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By Alameda County Environmental Health at 10:48 am, Jan 21, 2015

November 13, 2014

Mr. Keith Nowell
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

I, Larry David, as Manager of JLD Oakland Management, LLC, hereby authorize ERAS Environmental, Inc. to submit the Workplan for Limited Phase II Soil Investigation for 106-110 Hegenberger Rd., Oakland, California (ERAS Project Number: 14174 dated October 30,2014), attached hereto, to the Alameda County Health Care Services Agency.

Signature: 

Mr. Larry David
626.836.2908
jld@abbot-partners.com

ERAS Environmental, Inc.

1533 B Street

Hayward, CA 94541

Phone (510) 247-9885 Facsimile: (510) 886-5399 info@eras.biz

WORK PLAN FOR
LIMITED PHASE II SUBSURFACE INVESTIGATION

AT

106-110 Hegenberger Road
Oakland, California

ERAS PROJECT NUMBER: 14174

Prepared for

Mr. Dhruv Patel
Balaji Hotels
66 Airport Access Road
Oakland, CA 94603

October 30, 2014

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October 30, 2014

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CERTIFICATION

This **Work Plan for Limited Phase II Subsurface Investigation** at 106-110 Hegenberger Road in Oakland, California, has been prepared by ERAS Environmental, Inc. (ERAS) under the professional supervision of the Registered Professional Geologist whose signature appears hereon.

This work plan was prepared in general accordance with the accepted standard of practice that exists in Northern California at the time the investigation was performed. Judgments leading to conclusions and recommendations are generally made with an incomplete knowledge of the conditions present. More extensive studies, including additional environmental investigations, can tend to reduce the inherent uncertainties associated with such studies.

Our firm has prepared this work plan for the Client's exclusive use for this particular project and in accordance with generally accepted professional practices within the area at the time of our investigation. No other representations, expressed or implied, and no warranty or guarantee is included or intended.

This work plan may be used only by the client and only for the purposes stated within a reasonable time from its issuance. Land use, site conditions (both on-site and off-site) or other factors may change over time, and additional work may be required with the passage of time. Any party other than the client who wishes to use this report shall notify ERAS of such intended use. Based on the intended use of report, ERAS may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else will release ERAS from any liability resulting from the use of this report by any unauthorized party.

Sincerely,
ERAS Environmental, Inc.

Andrew Savage
Project Geologist

Curtis Payton
California Registered Professional Geologist 5608

October 30, 2014

1.0 INTRODUCTION

The following is a work plan for the collection of soil and groundwater samples to define the lateral and vertical extent of contamination at a commercial site located at 106-110 Hegenberger Road in Oakland, California (the "Property"). The Property is a LUST case that was closed on February 8, 2001. According to case closure documentation, no further action was required for the underground storage tanks (USTs) but elevated concentrations of the contaminants of concern remained in the vicinity of a sump formerly located on the Property. The case closure letter is included in **Appendix A**.

Subsurface investigations previously conducted on the Property have identified contamination including elevated concentrations of petroleum hydrocarbons quantified as gasoline, diesel and oil range organics (TPH-gro[1], TPH-dro, and TPH-oro), benzene, toluene, ethylbenzene, and xylenes (BTEX), along with lead, zinc, cadmium, and chromium.

This work plan was prepared to further investigate contamination near the former sump so that an unconditional site closure can be obtained from the Alameda County Environmental Health Care Services Agency (ACHCSA).

The Property is located on the southeast side of Hegenberger Road near the intersection of Hegenberger Road and Airport Access Road in the southern portion of the City of Oakland. The Property consists of an approximately 1.17-acre rectangular shaped parcel of land that is improved with an approximately 1,300-square foot one story commercial building and associated paved areas. The Property is currently used for a parking lot and is planned to be redeveloped with a hotel.

The location of the Property is shown on **Figure 1**. The layout of the Property is shown on **Figure 2**.

1.1 BACKGROUND

Previous Investigations

The Property was once improved with a car wash building, USTs and associated pump islands/canopy, and a clarifier sump.

Subsurface investigations were conducted at the Property by West Coast Environmental in 1991, Dugan Associates in 1994 and BSK & Associates in 1997 and by Environmental Risk Assessors (ERA) in 2014. Soil borings were drilled on many areas of the Property including some near former USTs, pump islands, and piping and near the sump. Other borings appear to have been drilled randomly

[1] TPH-gro, TPH-dro, and TPH-oro are methods that compare analytical results to standards for gasoline, diesel and motor oil, respectively. Therefore analytical results are estimates of quantities based on what would be expected for the range of hydrocarbon results for the standard. Gasoline range organics (gro) are those hydrocarbon compounds that are in the range of C6 to C10, diesel range organics (dro) are those hydrocarbon compounds that are in the range of C10 to C23, and oil range organics (oro) are those hydrocarbon compounds that are in the range of C18 to C36. There can be overlap in reporting methods as well as identification of compounds that fall within the standard that may not necessarily be derived from gasoline, diesel, or oil.

near the central portion of the Property. Four groundwater monitoring wells were eventually installed at widely spaced locations at the Property and monitored several times.

The results of investigations indicated elevated concentrations of petroleum hydrocarbons in soil and groundwater, mostly in the area of the former clarifier sump. After monitoring of the groundwater several times between 1994 and 2000, the Alameda County Health Care Services Agency (ACHCSA) closed the case in 2001. The case closure indicated that concentrations of petroleum hydrocarbons, BTEX, and metals (lead, zinc, cadmium, and chromium) remained in soil on the Property.

ERA drilled 7 soil borings in 2014 to the southeast and southwest of the former clarifier sump. Elevated concentrations of petroleum hydrocarbons in soil samples were reported in borings (SB-6 and SB-7) near the clarifier sump on the southeast side where these were reported from earlier investigations. Elevated concentrations of benzene were reported in soil gas samples collected in close proximity to the southwest side of the sump.

Extent of Contamination

It appears that petroleum hydrocarbons are present in elevated concentrations to the southeast and southwest of the former clarifier sump. Elevated concentrations of petroleum hydrocarbons are also present in soil gas in this area.

The extent of petroleum hydrocarbons in soil is not known on the north and northwest sides of the clarifier sump. In addition the impact to groundwater is not known. Petroleum hydrocarbons in shallow soil near the clarifier sump have caused elevated concentrations of soil vapor near the sump area.

Historical figures and tables are included in **Appendix B**. The locations of the previous borings are also presented in composite on **Figure 2** of this Work Plan.

2.0 REGIONAL GEOLOGY/HYDROLOGY

The Property is in the southern part of the City of Oakland in the San Francisco Bay area. The San Francisco Bay area occupies a broad alluvial valley that slopes gently northward and is flanked by alluvial fans deposited at the foot of the Diablo Range to the east and the Santa Cruz Mountains to the west. Surface topography in the immediate vicinity of the Property is gently sloping down to the northwest towards Airport Channel.

The Property is at an elevation of approximately 10 feet above Mean Sea Level according to the United States Geological Survey (USGS) Oakland East Quadrangle California 7.5 Minute Series topographic map.

Materials underlying the site are unconsolidated deposits of near shore and beach sediments, deposited in Oakland Bay at higher sea level stands. At shallow depths beneath these sediments are chert, greywacke, serpentine and shale bedrock that are a part of the Cretaceous to Jurassic-aged Franciscan Formation. Bedrock is exposed to the east-northeast on the upland surfaces.

The subject site is located on the San Francisco Bay Plain in the northernmost part of the Santa Clara Valley Groundwater Basin, (DWR, 1967), the surface of which slopes gently down toward west.

The regional groundwater flow follows the topography, moving from areas of higher elevation to areas of lower elevation. The regional groundwater flow direction in the area of the Property is estimated to be toward the northwest toward the Oakland Outer Harbor.

Based on the groundwater monitoring conducted on the Property the groundwater flow direction has been determined to be to the southwest (BSK, 2000). This is consistent with what is likely to be the regional groundwater gradient, based on topography.

Based on lithologic logs prepared from borings on the Property the subsurface lithology consists of approximately 3 feet of fill underlain by 13 to 15 feet of silts and clays, which is underlain by silty sand and sands. In some borings on the Property a clayey sand unit was also observed between 10 and 12 feet below ground surface (bgs) which appeared to be moist to wet. The main groundwater zone was indicated by the previous consultants to be the silty sand and sand unit starting at a depth of approximately 18 feet bgs (BSK, 1998).

3.0 SITE CONCEPTUAL MODEL

3.1 HYDROGEOLOGIC SETTING

Shallow groundwater is located at roughly 18 feet bgs however a groundwater producing zone may be present between 10 and 12 feet bgs. Groundwater monitoring has been conducted on the Property and the groundwater flow direction was determined to be to the southwest.

The shallow water-bearing zone appears to be located in thin clayey sand, sand, and silty sand units interbedded with clay. Groundwater is generally under water-table conditions, but may be locally confined by clay in the upper portion of the water-bearing zone. The base of the shallow water bearing zone has not been determined.

3.2 EXTENT OF CONTAMINATION

3.2.1 Results in Soil

High concentrations of TPH-dro, TPH-gro, TPH-oro, BTEX, and metals (lead, zinc, cadmium, and chromium) were detected at 4.5-5 feet in boring SS-22-4.5, SB-1, SB-2, SB-6, SB-7, HA-4-5, and HA-7-5 located near the southeastern side of the sump. The lateral extent of contamination is defined on southeast side of the sump but is poorly defined on the remaining sides. The vertical extent of contamination has not been determined.

3.2.2 Results in Groundwater

Groundwater conditions have not been evaluated in the vicinity of the sump.

4.0 WORK PLAN

4.1 SCOPE OF PROPOSED INVESTIGATION

ERAS proposes a scope of work for this investigation as follows.

- Obtain a permit for drilling from the Alameda County Public Works Department (ACPWD).
- Clear the boring locations for the presence of utilities by notifying Underground Service Alert and employing a private underground locating/clearance service.
- Advance seven borings using a direct push sample rig to approximately 20 feet in the vicinity of the sump. These borings will be continuously logged by a field geologist.
- Soil samples will be collected from a depth of 4-6 feet bgs and 10-12 feet bgs. If sufficient groundwater is encountered at a depth of 10-12 feet bgs a groundwater sample will be collected and the boring will not be advanced to the next zone.
- Groundwater samples will be collected from 18-20 feet bgs unless encountered in sufficient volume in the 10-12 foot zone.
- Analyze the soil and groundwater samples for the presence of TPH-gro, TPH-dro, TPH-oro, BTEX and LUFT 5 metals (cadmium, chromium, nickel, lead, zinc).
- Prepare a report detailing the field procedures and results of the investigation.

4.2 FIELD WORK COORDINATION

ERAS will procure a drilling permit from the ACPWD prior to drilling activities.

The boring locations will be marked with paint and Underground Service Alert notified at least 48 hours in advance to give owners of underground utilities an opportunity to mark their lines. Prior to drilling, each boring location will be cleared using a private underground utility locator.

4.3 BORING LOCATIONS AND SAMPLING

The locations of the borings are shown on **Figure 2**. The Standard Operating Procedures for direct-push sampling is included in **Appendix C**.

Seven borings will be advanced using a direct push sample rig to about 20 feet in the vicinity of the sump in an attempt to vertically and horizontally delineate the extent of the contamination. These borings will be continuously logged.

Groundwater and soil samples will be collected from each boring.

The soil and groundwater samples will be kept chilled pending transport under chain-of-custody

procedures to a California certified environmental analytical laboratory.

The soil and groundwater samples will be analyzed for the presence of TPH-gro, TPH-dro, TPH-oro, BTEX, and LUFT 5 metals (cadmium, chromium, nickel, lead, zinc).

4.4 FIELD AND REPORT SCHEDULE

The field work will be scheduled as soon as possible following approval of this work plan by the ACEHD. A report will be submitted within 30 working days of the completion of field activities.

5.0 REFERENCES

Alameda County Environmental Health Department, Remedial Action Completion Certification, Diablo Cellular, 106-110 Hegenberger Road, Oakland, California, February 8, 2001.

BSK, Soil Vapor Survey and Tier 3 Risk Assessment, Former Clarifier Sump, 106-110 Hegenberger Road, Oakland, California, December 3, 1998.

BSK, Groundwater Sampling and Analysis, 106-110 Hegenberger Road, Oakland, California, July 5, 2000.

California Department of Water Resources, Evaluation of Ground Water Resources South Bay, Appendix A: Geology, Bulletin 118-1, August 1967.

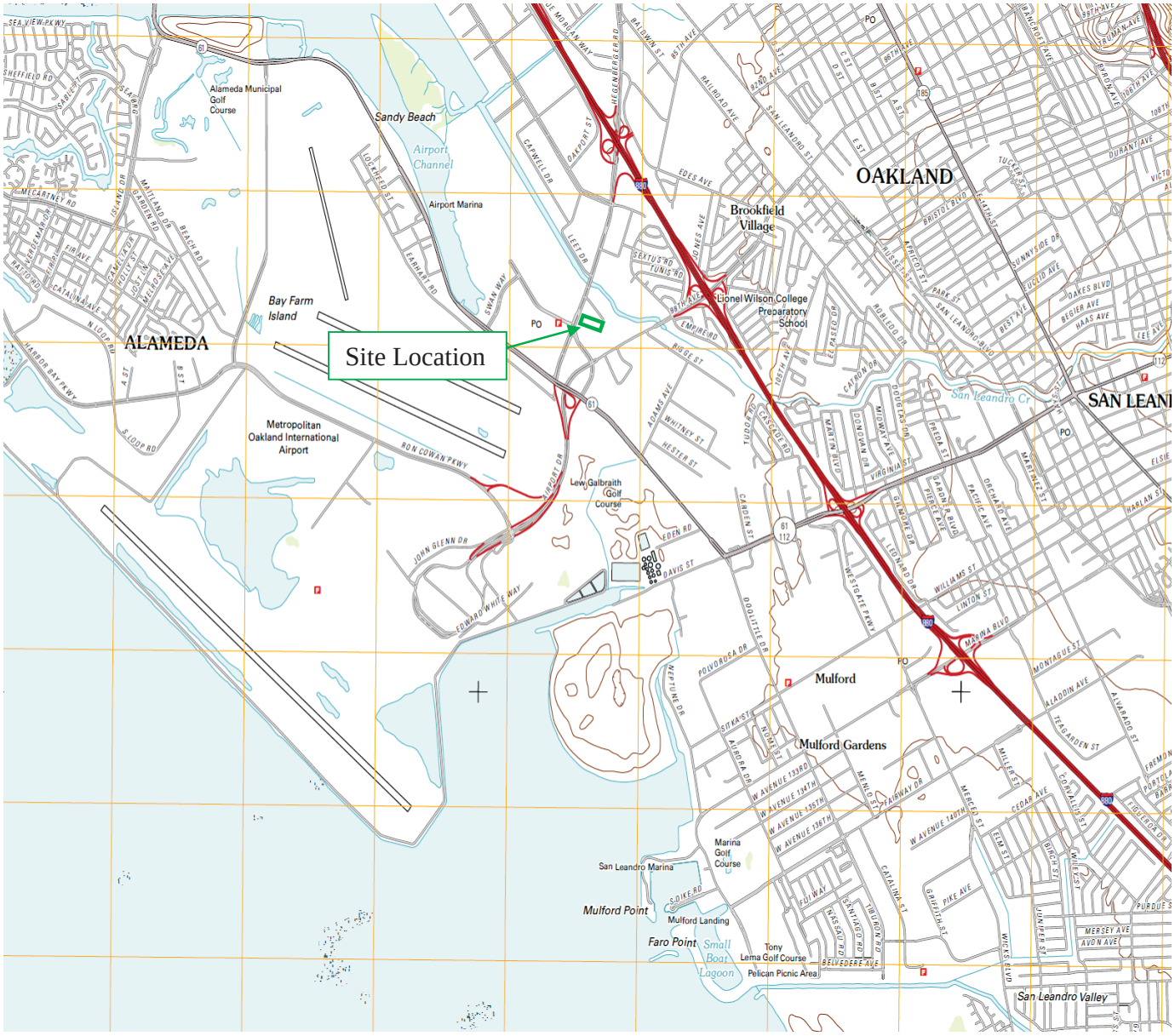
California Regional Water Quality Control Board, Water Quality Control Plan, San Francisco Bay Basin Region (2), December 1986.

California Regional Water Quality Control Board, Screening of Environmental Concerns at Sites with Contaminated Soil and Groundwater, December 2013.

Goldman, Harold B., Geology of San Francisco Bay prepared for San Francisco Bay Conservation and Development Commission, February 1967.

Helley, E.J., La Joie, K.R., Spangle, W.E., and Blair, M.L., Flatland Deposits of the San Francisco Bay Region, California - their geology and engineering properties and their importance to comprehensive planning, U.S. Geological Survey Professional Paper 943, 1974.

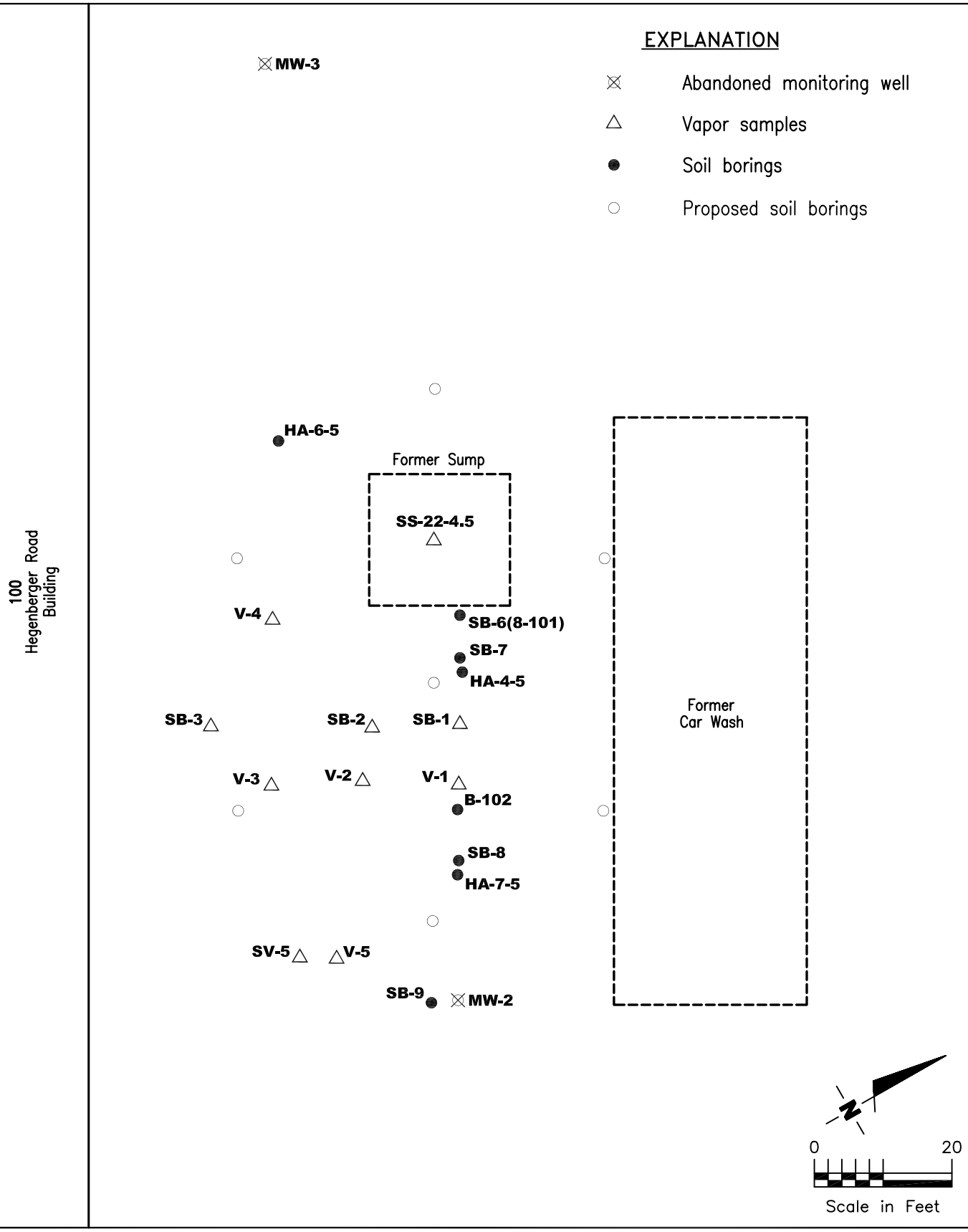
FIGURES



Site Location Map

LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT

106 - 110 Hegenberger Road, Oakland, California



PROPOSED BORING LOCATION MAP

DATE
10/14
REVIEWED BY
AS

106–110 Hegenberger Road
Oakland, California

JOB NUMBER
14174
FIGURE
2

ERAS Environmental Inc.

ERAS 10-28-14 Proposed Boring Location.dwg

APPENDIX A

ACHCSA Letter – February 8, 2001

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

CR-13-01

P091

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

February 8, 2001
StID # 4240

J. L. David, et al Trs. c/o
Ms. Deborah David
1880 Century Park East, Suite 900
Los Angeles, CA 90067

RE: Diablo Cellular, 106-110 Hegenberger Rd., Oakland CA 94621

Dear Ms. David:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with the Health and Safety Code, Chapter 6.75 (Article 4, Section 25299.37 h). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Health Services, Local Oversight Program (LOP) is required to use this case closure letter. We are also enclosing the case closure summary. This document confirms the completion of the investigation and cleanup of the reported release at the subject site.

Site Investigation and Cleanup Summary:

Please be advised that the following conditions exist at the site:

- 2100 parts per million (ppm) Total Petroleum Hydrocarbons as gasoline (TPHg), 110 ppm TPH as diesel (TPHd), 13,000 ppm Total Oil and Grease, 19, 21, 26 and 12 ppm benzene, toluene, ethyl benzene and xylenes, respectively and 109, 69, 10 and 52 ppm lead, zinc, cadmium and chromium, respectively remain in the soil at the site.

This site should be included in the City's permit tracking system. Please contact me at (510) 567-6765 with any questions.

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

enclosures: Case Closure Letter, Case Closure Summary

c: Mr. L. Griffin, City of Oakland OES, 1605 MLK Jr. Way, Oakland CA 94612
B. Chan, files (letter only)

Trlt 106-110HegRd

02-13-01

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

p091

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

February 8, 2001
StID # 4240

REMEDIAL ACTION COMPLETION CERTIFICATION

J. L. David, et al Trs. c/o
Ms. Deborah David
1880 Century Park East, Suite 900
Los Angeles, CA 90067

RE: Diablo Cellular, 106-110 Hegenberger Rd., Oakland CA 94621

Dear Ms. David:

This letter confirms the completion of site investigation and remedial action for the three (3) 10,000 gasoline tanks formerly located at the above described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground tank is greatly appreciated.

Based on information in the above-referenced file and with provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25299.37 of this Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.77 of the Health and Safety Code and that no further action related to the petroleum release(s) as the site is required.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code.

Please contact Barney Chan at (510) 567-6765 if you have any questions regarding this matter.

Sincerely,

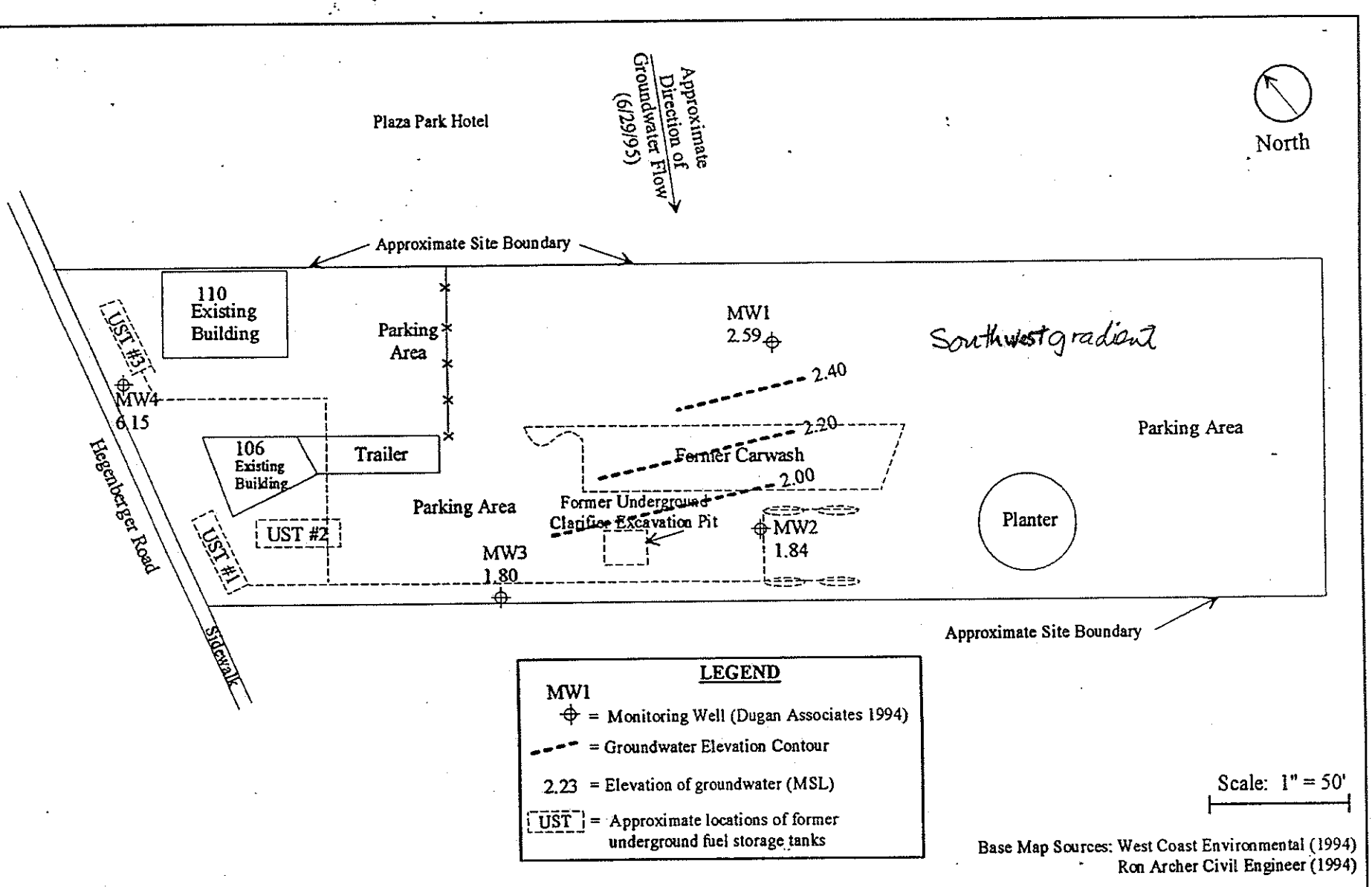
Mee Ling Tung
Director, Environmental Health

c: B. Chan, Hazardous Materials Division-files
Chuck Headlee, RWQCB
Mr. Allan Patton, SWRCB Cleanup Fund
Mr. Leroy Griffin, City of Oakland OES, 1605 Martin Luther King Dr., Oakland CA 94612

RACC106-110HegRd

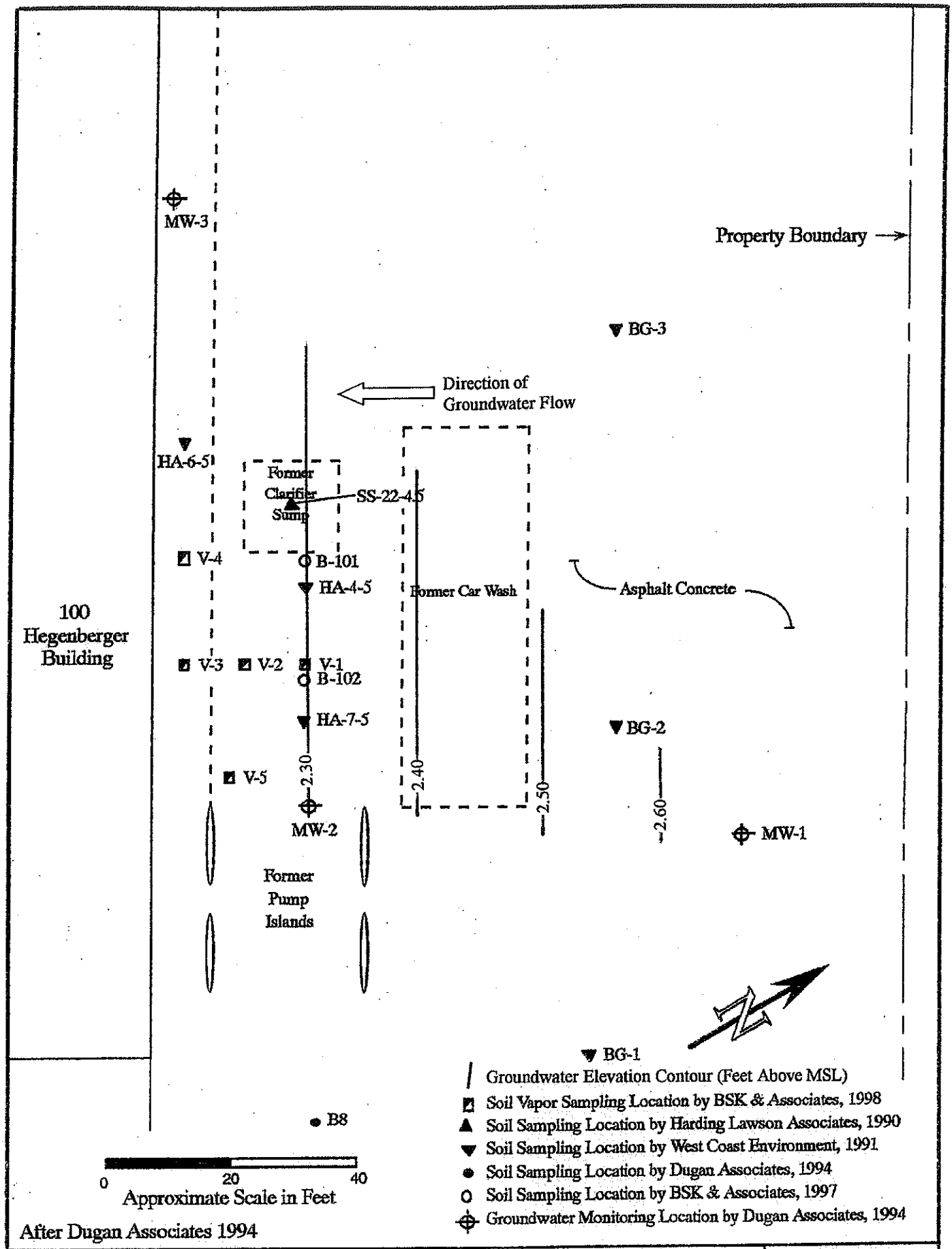
APPENDIX B

Previous Investigation Maps and Tables



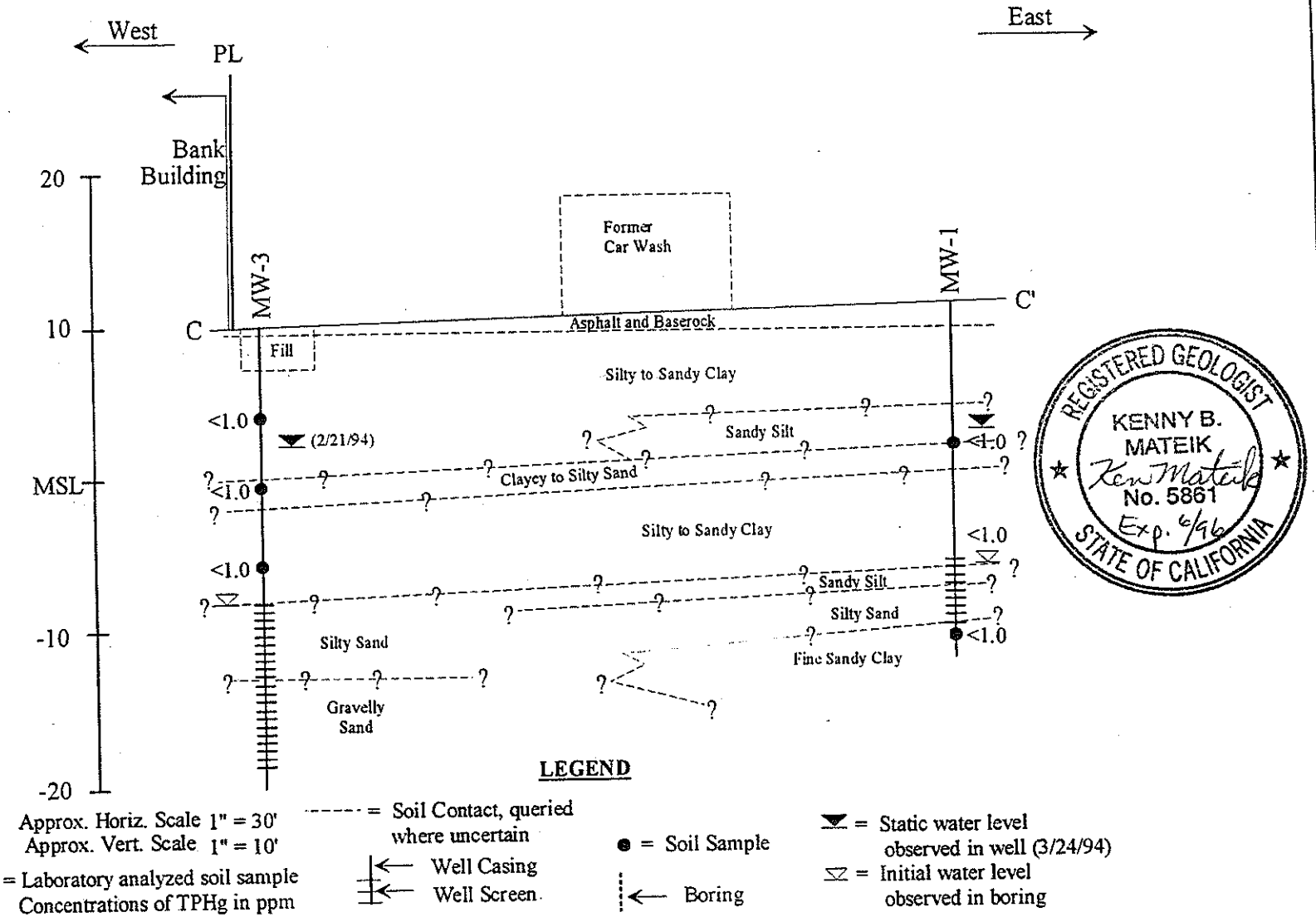
DUGAN ASSOCIATES **1023B Martin Ave.** **Santa Clara, California** **JOB NO. 121-QM**	**Groundwater Gradient Map (06/29/95)** **David Property** **106/110 Hegenberger Road** **Oakland, California**	**FIGURE** **2**

6gg95.121



After Dugan Associates 1994

David Property 106/110 Hegenberger Road Oakland, California	Job No. 07400249 GROUNDWATER CONTOUR MAP FIGURE 3	BSK & ASSOCIATES



REGISTERED GEOLOGIST
KENNY B. MATEIK
No. 5861
Exp. 6/96
STATE OF CALIFORNIA

DUGAN ASSOCIATES
1023B Martin Ave.
Santa Clara, California

Geologic Cross-Section C - C'
David Property
106/110 Hegenberger Road, Oakland
San Jose, California

FIGURE
16

TABLE 3
SUMMARY OF SOIL ANALYTICAL RESULTS
Former Clarifier Sump Location
106-110 Hegenberger Road
Oakland, California

Sample No.	Date	Sample Depth (ft-BGS)	TPHg (mg/kg)	TPHd (mg/kg)	TOG (mg/kg)	TOG (mg/kg)	TRPH (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	2-Methyl-Naphthalene (mg/kg)	VOCs (mg/kg)	Total Cadmium (mg/kg)	Total Chromium (mg/kg)	Total Lead (mg/kg)	STLC Lead (mg/L)	Nickel (mg/kg)	Total Zinc (mg/kg)
EPA Analytical Method:			8015m	8015m	503A	5520B(503D)	418.1	8020	8020	8020	8020	8010	8010	8010	7130	7190	7420	WET/7420	7520	7950
Harding-Lawson Associates, 1990																				
SS-22-4.5	09/07/90	4.5	570	420	780	2,400	-	0.15	0.062	1.7	13	6.0	7.9	-	1.0	62	80	8.0	-	69
West Coast Environmental, 1991																				
HA-4-5	04/03/91	5	3,340	ND(<10)	-	-	4,000	39.9	177	93.3	281	-	-	-	10	41.1	59.3	0.98	-	60.8
HA-6-5	04/03/91	5	ND(<1.0)	ND(<10)	-	-	160	ND(<0.05)	ND(<0.07)	ND(<0.07)	ND(<0.14)	-	-	-	0.80	45.6	46.2	-	-	52.3
HA-7-5	04/03/91	5	1,160	ND(<10)	-	-	1,700	16.1	29.2	41	115	-	-	-	0.90	52.3	109	0.41	-	38.1
BG-1-3	04/03/91	3	-	-	-	-	56	-	-	-	-	-	-	-	0.80	41.5	10	-	-	19.9
BG-2-3	04/03/91	3	-	-	-	-	114	-	-	-	-	-	-	-	0.90	47.9	47.8	-	-	43
BG-3-3	04/03/91	3	-	-	-	-	82	-	-	-	-	-	-	-	0.74	49.8	30.5	-	-	39.4
Dugan Associates, 1994																				
S-6-B3	02/28/94	6	30	-	-	-	-	0.76	0.07	0.17	0.97	-	-	-	-	-	-	-	-	-
S-10-B3	02/28/94	10	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-11-B3	02/28/94	11	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-16-B3	02/28/94	16	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-18.5-B3	02/28/94	18.5	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-5.5-B4	02/28/94	5.5	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-10.5-B4	02/28/94	10.5	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-15.5-B4	02/28/94	15.5	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-18-B4	02/28/94	18	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-5.5-B5	02/28/94	5.5	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-10.5-B5	02/28/94	10.5	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-15.5-B5	02/28/94	15.5	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-9-MW1	02/11/94	9	ND(<1.0)	-	-	ND(<50)	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	ND(<4.0)	-	-	-
S-16.5-MW1	02/11/94	16.5	ND(<1.0)	-	-	ND(<50)	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	4.1	-	-	-
S-21-MW1	02/11/94	21	ND(<1.0)	-	-	ND(<50)	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	ND(<4.0)	-	-	-
S-10.5-MW2	02/11/94	10.5	ND(<1.0)	-	-	ND(<50)	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-15.5-MW2	02/11/94	15.5	ND(<1.0)	-	-	ND(<50)	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-17-MW2	02/11/94	17	ND(<1.0)	-	-	ND(<50)	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	5.3	ND(<0.2)	-	-
S-10.5-B8	02/11/94	10.5	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-15.5-B8	02/11/94	15.5	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-5.5-MW3	02/15/94	5.5	ND(<1.0)	ND(<10)	-	ND(<50)	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-10.5-MW3	02/15/94	10.5	ND(<1.0)	ND(<10)	-	ND(<50)	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.05)	ND(<0.05)	(<varies)	ND(<1.0)	36	4.1	ND(<0.2)	36	28
S-15.5-MW3	02/15/94	15.5	ND(<1.0)	ND(<10)	-	ND(<50)	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.05)	ND(<0.05)	(<varies)	ND(<1.0)	53	4.7	ND(<0.2)	56	53
BSK & Associates, 1997																				
B-101	09/08/97	5	900	-	-	-	-	1.1	5.6	19	39	-	-	-	-	-	41	-	-	-
B-101	09/08/97	10	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
B-102	09/08/97	5	2000	-	-	-	-	16	3.2	120	57	-	-	-	-	-	-	-	-	-
B-102	09/08/97	10	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
BSK & Associates, 1998																				
V-1 (soil vapor)	10/26/98	3	-	-	-	-	-	680 ppbv	8.8 ppbv	70 ppbv	21.4 ppbv	-	-	-	-	-	41	-	-	-
V-2 (soil vapor)	10/26/98	2.5	-	-	-	-	-	96 ppbv	11 ppbv	290 ppbv	24 ppbv	-	-	-	-	-	-	-	-	-
V-3 (soil vapor)	10/26/98	2	-	-	-	-	-	1.4 ppbv	3.6 ppbv	ND	ND	-	-	-	-	-	-	-	-	-
V-4 (soil vapor)	10/26/98	2	-	-	-	-	-	8.8 ppbv	5.0 ppbv	9.6 ppbv	9.6 ppbv	-	-	-	-	-	-	-	-	-
V-5 (soil vapor)	10/26/98	2	-	-	-	-	-	3.2 ppbv	5.4 ppbv	4.5 ppbv	4.5 ppbv									

Soil analytical results presented in milligrams per kilogram.
ppbv=parts per billion by volume
EPA Environmental Protection Agency
ft-BGS Feet below ground surface
mg/kg Milligrams per kilogram
mg/L Milligrams per liter
ND Concentration below detection limit presented in parentheses
STLC Soluble Threshold Limit Concentration
TOG Total Oil and Grease
TPHg Total Petroleum Hydrocarbons as Gasoline
TPHd Total Petroleum Hydrocarbons as Diesel
TRPH Total Recoverable Petroleum Hydrocarbons
VOCs Volatile organic compounds
WET Waste Extraction Test

BSK & Associates

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TABLE 2
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF
GROUNDWATER SAMPLES FROM MONITORING WELLS
David Property
106 and 110 Hegenberger Road
Oakland, California

Well Date	TPHg	TPHd	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TOG
MW-1							
02/21/94	<50	<50	<0.5	<0.5	<0.5	<0.5	<5,000
03/24/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
07/03/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
12/15/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
03/06/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
06/29/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
MW-2							
02/21/94	<50	<50	<0.5	<0.5	<0.5	<0.5	<5,000
03/24/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
07/03/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
12/15/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
03/06/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
06/29/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
MW-3							
02/21/94	<50	<50	<0.5	<0.5	<0.5	<0.5	<5,000
03/24/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
07/03/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
12/15/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
03/06/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
06/29/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
MW-4							
03/09/94	81	65	<0.5	<0.5	<0.5	<0.5	NA
03/24/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
07/03/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
12/15/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
03/06/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
MCLs	----	------	1.0	----	680	1,750	----
DWALs	----	------	----	100	----	------	----

Chemical Analysis

As requested by Barney Chan of ACDEH samples from each well were analyzed for cadmium, chromium, lead, nickel and zinc by EPA Method 200.7.

Chemical Test Results

A summary of the results of the analyses of the groundwater samples is presented in Table 1 below.

TABLE 1
SUMMARY OF CHEMICAL TEST RESULTS
All units in mg/l (ppm), unless otherwise indicated

WELL DESIGNATION	CONSTITUENTS				
	Cadmium	Chromium	Lead	Nickel	Zinc
Detection Limit	0.02	0.1	0.05	0.1	0.1
MW-2	ND	ND	ND	ND	ND
MW-3	ND	ND	ND	ND	ND

ND = None Detected

Findings

As indicated in Table 1 above, the constituents analyzed for were not present at detectable concentrations in the groundwater samples during this monitoring round.

The laboratory data sheets and chain-of-custody documentation are presented in Appendix A.

Report Distribution

Copies of this report should be submitted to Barney Chan of ACDEH. An extra copy of this report has been provided for submittal to ACDEH.

Limitations

The findings and conclusions presented in this report are based on field review and observations, and from the limited testing program described herein. This report has been prepared in accordance with generally accepted methodologies and standards of practice in the area. No other warranties, expressed or implied, are made as to the findings included in the report.

BSK

Chemical Analysis

As requested by Barney Chan of ACDEH samples from each well were analyzed for methyl tert butyl ether (MTBE) using EPA method 8020. The laboratory data sheets and chain-of-custody documentation are presented in Appendix A.

Chemical Test Results

A summary of the results of the analyses of the groundwater samples is presented in Table 1 below.

TABLE 1
SUMMARY OF CHEMICAL TEST RESULTS
All units are ug/L (ppb) unless otherwise noted

WELL DESIGNATION	MTBE
Detection Limit	5
MW-1	ND
MW-2	ND
MW-3	ND

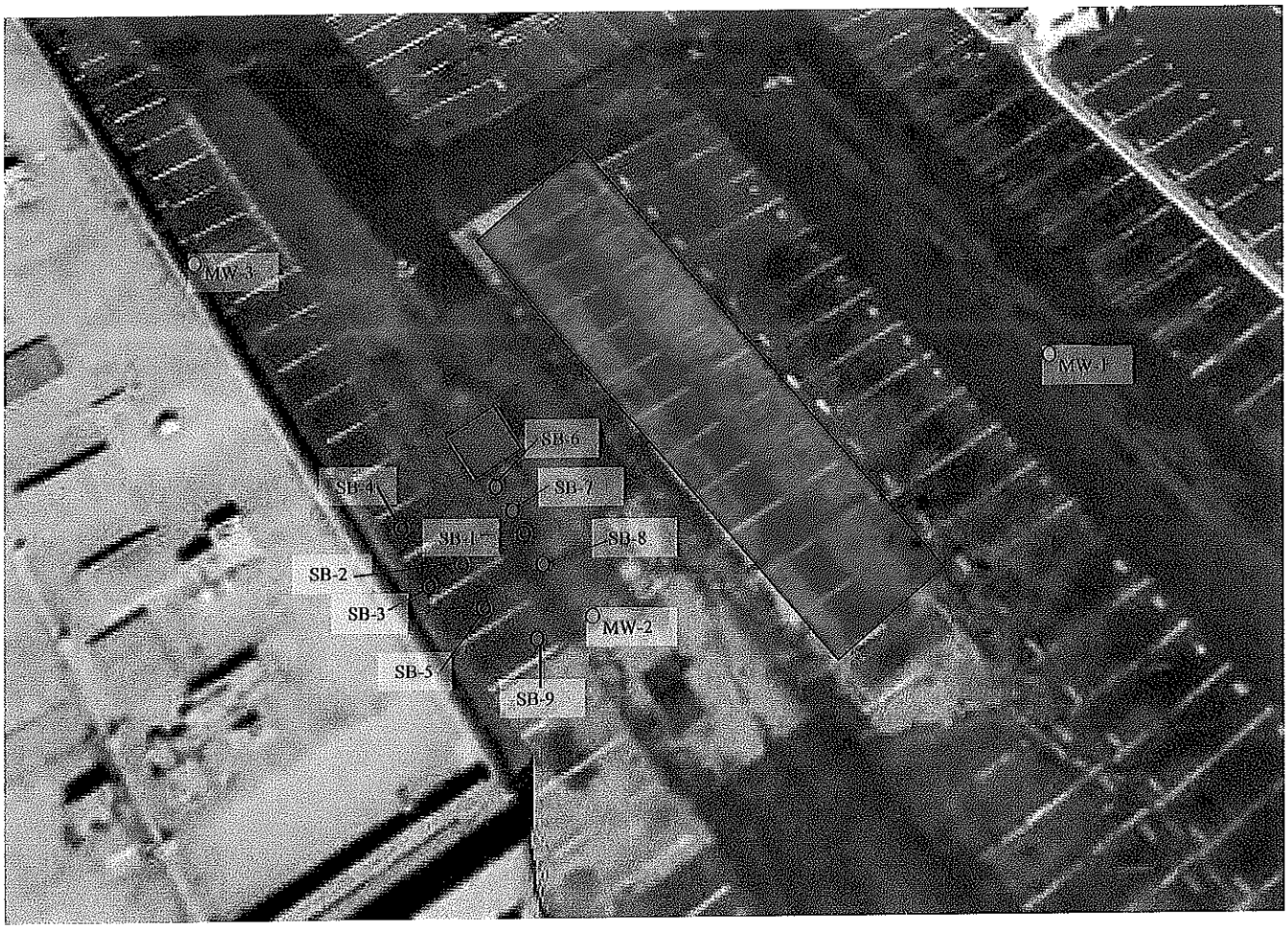
ND = None Detected

Findings

As indicated in Table 1 above, MTBE was not present at detectable concentrations in the groundwater samples during this monitoring event.

Groundwater depths were measured in each well prior to sampling. Depths were measured relative to the top of each well casing. Groundwater depths in each well were subtracted from the elevation of that wellhead to establish a groundwater elevation.

On the basis of groundwater measurements on June 13, 2000, groundwater appears to flow to the southwest with a surface gradient of 0.005 ft/ft. Figure 3 presents a groundwater contour map for the monitoring event.



– – – Approximate Property Boundary	O Former Groundwater Monitoring Well Location
◇ Former Clarifier Sump	● Soil Gas Sampling Location
◇ Former Car Wash	● Soil Sampling Location (all locations are approximate)

ERA soil-water-vapor

Former Clarifier Area and Sample Locations	PN: 01-2014-500-001
	Date: August 25, 2014
LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT	EP: Lita Freeman
106 - 110 Hegenberger Road, Oakland, California	**Figure 3**

Table 2
Sampling and Analysis Summary
Hegenberger Road Property
106 - 110 Hegenberger Road
Oakland, California

Location	Sample ID	Sample Depth (feet bgs)[1]	Matrix	VOCs[2]	TPH-g, TPH-d[3]	Oil & Grease[4]	LUFT 5 Metals[5]
Adjacent to Former Sampling Point V-1	SB-1	3.0	Soil Gas	X	--	--	--
Adjacent to Former Sampling Point V-2	SB-2	3.0	Soil Gas	X	--	--	--
Adjacent to Former Sampling Point V-3	SB-3	3.0	Soil Gas	X	--	--	--
Adjacent to Former Sampling Point V-4	SB-4	3.0	Soil Gas	X	--	--	--
Adjacent to Former Sampling Point V-5	SB-5	3.0	Soil Gas	X	--	--	--
Adjacent to Former Sampling Point B-101	SB-6-5	4.5 - 5.0	Soil	X	--	--	--
Adjacent to Former Sampling Point HA-4-5	SB-7-5	4.5 - 5.0	Soil	X	X	X	X
Adjacent to Former Sampling Point HA-7-5	SB-8-5	4.5 - 5.0	Soil	X	X	X	X
Southern End of Sampling Area	SB-9-5	4.5 - 5.0	Soil	X	X	X	X

Notes:

1. bgs = below ground surface
2. VOCs = Volatile Organic Compound: soil vapor samples were analyzed using U.S. EPA Method TO-15, soil samples were analyzed using U.S. EPA Method 8260B.
3. TPH-g, TPH-d = Total Petroleum Hydrocarbons (TPH) quantified as gasoline, TPH quantified as diesel were analyzed using U.S. EPA Method 8015B.
4. O&G = Oil and Grease was analyzed using U.S. EPA Method 5520C/F.
5. LUFT 5 Metals = Leaking Underground Fuel Tank 5 Metals (cadmium, chromium, lead, nickel, and zinc) were analyzed using U.S. EPA Method 6010B.

Table 3
Soil Gas Samples Analytical Summary
Hegenberger Road Property
106 - 110 Hegenberger Road
Oakland, California

Sample ID	Canister Serial Number	Vacuum Gauge Serial Number	Start Time (hours)	End Time (hours)	Beginning Vacuum Reading (in. Hg)	Final Vacuum Reading (in. Hg)	1,1-DFA	Acetone	Benzene	1,3-Butadiene	Carbon Disulfide	Chloromethane	Cyclohexane	Heptane	Hexane	2-Hexanone	MIBK	PCE	Toluene	EB	4-Ethyltoluene	Xylenes	1,2,4-TMB	1,3,5-TMB
ESL for Evaluation of Potential Vapor Intrusion							-	$1.4x10^8$	420	NE	NE	390,000	NE	NE	NE	NE	NE	2,100	1,300,000	4,900	NE	440,000	NE	NE
SB-1	CAN6309-789	MAN316-725	1425	1515	-30	-4.5	**28,000**	**<$6.7x10^4$**	**50,000**	-	<3,300	<3,300	-	-	-	<3,300	<3,300	<3,300	**5,200**	<3,300	-	<3,300	<3,300	<3,300
SB-2	CAN6311-791	MAN316-689	1450	1500	-29.5	-3	**38**	**<60**	**3,200**	<1.1	**25**	<1.0	**6,900**	**140**	**1,300**	<2.1	**45**	**18**	**25**	**47**	<2.5	**27**	<2.5	<2.5
SB-3	CAN5804-735	MAN316-682	1514	1535	-28	-3	<110	**330**	**120**	**42**	**29**	<4.2	**490**	**270**	**400**	**12**	<8.4	<14	**21**	**18**	<10	<26	<10	<10
SB-4	CAN6169-755	MAN316-676	1530	1535	-30	-3	**430**	**83**	**25**	**11**	**8.5**	**1.8**	**28**	<21	**62**	<2.1	**2.6**	<3.4	**75**	**6.6**	**2.6**	**28**	**8.8**	**2.8**
SB-5	CAN5803-739	MAN316-727	1355	1410	-30	-4	<10,000	**<$2.0x10^6$**	**<10,000**	-	<10,000	<10,000	-	-	-	<10,000	<10,000	**<10,000**	<10,000	**<10,000**	-	-	<10,000	<10,000

Volatile Organic Compound (VOCs): soil gas samples were analyzed using U.S. EPA Method TO-15
$\mu g/m^3$ = micrograms per cubic meter
Vacuum reading in inches mercury (Hg)
NE = Not Established
NA = Not Available
MIBK = 4-Methyl-2-pentanone
PCE = Tetrachloroethene
TCE = Trichloroethene
EB = Ethylbenzene
Xylenes = Total xylenes
1,2,4-TMB = 1,2,4- Trimethylbenzene
1,3,5-TMB = 1,3,5- Trimethylbenzene

ESL = Environmental Screening Levels for soil gas and commercial/industrial land use as established by the California Environmental Protection Agency, San Francisco Bay Regional Water Quality Control Board (SFBRWQCB, Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion (volatile chemicals only), Table E-2, December 2013).

Bold = Compound detected

Bold = Compound detected above ESL

Bold = Compound not detected above laboratory reporting limit; however, laboratory reporting limit is above the ESL.

Table 4
Soil Samples Analytical Summary
Hegenberger Road Property
106 - 110 Hegenberger Road
Oakland, California

Sample ID	Sample Depth (feet bgs)[1]	Former Sampling Point	Petroleum Hydrocarbons[2] (Units: mg/kg)			LUFT 5 Metals[3] (Units: mg/kg)					VOCs[4] (Units: mg/kg)							
Analytes			TPH-g	TPH-d	O&G	Cadmium	Chromium	Lead	Nickel	Zinc	Benzene	n-Butyl Benzene	sec-Butyl Benzene	Ethylbenzene	Isopropyl-benzene	Naphthalene	n-Propyl benzene	Xylenes, total
ESL for Shallow Soil (GW is DWS)[5]			500	110	500	12	2,500	320	150	600	0.044	NE	NE	3.3	NE	1.2	NE	2.3
ESL for Shallow Soil (GW is not DWS)[6]			500	110	500	12	2,500	320	150	600	1.2	NE	NE	4.7	NE	4.8	NE	11
ESL for Worker Protection[7]			4,000	1,100	100,000	1,000	NE	320	19,000	310,000	3.7	NE	NE	24	NE	15	NE	2,600
SB-6-5	4.5 - 5.0	B-101	**1,200**	**400**	**910**	<0.25	**56**	**64**	**53**	**76**	**8.6**	**6.8**	**2.5**	**7.5**	**8.0**	**19.0**	**26**	**1.2**
SB-7-5	4.5 - 5.0	HA-4-5	**1,200**	**180**	**530**	<0.25	**110**	**120**	**84**	**95**	**3.5**	**3**	**1.1**	**2.6**	**3.0**	**7.7**	**10**	<1.0
SB-8-5	4.5 - 5.0	HA-7-5	**40**	**8.6**	**160**	<0.25	**88**	**190**	**88**	**100**	<0.05	<0.05	<0.05	<0.05	**0.21**	<0.05	**0.6**	<0.05
SB-9-5	4.5 - 5.0	NA	**1.5**	**6.2**	**53**	<0.25	**89**	**30**	**82**	**65**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Notes:

1. bgs = below ground surface

2. Petroleum Hydrocarbons = TPH-g, TPH-d, O&G = Total Petroleum Hydrocarbons (TPH) quantified as gasoline and TPH quantified as diesel were analyzed using U.S. EPA Method 8015B, and Oil and Grease were analyzed using U.S. EPA Method SM5520C/F.

3. LUFT 5 Metals = Leaking Underground Fuel Tank 5 Metals (cadmium, chromium, lead, nickel, and zinc) were analyzed using U.S. EPA Method 6010B.

4. VOCs = Volatile Organic Compound were analyzed using U.S. EPA Method 8260B.

5. ESL for Shallow Soil (GW is DWS) = Environmental Screening Levels for shallow soil as established by the California Environmental Protection Agency, San Francisco Bay Regional Water Quality Control Board (SFBRWQCB, Shallow Soil Screening Levels (<3 m bgs) Commercial/Industrial Land Use (groundwater is a current or potential drinking water resource), Table A-2, December 2013).

6. ESL for Shallow Soil (GW is not DWS) = Environmental Screening Levels for shallow soil as established by the California Environmental Protection Agency, San Francisco Bay Regional Water Quality Control Board (SFBRWQCB, Shallow Soil Screening Levels (<3 m bgs) Commercial/Industrial Land Use (groundwater is not a current or potential drinking water resource), Table B-2, December 2013).

7. ESL for Worker Protection = Environmental Screening Levels for worker protection as established by the California Environmental Protection Agency, San Francisco Bay Regional Water Quality Control Board (SFBRWQCB, Direct Exposure Soil Screening Levels, Commercial/Industrial Worker Exposure Scenario, Table K-2, December 2013).

Units: mg/kg = milligrams per kilogram

<0.25 = Not detected at stated concentration

Bold = Compound detected

Bold = Compound detected above ESL

APPENDIX C

Standard Operating Procedures

STANDARD OPERATING PROCEDURE – DIRECT PUSH BORINGS

SOIL CORING AND SAMPLING PROCEDURES

Prior to drilling, all boreholes will be hand dug to a depth of 4-5 feet below ground surface (bgs) to check for underground utilities.

Soil and groundwater samples are collected for lithologic and chemical analyses using a direct driven soil coring system. A hydraulic hammer drives sampling rods into the ground to collect continuous soil cores. As the rods are advanced, soil is driven into an approximately 2.5-inch-diamter sample barrel that is attached to the end of the rods. Soil samples are collected in sleeves inside the sample barrel as the rods are advanced. After being driven 4 to 5 feet into the ground, the rods are removed from the borehole. The sleeve containing the soil core is removed from the sample barrel, and can then be preserved for chemical analyses, or used for lithologic description. This process is repeated until the desired depth or instrument refusal is reached.

A soil core interval selected for analyses is cut from the sleeve using a pre-cleaned hacksaw. The ends of the tube are covered with aluminum foil or Teflon liner and sealed with plastic caps. The soil-filled liner is labeled with the bore number, sample depth, site location, date, and time. The samples are placed in bags and stored in a cooler containing ice. Soil from the core adjacent to the interval selected for analyses is placed in a plastic zip-top bag. The soil is allowed to volatilize for a period of time, depending on the ambient temperature. The soil is scanned with a flame-ionization detector (FID) or photo-ionization detector (PID).

All sample barrels, rods, and tools (e.g. hacksaw) are cleaned with Alconox or equivalent detergent and de-ionized water. All rinsate from the cleaning is contained in 55-gallon drums at the project site.

GROUNDWATER SAMPLING FROM DIRECT PUSH BORINGS

After the targeted water-bearing zone has been penetrated, the soil-sample barrel is removed from the borehole. Small-diameter well casing with 0.010-inch slotted well screen may be installed in the borehole to facilitate the collection of groundwater samples. Threaded sections of PVC are lowered into the borehole. Groundwater samples may then be collected with a bailer, peristaltic pump, submersible or other appropriate pump until adequate sample volume is obtained. Perstaltic pumps are not used in applications requiring a lift of greater than 1 foot of net head.

Groundwater samples are preserved, stored in an ice-filled cooler, and are delivered, under chain-of-custody, to a laboratory certified by the California Department of Health Services (DHS) for hazardous materials analysis.

BOREHOLE GROUTING FOR DIRECT PUSH BORINGS

Upon completion of soil and water sampling, boreholes will be abandoned with neat cement grout to the surface. If the borehole was advanced into groundwater, the grout is pumped through a grouting tube positioned at the bottom of the borehole.

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FIGURES

APPENDICES

CERTIFICATION

This **Work Plan for Limited Phase II Subsurface Investigation** at 106-110 Hegenberger Road in Oakland, California, has been prepared by ERAS Environmental, Inc. (ERAS) under the professional supervision of the Registered Professional Geologist whose signature appears hereon.

This work plan was prepared in general accordance with the accepted standard of practice that exists in Northern California at the time the investigation was performed. Judgments leading to conclusions and recommendations are generally made with an incomplete knowledge of the conditions present. More extensive studies, including additional environmental investigations, can tend to reduce the inherent uncertainties associated with such studies.

Our firm has prepared this work plan for the Client's exclusive use for this particular project and in accordance with generally accepted professional practices within the area at the time of our investigation. No other representations, expressed or implied, and no warranty or guarantee is included or intended.

This work plan may be used only by the client and only for the purposes stated within a reasonable time from its issuance. Land use, site conditions (both on-site and off-site) or other factors may change over time, and additional work may be required with the passage of time. Any party other than the client who wishes to use this report shall notify ERAS of such intended use. Based on the intended use of report, ERAS may require that additional work be performed and that an updated report be issued. Non-compliance with any of these requirements by the client or anyone else will release ERAS from any liability resulting from the use of this report by any unauthorized party.

Sincerely,
ERAS Environmental, Inc.

Andrew Savage
Project Geologist

Curtis Payton
California Registered Professional Geologist 5608

October 30, 2014

1.0 INTRODUCTION

The following is a work plan for the collection of soil and groundwater samples to define the lateral and vertical extent of contamination at a commercial site located at 106-110 Hegenberger Road in Oakland, California (the "Property"). The Property is a LUST case that was closed on February 8, 2001. According to case closure documentation, no further action was required for the underground storage tanks (USTs) but elevated concentrations of the contaminants of concern remained in the vicinity of a sump formerly located on the Property. The case closure letter is included in **Appendix A**.

Subsurface investigations previously conducted on the Property have identified contamination including elevated concentrations of petroleum hydrocarbons quantified as gasoline, diesel and oil range organics (TPH-gro[1], TPH-dro, and TPH-oro), benzene, toluene, ethylbenzene, and xylenes (BTEX), along with lead, zinc, cadmium, and chromium.

This work plan was prepared to further investigate contamination near the former sump so that an unconditional site closure can be obtained from the Alameda County Environmental Health Care Services Agency (ACHCSA).

The Property is located on the southeast side of Hegenberger Road near the intersection of Hegenberger Road and Airport Access Road in the southern portion of the City of Oakland. The Property consists of an approximately 1.17-acre rectangular shaped parcel of land that is improved with an approximately 1,300-square foot one story commercial building and associated paved areas. The Property is currently used for a parking lot and is planned to be redeveloped with a hotel.

The location of the Property is shown on **Figure 1**. The layout of the Property is shown on **Figure 2**.

1.1 BACKGROUND

Previous Investigations

The Property was once improved with a car wash building, USTs and associated pump islands/canopy, and a clarifier sump.

Subsurface investigations were conducted at the Property by West Coast Environmental in 1991, Dugan Associates in 1994 and BSK & Associates in 1997 and by Environmental Risk Assessors (ERA) in 2014. Soil borings were drilled on many areas of the Property including some near former USTs, pump islands, and piping and near the sump. Other borings appear to have been drilled randomly

[1] TPH-gro, TPH-dro, and TPH-oro are methods that compare analytical results to standards for gasoline, diesel and motor oil, respectively. Therefore analytical results are estimates of quantities based on what would be expected for the range of hydrocarbon results for the standard. Gasoline range organics (gro) are those hydrocarbon compounds that are in the range of C6 to C10, diesel range organics (dro) are those hydrocarbon compounds that are in the range of C10 to C23, and oil range organics (oro) are those hydrocarbon compounds that are in the range of C18 to C36. There can be overlap in reporting methods as well as identification of compounds that fall within the standard that may not necessarily be derived from gasoline, diesel, or oil.

near the central portion of the Property. Four groundwater monitoring wells were eventually installed at widely spaced locations at the Property and monitored several times.

The results of investigations indicated elevated concentrations of petroleum hydrocarbons in soil and groundwater, mostly in the area of the former clarifier sump. After monitoring of the groundwater several times between 1994 and 2000, the Alameda County Health Care Services Agency (ACHCSA) closed the case in 2001. The case closure indicated that concentrations of petroleum hydrocarbons, BTEX, and metals (lead, zinc, cadmium, and chromium) remained in soil on the Property.

ERA drilled 7 soil borings in 2014 to the southeast and southwest of the former clarifier sump. Elevated concentrations of petroleum hydrocarbons in soil samples were reported in borings (SB-6 and SB-7) near the clarifier sump on the southeast side where these were reported from earlier investigations. Elevated concentrations of benzene were reported in soil gas samples collected in close proximity to the southwest side of the sump.

Extent of Contamination

It appears that petroleum hydrocarbons are present in elevated concentrations to the southeast and southwest of the former clarifier sump. Elevated concentrations of petroleum hydrocarbons are also present in soil gas in this area.

The extent of petroleum hydrocarbons in soil is not known on the north and northwest sides of the clarifier sump. In addition the impact to groundwater is not known. Petroleum hydrocarbons in shallow soil near the clarifier sump have caused elevated concentrations of soil vapor near the sump area.

Historical figures and tables are included in **Appendix B**. The locations of the previous borings are also presented in composite on **Figure 2** of this Work Plan.

2.0 REGIONAL GEOLOGY/HYDROLOGY

The Property is in the southern part of the City of Oakland in the San Francisco Bay area. The San Francisco Bay area occupies a broad alluvial valley that slopes gently northward and is flanked by alluvial fans deposited at the foot of the Diablo Range to the east and the Santa Cruz Mountains to the west. Surface topography in the immediate vicinity of the Property is gently sloping down to the northwest towards Airport Channel.

The Property is at an elevation of approximately 10 feet above Mean Sea Level according to the United States Geological Survey (USGS) Oakland East Quadrangle California 7.5 Minute Series topographic map.

Materials underlying the site are unconsolidated deposits of near shore and beach sediments, deposited in Oakland Bay at higher sea level stands. At shallow depths beneath these sediments are chert, greywacke, serpentine and shale bedrock that are a part of the Cretaceous to Jurassic-aged Franciscan Formation. Bedrock is exposed to the east-northeast on the upland surfaces.

The subject site is located on the San Francisco Bay Plain in the northernmost part of the Santa Clara Valley Groundwater Basin, (DWR, 1967), the surface of which slopes gently down toward west.

The regional groundwater flow follows the topography, moving from areas of higher elevation to areas of lower elevation. The regional groundwater flow direction in the area of the Property is estimated to be toward the northwest toward the Oakland Outer Harbor.

Based on the groundwater monitoring conducted on the Property the groundwater flow direction has been determined to be to the southwest (BSK, 2000). This is consistent with what is likely to be the regional groundwater gradient, based on topography.

Based on lithologic logs prepared from borings on the Property the subsurface lithology consists of approximately 3 feet of fill underlain by 13 to 15 feet of silts and clays, which is underlain by silty sand and sands. In some borings on the Property a clayey sand unit was also observed between 10 and 12 feet below ground surface (bgs) which appeared to be moist to wet. The main groundwater zone was indicated by the previous consultants to be the silty sand and sand unit starting at a depth of approximately 18 feet bgs (BSK, 1998).

3.0 SITE CONCEPTUAL MODEL

3.1 HYDROGEOLOGIC SETTING

Shallow groundwater is located at roughly 18 feet bgs however a groundwater producing zone may be present between 10 and 12 feet bgs. Groundwater monitoring has been conducted on the Property and the groundwater flow direction was determined to be to the southwest.

The shallow water-bearing zone appears to be located in thin clayey sand, sand, and silty sand units interbedded with clay. Groundwater is generally under water-table conditions, but may be locally confined by clay in the upper portion of the water-bearing zone. The base of the shallow water bearing zone has not been determined.

3.2 EXTENT OF CONTAMINATION

3.2.1 Results in Soil

High concentrations of TPH-dro, TPH-gro, TPH-oro, BTEX, and metals (lead, zinc, cadmium, and chromium) were detected at 4.5-5 feet in boring SS-22-4.5, SB-1, SB-2, SB-6, SB-7, HA-4-5, and HA-7-5 located near the southeastern side of the sump. The lateral extent of contamination is defined on southeast side of the sump but is poorly defined on the remaining sides. The vertical extent of contamination has not been determined.

3.2.2 Results in Groundwater

Groundwater conditions have not been evaluated in the vicinity of the sump.

4.0 WORK PLAN

4.1 SCOPE OF PROPOSED INVESTIGATION

ERAS proposes a scope of work for this investigation as follows.

- Obtain a permit for drilling from the Alameda County Public Works Department (ACPWD).
- Clear the boring locations for the presence of utilities by notifying Underground Service Alert and employing a private underground locating/clearance service.
- Advance seven borings using a direct push sample rig to approximately 20 feet in the vicinity of the sump. These borings will be continuously logged by a field geologist.
- Soil samples will be collected from a depth of 4-6 feet bgs and 10-12 feet bgs. If sufficient groundwater is encountered at a depth of 10-12 feet bgs a groundwater sample will be collected and the boring will not be advanced to the next zone.
- Groundwater samples will be collected from 18-20 feet bgs unless encountered in sufficient volume in the 10-12 foot zone.
- Analyze the soil and groundwater samples for the presence of TPH-gro, TPH-dro, TPH-oro, BTEX and LUFT 5 metals (cadmium, chromium, nickel, lead, zinc).
- Prepare a report detailing the field procedures and results of the investigation.

4.2 FIELD WORK COORDINATION

ERAS will procure a drilling permit from the ACPWD prior to drilling activities.

The boring locations will be marked with paint and Underground Service Alert notified at least 48 hours in advance to give owners of underground utilities an opportunity to mark their lines. Prior to drilling, each boring location will be cleared using a private underground utility locator.

4.3 BORING LOCATIONS AND SAMPLING

The locations of the borings are shown on **Figure 2**. The Standard Operating Procedures for direct-push sampling is included in **Appendix C**.

Seven borings will be advanced using a direct push sample rig to about 20 feet in the vicinity of the sump in an attempt to vertically and horizontally delineate the extent of the contamination. These borings will be continuously logged.

Groundwater and soil samples will be collected from each boring.

The soil and groundwater samples will be kept chilled pending transport under chain-of-custody

procedures to a California certified environmental analytical laboratory.

The soil and groundwater samples will be analyzed for the presence of TPH-gro, TPH-dro, TPH-oro, BTEX, and LUFT 5 metals (cadmium, chromium, nickel, lead, zinc).

4.4 FIELD AND REPORT SCHEDULE

The field work will be scheduled as soon as possible following approval of this work plan by the ACEHD. A report will be submitted within 30 working days of the completion of field activities.

5.0 REFERENCES

Alameda County Environmental Health Department, Remedial Action Completion Certification, Diablo Cellular, 106-110 Hegenberger Road, Oakland, California, February 8, 2001.

BSK, Soil Vapor Survey and Tier 3 Risk Assessment, Former Clarifier Sump, 106-110 Hegenberger Road, Oakland, California, December 3, 1998.

BSK, Groundwater Sampling and Analysis, 106-110 Hegenberger Road, Oakland, California, July 5, 2000.

California Department of Water Resources, Evaluation of Ground Water Resources South Bay, Appendix A: Geology, Bulletin 118-1, August 1967.

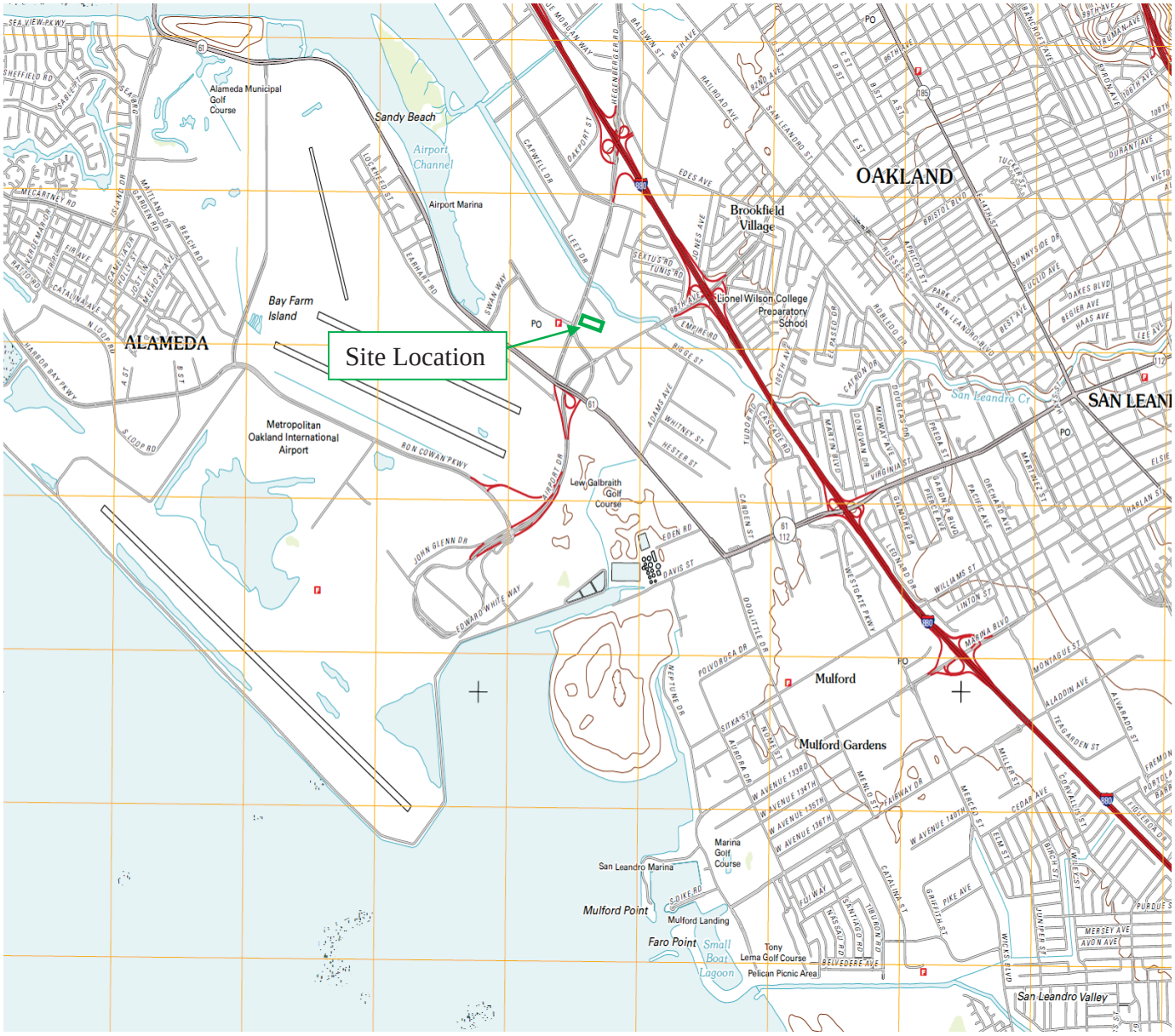
California Regional Water Quality Control Board, Water Quality Control Plan, San Francisco Bay Basin Region (2), December 1986.

California Regional Water Quality Control Board, Screening of Environmental Concerns at Sites with Contaminated Soil and Groundwater, December 2013.

Goldman, Harold B., Geology of San Francisco Bay prepared for San Francisco Bay Conservation and Development Commission, February 1967.

Helley, E.J., La Joie, K.R., Spangle, W.E., and Blair, M.L., Flatland Deposits of the San Francisco Bay Region, California - their geology and engineering properties and their importance to comprehensive planning, U.S. Geological Survey Professional Paper 943, 1974.

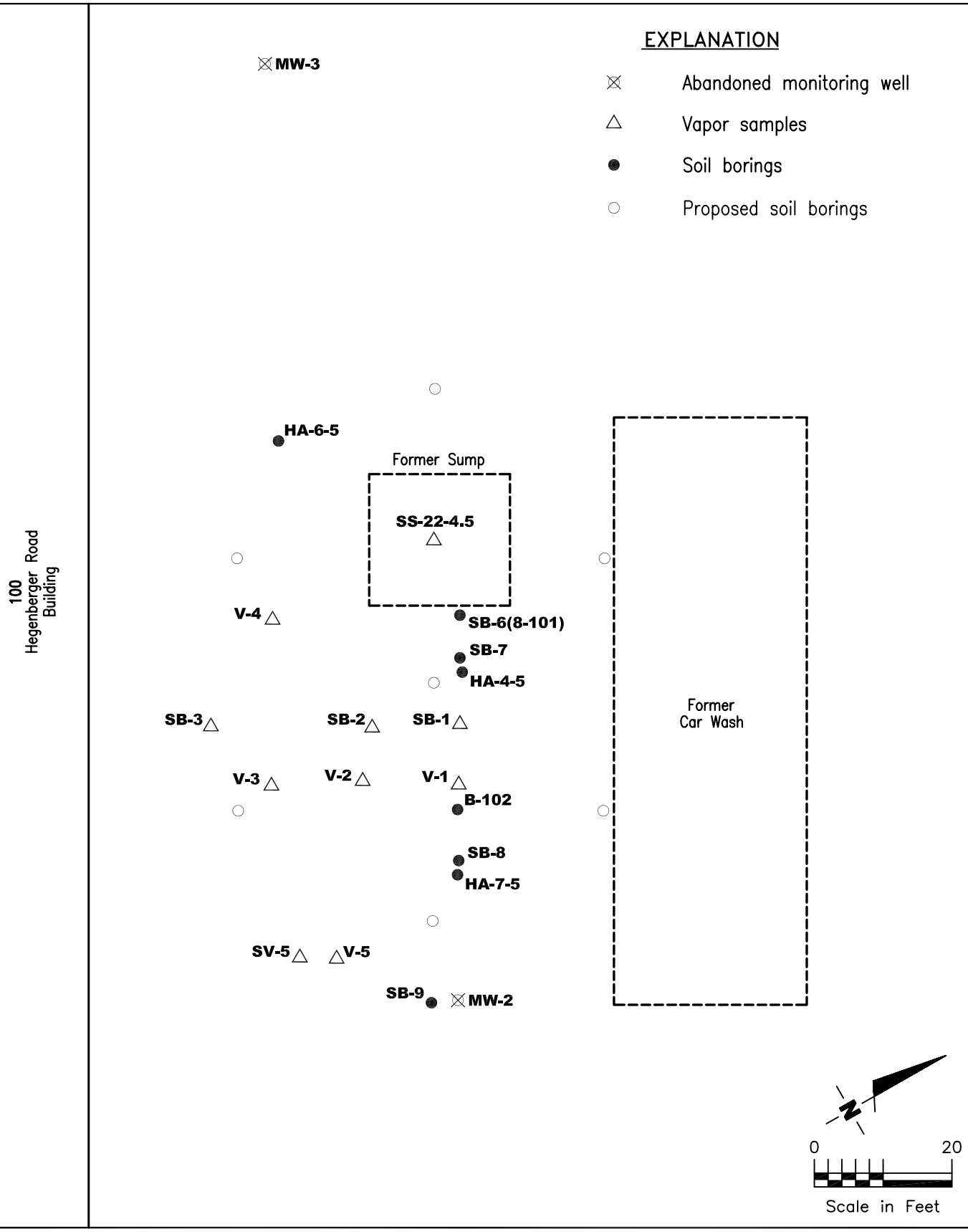
FIGURES



Site Location Map

LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT

106 - 110 Hegenberger Road, Oakland, California



PROPOSED BORING LOCATION MAP

DATE
10/14
REVIEWED BY
AS

106–110 Hegenberger Road
Oakland, California

JOB NUMBER
14174
FIGURE
2

ERAS Environmental Inc.

ERAS 10-28-14 Proposed Boring Location.dwg

APPENDIX A

ACHCSA Letter – February 8, 2001

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

CR-13-01

P091

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

February 8, 2001
StID # 4240

J. L. David, et al Trs. c/o
Ms. Deborah David
1880 Century Park East, Suite 900
Los Angeles, CA 90067

RE: Diablo Cellular, 106-110 Hegenberger Rd., Oakland CA 94621

Dear Ms. David:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with the Health and Safety Code, Chapter 6.75 (Article 4, Section 25299.37 h). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Health Services, Local Oversight Program (LOP) is required to use this case closure letter. We are also enclosing the case closure summary. This document confirms the completion of the investigation and cleanup of the reported release at the subject site.

Site Investigation and Cleanup Summary:

Please be advised that the following conditions exist at the site:

- 2100 parts per million (ppm) Total Petroleum Hydrocarbons as gasoline (TPHg), 110 ppm TPH as diesel (TPHd), 13,000 ppm Total Oil and Grease, 19, 21, 26 and 12 ppm benzene, toluene, ethyl benzene and xylenes, respectively and 109, 69, 10 and 52 ppm lead, zinc, cadmium and chromium, respectively remain in the soil at the site.

This site should be included in the City's permit tracking system. Please contact me at (510) 567-6765 with any questions.

Sincerely,

Barney M Chan

Barney M. Chan
Hazardous Materials Specialist

enclosures: Case Closure Letter, Case Closure Summary

c: Mr. L. Griffin, City of Oakland OES, 1605 MLK Jr. Way, Oakland CA 94612
B. Chan, files (letter only)

Trlt 106-110HegRd

02-13-01

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

p091

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

February 8, 2001
StID # 4240

REMEDIAL ACTION COMPLETION CERTIFICATION

J. L. David, et al Trs. c/o
Ms. Deborah David
1880 Century Park East, Suite 900
Los Angeles, CA 90067

RE: Diablo Cellular, 106-110 Hegenberger Rd., Oakland CA 94621

Dear Ms. David:

This letter confirms the completion of site investigation and remedial action for the three (3) 10,000 gasoline tanks formerly located at the above described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground tank is greatly appreciated.

Based on information in the above-referenced file and with provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25299.37 of this Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.77 of the Health and Safety Code and that no further action related to the petroleum release(s) as the site is required.

This notice is issued pursuant to subdivision (h) of Section 25299.37 of the Health and Safety Code.

Please contact Barney Chan at (510) 567-6765 if you have any questions regarding this matter.

Sincerely,

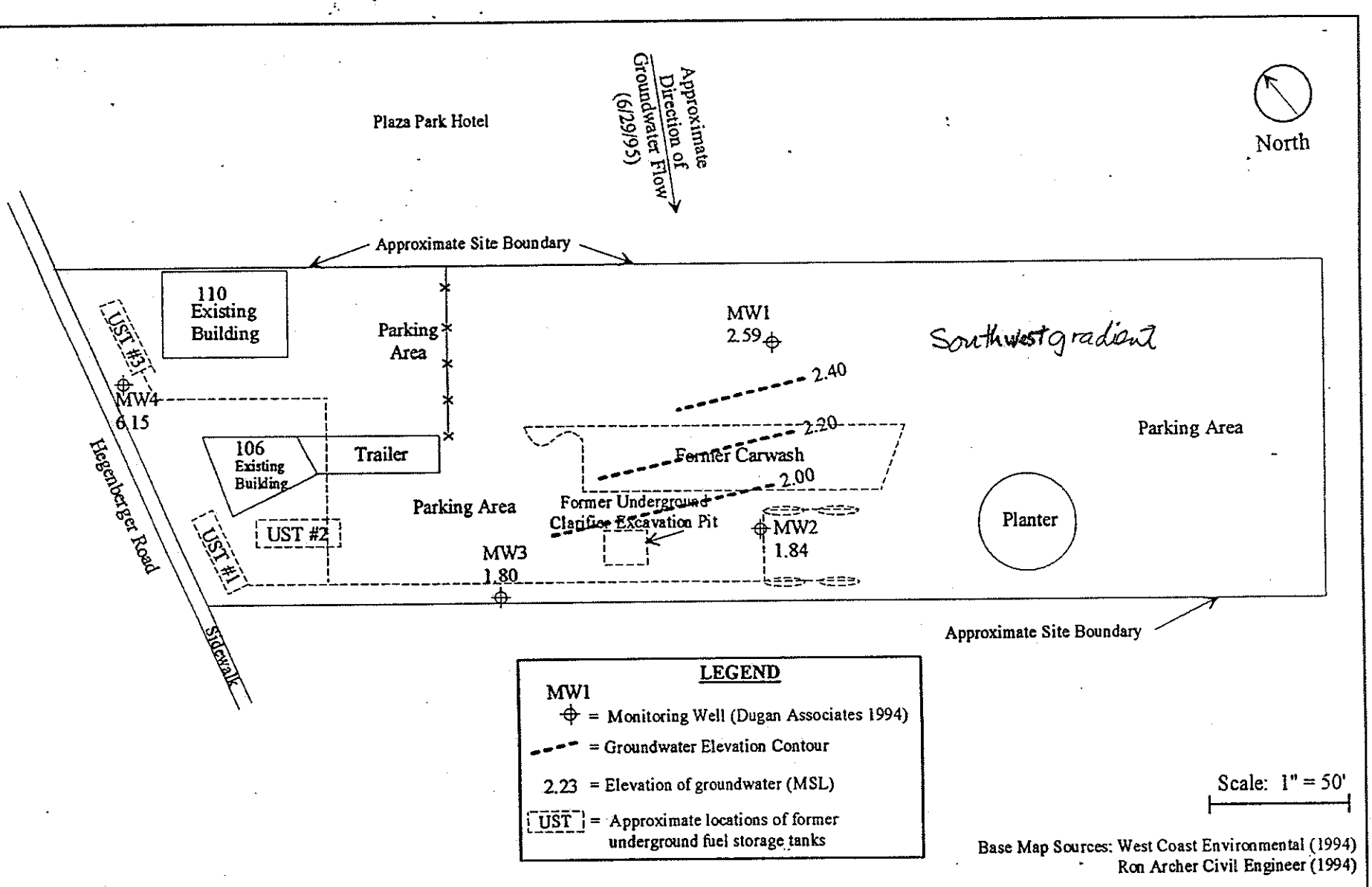
Mee Ling Tung
Director, Environmental Health

c: B. Chan, Hazardous Materials Division-files
Chuck Headlee, RWQCB
Mr. Allan Patton, SWRCB Cleanup Fund
Mr. Leroy Griffin, City of Oakland OES, 1605 Martin Luther King Dr., Oakland CA 94612

RACC106-110HegRd

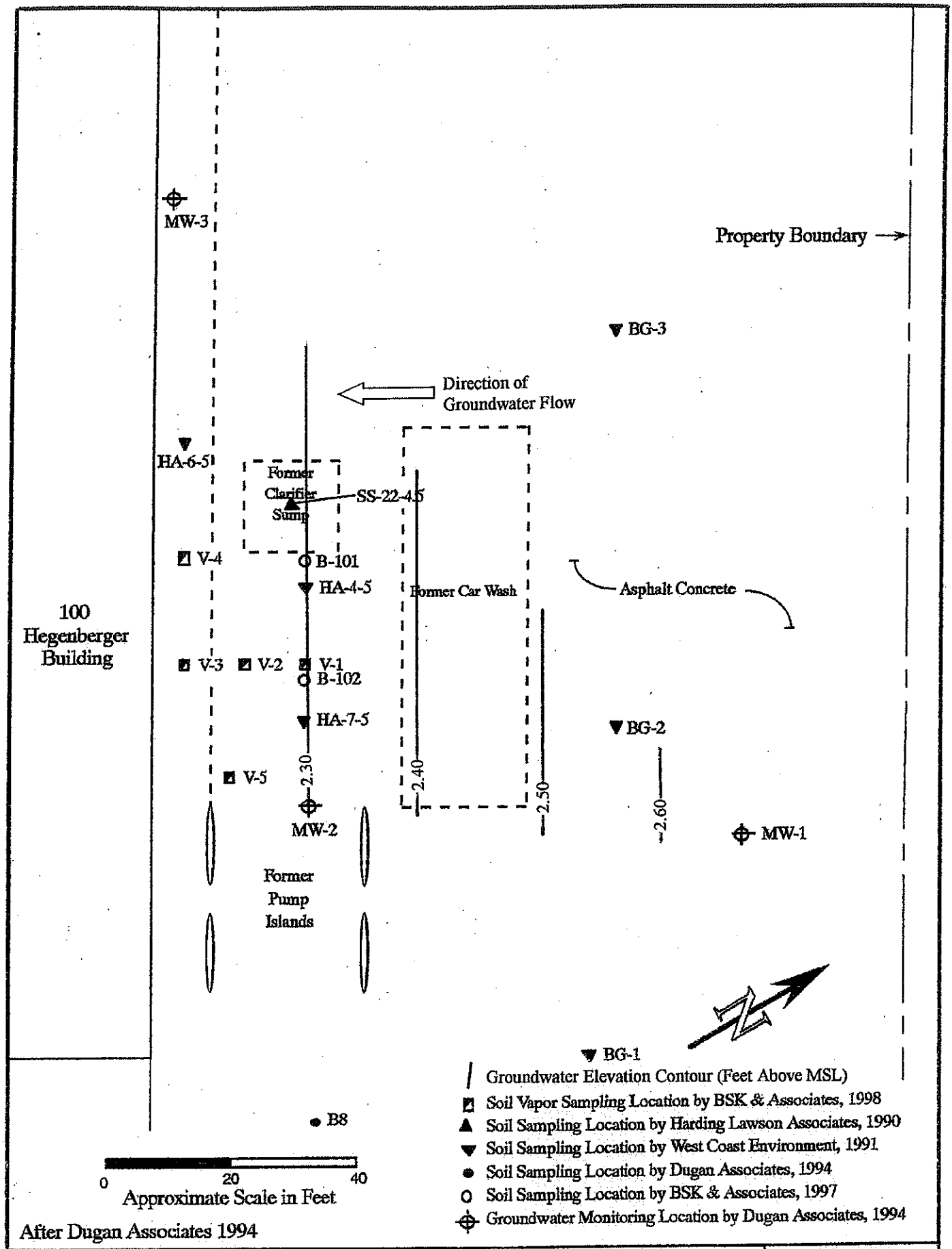
APPENDIX B

Previous Investigation Maps and Tables



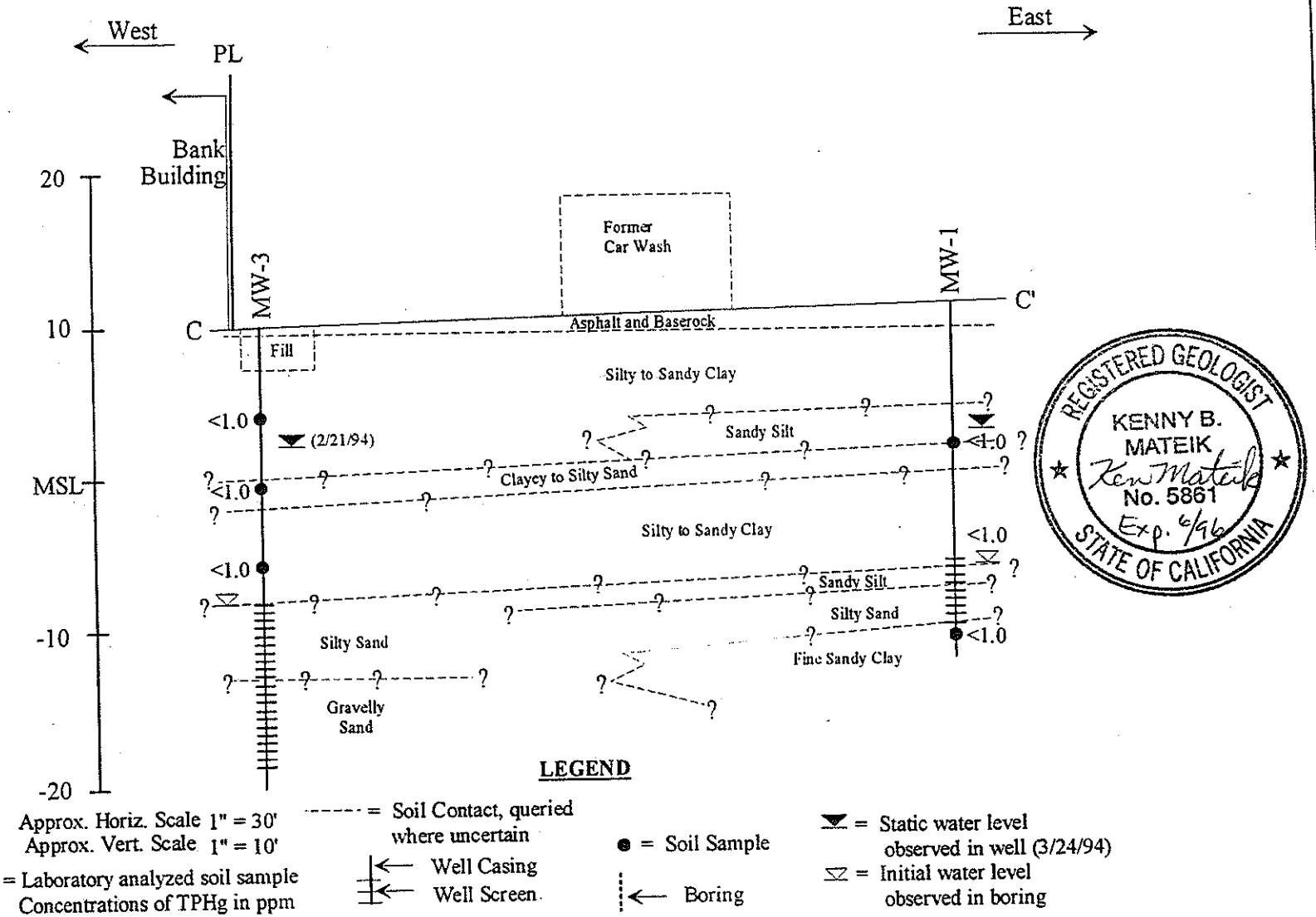
DUGAN ASSOCIATES **1023B Martin Ave.** **Santa Clara, California** **JOB NO. 121-QM**	**Groundwater Gradient Map (06/29/95)** **David Property** **106/110 Hegenberger Road** **Oakland, California**	**FIGURE** **2**

6gg95.121



After Dugan Associates 1994

David Property 106/110 Hegenberger Road Oakland, California	Job No. 07400249 GROUNDWATER CONTOUR MAP FIGURE 3	BSK & ASSOCIATES



REGISTERED GEOLOGIST
KENNY B. MATEIK
No. 5861
Exp. 6/96
STATE OF CALIFORNIA

DUGAN ASSOCIATES
1023B Martin Ave.
Santa Clara, California

Geologic Cross-Section C - C'
David Property
106/110 Hegenberger Road, Oakland
San Jose, California

FIGURE
16

TABLE 3
SUMMARY OF SOIL ANALYTICAL RESULTS
Former Clarifier Sump Location
106-110 Hegenberger Road
Oakland, California

Sample No.	Date	Sample Depth (ft-BGS)	TPHg (mg/kg)	TPHd (mg/kg)	TOG (mg/kg)	TOG (mg/kg)	TRPH (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	Naphthalene (mg/kg)	2-Methyl-Naphthalene (mg/kg)	VOCs (mg/kg)	Total Cadmium (mg/kg)	Total Chromium (mg/kg)	Total Lead (mg/kg)	STLC Lead (mg/L)	Nickel (mg/kg)	Total Zinc (mg/kg)
EPA Analytical Method:			8015m	8015m	503A	5520B(503D)	418.1	8020	8020	8020	8020	8010	8010	8010	7130	7190	7420	WET/7420	7520	7950
Harding-Lawson Associates, 1990																				
SS-22-4.5	09/07/90	4.5	570	420	780	2,400	-	0.15	0.062	1.7	13	6.0	7.9	-	1.0	62	80	8.0	-	69
West Coast Environmental, 1991																				
HA-4-5	04/03/91	5	3,340	ND(<10)	-	-	4,000	39.9	177	93.3	281	-	-	-	10	41.1	59.3	0.98	-	60.8
HA-6-5	04/03/91	5	ND(<1.0)	ND(<10)	-	-	160	ND(<0.05)	ND(<0.07)	ND(<0.07)	ND(<0.14)	-	-	-	0.80	45.6	46.2	-	-	52.3
HA-7-5	04/03/91	5	1,160	ND(<10)	-	-	1,700	16.1	29.2	41	115	-	-	-	0.90	52.3	109	0.41	-	38.1
BG-1-3	04/03/91	3	-	-	-	-	56	-	-	-	-	-	-	-	0.80	41.5	10	-	-	19.9
BG-2-3	04/03/91	3	-	-	-	-	114	-	-	-	-	-	-	-	0.90	47.9	47.8	-	-	43
BG-3-3	04/03/91	3	-	-	-	-	82	-	-	-	-	-	-	-	0.74	49.8	30.5	-	-	39.4
Dugan Associates, 1994																				
S-6-B3	02/28/94	6	30	-	-	-	-	0.76	0.07	0.17	0.97	-	-	-	-	-	-	-	-	-
S-10-B3	02/28/94	10	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-11-B3	02/28/94	11	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-16-B3	02/28/94	16	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-18.5-B3	02/28/94	18.5	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-5.5-B4	02/28/94	5.5	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-10.5-B4	02/28/94	10.5	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-15.5-B4	02/28/94	15.5	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-18-B4	02/28/94	18	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-5.5-B5	02/28/94	5.5	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-10.5-B5	02/28/94	10.5	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-15.5-B5	02/28/94	15.5	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-9-MW1	02/11/94	9	ND(<1.0)	-	-	ND(<50)	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	ND(<4.0)	-	-	-
S-16.5-MW1	02/11/94	16.5	ND(<1.0)	-	-	ND(<50)	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	4.1	-	-	-
S-21-MW1	02/11/94	21	ND(<1.0)	-	-	ND(<50)	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	ND(<4.0)	-	-	-
S-10.5-MW2	02/11/94	10.5	ND(<1.0)	-	-	ND(<50)	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-15.5-MW2	02/11/94	15.5	ND(<1.0)	-	-	ND(<50)	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-17-MW2	02/11/94	17	ND(<1.0)	-	-	ND(<50)	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	5.3	ND(<0.2)	-	-
S-10.5-B8	02/11/94	10.5	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-15.5-B8	02/11/94	15.5	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-5.5-MW3	02/15/94	5.5	ND(<1.0)	ND(<10)	-	ND(<50)	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
S-10.5-MW3	02/15/94	10.5	ND(<1.0)	ND(<10)	-	ND(<50)	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.05)	ND(<0.05)	(<varies)	ND(<1.0)	36	4.1	ND(<0.2)	36	28
S-15.5-MW3	02/15/94	15.5	ND(<1.0)	ND(<10)	-	ND(<50)	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.05)	ND(<0.05)	(<varies)	ND(<1.0)	53	4.7	ND(<0.2)	56	53
BSK & Associates, 1997																				
B-101	09/08/97	5	900	-	-	-	-	1.1	5.6	19	39	-	-	-	-	-	41	-	-	-
B-101	09/08/97	10	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
B-102	09/08/97	5	2000	-	-	-	-	16	3.2	120	57	-	-	-	-	-	-	-	-	-
B-102	09/08/97	10	ND(<1.0)	-	-	-	-	ND(<0.005)	ND(<0.005)	ND(<0.005)	ND(<0.005)	-	-	-	-	-	-	-	-	-
BSK & Associates, 1998																				
V-1 (soil vapor)	10/26/98	3	-	-	-	-	-	680 ppbv	8.8 ppbv	70 ppbv	21.4 ppbv	-	-	-	-	-	41	-	-	-
V-2 (soil vapor)	10/26/98	2.5	-	-	-	-	-	96 ppbv	11 ppbv	290 ppbv	24 ppbv	-	-	-	-	-	-	-	-	-
V-3 (soil vapor)	10/26/98	2	-	-	-	-	-	1.4 ppbv	3.6 ppbv	ND	ND	-	-	-	-	-	-	-	-	-
V-4 (soil vapor)	10/26/98	2	-	-	-	-	-	8.8 ppbv	5.0 ppbv	9.6 ppbv	9.6 ppbv	-	-	-	-	-	-	-	-	-
V-5 (soil vapor)	10/26/98	2	-	-	-	-	-	3.2 ppbv	5.4 ppbv	4.5 ppbv	4.5 ppbv									

Soil analytical results presented in milligrams per kilogram.
ppbv=parts per billion by volume
EPA Environmental Protection Agency
ft-BGS Feet below ground surface
mg/kg Milligrams per kilogram
mg/L Milligrams per liter
ND Concentration below detection limit presented in parentheses
STLC Soluble Threshold Limit Concentration
TOG Total Oil and Grease
TPHg Total Petroleum Hydrocarbons as Gasoline
TPHd Total Petroleum Hydrocarbons as Diesel
TRPH Total Recoverable Petroleum Hydrocarbons
VOCs Volatile organic compounds
WET Waste Extraction Test

BSK & Associates

F:\DOCUMENT\ENV\DATA\REPORTS\DAVID\SUMSCLVA.WB2

TABLE 2
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF
GROUNDWATER SAMPLES FROM MONITORING WELLS
David Property
106 and 110 Hegenberger Road
Oakland, California

Well Date	TPHg	TPHd	Benzene	Toluene	Ethyl-benzene	Total Xylenes	TOG
MW-1							
02/21/94	<50	<50	<0.5	<0.5	<0.5	<0.5	<5,000
03/24/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
07/03/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
12/15/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
03/06/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
06/29/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
MW-2							
02/21/94	<50	<50	<0.5	<0.5	<0.5	<0.5	<5,000
03/24/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
07/03/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
12/15/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
03/06/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
06/29/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
MW-3							
02/21/94	<50	<50	<0.5	<0.5	<0.5	<0.5	<5,000
03/24/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
07/03/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
12/15/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
03/06/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
06/29/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
MW-4							
03/09/94	81	65	<0.5	<0.5	<0.5	<0.5	NA
03/24/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
07/03/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
12/15/94	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
03/06/95	<50	<50	<0.5	<0.5	<0.5	<0.5	NA
MCLs	----	------	1.0	----	680	1,750	----
DWALs	----	------	----	100	----	------	----

Chemical Analysis

As requested by Barney Chan of ACDEH samples from each well were analyzed for cadmium, chromium, lead, nickel and zinc by EPA Method 200.7.

Chemical Test Results

A summary of the results of the analyses of the groundwater samples is presented in Table 1 below.

TABLE 1
SUMMARY OF CHEMICAL TEST RESULTS
All units in mg/l (ppm), unless otherwise indicated

WELL DESIGNATION	CONSTITUENTS				
	Cadmium	Chromium	Lead	Nickel	Zinc
Detection Limit	0.02	0.1	0.05	0.1	0.1
MW-2	ND	ND	ND	ND	ND
MW-3	ND	ND	ND	ND	ND

ND = None Detected

Findings

As indicated in Table 1 above, the constituents analyzed for were not present at detectable concentrations in the groundwater samples during this monitoring round.

The laboratory data sheets and chain-of-custody documentation are presented in Appendix A.

Report Distribution

Copies of this report should be submitted to Barney Chan of ACDEH. An extra copy of this report has been provided for submittal to ACDEH.

Limitations

The findings and conclusions presented in this report are based on field review and observations, and from the limited testing program described herein. This report has been prepared in accordance with generally accepted methodologies and standards of practice in the area. No other warranties, expressed or implied, are made as to the findings included in the report.

BSK

Chemical Analysis

As requested by Barney Chan of ACDEH samples from each well were analyzed for methyl tert butyl ether (MTBE) using EPA method 8020. The laboratory data sheets and chain-of-custody documentation are presented in Appendix A.

Chemical Test Results

A summary of the results of the analyses of the groundwater samples is presented in Table 1 below.

TABLE 1
SUMMARY OF CHEMICAL TEST RESULTS
All units are ug/L (ppb) unless otherwise noted

WELL DESIGNATION	MTBE
Detection Limit	5
MW-1	ND
MW-2	ND
MW-3	ND

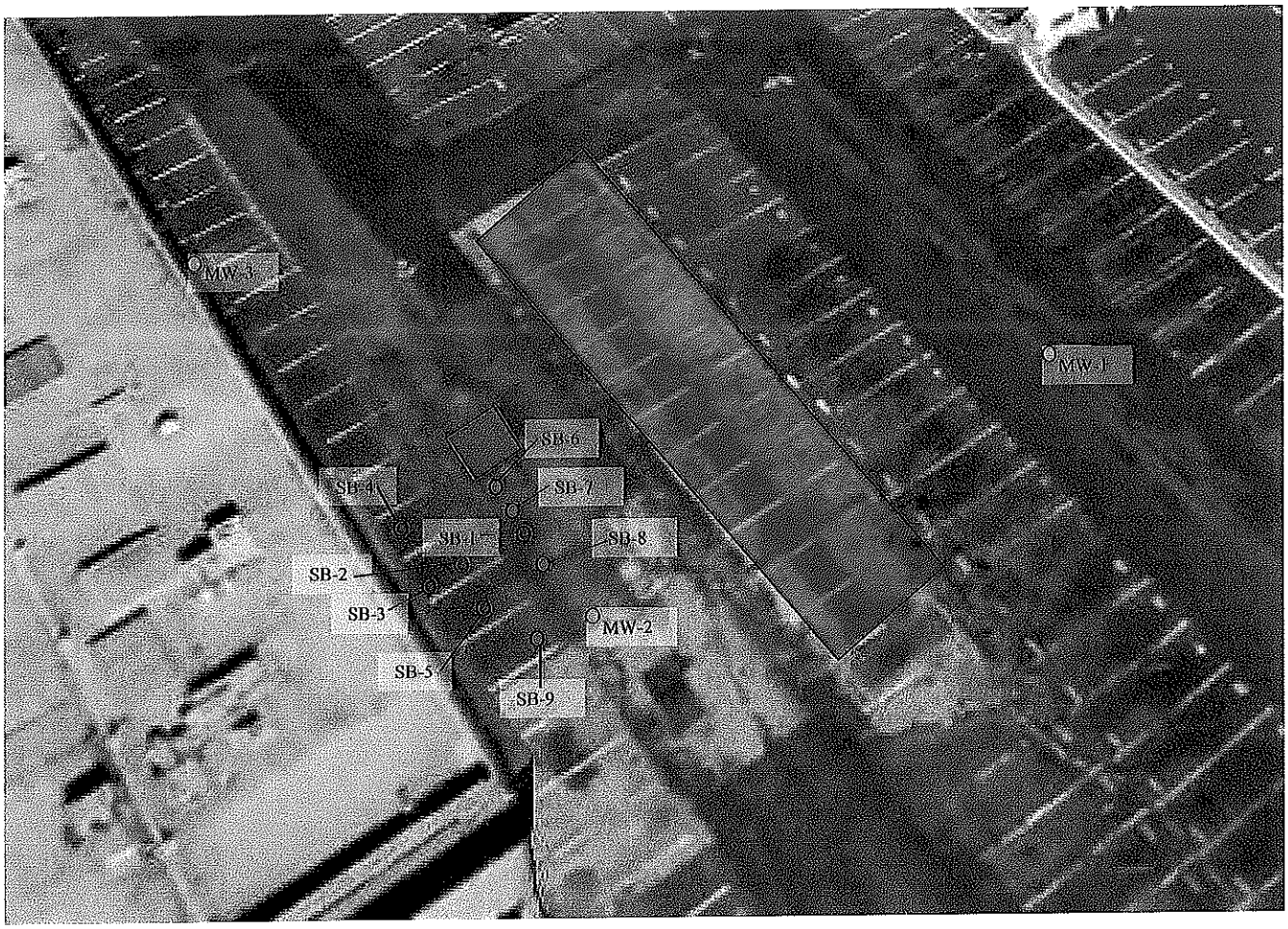
ND = None Detected

Findings

As indicated in Table 1 above, MTBE was not present at detectable concentrations in the groundwater samples during this monitoring event.

Groundwater depths were measured in each well prior to sampling. Depths were measured relative to the top of each well casing. Groundwater depths in each well were subtracted from the elevation of that wellhead to establish a groundwater elevation.

On the basis of groundwater measurements on June 13, 2000, groundwater appears to flow to the southwest with a surface gradient of 0.005 ft/ft. Figure 3 presents a groundwater contour map for the monitoring event.



– – – Approximate Property Boundary	O Former Groundwater Monitoring Well Location
◇ Former Clarifier Sump	● Soil Gas Sampling Location
◇ Former Car Wash	● Soil Sampling Location (all locations are approximate)

ERA soil-water-vapor

Former Clarifier Area and Sample Locations	PN: 01-2014-500-001
	Date: August 25, 2014
LIMITED PHASE II ENVIRONMENTAL SITE ASSESSMENT	EP: Lita Freeman
106 - 110 Hegenberger Road, Oakland, California	**Figure 3**

Table 2
Sampling and Analysis Summary
Hegenberger Road Property
106 - 110 Hegenberger Road
Oakland, California

Location	Sample ID	Sample Depth (feet bgs)[1]	Matrix	VOCs[2]	TPH-g, TPH-d[3]	Oil & Grease[4]	LUFT 5 Metals[5]
Adjacent to Former Sampling Point V-1	SB-1	3.0	Soil Gas	X	--	--	--
Adjacent to Former Sampling Point V-2	SB-2	3.0	Soil Gas	X	--	--	--
Adjacent to Former Sampling Point V-3	SB-3	3.0	Soil Gas	X	--	--	--
Adjacent to Former Sampling Point V-4	SB-4	3.0	Soil Gas	X	--	--	--
Adjacent to Former Sampling Point V-5	SB-5	3.0	Soil Gas	X	--	--	--
Adjacent to Former Sampling Point B-101	SB-6-5	4.5 - 5.0	Soil	X	--	--	--
Adjacent to Former Sampling Point HA-4-5	SB-7-5	4.5 - 5.0	Soil	X	X	X	X
Adjacent to Former Sampling Point HA-7-5	SB-8-5	4.5 - 5.0	Soil	X	X	X	X
Southern End of Sampling Area	SB-9-5	4.5 - 5.0	Soil	X	X	X	X

Notes:

1. bgs = below ground surface
2. VOCs = Volatile Organic Compound: soil vapor samples were analyzed using U.S. EPA Method TO-15, soil samples were analyzed using U.S. EPA Method 8260B.
3. TPH-g, TPH-d = Total Petroleum Hydrocarbons (TPH) quantified as gasoline, TPH quantified as diesel were analyzed using U.S. EPA Method 8015B.
4. O&G = Oil and Grease was analyzed using U.S. EPA Method 5520C/F.
5. LUFT 5 Metals = Leaking Underground Fuel Tank 5 Metals (cadmium, chromium, lead, nickel, and zinc) were analyzed using U.S. EPA Method 6010B.

Table 3
Soil Gas Samples Analytical Summary
Hegenberger Road Property
106 - 110 Hegenberger Road
Oakland, California

Sample ID	Canister Serial Number	Vacuum Gauge Serial Number	Start Time (hours)	End Time (hours)	Beginning Vacuum Reading (in. Hg)	Final Vacuum Reading (in. Hg)	1,1-DFA	Acetone	Benzene	1,3-Butadiene	Carbon Disulfide	Chloromethane	Cyclohexane	Heptane	Hexane	2-Hexanone	MIBK	PCE	Toluene	EB	4-Ethyltoluene	Xylenes	1,2,4-TMB	1,3,5-TMB
ESL for Evaluation of Potential Vapor Intrusion							-	$1.4x10^8$	420	NE	NE	390,000	NE	NE	NE	NE	NE	2,100	1,300,000	4,900	NE	440,000	NE	NE
SB-1	CAN6309-789	MAN316-725	1425	1515	-30	-4.5	**28,000**	**<$6.7x10^4$**	**50,000**	-	<3,300	<3,300	-	-	-	<3,300	<3,300	<3,300	**5,200**	<3,300	-	<3,300	<3,300	<3,300
SB-2	CAN6311-791	MAN316-689	1450	1500	-29.5	-3	**38**	**<60**	**3,200**	<1.1	**25**	<1.0	**6,900**	**140**	**1,300**	<2.1	**45**	**18**	**25**	**47**	<2.5	**27**	<2.5	<2.5
SB-3	CAN5804-735	MAN316-682	1514	1535	-28	-3	<110	**330**	**120**	**42**	**29**	<4.2	**490**	**270**	**400**	**12**	<8.4	<14	**21**	**18**	<10	<26	<10	<10
SB-4	CAN6169-755	MAN316-676	1530	1535	-30	-3	**430**	**83**	**25**	**11**	**8.5**	**1.8**	**28**	<21	**62**	<2.1	**2.6**	<3.4	**75**	**6.6**	**2.6**	**28**	**8.8**	**2.8**
SB-5	CAN5803-739	MAN316-727	1355	1410	-30	-4	<10,000	**<$2.0x10^6$**	**<10,000**	-	<10,000	<10,000	-	-	-	<10,000	<10,000	**<10,000**	<10,000	**<10,000**	-	-	<10,000	<10,000

Volatile Organic Compound (VOCs): soil gas samples were analyzed using U.S. EPA Method TO-15
$\mu g/m^3$ = micrograms per cubic meter
Vacuum reading in inches mercury (Hg)
NE = Not Established
NA = Not Available
MIBK = 4-Methyl-2-pentanone
PCE = Tetrachloroethene
TCE = Trichloroethene
EB = Ethylbenzene
Xylenes = Total xylenes
1,2,4-TMB = 1,2,4- Trimethylbenzene
1,3,5-TMB = 1,3,5- Trimethylbenzene

ESL = Environmental Screening Levels for soil gas and commercial/industrial land use as established by the California Environmental Protection Agency, San Francisco Bay Regional Water Quality Control Board (SFBRWQCB, Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion (volatile chemicals only), Table E-2, December 2013).

Bold = Compound detected

Bold = Compound detected above ESL

Bold = Compound not detected above laboratory reporting limit; however, laboratory reporting limit is above the ESL.

Table 4
Soil Samples Analytical Summary
Hegenberger Road Property
106 - 110 Hegenberger Road
Oakland, California

Sample ID	Sample Depth (feet bgs)[1]	Former Sampling Point	Petroleum Hydrocarbons[2] (Units: mg/kg)			LUFT 5 Metals[3] (Units: mg/kg)					VOCs[4] (Units: mg/kg)							
Analytes			TPH-g	TPH-d	O&G	Cadmium	Chromium	Lead	Nickel	Zinc	Benzene	n-Butyl Benzene	sec-Butyl Benzene	Ethylbenzene	Isopropyl-benzene	Naphthalene	n-Propyl benzene	Xylenes, total
ESL for Shallow Soil (GW is DWS)[5]			500	110	500	12	2,500	320	150	600	0.044	NE	NE	3.3	NE	1.2	NE	2.3
ESL for Shallow Soil (GW is not DWS)[6]			500	110	500	12	2,500	320	150	600	1.2	NE	NE	4.7	NE	4.8	NE	11
ESL for Worker Protection[7]			4,000	1,100	100,000	1,000	NE	320	19,000	310,000	3.7	NE	NE	24	NE	15	NE	2,600
SB-6-5	4.5 - 5.0	B-101	**1,200**	**400**	**910**	<0.25	**56**	**64**	**53**	**76**	**8.6**	**6.8**	**2.5**	**7.5**	**8.0**	**19.0**	**26**	**1.2**
SB-7-5	4.5 - 5.0	HA-4-5	**1,200**	**180**	**530**	<0.25	**110**	**120**	**84**	**95**	**3.5**	**3**	**1.1**	**2.6**	**3.0**	**7.7**	**10**	<1.0
SB-8-5	4.5 - 5.0	HA-7-5	**40**	**8.6**	**160**	<0.25	**88**	**190**	**88**	**100**	<0.05	<0.05	<0.05	<0.05	**0.21**	<0.05	**0.6**	<0.05
SB-9-5	4.5 - 5.0	NA	**1.5**	**6.2**	**53**	<0.25	**89**	**30**	**82**	**65**	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005

Notes:

1. bgs = below ground surface

2. Petroleum Hydrocarbons = TPH-g, TPH-d, O&G = Total Petroleum Hydrocarbons (TPH) quantified as gasoline and TPH quantified as diesel were analyzed using U.S. EPA Method 8015B, and Oil and Grease were analyzed using U.S. EPA Method SM5520C/F.

3. LUFT 5 Metals = Leaking Underground Fuel Tank 5 Metals (cadmium, chromium, lead, nickel, and zinc) were analyzed using U.S. EPA Method 6010B.

4. VOCs = Volatile Organic Compound were analyzed using U.S. EPA Method 8260B.

5. ESL for Shallow Soil (GW is DWS) = Environmental Screening Levels for shallow soil as established by the California Environmental Protection Agency, San Francisco Bay Regional Water Quality Control Board (SFBRWQCB, Shallow Soil Screening Levels (<3 m bgs) Commercial/Industrial Land Use (groundwater is a current or potential drinking water resource), Table A-2, December 2013).

6. ESL for Shallow Soil (GW is not DWS) = Environmental Screening Levels for shallow soil as established by the California Environmental Protection Agency, San Francisco Bay Regional Water Quality Control Board (SFBRWQCB, Shallow Soil Screening Levels (<3 m bgs) Commercial/Industrial Land Use (groundwater is not a current or potential drinking water resource), Table B-2, December 2013).

7. ESL for Worker Protection = Environmental Screening Levels for worker protection as established by the California Environmental Protection Agency, San Francisco Bay Regional Water Quality Control Board (SFBRWQCB, Direct Exposure Soil Screening Levels, Commercial/Industrial Worker Exposure Scenario, Table K-2, December 2013).

Units: mg/kg = milligrams per kilogram

<0.25 = Not detected at stated concentration

Bold = Compound detected

Bold = Compound detected above ESL

APPENDIX C

Standard Operating Procedures

STANDARD OPERATING PROCEDURE – DIRECT PUSH BORINGS

SOIL CORING AND SAMPLING PROCEDURES

Prior to drilling, all boreholes will be hand dug to a depth of 4-5 feet below ground surface (bgs) to check for underground utilities.

Soil and groundwater samples are collected for lithologic and chemical analyses using a direct driven soil coring system. A hydraulic hammer drives sampling rods into the ground to collect continuous soil cores. As the rods are advanced, soil is driven into an approximately 2.5-inch-diamter sample barrel that is attached to the end of the rods. Soil samples are collected in sleeves inside the sample barrel as the rods are advanced. After being driven 4 to 5 feet into the ground, the rods are removed from the borehole. The sleeve containing the soil core is removed from the sample barrel, and can then be preserved for chemical analyses, or used for lithologic description. This process is repeated until the desired depth or instrument refusal is reached.

A soil core interval selected for analyses is cut from the sleeve using a pre-cleaned hacksaw. The ends of the tube are covered with aluminum foil or Teflon liner and sealed with plastic caps. The soil-filled liner is labeled with the bore number, sample depth, site location, date, and time. The samples are placed in bags and stored in a cooler containing ice. Soil from the core adjacent to the interval selected for analyses is placed in a plastic zip-top bag. The soil is allowed to volatilize for a period of time, depending on the ambient temperature. The soil is scanned with a flame-ionization detector (FID) or photo-ionization detector (PID).

All sample barrels, rods, and tools (e.g. hacksaw) are cleaned with Alconox or equivalent detergent and de-ionized water. All rinsate from the cleaning is contained in 55-gallon drums at the project site.

GROUNDWATER SAMPLING FROM DIRECT PUSH BORINGS

After the targeted water-bearing zone has been penetrated, the soil-sample barrel is removed from the borehole. Small-diameter well casing with 0.010-inch slotted well screen may be installed in the borehole to facilitate the collection of groundwater samples. Threaded sections of PVC are lowered into the borehole. Groundwater samples may then be collected with a bailer, peristaltic pump, submersible or other appropriate pump until adequate sample volume is obtained. Perstaltic pumps are not used in applications requiring a lift of greater than 1 foot of net head.

Groundwater samples are preserved, stored in an ice-filled cooler, and are delivered, under chain-of-custody, to a laboratory certified by the California Department of Health Services (DHS) for hazardous materials analysis.

BOREHOLE GROUTING FOR DIRECT PUSH BORINGS

Upon completion of soil and water sampling, boreholes will be abandoned with neat cement grout to the surface. If the borehole was advanced into groundwater, the grout is pumped through a grouting tube positioned at the bottom of the borehole.