SOIL AND GROUNDWATER ASSESSMENT REPORT

Commercial Property 2853-2863 Mandela Parkway Oakland, California





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> Ceres Project CA268-4 December 28, 1998

Prepared for:

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Commercial Property 2853-2863 Mandela Parkway Oakland, California

Ceres Project CA268-4

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1.0 INTRODUCTION

On November 30 1998, Ceres Associates conducted field work for the characterization of soil and groundwater contamination in the southern portion of 2853-2863 Mandela Parkway, Oakland, California (Property) and offsite to the east. This field work was the third assessment conducted by Ceres Associates for Page Street Properties at the Property since August 1998 in an attempt to find the scope and source of known groundwater contamination beneath the Property.

1.1 PROPERTY AND SURROUNDING AREA DESCRIPTION

The Property is approximately 4 acres in size and is developed with one 142,000 square-foot office and warehouse building. The remainder of the Property is paved with asphalt. The Property building is currently occupied by several tenants which utilize their respective spaces for general office and warehouse use, as well as light manufacturing. The Property has been developed and used for industrial purposes since at least 1942 when International Harvester occupied the site. The Property has been used for truck storage, cleaning, painting and repair until as late as 1951.

The Property is located in an industrial portion of Oakland near the Oakland Army Terminal. Many of the surrounding sites are used as manufacturing and automotive repair facilities, as well as for general warehouse storage use. Many of these sites are listed on various environmental databases for having leaking underground storage tanks (USTs), hazardous materials spills and other environmental violations.

1.2 BACKGROUND

In April 1998, Ceres Associates conducted an environmental site assessment transaction screen (ESATS) for the Property. Concerns noted included: 1) the potential that soil and groundwater beneath the Property has been affected by chlorinated solvents which are known to have been used and/or stored at the Property; 2) soil and groundwater contamination resulting from leaking gasoline and waste oil USTs which were removed from the Property in 1991; and 3) the potential that offsite sources have adversely affected soil and groundwater quality conditions beneath the Property.

Based on previous environmental assessments by Harding Lawson Associates and ATEC, as well as historical site information obtained during the ESATs assessment by Ceres Associates, subsurface assessment was recommended to further characterize the apparent unauthorized UST release of gasoline in the south portion of the Property, and to assess the potential that previous hazardous materials use both onsite and offsite had affected subsurface soil and groundwater beneath other portions of the Property.

In August 1998, Ceres Associates conducted soil and groundwater sampling, as well as soil vapor sampling throughout much of the Property. In 1992 during ATEC's assessment, groundwater was reported at 11 feet below ground surface (bgs). During the August 1998 assessment Ceres Associates

found groundwater to be at approximately 6½-feet bgs. The soil vapor sampling was conducted to evaluate the potential that chlorinated solvents originating from unknown source areas had impacted soil and groundwater beneath the Property. Significant concentrations of chlorinated solvents were not found in soil vapor, soil or groundwater.

The majority of the soil and groundwater sampling was conducted to further assess the vertical and lateral extent of contamination associated with the former gasoline and waste oil USTs. Analytical laboratory results and observations noted during the field assessment indicated that elevated TPH-g and BTEX compounds were present beneath the southeast portion of the Property in the vicinity of the former USTs. A likely source of the contamination was probably somewhere offsite to the east, near the southern portion of the Property. Gasoline product was observed floating on the water table surface in borings along the southeast Property border, about 50-feet east of the former UST excavation, yet it was not found in soil borings located nearest to and down gradient from the former USTs. The groundwater flow direction measured across the Property during the assessment was calculated as flowing towards the west-northwest at a gradient of approximately 0.021.

In early November 1998 Ceres Associates collected data concerning potential offsite sources of gasoline contamination. The Oakland Fire Department Office of Emergency Services (OES) supplied information concerning a closed UST at 2607 Mandela Parkway. Based on data from previous assessments the closed UST at this site was in a direct upgradient groundwater flow direction from the most significant groundwater contamination on the Property. OES documents indicated that analysis of soil and groundwater samples collected from beneath the UST did not reveal significant contamination. However, groundwater was reported at 2.5 feet bgs, which was the same depth as the top of the UST. The County inspector noted soil staining and a hydrocarbon odor. Analysis of soil and groundwater samples did not confirm the observations of the inspector. It is not clear if the observations of the County inspector were in error, or if sampling was conducted away from the area of staining and odor. The inspector also noted that the top of the UST was about 4-feet bgs and "UST full-water(?) w/gas odor." The condition of UST was noted by the consultant to be "rusty, pitted, several holes noted." Only the top of the UST was observed, the condition of the bottom was not assessed.

On November 11, 1998, two soil borings were drilled in Willow Street east of the Property and west of the UST at 2607 Mandela Parkway. When sampled, both borings were reported to contain greater than 3 feet of gasoline floating on the groundwater surface. Borings were also drilled on the Property during that assessment to help further evaluate soil and groundwater contamination beneath the Property.

1.3 SCOPE OF WORK

The following scope of this work outlined below is intended to supplement data generated during previous assessments. The work conducted during the months of November and December 1998 included the following:

- Prepare a workplan for approval by the City of Oakland Office of Emergency Services (OES) and the Alameda County Environmental Health Department (ACEHD);
- Obtain drilling and excavation permits form the Alameda Count Public Works Agency and City of Oakland Department of Public Works;
- Install six (6) direct-push soil borings.
- Prepare a report of findings for distribution to the client and to the ACEHD, the local oversight agency.

2.0 SITE ASSESSMENT ACTIVITIES

Mobilization for field assessment activities included: soil boring and excavation permit acquisition from the Alameda County Public Works Agency and City of Oakland Department of Public Works; preparation of a site-specific health and safety plan; and scheduling the field activities with the appropriate subcontractors, Property tenants and concerned parties. A copy of the drilling permit and excavation permit is provided in Appendix A.

2.1 SOIL AND GROUNDWATER SAMPLING

On November 30, 1998 Ceres Associates installed six soil borings at the Property. The soil borings were installed by Vironex, Inc. using a direct-push drill rig.

2.1.1 Sample Methodology

The drill rig utilizes direct-push technology to collect soil and groundwater samples from specific subsurface depths while minimizing soil cuttings. The direct-push soil sampling system consists of a series of 1-inch diameter stainless steel rods which are hydraulically driven into the ground using a jack hammer attached to the rig. Soil samples were collected by driving a 4-foot long stainless steel sample sleeve attached to the end of the steel rods into soil in 4-foot sample intervals. Soil from the 4-foot column is collected in an acetate sample tube installed inside the steel sample sleeve. After the 4-foot sample sleeve has been hydraulically extended to the target sample depth, the sample sleeve is retrieved to ground surface and the acetate sample tube containing soil from the appropriate sample interval is capped with Teflon-lined plastic end caps, and immediately placed in a chest cooled with ice for the duration of the day's sampling. Excess soil from each sample interval was used for lithologic description and field screening purposes.

Excess soil from each sample interval was field screened for the presence of volatile organic compounds (VOCs) using a Mini Rae photoionization detector (PID). Field screening was conducted by placing soil in a plastic Ziploc® bag and monitoring the atmosphere inside the bag with the PID. The PID readings were digitally displayed in parts per million (ppm) and recorded on the soil boring log provided in Appendix B.

Grab groundwater samples were collected from each soil boring by extending each borehole to approximately 16 feet bgs. Groundwater samples were collected using disposable ½-inch diameter polyethylene bailers. Once groundwater had been retrieved to ground surface Ceres Associates transferred water from the bailers into two (2) 40 milliliter glass voas preserved with hydrochloric acid.

After soil and groundwater samples had been collected the soil borings were backfilled with Portland cement and capped with asphalt or concrete patch depending on ground surface conditions. Excess



soil cuttings and well casings were temporarily stored in one 55-gallon DOT-approved drum, along with a small volume of rinsate fluid generated during decontamination. Arrangements will be made to dispose the contents of the drum as hazardous waste.

2.1.2 Sample Locations and Sample Depths

Soil borings SB-13, SB-14 and SB-15 were drilled in Willow Street. The borings were installed in the street to assess the lateral extent of contamination and to confirm evidence that the source of the free product observed during the previous assessments originated from an upgradient offsite source. Borings SB-16 and SB-17 were drilled within the southern portion of the structure on the Property in order to further assess the extent of contamination on the Property. Boring SB-18 was installed in the southwestern corner of the Property to assess the southwestern limit of soil and groundwater contamination beneath the Property. The boring locations are shown on Figure 2.

Soil borings SB-13, SB-14 and SB-15 were placed in Willow Street as shown on Figure 2. Soil samples were collected 10 and 15-feet bgs in SB-13, 5 and 10-feet bgs in SB-14 and 5, 10 and 15-feet bgs in SB-15 to assess the vertical distribution of contaminants in soil above and below the groundwater surface expected to be between 5 and 10-feet bgs. Poor sample recovery in SB-13 and SB-14 prevented collection of the 5 and 15-foot soil samples in the respective borings. SB-16 and SB-17 were placed in the southern portion of the Property building, north of the work from the previous assessments to further assess contaminant trends. Soil samples were collected for laboratory analysis from SB-16 at sample depths of 12 and 18-feet bgs. Strong petroleum product odor was noted during drilling after the 8 to 12-foot bgs interval was brought to the surface, then the soil boring was extended to 20-feet bgs, and a soil sample was collected at a depth of 18-feet bgs. Soil samples were collected from SB-17 at sample depths of 9 and 16-feet bgs. Boring SB-18 was installed in the southwestern corner of the Property and soil samples were collected for laboratory analysis at sample depth of 8 and 16-feet bgs.

Groundwater samples were taken within minutes of opening each boring. Approximately 2 inches of floating product was observed in SB-13 after allowing the boring to remain open for about one hour. Floating product was not encountered in either SB-14 or SB15. Petroleum odor was noted emanating from open borings after construction and sampling of SB-13, SB-16, and SB-17, however floating product was not observed.

2.1.3 Laboratory Analysis and Results

Upon sample collection, the soil and groundwater samples collected from SB-13 through SB-18 were delivered under chain-of-custody protocol to McCampbell Analytical Laboratory, a State of California-certified laboratory located in Pacheco, California. Soil and groundwater samples submitted for laboratory analysis were analyzed for TPH-g using United States Environmental Protection Agency (U.S. EPA) Method 8015 modified, and BTEX compounds and methyl tertiary butyl ether (MTBE) using U.S. EPA Method 8020/602.



Analytical laboratory results of soil and groundwater samples collected during this assessment, as well as sample results from the August, November 11, and 30 1998 Ceres Associates assessments are tabulated in Tables 1 and 2. Analytical laboratory results from the current assessment as well as the locations of the borings from the previous work are also plotted on Figures 3 and 4.

Results of Laboratory Analysis

Concentrations of petroleum hydrocarbons were found in soil samples from SB-13, SB-15, SB-16 and SB-17. Analytical results ranging from 2.9 to 1,600 parts per million (ppm) were reported for TPH-g, and 0.017 to 22 ppm were reported for benzene. Soil samples at SB-14 and SB-18 were not reported by the laboratory to contain reportable concentrations. Relatively minor concentrations of toluene, ethylbenzene and total xylenes were reported in said samples from the five borings. MTBE was not reported above the laboratory limits in the analyzed soil samples.

Analytical results of groundwater samples were reported to contain detectable concentrations of petroleum hydrocarbons in SB-13, SB-16 and SB-17. Analytical results ranging from 1,800 to 110,000 parts per billion (ppb) were found for TPH-G, and 88 to 17,000 ppb for benzene. The laboratory reported results ranging from 100 to 24,000 ppb for toluene and 160 to 1,000 for total xylenes in SB-13, SB-16 and SB-17. Analytical results ranging from 0.67 to 2,700 ppb were reported for ethylbenzene in SB-13, SB-16, SB-17 and SB-18. Groundwater samples from SB-14, SB-15 and SB-18 were not reported to contain reportable concentrations of petroleum compounds.

MTBE was not reported above the laboratory reporting limits in the analyzed groundwater samples in SB-13, SB-15 through SB-18. Groundwater in SB-14 was reported to contain 14 ppb MTBE.

3.0 SUBSURFACE SOIL AND GROUNDWATER CONDITIONS

A review of soils encountered during the installation of SB-13 through SB-18 indicates the Property area is underlain with apparent fill soil which consists of intermixed gravel, sand, silt, clay and construction debris between the baserock and the sand layer. A sand layer was generally encountered between 2.5 and 4-feet bgs in the six soil borings logged during this assessment, however it was not be demonstrated whether this unit represents native soil or not. Beneath the sand at 4-feet bgs, were Bay Muds, which were logged as deep as 20 feet bgs. The Bay Muds encountered between 4 and 20-feet bgs contained relatively thin (<2" thick) discontinuous sand and organic-rich zones (preferential pathways) which appear to be the primary shallow water producing units beneath the Property.

Product was observed while installing SB-16 and SB-17 at a depth of approximately six to ten feet bgs. Analytical laboratory results of soil samples collected from soil borings SB-16 and SB-17 seem to substantiate the conclusion from previous assessments. The data indicated that contaminants are probably migrating beneath the Property through preferential pathways in the Bay Muds situated between 10 and 16-feet bgs.

Depth to groundwater beneath the Property was difficult to assess since the Bay Muds were very moist to saturated from roughly 6-feet bgs to 16-feet bgs. The depth to groundwater was measured to be between approximately 6 ½ to 8-feet bgs in boreholes installed during this assessment. A description of the subsurface conditions encountered during this assessment are presented in the soil boring logs provided in Appendix B.

3.1 GROUNDWATER FLOW DIRECTION

Information from previous assessments indicates the groundwater flow direction beneath the Property is towards the west-northwest. The groundwater flow direction was calculated in August 1998 by installing temporary well casings in three soil borings located across the Property, allowing groundwater in each borehole to stabilize for at least 24 hours, and then surveying the water table elevations at each sample location. The groundwater flow direction was calculated as flowing towards the west-northwest at gradient of approximately 0.021.

4.0 CONCLUSIONS AND RECOMMENDATIONS

Findings of this and past assessments indicate that a significant gasoline fuel release has occurred. Soil and groundwater beneath the southeastern portion of the Property has been affected, and there is a considerable plume of gasoline floating on the groundwater underneath Willow Street. It is likely that contamination at the Property results from both onsite and offsite sources. These potential sources include the former onsite USTs removed in 1991 on the Property, the gasoline UST located at 2607 Mandela Parkway, and yet unidentified offsite source(s). The groundwater contamination beneath the Property building is probably a result of releases from USTs removed from the Property in 1991.

At present, it appears probable that the bulk of the contamination reported in the soil and groundwater samples collected beneath southeast portion of the Property and beneath Willow Street may be originating from somewhere on 2607 Mandela Parkway. The depth of floating product increases in an eastward direction from the Property. The groundwater flow direction calculated beneath the Property was to the west-northwest, placing 2607 Mandela Parkway in an upgradient groundwater flow direction from the Property.

One former gasoline UST was identified at 2607 Mandela Parkway after reviewing OES files for the site during previous assessments. The location of the UST relative to the Property is shown in Figures 2, 3 and 4. Ceres Associates did not find a installation permitting information or a date of installation for the UST. The tank had apparently not been in use for approximately 20 years and was likely installed more than 30 years prior to being closed in 1997. Historical information reveals that the south half of the building at 2607 Mandela Parkway was constructed in the 1940s, the north half of the building was constructed in the late 1950s or early 1960s. If more than one UST was installed at the site, a yet-to-be identified point source of the groundwater contamination may still exists beneath the north half of the current building.

Groundwater in SB-14 was found to have a concentration of 14 ppb MTBE. Since MTBE is a relatively new additive to gasoline in California, this concentration may either represent the front portion of an approaching plume of gasoline or simply a "false positive" analysis. U.S. EPA method 602 sometimes results in "false positives" of MTBE. Future subsurface assessment in this area should include analysis of groundwater using U.S. EPA method 626 to preclude the possibility of "false positive" laboratory reports.

Although the extent of contamination probably caused by offsite source(s) to the east has not been adequately defined, Ceres Associates recommends that further delineation be conducted by the owner of the 2607 Mandela Parkway site. A suggested scope of work would be to install between 6 and 8 soil borings at the site with at least 3 borings in the northern half of the building and three borings in the southern half of the building. Soil should be sampled for analysis at approximately 10 and 15 feet below ground surface. Groundwater in the borings should sampled minutes after the borings are installed, and then again after the boring has been left open for 3-4 hours. Analysis should include U.S. EPA method 8015 modified for TPHg, and U.S. EPA method 8020 for BTEX and MTBE.

Ceres Associates also recommends that a remedial action plan be developed to make recommendations on how to best remove floating product from the groundwater beneath the Property to remedy the potential immediate danger such conditions convey.

5.0 REFERENCES

- ATEC, 1992, Subsurface Soil Investigation, 2855 Cypress Street, Oakland, California
- Ceres Associates, 1998, Additional Subsurface Investigation Report, 2853-2863 Mandela Parkway, Oakland, California
- Ceres Associates, 1998, Environmental Site Assessment Transaction Screen
- Ceres Associates, 1998, Phase II Subsurface Investigation Report, 2853-2863 Mandela Parkway, Oakland, California
- Harding Lawson Associates, 1991, Underground Storage Tank Removal, 2855 Cypress Street,
 Oakland, California
- Light, Air & Space Construction, 1997, Underground Tank removal Closure Report

6.0 LIMITATIONS

Much of the information on which the conclusions of this report are based, comes from data provided by others. Ceres Associates is not responsible for the accuracy or completeness of this information. Inaccurate data provided by others, as well as information that was not found or made available to Ceres, may result in a modification of the conclusions presented in this report.

It is possible unpermitted, undocumented or concealed improvements or alterations to the Property could exist beyond what was found during assessment activities. Variations in Property specific soil and groundwater conditions are probable beyond what field characterization can record. Changes in the conditions found on the Property could occur at some time in the future due to variations in environmental and physical conditions.

In today's technology, no amount of assessment can ascertain that the Property is completely free of environmental concern.

Any geologic and hydrogeologic data are for drawing conclusions, by Ceres, within the context and timing of this report only. This report was prepared for the sole use and benefit of Page Street Properties.



Photograph 1
View looking north along Willow Street at the southern portion of the Property.



Photograph 2 View looking southeast across Willow Street at SB-13, SB-14 and SB-15.



Photograph 3
View of SB-16 inside building on Property.



Photograph 4
View at SB-16 during groundwater sampling.

TABLE 1 SOIL SAMPLE RESULTS (TPH-g, BTEX COMPOUNDS AND MTBE) Page 1 of 2

Sample	Sample	Analytical Laboratory Results (mg/kg or ppm)										
Location	Depth (feet bgs)	TPH-g	Benzene	Benzene Toluene		Xylenes	MTBE					
SB-1	5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005					
SB-1	10	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005					
SB-2	5	130	1.2	2.0	6.3	13	<0.005					
SB-2	11	52	13	17	2.1	8.6	<0.005					
SB-3	5	68	7.2	15	3.0	11	<0.005					
SB-3	10	99	9.1	14	5.0	17	<0.005					
SB-4	.5	21	3.1	0.49	2.9	2.9	<0.005					
SB-4	11	42	1.6	0.12	1.1	4.3	<0.005					
SB-4	15	<1.0	0.019	<0.005	<0.005	<0.005	<0.005					
SB-5	5	2.7	0.56	0.011	0.46	0.041	<0.005					
SB-5	10	3.4	0.040	0.76	0.13	0.59	<0.005					
SB-6	5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.0005					
SB-7	5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005					
SB-8	5	2.6	0.92	0.010	0.026	0.063	<0.05					
SB-8	10	7,400	83	270	110	470	<100					
SB-9	5	1.1	0.006	0.034	0.017	0.082	<0.05					
SB-9	10	49	0.31	1.7	0.84	3.5	<0.30					
SB-9	15	4,700	32	180	80	320	<70					
SB-10	5	<1.0	<0.005	<0.005	< 0.005	<0.005	<0.05					
SB-10	10	<1.0	0.005	0.006	<0.005	0.017	<0.05					
SB-10	15	580	12	29	12	52	<10					

Bold type indicates compound reported above laboratory detection limit concentration. HVOCs were not reported above their respective detection limit concentrations. Detection limit concentrations are presented on the analytical laboratory data sheets provided in Appendix C.

TABLE 1 SOIL SAMPLE RESULTS (TPH-g, BTEX COMPOUNDS AND MTBE) Page 2 of 2

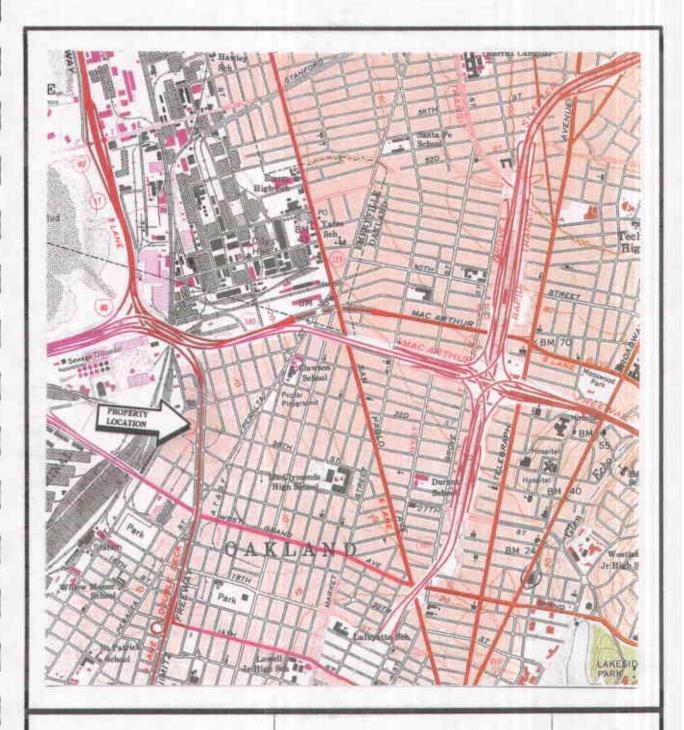
Sample	Sample	Analytical Laboratory Results (mg/kg or ppm)									
Location	Depth (feet bgs)	TPH-g Benzene		Toluene	Ethylbenzene	Xylenes	MTBE				
SB-11	5	11	0.34	0.016	0.35	0.29	<0.05				
SB-11	10	8.0	0.39	0.026	0.057	0.12	<0.05				
SB-11	15	<1.0	<0.005	< 0.005	<0.005	<0.005	<0.05				
SB-12	17	26	0.33	1.5	0.52	2.1	<0.50				
SB-13	10	94	3.2	6.1	2.6	10	<2.0				
SB-13	15	<1.0	<0.005	<0.005	< 0.005	<0.005	<0.05				
SB-14	5	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05				
SB-14	10	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05				
SB-15	5	<1.0	<0.005	<0.005	<0.005	< 0.005	<0.05				
SB-15	10	<1.0	<0.005	<0.005	<0.005	<0.005	<0.05				
SB-15	15	1,600	22	67	26	93	<30				
SB-16	12	670	12	34	9.2	40	<5				
SB-16	16	5.6	0.60	0.62	0.14	0.57	<0.05				
SB-17	9	5.9	0.017	0.12	0.074	0.33	<0.05				
SB-17	16	2.9	0.33	0.36	0.064	0.25	<0.05				
SB-18	8	<1.0	<0.005	<0.005	<0.005	<0.005	<0.005				
SB-18	16	<1.0	< 0.005	<0.005	<0.005	<0.005	<0.05				

Bold type indicates compound reported above laboratory detection limit concentration. HVOCs were not reported above their respective detection limit concentrations. Detection limit concentrations are presented on the analytical laboratory data sheets provided in Appendix C.

TABLE 2 GRAB GROUNDWATER SAMPLE RESULTS (TPH-g, BTEX COMPOUNDS AND MTBE)

Sample	Sample		Analytical Laboratory Results (μ g/l or ppb)									
Location	Depth (feet bgs)	TPH-g	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE					
SB-1	4	<50	1.0	1.0	<0.5	1.2	<0.5					
SB-2	4	160,000	44,000	38,000	5,900	24,000	<50					
SB-3	4			No sample	e. Free product.							
SB-4	7.5	63,000	16,000	12,000	3,200	11,000	<50					
SB-5	7.5	72,000	11,000	17,000	3,600	20,000	<250					
SB-6	8	63	3.1	9.0	3.3	16	<0.5					
SB-7	6.5	<50	1.1	2.1	1.9	6.4	<0.5					
SB-8	6			No sampl	le. Free product.							
SB-9	6			No sampl	le. Free product.							
SB-10	11	98,000	8,400	10,000	2,800	13,000	<200					
SB-11	7	780	81	1.3	4.9	18	<1					
SB-12	8			No sampl	le. Free product.							
SB-13	7.5	1,800	88	100	85	160	<80					
SB-14	7.5	<50	<0.5	<0.5	<0.5	<0.5	14					
SB-15	7	<50	<0.5	<0.5	<0.5	<0.5	<5.0					
SB-16	8	110,000	17,000	24,000	2,700	11,000	<1,300					
SB-17	7.5	43,000	2,500	6,700	1,600	6,200	<690					
SB-18	7	<50	<0.5	<0.5	0.67	<0.5	<5.0					

Bold type indicates compound reported above laboratory detection limit concentration. HVOCs were not reported above their respective detection limit concentrations. Detection limit concentrations are presented on the analytical laboratory data sheets provided in Appendix C.



Commercial Property 2853-2863 Mandela Parkway Oakland, California

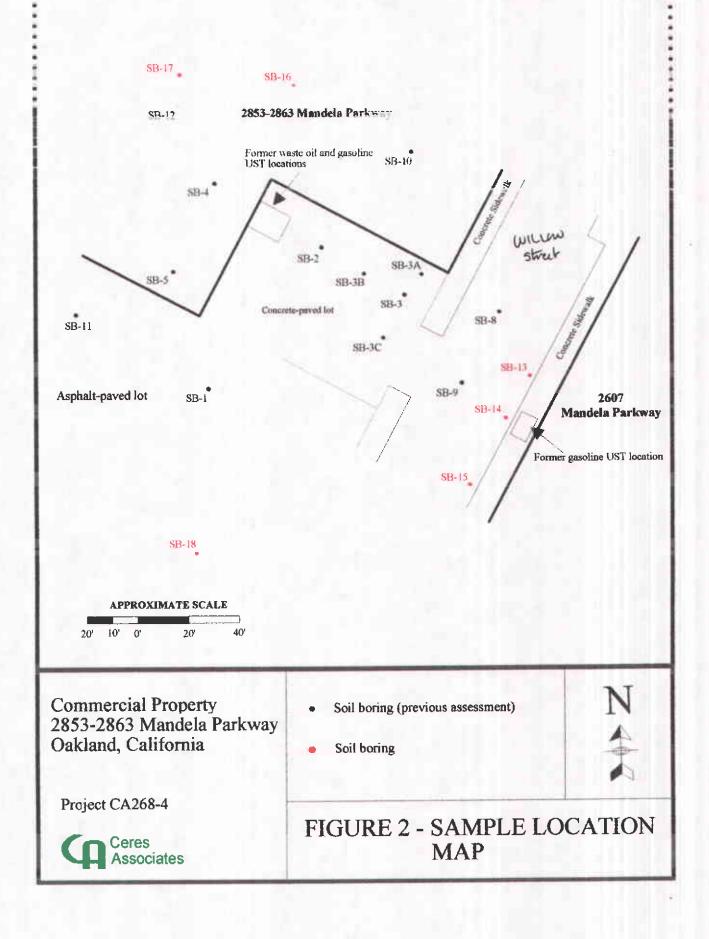
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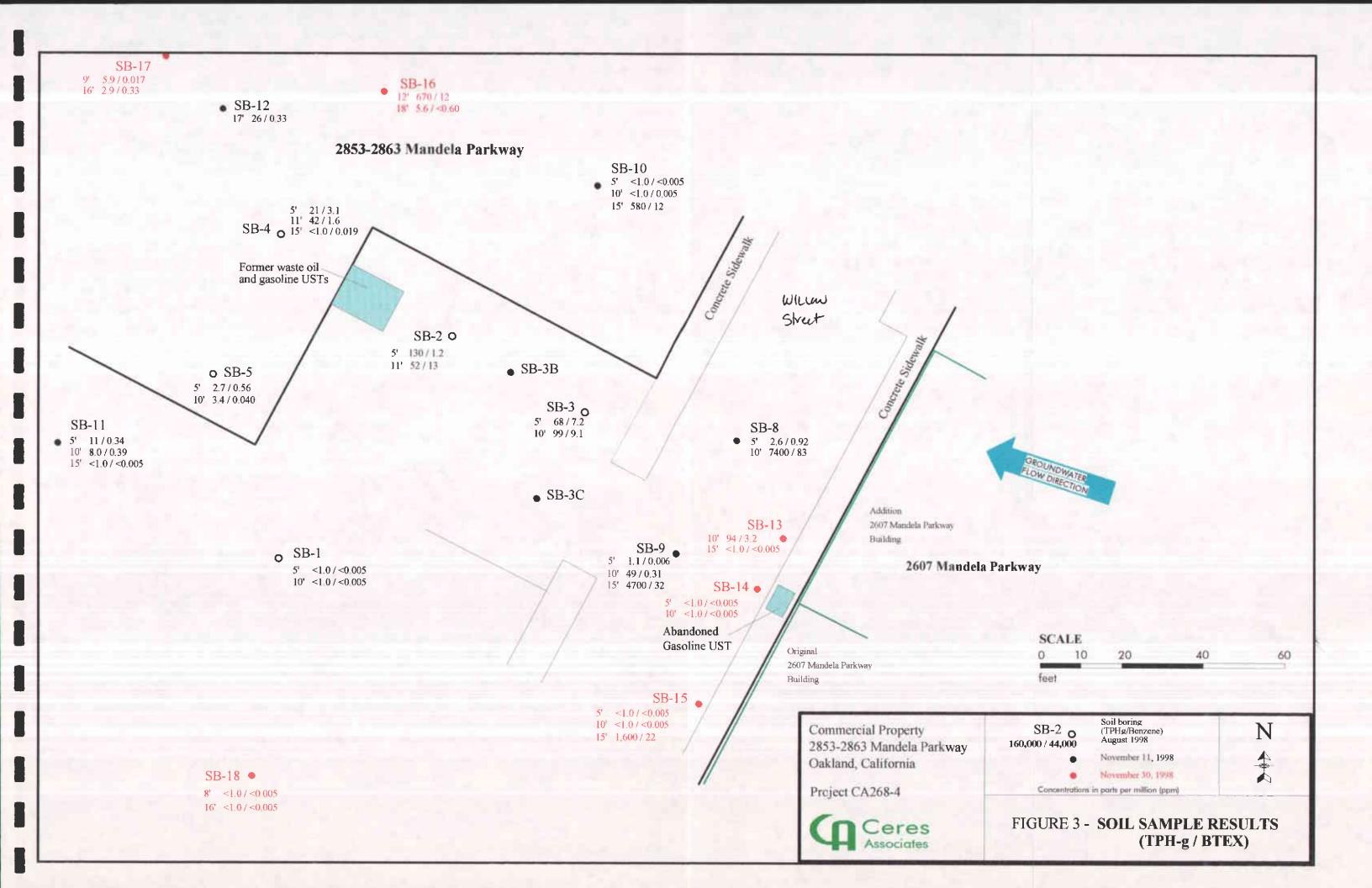


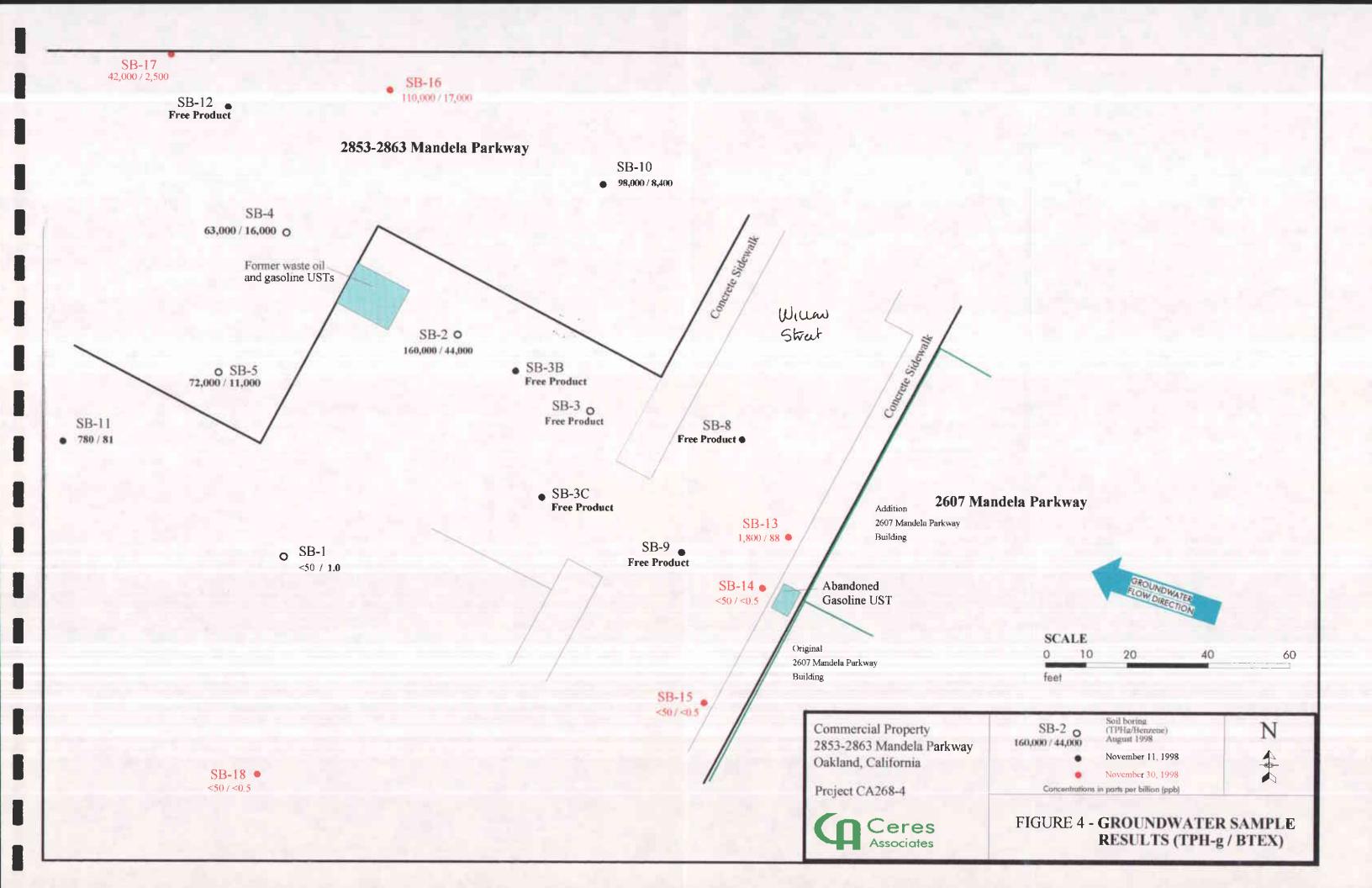
United States Geological Survey 7.5 Minute Series, Topographic Map Oakland, West, California Quadrangle 1959, photorevised 1980



FIGURE 1 - PROPERTY LOCATION MAP









EXCAVATION PERMIT

CIVIL ENGINEERING

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TO EXCAVATE IN STREETS OR OTHER SPECIFIED WORK

X 98	00739	2853 MANDELA	PKY
APPROX. START DATE	APPROX. END DATE	24-HOUR EMERGENCY PHONE NUMBER	
		(Permit not valid without 24-Hour number)	40 T
CONTRACTOR'S LICENSE #	AND CLASS	CITY BUSINESS TAX #	
inquiry identification	number issued by USA. The USA telepho	Gervice Alert (USA) two working days before excavating. This permit is not valid unless number in 1 (800) 642-2444. UNDERGROUND SERVICE ALERT (USA) #: 20 (UST CALL (510) 238-3651 TO SCHEDULE AN INSP	187613 1-287604
OWNER/BUILDER	NOTICE AND LINE	And the state of t	
 □ I, as an owner of the property Professions Code: The Contractor provided that such improvements burden of proving that he did not □ I, as owner of the property, as 	, or my employees with wages as their solor's License Law does not apply to an own are not intended or offered for sale. If he build or improve for the purpose of sale), mexempt from the sale requirements of the	permit subjects the applicant to a civil penalty of not more than \$500); e compensation, will do the work, and the structure is not intended or offered for sale are of property who builds or improves thereon, and who does such work himself or the wever, the building or improvement is sold within one year of completion, the owners above due to: (1) I am improving my principal place of residence or appurtenances with prior to completion of the work, and (4) I have not claimed exemption on this sale	hrough his own employees, builder will have the thereto, (2) the work will
structures more than once during I, as owner of the property, as does not apply to an owner of pre	any three-year period. (Sec. 7044 Business m exclusively contracting with licensed cor	s and Professions Code). Attractors to construct the project, (Sec. 7044, Business and Professions Code: The Code d who contracts for such projects with a contractor(s) licensed pursuant to the Contrac	ontractor's License Law
structures more than once during I, as owner of the property, a does not apply to an owner of pre I am exempt under Sec.	any three-year period. (Sec. 7044 Business m exclusively contracting with licensed cor- operty who builds or improves thereou, and B&PC for this reason	s and Professions Code). Attractors to construct the project, (Sec. 7044, Business and Professions Code: The Code d who contracts for such projects with a contractor(s) licensed pursuant to the Contrac	ontractor's License Law
structures more than once during I, as owner of the property, as does not apply to an owner of pre I am exempt under Sec. WORKER'S COMPENSATION	any three-year period. (Sec. 7044 Business m exclusively contracting with licensed cor- operty who builds or improves thereou, and , B&PC for this reason	a and Professions Code). Attractors to construct the project, (Sec. 7044, Business and Professions Code: The Code who contracts for such projects with a contractor(s) licensed pursuant to the Contract	contractor's License Law stor's License law).
structures more than once during I, as owner of the property, as does not apply to an owner of pre I am exempt under Sec. WORKER'S COMPENSATION I hereby affirm that I have a c	any three-year period. (Sec. 7044 Business m exclusively contracting with licensed cor operty who builds or improves thereou, an , B&PC for this reason certificate of consent to self-insure, or a cer	a and Professions Code). Attractors to construct the project, (Sec. 7044, Business and Professions Code: The Code who contracts for such projects with a contractor(s) licensed pursuant to the Contract and the	contractor's License Law etor's License law).
structures more than once during I, as owner of the property, as does not apply to an owner of pro I am exempt under Sec. WORKER'S COMPENSATION	any three-year period. (Sec. 7044 Business m exclusively contracting with licensed cor- operty who builds or improves thereou, and , B&PC for this reason	a and Professions Code). Attractors to construct the project, (Sec. 7044, Business and Professions Code: The Code who contracts for such projects with a contractor(s) licensed pursuant to the Contract and the	contractor's License Law stor's License law).
structures more than once during I, as owner of the property, as does not apply to an owner of pre I am exempt under Sec. WORKER'S COMPENSATION I hereby affirm that I have a co Policy # I certify that in the performan	any three-year period. (Sec. 7044 Business m exclusively contracting with licensed cor- operty who builds or improves thereon, an	a and Professions Code). tractors to construct the project, (Sec. 7044, Business and Professions Code: The Code who contracts for such projects with a contractor(s) licensed pursuant to the Contractor. trificate of Worker's Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance) (Sec. 3700, and	ontractor's License Law stor's License law).
structures more than once during I, as owner of the property, as does not apply to an owner of pro I am exempt under Sec. WORKER'S COMPENSATION I hereby affirm that I have a complete of the property of the property of the property of the property of the provisions or the property of the provisions or the property of the comply with such provisions or the granted upon the express conditions and employees, from and against sustained or arising in the constructions.	any three-year period. (Sec. 7044 Business on exclusively contracting with licensed corporty who builds or improves thereon, and B&PC for this reason B&PC for this reason certificate of consent to self-insure, or a certificate of consent to self-insure, or a certificate of the work for which this permit is issured valued at one hundred dollars (\$100) or after making this Certificate of Exemption, his permit shall be deemed revoked. This is next the permittee shall be responsible to cert to street maintenance. The permittee shall any and all suits, claims, or actions broaging action of the work performed under the permittee the permittee of the work performed under the permittee the permittee of the work performed under the permittee of the work performed under the permittee the permittee of the work performed under the permittee the permittee of the work performed under the permittee the permittee of the work performed under the permittee the permittee of the work performed under the permittee the permittee of the work performed under the permittee of the work permittee of the	a and Professions Code). tractors to construct the project, (Sec. 7044, Business and Professions Code: The Code who contracts for such projects with a contractor(s) licensed pursuant to the Contractor. trificate of Worker's Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance, or a certified copy thereof (Sec. 3700, and particular of the Compensation Insurance) (Sec. 3700, and	Code, you must forthwith dunicipal Code. It is not of permittee's failure to nless the City, its officers or to persons and/or property
structures more than once during I, as owner of the property, at does not apply to an owner of pro I am exempt under Sec. WORKER'S COMPENSATION I hereby affirm that I have a comply with such provisions or to granted upon the express condition perform the obligations with reap and employees, from and against sustained or arising in the construpermit is void 90 days from the distribution of the permit is and agree to its requirements.	any three-year period. (Sec. 7044 Business on exclusively contracting with licensed corporty who builds or improves thereon, and B&PC for this reason. B&PC for this reason. Company Na see of the work for which this permit is issued to the work for which this permit is issued to the work one hundred dollars (\$100) or the permit shall be deemed revoked. This is that the permittes shall be responsible for that the permittes shall be responsible for the work performed under the perlate of issuance unless an extension is grant under provisions of Chapter 9 of Division tements, and that the above information is to the permitted of the work performed under the permitted of the work permitted the permitted of the work permitted the permitted of the work permitted the	a and Professions Code). Attractors to construct the project, (Sec. 7044, Business and Professions Code: The Code who contracts for such projects with a contractor(s) licensed pursuant to the Contract for such projects with a contractor(s) licensed pursuant to the Contract for such projects with a contractor(s) licensed pursuant to the Contract for such project with a contractor of the Contract for such project in the Contract for such pursuant to the Contract for least for the Contract for such pursuant to the Worker's Compensation provisions of the Labor Contract for such pursuant to all provisions of Title 12 Chapter 12.12 of the Oakland More all claims and liabilities arising out of work performed under the permit or arising of hall, and by acceptance of the permit agrees to defend, indemnify, save and hold harm in the party person for or on account of any bodily injuries, disease or illness or damagement or in consequence of permittee's failure to perform the obligations with respect to ted by the Director of the Office of Planning and Building. 10/13/98	contractor's License Law stor's License law). Labor Code). ker's Compensation Laws code, you must forthwith dunicipal Code. It is sold of permittee's failure to nless the City, its officers e to persons and/or property o street maintenance. This
structures more than once during I, as owner of the property, a does not apply to an owner of pre I am exempt under Sec. WORKER'S COMPENSATION I hereby affirm that I have a c Policy # I certify that in the performan of California (not required for we NOTICE TO APPLICANT: If, a comply with such provisions or ti granted upon the express condition perform the obligations with reap and employees, from and against sustained or arising in the constru- permit is void 90 days from the d I hereby affirm that I am licensed	any three-year period. (Sec. 7044 Business mexclusively contracting with licensed corporty who builds or improves thereon, and B&PC for this reason B&PC for this reason. Company Na corporate of consent to self-insure, or a cest company Na corporate of the work for which this permit is issued to the work for which this permit is issued to the work of the self-insure of Exemption, this permit shall be deemed revoked. This is no that the permittee shall be responsible for cet to street maintenance. The permittee shall be responsible for cet to street maintenance. The permittee shall be responsible for cet to street maintenance. The permittee shall be responsible for cet to street maintenance. The permittee shall be responsible for cet to street maintenance. The permittee shall be responsible for cet to street maintenance. The permittee shall be responsible for cet to street maintenance. The permittee shall be responsible for cet to street maintenance. The permittee shall be responsible for cet to street maintenance. The permittee shall be responsible for cet to street maintenance. The permittee shall be responsible for cet to street maintenance. The permittee shall be responsible for cet to street maintenance. The permittee shall be responsible for cet to street maintenance. The permittee shall be responsible for cet to street maintenance. The permittee shall be responsible for cet to street maintenance. The permittee shall be responsible for cet to street maintenance. The permittee shall be responsible for cet to street maintenance and the responsible for cet to street maintenance and the responsible for cet to street maintenance. The permittee shall be responsible for cet to street maintenance and the responsible for	a and Professions Code). Itractors to construct the project, (Sec. 7044, Business and Professions Code: The Code who contracts for such projects with a contractor(s) licensed pursuant to the Contract of Compensation Insurance, or a certified copy thereof (Sec. 3700, and the Contract of Contra	Code, you must forthwith dunicipal Code, it is sut of permittee's failure to nless the City, its officers e to persons and/or property o street maintenance. This contractor), that I have read
structures more than once during I, as owner of the property, at does not apply to an owner of pro I am exempt under Sec. WORKER'S COMPENSATION I hereby affirm that I have a complete the property of the property of the property of the property of the provisions or the property of the provisions or the property of the property of the provisions of the property	any three-year period. (Sec. 7044 Business on exclusively contracting with licensed corporty who builds or improves thereon, and B&PC for this reason. B&PC for this reason. Company Na see of the work for which this permit is issued to the work for which this permit is issued to the work one hundred dollars (\$100) or the permit shall be deemed revoked. This is that the permittes shall be responsible for that the permittes shall be responsible for the work performed under the perlate of issuance unless an extension is grant under provisions of Chapter 9 of Division tements, and that the above information is to the permitted of the work performed under the permitted of the work permitted the permitted of the work permitted the permitted of the work permitted the	a and Professions Code). Attractors to construct the project, (Sec. 7044, Business and Professions Code: The Code who contracts for such projects with a contractor(s) licensed pursuant to the Contract for such projects with a contractor(s) licensed pursuant to the Contract for such projects with a contractor(s) licensed pursuant to the Contract for such project with a contractor of the Contract for such project in the Contract for such pursuant to the Contract for least for the Contract for such pursuant to the Worker's Compensation provisions of the Labor Contract for such pursuant to all provisions of Title 12 Chapter 12.12 of the Oakland More all claims and liabilities arising out of work performed under the permit or arising of hall, and by acceptance of the permit agrees to defend, indemnify, save and hold harm in the party person for or on account of any bodily injuries, disease or illness or damagement or in consequence of permittee's failure to perform the obligations with respect to ted by the Director of the Office of Planning and Building. 10/13/98	Code, you must forthwith dunicipal Code. It is but of permittee's failure to niless the City, its officers e to persons and/or property o street maintenance. This contractor), that I have read the City of the Contractor, that I have read the Contractor, that I have read the City of the Contractor, that I have read the City of the Contractor, that I have read the City of the C



ALAMEDA COUNTY PUBLIC WORKS AGENCY

WATER RESOURCES SECTION 951 TURNER COURT, SUITE 340, HAYWARD, CA 34515-2455 PROTE (510) 676-5575 ANDREAS GOPPERY YAX (516) 676-5241 (619) 678-5244 ALVIN KAN

DRILLING PERMIT APPLICATION

for applicant to complete	FOR OFFICE USE
LOCATION OF PROTECT 2853-2863 Marilela Parhagy	PERMIT NUMBER 98WP43Z
	PERMIT CONDITIONS
Cel·Cornie Countinates Source ft. Accuracy =ft. CENft. CCEft. AZN	Circles Parmit Raquirements Apply
CLIENT	(A) GENERAL
Hume Rage Street Proportici	I. A permit application should be submitted 50 et to
Address 3 Embarcadary Center Phone 1415) 398-2266	server or the ACFWA office five days prior to
City _ 5.F Tip 94111	biscored antigot der.
	2. Submit to ACT WA within 60 day: after completion al
APPLICANT	permitted work the eriginal Department of Wither
Name CERES Associates	Resources Water Wall Difffett Aspert er enquestlett for
For (925) 825-444	well projects, or drilling lugs and lockung sherth for
Address 5040 Commercial Gr Phone (925) 825-4466	e-acceptical petitical
City Concered Ste F tip 94520	3. Permit is youd of project not begun within 90 days of
The state of the s	approval daw.
TYPE OF PROJECT	B. WATER SUFFLY WELLS
Walt Canonicus Gentalmiest Inversion	t. Minimum surface sest thickness is two ments of
Cethodic Protection C General D	coment great placed by mercia.
Water Supply C Consumination 3	3. Minimum cael capes is 30 feet for municipal and
Monitoring D Well Demuenon D	industrial wells or 20 feet for domestic and imprison
Incompanie O west Digusteday	wells univer a larger depth in specially approved.
Proposed water Supply well, use	C. GROUNDWATER MONETORING WELLS
plant and the first that the first t	INCLUDING PIEZOMETERS
	1. Historium sorthes and mickeys it two metres of
A STATE OF THE PARTY OF THE PAR	comest grows placed by creme.
industries 0 Other Bongos 3	2. Minimum seal depth for monaging wells is the
EN.	
DRILLING METROD:	maximum depth practicable or 20 feet.
Mud Ratery U Ast Rosery O Auger I Cable O Other D Direct Poin (Geographe)	(b.) GEOTECHNICAL
Cable O Other O Direct Poin (Generalie)	Becklill both bole surp compected contings as parals
	bentonile and upper two feet with compacted material.
DARLER'S LICENSE NO CS7 485165 (Grege Drilling)	In errar of known or suspected contemment, around countries grow shall be used in place of compacted comings.
WELL PROJECTS	Y CATHODIC
Drill Hele Disercerin Meanners	Fill hate shows anode some with commerce placed by seems.
Casing Diameter in. Depth in	F. WELL DESTRUCTION
Surface Stat Dopin ft. Number	Sec attached.
	G. SPECIAL CONDITIONS
GEOTECHNICAL PROJECTS	In .
Number of Bornes 6 Maximum	A
Hale Dismozer n. Depth 12_ft	A 1 1 7
Control Market and Control Con	(1) 1/2 (5)
ESTIMATED STARTING DATE 10/28/98	10/13/98
ESTIMATED COMPLETION DATE SAME	APPROVEDDATE
i hareby agree se comply with all requirements of this permit and Atameda County Ordinance No. 73 68.	
SIGNATURE SANTE DATE 10/17/98	

20 · a

Apr-06-98 01:33P Kvijhaug Well prilling 510-685-6678



Soit Boring Completion Details Asphalt 1 2 3 1.5* Dia. Borehole 5 4 5 7 7 8 9 10 11 12 0 Portland cement 14 22 5	Aspiral and business flavor, sales, sit and oldy)
Asphalt 1 2 5 3 1.5° Dia. Borchole 4 5 7 8 9 10 11 11 12 0 C 12	Asphalt and baserock(includes gravel, sand, silt and clay)
Estimated Depth to GW Part of	Sanda braum firm fine and no oder
11	P Same: brown, tirm; time same, no odor.
	Silty Clay: Very dark gray brown; firm; low plasticity; moist; no odor.
12 0	
cement 14 g	Olive brown; firm; low plasticity; moist; no odor.
TD 16' 55 12	low to medium plasticity; wet; petroleum odor.
17- 18- 19-	
20- 21- 22-	
23-	
25- 26- 27-	
28-	
31- 32- 33-	



BORING NO. SB-14	PROJECT NAME: Commercial Prope	arty	PRO 285	OJECT ADDRESS: 3-2863 Mandela Parkway, Oakland, California	DATE: November 30, 1998	SHEET 1 OF 1
Soil Boring Completion Details	E Sample Interval	PID Reading	USCS	DESCRIPTION OF MATER	IAL	
Asphalt	1 0		af	Asphalt and baserock(includes gravel, sand, silt a	nd clay)	-
1.5" Dia. Borehole	2 0° 5° 5° 4° 4° 4° 4° 4° 4° 4° 4° 4° 4° 4° 4° 4°		SP	Sand: brown; firm; fine sand; no odor.		
Estimated Depth to GW	5 - 4 - 6 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2 - 2	0		Silty Clay: Very dark gray brown; firm; low plasticity; moist; no odor.		
	8 - 8 - 8 - 8 - 10 - 8 - 12 - 12 - 12 - 12 - 12 - 12 - 12	0	CL	Olive brown; firm; low plasticity; moist; no odor.		
Portland cement	11- 12- 13- 14- 15- 16- 17-	27		Olive brown; firm; low to medium plasticity; wet; petroleum odor.		
	18- 19- 20- 21-					
	22-					
	25- 26- 27- 28-					
	29- 30- 31-					-
	32-					-

Logged by: Mary Holland-Ford

BORING NO. SB-15	PROJECT NAME: Commercial Property			PROJECT ADDRESS: 2853-2863 Mandela Parkway, Oakland, California DATE: November 30, 19						
Soil Boring Completion Details	DEPTH	Sample Interval	PID Reading	USCS	DESCRIPTION OF MATERIAL					
Asphalt	1			af	Asphalt and baserock(includes gravel, sand, si	lt and clay)				
4	3	0' to 4'		SP	Sand: brown; fimr; fine sand; no odor		_			
1.5" Dia. Borehole	4 _		0		Silty Clay: Very dark gray brown; firm; low plasticity; moist; no odor.					
Estimated Depth to GW	6 -	4' to 8'					 -			
-	8 -			CL			-			
	9 -	8. 8.	0		Olive brown;		<u>-</u>			
	11-	o 12'		ļ						
	13-	Ž								
	14	12' to 16'	12	***************************************	Low to medium plasticity; wet; petroleum od-	or.	<u>-</u> -			
TD 16	16-									
	17- 18-						 			
	19- 20-						<u>-</u> -			
	21-	į					_			
1	22-						-			
The state of the s	24- 25-	}								
	26-						 			
	27- 28-						<u>-</u>			
	29- 30-						 -			
3	31-									
	13						-			

				Logge	ed by: Mary Holla	nd-Ford		
BORING NO. SB-16	 	PROJECT NAME: Commercial Property		DECT ADDRESS: 3-2863 Mandela Parkway, Oakland, California	DATE: November 30, 1998	SHEET 1 OF 1		
Soil Boring Completion Details	Completion Details Sample Interval		Sample Interval R S D DESCRIPTION OF MATERIAL					
Asphalt	1		af	Asphalt and baserock(includes gravel, sand, s	silt and clay)	-		
-	2 0 5 5 4 4 5 4 5 6 6 6 6 6 6 6 6 6 6 6 6 6		SP	Sand: brown; funr; fine sand; no odor		<u>-</u> -		
1.5" Dia. Borehole	4			Silty Clay Vary dock grow house 6		-		
	5 - 4. to &	7		Silty Clay: Very dark gray brown; firm; low plasticity; moist; petroleum odor.				
Estimated Depth to GW	'					 		
<u> </u>	9 2 2					_		
	8' to 12'							
	12-	19	CL	Olive brown; wet; petroleum odor.		_		
Portland cement	13-14-15-15-15-15-15-15-15-15-15-15-15-15-15-					-		
	14- 8 6					-		
	16-17-17		:					
	18-16' to 20'	37		Low to medium plasticity.		-		
\bowtie	19_20							
1	21-					<u>-</u>		
	23							
i	24- 25-				÷	-		
	26-							
	27 - 28 -							
<u> </u>	29					 		
1	30- 31-							
	32							
1		i I	1					

BORING NO. SB-17	PRo Co	OJECT NAME: mmercial Property	y	PROJECT ADDRESS: 2853-2863 Mandela Parkway, Oakland, California DATE: November 30, 199				
Soil Boring Completion Details	DEPTH	Sample Interval	PID Reading	USCS	DESCRIPTION OF MATERI		OF 1	
Concrete	ì - 2 -	0' to 4'		af	Concrete and baserock(includes gravel, sand	, silt and clay)		
1.5" Dia. Borehole	3	<u> </u>		SP	Sand: brown; fimr, fine sand; no odor			
stimated epth to GW	5-	4' to 8'	12		Silty Clay: Olive brown; firm; low plasticity; wet; petroleum odor.			
**	8 9 **	2	21	CL			-	
	11-	8' to 12'					-	
Portland cement	14_	12' to 16'	27		Low to medium			
	16- 17- 18-				plasticity; wet; petroleum odor.			
	19-							
	21-						-	
	24- 25-			\$			-	
	26- 27- 28-						- 	
	29- 30- 31-						-	
	32-						-	

BORING NO. SB-18	PRO Co	OJECT NAME: mmercial Property	y	PRO 2853	DATE: November 30, 1998	SHEET 1 OF 1	
Soil Boring Completion Details	DEPTH	Sample Interval	PID Reading	nscs	DESCRIPTION OF MATERI	AL	1
Asphalt	1-			af	Asphalt and baserock(includes gravel, sand, s	ilt and clay)	
~	3	0° to 4.		SP	Sand: brown; fimr, fine sand; no odor		
1.5" Dia. Borehole	4 -		0		Silty Clay: Very dark gray brown; firm; low plasticity; moist: no odor.		-
Estimated Depth to GW	6 -	4' to 8"			,,,		
<u> </u>	7 - 8 -	X			Olive brown		. <u></u>
	9 -	8' to 12'	0	CL	Olive brown		- -
	11-	× 15;			•		
Portland	12-4						-
cement	14-	12' to 16'	0		Medium plasticity; wet.		-
TD 16	16-	Ä			, and the parties of the same		
	18-						
	20						
	21-						
	23-					_	
	25- 26-	3					 -
	27-						
	28-						-
	30-						- - -
	32- 33-						_
<u> </u>	33°	}	1	1			

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

Ceres Associates	Client Project ID: #CA 2684	Date Sampled: 11/30/98				
5040 Commercial Circle, Ste F	·i	Date Received: 12/02/98				
Concord, CA 94520	Client Contact: Mary Holland	Date Extracted: 12/02/98 Date Analyzed: 12/02/98				
	Client P.O:					

12/09/98

Dear Mary:

Enclosed are:

- 1). the results of 19 samples from your #CA 2684 project,
- 2). a QC report for the above samples
- 3). a copy of the chain of custody, and
- 4). a bill for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions please contact me. McCampbell Analytical Laboratories strives for excellence in quality, service and cost. Thank you for your business and I look forward to working with you again.

Yours truly,

Edward Hamilton, Lab Director

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

Ceres Associates	Client Project ID: #CA 2684	Date Sampled: 11/30/98				
5040 Commercial Circle, Ste F		Date Received: 12/02/98				
Concord, CA 94520	Client Contact: Mary Holland	Date Extracted: 12/02/98				
	Client P.O:	Date Analyzed: 12/02-12/03/98				

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX* EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g)	МТВЕ	Benzene	Toluene	Ethylben- zene	Xylenes	% Recovery Surrogate
99517	SB13(10)	S	94,a	ND<2.0	3.2	6.1	2.6	10	100
99518	SB13(15)	S	ND	ND	ND	ND	ND	ND	100
99519	SB14(5)	S	ND	ND	ND	ND	ND	ND	109
99520	SB14(10)	s	ND	ND	ND	ND	ND	ND	98
99521	SB15(5)	S	ND	ND	ND	ND	ND	ND	105
99522	SB15(10)	S	ND	ND	ND	ND	ND	ND	101
99523	SB15(15)	S	1600,a	ND<30	22	67 26		93	95
99524	SB16(12)	S	670,a	ND<5	12	34	9.2	40	100
99525	SB16(18)	S	5.6,a	ND	0.60	0.62	0.14	0.57	114*
99526	SB17(9)	s	5.9,a	ND	0.017	0.12	0.074	0.33	#
99527	SB17(16)	S	2.9,a	ND	0.33	0.36	0.064	0.25	106
99528	SB18(8)	s	ND	ND	ND	ND	ND	ND	102
99529	SB18(16)	S	ND	ND	ND	ND	ND ND		96
99530	SB13	W	1800,a,i	ND<80	88	100	85	160	101
	g Limit unless se stated; ND	W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
	means not detected above the reporting limit		1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

^{*} water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L

^{*} cluttered chromatogram; sample peak coelutes with sumogate peak

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.

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

Ceres Associates	Client Project ID: #CA 2684	Date Sampled: 11/30/98					
5040 Commercial Circle, Ste F		Date Received: 12/02/98					
Concord, CA 94520	Client Contact: Mary Holland	Date Extracted: 12/02-12/04/98					
	Client P.O:	Date Analyzed: 12/02/-12/04/98					

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline*, with Methyl tert-Butyl Ether* & BTEX* EPA methods 5030, modified 8015, and 8020 or 602; California RWQCB (SF Bay Region) method GCFID(5030)

Lab ID	Client ID	Matrix	TPH(g) ⁺	МТВЕ	Benzene	Toluene	Ethylben- zene	Xylenes	% Recovery Surrogate
99531	SB14	W	ND,i	14	ND	ND	ND	ND	90
99532	SB15	W	ND	ND	ND	ND	ND	0.55	105
99533	SB16	W	110,000,a,h,i	ND<1300	17,000	24,000	2700	11,000	95
99534	SB17	W	43,000,a,h,i	ND<690	2500	6700	1600	6200	105
99535	SB18	W	ND,i	ND	ND	0.67	ND	0.62	107
									<u> </u>
otherwise	Limit unless stated; ND	W	50 ug/L	5.0	0.5	0.5	0.5	0.5	
means not detected above the reporting limit		S	1.0 mg/kg	0.05	0.005	0.005	0.005	0.005	

^{*} water and vapor samples are reported in ug/L, wipe samples in ug/wipe, soil and sludge samples in mg/kg, and all TCLP and SPLP extracts in ug/L.

[#] cluttered chromatogram; sample peak coelutes with surrogate peak

The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (?); f) one to a few isolated peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen is present; i) liquid sample that contains greater than ~5 vol. % sediment; j) no recognizable pattern.

QC REPORT FOR HYDROCARBON ANALYSES

Date: 12/02/98

Matrix: WATER

	Concent	ration	(mg/L)		% Reco	very	
Analyte 	Sample (#99306) MS		MSD	Amount Spiked	 MS	MSD	RPD
 TPH (qas)	0.0	97.5	92.7	100.0	 97.5	92.7	5.0
Benzene	0.0	9.4	9.4	10.0	94.0	94.0	0.0
Toluene	0.0	9.9	9.7	10.0	99.0	97.0	2.0
Ethyl Benzene	0.0	10.6	9.8	10.0	106.0	98.0	7.8
Xylenes 	0.0	30.1	29.3	30.0 	100.3	97.7	2.7
 TPH(diesel)	0.0	178	177	150	119	118	0.5
TRPH (oil & grease)	0	25600	28000	23700	108	118	9.0

% Rec. = (MS - Sample) / amount spiked x 100

 $RPD = (MS - MSD) / (MS + MSD) \times 2 \times 100$

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QC REPORT FOR HYDROCARBON ANALYSES

Date: 12/02/98

Matrix: SOIL

Concent	ration	(mg/kg)		% Reco	very	
Sample			Amount			RPD
(#95614)	MS	MSD	Spiked	MS	MSD	
						
0.000	2.000	2.105	2.03	99	104	5.1
0.000	0.194	0.192	0.2	. 97	96	1.0
0.000	0.204	0.204	0.2	102	102	0.0
0.000	0.190	0.194	0.2	95	97	2.1
0.000	0.560	0.568	0.6	93	95	1.4
	210	326	200	106	100	2.4
 	210	326	300 			
 0.0 	25.0	25.0	 20.8 	120	120	0.0
	Sample (#95614) 0.000 0.000 0.000 0.000	Sample (#95614) MS 0.000 2.000 0.000 0.194 0.000 0.204 0.000 0.190 0.000 0.560	(#95614) MS MSD 0.000 2.000 2.105 0.000 0.194 0.192 0.000 0.204 0.204 0.000 0.190 0.194 0.000 0.560 0.568	Sample (#95614) MS MSD Spiked 0.000 2.000 2.105 2.03 0.000 0.194 0.192 0.2 0.000 0.204 0.204 0.2 0.000 0.190 0.194 0.2 0.000 0.560 0.568 0.6	Sample (#95614) MS Amount MSD Amount Spiked MSD 0.000 2.000 2.105 2.03 99 2.03 99 99 0.000 0.194 0.192 0.2 97 0.2 97 0.000 0.204 0.204 0.2 102 0.2 95 0.000 0.190 0.194 0.2 95 0.6 93 0 318 326 300 106	Sample (#95614) MS Amount MSD Amount Spiked MSD 0.000 2.000 2.105 2.03 99 104 2.03 99 104 0.000 0.194 0.192 0.2 97 96 2.02 97 96 0.000 0.204 0.204 0.204 0.2 102 102 2.02 102 102 0.000 0.190 0.194 0.2 95 97 2.00 95 97 0.000 0.560 0.568 0.6 93 95

% Rec. = (MS - Sample) / amount spiked x 100

RPD = $(MS - MSD) / (MS + MSD) \times 2 \times 100$

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