	21
CS4-10								38	5.6	33	22
CS5-5								28	ND	19	13
CS5-10			ND					51	ND	35	30
CS6-10*								36	ND	32	26
CS7-10									NA		
CS8-10											

Analytes that were reported as ND, but not listed here: PCBs, PNAs, PAHs, 1,4 Dioxane, Cadmium, and Total Oil and Grease

* Sample 6-10 was analyzed one day outside of the hold time for volatile organic compounds (BTEX was within time frame)

Key

ESL	Environmental Screening Limit, published by San Francisco Bay Regional Water Quality Control Board (Feb. 2005)
ND	Not detected above the method reporting limit
NA	Not analyzed
TPHg	Total petroleum hydrocarbons as gasoline
TPHd	Total petroleum hydrocarbons as diesel
TPHmo	Total petroleum hydrocarbons as motor oil

Table 11 – Backfill Soil Sampling and Soil Vapor Sampling, January 2008

Backfill Soil Sampling

Boring	**Cadmium**	**Chromium***	**Lead**	**Nickel**	**Zinc**	**pH**	**Asbestos**
	Concentrations reported as milligrams per kilogram (mg/Kg)					-	*%*
ESL	*1.7*	*750*	*200*	*150*	*600*	-	-
BF-01	ND	18.7	8.23	18.6	28.5	8.85	ND
BF-02	ND	15.2	12.3	16.1	31.3	9.17	ND

Soil Vapor Sampling

Boring	**Trichloroethene**	**TPH gasoline**
	Concentrations reported in micrograms per liter (µg/L)	
ESL	*1.2*	*10*
SV-01	ND	ND
SV-02	ND	**8.4**
SV-03	ND	ND
SV-04	**5.7**	ND
SV-05	ND	ND
SV-06	ND	ND

TABLE 12

Quarterly Groundwater Monitoring Data and Results

Site: 2547 East 27th Street, Oakland, California

Well (TOC)	Sample Date	Depth to Groundwater (ft)	Groundwater Elevation (ft amsl)	TPHg	TPHd	TPHmo	THPk	Benzene*	Toluene*	Ethylbenzene*	Xylenes*	MTBE
				Concentrations reported as micrograms per Liter (µg/L)								
ESL (Table F-1a): Groundwater IS a current or potential source of drinking water				100	100	100	100	1	40	30	20	5
ESL (Table E-1a): Potential Vapor Intrusion; High Permeability Soils, Residential Use				use soil gas	use soil gas	use soil gas	use soil gas	540	380,000	170,000	160,000	24,000
MW-1	8/24/06	4.63	104.12	ND	ND	NA	NA	ND	ND	ND	ND	ND
108.75	11/17/06	4.50	104.25	ND	ND	ND	NA	ND	ND	ND	ND	ND
	1/30/07	4.14	104.61	ND	78	280	NA	ND	ND	ND	ND	ND
	4/30/07	4.04	104.71	ND	ND	ND	NA	ND	ND	ND	ND	ND
	7/24/07	4.16	104.59	ND	ND	ND	NA	ND	0.5	ND	ND	ND
	10/1/07	4.19	104.56	ND	ND	ND	NA	ND	ND	ND	ND	ND
	11/25/08	4.10	104.65	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-2	8/24/06	4.26	105.29	ND	78	NA	NA	ND	ND	0.65	1.5	ND
109.55	11/17/06	4.16	105.39	ND	ND	ND	NA	ND	ND	0.8	1.8	ND
	1/30/07	4.29	105.26	ND	ND	ND	NA	ND	ND	1	2	ND
	4/30/07	4.53	105.02	ND	60	ND	NA	ND	ND	ND	ND	ND
	7/24/07	4.50	105.05	NS	NS	NS	NA	NS	NS	NS	NS	NS
	10/1/07	4.37	105.18	ND	ND	ND	NA	ND	ND	ND	ND	ND
	11/25/08	4.50	105.05	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-3	8/24/06	4.40	104.00	ND	ND	NA	NA	ND	ND	ND	ND	ND
108.4	11/17/06	3.92	104.48	ND	ND	ND	NA	ND	ND	ND	ND	ND
	1/30/07	4.30	104.10	ND	ND	ND	NA	ND	ND	ND	ND	ND
	4/30/07	4.22	104.18	ND	ND	ND	NA	ND	ND	ND	ND	ND
	7/24/07	4.40	104.00	ND	ND	ND	NA	ND	0.67	ND	ND	ND
	10/1/07	4.50	103.90	ND	ND	ND	NA	ND	ND	ND	ND	ND
	11/25/08	4.25	104.15	ND	ND	ND	ND	ND	ND	ND	ND	ND
MW-4	8/24/06	4.87	103.02	ND	ND	NA	NA	ND	ND	ND	ND	ND
107.89	11/17/06	3.75	104.14	ND	ND	ND	NA	ND	ND	ND	ND	ND
	1/30/07	3.82	104.07	ND	ND	ND	NA	ND	ND	ND	ND	ND
	4/30/07	4.50	103.39	ND	ND	ND	NA	ND	ND	ND	ND	ND
	7/24/07	4.27	103.62	ND	ND	ND	NA	ND	0.66	ND	ND	ND
	10/1/07	3.92	103.97	ND	ND	ND	NA	ND	ND	ND	ND	ND
	11/25/08	4.31	103.58	ND	ND	ND	58	ND	ND	ND	ND	ND
MW-5	8/24/06	5.00	103.65	ND	ND	NA	NA	ND	ND	ND	ND	ND
108.65	11/17/06	3.30	105.35	ND	ND	ND	NA	ND	ND	ND	ND	ND
	1/30/07	3.22	105.43	ND	ND	ND	NA	ND	ND	ND	ND	ND
	4/30/07	3.20	105.45	ND	ND	ND	NA	ND	ND	ND	ND	ND
	7/24/07	3.37	105.28	ND	ND	ND	NA	ND	ND	ND	ND	ND
	10/1/07	3.27	105.38	ND	ND	ND	NA	ND	ND	ND	ND	ND
	11/25/08	3.17	105.48	ND	ND	ND	ND	ND	ND	ND	ND	ND
EX-1	8/24/06	4.84	104.62	460	220	NA	NA	ND	ND	ND	ND	ND
109.46	11/17/06	4.38	105.08	270	130	ND	NA	ND	ND	ND	1.9	ND
	1/30/07	4.00	105.46	2,200	800	270	NA	1	ND	3.9	3.2	ND<10
	4/30/07	4.20	105.26	1,000	740	ND	NA	ND	ND	1.7	2.4	ND
	7/24/07	4.41	105.05	210	170	ND	NA	ND	ND	ND	ND	ND
	10/1/07	4.69	104.77	290	230	ND	NA	ND	ND	ND	0.7	ND
	11/25/08	4.63	104.83	220	170	ND	140	ND	ND	ND	ND	ND

Abbreviations and Notes

µg/L	micrograms per Liter
TOC	elevation of well at the top of the casing, in feet above mean sea level
TPHg	total petroleum hydrocarbons as gasoline using US EPA method 8015C
TPHd	total petroleum hydrocarbons as diesel using US EPA method 8015C
TPHmo	total petroleum hydrocarbons as motor oil using US EPA method 8015C
TPHK	total petroleum hydrocarbons as kerosene using US EPA method 8015C
MTBE	methyl tertiary butyl ether using US EPA method 8260B and/or 8021B
*	benzene, toluene, ethylbenzene, and xylenes were analyzed by US EPA method 8021B and 8260B (only the highest concentration was reported here)
ESL	Environmental Screening Limit, published by San Francisco Bay Regional Water Quality Control Board
NA	not analyzed
ND	not detected below the method reporting limit
ND < X	not detected below an increased method reporting limit (see lab sheets for further details)
NE	not yet an established value
NS	not sampled