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Alameda County
Environmental Health

December 4, 2008

Ms. Barbara Jakub
Hazardous Materials Specialist
Alameda County Environmental Health Care Services Agency
Department of Environmental Health – Local Oversight Program
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Subject: Preferential Pathway and Offsite Utility and Well Survey Report, Former Modern Mail Service, 2836 Union Street, Oakland, California
Alameda County Environmental Health Department Fuel Leak Case No. RO2901

Dear Ms. Jakub:

INTRODUCTION

On behalf of the property owner and “Responsible Party” (Estate of Lawrence M. Wadler), Stellar Environmental Solutions, Inc. (SES) is submitting this Preferential Pathway and Offsite Utility and Well Survey Report for the former Modern Mail Service Facility located at 2836 Union Street, Oakland, California. SES was contracted by the property owner to conduct corrective actions and monitoring related to soil and groundwater contamination associated with a former 10,000-gallon underground fuel storage tank (UFST) at the subject property.

This report fulfills the scope of work requested by Alameda County Department of Environmental Health Services (ACEH) in Technical Comment No. 1, in their letter dated August 20, 2008. This report has been uploaded to the ACEH “ftp” site and to the State Water Resources Control Board’s (Water Board) GeoTracker system.

Figures 1 and 2 in Attachment A show the site location and the site plan with the locations of groundwater wells, borings, and the former UFST. Historical groundwater analytical and elevation data is contained in Attachment D.

SITE DESCRIPTION AND HISTORY

The approximately 7,200-square foot rectangular subject property is developed with one approximately 1,500-square foot two-story building. A narrow driveway borders the building to the north, and the rear of the property is undeveloped (paved). Adjacent uses include:

- A residence (to the north);
- A paved parking area (to the east);
- A residence (to the south); and
- A sidewalk, then Union Street, then a moving company (to the west).

The property operated as an express courier facility (Modern Mail Services, Inc.) between 1951 and 2003. One 10,000-gallon gasoline UFST was installed in the late 1970s. The UFST operated under an ACEH permit (permit No. STID 4065) until it was removed in 1998. The tank closure report was submitted to the Oakland Fire Department (Golden Gate Tank Removal, 1998).

An initial site characterization conducted by SES in November 2005, which included the advancement of four borings, revealed gasoline and associated aromatic hydrocarbons at elevated levels in both soil and groundwater. That investigation was summarized in a technical report (SES, 2005b).

Additional site investigations in April 2006 involved the advancement of nine exploratory boreholes to determine the areal and vertical extent of soil and groundwater contamination. Site data indicated the presence of petroleum hydrocarbons in soil and groundwater. Actions such as groundwater monitoring, and the removal of any remaining (accessible) contaminated soils by excavation, were recommended as an interim corrective action. The April 2006 investigation is summarized in a technical report (SES, 2006b).

A corrective action which implemented the April 2006 recommendations was conducted between September and December 2006. This included the installation of ten monitoring wells, the advancement of one soil boring, the removal of 398 tons of contaminated soil, and the pumping of 5,100 gallons of contaminated groundwater from the backfilled excavation. Some residual contaminated soil was inaccessible for removal, and remained beneath the onsite building. Removal of this portion of the building and the previously inaccessible soil was conducted in November 2007. This corrective action was effective in removing 212 tons of contaminated soil; and included purging contaminated groundwater and applying Oxygen

Reducing Compound (ORC) Advanced™ product into the open excavation. Monitoring well MW-5A was destroyed by excavation during the November 2007 activity. These investigations are summarized in SES technical reports (SES, 2006d and 2007f). The site wells have been monitored quarterly since October 2006.

REGULATORY STATUS

ACEH is the lead regulatory agency for the case, acting as a Local Oversight Program (LOP) for the Water Board. There are no ACEH or Water Board cleanup orders for the site; however, all site work has been conducted under the oversight of ACEH. ACEH assigned the site to its fuel leak case system (RO#2901), and the case officer assigned was Mr. Barney Chan. Mr. Chan transferred to another ACEH department in 2007 and the current case officer, Ms. Barbara Jakub was assigned to the case in the summer of 2008. In August 2008, Ms. Jakub issued a technical directive requesting the responsible party continue quarterly groundwater monitoring and conduct a preferential pathway survey, which is the subject of this technical report.

The case has been assigned No. T0600105641 in the Water Board's GeoTracker system. Electronic uploads of required data/reports are submitted to both agencies. The site has been granted a Letter of Commitment, and has been receiving financial reimbursement from the California Underground Storage Tank Cleanup Fund.

TOPOGRAPHY AND DRAINAGE

The mean elevation of the property is approximately 18 feet above mean sea level (amsl), and the general topographic gradient in the site vicinity is slight and to the west-southwest (toward San Francisco Bay). The site itself has no discernible slope. The nearest downgradient (to the west) permanent surface water body is the Airport Channel of San Leandro Bay (which is connected to San Francisco Bay), approximately 2 miles west of the subject property. According to the commercially available database, the site is not located within a flood zone or wetland.

LITHOLOGY

The predominant soil type in all site boreholes was silty clay, generally firm and plastic. Several of the boreholes had no obvious sand or gravel units, although minor amounts of sand and gravel were occasionally present in the overall clay matrix with the occurrence of groundwater coincident in units with higher sandy-gravel than clay content. Local heterogeneities in shallow lithology and groundwater levels are typical of the alluvial deposits in this area.

GROUNDWATER CONDITIONS

The groundwater table was measured at a depth of between 10 and 12 feet below ground surface (bgs) as evident in two separate excavations the immediate vicinity of the former UFST during the remediation work. However this groundwater was considered to be a perched zone which was later corroborated by the some of the shallow wells (at a depth of 13 feet bgs) being dry. This groundwater depth of 10-12 feet is considered to a more accurate reflection of the real depth to [perched] groundwater compared to water level depths measured in the deeper groundwater monitoring wells which are small 2-inch diameter pipes that are very sensitive to confining pressure, resulting in groundwater rising up in the well casing to higher elevations than the water table or top of the plume would reflect. This is corroborated by the apparent higher water elevations measured in the deeper groundwater wells (screened from 19 to 25 feet bgs).

The shallow groundwater is under semi-confining conditions, rising from approximately 20 feet bgs (encountered during drilling) to as high as 5 feet bgs in the deeper B wells. The groundwater contaminant plume has not been fully delineated, but appears to have an elliptical configuration with the long axis trending east to west-northwest. The flow direction is indicated to be toward the west-northwest (toward San Francisco Bay), typical in this area of west Oakland and generally parallel to the long dimension of the groundwater contaminant plume. Since quarterly monitoring began in October 2006 groundwater gradient has ranged between approximately 0.006 feet/foot and 0.01 feet/foot, averaging approximately 0.008 feet/foot. Depth to groundwater has ranged in the 10 site monitoring wells between 5.02 feet bgs (measured in well MW-4B) to 10.68 feet bgs (measured in MW-4A). But as stated above, the water levels in the wells, particularly the deeper, B-designated ones, represents the potentiometric surface and not the occurrence of groundwater, which reflects the true plume depth.

These data indicate the there is insignificant risk of migration of the groundwater plume into the identified anthropogenic conduits because the depth to groundwater is at 10 feet or more and the deepest potential conduit is at a depth of 6.3 feet.

Monitoring well elevation data and historical groundwater depth in individual wells since the initiation of quarterly monitoring is shown in Table 1. Figure 3 in Attachment A is a groundwater elevation map based on the July 7, 2008 groundwater elevation showing the typical flow direction (SES 2008c).

Table 1
Historical Range of Monitoring Well Groundwater Elevations
2836 Union Street, Oakland, California

Well	Well Depth Below TOC	Surface Rim Elevation	TOC Elevation	Groundwater Elevation	Range of Groundwater Depths (feet bgs)
MW-1A	12.59	12.52	12.25	4.00	6.59 to 10.07
MW-1B	22.52	12.48	12.05	4.43	6.24 to 8.64
MW-2A	12.69	13.06	12.82	5.12	5.74 to 8.68
MW-2B	24.59	13.16	12.96	5.18	5.71 to 8.82
MW-3A	13.06	11.76	11.59	4.86	5.86 to 8.85
MW-3B	25.06	12.10	11.95	4.45	5.75 to 8.26
MW-4A	12.28	11.25	11.02	4.72	5.57 to 10.68
MW-4B	24.32	11.25	11.04	4.34	5.02 to 7.45
MW-5B	25.39	12.57	12.38	4.74	5.13 to 9.26

Notes:
 Historical measurements collected from October 2006 to October 2008
 bgs = below ground surface
 TOC = top of casing
 Wells are 1-inch diameter.
 A-wells screened from 10-13 feet bgs.
 B-wells screened from 19 to 25 feet bgs.
 All elevations are in feet above mean sea level.

PREFERENTIAL PATHWAY SURVEY

Alameda County Environmental Health requested that a survey be conducted to identify potential preferential horizontal and vertical contaminant migration pathways that might be influencing site-sourced contaminant transport. This task focused on identifying both the location and the depth of potential underground utilities that typically have highly permeable backfill acting as a preferential pathway. The preferential pathway survey task included contacting applicable state and municipal agencies, and utility providers to obtain underground utility and well construction data. It should be noted that the majority of contaminants migrating offsite occurs in groundwater under confined conditions primarily in the deeper aquifer screened by the B-zone wells from 19 to 25 feet bgs, with the exception of MTBE which is more prevalent in the A-zone wells that are screened from 10 to 13 feet bgs. Though the historical highest site groundwater depth was measured at 5.02 feet bgs, this is the potentiometric surface and therefore, it is highly unlikely that any utility-related preferential pathways above this depth would intercept groundwater.

Underground Utilities

We identified the following underground utilities, located beneath Union Street, between 30th and 28th; sanitary sewer, municipal water, electric, and natural gas. Attached Figure 3 shows those utilities identified with documented or potential maximum depths. Figure 4 is a cross-section showing the maximum depth of utilities downgradient of the contaminant source area. Table 2 summarizes the locations, depths, and type of all identified utilities.

SES physically measured the depth to the downgradient sanitary sewer pipe on November 24, 2008, which is located in the center of Union Street approximately 14 feet west of the site. The top of the pipe begins at approximately 5.5 feet bgs and extends to approximately 6.3 feet bgs (the pipe is 10 inches in diameter). The stormwater drainpipe for the subject property is not located downgradient, but crossgradient to the site (to the north). The Pacific Gas and Electric Company (PG&E) gas and electrical lines are located in Union Street, at a depth of 3-5 feet bgs. The gas line runs along both the eastern and western sides of Union Street at a distance of approximately 10 and 20 feet west of the site. The electrical utility line is located approximately 13 feet west of the site. A East Bay Municipal Utility District (EBMUD) water main is located along Union Street approximately 15 feet west of the site and is at a depth of approximately 3-5 feet bgs. The depth range of 3- 5 feet bgs for the PG&E and EBMUD utilities was provided by representatives of the companies who stated that the actual utility depth could only be exactly determined by excavating to expose the pipe. There are no other underground utilities located immediately downgradient of the site.

Table 2
Preferential Pathway Survey Findings
2836 Union Street, Oakland, California

Underground Utility / Facility	Agency / Firm Contacted	Utility / Facility Description and Location	Estimated Maximum Depth (feet below grade)	Potential Preferential Pathway for Groundwater?
Sanitary Sewer	City of Oakland— Records and Maps City of Oakland Public Works— Sewer Maintenance	Offsite- Main line runs beneath Union Street, approximately 14 feet west of site, directly down the middle of the street.	6.3 feet	Yes
Stormwater Sewer	City of Oakland— Records and Maps	Offsite (only): Beneath 30 th St., north of site.	Not Applicable, cross-gradient	No
Drinking Water	East Bay Municipal Utility District	Offsite-water main runs beneath Union Street, approximately 14 feet west of the site.	5 feet	No
Traffic Lights	City of Oakland— Department of Electrical Engineering	Offsite: All traffic lights are overhead lights. There are no underground lighting utilities.	Not Applicable	No
Electric	Pacific Gas & Electric— Service Planning Department	Electrical line runs down Union Street, approximately 10 feet west of the site.	5 feet	No
Natural Gas	Pacific Gas & Electric— Service Planning Department	Gas line runs down Union Street, approximately 5 and 15 feet west of the site.	5 feet	No
MCI, Level 3 Communications, AT&T	Contacted through U.S.A (Underground Service Alert) North	None of these companies have utilities immediately downgradient of the subject property.	Not Applicable	No

Offsite Well Survey

ACEH requested that a survey be conducted to identify all water wells within $\frac{1}{4}$ mile of the subject property. Water wells might include groundwater monitoring wells and water supply wells (irrigation, domestic, industrial, and municipal). We made a formal well survey request to the California Department of Water Resources (DWR), the agency ultimately responsible for permitting water wells and retaining Water Well Driller's Reports. We also reviewed the Alameda County Public Works database which essentially duplicates DWR's database. SES commissioned an Environmental Database Research Inc. (EDR) search of municipal and domestic wells within a 1- mile radius. All of these documents are contained in Attachment C.

The EDR search listed one Federal FRDS public water supply well located approximately 0.75 mile to the north. Six state wells are located between $\frac{1}{4}$ - and $\frac{1}{2}$ mile to the north and 56 state wells are located between $\frac{1}{2}$ - to 1- mile to the north-northeast of the subject property. See Attachment A for the EDR Physical Setting Map. As the residual hydrocarbon groundwater contamination at the subject property is in the upper water-bearing zone, at 25 feet bgs or less, and the wells discussed above are all significantly upgradient and deeper it is unlikely that any of these wells would be impacted.

Beneficial uses do not include use of the local shallow (<100 feet bgs) groundwater, however shallow groundwater wells are discussed since they can serve as contaminant pathways. The Department of Water Resources (DWR) provided all of the DWR water well completion reports within a 1- mile radius of the subject property. Of the 134 active wells and 25 abandoned wells located within the search radius, only 6 active wells are located downgradient of the subject property. Three wells are located approximately 0.12 miles to the west-northwest of the subject property, and are associated with the Linford Construction Company at 2850 Poplar Street. All three of these wells extend to a depth of between 20 and 22 feet below ground surface (bgs) and are screened approximately from between 10 to 12 feet bgs to the depth of the wells. One of these wells (MW-3) is located directly across Union Street, approximately 50 feet from the western border of the subject property.

The remaining three wells are located approximately 0.45 miles to the west-northwest of the subject property, and are associated with Kalmar AC located at 2792 Cypress Street (now Mandela Parkway). SES was only provided with the boring log for MW-3 which indicates the well was installed to a depth of 20 feet bgs, and is screened from 6 feet bgs to the depth of the well. The latter three wells are located greater than $\frac{1}{2}$ -mile from the subject property; and therefore, are unlikely to be impacted by the subject property plume. The former wells,

associated with the Linford Construction Company, are currently being used to monitor contamination associated with the removal of underground fuel storage tanks.

SUMMARY AND CONCLUSIONS

- The property, located at 2836 Union Street in Oakland, California, operated as an express courier facility (Modern Mail Services, Inc.) between 1951 and 2003. One 10,000-gallon gasoline UFST was installed in the late 1970s. The UFST operated under an ACEH permit until it was removed in 1998.
- Soil and groundwater contamination was discovered during a site characterization study in 2005. Corrective action events (including soil excavation and groundwater removal) were conducted in April 2006 and November 2007; however, residual hydrocarbon contamination remains in soil and groundwater.
- Quarterly groundwater monitoring has been conducted on site since October 2006. The groundwater contaminant plume has not been fully delineated, but appears to have an elliptical configuration with the long axis trending east to west-northwest and extends offsite below Union Street.
- The majority of contaminants migrating offsite occurs in groundwater under semi to confined aquifer conditions primarily in the deeper aquifer screened by the B-zone wells from 19 to 25 feet bgs, with the exception of MTBE which is more prevalent in the A-zone wells that are screened from 10 to 13 feet bgs.
- Previous investigations have shown groundwater to exist in at least semi-confined conditions. Groundwater was not encountered during site excavation activities as deep as 11 feet bgs or during drilling until depths of 17 to 22 feet. Though the historical high site groundwater level was measured at 5.02 feet bgs, this is the potentiometric surface of the confined aquifer screened at 19-25 feet bgs.
- The only utilities located downgradient of the subject property are a City of Oakland sanitary sewer line, an EBMUD water main, and PG&E gas and electrical lines. These are estimated by utility company personnel to be buried at 3-5 feet bgs with the exception of the sanitary sewer which is at 6.3 feet bgs. These data indicate the there is insignificant risk of migration of the groundwater plume into the identified anthropogenic conduits because the depth to groundwater is at 10 feet or more and the deepest potential conduit is at a depth of 6.3 feet.

- The EDR search listed one Federal FRDS public water supply well located approximately 0.75 mile to the north. Six state wells are located between ¼- and ½ mile to the north and 56 state wells are located between ½- to 1- mile to the north-northeast of the subject property; all upgradient of the subject property.
- Of the 134 active wells and 25 abandoned wells located within the one mile search radius, only 6 active wells are located downgradient of the subject property. One of these wells (MW-3) is located directly across Union Street, approximately 50 feet from the western border of the subject property. This well is currently being used to monitor a hydrocarbon plume associated with the adjacent property to the west.

RECOMMENDATIONS

- We recommend following up with Alameda County Environmental Health Services following its receipt of this report, to discuss the requirements to move the site toward regulatory closure.
- We further recommend that this and all future technical reports be provided to the appropriate regulatory agencies, including electronic uploads to Alameda County Environmental Health's "ftp" system and the State Water Board's GeoTracker system.

This report has been prepared for the exclusive use by the Estate of Mr. Lawrence Wadler (subject property owner), the regulatory agencies, and their authorized assigns and/or representatives. No reliance on this report shall be made by anyone other than those for whom it was prepared.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report are true and correct to the best of my knowledge. If you have any questions regarding this report, please contact us at (510) 644-3123.

Sincerely,



Henry Pietropaoli, R.G., R.E.A.
Project Manager



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

cc: Ms. Elana Aabas

ATTACHMENTS:

- Attachment A Figures
- Attachment B Utility Maps
- Attachment C Water Well Survey Documentation
- Attachment D Historical Groundwater Analytical and Elevation Data

REFERENCES

- Alameda County Environmental Health, 2008. Letter requesting preferential pathway study, utility and well survey at 2836 Union Street, Oakland, California. August 20.
- Department of Water Resources, 2008. Well Database Search, Alameda County T1S/04W Sections 22 and 27. October 8.
- East Bay Municipal Utility District, 2008. Telephone conversation between Eric West (EBMUD mapping services) and Henry Pietropaoli (SES) November 7.
- Golden Gate Tank Removal, 1998. Tank Closure Report – 2836 Union Street, Oakland, California. July 31.
- Environmental Data Resources, Inc., 2008. EDR Radius Map Report with Geocheck™. 2836 Union Street, Oakland, CA. November 3.
- Pacific Gas & Electric, 2008. Telephone conversation between Anthony Thompsen (PG&E delineation services) and Henry Pietropaoli (SES) November 7.
- Stellar Environmental Solutions, Inc. (SES), 2005b. Technical Documentation Report for Initial Site Characterization – 2836 Union Street, Oakland, California. December 14.
- Stellar Environmental Solutions, Inc. (SES), 2006b. Corrective Action Investigation: 2836 Union Street, Oakland, California, Alameda County Environmental Health Case No. RO0002901. May 3.
- Stellar Environmental Solutions, Inc. (SES), 2006d. Underground Fuel Storage Tank-Related Corrective Action Report – 2836 Union Street, Oakland, California, Alameda County Environmental Health Case No. RO0002901. December 3.
- Stellar Environmental Solutions, Inc. (SES), 2007f. Underground Fuel Storage Tank-Related Corrective Action Report – 2836 Union Street, Oakland, California. December 31.
- Stellar Environmental Solutions, Inc. (SES), 2008c. Third Quarter 2008 Groundwater Monitoring– 2836 Union Street, Oakland, California. July 24.

ATTACHMENT A

FIGURES



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

**2836 Union Street
Oakland, CA**

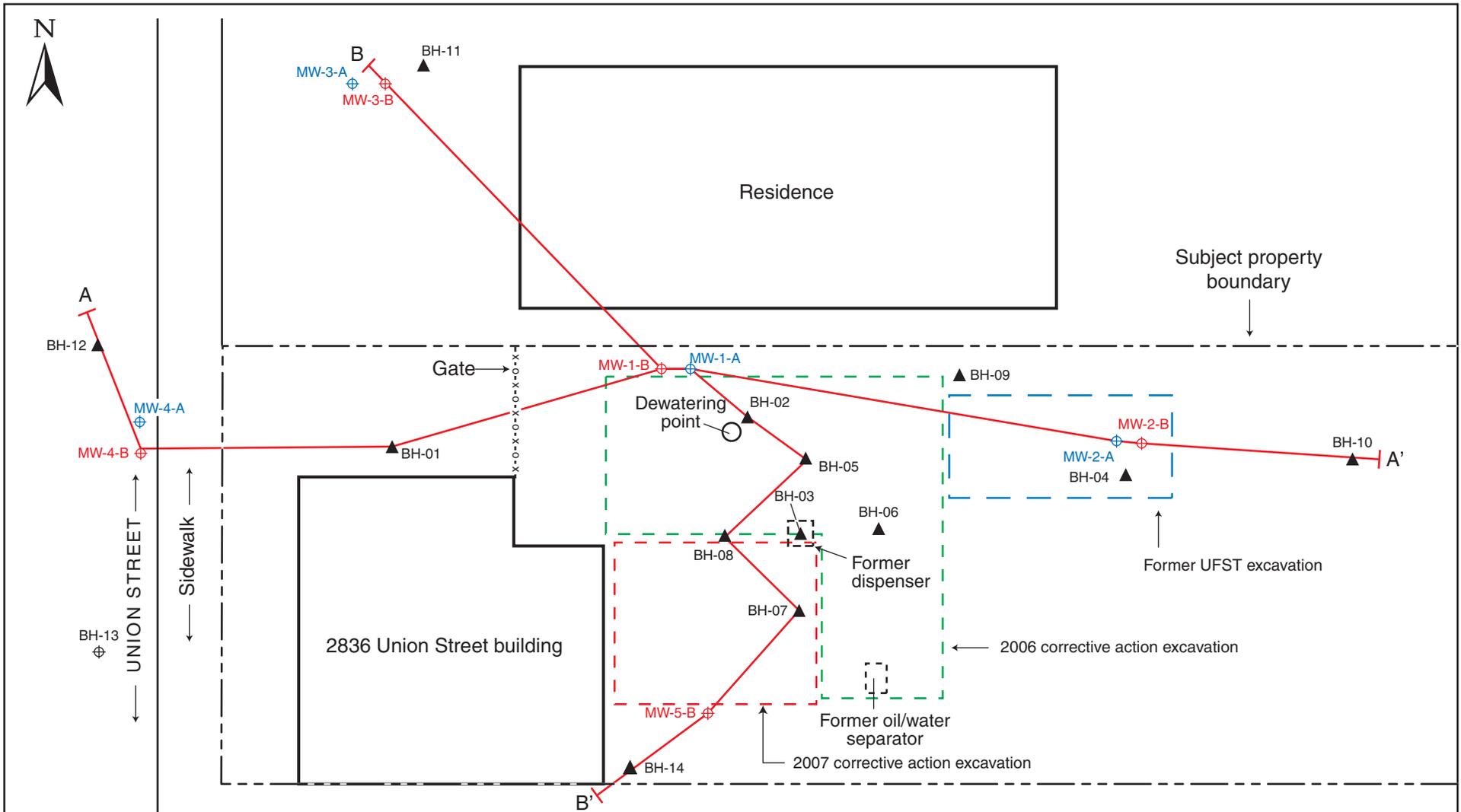
By: MJC

NOVEMBER 2005

Figure 1



2005-65-01



LEGEND

- MW-1-A Groundwater monitoring well; 10'-13' deep screened interval
- MW-1-B Groundwater monitoring well; 19'-25' deep screened interval
- BH-01 Previous exploratory borehole
- A-A' Cross-section A-A'
- ND = TPH-gas not detected, concentration of TPH-gas in mg/kg

0 10
SCALE IN FEET (approx.)

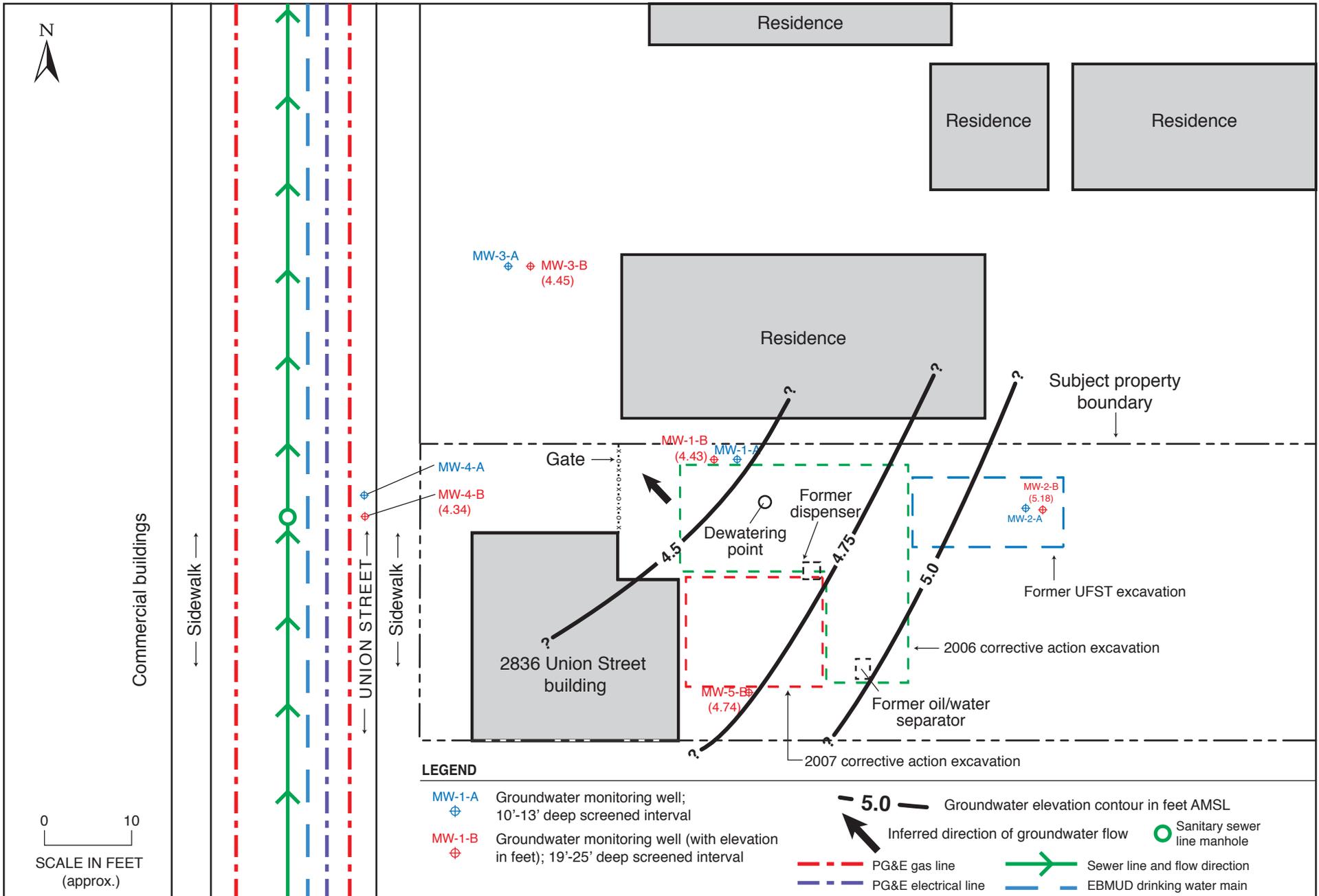
**SITE PLAN SHOWING LOCATIONS OF SOIL BORINGS AND MONITORING WELLS
2836 Union Street, Oakland, CA**

Figure 2

by: MJC NOVEMBER 2008

2005-65-72





GROUNDWATER ELEVATION MAP (B-WELLS) & UTILITY LOCATIONS

2836 Union Street, Oakland, CA

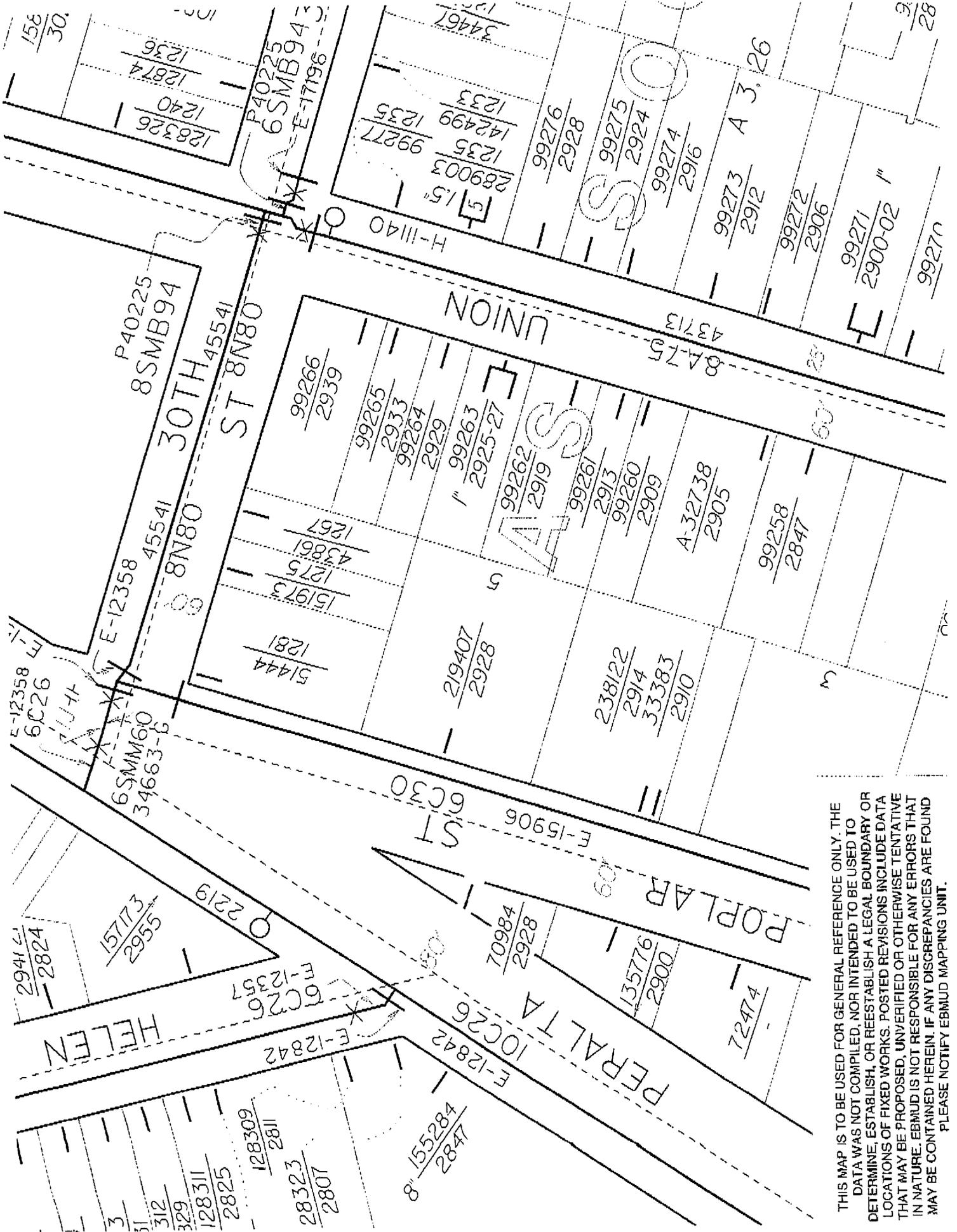
Figure 3

by: MJC

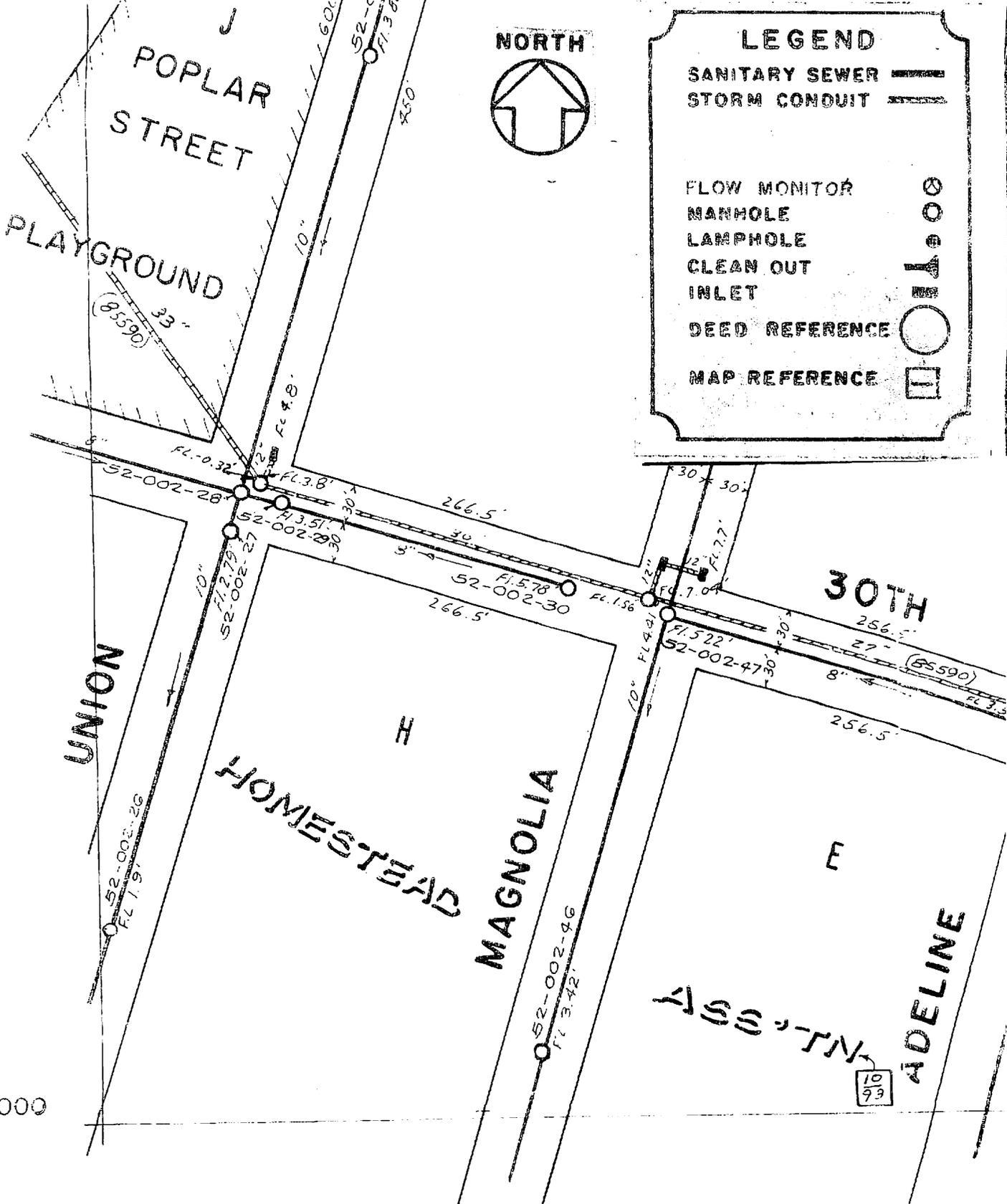
DECEMBER 2008

ATTACHMENT B

UTILITY MAPS



THIS MAP IS TO BE USED FOR GENERAL REFERENCE ONLY. THE DATA WAS NOT COMPILED, NOR INTENDED TO BE USED TO DETERMINE, ESTABLISH, OR REESTABLISH A LEGAL BOUNDARY OR LOCATIONS OF FIXED WORKS. POSTED REVISIONS INCLUDE DATA THAT MAY BE PROPOSED, UNVERIFIED OR OTHERWISE TENTATIVE IN NATURE. EBMUD IS NOT RESPONSIBLE FOR ANY ERRORS THAT MAY BE CONTAINED HEREIN. IF ANY DISCREPANCIES ARE FOUND PLEASE NOTIFY EBMUD MAPPING UNIT.



LEGEND

SANITARY SEWER ———

STORM CONDUIT = = =

FLOW MONITOR ○ F

MANHOLE ○ M

LAMPHOLE ○ L

CLEAN OUT ○ C

INLET ○ I

DEED REFERENCE ○ D

MAP REFERENCE □



486,000

1,455,000

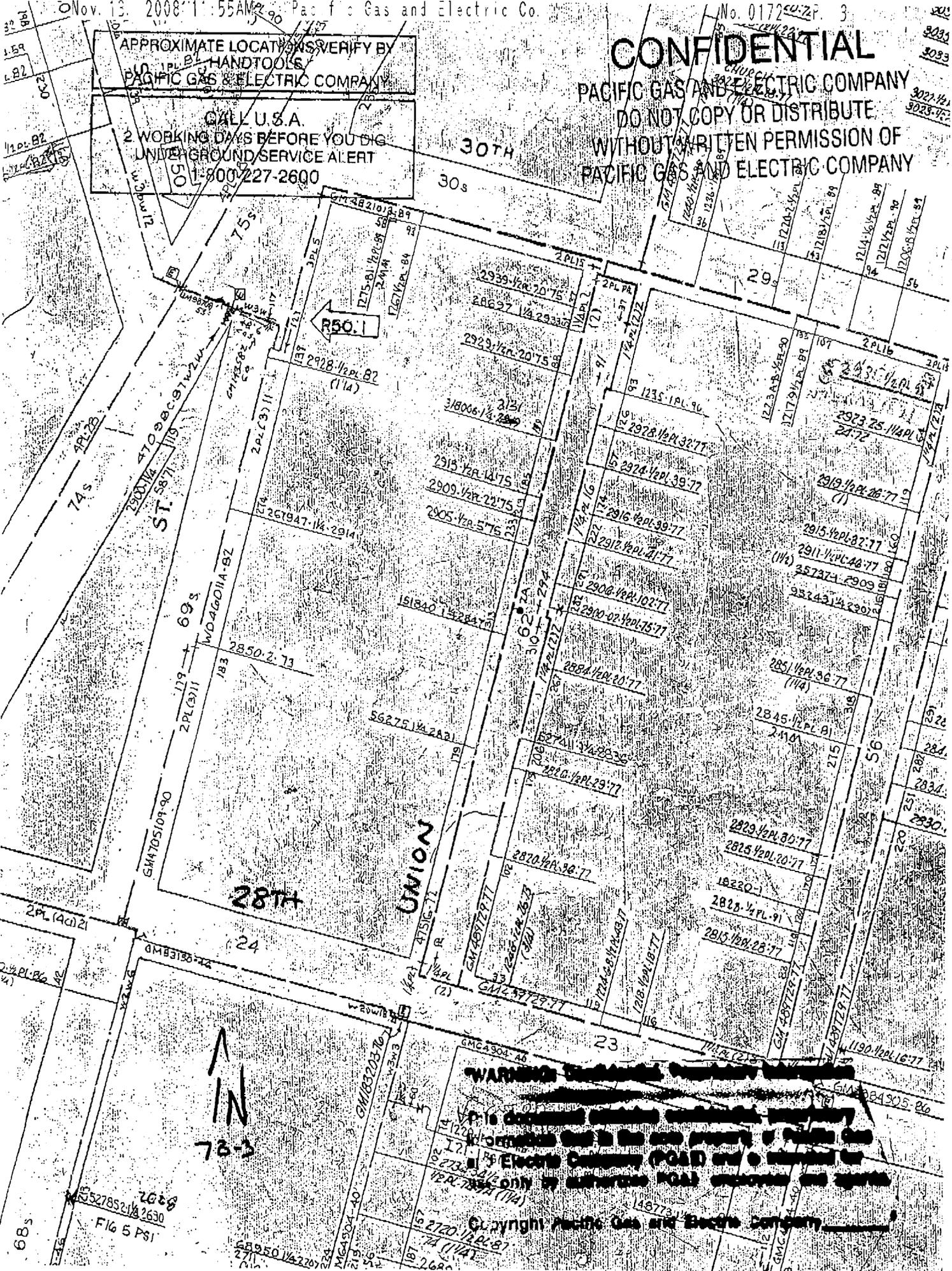
10/93

APPROXIMATE LOCATIONS VERIFY BY HANDTOOLS
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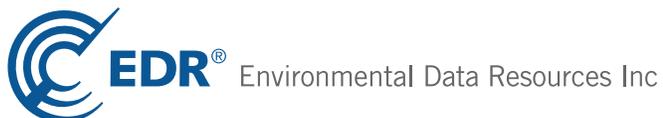
ATTACHMENT C

WATER WELL SURVEY DOCUMENTATION

2836 Union Street
2836 Union Street
Oakland, CA 94608

Inquiry Number: 02355356.1r
November 04, 2008

The EDR Radius Map™ Report with GeoCheck®



440 Wheelers Farms Road
Milford, CT 06461
Toll Free: 800.352.0050
www.edrnet.com

GEOCHECK[®] - PHYSICAL SETTING SOURCE ADDENDUM

TARGET PROPERTY ADDRESS

2836 UNION STREET
2836 UNION STREET
OAKLAND, CA 94608

TARGET PROPERTY COORDINATES

Latitude (North):	37.82130 - 37° 49' 16.7"
Longitude (West):	122.284 - 122° 17' 2.4"
Universal Tranverse Mercator:	Zone 10
UTM X (Meters):	563017.1
UTM Y (Meters):	4186024.5
Elevation:	14 ft. above sea level

USGS TOPOGRAPHIC MAP

Target Property Map:	37122-G3 OAKLAND WEST, CA
Most Recent Revision:	1980

EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

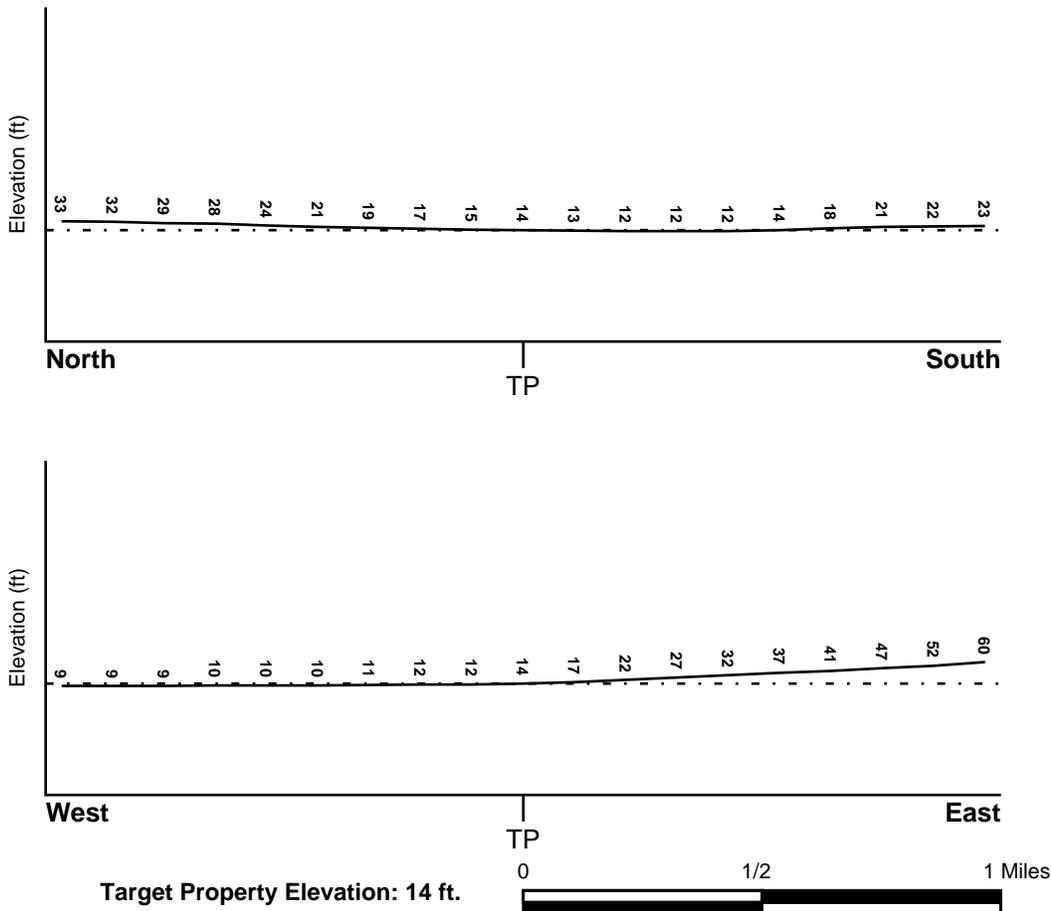
TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

TARGET PROPERTY TOPOGRAPHY

General Topographic Gradient: General WSW

SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

FEMA FLOOD ZONE

<u>Target Property County</u>	<u>FEMA Flood Electronic Data</u>
ALAMEDA, CA	YES - refer to the Overview Map and Detail Map

Flood Plain Panel at Target Property: 0650480015B

Additional Panels in search area: 0600050000A

NATIONAL WETLAND INVENTORY

<u>NWI Quad at Target Property</u>	<u>NWI Electronic Data Coverage</u>
OAKLAND WEST	YES - refer to the Overview Map and Detail Map

HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Site-Specific Hydrogeological Data:*

Search Radius:	1.25 miles
Status:	Not found

AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
1	0 - 1/8 Mile SW	SW
2	1/8 - 1/4 Mile SW	NE
3	1/4 - 1/2 Mile West	S
4	1/4 - 1/2 Mile SSW	W
5	1/4 - 1/2 Mile SW	SE
7	1/4 - 1/2 Mile WSW	E, W
8	1/4 - 1/2 Mile ENE	S
A9	1/4 - 1/2 Mile West	SE
A10	1/4 - 1/2 Mile West	SW

* ©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
11	1/4 - 1/2 Mile ESE	Varies
12	1/4 - 1/2 Mile NW	Varies
B13	1/4 - 1/2 Mile SSW	S
B14	1/4 - 1/2 Mile SSW	S
B15	1/4 - 1/2 Mile SSW	S
16	1/4 - 1/2 Mile WNW	E
17	1/2 - 1 Mile NNE	WSW
C18	1/2 - 1 Mile SSW	W
C19	1/2 - 1 Mile SSW	W
C20	1/2 - 1 Mile SSW	W
D21	1/2 - 1 Mile SW	NW
D22	1/2 - 1 Mile SW	NW
D23	1/2 - 1 Mile SW	NW
E24	1/2 - 1 Mile North	Varies
F25	1/2 - 1 Mile SE	SW
F26	1/2 - 1 Mile SE	SW
F27	1/2 - 1 Mile SE	SW
E28	1/2 - 1 Mile North	W
E29	1/2 - 1 Mile North	WSW
D30	1/2 - 1 Mile SW	N
D31	1/2 - 1 Mile SW	SSW
G32	1/2 - 1 Mile NNW	W
G33	1/2 - 1 Mile NNW	W
G35	1/2 - 1 Mile NNW	Varies
G36	1/2 - 1 Mile NNW	NW
G37	1/2 - 1 Mile NNW	Varies
I38	1/2 - 1 Mile SE	NE
H39	1/2 - 1 Mile North	W
H40	1/2 - 1 Mile North	W
J41	1/2 - 1 Mile NNW	W
J42	1/2 - 1 Mile NNW	W
I43	1/2 - 1 Mile SE	Varies
K44	1/2 - 1 Mile SSW	Not Reported
K45	1/2 - 1 Mile SSW	Not Reported
K46	1/2 - 1 Mile SSW	NE
K47	1/2 - 1 Mile SSW	N, S
48	1/2 - 1 Mile SSW	SW
49	1/2 - 1 Mile SW	Not Reported
L50	1/2 - 1 Mile NNE	W
L51	1/2 - 1 Mile NNE	Varies
L52	1/2 - 1 Mile North	SW
L53	1/2 - 1 Mile North	SW
M54	1/2 - 1 Mile ENE	NW
M55	1/2 - 1 Mile ENE	NW
57	1/2 - 1 Mile North	NNE
58	1/2 - 1 Mile East	SW
59	1/2 - 1 Mile ESE	SE
60	1/2 - 1 Mile ESE	Not Reported
61	1/2 - 1 Mile NNW	W
62	1/2 - 1 Mile SE	W
63	1/2 - 1 Mile SW	NE, SE, S
64	1/2 - 1 Mile West	S

For additional site information, refer to Physical Setting Source Map Findings.

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

ROCK STRATIGRAPHIC UNIT

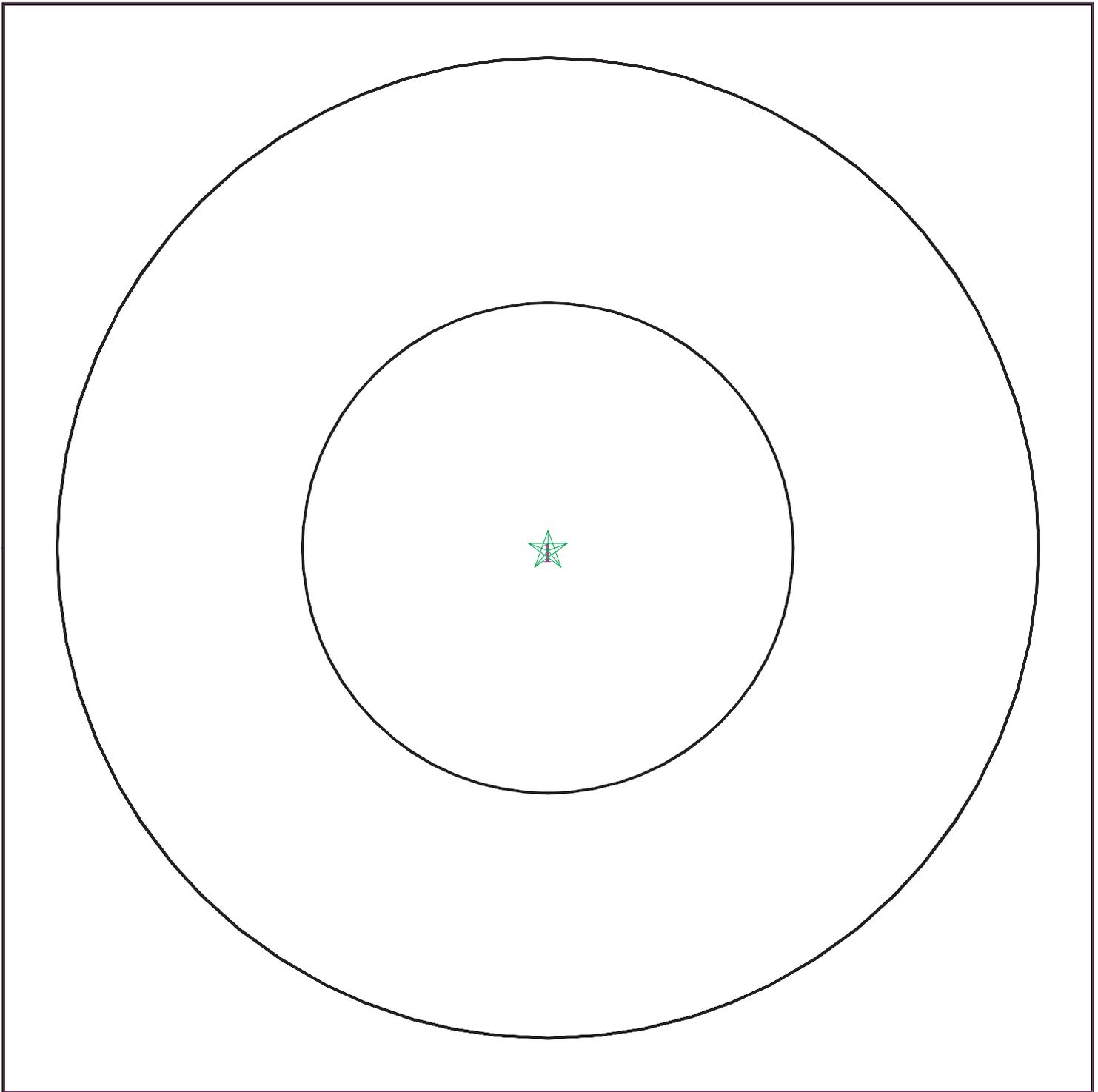
Era:	Cenozoic
System:	Quaternary
Series:	Quaternary
Code:	Q (<i>decoded above as Era, System & Series</i>)

GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

SSURGO SOIL MAP - 02355356.1r



- ★ Target Property
- ∩ SSURGO Soil
- ∩ Water



SITE NAME: 2836 Union Street
ADDRESS: 2836 Union Street
Oakland CA 94608
LAT/LONG: 37.8213 / 122.2840

CLIENT: Stellar Enviro Solutions
CONTACT: Teal Glass
INQUIRY #: 02355356.1r
DATE: November 04, 2008 3:21 pm

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. The following information is based on Soil Conservation Service SSURGO data.

Soil Map ID: 1

Soil Component Name: Urban land

Soil Surface Texture:
Hydrologic Group: Not reported

Soil Drainage Class:
Hydric Status: Partially hydric

Corrosion Potential - Uncoated Steel: Not Reported

Depth to Bedrock Min: > 0 inches

Depth to Watertable Min: > 153 inches

No Layer Information available.

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No Wells Found		

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
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GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
H34	CA1009246	1/2 - 1 Mile North

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
6	CADW20000038488	1/4 - 1/2 Mile North
56	CADW20000038500	1/2 - 1 Mile NNE

PHYSICAL SETTING SOURCE MAP - 02355356.1r



- County Boundary
- Major Roads
- Contour Lines
- Earthquake Fault Lines
- Airports
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells



<p>SITE NAME: 2836 Union Street ADDRESS: 2836 Union Street Oakland CA 94608 LAT/LONG: 37.8213 / 122.2840</p>	<p>CLIENT: Stellar Enviro Solutions CONTACT: Teal Glass INQUIRY #: 02355356.1r DATE: November 04, 2008 3:21 pm</p>
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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

1 SW 0 - 1/8 Mile Lower	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-0053 SW Not Reported Not Reported 10.5 03/18/1998	AQUIFLOW	55970
--	---	---	-----------------	--------------

2 SW 1/8 - 1/4 Mile Lower	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-2288 NE Not Reported Not Reported Not Reported 10/29/1997	AQUIFLOW	64082
--	---	---	-----------------	--------------

3 West 1/4 - 1/2 Mile Lower	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-0847 S Not Reported Not Reported Not Reported 08/17/1992	AQUIFLOW	63624
--	---	--	-----------------	--------------

4 SSW 1/4 - 1/2 Mile Lower	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-0833 W Not Reported Not Reported 3 03/23/1994	AQUIFLOW	63895
---	---	---	-----------------	--------------

5 SW 1/4 - 1/2 Mile Lower	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-2218 SE 8.15 9.04 Not Reported 07/14/1995	AQUIFLOW	63941
--	---	---	-----------------	--------------

6 North 1/4 - 1/2 Mile Higher			CA WELLS	CADW20000038488
--	--	--	-----------------	------------------------

Longitude:	122.2822
Latitude:	37.8267
Stwellno:	01S04W22J001M
Districtco:	7
Welluseco:	N
Countycode:	1
Gwcode:	200901
Site id:	CADW20000038488

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation			Database	EDR ID Number
7 WSW 1/4 - 1/2 Mile Lower	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-3995 E, W Not Reported Not Reported 55 11/1995	AQUIFLOW	55923
8 ENE 1/4 - 1/2 Mile Higher	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-0924 S Not Reported Not Reported 5 ft. 05/10/1988	AQUIFLOW	66595
A9 West 1/4 - 1/2 Mile Lower	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-2294 SE Not Reported Not Reported 55 12/03/1997	AQUIFLOW	64099
A10 West 1/4 - 1/2 Mile Lower	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-4835 SW Not Reported Not Reported 5.0 07/10/1995	AQUIFLOW	63936
11 ESE 1/4 - 1/2 Mile Higher	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-2181 Varies 1.2 7.8 Not Reported 05/28/1996	AQUIFLOW	63628
12 NW 1/4 - 1/2 Mile Lower	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-2319 Varies Not Reported Not Reported 119 11/17/1993	AQUIFLOW	63684
B13 SSW 1/4 - 1/2 Mile Lower	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-2299 S Not Reported Not Reported 15 04/27/1993	AQUIFLOW	55954

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation			Database	EDR ID Number
B14 SSW 1/4 - 1/2 Mile Lower	Site ID:	01-2299	AQUIFLOW	55953
	Groundwater Flow:	S		
	Shallow Water Depth:	12		
	Deep Water Depth:	15		
	Average Water Depth:	Not Reported		
Date:	06/24/1996			
B15 SSW 1/4 - 1/2 Mile Lower	Site ID:	01-2299	AQUIFLOW	55955
	Groundwater Flow:	S		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	12-15		
Date:	04/27/1993			
16 WNW 1/4 - 1/2 Mile Lower	Site ID:	01-3995	AQUIFLOW	55922
	Groundwater Flow:	E		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	43		
Date:	02/15/1993			
17 NNE 1/2 - 1 Mile Higher	Site ID:	01-2120	AQUIFLOW	67880
	Groundwater Flow:	WSW		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	5.25		
Date:	08/31/1995			
C18 SSW 1/2 - 1 Mile Lower	Site ID:	01-2048	AQUIFLOW	55821
	Groundwater Flow:	W		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	73		
Date:	11/21/1988			
C19 SSW 1/2 - 1 Mile Lower	Site ID:	01-2048	AQUIFLOW	55823
	Groundwater Flow:	W		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	Not Reported		
Date:	08/03/1993			
C20 SSW 1/2 - 1 Mile Lower	Site ID:	01-2048	AQUIFLOW	55822
	Groundwater Flow:	W		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	74		
Date:	09/24/1992			

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

D21 SW 1/2 - 1 Mile Lower	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-0438 NW Not Reported Not Reported 5 07/01/1998	AQUIFLOW	55983
--	---	--	-----------------	--------------

D22 SW 1/2 - 1 Mile Lower	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-0438 NW Not Reported Not Reported 7.6 09/12/1997	AQUIFLOW	55981
--	---	--	-----------------	--------------

D23 SW 1/2 - 1 Mile Lower	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-0438 NW Not Reported Not Reported 4 05/06/1998	AQUIFLOW	55982
--	---	--	-----------------	--------------

E24 North 1/2 - 1 Mile Higher	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-0155 Varies Not Reported Not Reported 4.5 12/01/1991	AQUIFLOW	52363
--	---	--	-----------------	--------------

F25 SE 1/2 - 1 Mile Higher	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-2295 SW Not Reported Not Reported 100 07/09/1997	AQUIFLOW	51336
---	---	--	-----------------	--------------

F26 SE 1/2 - 1 Mile Higher	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-2295 SW Not Reported Not Reported 20 03/12/1997	AQUIFLOW	51337
---	---	---	-----------------	--------------

F27 SE 1/2 - 1 Mile Higher	Site ID: Groundwater Flow: Shallow Water Depth: Deep Water Depth: Average Water Depth: Date:	01-2295 SW Not Reported Not Reported 8-15 08/19/1996	AQUIFLOW	51338
---	---	---	-----------------	--------------

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID	Direction	Distance	Elevation	Database	EDR ID Number
E28	Site ID:	01-1223			
North	Groundwater Flow:	W		AQUIFLOW	52361
1/2 - 1 Mile	Shallow Water Depth:	10			
Higher	Deep Water Depth:	20			
	Average Water Depth:	Not Reported			
	Date:	10/30/1989			
<hr/>					
E29	Site ID:	01-1223			
North	Groundwater Flow:	WSW		AQUIFLOW	52360
1/2 - 1 Mile	Shallow Water Depth:	6.13			
Higher	Deep Water Depth:	18.91			
	Average Water Depth:	Not Reported			
	Date:	07/31/1996			
<hr/>					
D30	Site ID:	01-5284			
SW	Groundwater Flow:	N		AQUIFLOW	55940
1/2 - 1 Mile	Shallow Water Depth:	3.0			
Lower	Deep Water Depth:	4.0			
	Average Water Depth:	Not Reported			
	Date:	02/18/1992			
<hr/>					
D31	Site ID:	01-5284			
SW	Groundwater Flow:	SSW		AQUIFLOW	55941
1/2 - 1 Mile	Shallow Water Depth:	Not Reported			
Lower	Deep Water Depth:	Not Reported			
	Average Water Depth:	12			
	Date:	02/18/1992			
<hr/>					
G32	Site ID:	01-1033			
NNW	Groundwater Flow:	W		AQUIFLOW	51563
1/2 - 1 Mile	Shallow Water Depth:	Not Reported			
Lower	Deep Water Depth:	Not Reported			
	Average Water Depth:	5 ft.			
	Date:	11/19/1993			
<hr/>					
G33	Site ID:	01-1033			
NNW	Groundwater Flow:	W		AQUIFLOW	51562
1/2 - 1 Mile	Shallow Water Depth:	2.34			
Lower	Deep Water Depth:	4.90			
	Average Water Depth:	Not Reported			
	Date:	02/23/1996			
<hr/>					
H34				FRDS PWS	CA1009246
North					
1/2 - 1 Mile					
Higher					

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

PWS ID: CA1009246 PWS Status: Active
 Date Initiated: 7706 Date Deactivated: Not Reported
 PWS Name: BERKELEY LAND COMPANY
 BERKELEY LAND COMPANY
 13310 EAGLEFIELD RD
 FIREBAUGH, CA 93622

Addressee / Facility: System Owner/Responsible Party
 BERKELEY LAND COMPANY
 1211 NEWALL AVENUE 1
 WALNUT CREEK, CA 94596

Facility Latitude: 37 49 53 Facility Longitude: 122 17 03
 City Served: Not Reported
 Treatment Class: Untreated Population: 00000060

Violations information not reported.

ENFORCEMENT INFORMATION:

System Name: BERKELEY LAND COMPANY
 Violation Type: Initial Tap Sampling for Pb and Cu
 Contaminant: LEAD & COPPER RULE
 Compliance Period: 1993-07-01 - 2015-12-31
 Violation ID: 95V0001
 Enforcement Date: Not Reported Enf. Action: Not Reported

G35
NNW
1/2 - 1 Mile
Higher

Site ID:	01-1532		
Groundwater Flow:	Varies	AQUIFLOW	51584
Shallow Water Depth:	Not Reported		
Deep Water Depth:	Not Reported		
Average Water Depth:	20 bg		
Date:	03/10/1995		

G36
NNW
1/2 - 1 Mile
Higher

Site ID:	01-1532		
Groundwater Flow:	NW	AQUIFLOW	51582
Shallow Water Depth:	3.83		
Deep Water Depth:	4.88		
Average Water Depth:	Not Reported		
Date:	12/11/1996		

G37
NNW
1/2 - 1 Mile
Higher

Site ID:	01-1532		
Groundwater Flow:	Varies	AQUIFLOW	51583
Shallow Water Depth:	Not Reported		
Deep Water Depth:	Not Reported		
Average Water Depth:	7.20		
Date:	10/26/1990		

I38
SE
1/2 - 1 Mile
Higher

Site ID:	01-0674		
Groundwater Flow:	NE	AQUIFLOW	51546
Shallow Water Depth:	12.6		
Deep Water Depth:	22.0		
Average Water Depth:	Not Reported		
Date:	05/26/1988		

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation			Database	EDR ID Number
H39 North 1/2 - 1 Mile Higher	Site ID:	01-2142	AQUIFLOW	51574
	Groundwater Flow:	W		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	8 ft.		
Date:	12/21/1996			
H40 North 1/2 - 1 Mile Higher	Site ID:	01-2142	AQUIFLOW	51575
	Groundwater Flow:	W		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	28ft.		
Date:	03/04/1996			
J41 NNW 1/2 - 1 Mile Lower	Site ID:	01-2127	AQUIFLOW	51579
	Groundwater Flow:	W		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	6 ft.		
Date:	05/09/1994			
J42 NNW 1/2 - 1 Mile Lower	Site ID:	01-2124	AQUIFLOW	51578
	Groundwater Flow:	W		
	Shallow Water Depth:	3.75		
	Deep Water Depth:	4.25		
	Average Water Depth:	Not Reported		
Date:	11/28/1995			
I43 SE 1/2 - 1 Mile Higher	Site ID:	01-3919	AQUIFLOW	51332
	Groundwater Flow:	Varies		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	14 ft		
Date:	08/29/1997			
K44 SSW 1/2 - 1 Mile Higher	Site ID:	01-3911	AQUIFLOW	55973
	Groundwater Flow:	Not Reported		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	10		
Date:	11/08/1988			
K45 SSW 1/2 - 1 Mile Higher	Site ID:	01-3911	AQUIFLOW	55972
	Groundwater Flow:	Not Reported		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	10		
Date:	03/24/1992			

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation			Database	EDR ID Number
K46 SSW 1/2 - 1 Mile Higher	Site ID:	01-0282	AQUIFLOW	55977
	Groundwater Flow:	NE		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	Not Reported		
Date:	03/27/1989			
K47 SSW 1/2 - 1 Mile Higher	Site ID:	01-0282	AQUIFLOW	55976
	Groundwater Flow:	N, S		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	5		
Date:	06/05/1989			
48 SSW 1/2 - 1 Mile Higher	Site ID:	01-0933	AQUIFLOW	55988
	Groundwater Flow:	SW		
	Shallow Water Depth:	6.5		
	Deep Water Depth:	7.5		
	Average Water Depth:	Not Reported		
Date:	04/08/1986			
49 SW 1/2 - 1 Mile Lower	Site ID:	01-0152	AQUIFLOW	55883
	Groundwater Flow:	Not Reported		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	15		
Date:	04/22/1993			
L50 NNE 1/2 - 1 Mile Higher	Site ID:	01-0394	AQUIFLOW	51586
	Groundwater Flow:	W		
	Shallow Water Depth:	Not Reported		
	Deep Water Depth:	Not Reported		
	Average Water Depth:	Not Reported		
Date:	12/04/1989			
L51 NNE 1/2 - 1 Mile Higher	Site ID:	01-0394	AQUIFLOW	51585
	Groundwater Flow:	Varies		
	Shallow Water Depth:	3.21		
	Deep Water Depth:	10.66		
	Average Water Depth:	Not Reported		
Date:	01/03/1996			
L52 North 1/2 - 1 Mile Higher	Site ID:	01-2274	AQUIFLOW	51587
	Groundwater Flow:	SW		
	Shallow Water Depth:	4.57		
	Deep Water Depth:	10.27		
	Average Water Depth:	Not Reported		
Date:	03/16/1998			

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

L53 North 1/2 - 1 Mile Higher	Site ID:	01-2274	AQUIFLOW	51588	
	Groundwater Flow:	SW			
	Shallow Water Depth:	4.57			
	Deep Water Depth:	6.74			
	Average Water Depth:	Not Reported			
Date:	12/16/1997				
M54 ENE 1/2 - 1 Mile Higher	Site ID:	01-0118	AQUIFLOW	51861	
	Groundwater Flow:	NW			
	Shallow Water Depth:	Not Reported			
	Deep Water Depth:	Not Reported			
	Average Water Depth:	18 bg			
Date:	07/22/1994				
M55 ENE 1/2 - 1 Mile Higher	Site ID:	01-0118	AQUIFLOW	51860	
	Groundwater Flow:	NW			
	Shallow Water Depth:	Not Reported			
	Deep Water Depth:	Not Reported			
	Average Water Depth:	8-11			
Date:	09/16/1991				
56 NNE 1/2 - 1 Mile Higher			CA WELLS	CADW20000038500	
	Longitude:	122.2744			
	Latitude:	37.8321			
	Stwellno:	01S04W23E001M			
	Districtco:	7			
	Welluseco:	N			
	Countycode:	1			
	Gwcode:	200901			
	Site id:	CADW20000038500			
57 North 1/2 - 1 Mile Higher	Site ID:	01-0355	AQUIFLOW	52356	
	Groundwater Flow:	NNE			
	Shallow Water Depth:	13.05			
	Deep Water Depth:	18.39			
	Average Water Depth:	Not Reported			
Date:	03/11/1998				
58 East 1/2 - 1 Mile Higher	Site ID:	01-0886	AQUIFLOW	63803	
	Groundwater Flow:	SW			
	Shallow Water Depth:	8.67			
	Deep Water Depth:	14.02			
	Average Water Depth:	Not Reported			
Date:	04/07/1997				

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID	Direction	Distance	Elevation	Database	EDR ID Number
59					
ESE	Site ID:	01-1349		AQUIFLOW	63626
1/2 - 1 Mile Higher	Groundwater Flow:	SE			
	Shallow Water Depth:	9.00			
	Deep Water Depth:	10.39			
	Average Water Depth:	Not Reported			
	Date:	10/11/1988			
60					
ESE	Site ID:	01-1313		AQUIFLOW	64106
1/2 - 1 Mile Higher	Groundwater Flow:	Not Reported			
	Shallow Water Depth:	Not Reported			
	Deep Water Depth:	Not Reported			
	Average Water Depth:	25-30			
	Date:	02/22/1999			
61					
NNW	Site ID:	01-1240		AQUIFLOW	52358
1/2 - 1 Mile Lower	Groundwater Flow:	W			
	Shallow Water Depth:	9.33			
	Deep Water Depth:	22.0			
	Average Water Depth:	Not Reported			
	Date:	06/15/1989			
62					
SE	Site ID:	01-1706		AQUIFLOW	66329
1/2 - 1 Mile Higher	Groundwater Flow:	W			
	Shallow Water Depth:	Not Reported			
	Deep Water Depth:	Not Reported			
	Average Water Depth:	40.0			
	Date:	01/11/1996			
63					
SW	Site ID:	01-0506		AQUIFLOW	55880
1/2 - 1 Mile Higher	Groundwater Flow:	NE, SE, S			
	Shallow Water Depth:	Not Reported			
	Deep Water Depth:	Not Reported			
	Average Water Depth:	Not Reported			
	Date:	11/17/1994			
64					
West	Site ID:	01-2104		AQUIFLOW	55911
1/2 - 1 Mile Lower	Groundwater Flow:	S			
	Shallow Water Depth:	Not Reported			
	Deep Water Depth:	Not Reported			
	Average Water Depth:	7.5			
	Date:	08/05/1992			

PHYSICAL SETTING SOURCE RECORDS SEARCHED

TOPOGRAPHIC INFORMATION

USGS 7.5' Digital Elevation Model (DEM)

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002 and updated it in 2006. The 7.5 minute DEM corresponds to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps. The DEM provides elevation data with consistent elevation units and projection.

HYDROLOGIC INFORMATION

Flood Zone Data: This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

NWI: National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 and 2005 from the U.S. Fish and Wildlife Service.

HYDROGEOLOGIC INFORMATION

AQUIFLOW^R Information System

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

GEOLOGIC INFORMATION

Geologic Age and Rock Stratigraphic Unit

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

STATSGO: State Soil Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

SSURGO: Soil Survey Geographic Database

Source: Department of Agriculture, Natural Resources Conservation Services (NRCS)

Telephone: 800-672-5559

SSURGO is the most detailed level of mapping done by the Natural Resources Conservation Services, mapping scales generally range from 1:12,000 to 1:63,360. Field mapping methods using national standards are used to construct the soil maps in the Soil Survey Geographic (SSURGO) database. SSURGO digitizing duplicates the original soil survey maps. This level of mapping is designed for use by landowners, townships and county natural resource planning and management.

LOCAL / REGIONAL WATER AGENCY RECORDS

FEDERAL WATER WELLS

PWS: Public Water Systems

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

PHYSICAL SETTING SOURCE RECORDS SEARCHED

PWS ENF: Public Water Systems Violation and Enforcement Data

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

USGS Water Wells: USGS National Water Inventory System (NWIS)

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

STATE RECORDS

Water Well Database

Source: Department of Water Resources

Telephone: 916-651-9648

California Drinking Water Quality Database

Source: Department of Health Services

Telephone: 916-324-2319

The database includes all drinking water compliance and special studies monitoring for the state of California since 1984. It consists of over 3,200,000 individual analyses along with well and water system information.

OTHER STATE DATABASE INFORMATION

California Oil and Gas Well Locations

Source: Department of Conservation

Telephone: 916-323-1779

RADON

State Database: CA Radon

Source: Department of Health Services

Telephone: 916-324-2208

Radon Database for California

Area Radon Information

Source: USGS

Telephone: 703-356-4020

The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

EPA Radon Zones

Source: EPA

Telephone: 703-356-4020

Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

OTHER

Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

Epicenters: World earthquake epicenters, Richter 5 or greater

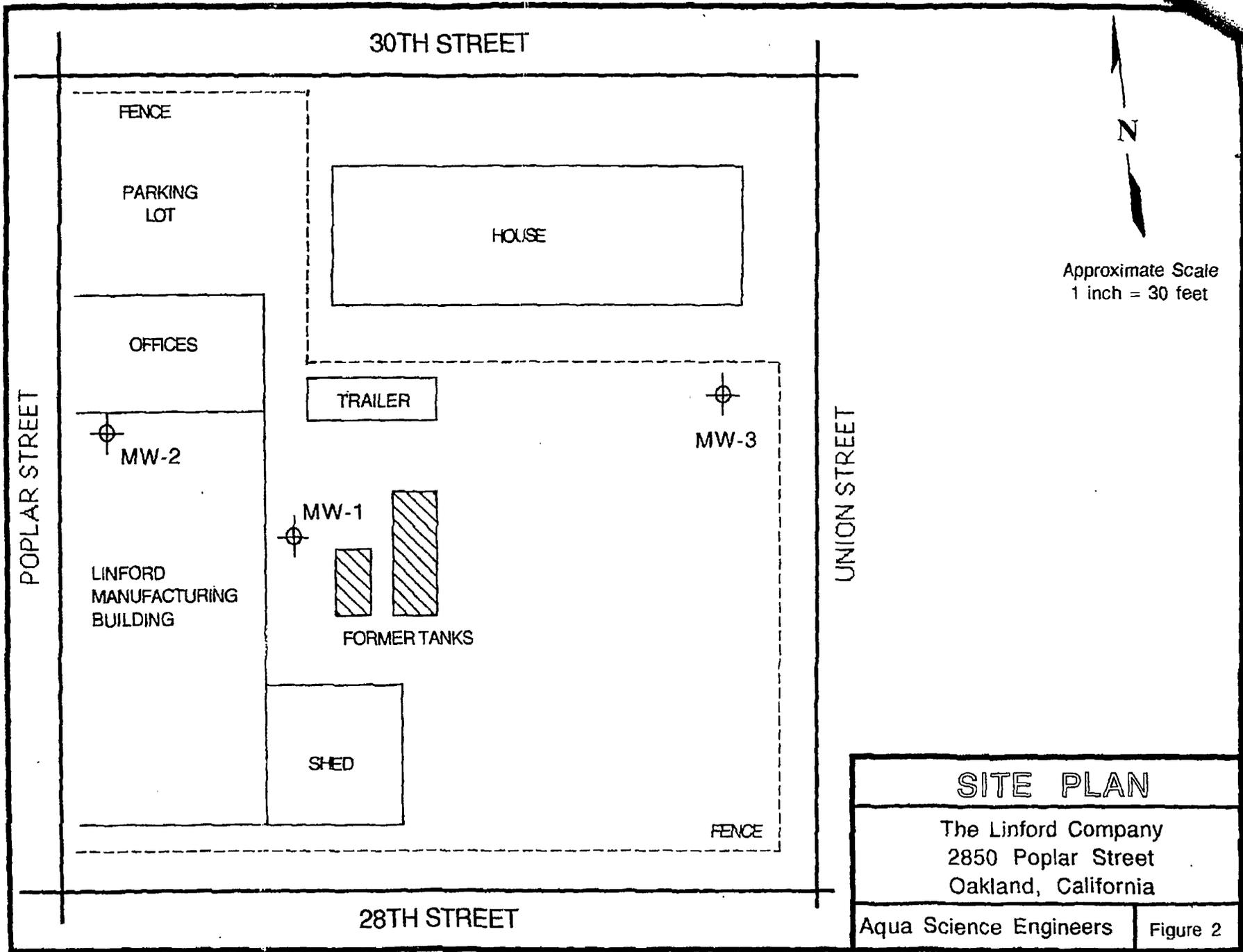
Source: Department of Commerce, National Oceanic and Atmospheric Administration

California Earthquake Fault Lines: The fault lines displayed on EDR's Topographic map are digitized quaternary fault lines, prepared in 1975 by the United State Geological Survey. Additional information (also from 1975) regarding activity at specific fault lines comes from California's Preliminary Fault Activity Map prepared by the California Division of Mines and Geology.

CONFIDENTIAL

STATE OF CALIFORNIA DWR
WELL COMPLETION REPORT
(WELL LOGS)

REMOVED



Approximate Scale
1 inch = 30 feet

243

15/4w 22011-
421888 A-C

SITE PLAN	
The Linford Company 2850 Poplar Street Oakland, California	
Aqua Science Engineers	Figure 2

3 of 3

421888A

1S/4W 22Q11

SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DETAILS						WELL NO. MW-1						
Project Name: Linford Construction			Project Location: 2850 Poplar Street, Oakland, CA			Page 1 of 1						
Driller: Gregg Drilling 1539		Type of Rig: Mobil B - 53		Type and Size of Auger: 8-3/4" O.D., H.S.								
Logged By: WCL		Date Drilled: 04/30/93		Checked By: M. Marelio, R.G.								
WATER AND WELL DATA						Total Depth of Well Completed: 22.0'						
Depth of Water First Encountered: ~ 15.5'						Well Screen Type and Diameter: 2" Diameter Schedule 40 PVC						
Static Depth of Water in Well: 5.43' Below T.O.C.						Well Screen Slot Size: 0.020"						
Total Depth of Boring: 22'						Type and Size of Soil Sampler: 2" I.D., Calif. Split-Spoon						
Depth in Feet	WELLBORING DETAIL	Description	SOIL/ROCK SAMPLE DATA				Depth in Feet	DESCRIPTION OF LITHOLOGY				
			Interval	Blow Ct.	Field VOC (ppmv)	Graphic Log		standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.				
							And (40-50%)	With (40-25%)	Some (25-10%)	Trace (10-0%)		
0	Cap	Street Box					Concrete (~ 12")					
5	2" ID Blank PVC Casing	Street Cement		3 8	< 10		Green Clay (CL), moist, no odor, highly plastic NOTE: Moderate gasoline odor from 6 to 10 feet					
10	Bentonite Seal	Class "H" Portland Cement		5 8	25		Light Brown Clay (CL), with green mottling, slight old gasoline odor, moist					
15	2" ID 0.020" Slotted PVC Casing	No. 3 Washed Sand		6 8	< 10		SAME AS ABOVE, No Odor, Very moist ≡ Saturated Sediments @ ~ 15.5'					
20	Female Bottom Plug											
	E.O.H. 22'											

373

421888B

15/4W 22Q12

SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DETAILS						WELL NO. MW-2								
Project Name: Linford Construction			Project Location: 2850 Poplar Street, Oakland, CA			Page 1 of 1								
Driller: Gregg Drilling 1539		Type of Rig: Simco 2400 SK1		Type and Size of Auger: 6-1/2" O.D., H.S.										
Logged By: WCL		Date Drilled: 04/30/93		Checked By: M. Marelo, R.G.										
WATER AND WELL DATA						Total Depth of Well Completed: 20.0'								
Depth of Water First Encountered: ~ 13.5'						Well Screen Type and Diameter: 2" Diameter Schedule 40 PVC								
Static Depth of Water in Well: 6.10' Below T.O.C.						Well Screen Slot Size: 0.020"								
Total Depth of Boring: 20'						Type and Size of Soil Sampler: 2" I.D., Calif. Split-Spoon								
Depth in Feet	WELLBORING DETAIL	Description	SOIL/ROCK SAMPLE DATA				Depth in Feet	DESCRIPTION OF LITHOLOGY						
			Interval	Blow Ct.	Field VOC (ppmv)	Graphic Log		standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.						
							And (40-50%)	With (40-25%)	Some (25-10%)	Trace (10-0%)				
0	Cap	Street Box				0	Concrete (~ Two 5" Foundations)							
5	2" ID Blank PVC Casing	Street Cement	11 17 28		22	5	Light Brown Clay (CL), green mottling, old gasoline odor, moist							
10	2" ID Blank PVC Casing	Berltonite Seal	17 25 38		< 10	10	Light Brown Clay (CL), with green mottling, slight old gasoline odor, moist							
15	2" ID Blank PVC Casing	Class "H" Portland Cement				15								
20	2" ID 0.020" Slotted PVC Casing	No. 3 Washed Sand				20								
	E.O.H. 20'	2" ID 0.020" Slotted PVC Casing												
		Female Bottom Plug												

☒ Saturated Sediments @ ~ 13.5'

373

421888C

15/4W 22Q13

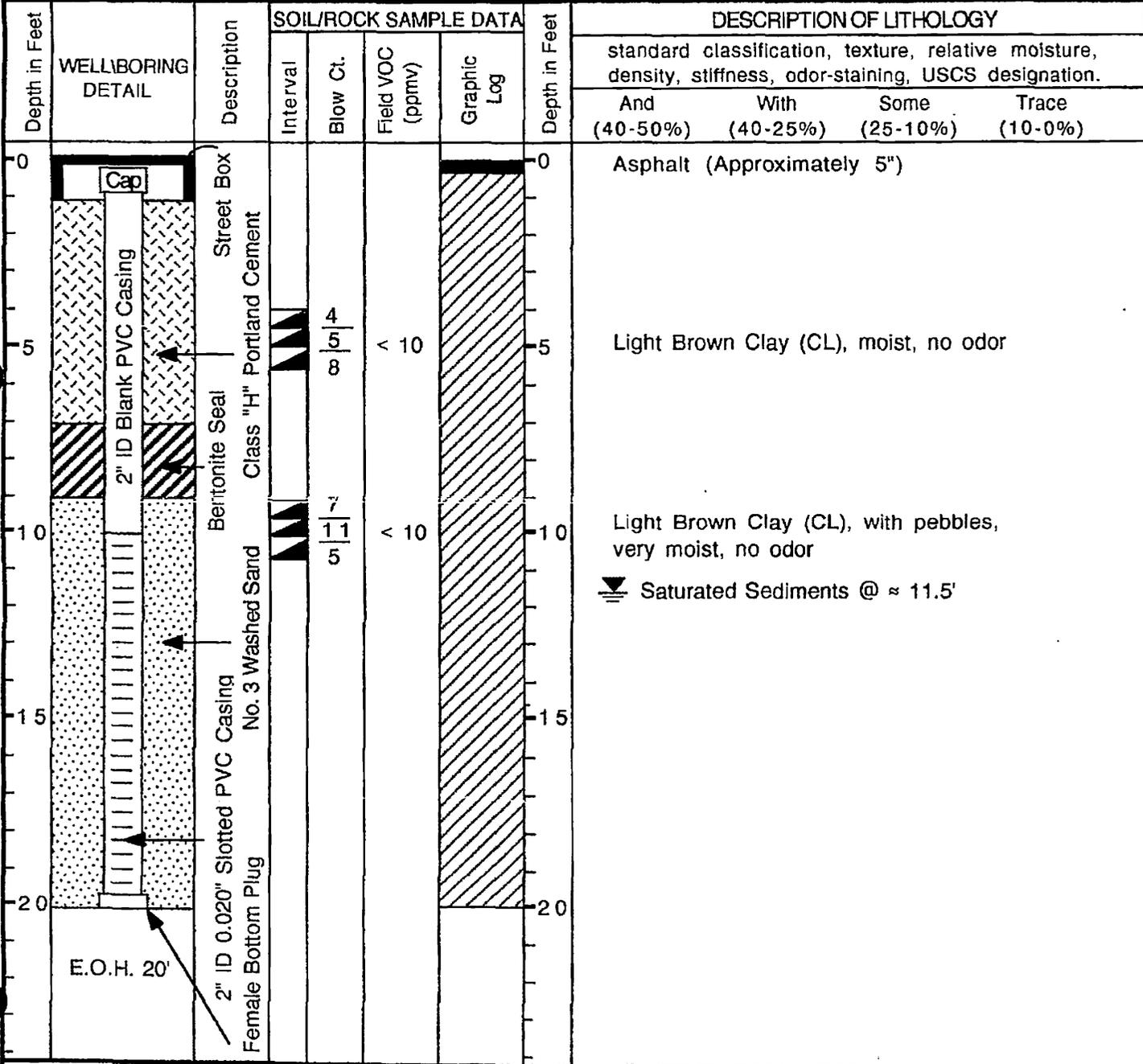
SOIL BORING LOG AND MONITORING WELL CONSTRUCTION DETAILS	WELL NO. MW-3
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Project Name: Linford Construction	Project Location: 2850 Poplar Street, Oakland, CA	Page 1 of 1
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Driller: Gregg Drilling 1539	Type of Rig: Mobil B - 53	Type and Size of Auger: 8-3/4" O.D., H.S.
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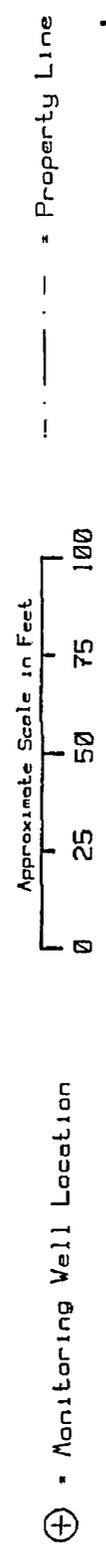
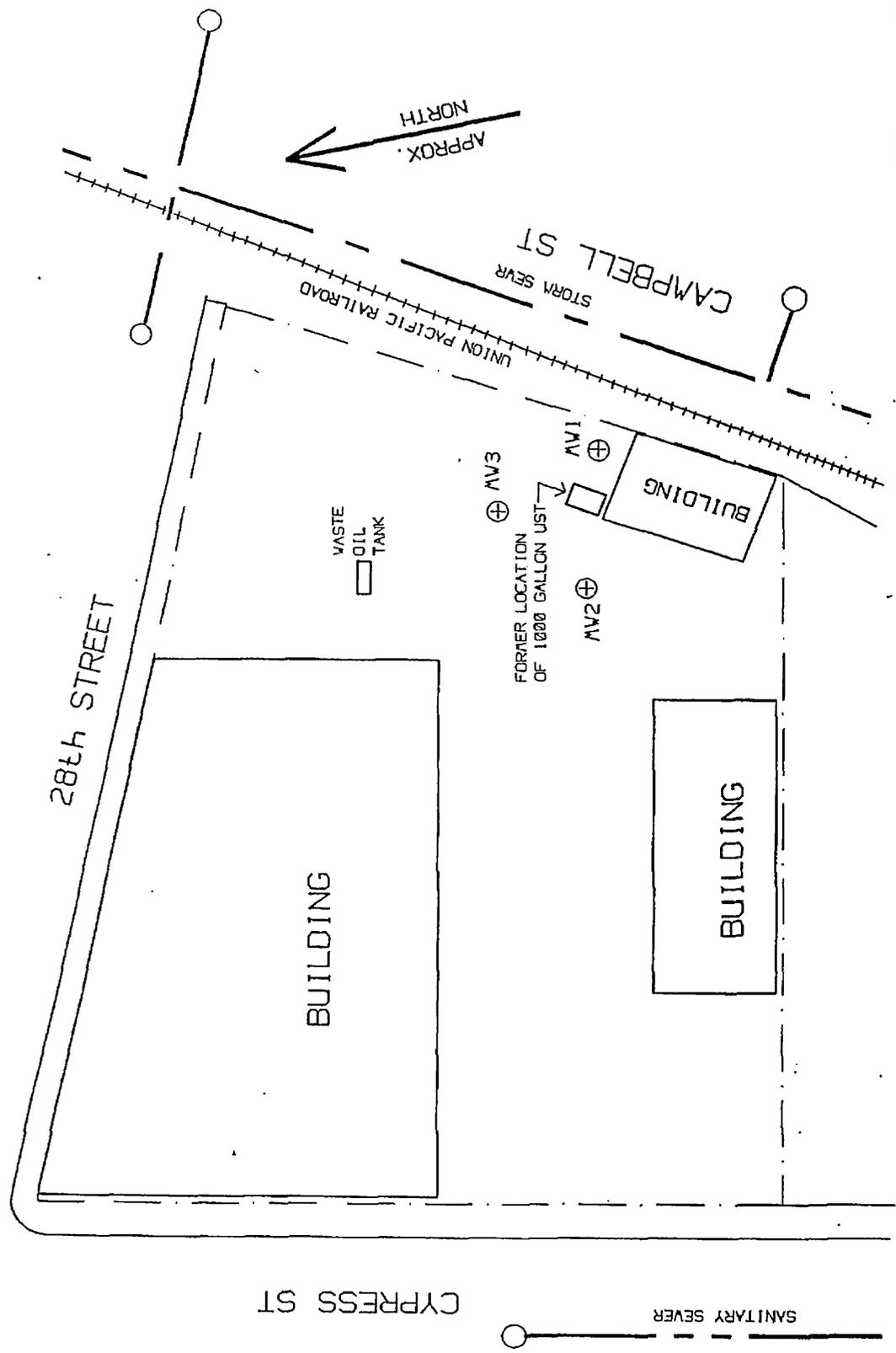
Logged By: WCL	Date Drilled: 04/30/93	Checked By: M. Marelo, R.G.
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WATER AND WELL DATA	Total Depth of Well Completed: 20.0'
Depth of Water First Encountered: ~ 11.5'	Well Screen Type and Diameter: 2" Diameter Schedule 40 PVC
Static Depth of Water in Well: 6.48' Below T.O.C.	Well Screen Slot Size: 0.020"
Total Depth of Boring: 20'	Type and Size of Soil Sampler: 2" I.D., Calif. Split-Spoon



01-4524
15/14W 2204

FIGURE - SITE PLAN FOR 2792 CYPRESS ST. OAKLAND



MILLER ENVIRONMENTAL COMPANY. RICHMOND. CA

L&B Amighi Investments
 2792 Cypress St. Oakland

KALMAR AC
 MILLER ENVIRONMENTAL COMPANY
 BORING LOG

15/4W 22Q4
 01-452Y

BORING # MW3

SHEET 1 OF 1

F E N C E	BUILDING	C Y P R E S S	
	* MW3		
	BUILDING		
	PROJECT # 89-1006 PROJECT NAME: KALMAR AC LOCATION: 2792 CYPRESS STREET, OAKLAND LOGGED BY: REINHARD RUHMKE CONTRACTOR: HEW DRILLING DRILLING METHODS: HOLLOW STEM AUGER SAMPLING METHODS: SPLIT SPOON SAMPLER START TIME: 8:45 DATE: 12/7/89 STOP TIME: 12:00 DATE: 12/7/89 TOTAL DEPTH: 20'		

SITE MAP

DEPTH	SAMPLER #	RECOVERY	TIME	BLOWS	DESCRIPTION	USCS	SYMBOL
0					8" CONCRETE; 6" GRAVEL BASE.		
					GRAY SILTY CLAY; STIFF.	CL	
5	MW3-5'	18"	9:15	2-1-1	GRAY FINE SAND; LOOSE.	SP	∇
					GRAY SILTY CLAY; STIFF; SLIGHTLY PLASTIC; WET.		
10						CL	
15					LIGHT BROWN SILTY CLAY.		
20					END OF BORING.		
25							
30							

REMARKS

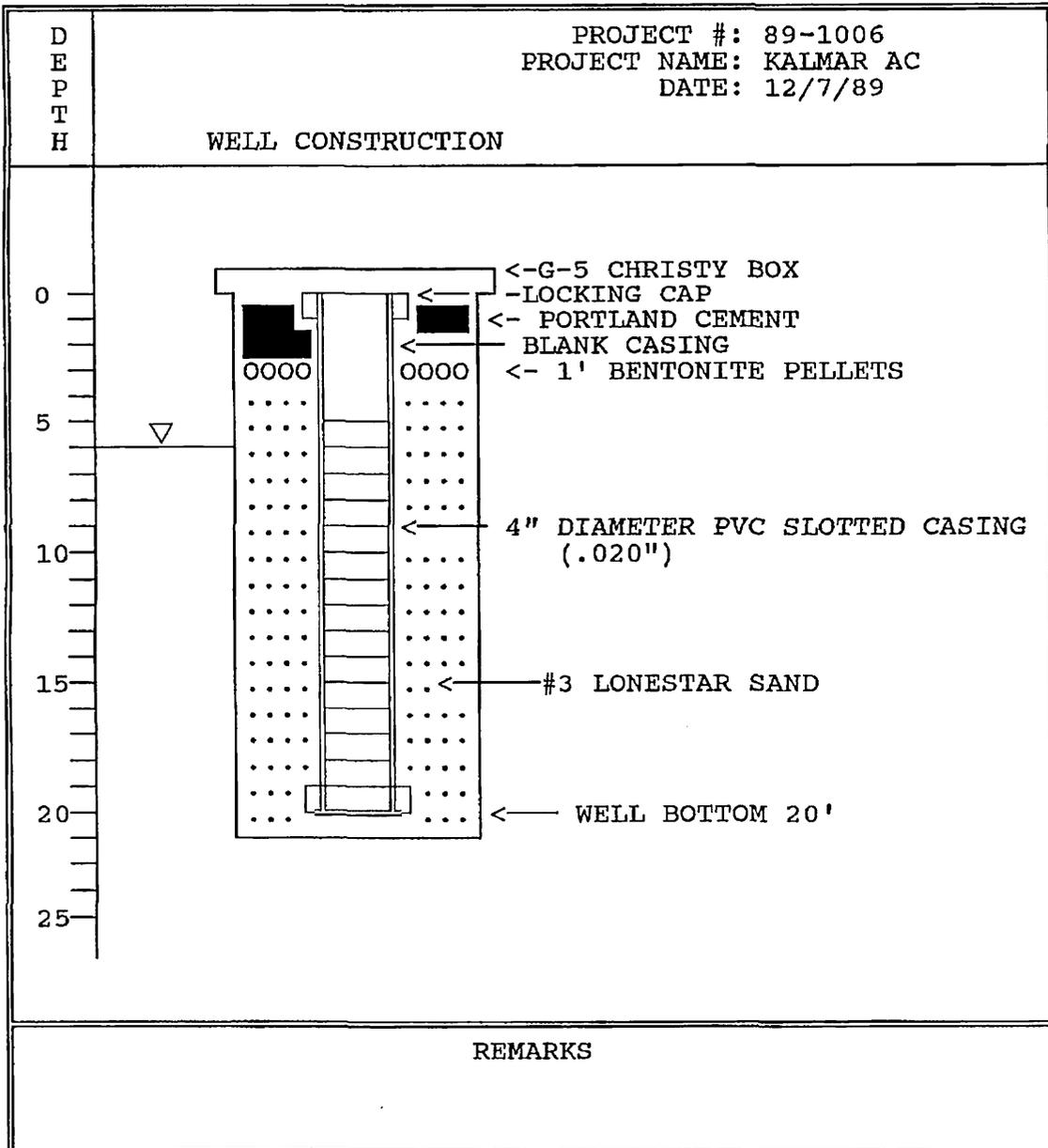
Lic # C57-384167

IS/4W 22Q4
01-4527

MILLER ENVIRONMENTAL COMPANY

WELL CONSTRUCTION LOG

BORING # MW3



ATTACHMENT D

**HISTORICAL GROUNDWATER
ELEVATION AND ANALYTICAL DATA**

TABLE A
Historical Groundwater Monitoring Well Elevation Data
2836 Union Street, Oakland, California

MW-1A			
Sampling Event No.	Date Measured	Water Level Depth (a)	Water Level Elevation (b)
1	Oct-06	dry	dry
2	Jan-07	10.07	2.45
3	Apr-07	7.76	4.76
4	Jul-07	7.43	5.09
5	Oct-07	7.56	4.96
6	Jan-08	7.09	5.70
7	Apr-08	6.59	5.70
8	Jul-08	8.52	4.00
9	Oct-08	9.31	3.21

MW-1B			
Sampling Event No.	Date Measured	Water Level Depth (a)	Water Level Elevation (b)
1	Oct-06	7.87	4.56
2	Jan-07	6.83	5.65
3	Apr-07	6.85	5.63
4	Jul-07	7.19	4.86
5	Oct-07	7.53	4.95
6	Jan-08	6.24	6.67
7	Apr-08	7.25	5.23
8	Jul-08	8.05	4.43
9	Oct-08	8.64	3.84

MW-2A			
Sampling Event No.	Date Measured	Water Level Depth (a)	Water Level Elevation (b)
1	Oct-06	8.17	4.87
2	Jan-07	6.82	6.24
3	Apr-07	6.76	6.30
4	Jul-07	7.61	5.45
5	Oct-07	7.57	5.49
6	Jan-08	5.74	7.56
7	Apr-08	7.10	5.96
8	Jul-08	7.94	5.12
9	Oct-08	8.68	4.38

Notes:

(a) Feet below ground surface

(b) Relative to mean sea level.

MW-2B			
Sampling Event No.	Date Measured	Water Level Depth (a)	Water Level Elevation (b)
1	Oct-06	8.10	5.06
2	Jan-07	6.79	6.37
3	Apr-07	6.40	6.76
4	Jul-07	7.53	5.63
5	Oct-07	7.32	5.84
6	Jan-08	5.71	7.65
7	Apr-08	6.76	6.40
8	Jul-08	7.98	5.18
9	Oct-08	8.82	4.34

MW-3A			
Sampling Event No.	Date Measured	Water Level Depth (a)	Water Level Elevation (b)
1	Oct-06	dry	dry
2	Jan-07	6.49	5.27
3	Apr-07	5.92	5.84
4	Jul-07	6.36	5.40
5	Oct-07	6.67	5.09
6	Jan-08	5.86	6.07
7	Apr-08	6.73	6.40
8	Jul-08	6.90	4.86
9	Oct-08	8.85	2.91

MW-3B			
Sampling Event No.	Date Measured	Water Level Depth (a)	Water Level Elevation (b)
1	Oct-06	7.49	4.61
2	Jan-07	6.56	5.54
3	Apr-07	6.54	5.56
4	Jul-07	7.30	4.80
5	Oct-07	7.26	4.84
6	Jan-08	5.75	6.50
7	Apr-08	6.92	5.18
8	Jul-08	7.65	4.45
9	Oct-08	8.26	3.84

Notes:

(a) Feet below ground surface

(b) Relative to mean sea level.

MW-4A			
Sampling Event No.	Date Measured	Water Level Depth (a)	Water Level Elevation (b)
1	Oct-06	9.97	1.28
2	Jan-07	5.87	5.38
3	Apr-07	5.57	5.68
4	Jul-07	5.94	5.31
5	Oct-07	6.32	4.93
6	Jan-08	5.76	5.72
7	Apr-08	5.79	5.46
8	Jul-08	6.53	4.34
9	Oct-08	10.68	0.57

MW-4B			
Sampling Event No.	Date Measured	Water Level Depth (a)	Water Level Elevation (b)
1	Oct-06	6.84	4.41
2	Jan-07	5.76	5.49
3	Apr-07	5.66	5.59
4	Jul-07	6.49	4.76
5	Oct-07	6.34	4.91
6	Jan-08	5.02	6.44
7	Apr-08	6.11	5.14
8	Jul-08	6.91	4.34
9	Oct-08	7.45	3.80

MW-5A			
Sampling Event No.	Date Measured	Water Level Depth (a)	Water Level Elevation (b)
1	Oct-06	9.74	2.82
2	Jan-07	6.86	6.10
3	Apr-07	5.88	6.68
4	Jul-07	7.12	5.44
5	Oct-07	8.46	4.10
<i>Well Destroyed November 2007</i>			

MW-5B			
Sampling Event No.	Date Measured	Water Level Depth (a)	Water Level Elevation (b)
1	Oct-06	9.26	3.31
2	Jan-07	6.64	5.93
3	Apr-07	6.64	5.93
4	Jul-07	7.34	5.23
5	Oct-07	7.47	5.10
6	Jan-08	5.13	7.63
7	Apr-08	6.70	5.87
8	Jul-08	7.83	4.74
9	Oct-08	8.43	4.14

Notes:

(a) Feet below ground surface

(b) Relative to mean sea level.

TABLE A
Historical Groundwater Monitoring Well Data
2836 Union Street, Oakland, California

MW-1A										
Sampling Event No.	Date Sampled	Depth to Groundwater (a)	Groundwater Elevation (b)	Dissolved Oxygen	TVH-g	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
1	Oct-06	dry	dry		NS	NS	NS	NS	NS	NS
2	Jan-07	9.80	2.45		790	94	< 0.5	8.6	< 0.5	100
3	Apr-07	7.49	4.76		760	63	< 0.5	1.9	< 0.5	150
4	Jul-07	7.16	5.09		NS	NS	NS	NS	NS	NS
5	Oct-07	7.29	4.96		830	28	< 0.7	13	< 0.7	110
6	Jan-08	6.82	5.70		720	8.1	< 0.5	< 0.5	< 0.5	130
7	Apr-08	6.32	5.70		NS	NS	NS	NS	NS	NS
8	Jul-08	8.25	4.00		120	1.0	< 0.5	< 0.5	< 0.5	86
9	Oct-08	9.04	3.21	NS	NS	NS	NS	NS	NS	NS

MW-1B										
Sampling Event No.	Date Sampled	Depth to Groundwater (a)	Groundwater Elevation (b)	Dissolved Oxygen	TVH-g	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
1	Oct-06	7.44	4.56		350	< 1.3	< 1.3	< 1.3	< 1.3	2.7
2	Jan-07	6.40	5.65		350	< 1.3	< 1.3	< 1.3	< 1.3	3.6
3	Apr-07	6.42	5.63		320	< 0.5	< 0.5	< 0.5	< 0.5	4.2
4	Jul-07	7.19	4.86		200	< 1.3	< 1.3	< 1.3	< 1.3	3.2
5	Oct-07	7.10	4.95		230	< 0.7	< 0.7	< 0.7	< 0.7	6.0
6	Jan-08	5.81	6.67		400	< 0.5	< 0.5	< 0.5	< 0.5	6.2
7	Apr-08	6.82	5.23		350	< 0.5	< 0.5	< 0.5	< 0.5	7.8
8	Jul-08	7.62	4.43		300	< 0.5	< 0.5	< 0.5	< 0.5	8.4
9	Oct-08	8.21	3.84	3,600	520	< 0.5	< 0.5	< 0.5	< 0.5	5.9

MW-2A										
Sampling Event No.	Date Sampled	Depth to Groundwater (a)	Groundwater Elevation (b)	Dissolved Oxygen	TVH-g	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
1	Oct-06	7.93	4.87		80	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
2	Jan-07	6.58	6.24		490	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
3	Apr-07	6.52	6.30		83	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
4	Jul-07	7.37	5.45		< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
5	Oct-07	7.33	5.49		< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
6	Jan-08	5.50	7.56		< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0
7	Apr-08	6.86	5.96		160	< 0.5	< 0.5	< 0.5	< 0.5	3.0
8	Jul-08	7.70	5.12		97	< 0.5	< 0.5	< 0.5	< 0.5	5.5
9	Oct-08	8.44	4.38	3,280	71	< 0.5	< 0.5	< 0.5	< 0.5	< 2.0

MW-2B										
Sampling Event No.	Date Sampled	Depth to Groundwater (a)	Groundwater Elevation (b)	Dissolved Oxygen	TVH-g	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
1	Oct-06	7.90	5.06		NS	NS	NS	NS	NS	NS
2	Jan-07	6.59	6.37		2,000	< 0.5	1.1	6.7	0.8	19
3	Apr-07	6.20	6.76		84	< 0.5	< 0.5	< 0.5	< 0.5	18
4	Jul-07	7.33	5.63		580	< 0.5	< 0.5	< 0.5	< 0.5	6.0
5	Oct-07	7.12	5.84		1,700	< 0.5	< 0.5	< 0.5	< 0.5	83
6	Jan-08	5.51	7.65		780	< 0.5	< 0.5	< 0.5	< 0.5	32
7	Apr-08	6.56	6.40		92	< 0.5	< 0.5	< 0.5	< 0.5	2.4
8	Jul-08	7.78	5.18		570	< 0.5	< 0.5	< 0.5	0.72	17
9	Oct-08	8.62	4.34	NS	NS	NS	NS	NS	NS	NS

MW-3A										
Sampling Event No.	Date Sampled	Depth to Groundwater (a)	Groundwater Elevation (b)	Dissolved Oxygen	TVH-g	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
1	Oct-06	dry	dry		NS	NS	NS	NS	NS	NS
2	Jan-07	6.32	5.27		NS	NS	NS	NS	NS	NS
3	Apr-07	5.75	5.84		<50	<0.5	<0.5	<0.5	<0.5	75
4	Jul-07	6.19	5.40		NS	NS	NS	NS	NS	NS
5	Oct-07	6.50	5.09		<50	<0.5	<0.5	<0.5	<0.5	<0.5
6	Jan-08	5.69	6.07		<50	<0.5	<0.5	<0.5	<0.5	70
7	Apr-08	6.56	6.40		<50	<0.5	<0.5	<0.5	<0.5	77
8	Jul-08	6.73	4.86		<50	<0.5	<0.5	<0.5	<0.5	56
9	Oct-08	8.68	2.91	NS	NS	NS	NS	NS	NS	NS

MW-3B										
Sampling Event No.	Date Sampled	Depth to Groundwater (a)	Groundwater Elevation (b)	Dissolved Oxygen	TVH-g	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
1	Oct-06	7.34	4.61		1,900	<10	<10	<10	<10	<10
2	Jan-07	6.41	5.54		1,900	<8.3	<8.3	<8.3	<8.3	<8.3
3	Apr-07	6.39	5.56		1,900	<0.5	<0.5	<0.5	<0.5	<0.5
4	Jul-07	7.15	4.80		1,200	<2.0	<2.0	<2.0	<2.0	<2.0
5	Oct-07	7.11	4.84		2,100	<7.1	<7.1	<7.1	<7.1	<7.1
6	Jan-08	5.60	6.50		2,100	<0.5	<0.5	<0.5	<0.5	<2.0
7	Apr-08	6.77	5.18		1,800	<0.5	<0.5	<0.5	<0.5	<2.0
8	Jul-08	7.50	4.45		1,700	<0.5	<0.5	<0.5	<0.5	<2.0
9	Oct-08	8.11	3.84	1,490	2,300	<0.5	<0.5	<0.5	<0.5	<2.0

MW-4A										
Sampling Event No.	Date Sampled	Depth to Groundwater (a)	Groundwater Elevation (b)	Dissolved Oxygen	TVH-g	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
1	Oct-06	9.74	1.28		NS	NS	NS	NS	NS	NS
2	Jan-07	5.64	5.38		<50	<0.5	<0.5	<0.5	<0.5	72
3	Apr-07	5.34	5.68		<50	<0.5	0.6	<0.5	0.6	77
4	Jul-07	5.71	5.31		<50	<0.5	<0.5	<0.5	<0.5	64
5	Oct-07	6.09	4.93		<50	<0.5	<0.5	<0.5	<0.5	73
6	Jan-08	5.53	5.72		NS	NS	NS	NS	NS	NS
7	Apr-08	5.56	5.46		<50	<0.5	<0.5	<0.5	<0.5	61
8	Jul-08	6.30	4.34		<50	<0.5	<0.5	<0.5	<0.5	46
9	Oct-08	10.45	0.57	NS	<50	<0.5	<0.5	<0.5	<0.5	66

MW-4B										
Sampling Event No.	Date Sampled	Depth to Groundwater (a)	Groundwater Elevation (b)	Dissolved Oxygen	TVH-g	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
1	Oct-06	6.63	4.41		1,100	<2.5	<2.5	<2.5	<2.5	<2.5
2	Jan-07	5.55	5.49		1,300	<4.2	<4.2	<4.2	<4.2	<4.2
3	Apr-07	5.45	5.59		1,300	<0.5	<0.5	<0.5	<0.5	<0.5
4	Jul-07	6.28	4.76		1,000	<4.2	<4.2	<4.2	<4.2	<4.2
5	Oct-07	6.13	4.91		1,400	<4.2	<4.2	<4.2	<4.2	<4.2
6	Jan-08	4.81	6.44		1,500	<0.5	<0.5	<0.5	<0.5	<2.0
7	Apr-08	5.90	5.14		1,500	<0.5	<0.5	<0.5	<0.5	<2.0
8	Jul-08	6.70	4.34		1,200	<0.5	<0.5	<0.5	<0.5	<2.0
9	Oct-08	7.24	3.80	1,960	1,600	<0.5	<0.5	<0.5	<0.5	<2.0

MW-5A										
Sampling Event No.	Date Sampled	Depth to Groundwater (a)	Groundwater Elevation (b)	Dissolved Oxygen	TVH-g	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
1	Oct-06	9.60	2.82		NS	NS	NS	NS	NS	NS
2	Jan-07	6.72	6.10		NS	NS	NS	NS	NS	NS
3	Apr-07	5.74	6.68		1,000	6.6	<0.5	29	7.6	79
4	Jul-07	6.98	5.44		NS	NS	NS	NS	NS	NS
5	Oct-07	8.32	4.10		820	6.6	<0.5	6.6	1.8	78
<i>Well Destroyed in November 2007</i>										

MW-5B										
Sampling Event No.	Date Sampled	Depth to Groundwater (a)	Groundwater Elevation (b)	Dissolved Oxygen	TVH-g	Benzene	Toluene	Ethylbenzene	Total Xylenes	MTBE
1	Oct-06	9.07	3.31		13,000	9.6	0.6	21	1.9	37
2	Jan-07	6.45	5.93		6,600	4.0	<0.5	10	1.0	22
3	Apr-07	6.45	5.93		3,300	0.7	<0.5	2.7	<0.5	<0.5
4	Jul-07	7.15	5.23		2,000	1.1	<0.5	2.2	<0.5	26
5	Oct-07	7.28	5.10		1,200	<0.5	<0.5	<0.5	<0.5	45
6	Jan-08	4.94	7.63		1,200	<0.5	<0.5	4.1	<0.5	69
7	Apr-08	6.51	5.87		240	<0.5	<0.5	<0.5	<0.5	65
8	Jul-08	7.64	4.74		310	<0.5	<0.5	<0.5	<0.5	68
9	Oct-08	8.24	4.14	1,670	780	<0.5	<0.5	<0.5	<0.5	84

Notes:

All concentrations reported in micrograms per liter.

TVH-g = Total volatile hydrocarbons – gasoline range.

NS = Not sampled, insufficient water

(a) Feet below top of casing

(b) Relative to mean sea level