R0142
File

STELLAR ENVIRONMENTAL SOLUTIONS, INC.
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TRANSMITTAL MEMORANDUM	
TO: **LOCAL OVERSIGHT PROGRAM** **ENVIRONMENTAL HEALTH SERVICES** **ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY** **1131 HARBOR BAY PARKWAY** **ALAMEDA, CALIFORNIA 94502-6577**	**DATE: DECEMBER 27, 2004**
ATTENTION: DON HWANG	**FILE: SES 2003-43**
SUBJECT: **OAKLAND AUTO WORKS** **240 W. MACARTHUR BLVD** **OAKLAND, CALIFORNIA** **ACEH FUEL LEAK CASE NO. R00000142**	
WE ARE SENDING: ☒ HEREWITH	☐ UNDER SEPARATE COVER
☒ VIA MAIL	☐ VIA
THE FOLLOWING: WORKPLAN FOR ADDITIONAL SITE CHARACTERIZATION AND INTERIM REMEDIAL ACTION (DATED 12/27/04)	
☐ AS REQUESTED	☒ FOR YOUR APPROVAL
☐ FOR REVIEW	☐ FOR YOUR USE
☐ FOR SIGNATURE	☐ FOR YOUR FILES
COPY TO: MR. GLEN POY-WING **OAKLAND AUTO WORKS** **240 WEST MCARTHUR BLVD.** **OAKLAND, CA 94711**	**BY: BRUCE RUCKER** BMR

STELLAR
ENVIRONMENTAL SOLUTIONS, INC.

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December 27, 2004

Mr. Don Hwang
Local Oversight Program
Environmental Health Services – Environmental Protection
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway
Alameda, California 94502-6577

Subject: Workplan for Additional Site Characterization and Interim Remedial Action
Oakland Auto Works (Former Vogue Tyres) – 240 W. MacArthur Blvd., Oakland, CA
ACEH Fuel Leak Case No. R00000142

Dear Mr. Hwang:

INTRODUCTION AND BACKGROUND

On behalf of the property owners (Glen Poy-Wing and his wife), Stellar Environmental Solutions, Inc. (SES) is submitting to the Alameda County Environmental Health (ACEH) this workplan for additional site characterization and interim remedial action at the referenced site. This workplan is being submitted in response to the ACEH letter dated October 27, 2004. Figures 1 through 12 (attached) show historical and proposed sampling locations and analytical results, utility lines and geologic cross-sections with analytical results.

Previous environmental remediation and investigations associated with former underground fuel storage tanks (UFSTs) and a waste oil underground storage tank (UFST) have been conducted at the site since 1991. All known UFSTs have been removed, and there are currently eight site groundwater monitoring wells. In 2002, the current property owners purchased the property and become solely responsible for the remaining site environmental issues. The following briefly summarizes key activities and findings that were considered in preparing this workplan. Our June 8, 2004 Soil and Water Investigation Report (and subsequent quarterly groundwater monitoring progress reports) provide a full discussion of the following site history and environmental characteristics. Tables A-1 through A-7 summarize historical site analytical results.

- Waste oil USTs removed in 1991 and 1996 resulted in no significant residual soil or groundwater contamination.
- Three 10,000-gallon gasoline UFSTs removed prior to 1991 resulted in residual soil and groundwater contamination at concentrations exceeding screening-level criteria.
- Site contaminants include gasoline- and diesel-range petroleum hydrocarbons, BTEX, MTBE, fuel oxygenates (groundwater only) and the lead scavenger EDC (groundwater only)
- There is a substantial mass of residual soil contamination in the former source area. that will very likely be a long-term source of groundwater contamination if unabated.
- A total of 23 groundwater monitoring/sampling events have been conducted in available site wells between August 1997 and September 2004 (the most recent event for which data are available).
- Historical (since 1997) site groundwater flow direction (since 1997) has been northwest to N80W with a relatively flat hydraulic gradient. Shallowest recorded groundwater depth (equilibrated in wells) is 12.5 feet, and first groundwater is encountered in exploratory boreholes at depths of approximately 15 feet, suggesting semi-confining conditions. Shallowest groundwater occurs in a lithologically-distinct sand and gravel zone between approximately 15 and 18 feet deep, overlain by typical clay, silt and sand sediments. A capillary fringe (zone of fluctuating groundwater) of several feet is suggested by seasonal water level elevations and the distribution of soil contamination. The attached Figures show geologic cross-sections of the site and immediate vicinity.
- Groundwater contamination extends offsite to the west and north.
- Soil and groundwater contamination appears to be laterally heterogeneous on the subject property, likely due to lithologic variations.
- No soil contamination was detected in the non-water-bearing zone (approximately 21.5 to 23.5 feet below grade) beneath the upper water-bearing zone.
- There are no documented sensitive receptors (i.e. water wells) that could be impacted by site-sourced contamination. A deep sanitary sewer line beneath MacArthur Boulevard (to the west of the property) is the sole identified potential preferential pathway for contaminant migration.

TECHNICAL OBJECTIVES AND PROPOSED SCOPE OF WORK

The objective of the proposed work is to satisfy ACEH requirements as stipulated in the October 27, 2004 ACEH letter. The scope of work proposed herein is presented below in the numerical order of the ACEH letter items. As requested by ACEH, this workplan presents specific technical data/documentation to support the workplan, including: geologic cross-sections; soil and groundwater analytical results; location of known utility conduits; site monitoring well screen intervals; and our technical rationale for proposed sampling locations.

ACEH Comment 1 – Borehole Groundwater Analytical Results Map

Attached is a revised borehole groundwater analytical results map ("Figure 11") that shows benzene concentrations separate from other contaminants.

ACEH Comment 2 – Site Characterization

The ACEH letter notes that that the lateral extent of the groundwater contaminant plume has not been fully defined. At this time, ACEH is not requiring additional groundwater monitoring wells, but is requesting exploratory borehole sampling. Those data will then be used to determine if (and where) additional groundwater wells should be installed.

We propose to install additional boreholes (as shown on the attached figures) to accomplish the two following general objectives:

1) Collect grab-groundwater data (proposed boreholes BH-22 and BH-23) from the median of MacArthur Boulevard (the downgradient side of the deep sanitary sewer line) to determine if site-sourced contamination extends to this location; and

2) Collect soil and grab-groundwater data from seven (7) boreholes (proposed boreholes BH-24 through BH-30) along the northern and western sides of the property to further define what appear to be lateral heterogeneity in contamination, and to provide data to evaluate the proposed interim remedial action strategy (discussed in a subsequent task).

Boreholes will be advanced with a GeoProbe (or equivalent) direct-push rig. In general, boreholes along the property boundaries will have grab-groundwater sampling only, and samples will be collected from the upper saturated zone (depth less than 20 feet below grade). Boreholes interior to the property will also have soil and soil vapor sampling conducted to further define soil contamination geometry (and to collect additional data for evaluating the interim remedial action technology). Tables 1 through 3 summarize the proposed soil, groundwater and soil vapor

sampling/analysis schedule for the proposed boreholes. Attachment B contains our proposed methods and protocols for exploratory borehole drilling and sampling.

ACEH Comment 3 – Source Characterization

In our June 2004 Soil and Water Investigation Report, we discussed the results of soil sampling beneath the former UFSTs (boreholes BH-19, -20 and –21). As summarized in Tables A-1 and A-2, no soil contamination was detected in any of the maximum-depth samples collected from these boreholes (at depths between 21.5 and 23.5 feet bgs), which in our professional opinion demonstrates that soil contamination does not extend to this depth. In accordance with the ACEH letter request, we will advance and sample two (2) additional exploratory boreholes in the former source area:

BH-31: This borehole will be advanced adjacent to existing BH-20 (where maximum soil contamination was previously detected). One soil sample will be collected from a depth of approximately 27-28 feet bgs (approximately 4 feet beneath the previously-deepest soil sample).

BH-32: This borehole will be advanced between existing BH-20 and BH-21. One soil sample will be collected from a depth of approximately 28 feet bgs (approximately 4 feet beneath the previously-deepest soil sample). The objective of that sample will be to demonstrate the vertical extent of soil contamination at that location.

Soil gas samples will be collected at several depths within the contaminated interval of the unsaturated zone (likely between 12' and 20') for evaluating the interim remedial action technology (discussed below).

ACEH Comment 4 – Preferential Pathway Survey

Our June 2004 Soil and Water Investigation Report discussed the findings of our preferential pathway (and sensitive receptor) survey. We identified one deep utility whose depth and location suggest it could be a potential preferential pathway for contaminant migration: a 21 foot-deep sanitary sewer line located near the center of MacArthur Boulevard. The sanitary sewer line along Howe Street is at a depth of 10 feet bgs, which is several feet above the highest historical groundwater depth, and in our opinion is therefore not a potential preferential pathway.

As discussed in Technical Comment 2 (above), we are proposing to install two exploratory boreholes (BH-22 and BH-23) in the median of MacArthur Boulevard, to evaluate if groundwater contamination extends to the deep sanitary sewer line.

ACEH Comment 5 – Interim Remedial Action Plan

In our professional opinion, interim remedial action should be undertaken as soon as practical to reduce the residual soil contamination in the unsaturated zone in the former source area that will continue to feed the groundwater plume if unabated. We are therefore proposing to evaluate (and implement if the evaluation is favorable) using Soil Vapor Extraction (SVE) as the selected interim remedial action. This technology appears to be the most technically-appropriate strategy because:

- SVE is a proven technology for treating gasoline and its BTEX constituents which are the primary site unsaturated-zone soil contaminants and the primary source of ongoing groundwater contamination at the site;
- SVE requires a minimum of ground space for installation/operation and can achieve contaminant capture from a relatively significant radius outward from the extraction point and beneath the building where the contaminated soil is projected to be;
- SVE can operate cost-effectively once installed with mass capture reduction and equilibration being used as a criterion to terminate its use;
- Contaminant mass removal can be quantified by direct vapor measurement.

The system will likely include the following:

- One or two vapor extraction wells with aboveground (or shallow below-grade) piping connecting the wells to the vacuum pump/blower
- Offgas treatment unit (likely a catalytic convertor or similar)
- One to three vapor monitoring wells to be used for monitoring the efficacy of the installed SVE system
- Associated vapor monitoring ports and gauges

We propose to implement the following approach as regards the interim remedial action:

- Collect borehole contaminant data (soil and vapor sampling, as discussed above) to be used in the evaluation and design phase;
- Conduct a detailed feasibility of the strategy (i.e. evaluating soil permeability; refining contaminant mass and distribution data; estimating contaminant mass removal rates; and considering cost, permitting, regulatory and community acceptability factors);

- Prepare and submit to ACEH an interim remedial action plan discussing the findings of the evaluation, and if favorable, detailed discussion of the system design, operation and maintenance, and technical reporting.
- Install and operate the SVE system and evaluate its effect on site groundwater contamination. Additional corrective action designed specifically to address groundwater contamination would be recommended as indicated by the SVE and continued groundwater monitoring.

ACEH Comment 6 – Historical Groundwater Monitoring Well Analytical Data

The ACEH letter identified a typographical error in our historical groundwater monitoring analytical table (Table A-5). A corrected copy of Table A-5 is included in Attachment A.

ACEH Comment 7 – Borehole Groundwater Depths

The ACEH letter requests that static groundwater levels be determined in future boreholes. For future boreholes (including those proposed herein), we will allow water levels to equilibrate in boreholes for at least 15 minutes following drilling, or for a maximum of one hour following drilling if water levels rise in boreholes more than 0.1 foot per 15 minutes.

Technical Reports

The following technical reports (in addition to this workplan) will be submitted to ACEH, presented in chronological order.

- ***Fourth Quarter 2004 Groundwater Monitoring Report.*** This report will be submitted by January 31, 2005.
- ***First Quarter 2005 Groundwater Monitoring Report.*** This report will be submitted by April 30, 2005.
- ***Interim Remedial Action Plan.*** This Plan will likely be submitted in the First Quarter of 2005.
- ***Interim Remediation Implementation Report.*** This report documenting the interim remedial action will completed as soon as practical following the approval and implementation. Subsequent reporting on remedial monitoring will be included in quarterly reports.
- ***Second Quarter 2005 Groundwater Monitoring Report.*** This report will be submitted by July 31, 2005.
- ***Third Quarter 2005 Groundwater Monitoring Report.*** This report will be submitted by October 31, 2005.

Updated geological cross-sections will be prepared using the findings of the proposed drilling.

The timeline for installing and starting up the remedial system is not known. SES will submit to ACEH a technical report discussing those activities within several weeks following completion of field and/or analytical activities.

The entire project will be overseen by and all technical reports/workplans will be signed by a California Registered Geologist.

TEAM QUALIFICATIONS

Stellar Environmental Solutions, Inc. has completed dozens of similar projects, including several under the jurisdiction of ACEH. Our team will consist of the following:

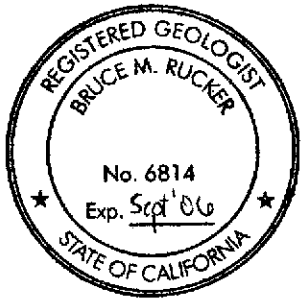
- Stellar Environmental Solutions, Inc. (owners' consultant responsible for overall project coordination, geologic evaluation, sampling, data evaluation, and report certification by a California Registered Geologist);
- Borehole installation driller with a current C-57 license; and
- Analytical laboratory with a current California ELAP certification.

We trust that this submittal meets your agency's needs. We request that ACEH provide to SES and the property owners written approval of this workplan. Please contact the undersigned directly if you have any questions.

Sincerely,

Bruce M. Rucker

Bruce M. Rucker, R.G., R.E.A.
Project Manager



BMR RC RSM

Richard S. Makdisi, R.G., R.E.A.
Principal

Attachments: Figures 1 through 12
Tables 1 through 3 (proposed sampling depths and analyses)
Attachment A (historical analytical results)
Attachment B (drilling/sampling methods and protocols

cc: Mr. Glen Poy-Wing (Property Owner)

TABLE 1
PROPOSED BOREHOLE SAMPLING AND ANALYSIS
SOIL SAMPLES
240 W. MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA

Borehole	Location	Sampling Depths [a]	Analytical Methods		
			TVH-gas	TEH-diesel	BTEX & MTBE
BH-22	MacArthur Blvd. median	No			
BH-23	MacArthur Blvd. median	No			
BH-24	Western property line	No			
BH-25	Western property line	No			
BH-26	Western property line	No			
BH-27	Western property line	11', 13', 15', 17', 19'	X	X	X
BH-28	Western property line	No			
BH-29	Howe St. sidewalk	11', 13', 15', 17', 19'	X	X	X
BH-30	Between BH-6 and -7	11', 13', 15', 17', 19'	X	X	X
BH-31	At BH-20	27'	X	X	X
BH-32	Between BH-20 and -21	27'	X	X	X

[a] Sampling depths are approximate and may be revised in the field based on lithology and evidence of contamination.

TABLE 2
PROPOSED BOREHOLE SAMPLING AND ANALYSIS
GRAB-GROUNDWATER SAMPLES
240 W. MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA

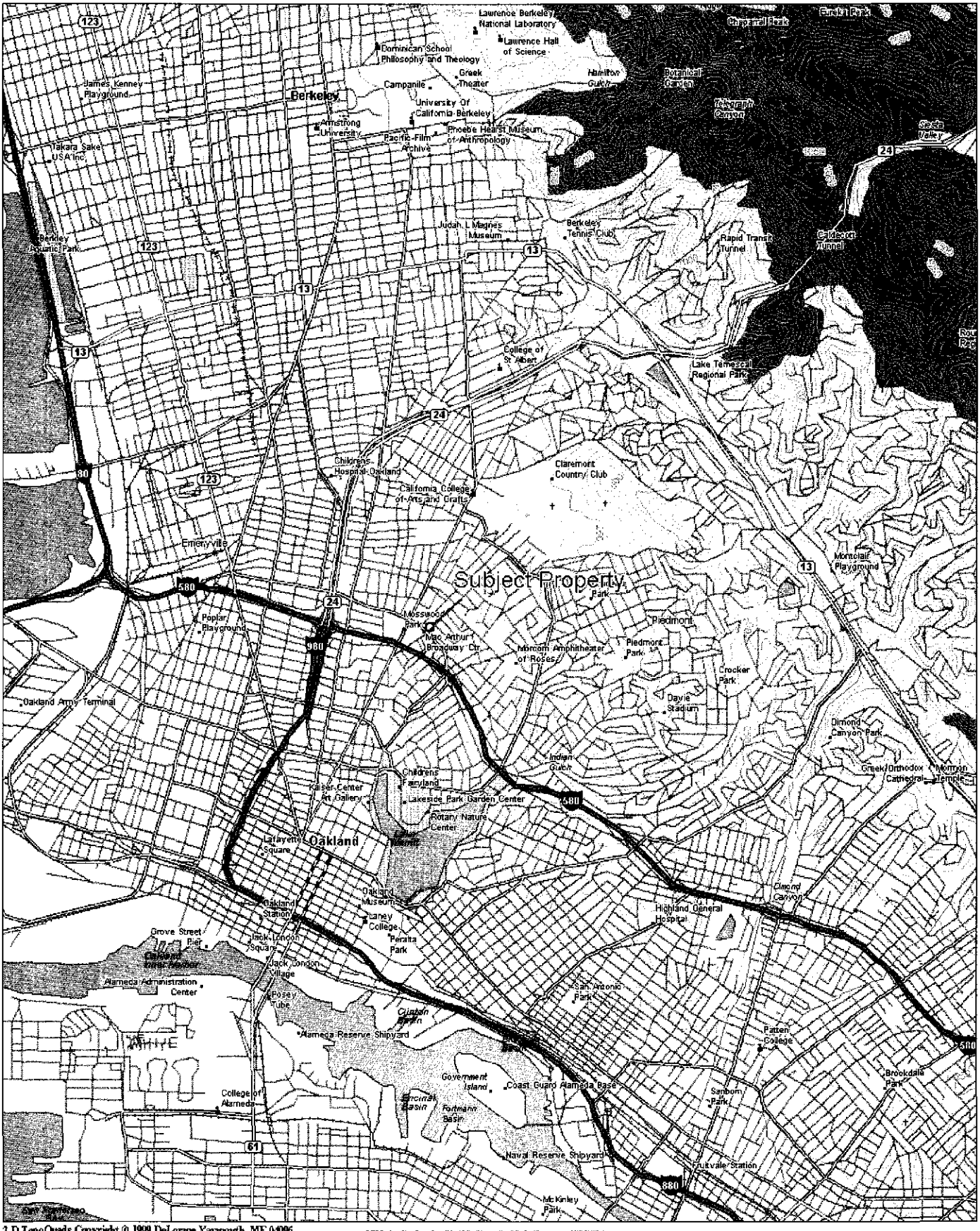
Borehole	Location	Analytical Methods		
		TVH-gas	TEH-diesel	BTEX & MTBE
BH-22	MacArthur Blvd. median	X	X	X
BH-23	MacArthur Blvd. median	X	X	X
BH-24	Western property line	X	X	X
BH-25	Western property line	X	X	X
BH-26	Western property line	X	X	X
BH-27	Western property line	X	X	X
BH-28	Western property line	X	X	X
BH-29	Howe St. sidewalk	X	X	X
BH-30	Between BH-6 and -7	X	X	X
BH-31	At BH-20	X	X	X
BH-32	Between BH-20 and -21	X	X	X

Note: All grab-groundwater samples will be collected from first occurrence of groundwater (likely 20' to 21' below grade)

TABLE 3
PROPOSED BOREHOLE SAMPLING AND ANALYSIS
SOIL VAPOR SAMPLES
240 W. MACARTHUR BOULEVARD, OAKLAND, CALIFORNIA

Borehole	Location	Sampling Depths [a]	Analytical Method [b]	
			TVH-gas	BTEX & MTBE
BH-22	MacArthur Blvd. median	No		
BH-23	MacArthur Blvd. median	No		
BH-24	Western property line	No		
BH-25	Western property line	No		
BH-26	Western property line	No		
BH-27	Western property line	No		
BH-28	Western property line	No		
BH-29	Howe St. sidewalk	No		
BH-30	Between BH-6 and -7	10', 14' & 18'	X	X
BH-31	At BH-20	10', 14' & 18'	X	X
BH-32	Between BH-20 and -21	10', 14' & 18'	X	X

[a] Sampling depths are approximate and may be revised in the field based on lithology and evidence of contamination.
[b] Analysis by TO-3.



1500 ft Scale: 1 : 50,000 Detail: 12-0 Datum: WGS84

N

SITE LOCATION ON U.S.G.S. TOPOGRAPHIC MAP

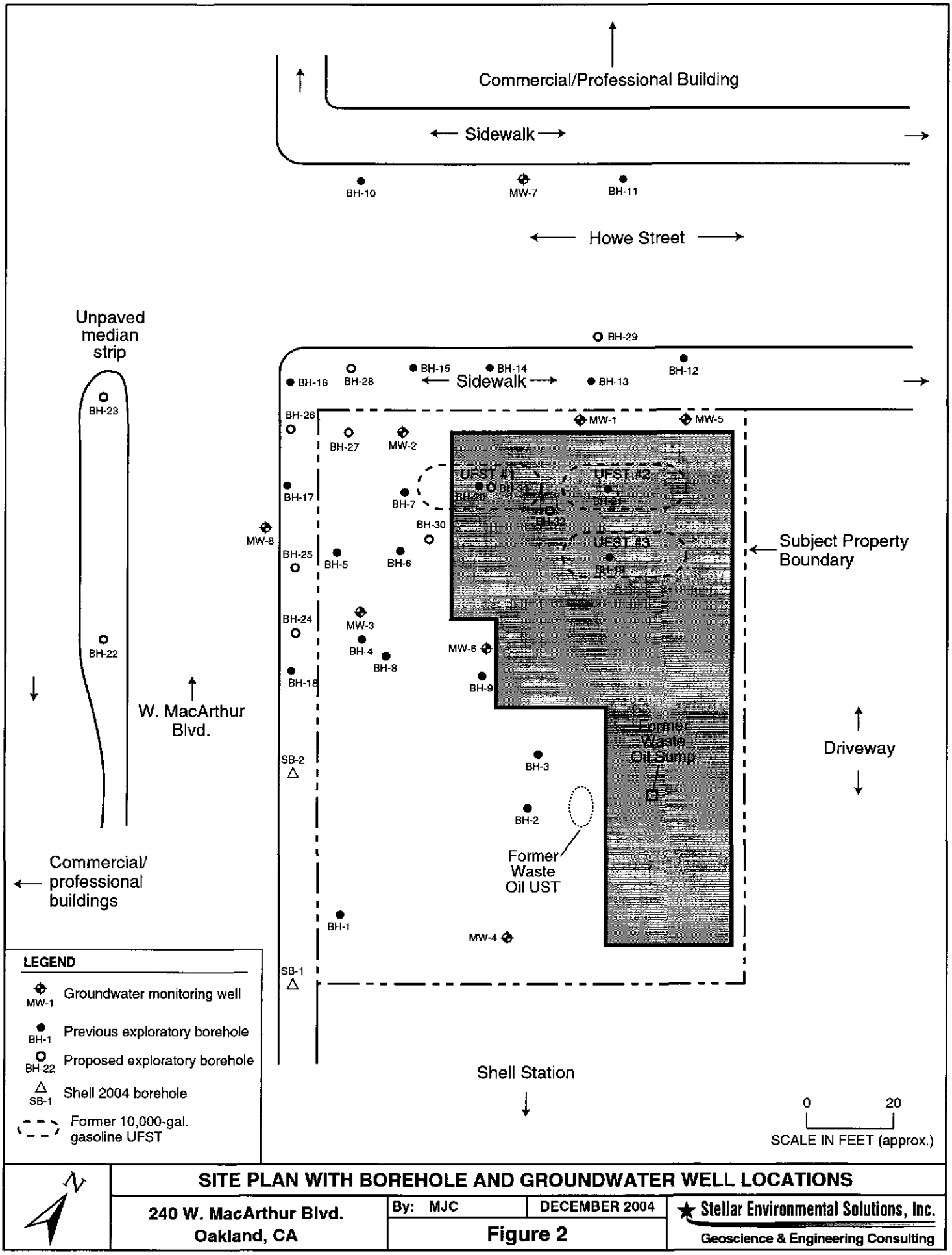
240 W. MacArthur Blvd.
Oakland, CA

By: MJC | APRIL 2004

Figure 1

★ Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

2003-43-01



SITE PLAN WITH BOREHOLE AND GROUNDWATER WELL LOCATIONS

240 W. MacArthur Blvd.
Oakland, CA

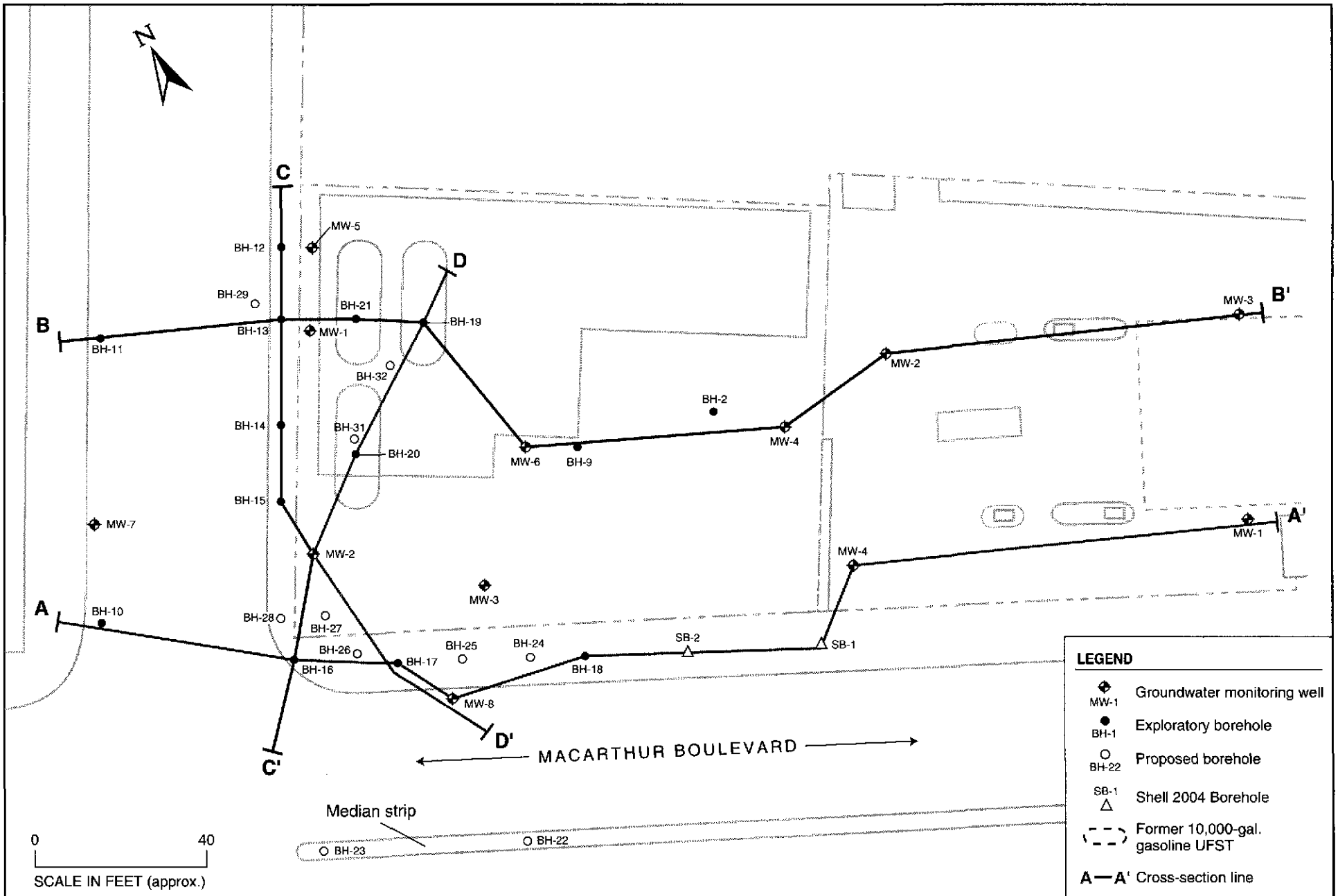
By: MJC

DECEMBER 2004

Figure 2

Stellar Environmental Solutions, Inc.
Geoscience & Engineering Consulting

2003-43-94



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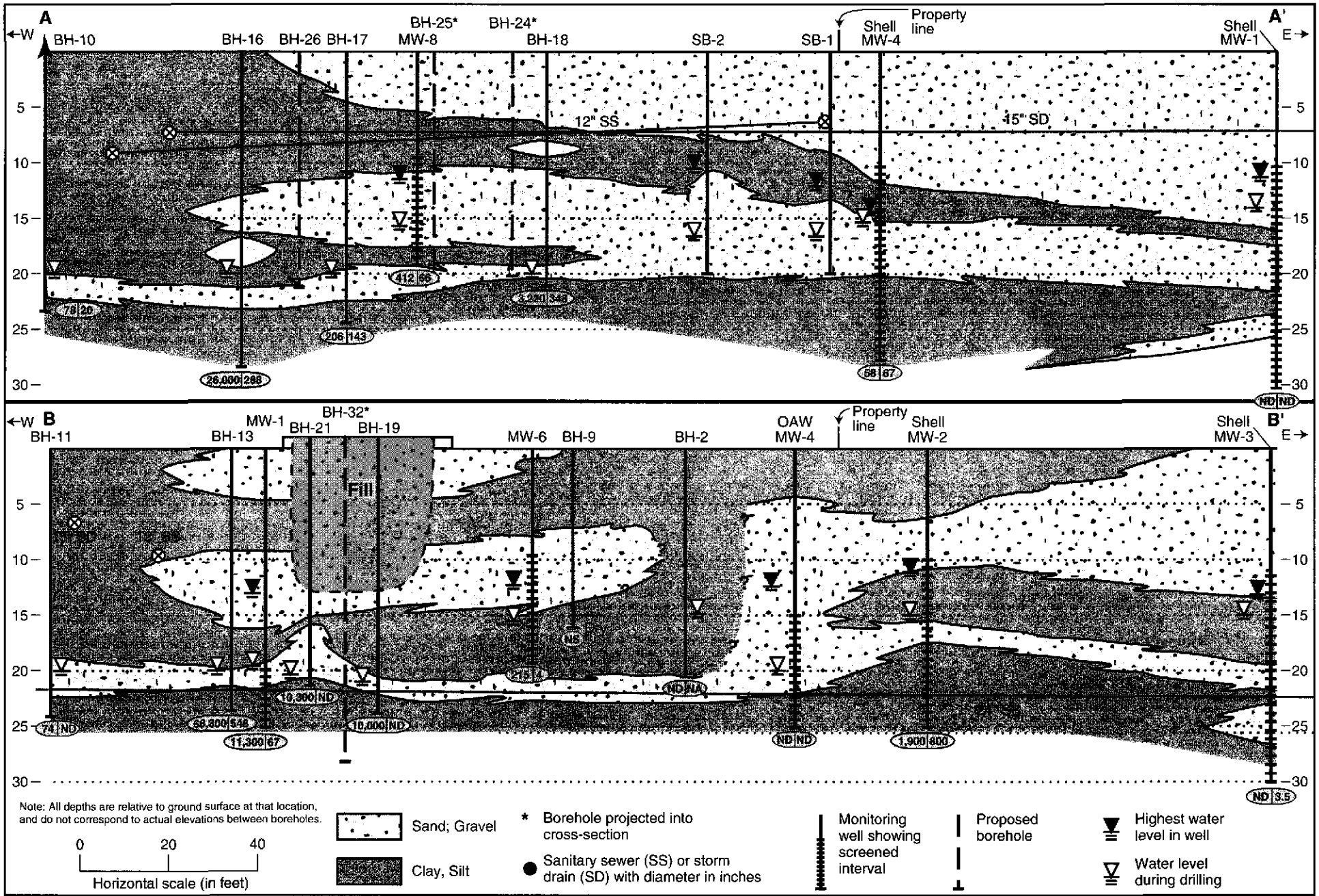
GEOLOGIC CROSS-SECTION LINE LOCATIONS

240 W. MacArthur Blvd., Oakland, CA

Figure 3

by: MJC | DECEMBER 2004

2003-43-95



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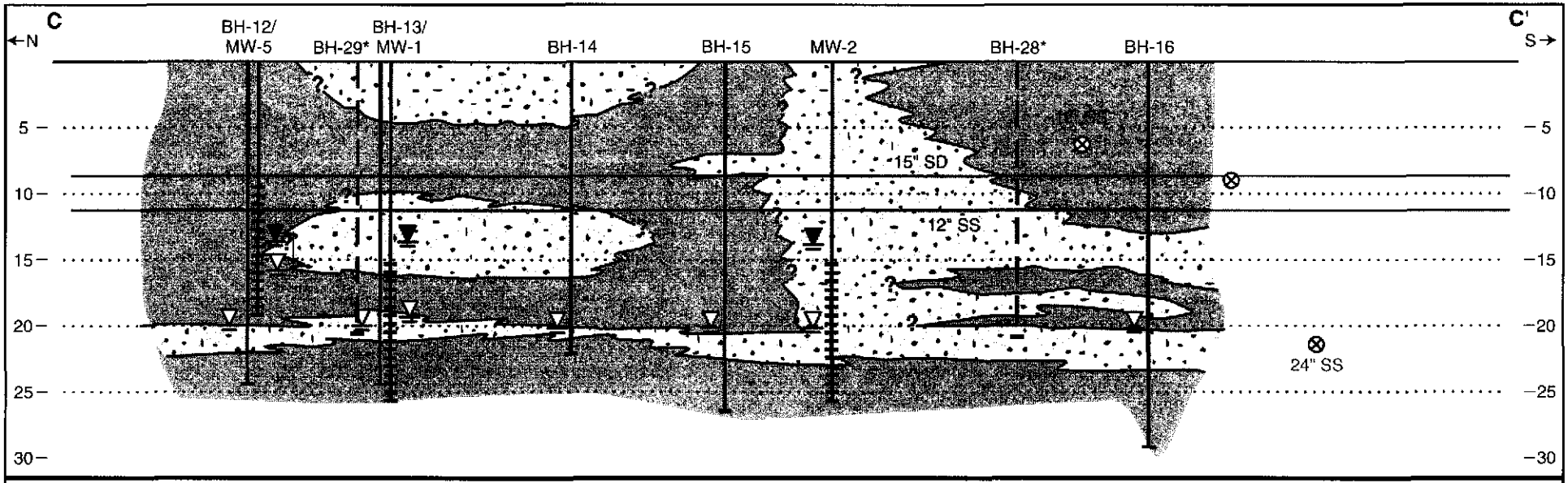
GEOLOGIC CROSS SECTIONS A–A' AND B–B'

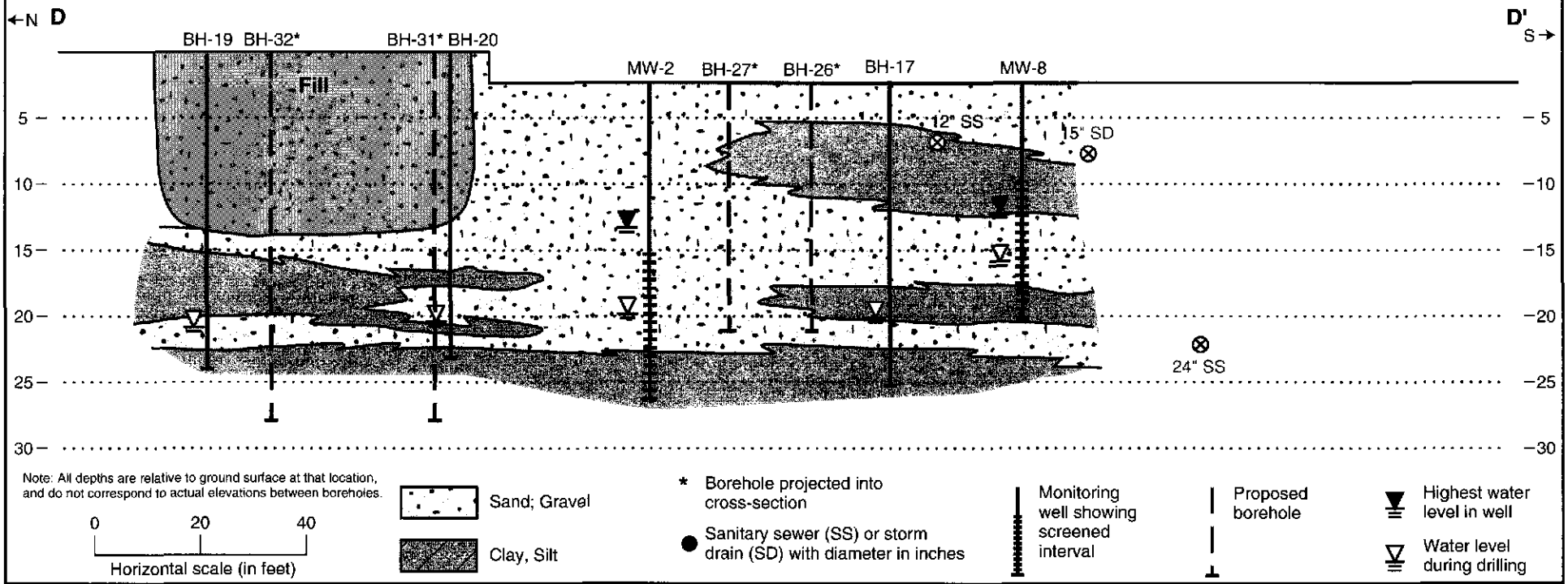
240 W. MacArthur Blvd., Oakland, CA

Figure 4

by: MJC | DECEMBER 2004

2003-43-100





Note: All depths are relative to ground surface at that location, and do not correspond to actual elevations between boreholes.

0 20 40

Horizontal scale (in feet)

Sand; Gravel

Clay, Silt

* Borehole projected into cross-section

● Sanitary sewer (SS) or storm drain (SD) with diameter in inches

Monitoring well showing screened interval

Proposed borehole

Highest water level in well

Water level during drilling

★ Stellar Environmental Solutions, Inc.

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GEOLOGIC CROSS SECTIONS C–C' AND D–D'

240 W. MacArthur Blvd., Oakland, CA

Figure 5

by: MJC

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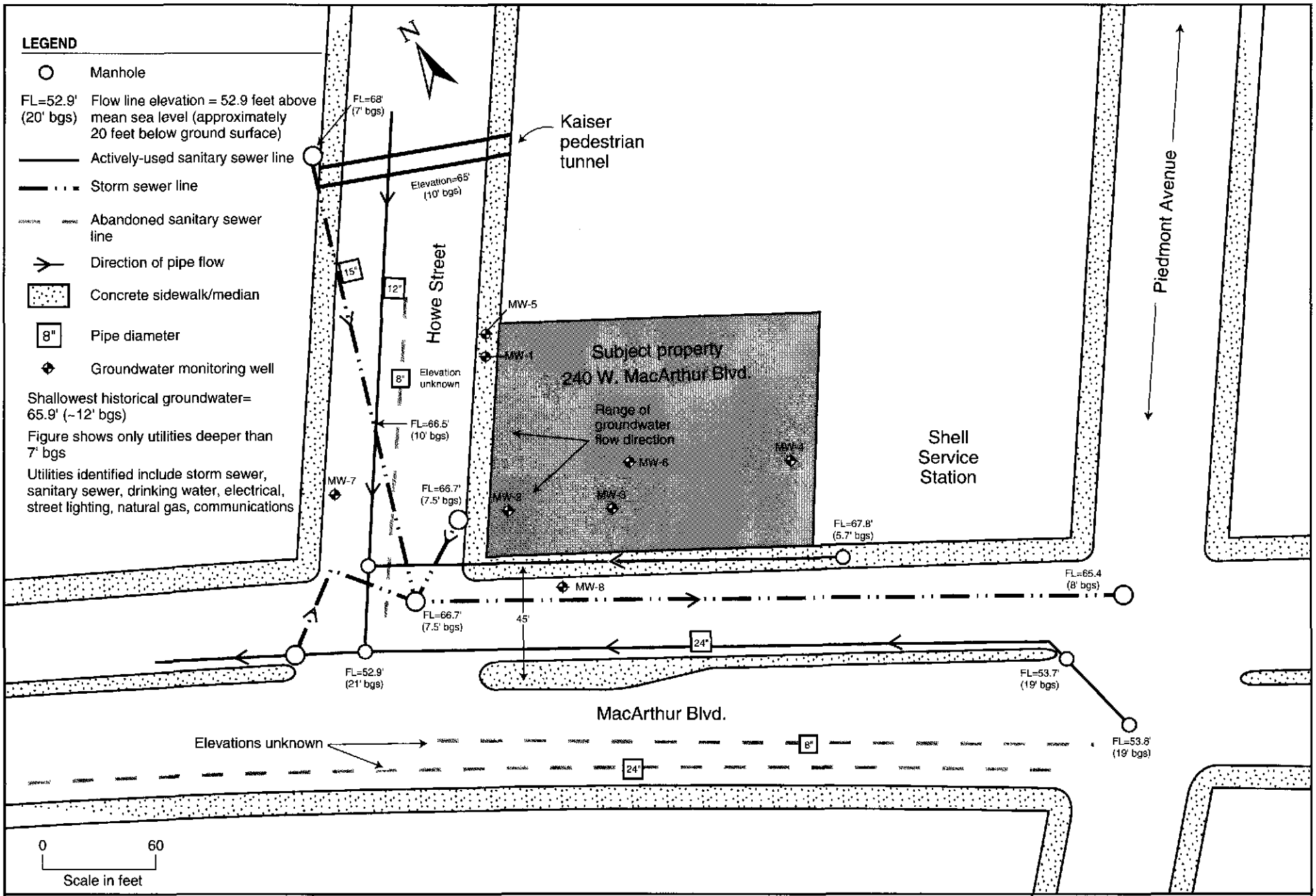
2003-43-99



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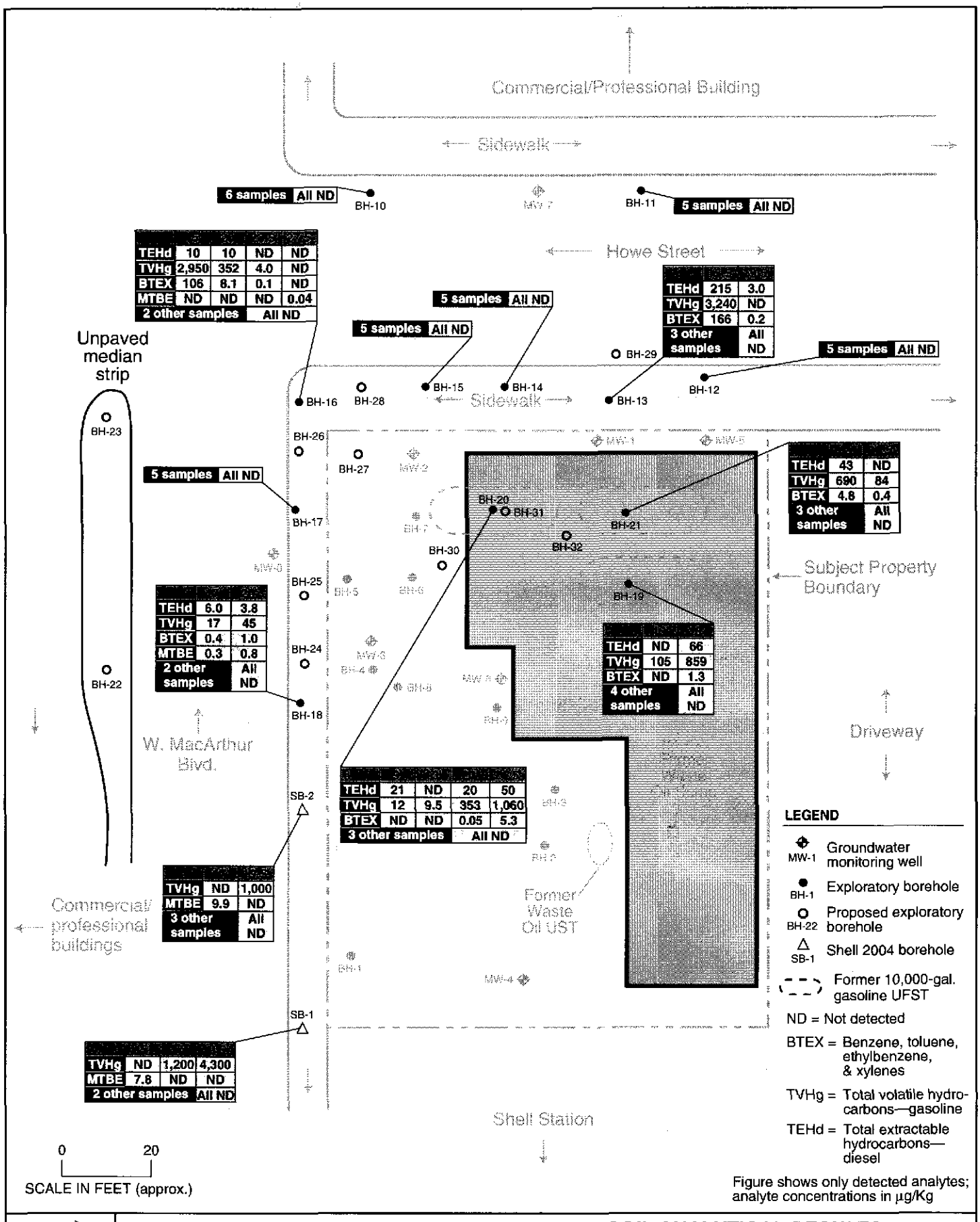
POTENTIAL PREFERENTIAL PATHWAY/UTILITY LOCATION MAP
240 W. MacArthur Blvd., Oakland

Figure 6

by: MJC | DECEMBER 2004

2003-43-97



SITE PLAN WITH APRIL 2004 BOREHOLE SOIL ANALYTICAL RESULTS

240 W. MacArthur Blvd.
Oakland, CA

By: MJC | DECEMBER 2004

Figure 7

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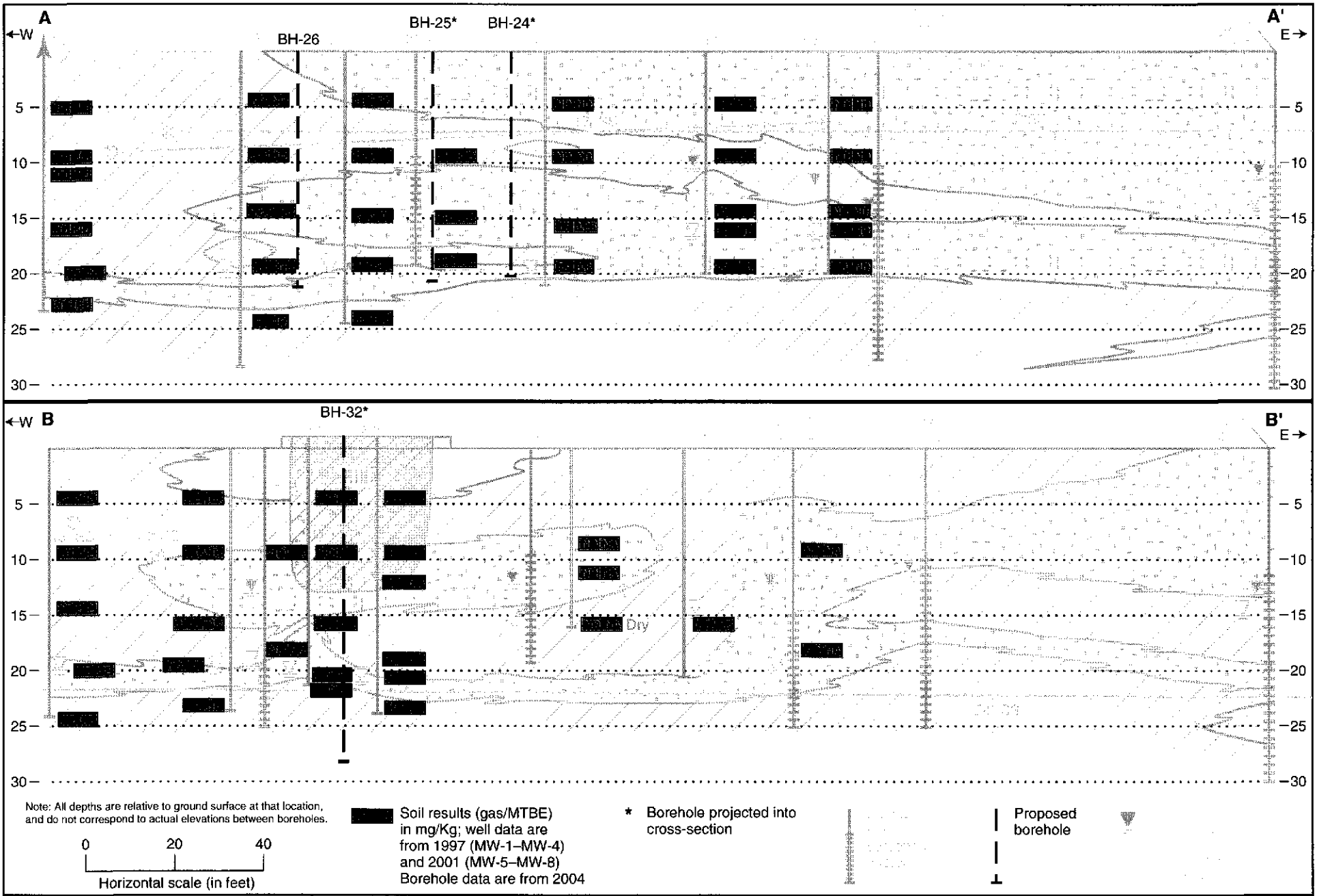

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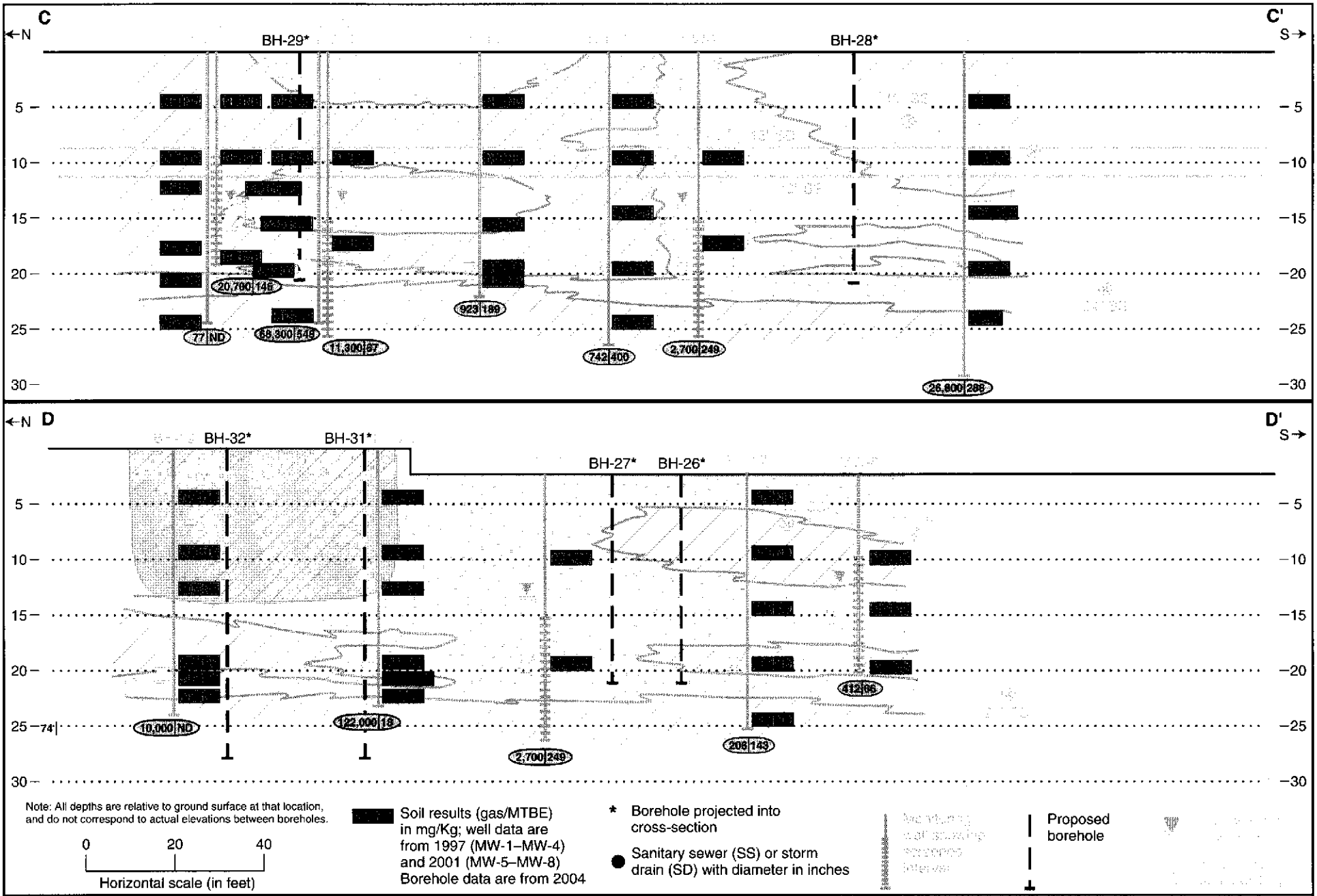
GEOLOGIC CROSS SECTIONS A–A' AND B–B' WITH BOREHOLE SOIL ANALYTICAL RESULTS
240 W. MacArthur Blvd., Oakland, CA

Figure 8

by: MJC | DECEMBER 2004

2003-43-98



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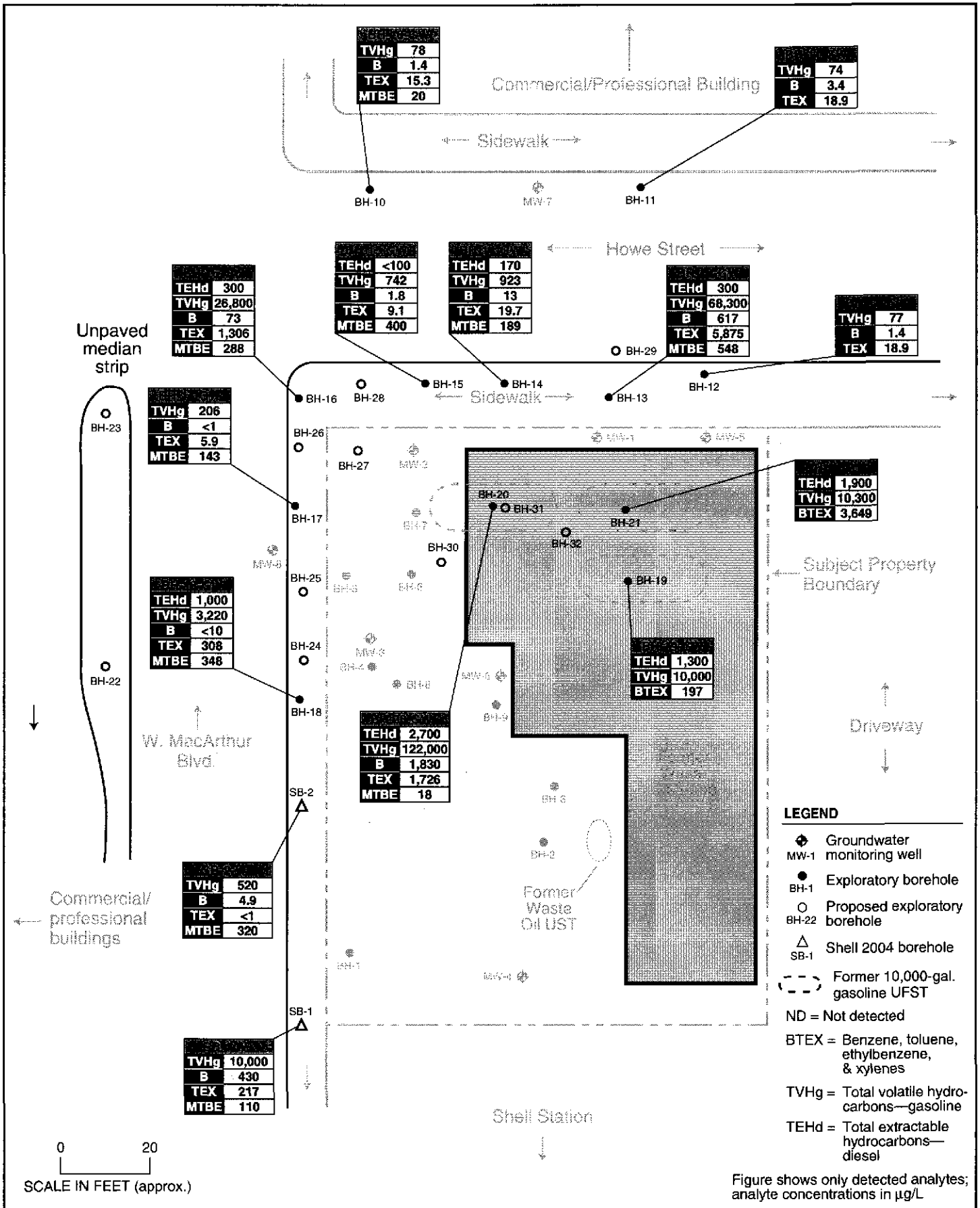
GEOLOGIC CROSS SECTIONS C–C' AND D–D' WITH BOREHOLE SOIL ANALYTICAL RESULTS
240 W. MacArthur Blvd., Oakland, CA

Figure 9

by: MJC | DECEMBER 2004

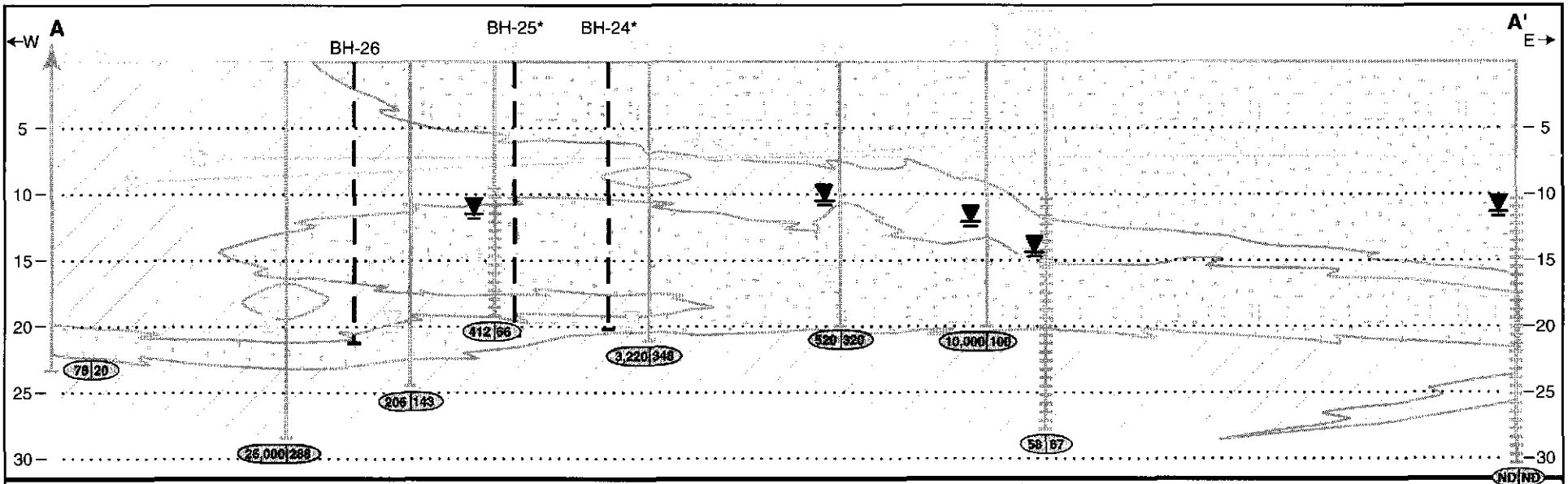
2003-43-96

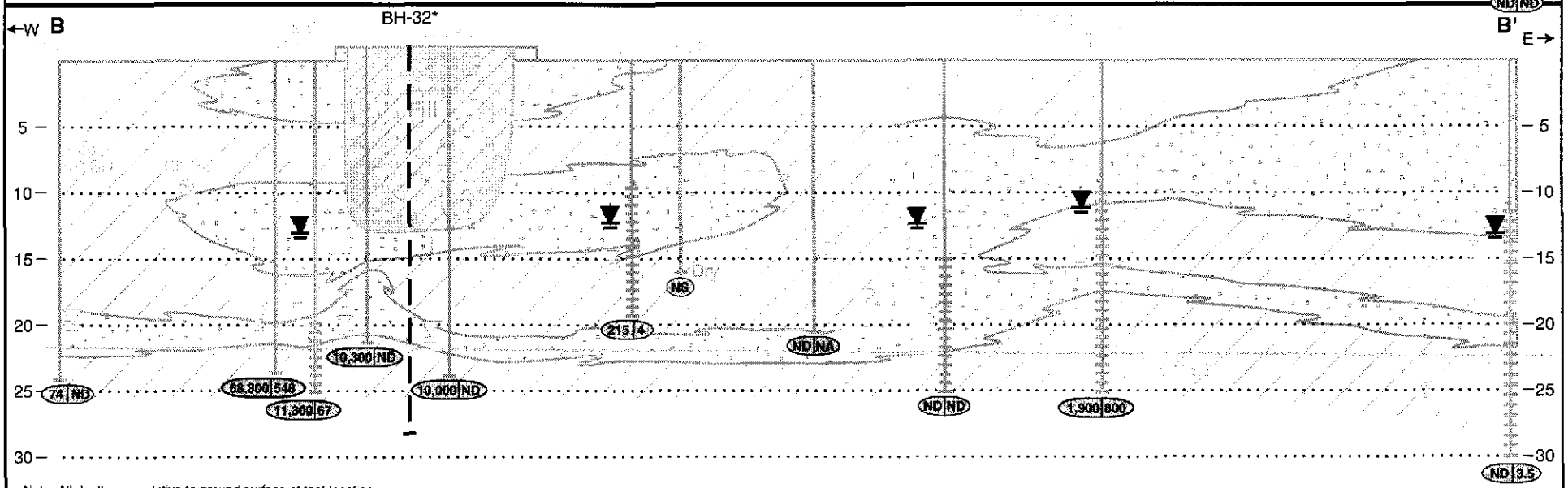


APRIL 2004 BOREHOLE GROUNDWATER ANALYTICAL RESULTS

240 W. MacArthur Blvd. Oakland, CA	By: MJC	DECEMBER 2004	★ Stellar Environmental Solutions, Inc. Geoscience & Engineering Consulting
	Figure 10		

2003-43-91





Note: All depths are relative to ground surface at that location, and do not correspond to actual elevations between boreholes.

0 20 40

Horizontal scale (in feet)

163 66 March-April 2004 groundwater result (gas/MTBE) in µg/L

ND = Not detected

NA = Not analyzed

* Borehole projected into cross-section

● Sanitary sewer (SS) or storm drain (SD) with diameter in inches

Proposed borehole

Highest water level in well

★ Stellar Environmental Solutions, Inc.

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GEOLOGIC CROSS SECTIONS A–A' AND B–B' WITH BOREHOLE GROUNDWATER ANALYTICAL RESULTS

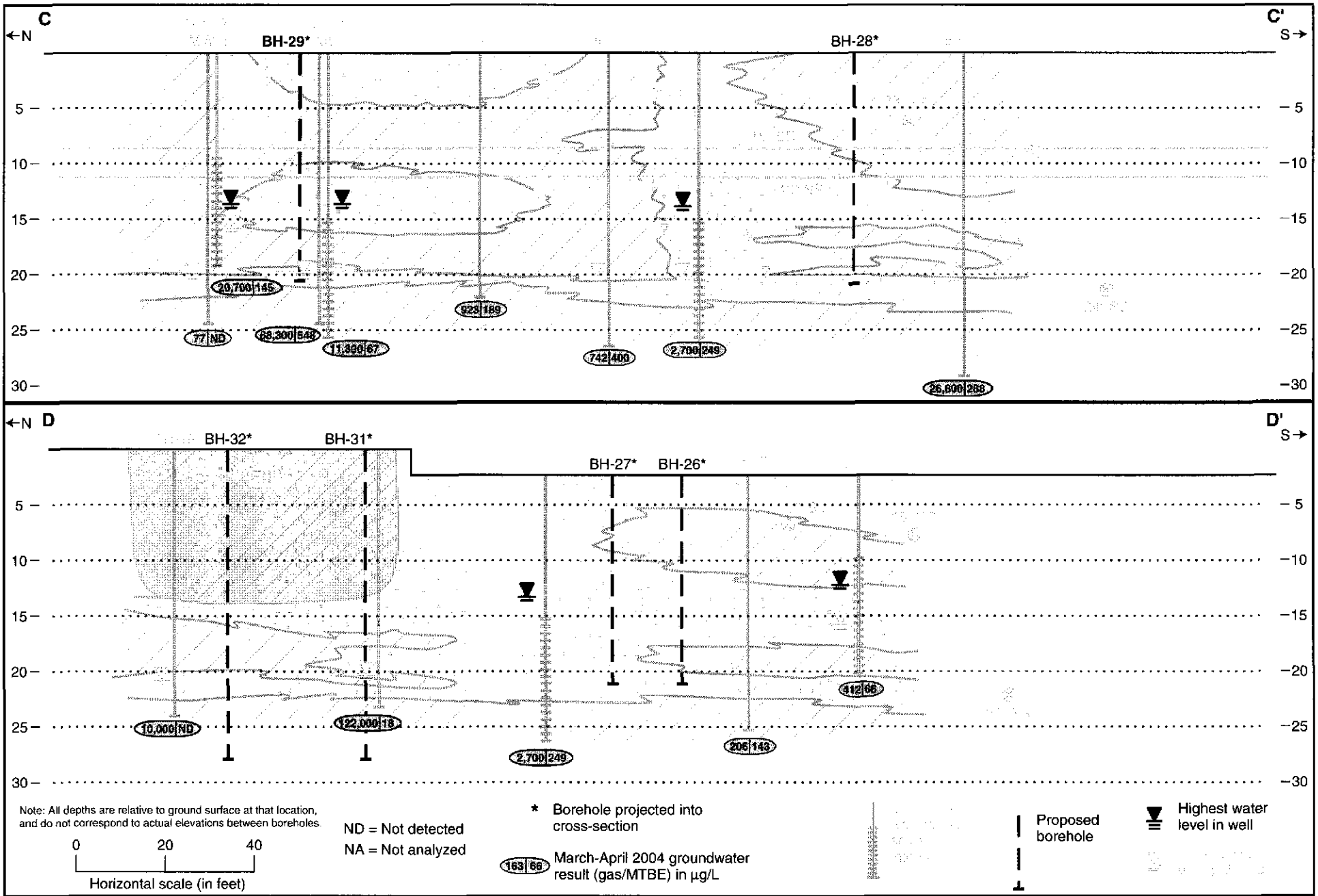
240 W. MacArthur Blvd., Oakland, CA

Figure 11

by: MJC

DECEMBER 2004

2003-43-92



2003-43-101

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GEOLOGIC CROSS SECTIONS C–C' AND D–D' WITH BOREHOLE GROUNDWATER ANALYTICAL RESULTS
240 W. MacArthur Blvd., Oakland, CA

Figure 12

by: MJC | DECEMBER 2004

TABLE A-1
Historical Borehole Soil Sample Analytical Results
Petroleum and Aromatic Hydrocarbons
240 W. MacArthur Boulevard, Oakland, Alameda, California
(all concentrations in mg/Kg)

Borehole / Well I.D.	Sample Depth (ft)	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
BH-1	15'	Jan-97	*<1.0*	*<1.0*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	*<0.05*
BH-2	15'	Jan-97	*<1.0*	*<1.0*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	*<0.05*
BH-3	15'	Jan-97	*<1.0*	*<1.0*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	*<0.05*
BH-4	15'	Jan-97	1,100	370	*<0.02*	*<0.02*	4.4	14	*<3.0*
BH-5	15'	Jan-97	2.1	1.9	0.009	0.006	*<0.005*	0.016	*<0.05*
BH-6	15'	Jan-97	190	140	0.25	0.50	8.4	3.6	*<0.6*
BH-7	12'	Aug-97	*<5.0*	*<5.0*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	NA
	16'	Aug-97	*<5.0*	*<5.0*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	NA
BH-8	8'	Aug-97	*<5.0*	*<5.0*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	NA
	12'	Aug-97	168	<5.0	0.02	*<0.005*	5.1	0.045	NA
	16'	Aug-97	21	<5.0	0.027	0.07	0.75	*<0.005*	NA
BH-9	8'	Aug-97	*<5.0*	*<5.0*	*<0.005*	0.032	0.28	0.029	NA
	12'	Aug-97	*<5.0*	*<5.0*	*<0.005*	0.012	*<0.005*	*<0.005*	NA
	16'	Aug-97	*<5.0*	*<5.0*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	NA
MW-1	10'	Aug-97	*<5.0*	*<5.0*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	NA
	17'	Aug-97	*<5.0*	*<5.0*	*<0.005*	0.031	*<0.005*	*<0.005*	NA
MW-2	10'	Aug-97	*<5.0*	*<5.0*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	NA
	17'	Aug-97	16	*<5.0*	0.035	0.037	0.15	0.018	NA
MW-3	10'	Aug-97	*<5.0*	*<5.0*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	NA
	15'	Aug-97	*<5.0*	*<5.0*	0.027	*<0.005*	*<0.005*	*<0.005*	NA
MW-4	10'	Aug-97	*<5.0*	*<5.0*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	NA
	17'	Aug-97	*<5.0*	*<5.0*	*<0.005*	*<0.005*	*<0.005*	*<0.005*	NA
MW-5	5'	Feb-01	*<10*	NA	*<0.005*	*<0.005*	*<0.015*	*<0.005*	*<0.005*
	10'	Feb-01	*<10*	NA	*<0.005*	*<0.005*	*<0.015*	*<0.005*	*<0.005*
	15'	Feb-01	11,700	NA	25.6	12	38.6	55.8	55.8
	20'	Feb-01	*<10*	NA	*<0.005*	*<0.005*	*<0.015*	*<0.005*	*<0.005*
MW-7	10'	Feb-01	*<10*	NA	*<0.005*	*<0.005*	*<0.015*	*<0.005*	*<0.005*
	15'	Feb-01	*<10*	NA	*<0.005*	*<0.005*	*<0.015*	*<0.005*	*<0.005*
	20'	Feb-01	*<10*	NA	*<0.005*	*<0.005*	*<0.015*	*<0.005*	*<0.005*
MW-8	10'	Feb-01	*<10*	NA	*<0.005*	*<0.005*	*<0.015*	*<0.005*	*<0.005*
	15'	Feb-01	*<10*	NA	*<0.005*	*<0.005*	*<0.015*	*<0.005*	*<0.005*
	20'	Feb-01	*<10*	NA	*<0.005*	*<0.005*	*<0.015*	*<0.005*	*<0.0723*

(Table continued on next page)

TABLE A-1 (continued)

Borehole / Well I.D.	Sample Depth (ft)	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
BH-10	9.5'	Apr-04	< 3.0	1.4	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	12'	Apr-04	< 3.0	1.4	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	17'	Apr-04	< 3.0	1.3	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	20.5' *	Apr-04	< 3.0	2.2	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	23.5' **	Apr-04	< 3.0	1.2	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
BH-11	4.5'	Apr-04	< 3.0	1.6	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	9.5'	Apr-04	< 3.0	1.1	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	15'	Apr-04	< 3.0	1.4	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	21.5' *	Apr-04	< 3.0	2.5	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	23.5' **	Apr-04	< 3.0	1	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
BH-12	4.5'	Apr-04	< 3.0	2.2	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	9.5'	Apr-04	< 3.0	1.1	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	12'	Apr-04	< 3.0	1.5	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	20' (a)	Apr-04	< 3.0	1.8	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	20.5' *	Apr-04	< 3.0	1.6	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	23.5' **	Apr-04	< 3.0	1	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
BH-13	4.5'	Apr-04	< 3.0	1	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	9.5'	Apr-04	< 3.0	1.5	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	15.5'	Apr-04	3,240	215	3.3	6.5	14	142	< 3.5
	19.5'	Apr-04	< 3.0	3	0.21	< 0.005	< 0.005	< 0.015	< 0.035
	23.5' **	Apr-04	< 3.0	< 1.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
BH-14	4.5'	Apr-04	< 3.0	< 1.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	9.5'	Apr-04	< 3.0	< 1.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	16'	Apr-04	< 3.0	< 1.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	20' *	Apr-04	< 3.0	< 1.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	21.5' **	Apr-04	< 3.0	< 1.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	4.5'	Apr-04	< 3.0	< 1.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
BH-15	9.5'	Apr-04	< 3.0	1.2	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	15'	Apr-04	< 3.0	<1.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	20' *	Apr-04	< 3.0	<1.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	23.5' **	Apr-04	< 3.0	<1.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
BH-16	4.5'	Apr-04	< 3.0	<1.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	9.5'	Apr-04	< 3.0	1.2	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	15'	Apr-04	2,950	10	2.8	12	19	72	< 17.5
	20' *	Apr-04	352	10	< 0.25	1.2	< 0.25	6.9	< 1.75
	23.5' **	Apr-04	4	1.8	< 0.005	0.015	0.027	0.081	< 0.035
	27.5' **	Apr-04	< 3.0	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	0.043

(Table continued on next page)

TABLE A-1 (continued)

Borehole / Well I.D.	Sample Depth (ft)	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
BH-17	4.5'	Apr-04	< 3.0	<1.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	9.5'	Apr-04	< 3.0	1.4	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	15'	Apr-04	< 3.0	<1.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	20' *	Apr-04	< 3.0	<1.0	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	23.5' **	Apr-04	< 3.0	1.1	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
BH-18	4.5'	Apr-04	< 3.0	1	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	9.5'	Apr-04	< 3.0	1	< 0.005	< 0.005	< 0.005	< 0.015	< 0.035
	17'	Apr-04	17	6	< 0.005	0.035	0.12	0.29	0.25
	20' *	Apr-04	45	3.8	0.049	0.15	0.24	0.56	0.84
BH-19	4.5'	Apr-04	< 3.0	1.7	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	9'	Apr-04	< 3.0	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	13'	Apr-04	105	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	18'	Apr-04	859	66	< 0.500	< 0.500	0.616	0.714	< 0.500
	21' *	Apr-04	< 3.0	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	23.5' **	Apr-04	< 3.0	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
BH-20	4.5'	Apr-04	< 3.0	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	9'	Apr-04	12	21	< 0.025	< 0.025	< 0.025	< 0.025	< 0.025
	13'	Apr-04	9.5	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	20'	Apr-04	353	20	< 0.050	< 0.050	0.0075	0.039	< 0.050
	21.5' *	Apr-04	1,060	50	< 0.500	< 0.500	< 0.500	5.34	< 0.500
	23.5' **	Apr-04	< 3.0	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
BH-21	4.5'	Apr-04	< 3.0	1	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	9.5'	Apr-04	< 3.0	1.2	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005
	15.5'	Apr-04	690	43	< 0.500	< 0.500	0.823	3.98	< 0.500
	20.5' *	Apr-04	84	<1.0	0.056	<0.025	0.06	0.245	<0.025
	21.5' **	Apr-04	< 3.0	<1.0	< 0.005	< 0.005	< 0.005	< 0.005	< 0.005

Notes:

TVH-g = Total volatile hydrocarbons – gasoline range. TEH-d – Total extractable hydrocarbons – diesel range.

NA = Not analyzed for this constituent.

* Sample collected within the saturated zone

** Sample collected beneath the saturated zone

(a) Depth of sample uncertain due to minimal recovery in sampling sleeve.

TABLE A-3
Summary of Soil Analytical Results - Metals
240 W. MacArthur Boulevard, Oakland, California

Sample I.D.	Metals Concentrations (mg/kg unless specified otherwise)																
	Antimony	Arsenic	Barium	Beryllium	Cadmium	Chromium (total)	Cobalt	Copper	Lead	Mercury	Molybdenum	Nickel	Selenium	Silver	Thallium	Vanadium	Zinc
1996 Waste Oil UST Removal																	
SW1	NA	NA	NA	NA	< 0.5	36	NA	NA	3.9	NA	NA	35	NA	NA	NA	NA	26
SW2	NA	NA	NA	NA	< 0.5	33	NA	NA	4.5	NA	NA	44	NA	NA	NA	NA	28
SW3	NA	NA	NA	NA	< 0.5	44	NA	NA	8.7	NA	NA	57	NA	NA	NA	NA	48
SW4	NA	NA	NA	NA	< 0.5	26	NA	NA	6.3	NA	NA	40	NA	NA	NA	NA	37
EB (7.0')	NA	NA	NA	NA	NA	NA	NA	NA	3.4 mg/L [c.]	NA	NA	NA	NA	NA	NA	NA	NA
EB (8.0')	NA	NA	NA	NA	NA	NA	NA	NA	< 0.2 mg/L [c.]	NA	NA	NA	NA	NA	NA	NA	NA
EB (9.0')	NA	NA	NA	NA	< 0.5	29	NA	NA	3.4 mg/L [c.]	NA	NA	39	NA	NA	NA	NA	35
STKP-1	NA	NA	NA	NA	< 0.5	NA	NA	NA	2.8 mg/L [c.]	NA	NA	NA	NA	NA	NA	NA	NA
STKP-2	NA	NA	NA	NA	NA	NA	NA	NA	1.3 mg/L [c.]	NA	NA	NA	NA	NA	NA	NA	NA
STKP-3	< 2.5	4.5	78	< 0.5	< 0.5	33	9.1	14	62	< 0.06	< 2	39	< 2.5	< 1	NA	33	130
January 1997 Investigation																	
BH-1 (15')	NA	NA	NA	NA	NA	NA	NA	NA	15	NA	NA	NA	NA	NA	NA	NA	NA
BH-2 (15')	NA	NA	NA	NA	NA	NA	NA	NA	8.4	NA	NA	NA	NA	NA	NA	NA	NA
BH-3 (15')	NA	NA	NA	NA	NA	NA	NA	NA	7.6	NA	NA	NA	NA	NA	NA	NA	NA
BH-4 (15')	NA	NA	NA	NA	NA	NA	NA	NA	6.2	NA	NA	NA	NA	NA	NA	NA	NA
BH-5 (15')	NA	NA	NA	NA	NA	NA	NA	NA	4.6	NA	NA	NA	NA	NA	NA	NA	NA
BH-6 (15')	NA	NA	NA	NA	NA	NA	NA	NA	23	NA	NA	NA	NA	NA	NA	NA	NA
August 1997 Investigation																	
BH-8 (12')	NA	NA	NA	NA	NA	NA	NA	NA	12.8	NA	NA	NA	NA	NA	NA	NA	NA
BH-8 (16')	NA	NA	NA	NA	NA	NA	NA	NA	47.8	NA	NA	NA	NA	NA	NA	NA	NA
California Hazardous Waste Criteria (10 X Soluble Threshold Limit Concentrations) [a]																	
	150	50	1,000	7.5	10	50	800	250	50	2.0	3,500	200	10	50	70	240	2,500
California Hazardous Waste Criteria (Total Threshold Limit Concentrations)																	
	500	500	10,000	75	100	2,500	8,000	2,500	1,000	20	3,500	2,000	100	500	700	2,400	5,000
California Regional Water Quality Control Board - San Francisco Bay Region Environmental Screening Levels for Commercial/Industrial Land Use [b]																	
	40	2.7	1,500	8.0	12	750	80	225	750	10	40	150	10	40	27	600	

NA = Sample Not Analyzed for this constituent
(a) Guideline for determining if waste could be classified as hazardous based on soluble concentrations, and waste should therefore be analyzed for soluble concentrations.
(b) For coarse-grained soils at commercial/industrial sites where groundwater is a current or potential drinking water source.

TABLE A-4
Historical Borehole Grab Groundwater Sample Analytical Results
Petroleum and Aromatic Hydrocarbons
240 W. MacArthur Boulevard, Oakland, Alameda, California
(all concentrations in µg/L)

Borehole / Well I.D.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
BH1W [a]	Jan-97	330	490	2	0.72	*< 0.5*	1.3	220
BH2W [b]	Jan-97	*< 50*	320	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 5.0*
BH4W	Jan-97	6,600	*NA*	58	13	110	270	170
BH6W [a]	Jan-97	13,000	450,000	870.00	65.00	130	570	320
BH-10-GW	Apr-04	78	*< 100*	1	7	2	7	20
BH-11-GW	Apr-04	74	*< 100*	3	8	2	9	*<5.0*
BH-12-GW	Apr-04	77	*< 100*	1	8	2	9	*<5.0*
BH-13-GW	Apr-04	68,300	300	617	527	668	4,680	548
BH-14-GW	Apr-04	923	170	13	5	6	9	189
BH-15-GW	Apr-04	742	*< 100*	2	3	2	5	400
BH-16-GW	Apr-04	26,800	300	73	138	222	946	288
BH-17-GW	Apr-04	206	*< 100*	*< 1.0*	3	*< 5*	3	143
BH-18-GW	Apr-04	3,220	1,000	*< 10*	*< 10*	76	232	348
BH-19-GW	Apr-04	10,000	1,300	24	*< 50*	65	108	*< 10*
BH-20-GW	Apr-04	122,000	2,700	1,830	69	227	1,430	*18*
BH-21-GW	Apr-04	10,300	1,900	485	70	474	2,620	*< 10*

Notes:

TVH-g = Total volatile hydrocarbons – gasoline range. TEH-d – Total extractable hydrocarbons – diesel range.

NA = Not analyzed for this constituent.

(a) Sample also analyzed for lead. No concentrations of concern.

(b) Sample also analyzed for lead, total oil & grease, and Poly-nuclear-aromatic hydrocarbons: no concentrations of concern.

TABLE A-5
Historical Borehole Grab Groundwater Sample Analytical Results
Oxygenates and Lead Scavengers
240 W. MacArthur Boulevard, Oakland, Alameda, California
(all concentrations in µg/L)

Borehole / Well I.D.	Date Sampled	*Lead Scavengers*		*Fuel Oxygenates*			
		EDB	**EDC**	**ETBE**	**DIPE**	**TAME**	**TBA**
BH1W	Jan-97	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
BH2W	Jan-97	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
BH4W	Jan-97	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
BH6W	Jan-97	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
BH-10-GW	Apr-04	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
BH-11-GW	Apr-04	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
BH-12-GW	Apr-04	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
BH-13-GW	Apr-04	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
BH-14-GW	Apr-04	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
BH-15-GW	Apr-04	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
BH-16-GW	Apr-04	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
BH-17-GW	Apr-04	*< 5.0*	*< 5.0*	*< 1*	*< 1*	*< 1*	*< 10*
BH-18-GW	Apr-04	*< 50*	*< 50*	*< 10*	*< 10*	*< 10*	*< 10*
BH-19-GW	Apr-04	*< 50*	*< 50*	*< 10*	*< 10*	*< 10*	*< 10*
BH-20-GW	Apr-04	*< 50*	*< 50*	*< 10*	*< 10*	*< 10*	114
BH-21-GW	Apr-04	*< 50*	*< 50*	*< 10*	*< 10*	*< 10*	*< 100*

Notes:

NA = Not analyzed for this constituent.

EDB = Ethylene dibromide (1,2-dibromoethane). EDC = Ethylene dichloride (1,2-dichloroethane).

DIPE = isopropyl ether. ETBE = Ethyl-tertbutyl ether. TAME = Tert-amylmethylether

TBA = Tertiary butyl alcohol

TABLE A-2
April 2004 Borehole Soil Sample Analytical Results
Lead Scavengers and Fuel Oxygenates
240 W. MacArthur Boulevard, Oakland, California
(all results reported in mg/kg)

Sample I.D.	EDC	EDB	ETBE	DIPE	TAME	TBA
BH-19-4.5'	*< 0.005*	*< 0.005*	*< 0.01*	*< 0.01*	*< 0.01*	*< 0.05*
BH-19-9'	*< 0.005*	*< 0.005*	*< 0.01*	*< 0.01*	*< 0.01*	*< 0.05*
BH-19-13'	*< 0.005*	*< 0.005*	*< 0.01*	*< 0.01*	*< 0.01*	*< 0.05*
BH-19-18'	*< 0.500*	*< 0.500*	*< 1*	*< 1*	*< 1*	*< 5*
BH-19-21' *	*< 0.005*	*< 0.005*	*< 0.01*	*< 0.01*	*< 0.01*	*< 0.05*
BH-19-23.5' **	*< 0.005*	*< 0.005*	*< 0.01*	*< 0.01*	*< 0.01*	*< 0.05*
BH-20-4.5'	*< 0.005*	*< 0.005*	*< 0.01*	*< 0.01*	*< 0.01*	*< 0.05*
BH-20-9'	*< 0.025*	*< 0.025*	*< 0.05*	*< 0.05*	*< 0.05*	*< 0.25*
BH-20-13'	*< 0.005*	*< 0.005*	*< 0.01*	*< 0.01*	*< 0.01*	*< 0.05*
BH-20-20'	*< 0.050*	*< 0.050*	*< 0.1*	*< 0.1*	*< 0.1*	*< 0.5*
BH-20-21.5' *	*< 0.500*	*< 0.500*	*< 1*	*< 1*	*< 1*	*< 5*
BH-20-23.5' **	*< 0.005*	*< 0.005*	*< 0.01*	*< 0.01*	*< 0.01*	*< 0.05*
BH-21-4.5'	*< 0.005*	*< 0.005*	*< 0.01*	*< 0.01*	*< 0.01*	*< 0.05*
BH-21-9.5'	*< 0.005*	*< 0.005*	*< 0.01*	*< 0.01*	*< 0.01*	*< 0.05*
BH-21-15.5'	*< 0.500*	*< 0.500*	*< 1*	*< 1*	*< 1*	*< 5*
BH-21-20.5' *	*<0.025*	*<0.025*	*< 0.05*	*< 0.05*	*< 0.05*	*< 0.25*
BH-21-21.5' **	*< 0.005*	*< 0.005*	*< 0.01*	*< 0.01*	*< 0.01*	*< 0.05*

Notes:

Samples BH-10 through BH-18 (non-source area boreholes) were not analyzed for lead scavengers or fuel oxygenates.

* Sample collected within the saturated zone

** Sample collected beneath the saturated zone

[a] Depth of sample uncertain due to minimal recovery in sampling sleeve.

EDB = Ethylene dibromide (1,2-dibromoethane). EDC = Ethylene dichloride (1,2-dichloroethane).

DIPE = isopropyl ether. ETBE = Ethyl-tertbutyl ether. TAME = Tert-amylmethylether

TBA = Tertiary butyl alcohol NLP = No Level Published

TABLE A-6
Historical Groundwater Monitoring Well Groundwater Analytical Results
Petroleum and Aromatic Hydrocarbons (µg/L)
240 W. MacArthur Boulevard, Oakland, Alameda, California

Well Purged?	Sampling Event No.	Date Sampled	TVH-g	TEH-d	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
MW-1									
Yes	1	Aug-97	1,140	*< 1,000*	110	16	15	112	*NA*
Yes	2	Dec-97	*ND*	*NA*	*ND*	*ND*	*ND*	31	*NA*
Yes	3	Mar-98	370	*NA*	8.9	*< 0.5*	*< 0.5*	2.2	18
Yes	4	Jul-98	6,400	*NA*	1,300	23	3.7	58	97
Yes	5	Oct-98	2,500	*NA*	360	44	1.3	150	*< 0.5*
Yes	6	Jan-99	2,700	*NA*	1,200	28	140	78	130
(a)	7	Jun-00	27,000	*NA*	5,200	500	320	3,100	1,300
(a)	8	Dec-00	976,000	*NA*	2,490	1,420	3,640	10,100	*< 150*
(a)	9	Feb-01	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
(a)	10	May-01	20,000	*NA*	2,900	310	230	1,900	*< 30*
(a)	11	Jul-01	92,000	*NA*	2,900	580	2,800	20,000	560
Pre"hi-vac"	12	Oct 22-01	20,000	*NA*	3,700	560	410	4,600	2,600
Post "hi-vac"	12	Oct 26-01	*< 0.05*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
(a)	13	Dec-01	3,300	*NA*	200	12	5.7	43	44
No	14	Mar-02	4,600	*NA*	820	4.4	100	300	210
No	15	May-02	1,600	*NA*	100	23	20	190	7.7
No	16	Jul-02	2,300	*NA*	250	15	13	180	180
No	17	Oct-02	1,820	*NA*	222	16	*< 0.3*	59	58
No	18	Jan-03	2,880	*NA*	188	*< 50*	*< 50*	157	20
No	19	Mar-03	6,700	*NA*	607	64	64	288	*< 0.18*
No	20	Aug-03	4,900	5,000	740	45	85	250	14
Pre-Purge	21	Dec-03	5,060	400	654	11	79	92	129
Post-Purge	21	Dec-03	8,930	800	1,030	55	127	253	212
Yes	22	Mar-04	11,300	1,100	483	97	122	452	67
Yes	23	Jun-04	9,300	4,000	1,700	75	92	350	6.0
Yes	24	Sep-04	9,100	97	920	19	82	201	7.2

(table continued on next page; footnotes on final page)

TABLE A-6 (continued)

MW-2									
Well Purged?	**Sampling Event No.**	**Date Sampled**	**TVH-g**	**TEH-d**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
Yes	1	Aug-97	5,350	*< 1,000*	108	36	33	144	*NA*
Yes	2	Dec-97	1,600	*NA*	73	*ND*	*ND*	*ND*	*NA*
Yes	3	Mar-98	3,400	*NA*	830	100	210	240	870
Yes	4	Jul-98	3,100	*NA*	25	2.2	*< 0.5*	0.9	1,900
Yes	5	Oct-98	4,300	*NA*	*< 0.5*	1.2	*< 0.5*	1	4,200
Yes	6	Jan-99	2,900	*NA*	160	8.9	6.9	78.4	2,100
(a)	7	Jun-00	2,700	*NA*	200	17	30	16	680
(a)	8	Dec-00	3,020	*NA*	56.7	*< 1.5*	*< 1.5*	*< 3.0*	3,040
(a)	9	Feb-01	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
(a)	10	May-01	720	*NA*	49	*< 3.0*	4.6	*< 3.0*	380
(a)	11	Jul-01	8,400	*NA*	350	44	77	78	550
Pre"hi-vac"	12	Oct 22-01	850	*NA*	170	4.9	5.1	14	260
Post "hi-vac"	12	Oct 26-01	770	*NA*	86	5.5	9.6	8.5	310
(a)	13	Dec-01	1,300	*NA*	9.2	*< 2.0*	*< 2.0*	*< 2.0*	370
No	14	Mar-02	1,300	*NA*	76	3.8	21	15	460
No	15	May-02	320	*NA*	12	1.1	4.6	4.8	160
No	16	Jul-02	1,300	*NA*	130	1.0	9.4	5.6	420
No	17	Oct-02	1,060	*NA*	12	2.2	4.2	3.5	270
No	18	Jan-03	581	*NA*	6.5	*< 5.0*	*< 5.0*	*< 5.0*	130
No	19	Mar-03	1,250	*NA*	*< 0.22*	*< 0.32*	*< 0.31*	*< 0.4*	155
No	20	Aug-03	2,200	730	58	9.2	*< 0.5*	28	240
Pre-Purge	21	Dec-03	2,120	100	45	9.4	9.5	20	289
Post-Purge	21	Dec-03	1,980	100	29	22.0	7.4	13	295
Yes	22	Mar-04	2,700	100	12	16.0	9	12	249
Yes	23	Jun-04	1,200	370	42	0.7	2.6	0.9	170
Yes	24	Sep-04	1,500	280	14	*< 0.5*	*< 0.5*	0.6	130

(table continued on next page; footnotes on final page)

TABLE A-6 (continued)

MW-3									
Well Purged?	**Sampling Event No.**	**Date Sampled**	**TVH-g**	**TEH-d**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
Yes	1	Aug-97	8,500	*< 1,000*	450	30	53	106	*NA*
Yes	2	Dec-97	5,200	*NA*	180	6.0	5.0	9.3	*NA*
Yes	3	Mar-98	1,000	*NA*	6.0	*< 0.5*	*< 0.5*	*< 0.5*	810
Yes	4	Jul-98	6,400	*NA*	490	57	23	78	220
Yes	5	Oct-98	2,100	*NA*	*< 5.0*	*< 5.0*	*< 5.0*	*< 5.0*	2,100
Yes	6	Jan-99	4,400	*NA*	450	65	26	42	1,300
(a)	7	Jun-00	1,700	*NA*	110	13	34	13	96
(a)	8	Dec-00	5,450	*NA*	445	*< 7.5*	23.8	*< 7.5*	603
(a)	9	Feb-01	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
(a)	10	May-01	1,900	*NA*	180	12	*< 3.0*	19	330
(a)	11	Jul-01	10,000	*NA*	830	160	150	260	560
Pre"hi-vac"	12	Oct 22-01	1,400	*NA*	240	7.8	4.1	15	220
Post "hi-vac"	12	Oct 26-01	1,900	*NA*	200	16	51	30	290
(a)	13	Dec-01	5,800	*NA*	93	*< 20*	31	*< 20*	330
No	14	Mar-02	1,900	*NA*	220	16	31	24	400
No	15	May-02	1,600	*NA*	110	3.4	29	14	320
No	16	Jul-02	1,900	*NA*	210	27	30	55	200
No	17	Oct. 2002	3,030	*NA*	178	19	6.2	36	178
No	18	Jan-03	2,980	*NA*	47	*< 5.0*	7.6	6.3	105
No	19	Mar-03	3,620	*NA*	124	*< 0.32*	22	12	139
No	20	Aug-03	3,800	2,400	170	28	31	31	170
Pre-Purge	21	Dec-03	5,550	400	311	20	41	48	357
Post-Purge	21	Dec-03	6,860	500	312	20	55	58	309
Yes	22	Mar-04	5,490	500	82	34	46	49	249
Yes	23	Jun-04	5,400	1,100	150	30	45	66	130
Yes	24	Sep-04	5,400	1,500	70	3.2	16	13	110

(table continued on next page; footnotes on final page)

TABLE A-6 (continued)

MW-4									
Well Purged?	**Sampling Event No.**	**Date Sampled**	**TVH-g**	**TEH-d**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
Yes	1	Aug-97	*< 500*	*< 1,000*	*< 0.5*	*< 0.5*	*< 0.5*	*< 1.5*	*NA*
Yes	2	Dec-97	*ND*	*NA*	*ND*	*ND*	*ND*	*ND*	*NA*
Yes	3	Mar-98	*< 50*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
Yes	4	Jul-98	*< 50*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
Yes	5	Oct-98	*< 50*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
Yes	6	Jan-99	*< 50*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
(a)	7	Jun-00	*< 50*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
(a)	8	Dec-00	*< 500*	*NA*	*< 0.3*	*< 0.3*	*< 0.6*	*< 0.3*	*< 0.3*
(a)	9	Feb-01	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
(a)	10	May-01	*< 50*	*NA*	1.2	*< 0.3*	0.55	1.2	2.9
(a)	11	Jul-01	*< 5.0*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
Pre"hi-vac"	12	Oct 22-01	*< 5.0*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
Post "hi-vac"	12	Oct 26-01	*< 5.0*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
(a)	13	Dec-01	*ND*	*NA*	*ND*	*ND*	*ND*	*ND*	*ND*
No	14	Mar-02	*< 50*	*NA*	*< 1*	*< 1*	*< 1*	*< 1*	*< 1*
No	15	May-02	*< 50*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
No	16	Jul-02	*< 50*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
No	17	Oct-02	*< 100*	*NA*	*< 0.3*	*< 0.3*	*< 0.3*	*< 0.6*	*< 0.3*
No	18	Jan-03	*< 100*	*NA*	*< 0.3*	*< 0.3*	*< 0.3*	*< 0.6*	14
No	19	Mar-03	*< 15*	*NA*	*< 0.4*	*< 0.02*	*< 0.02*	*< 0.06*	5.2
No	20	Aug-03	*< 50*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
Pre-Purge	21	Dec-03	71	*NA*	*< 0.3*	*< 0.3*	*< 0.3*	*< 0.6*	*< 5.0*
Post-Purge	21	Dec-03	63	*NA*	*< 0.3*	*< 0.3*	*< 0.3*	*< 0.6*	*< 5.0*
Yes	22	Mar-04	*< 50*	*NA*	*< 0.3*	*< 0.3*	*< 0.3*	*< 0.6*	*< 5.0*
Yes	23	Jun-04	*< 50*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	0.9
Yes	24	Sep-04	*< 50*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	2.3

(table continued on next page; footnotes on final page)

TABLE A-6 (continued)

MW-5									
Well Purged?	**Sampling Event No.**	**Date Sampled**	**TVH-g**	**TEH-d**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
(a)	9	Feb-01	5,660	*NA*	76.9	21.1	47.3	312	*< 0.3*
(a)	10	May-01	22,000	*NA*	2,600	480	220	2,700	*< 30*
(a)	11	Jul-01	72,000	*NA*	3,500	1,100	4,300	22,000	2,500
Pre"hi-vac"	12	Oct 22-01	26,000	*NA*	2,800	980	6,000	950	2,300
Post "hi-vac"	12	Oct 26-01	17,000	*NA*	1,200	470	2,900	440	900
(a)	13	Dec-01	2,000	*NA*	620	190	110	910	*< 20*
No	14	Mar-02	8,800	*NA*	1,200	72	7.4	350	1,200
No	15	May-02	2,000	*NA*	150	38	21	260	13
No	16	Jul-02	4,200	*NA*	480	68	29	280	450
No	17	Oct-02	5,370	*NA*	236	45	23	39	135
No	18	Jan-03	8,270	*NA*	615	156	174	1,010	*< 10*
No	19	Mar-03	12,400	*NA*	824	195	213	1,070	*< 0.18*
No	20	Aug-03	18,000	10,000	950	290	330	1,820	*< 2.0*
Pre-Purge	21	Dec-03	12,800	600	1,140	327	354	1,530	682
Post-Purge	21	Dec-03	11,900	800	627	263	288	1,230	595
Yes	22	Mar-04	20,700	850	867	266	305	678	145
Yes	23	Jun-04	12,000	1,700	920	240	260	1,150	*< 3.1*
Yes	24	Sep-04	13,000	1,900	580	240	260	1,260	*< 4.2*

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TABLE A-6 (continued)

MW-6									
Well Purged?	**Sampling Event No.**	**Date Sampled**	**TVH-g**	**TEH-d**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
(a)	9	Feb-01	1,340	*NA*	17	0.967	11.1	51.4	*< 0.3*
(a)	10	May-01	610	*NA*	15	0.97	*< 0.5*	46	*< 0.5*
(a)	11	Jul-01	2,500	*NA*	130	4.7	53	170	120
Pre"hi-vac"	12	Oct 22-01	280	*NA*	18	1.2	6.2	4.7	6.0
Post "hi-vac"	12	Oct 26-01	3,600	*NA*	210	20	170	62	120
(a)	13	Dec-01	5,300	*NA*	69	5.6	14	17	*< 2.0*
No	14	Mar-02	71	*NA*	54	4.2	27	17	8.5
No	15	May-02	150	*NA*	9.3	*< 0.5*	*< 0.5*	*< 0.5*	1.5
No	16	Jul-02	2,200	*NA*	98	32	46	150	66
No	17	Oct-02	786	*NA*	48	5.0	2.2	44	16
No	18	Jan-03	497	*NA*	6.8	*< 5.0*	*< 5.0*	11	*< 1.0*
No	19	Mar-03	258	*NA*	5.4	*< 0.32*	3.3	*< 1.1*	*< 0.18*
No	20	Aug-03	1,600	2,800	37	4.1	23	58	*< 0.5*
Pre-Purge	21	Dec-03	444	100	4.7	4.9	1.8	5.9	4.4
Post-Purge	21	Dec-03	365	200	2.5	3.8	1.4	6.1	*< 5.0*
Yes	22	Mar-04	215	140	4.0	1.2	1.4	1.4	3.7
Yes	23	Jun-04	710	830	14.0	0.7	5.2	6.6	*< 0.5*
Yes	24	Sep-04	350	600	*< 0.5*	2.4	*< 0.5*	*< 0.5*	*< 0.5*

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TABLE A-6 (continued)

MW-7									
Well Purged?	**Sampling Event No.**	**Date Sampled**	**TVH-g**	**TEH-d**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
(a)	9	Feb-01	*ND*	*NA*	*ND*	*ND*	*ND*	*ND*	*ND*
(a)	10	May-01	*< 50*	*NA*	0.75	0.77	0.48	2.4	1.1
(a)	11	Jul-01	*< 5.0*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
Pre"hi-vac"	12	Oct 22-01	*< 5.0*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
Post "hi-vac"	12	Oct 26-01	6,000	*NA*	170	550	110	120	970
(a)	13	Dec-01	*< 50*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	43
No	14	Mar-02	*< 50*	*NA*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
No	15	May-02	*< 50*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
No	16	Jul-02	*< 50*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
No	17	Oct-02	*< 100*	*NA*	*< 0.3*	*< 0.3*	*< 0.3*	*< 0.6*	*< 5.0*
No	18	Jan-03	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*	*NA*
No	19	Mar-03	*< 15*	*NA*	*< 0.04*	*< 0.02*	*< 0.02*	*< 0.06*	*< 0.03*
No	20	Aug-03	*< 50*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
Pre-Purge	21	Dec-03	*< 50*	*NA*	*< 0.3*	*< 0.3*	*< 0.3*	*< 0.6*	*< 5.0*
Post-Purge	21	Dec-03	*< 50*	*NA*	*< 0.3*	*< 0.3*	*< 0.3*	*< 0.6*	*< 5.0*
Yes	22	Mar-04	86	*NA*	*< 0.3*	*< 0.3*	*< 0.3*	*< 0.6*	57
Yes	23	Jun-04	*< 50*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
Yes	24	Sep-04	*< 50*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*

(table continued on next page; footnotes on final page)

TABLE A-6 (continued)

MW-8									
Well Purged?	**Sampling Event No.**	**Date Sampled**	**TVH-g**	**TEH-d**	**Benzene**	**Toluene**	**Ethylbenzene**	**Total Xylenes**	**MTBE**
(a)	9	Feb-01	1,000	*NA*	3.97	< 0.3	3.78	1.63	620
(a)	10	May-01	*< 50*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	4.4
(a)	11	Jul-01	*< 5.0*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
Pre"hi-vac"	12	Oct 22-01	*< 5.0*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
Post "hi-vac"	12	Oct 26-01	*< 5.0*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
(a)	13	Dec-01	*< 50*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
No	14	Mar-02	*< 50*	*NA*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*	*< 1.0*
No	15	May-02	*< 50*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
No	16	Jul-02	*< 50*	*NA*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*
No	17	Oct-02	458	*NA*	1.7	*< 0.3*	*< 0.3*	*< 0.6*	233
No	18	Jan-03	*< 100*	*NA*	*< 0.3*	*< 0.3*	*< 0.3*	*< 0.6*	*< 5.0*
No	19	Mar-03	*< 15*	*NA*	*< 0.22*	*< 0.32*	*< 0.31*	*< 0.4*	*< 0.18*
No	20	Jul-03	190	*< 50*	*< 0.5*	*< 0.5*	*< 0.5*	0.6	*< 0.5*
Pre-Purge	21	Dec-03	144	*< 100*	*< 0.3*	*< 0.3*	*< 0.3*	*< 0.6*	7.6
Post-Purge	21	Dec-03	163	*< 100*	*< 0.3*	*< 0.3*	*< 0.3*	*< 0.6*	66
Yes	22	Mar-04	412	*< 100*	1.2	*< 0.3*	1.7	3.9	66
Yes	23	Jun-04	320	68	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	120
Yes	24	Sep-04	280	2600	*< 0.5*	*< 0.5*	*< 0.5*	*< 0.5*	120

Notes:

(a) Data not available to SES as to whether the samples were collected "post-purge" or without purging.

"No Purge" means no purging was conducted before the groundwater sample was collected.

TVH-g = Total volatile hydrocarbons – gasoline range. TEH-d – Total extractable hydrocarbons – diesel range.

NA = Not analyzed for this constituent in this event.

ND = Not Detected (method reporting limit not specified in information available to SES).

TABLE A-7
Historical Groundwater Monitoring Well Groundwater Analytical Results
Fuel Oxygenates and VOCs (µg/L)
240 W. MacArthur Boulevard, Oakland, California

Well I.D.	Sampling Event No.	Date Sampled	EDB	EDC	1,2,4-TMB	1,3,5-TMB	t-Butanol	TBA	DIPE	Naphthalene	cis-1,2-DCE	TCE	PCE	Others
MW-1	7	Jun-00	< 5.0	< 5.0	51	< 5	< 1,000	< 1000	< 50	<5	< 5	< 5	< 5	ND
	14	Mar-02	< 1.0	< 1.0	< 1	1.6	< 10	NA	< 2	< 1	< 1	< 1	< 1	ND
	18	Jan-03	< 50	< 50	150	< 50	NA	68	< 10	< 50	< 50	< 50	< 50	ND
	19	Mar-03	< 0.26	< 0.17	373	< 0.49	NA	< 10	< 0.29	< 0.88	< 0.30	< 0.23	< 0.36	ND
	20	Aug-03	< 1.0	7.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	21	Dec-03	< 5.0	< 5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	< 0.26	< 0.17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 5.0	< 5.0	NA	NA	NA	270	< 5.0	NA	NA	NA	NA	NA
	24	Sep-04	< 5.0	< 5.0	NA	NA	NA	120	< 5.0	NA	NA	NA	NA	NA
MW-2	7	Jun-00	< 0.5	< 0.5	< 0.5	< 0.5	< 100	< 100	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	ND
	14	Mar-02	< 1.0	< 1.0	< 1	< 1	220	NA	< 2	< 1	< 1	< 1	< 1	ND
	18	Jan-03	< 5	< 5	< 5	< 5	NA	34	< 1	< 5	24	< 5	< 5	ND
	19	Mar-03	< 0.26	< 0.17	< 0.49	< 0.26	NA	94	< 0.29	< 0.88	15	< 0.23	< 0.36	ND
	21	Dec-03	< 0.6	< 0.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	20	Aug-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	21	Dec-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 0.5	2.0	NA	NA	NA	190	1.1	NA	NA	NA	NA	NA
	24	Sep-04	< 0.5	1.2	NA	NA	NA	130	0.9	NA	NA	NA	NA	NA
MW-3	7	Jun-00	< 0.5	< 0.5	< 0.5	< 0.5	< 100	< 100	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	ND
	14	Mar-02	< 1.0	< 1.0	1.8	4.7	180	NA	< 2	2.2	< 1	< 1	< 1	ND
	18	Jan-03	< 5	< 5	< 5	5.0	NA	76	< 1	< 5	21	< 5	< 5	(a)
	19	Mar-03	< 0.26	< 0.17	< 0.49	< 0.26	NA	< 10	< 0.29	< 0.88	24	< 0.23	< 0.36	ND
	20	Aug-03	< 0.5	< 0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	21	Dec-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 0.5	< 0.5	NA	NA	NA	130	1.9	NA	NA	NA	NA	NA
	24	Sep-04	< 0.5	< 0.5	NA	NA	NA	82	1.5	NA	NA	NA	NA	NA
MW-4	7	Jun-00	< 0.5	< 0.5	< 0.5	< 0.5	< 100	< 100	< 5.0	< 0.5	< 0.5	< 0.5	< 0.5	ND
	14	Mar-02	< 1.0	< 1.0	< 1	< 1	< 10	NA	< 2	< 1	2.9	3.7	5.0	ND
	18	Jan-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	19	Mar-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	20	Aug-03	< 0.5	< 0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	21	Dec-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 0.5	< 0.5	NA	NA	NA	< 10	< 0.5	NA	NA	NA	NA	NA
	24	Sep-04	< 0.5	< 0.5	NA	NA	NA	< 10	< 0.5	NA	NA	NA	NA	NA

TABLE A-7 (continued)

MW-5	14	Mar-02	< 1.0	< 1.0	< 1	2.7	640	NA	< 2	< 1	< 1	< 1	< 1	ND
	18	Jan-03	< 50	< 50	512	122	NA	< 100	< 10	120	< 50	< 50	< 50	ND
	19	Mar-03	< 0.26	< 0.17	554	107	NA	< 10	< 0.29	251	< 0.3	< 0.23	< 0.36	(b)
	20	Aug-03	< 2.0	6.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	21	Dec-03	< 5.0	< 5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	< 0.26	< 0.17	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 3.1	< 3.1	NA	NA	NA	120	< 3.1	NA	NA	NA	NA	NA
	24	Sep-04	< 4.2	18	NA	NA	NA	87	< 4.2	NA	NA	NA	NA	NA
MW-6	14	Mar-02	< 1.0	< 1.0	< 1	2.2	< 10	NA	< 2	1.6	< 1	< 1	< 1	ND
	18	Jan-03	< 5.0	< 5.0	13	< 5	NA	46	< 1	< 5	< 5	< 5	< 5	ND
	19	Mar-03	< 0.26	6.9	< 0.49	< 0.26	NA	40	< 0.29	< 0.88	< 0.3	< 0.23	< 0.36	(c.)
	20	Aug-03	< 0.5	12.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	21	Dec-03	< 5.0	11 / 17.1 [d]	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	< 0.26	31	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 0.5	19	NA	NA	NA	54	1.0	NA	NA	NA	NA	NA
	24	Sep-04	< 0.5	31	NA	NA	NA	43	1.0	NA	NA	NA	NA	NA
MW-7	14	Mar-02	< 1.0	< 1.0	< 1	< 1	< 10	NA	< 2	< 1	< 1	< 1	< 1	ND
	18	Jan-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	19	Mar-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	20	Aug-03	< 0.5	< 0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	21	Dec-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 0.5	< 0.5	NA	NA	NA	< 10	< 0.5	NA	NA	NA	NA	NA
	24	Sep-04	< 0.5	< 0.5	NA	NA	NA	< 10	< 0.5	NA	NA	NA	NA	NA
MW-8	14	Mar-02	< 1.0	< 1.0	< 1	< 1	< 10	NA	< 2	< 1	< 1	< 1	< 1	ND
	18	Jan-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	ND
	19	Mar-03	< 0.26	< 0.17	< 0.49	< 0.26	NA	< 10	< 0.29	< 0.88	< 0.3	< 0.23	< 0.36	ND
	20	Aug-03	< 0.5	< 0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	21	Dec-03	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	22	Mar-04	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
	23	Jun-04	< 0.5	< 0.5	NA	NA	NA	61	1.0	NA	NA	NA	NA	NA
	24	Sep-04	< 0.5	< 0.5	NA	NA	NA	96	1.1	NA	NA	NA	NA	NA

Notes:

Table includes only detected contaminants.

EDB = Ethylene dibromide, aka 1,2-Dibromoethane (lead scavenger)

EDC = Ethylene dichloride, aka 1,2-Dichloroethane (lead scavenger)

PCE = Tetrachloroethylene

TCE = Trichloroethyene

DCE = Dichloroethylene

TMB = Trimethylbenzene

DIPE = Isopropyl Ether (a.k.a. di-isopropyl ether)

TBA = Tertiary butyl alcohol

NLP = No Level Published

NA = Not analyzed for this constituent. ND = Not Detected

(a) Also detected were: n-propylbenzene (5.4 µg/L); p-Isopropyltoluene (14 µg/L); sec-Butylbenzene (7.2 µg/L)

(b) Also detected were: isopropylbenzene (38 µg/L); n-Butylbenzene (20 µg/L); n-propylbenzene (36 µg/L); p-Isopropyltoluene (14 µg/L).

(c.) Also detected were: isopropylbenzene (3.4 µg/L); n-propylbenzene (2.3 µg/L).

(d) Pre-purge / post-purge sampling, conducted in same event.

ATTACHMENT B
DRILLING & SAMPLING METHODS AND PROTOCOLS

Prior to drilling, SES will update the site-specific Health and Safety Plan to include the proposed drilling activities. We will apply for the requisite borehole drilling permit from Alameda County Public Works Agency, and we will notify Underground Service Alert of proposed drilling for their notification to utilities to mark any potential underground utilities. We will also obtain any required City of Oakland encroachment permits for drilling in public right-of-way

The boreholes will be advanced with a Geoprobe™ (direct-push) or equivalent rig that advances approximately 2-inch diameter sampling rods into undisturbed soil. Soil samples are collected in either acetate or metal sleeves inside the sampling rods. The sleeves selected for offsite laboratory analysis are then capped (with non-reactive plastic caps) and labeled. "grab" groundwater samples are collected by installing temporary PVC well casing, and collecting the water samples with either a disposable bailer or through new Tygon™ tubing connected to a vacuum pump. The water is transferred directly to the appropriate sampling containers.

Samples will be securely sealed in appropriate containers, placed in an ice chest with ice at approximately 4 degrees C., and transported to the analytical laboratory under chain-of-custody record.

Soil vapor samples will be collected will be collected at the surface in Summa-type canisters, via polyethylene or Tygon tubing extending to the sampling tool at depth.

Waste soil (unused samples) will be temporarily containerized onsite in labeled, 5-gallon plastic pails with sealing tops. This soil will be appropriately profiled and disposed of when it has been determined that no further waste soil will be generated, or will be combined with any future generated waste soil from subsequent investigation phases.