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424 First Street, Benicia, CA 94510
(707) 748-3170 / fax (707) 748-3171

July 19, 2006

Jerry Wickham
Alameda County Environmental Health Department

RE: 2547 East 27th Street, Oakland, California (Property)

Dear Mr. Wickham:

Enclosed is the Interim Corrective Action Plan (revised) that was requested by your agency. The revised Soil and Groundwater Sampling report has also been uploaded to the ftp system as requested.

The necessary changes to reports has been made, and items previously missing from the reports have been scanned to digital formats and should now meet your requirements.

We have scheduled the first quarterly groundwater monitoring event for the second week of August 2006, which will allow us to proceed with preparation of the quarterly monitoring report which you have indicated is due November 2006. We will then proceed with regular quarterly monitoring events from there forward and provide timely reports for your review. We request permission to conduct these events using low-flow, low-stress purging and sampling practices.

Please contact me at ryanmeyer@ceresassociates.com with your response to our request to conduct quarterly groundwater monitoring and the proposed timeline. Thank you for your help.

Sincerely,
Ceres Associates

A handwritten signature in black ink that reads 'Ryan Meyer'. The signature is written in a cursive, flowing style.

Ryan Meyer
Project Manager

424 First Street, Benicia, CA 94510
(707) 748-3170 / fax (707) 748-3171

June 28, 2006
Project: CA1264-3

Jerry Wickham
Alameda County Environmental Health Department
1131 Harbor Bay Parkway
Alameda, California

Interim Corrective Action Plan (Revised)

Former Gas Station
2547 East 27th Street
Oakland, California (Property)

Dear Mr. Wickham:

Ceres Associates is pleased to provide this Interim Corrective Action Plan (CAP) for the above referenced Property on behalf of Ted Dang of Tomorrow Development. This plan was requested by the Alameda County Environmental Health Department in an October 2005 letter to Mr. Dang.

This plan is based upon data collected as a part of past assessments conducted by Kleinfelder and Ceres Associates between 2002 and 2006.

SITE CONCEPTUAL MODEL

Developments

The Property was formerly developed with a fuel and service station between 1927 and 1994. In 1994, one 100-gallon waste oil UST and four 500-gallon gasoline USTs were removed from the Property. After the tanks were removed, the excavation pits were lined with visqueen plastic and backfilled with the excavated material. It was reported that eight soil samples were collected from below the tanks and two were collected from the stockpiled soil (from the excavation).

The Property is currently undeveloped with a chain-link fence along the perimeter. Some concrete pieces, remnants of the former foundation, were observed on the Property. The Property is located amongst single and multiple family residences.

Soil

The soils on the Property consist of generally sandy gravel fill from the surface to four (4) feet below ground surface (bgs). From four (4) to twelve (12) feet bgs the soil appears to be fat and lean silty clays. Below twelve (12) feet the soil is generally gravel and sand with some clay. Soils observed in off-site borings are generally consistent with on-site soils (*refer to Appendix for Soil Logs*).

Groundwater

Groundwater has been encountered on the Property between approximately three and fourteen (14) feet bgs. Once encountered, groundwater appears to rise to within approximately three to five feet of the ground surface. The variable groundwater elevations across the Property suggest the possibility of a perched groundwater lense.

Groundwater flow appears to be predominantly to the east. Groundwater flow gradient will be reported once the monitoring well elevations have been surveyed.

Contamination

Soil and groundwater contamination at the Property appears to have originated from historic uses of underground storage tanks for the purposes of storing motor vehicle fuel and waste oil. Underground storage tanks were present on the Property between at least 1927 and 1994. Resulting contamination appears to have migrated from the soil to the groundwater on the Property. Based upon the results of this sampling event, it is apparent that contamination has migrated off-site as well. Based on grab groundwater sample analysis, groundwater located more than 100 feet down-gradient of the Property has been impacted.

Historic Soil and Groundwater Sampling at the Property:

Kleinfelder conducted soil and groundwater sampling activities at the Property on June 19 and July 10, 2002. Kleinfelder supervised the advance of three soil borings ranging in depth from 11 to 19 feet below ground surface (bgs). Kleinfelder reportedly advanced each boring until approximately two feet below groundwater. According to the report issued by Kleinfelder, dated August 2, 2002:

“TPH-g was detected in the soil samples extracted from borings EB-1 and EB-2 at concentrations of 1,200 mg/kg and 1,800 mg/kg, respectively. TPH-d was detected in these samples, from borings EB-1 and EB-2, at concentrations of 650 mg/kg and 1,500 mg/kg, respectively. TPH-mo was detected in concentrations above laboratory reporting limits only in the sample from boring EB-1 at 14 mg/kg. Further, the laboratory described the detected TPH-g as strongly aged gasoline, and the TPH-d was described as Stoddard solvent.”

Total lead was reported as high as 24 ppm in the soil samples collected from the Property.

Groundwater samples were reported to contain concentrations of TPH-g as high as 82 micrograms per

liter ($\mu\text{g}/\text{l}$) or parts per billion (ppb); TPH-d as high as 360 ppb; motor oil as high as 540 ppb; benzene as high as 0.97 ppb; and toluene and xylenes as high as 1.3 ppb. Ethylbenzene and MTBE were not reported above their laboratory reporting limits.

On-site Contamination

Ceres Associates collected soil and groundwater samples from the Property on January 7, 2005.

Reported concentrations of contaminants from soil samples from the Property itself do not exceed regulatory criteria for further action based on Residential Environmental Screening Levels (ESLs) established by the State of California Regional Water Quality Control Board (RWQCB) or Residential Preliminary Remediation Goals (PRGs) established by the United States Environmental Protection Agency, Region IX (US EPA).

Target analytes were reported above method reporting limits in all but one groundwater sample collected from the Property. Generally, samples collected after retrieving soil samples (using the continuous sampling macro-core device) were reported as containing higher concentrations of target analytes than from those samples collected using the hydro-punch device.

Concentrations of target analytes were reported by the laboratory as high as 90,000 micrograms per liter ($\mu\text{g}/\text{l}$) or parts per billion (ppb) for TPH-g; 750,000 ppb for TPH-d; 140 ppb for benzene; 1.5 ppb for toluene; 77 ppb for ethylbenzene; and 20 ppb for xylenes. Methyl tert butyl ether (MTBE) was not reported above the method reporting limits.

Concentrations of benzene exceed the regulatory limit of 1.0 ppb as defined by the State of California Department of Health Services (CDHS) Maximum Contaminant Level (MCL). MCLs are not defined for petroleum hydrocarbons including gasoline and diesel. However, the RWQCB has established an ESL for TPH-g and TPH-d of 100 ppb. The ESL is designed to protect groundwater resources in the area.

Off-site Contamination

Ceres Associates collected on and off-site soil and groundwater samples on February 16 and 17, 2006.

Laboratory results indicated that analyte concentrations in soil samples fell below the Residential ESL of 100 ppm for TPH-g and TPH-d in all but two samples: SB12-14 at 250 ppm of TPH-g and SB21-12 at 490 ppm of TPH-d.

Although concentrations of other target analytes were reported in many samples above the laboratory detection limits, the concentrations were reported below their respective ESLs or the Residential Preliminary Remediation Goals (PRGs).

Groundwater sampling results suggest that on-site contamination has migrated off-site, east of the Property, in almost all sample points advanced by Ceres Associates.

Concentrations of TPH-g were reported as high as 1,500 parts per billion (ppb), but more generally between ND and 74 ppb. The highest concentration of TPH-g was reported in SB21, on the Property. Additional samples with concentration of TPH-g above ND include SB14, east of the Property; and, SB19, south of the Property. However, points between these sample locations were not reported above ND. It is unclear whether and how on-site TPH-g contamination has affected these off-site borings. Preferential pathways, including utility lines, soil-soil contact, or groundwater flow don't appear consistent with anticipated contamination migration. Even though a clear spatial disbursement of TPH-g is not clear, it is clear that on-site contamination of TPH-g remains above the ESL and that off-site contamination falls below the TPH-g ESL.

Concentrations of TPH-d were reported between ND and 3,600 ppb. The highest concentrations of TPH-d were reported off-site: SB22 at 3,600 ppb, immediately south of the Property and SB13 at 1,300 ppb, east of the Property. On-site contamination was reported as high as 910 ppb of TPH-d at SB21, located along the southern boundary of the Property. Samples further south and east of SB21 were also reported above ND at concentrations exceeding the ESL. In fact, approximately 2/3 of all samples were reported above the ESL for concentrations of TPH-d.

Concentrations of residual oils TPH-ro (motor oil and hydraulic oil) coincided with increased concentrations of TPH-d. Concentrations of these target analytes were, on average, higher than those concentrations reported for TPH-g or TPH-d, with a high value of 28,000 ppb of TPH-ro in SB22.

Overall, it is apparent that on-site contamination of petroleum hydrocarbons in groundwater has migrated off-site, down-gradient of the Property, in a generally easterly direction. Concentrations of petroleum hydrocarbons were reported above the ESL in groundwater samples collected as much as 100 feet down-gradient of the Property.

The relatively high concentrations of petroleum hydrocarbons was not accompanied by higher concentrations of BTEX compounds or fuel oxygenates. In fact, fuel oxygenates EDB and 1,2-DCA were reported as ND for all samples submitted to the laboratory. Concentrations of BTEX compounds fell below the Maximum Contaminant Levels (MCLs).

Generally

Contamination on the Property was historically attributable to soil contamination by petroleum hydrocarbons and associated BTEX compounds. Groundwater contamination was limited. However, during the January 2005 and January 2006 sampling events, petroleum hydrocarbon and BTEX compounds were identified above regulatory action limits in the groundwater, but generally not in the soil. This is true of both on and off-site sample points.

The Property lacks an impermeable surface layer, and given the rate of precipitation for Oakland (approximately 24.30 inches per year according to the National Oceanic and Atmospheric Administration) the rate of infiltration of contaminants from the soil to the groundwater has likely increased since the removal of the asphalt surface during demolition.

The potential migration of target analyte contaminants to deeper aquifer layers is not yet known; however, based upon the general soil profiles of sites in the City of Oakland and at the Property, it is anticipated that clay layers of varying thickness, located throughout the soil horizon, will help retard the vertical flow of contaminants.

Ceres Associates proposes to sample deeper aquifer zones for target contaminants in the near future.

RISK ASSESSMENT

Primary sources of contamination identified on the Property include historic product storage and associated piping and operations of the former gasoline service station. These primary sources have impacted soil and groundwater as evidenced by the laboratory results laid out above. However, soil contamination appears minimal and limited.

SOILS

Analyte	Max On-site (ppm)	Max Off-Site (ppm)	ESL (ppm)	SSL (ppm)
TPHg	32	3.6	100	<i>Use Soil Gas (no data)</i>
TPHd	52	14	100	<i>Use Soil Gas (no data)</i>
Benzene	0.024	ND	0.044	0.18
Toluene	ND	ND	2.9	180
Ethylbenzene	0.034	ND	3.3	4.7
Xylenes	0.013	ND	1.5	45

Concentrations are from shallow samples (4-8 feet bgs): representing borings SB4-8, SB6-5, SB9-5, and SB20-08

ESL - Residential Environmental Screening Limit, shallow soils

SSL - Soil Screening Levels for Evaluation of Potential Indoor Air Impacts, shallow soils

Soil concentrations of target analytes, both on and off-site, fall well below either the ESL or the SSLs established by the San Francisco Regional Water Quality Control Board even using the strictest of standards.

It does not appear that shallow on or off-site soil contamination constitutes elevated risks to human and ecological environments. Further, it is not anticipated that soil contamination will lead to vapor intrusion based upon the data above.

GROUNDWATER

Analyte	Max On-site (ppb)	Max Off-site (ppb)	ESL (ppb)	GSL (ppb)
TPHg	90,000	74	100	<i>Use soil gas (no data)</i>
TPHd	750,000	3,600	100	<i>Use soil gas (no data)</i>
Benzene	140	ND	1	530
Toluene	1.5	1.4	40	500,000
Ethylbenzene	77	ND	30	14,000
Xylenes	20	1.7	13	150,000

ESL - Residential Environmental Screening Limit, shallow soils

GSL - Groundwater Screening Levels for Evaluation of Potential Indoor Air Impacts, presuming high permeability soils and residential land use

Groundwater concentrations of toluene and xylenes, both on and off-site, fall below the ESLs and GSLs and are not anticipated to adversely impact environmental and/or human health.

Concentrations of benzene and ethylbenzene, on-site, exceed the ESLs; however, the reported concentrations do not exceed their respective GSLs. The Groundwater Screening Level is a threshold concentration meant to give guidance on when groundwater concentrations may lead to vapor intrusion issues. Here, both on and off-site contaminant concentrations fall below the GSLs and are therefore not thought to lead to vapor intrusion.

Concentrations of petroleum hydrocarbons as gasoline and diesel exceed the ESLs, but it is unclear whether they would lead to vapor intrusion issues because the GSLs do not estimate petroleum hydrocarbons and instead suggest that soil gas data be used. To this point, soil gas data has not been collected at the site. However, for purposes of analysis, Ceres Associates proposes to use benzene as an indicator contaminant. Utilizing such scenario, because benzene does not exceed the GSL, total petroleum hydrocarbons are also not thought to be a contributing factor to vapor intrusion either on or off-site.

Concentrations of benzene and ethylbenzene, exceed their established ESLs. However, Ceres Associates proposes to remove contaminated soils from the Property, which may reduce groundwater concentrations. It will be useful to obtain additional groundwater concentrations from on and off-site groundwater monitoring wells to further assess potential groundwater contamination issues.

DISCUSSION

Soil and groundwater data collected by Ceres Associates over two sampling events are inconsistent. Although initial groundwater sampling by Ceres Associates indicated relatively elevated concentrations of benzene, more recent sampling by Ceres Associates did not indicate elevated benzene concentrations.

However, based upon historically reported contaminated soil used as backfill in the former tank pits and the presence of benzene and petroleum hydrocarbons in nearby monitoring wells, Ceres Associates recommends that backfilled contaminated soil be removed from the Property and the excavation pits then backfilled with clean imported fill as discussed below.

Ceres Associates proposes that one soil boring be extended to approximately 40 feet below ground surface to assess deeper groundwater zones. The scope of assessment is meant to meet the Alameda County Environmental Health Department requirements and will include assessment of soils as they relate to aquifer zones.

After contaminated soils have been removed from the Property and deeper groundwater analyses have been received, it may be necessary to conduct further remedial work.

Ceres Associates proposes to conduct quarterly groundwater monitoring of the on and off-site wells installed by Ceres Associates. Data obtained during these events will help to further assess potential groundwater contamination migration as well as operate as an indicator for the effect of contaminated soil removal from the Property on the groundwater

REMEDIAL ACTIVITIES RECOMMENDED

Extensive off-site benzene contamination was not observed by Ceres Associates during the most recent sampling event. Historic concentrations of benzene on the Property coupled with high concentrations of petroleum hydrocarbons need to be reduced. Using benzene as a risk indicator, benzene concentrations on the Property should be reduced to below 1.0 ppb in groundwater.

Soil Contamination in Tank Pit Excavations

When the former Property USTs were removed in 1994, soil contamination was observed and noted beneath the USTs and the product piping. The reported analytical results indicated that impacted soils contained as much as 930 ppm of TPHg and 2.2 ppm of benzene. Further, stockpiled soil was reported as containing as much as 860 ppm of TPHg and 0.36 ppm of benzene. The stockpiled soil was apparently used as backfill material in the tank pit excavations on a temporary basis to support nearby structures. Those structures have since been removed.

The EHD has requested that the stockpiled soil used as backfill be removed from the Property and disposed of properly. Ceres Associates proposes to excavate the contaminated soil from the former tank pits (*refer to Figure - Soil Excavation Map*).

Ceres Associates will utilize a backhoe to remove contaminated soils from the historic tank pits. Soil will be removed to a depth of approximately seven to eight feet, or where groundwater is encountered. Ceres Associates will utilize a photoionization detector (PID), using a standard headspace method analysis, to check the effectiveness of removal along the horizontal and vertical boundaries of the excavation. The excavation will be continued horizontally until the PID reading is below 1 ppm. The vertical excavation will continue until the PID reading is below 1 ppm or groundwater is encountered sufficient to make removal of soils ineffective.

Soil will be removed to within five feet of any monitoring wells on-site, installed by Ceres Associates. It is anticipated that at least two of the wells installed by Kleinfelder will have to be removed as part of the excavation process. Such removal will be conducted according to local regulatory guidelines.

Confirmation soil samples will be obtained from the excavation pit floor and walls (one from each wall and two from the floor) and will be analyzed for target compounds (TPHg, TPHd, and BTEX compounds). If confirmation soil samples obtained from the excavation fall below the residential ESL for target compounds, then the excavation pits will be backfilled with imported fill-material, meeting residential ESL guidelines.

After contaminated soils have been removed, they will be stockpiled on-site on top of visqueen plastic sheeting (to prevent re-contamination of the Property surface). Composite samples will be collected and submitted for analysis of target compounds. Disposal of the soil will be based upon the results of the laboratory analyses.

Deeper Soil Sampling

Ceres Associates proposes to advance one soil boring on the Property to a depth of approximately 40 feet using a dual-walled sampling device (*refer to Figure - Interim CAP*). The boring will be continuously logged for lithological purposes. Further, depth-discrete groundwater samples will be collected in each observed groundwater zone and submitted for analysis of target compounds.

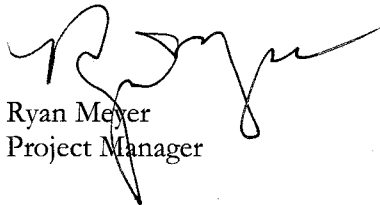
Quarterly Groundwater Monitoring

Ceres Associates, in meeting the Alameda County Environmental Health Department's (EHD) request for quarterly groundwater monitoring, proposes to collect groundwater samples from each of the five wells on and off the Property. The EHD has requested that such quarterly sampling report be submitted to the agency by November 15, 2006. Samples will be analyzed for TPHg, TPHd, TPHmo, and BTEX.

Quarterly monitoring of the wells has not yet been conducted.

If you have questions regarding this project please contact Ryan Meyer at (916) 485-2110 or via email at ryanmeyer@ceresassociates.com.

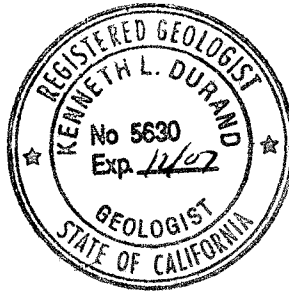
Sincerely,



Ryan Meyer
Project Manager




Ken Durand, RG CHG
Senior Project Manager



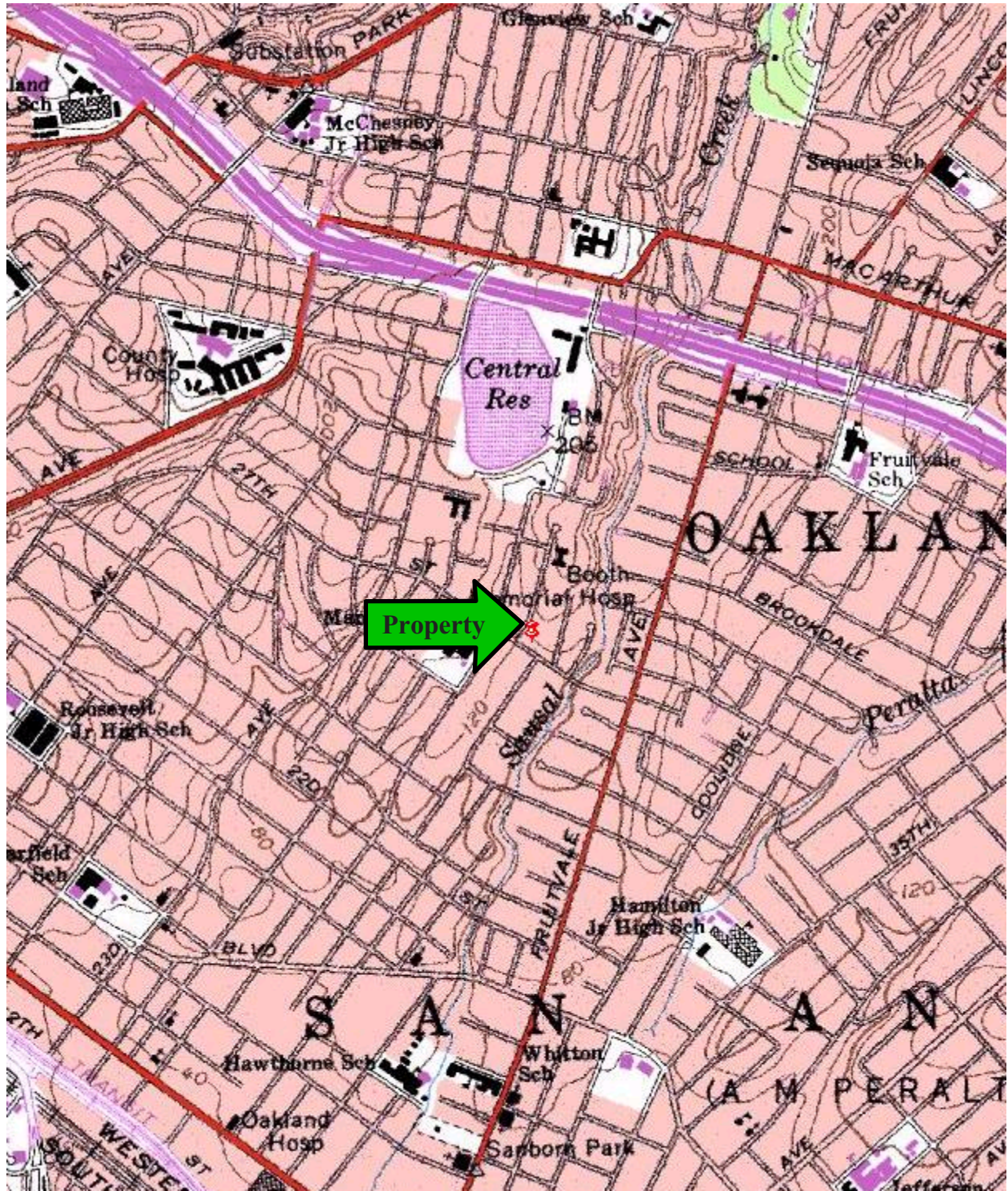
Perjury Statement

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

APPENDIX



1 inch equals 2000 feet

Map Taken From:

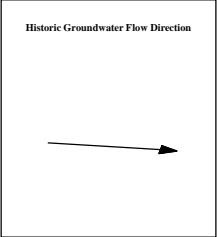
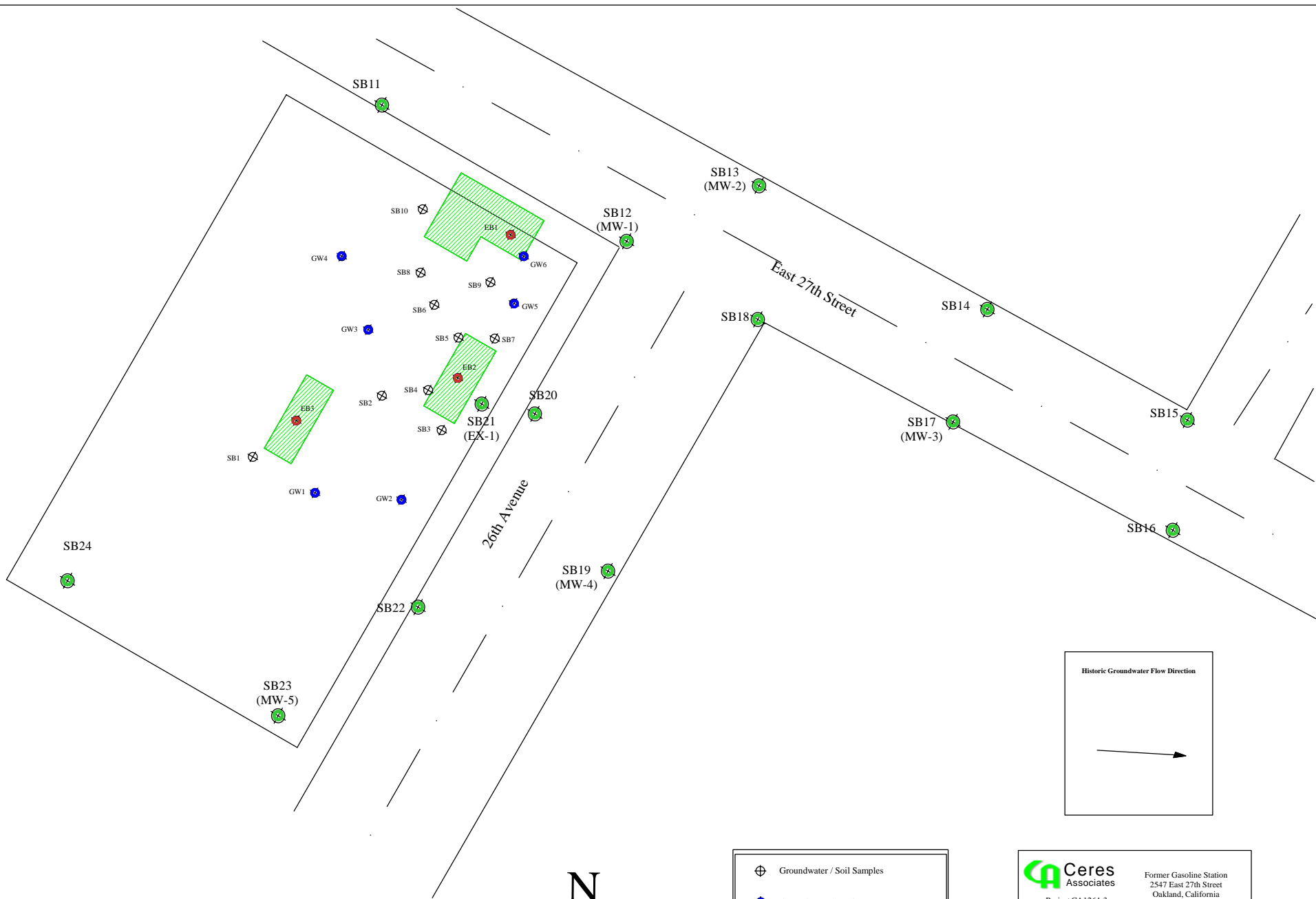
United States Geological Survey
7.5 Minute Topographic Series
Oakland East, California Quadrangle

 **Ceres**
Associates
Project CA1264-3

Former Gasoline Station
2547 East 27th Street
Oakland, California

**PROPERTY
LOCATION MAP**

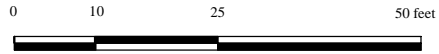
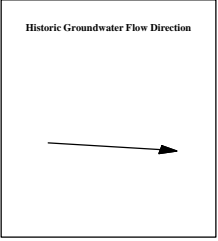
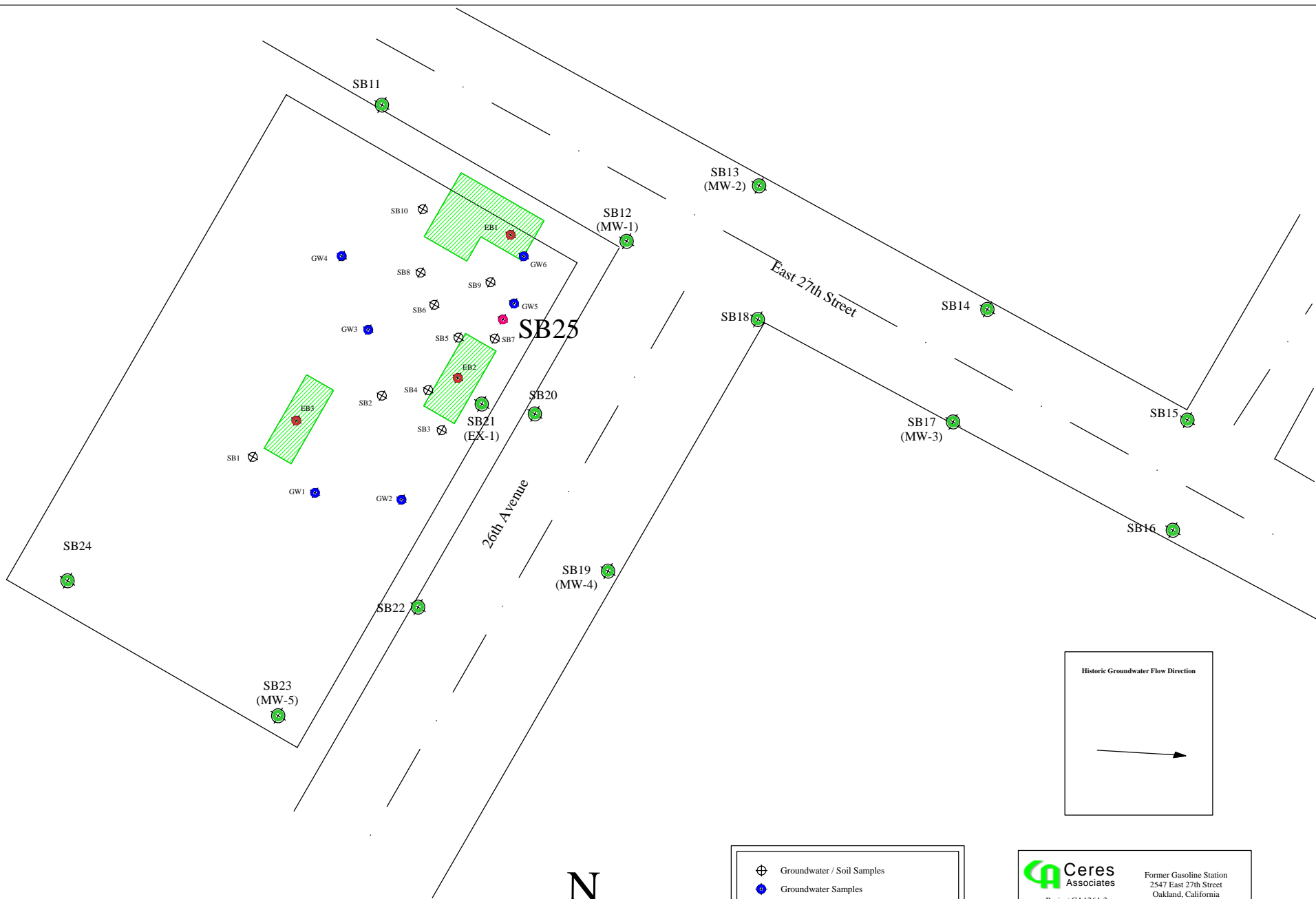
**FIGURE
1**









- Groundwater / Soil Samples
- Groundwater Samples
- Former boring/well installed by Kleinfelder
- January 2006 Boring Locations

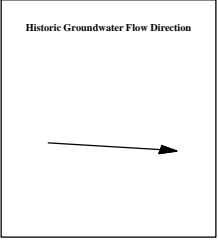
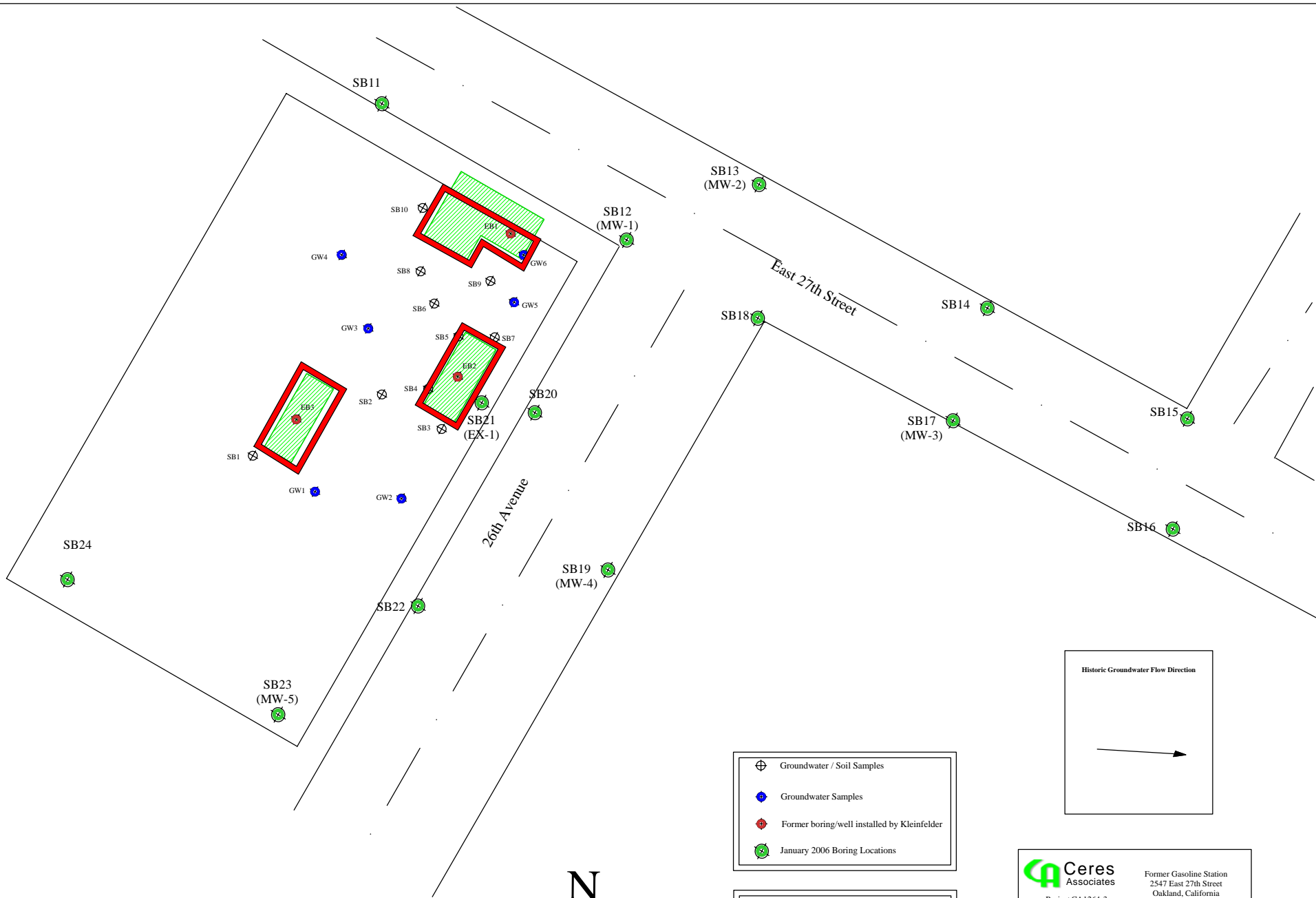
	Former Gasoline Station 2547 East 27th Street Oakland, California Project CA1264-3
	Soil Boring Location Map





**Figure
2**

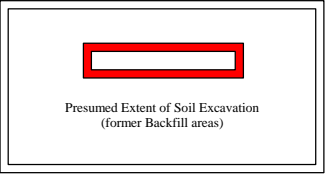



-  Groundwater / Soil Samples
-  Groundwater Samples
-  Former boring/well installed by Kleinfelder
-  January 2006 Boring Locations
-  Proposed Deeper Soil Boring

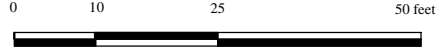
	Former Gasoline Station 2547 East 27th Street Oakland, California
	Project CA1264-3
Interim CAP Map	Figure



-  Groundwater / Soil Samples
-  Groundwater Samples
-  Former boring/well installed by Kleinfelder
-  January 2006 Boring Locations

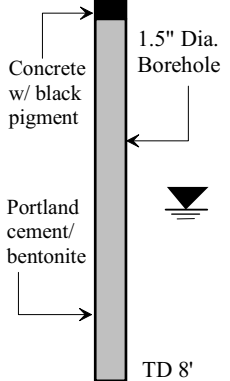


 Ceres Associates Project CA1264-3	Former Gasoline Station 2547 East 27th Street Oakland, California	
	<table border="1"> <tr> <td style="width: 50%;">Soil Excavation Map</td> <td style="width: 50%;">Figure</td> </tr> </table>	Soil Excavation Map
Soil Excavation Map	Figure	



Soil Boring Completion Details	Depth	Sample Interval	PID Reading	USCS Code	Soil Description
Concrete w/ black pigment	1			af	Artificial Fill - 2" Asphalt and base rock
1.5" Dia. Borehole	2			ML	
Portland cement/bentonite	3		0		Inorganic silt with fine to medium grained sand, black 2.54/2.5/1, wet
	4			CL	Clay with some sand grains mixed in, black 2.54/2.5/1, moist
	5		0		
	6			SM	Silty sand, fine grained sand and silt, olive brown 2.54/4/3, moist
	7		0		
	8				
TD 10'	9				
	10				
	11				
	12				
	13				
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Soil Boring Completion Details	Depth	Sample Interval	PID Reading	USCS Code	Soil Description	
	1			af	Artificial Fill - 2" Asphalt and base rock	
	2			SM	Silty sand with some 1/4 inch pebbles, grayish brown 1.4/5/2	
	3			CL	Clay, greenish black 6.1/2.5/1.06, medium plasticity, with some fine sands	
	4					
	5		1			
	6					
	7					
	8					
	9					
	10			1	CL	Same as above with petroleum odor
	11					Clayey sand, fine grained sand with 30% clay, grayish brown 2.54/5/2, rounded pebbles, petrolim odor
	12			14.5	SC	
	13					
	14					Sand with silt and clay, black 2.54/1/1, wet, rounded pebbles up to 1/2 inch in size, strong odor
	15			0	SP	
	16					
17						
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25						
26						
27						
28						
29						
30						
31						

Soil Boring Completion Details	Depth	Sample Interval	PD Reading	USCS Code	Soil Description
 <p>Concrete w/ black pigment</p> <p>1.5" Dia. Borehole</p> <p>Portland cement/bentonite</p> <p>TD 8'</p>	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31		3 0 0	af SP SP	Artificial Fill - 2" Asphalt and base rock Sand, medium fine sand with pebbles up to 1 inch in size, damp Sand with 1/2 inch rounded pebbles, moist, dark grayish brown, 1.04/4/1/1, no odor Coarse sand with pebbles up to 1/4 inch in size, wet, dark brown 1.4/3/3, no odor

Soil Boring Completion Details	Depth	Sample Interval	PID Reading	USCS Code	Soil Description	
	1		1.6	af	Artificial Fill - 2" Asphalt and base rock	
	2			SM	Silty sand with some 1/4 inch rounded pebbles, olive brown 2.54/4/4, damp	
	3		12.3	SP	Sand, mixed sands with silts and gravel, olive brown 2.54/4/3	
	4					
	5					
	6					
	7				SC	Clayey sand, fine grained sand with clay, light olive brown 2.54/5/4, damp
	8			0		
	9					
	10					
	11					
	12					
	13					
	14					
	15					
	16					
	17			1.4	SM	Silty clay, sand with pebbles up to 1/2 inch in size, olive brown 2.54/4/4, moist
	18					
	19			1.1	SM	Same as above, wet
	20					
21						
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Soil Boring Completion Details	Depth	Sample Interval	PID Reading	USCS Code	Soil Description
<p>Concrete w/ black pigment</p> <p>1.5" Dia. Borehole</p> <p>Portland cement/bentonite</p> <p>TD 15'</p>	1			af	Artificial Fill - 2" Asphalt and base rock
	2				
	3				
	4		1.4	CL	Clay, medium plasticity, dark grayish brown 2.54/4/2, damp
	5				
	6				
	7				
	8		1.1	SC	Sandy clayey sand, fine grain sand with slight clay, light olive brown 2.54/5/4, damp
	9				
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	14				
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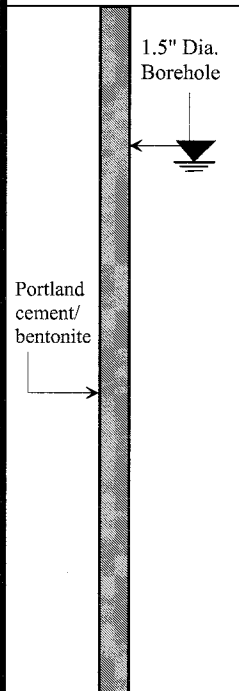
Soil Boring Completion Details	Depth	Sample Interval	PID Reading	USCS Code	Soil Description
Concrete w/ black pigment	1			af	Artificial Fill - 2" Asphalt and base rock
1.5" Dia. Borehole Portland cement/bentonite	2 3 4		0	SP	Sand with some angular pebbles up to 1/4 inch in diameter, light olive brown 2.54/5/4, damp
	5 6 7 8 9 10 11 12		0	SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
TD 20'	13 14 15 16 17 18 19 20		1.1	SC	Same as above, wet
	21 22 23 24 25 26 27 28 29 30 31				

Soil Boring Completion Details	Depth	Sample Interval	PID Reading	USCS Code	Soil Description
Concrete w/ black pigment	1			af	Artificial Fill - 2" Asphalt and base rock
	2		0	SP	Medium fine sand with pebbles up to 1 inch in diameter, brown 1.04/4/3
Portland cement/bentonite	3		0	SP	Medium fine sand with some silt and clay, brown 1.04/4/3, damp, no odor
	4			SC	Clayey sand, fine sand with clay, dark gray 2.54/4/1, no odor
	5		0	SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	6			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	7		0	SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	8			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	9		0	SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	10			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	11			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	12			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	13		0	SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	14			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	15			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
TD 16'	16			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	17			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	18			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	19			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	20			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	21			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	22			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	23			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	24			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	25			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	26			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	27			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	28			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	29			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	30			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	31			SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp

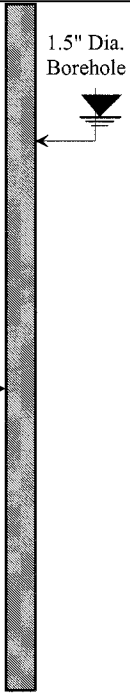
Soil Boring Completion Details	Depth	Sample Interval	PID Reading	USCS Code	Soil Description	
<p>Concrete w/ black pigment</p> <p>1.5" Dia. Borehole</p> <p>Portland cement/bentonite</p> <p>TD 16'</p>	1		3	af	Artificial Fill - 2" Asphalt and base rock	
	2			SC	Silty clay, silty with clay and 5% sand grains, black 2.54/2.5/1, slight odor	
	3					
	4					
	5			0	SC	Silty clay sand with pebbles up to 1 inch in diameter, dark greenish gray S61/4/10, moist, sight odor
	6					
	7			0	SM	Silty sand, medium fine sand with little clay, brown 104R/5/3, moist, no odor
	8					
	9					
	10			0	SC	Sandy silty clay, brown 104R/5/4, moist, no odor
	11					
	12					
	13				SP	Medium fine sand, 104a/5/4, moist, no odor
	14			0		
	15					
	16					
	17					
	18					
	19					
	20					
	21					
	22					
	23					
	24					
	25					
	26					
	27					
	28					
	29					
	30					
	31					


Soil Boring Completion Details	Depth	Sample Interval	PID Reading	USCS Code	Soil Description	
<p>Concrete w/ black pigment</p> <p>1.5" Dia. Borehole</p> <p>Portland cement/bentonite</p> <p>TD 15'</p>	1			af	Artificial Fill - 2" Asphalt and base rock	
	2					
	3					
	4			2.4	CL	Clay with small layers of fine gravel sand, very dark grayish brown, 2.54/3/2, damp
	5					
	6					
	7			1.7	CL	Clay with layers of fine gravel sand, dark grayish brown 2.54/3/2, damp
	8					
	9			2	SC	Clayey sand, fine to medium sand with clay, olive brown 2.54/4/4, moist
	10					
	11					
	12			2.4	SC	Same as above, wet
	13					
	14					
	15					
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Soil Boring Completion Details	Depth	Sample Interval	PID Reading	USCS Code	Soil Description
Concrete w/ black pigment	1			af	Artificial Fill - 2" Asphalt and base rock
1.5" Dia. Borehole	2				
Portland cement/bentonite	3		0	SM	Silty sand, medium grain sand and silt, wet, very dark gray 104R/3/1, no odor
TD 15'	4				
	5		0	SC	Sandy clay, fine sand and clay, very dark brown, 104R/2/1, moist
	6				
	7				
	8		1		
	9			SC	Clayey sand, fine grained sand and clay, some rounded pebbles, dark olive brown 2.54/3/2, moist
	10				
	11				
	12				
	13		0	GC	Clayey gravel, approximately 50% gravel pebbles with silt and clay, light olive brown 2.54/5/3, moist
	14				
	15				
	16				
	17				
	18				
	19				
	20				
	21				
	22				
	23				
	24				
	25				
	26				
	27				
	28				
	29				
	30				
	31				

Soil Boring Completion Details	Depth	Sample Interval	PID Reading	USCS Code	Soil Description
 <p>1.5" Dia. Borehole</p> <p>Portland cement/bentonite</p> <p>TD 15'</p>	1				
	2				
	3		44	CL	Clay with some silt and sand, black 5/2.5/1
	4				
	5				
	6				
	7		9	CL	Silty clay with some "rock" pebbles, black 5/2.5/1, moist
	8				
	9				
	10		0		
	11		107	CL	Silty clay with some silt, moist/wet, olive 5/5/3
	12				
	13				
	14		6		
	15				
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

Soil Boring Completion Details	Depth	Sample Interval	PID Reading	USCS Code	Soil Description
<p>Concrete w/ black pigment</p> <p>1.5" Dia. Borehole</p> <p>Portland cement/bentonite</p> <p>TD 15'</p>	1		0	af	Artificial Fill - 2" Asphalt and base rock
	2			SW	Fine to coarse grain sand with pebbles up to 1 inch in diameter, dark brown 7.54R/3/2, damp
	3		0	CL	Silty clay, dark olive brown 2.54/3/3, moist
	4			CL	Silty clay with some silt and sand, olive 5.4/4/3, moist
	5			CL	Clay, black 2.54/2.5/1, wet
	6			CL	
	7			CL	
	8			CL	
	9			CL	
	10			CL	
	11			CL	
	12			CL	
	13			CL	
	14			CL	
	15			CL	
16			CL		
17			CL		
18			CL		
19			CL		
20			CL		
21			CL		
22			CL		
23			CL		
24			CL		
25			CL		
26			CL		
27			CL		
28			CL		
29			CL		
30			CL		
31			CL		

Soil Boring Completion Details	Depth	Sample Interval	PID Reading	USCS Code	Soil Description
 <p>1.5" Dia. Borehole</p> <p>Portland cement/bentonite</p> <p>TD 15'</p>	1		4		
	2			SM	Silty sand, medium to fine grained sand and silt, very dark grayish brown 104R/3/5, damp
	3				
	4		0	CL	Clay with sand pebbles, black 104R/2/1, wet
	5				
	6				
	7		0	SC	Clayey sand, sand with clay and some pebbles up to 1 inch in diameter, olive brown 2.5/4/3, wet
	8				
	9				
	10				
	11		0	CL	Clay wit 5% "rock" fragments, black 2.54/2.5/1, wet
	12				
	13		0	SP	Sand with some silt and clays, dark yellowish brown 104R/3/6, damp
	14				
	15				
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					
26					
27					
28					
29					
30					
31					

Soil Boring Completion Details	Depth	Sample Interval	PID Reading	USCS Code	Soil Description	
 <p>1.5" Dia. Borehole</p> <p>Portland cement/bentonite</p> <p>TD 15'</p>	1		0	CL	Clay with some silt and sand, black 2.54/2.5/1, moist	
	2					
	3					
	4			2	CL	Clay with some pebbles up to 1/2 inch in diameter, dark olive brown 2.54/3/3, wet
	5					
	6					
	7					
	8					
	9			1	GM	Silty gravel, approximately 50% gravel with sand and silt, olive brown 2.54/4/3, damp
	10					
	11					
	12					
	13					
	14			1	SM	Medium to fine grained sand with some gravel, olive brown 2.54/4/3, damp
	15					
16						
17						
18						
19						
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24						
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28						
29						
30						
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Well Completion Details	Depth	Sample Interval	PID Reading	USCS Code	Soil Description	
<p>Grout</p> <p>2" Dia. Casing</p> <p>Bentonite</p> <p>Sand</p> <p>TD 15'</p>	1			af	Artificial Fill - 2" Asphalt and base rock	
	2			SM	Silty sand with some 1/4 inch pebbles, grayish brown 1.4/5/2	
	3			CL	Clay, greenish black 6.1/2.5/1.06, medium plasticity, with some fine sands	
	4					
	5		1			
	6					
	7					
	8					
	9					
	10			1	CL	Same as above with petroleum odor
	11					
	12			14.5	SC	Clayey sand, fine grained sand with 30% clay, grayish brown 2.54/5/2, rounded pebbles, petroleum odor
	13					
	14					
	15			0	SP	Sand with silt and clay, black 2.54/1/1, wet, rounded pebbles up to 1/2 inch in size, strong odor
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						
28						
29						
30						
31						

Well Completion Details	Depth	Sample Interval	PID Reading	USCS Code	Soil Description
Grout 2" Dia. Casing	1			af	Artificial Fill - 2" Asphalt and base rock
Bentonite	2		3	SP	Sand, medium fine sand with pebbles up to 1 inch in size, damp
	3		0	SP	Sand with 1/2 inch rounded pebbles, moist, dark grayish brown, 1.04/4/1/1, no odor
Sand	4				
	5		0	SP	Coarse sand with pebbles up to 1/4 inch in size, wet, dark brown 1.4/3/3, no odor
TD 8'	6				
	7				
	8				
	9				Well stopped at 8' bgs because subsurface concrete like material was encountered.
	10				
	11				
	12				
	13				
	14				
	15				
	16				
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	19				
	20				
	21				
	22				
	23				
	24				
	25				
	26				
	27				
	28				
	29				
	30				
	31				

Well Completion Details		Depth	Sample Interval	PID Reading	USCS Code	Soil Description
<p>2" Dia. Casing</p> <p>Grout</p> <p>Bentonite</p> <p>Sand</p> <p>TD 15'</p>	1				af	Artificial Fill - 2" Asphalt and base rock
	2			0	SP	Medium fine sand with pebbles up to 1 inch in diameter, brown 1.04/4/3
	3			0	SP	Medium fine sand with some silt and clay, brown 1.04/4/3, damp, no odor
	4					
	5			0	SC	Clayey sand, fine sand with clay, dark gray 2.54/4/1, no odor
	6					
	7					
	8				SC	Clayey sand, fine sand with clay, dark olive brown 2.54/3/3, damp
	9			0		
	10					
	11					
	12					
	13			0	SC	Clayey sand, fine grained sand with clay, olive brown, 2.54/4/1, moist
	14					
	15					
16						
17						
18						
19						
20						
21						
22						
23						
24						
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Well Completion Details		Depth	Sample Interval	PID Reading	USCS Code	Soil Description	
<p>Grout</p> <p>2" Dia. Casing</p> <p>Bentonite</p> <p>Sand</p> <p>TD 15'</p>	1				af	Artificial Fill - 2" Asphalt and base rock	
	2						
	3						
	4			2.4		CL	Clay with small layers of fine gravel sand, very dark grayish brown, 2.54/3/2, damp
	5						
	6						
	7						
	8			1.7		CL	Clay with layers of fine gravel sand, dark grayish brown 2.54/3/2, damp
	9						
	10			2		SC	Clayey sand, fine to medium sand with clay, olive brown 2.54/4/4, moist
	11						
	12						
	13			2.4		SC	Same as above, wet
	14						
	15						
16							
17							
18							
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31							

Well Completion Details	Depth	Sample Interval	PID Reading	USCS Code	Soil Description	
<p>2" Dia. Casing</p> <p>Grout</p> <p>Bentonite</p> <p>Sand</p> <p>TD 15'</p>	1		4		Silty sand, medium to fine grained sand and silt, very dark grayish brown 104R/3/5, damp	
	2			SM		
	3					Clay with sand pebbles, black 104R/2/1, wet
	4		0	CL		
	5					Clayey sand, sand with clay and some pebbles up to 1 inch in diameter, olive brown 2.5/4/3, wet
	6					
	7		0	SC		
	8					Clay wit 5% "rock" fragments, black 2.54/2.5/1, wet
	9					
	10					Sand with some silt and clays, dark yellowish brown 104R/3/6, damp
	11		0	CL		
	12					
	13					
	14		0	SP		
	15					
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Well Completion Details	Depth	Sample Interval	PID Reading	USCS Code	Soil Description
<p>4" Dia. Casing</p> <p>Grout</p> <p>Bentonite</p> <p>Sand</p> <p>TD 15'</p>	1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31		44 9 0 107 6	CL CL CL	Clay with some silt and sand, black 5/2.5/1 Silty clay with some "rock" pebbles, black 5/2.5/1, moist Silty clay with some silt, moist/wet, olive 5/5/3