ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Director

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

December 3, 2014

Tracy S. Campbell
307 W. Fairview Blvd.
Inglewood, CA 90302

International Estates, LLC
c/o: Mahmud Ghanem
6207 International Blvd.
Oakland, CA 94621

Jaleesa Hazzard
1722 Virginia Rd.
Los Angeles, CA 90012

Jeanne Shepherd
1722 Virginia Road
Los Angeles, CA 90012

Atlantic Richfield Company
c/o: Chuck Carmel
PO Box 1257
San Ramon, CA 94583
(*Sent via E-mail to: charles.carmel@bp.com*)

Pluckey, Inc.
6415 International Blvd.
Oakland, CA 94621

James J. Weiss
Address Unknown

Nattrass, Inc.
Address Unknown

Fabian A. Labat Jr.
Address Unknown

William C. Dixon
Address Unknown

Subject: Case Closure for Fuel Leak Case No. RO0002982 and GeoTracker Global ID T10000000417, ARCO #472 / Plucky Liquors, 6415 International Blvd., Oakland, CA 94621

Dear Responsible Parties:

This letter transmits the enclosed underground storage tank (UST) case closure letter in accordance with Chapter 6.75 (Article 4, Section 25296.10[g]). The State Water Resources Control Board adopted this letter on February 20, 1997. As of March 1, 1997, the Alameda County Environmental Health (ACEH) is required to use this case closure letter for all UST leak sites. We are also transmitting to you the enclosed case closure summary. These documents confirm the completion of the investigation and cleanup of the reported release at the subject site. The subject fuel leak case is closed. This case closure letter and the case closure summary can also be viewed on the State Water Resources Control Board's Geotracker website (http://geotracker.waterboards.ca.gov) and the Alameda County Environmental Health website (http://www.acgov.org/aceh/index.htm).

Due to potential residual shallow soil contamination where the UST source has never been fully delineated, the site was closed with Site Management Requirements for potential future excavation and construction activities. Direct contact criteria was not met within the LTCP framework as the 0 to 5 foot interval was not sampled; however, the 5 to 10 foot interval meets the LTCP Table 1 criteria. Site Management Requirements are further described in "*Additional Information*" section of the attached Case Closure Summary.

If you have any questions, please call Keith Nowell at (510) 567-6764. Thank you.

Sincerely,

Dilan Roe, P.E.
LOP and SCP Program Manager

Enclosures: 1. Remedial Action Completion Certification
2. Case Closure Summary

Cc w/enc.:

Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3354, Oakland, CA 94612 (*Sent via E-mail to: lgriffin@oaklandnet.com*)

Mark Johannes Arniola, City of Oakland Public Works, Environmental Remediation, 250 Frank H. Ogawa Plaza, Suite 5301, Oakland, CA 94612 (*Sent via E-mail to: marniola@oaklandnet.com*)

Kristene Tidwell, Broadbent & Associates, Inc., 4820 Business Center Drive, Suite 110, Fairfield, CA 94534 (*Sent via E-mail to: ktidwell@broadbentinc.com*)

Case Worker (*Sent via E-mail to: keith.nowell@acgov.org*)
e-File, GeoTracker

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

DEPARTMENT OF ENVIRONMENTAL HEALTH
OFFICE OF THE DIRECTOR
1131 HARBOR BAY PARKWAY
ALAMEDA, CA 94502
(510) 567-6777
FAX (510) 337-9135

REMEDIAL ACTION COMPLETION CERTIFICATION

December 3, 2014

Tracy S. Campbell
307 W. Fairview Blvd.
Inglewood, CA 90302

International Estates, LLC
c/o: Mahmud Ghanem
6207 International Blvd.
Oakland, CA 94621

Jaleesa Hazzard
1722 Virginia Rd.
Los Angeles, CA 90012

Jeanne Shepherd
1722 Virginia Road
Los Angeles, CA 90012

Atlantic Richfield Company
c/o: Chuck Carmel
PO Box 1257
San Ramon, CA 94583
(*Sent via E-mail to: charles.carmel@bp.com*)

Pluckey, Inc.
6415 International Blvd.
Oakland, CA 94621

James J. Weiss
Address Unknown

Nattrass, Inc.
Address Unknown

Fabian A. Labat Jr.
Address Unknown

William C. Dixon
Address Unknown

Subject: Case Closure for Fuel Leak Case No. RO0002982 and GeoTracker Global ID T10000000417, ARCO #472 / Plucky Liquors, 6415 International Blvd., Oakland, CA 94621

Dear Responsible Parties:

This letter confirms the completion of a site investigation and remedial action for the underground storage 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 storage tank(s) are greatly appreciated.

Based on information in the above-referenced file and with the 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 25296.10 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.3 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

Please be aware that claims for reimbursement of corrective action costs submitted to the Underground Storage Tank Cleanup Fund more than 365 days after the date of this letter or issuance or activation of the Fund's Letter of Commitment, whichever occurs later, will not be reimbursed unless one of the following exceptions applies:

- Claims are submitted pursuant to Section 25299.57, subdivision (k) (reopened UST case); or
- Submission within the timeframe was beyond the claimant's reasonable control, ongoing work is required for closure that will result in the submission of claims beyond that time period, or that under the circumstances of the case, it would be unreasonable or inequitable to impose the 365-day time period.

This notice is issued pursuant to subdivision (g) of Section 25296.10 of the Health and Safety Code. Please contact our office if you have any questions regarding this matter.

Sincerely,

Ariu Levi
Director

UST Case Closure Summary Form

Agency Information Date: December 3, 2014

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: 510-567-6764
Staff Person: Keith Nowell	Title: Hazardous Materials Specialist

Case Information

Facility Name: ARCO #472 / Plucky Liquors (aka Plucky's Liquors, Pluckey's Liquors)		
Facility Address: 6415 International Blvd., Oakland, CA 94621		
RB LUSTIS Case No: ----	Local Case No.: ----	LOP Case No.: RO0002982
URF Filing Date: ----	GeoTracker Global ID: T10000000417	
APN: 41-405-21	Current Land Use: Commercial (previously a liquor store, and previously a service station)	
Responsible Party(s):	Address:	Phone:
Tracy S. Campbell	307 W. Fairview Blvd. Inglewood, CA 90302	310-677-8680
Jaleesa Hazzard	1722 Virginia Rd. Los Angeles, CA 90012	323-702-3227
Atlantic Richfield Company c/o: Chuck Carmel	PO Box 1257 San Ramon, CA 94583	----
International Estates, LLC c/o: Mahmud Ghanem	6207 International Blvd. Oakland, CA 94621	----
Jeanne Shepherd	1722 Virginia Road Los Angeles, CA 90012	----
Plucky, Inc.	6415 International Blvd. Oakland, CA 94621	----
James J. Weiss	Address Unknown	----
Fabian A. Labat Jr.	Address Unknown	----
Nattrass, Inc.	Address Unknown	----
William C. Dixon	Address Unknown	----

UST Case Closure Summary Form

Tank Information

Tank No.	Size (gal)	Contents	Closed in-Place/ Removed/Active	Date
2 tanks	4,000	Gasoline/diesel	Removed	1976
1 tank	6,000	Gasoline/diesel	Removed	1976
Piping	----	----	Unknown	----

Conceptual Site Model (Attachment 1, 3 pages) (GeoTracker CSM Report)

Closure Criteria Met (Attachment 2, 2 pages) (GeoTracker LTCP Checklist)

LTCP Groundwater Specific Criteria (Attachment 3, 2 pages)

LTCP Vapor Specific Criteria (Attachment 4, 2 pages)

LTCP Direct Contact and Outdoor Air Exposure Criteria (Attachment 5, 1 page)

Site maps (Attachment 6, 7 pages)

Analytical Data (Attachment 7, 9 pages)

Additional Information:

Site Management Requirements:

This fuel leak case has been evaluated for closure consistent with the State Water Resource Control Board Low-Threat Underground Storage Tank Closure Policy (LTCP).

Site Management Requirements are to be implemented as part of the case closure requirements. The exact source of the historic release has never been definitively established, and there is a possibility that residual petroleum hydrocarbon impacts may be encountered during any potential future Site redevelopment work. The risk to potential future construction workers due to Site redevelopment may be significant. Prior to conducting any earthwork activities, a copy of the Site Management Plan shall be provided to contractors performing ground disturbance, and a Site-Specific Health and Safety Plan (HASP) shall be prepared for personnel implementing the work. The complete Site Management Plan titled "SITE_MANAGE_R_2014-10-23" can be accessed on the ACEH website (http://www.acgov.org/MAPS/deh/InspectionResults/?SITE=LOP) and the State's GeoTracker website (http://geotracker.waterboards.ca.gov/).

If a change in land use to any residential, or conservative land use, or if any redevelopment occurs, Alameda County Environmental health (ACEH) must be notified as required by Government Code Section 65850.2.2. Due to the potential for direct contact and outdoor air exposure, ACEH will re-evaluate the case upon receipt of approved development/construction plans.

This site is to be entered into the City of Oakland Permit Tracking System due to the residual contamination on site.

UST Case Closure Summary Form

RWQCB Notification **Notification Date: August 18, 2014**

RWQCB Staff Name: Cherie McCaulou	Title: Engineering Geologist

Local Agency Representative

Prepared by: Keith Nowell	Title: Hazardous Materials Specialist
Signature: Keith Nowell	Date: 12/03/2014
Approved by: Dilan Roe	Title: LOP and SCP Program Manager
Signature: Dilan Roe	Date: 12/3/2014

This Case Closure Summary along with the Case Closure Transmittal letter and the Remedial Action Completion Certification provides documentation of the case closure. This closure approval is based upon the available information and with the provision that the information provided to this agency was accurate and representative of site conditions. The Conceptual Site Model may not contain all available data. Additional information on the case can be viewed in the online case file. The entire case file can be viewed over the Internet on the Alameda County Environmental Health (ACEH) website (http://www.acgov.org/aceh/lop/ust.htm) or the State of California Water Resources Control Board GeoTracker website (http://geotracker.waterboards.ca.gov). Not all historic documents for the fuel leak case may be available on GeoTracker. A more complete historic case file for this site is located on the ACEH website.

ATTACHMENT 1

ARCO #472 / PLUCKY LIQUORS (T10000000417) - MAP THIS SITE *OPEN - ELIGIBLE FOR CLOSURE*

6415 INTERNATIONAL BLVD
OAKLAND , CA 94621
ALAMEDA COUNTY

ACTIVITIES REPORT
PUBLIC WEBPAGE

VIEW PRINTABLE CASE SUMMARY FOR THIS SITE

CLEANUP OVERSIGHT AGENCIES
ALAMEDA COUNTY LOP *(LEAD)* - *CASE #: RO0002982*
CASEWORKER: *KEITH NOWELL* - ***SUPERVISOR:*** *DILAN ROE*
SAN FRANCISCO BAY RWQCB (REGION 2) - *CASE #: NA*
CASEWORKER: *Cherie McCaulou* - ***SUPERVISOR:*** *Cheryl L. Prowell*

CR Site ID #: NOT SPECIFIED

THIS PROJECT WAS LAST MODIFIED BY ***KEITH NOWELL*** ON 12/3/2014 5:03:44 PM - HISTORY

THIS SITE HAS SUBMITTALS. CLICK HERE TO OPEN A NEW WINDOW WITH THE SUBMITTAL APPROVAL PAGE FOR THIS SITE.

CSM REPORT - VIEW PUBLIC NOTICING VERSION OF THIS REPORT

UST CLEANUP FUND CLAIM INFORMATION (DATA PULLED FROM SCUFIIS)

CLAIM NO	PRIORITY	CLAIMANT	SITE ADDRESS	AMT REIMB TO DATE	AGE OF LOC	IMPACTED WELLS?	FIVE YEAR REVIEW INFORMATION: REVIEW NUM	REVIEWER	FUND RECOMMENDATION	TO OVERSIGHT DATE	TO CLAIMANT DATE

PROJECT INFORMATION (DATA PULLED FROM GEOTRACKER) - MAP THIS SITE

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
ARCO #472 / PLUCKY LIQUORS (Global ID: T10000000417) 6415 INTERNATIONAL BLVD OAKLAND, CA 94621	Open - Eligible for Closure	12/3/2014	5/30/2008	7	ALAMEDA COUNTY LOP *(LEAD)* - *CASE #: RO0002982* ***CASEWORKER:*** *KEITH NOWELL* - ***SUPERVISOR:*** *DILAN ROE* SAN FRANCISCO BAY RWQCB (REGION 2) - *CASE #: NA* ***CASEWORKER:*** *Cherie McCaulou* - ***SUPERVISOR:*** *Cheryl L. Prowell*

STAFF NOTES (INTERNAL)
<NO STAFF NOTES ENTERED>

SITE HISTORY

ACEH has determined that the one remaining data gap has been addressed and is considering the case for closure. The data gap, the lack of lateral plume delineation, was addressed when the updated sensitive receptor survey did not identify any wells within 2,000 feet of the site. ACEH concured that the well sampling could be suspended until a determination is made.

The site is located in a mixed residential and commercial area on the south corner of the intersection of International Boulevard (formerly East 14th Street) and 64th Avenue in Oakland, California. The Site is currently being used as a storage lot for used cars for an adjacent operating lot. Previously, a liquor store was operated onsite and the building from this operation is still present. The site is predominantly covered with asphalt and concrete.

A gas station operated on the property since at least 1935. In 1947, Richfield Oil Company purchased the property for the construction of a service station with completion taking place in 1949. The service station was operated by various Richfield Oil Company dealers from 1949 until at least 1971. In 1966 two 4,000 gallon and one 6,000 gallon replacement underground storage tanks (USTs) were installed on the property. Richfield Oil Company sold the property in 1971 to the Nattrass Corporation. The fueling station features including the USTs and dispensers were removed in 1976.

In May 2007, a Phase I Environmental Site Assessment was conducted. In April 2008, a Limited Phase II Environmental Site investigation was conducted and included the advancement of six soil borings (SB-1 through SB-6) down to 31 feet below ground surface (ft bgs). Soil samples were collected from each boring and ground-water samples were collected from borings SB-1, SB-2, SB-3 and SB-5. Soil boring SB-1 was drilled on the backside of the property to assess the potential for off-site contaminant migration. Borings SB-2, SB-3, SB-5 and SB-6 were advanced in the area suspected of containing the former USTs. SB-4 was advanced to assess a former pump island.

Soil samples from borings SB-1 through SB-6 contained Total Petroleum Hydrocarbons in the Gasoline Range (TPH-G) at concentrations up to 95 milligrams per kilogram (mg/kg) (SB-6 at 14 ft bgs), Total Petroleum Hydrocarbons in the Diesel Range (TPH-D) at concentrations up to 20 mg/kg (SB-2 at 20 ft bgs), and Total Petroleum Hydrocarbons in the Motor Oil Range (TPHMO) at concentrations up to 51 mg/kg (SB-2 at 20 ft bgs). Ground-water samples from borings

SB-1, SB-2, SB-3 and SB-5 contained TPH-G at concentrations up to 8.1 milligrams per liter (mg/L) (SB-3), TPH-D at concentrations up to 7.2 mg/L (SB-3), and TPH-MO at concentrations up to 0.18 mg/L (SB-5). No concentrations of Benzene, Toluene, Ethylbenzene, or Xylenes (BTEX) were detected above the laboratory reporting limits in the soil or ground-water samples collected (GEOCON, 5/7/2008).

The Site elevation is approximately 24 feet above mean sea level. According to soil boring logs from the Phase II investigation, soils encountered at the Site consist primarily of sandy and silty clay from near ground surface to the total depth of 31 ft bgs at boring SB-6. Clayey gravel was encountered in borings SB-1 through SB-3 and SB-6 at depths ranging from six to twelve ft bgs, and in boring SB-1 and SB-2 at depths of 14 to 15 ft bgs. Some gravely sand was also

observed in boring SB-3 from 12 to 16 ft bgs, in boring SB-4 from five to eight ft bgs, SB-5 from 14 to 16 ft bgs, and boring SB-6 from 7.5 to nine ft bgs. In soil boring SB-5, 10 feet of fill was observed. Due to the presence of the fill, SB-5 is within the assumed location of a

former UST(s), since removed. Ground water was initially encountered during Phase II drilling activities at approximately 21 ft bgs and rose to stabilize at approximately 9 ft bgs within the borings.

In July 2009, an additional on-site soil and groundwater investigation was conducted to assess the extent and/or significance of soil and ground-water contamination at the Site, and included the installation of three groundwater monitoring wells to establish trends in groundwater elevatons, flow directons, horizontal gradients, and contaminant concentrations. Soil boring MW-1 (completed as well MW-1) was located approximately five feet southwest of the sidewalk on International Boulevard and centered in the concrete area in front of the building. Assuming a ground-water flow direction towards the southwest, boring MW-1 is upgradient and located northeast of SB-4 and the former fuel dispenser island. Soil boring MW-2 (completed as well MW-2) was located approximately 10 feet in from the sidewalk on 64th Avenue and from the back of the property, southwest of SB-5 and the assumed location of the former USTs. Soil boring MW-3 (completed as well MW-3) was located in the south corner of the property approximately 20 feet in from the back of the property and former store. The tested analytes were not detected above their respective reporting limits in the 20 soil samples collected for laboratory analysis with the exception of one sample containing GRO, which was detected at a concentration of 0.87 mg/kg in boring MW-1 at 14.5 ft bgs.

Groundwater monitoring has been conducted on a quarterly basis starting in the 3rd Quarter 2009 through the 3rd Quarter 2010, at which time the frequency was reduced to semi-annually.

In November 2011, ARCO submitted a Request for Case Closure (RFC). The RFC was subsequently retracted after a meeting in August 2012 with ACEH and ARCO to discuss data quality issues. A Site Model and Case Closure Request was submitted on June 19, 2013. A review of the document reveals the same data quality issues noted in the previous RFC. Additonally, the SCM is filled with errors, makes conclusions that are not supported by data, and does not address potential source areas.

Site appears to meet the LTCP criteria and may be eligible for closure pending acceptance of the Site Management Plan.

RESPONSIBLE PARTIES

NAME	ORGANIZATION	ADDRESS	CITY	EMAIL
FABIAN LABAT JR	UNK0002896	UNK	UNK	
JALEESA HAZZARD	NA	1722 VIRGINIA RD	LOS ANGELES	
JAMES WEISS	UNK0002895	UNK	UNK	
PAUL SUPPLE	BP WEST COAST PRODUCTS, LLC	PO BOX 1257	SAN RAMON	
TRACY CAMPBELL	NA	307 W FAIRVIEW BLVD	INGLEWOOD	
UNK0002898 UNK002898	PLUCKEY, INC.	UNK	UNK	
UNK0002899 UNK0002899	NATTRASS, INC.	UNK	UNK	
WILLIAM DIXON	UNK0002897	UNK	UNK	

CLEANUP ACTION INFO

NO CLEANUP ACTIONS HAVE BEEN REPORTED

RISK INFORMATION VIEW LTCP CHECKLIST VIEW PATH TO CLOSURE PLAN VIEW CASE REVIEWS

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTED WELLS
Benzene, Diesel, Ethylbenzene, Gasoline, MTBE / TBA / Other Fuel Oxygenates, Toluene, Xylene	Commercial	GW - Municipal and Domestic Supply		5/30/2008	Other Means	0

FREE PRODUCT	OTHER CONSTITUENTS	NAME OF WATER SYSTEM	LAST REGULATORY ACTIVITY	LAST ESI UPLOAD	LAST EDF UPLOAD	EXPECTED CLOSURE DATE	MOST RECENT CLOSURE REQUEST
NO	NO	EBMUD	11/4/2014	11/6/2014	10/11/2013		5/20/2014

CDPH WELLS WITHIN 1500 FEET OF THIS SITE

NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN
041 405002100

GW BASIN NAME
Santa Clara Valley - East Bay Plain (2-9.04)

WATERSHED NAME
South Bay - East Bay Cities (20420)

COUNTY
Alameda

PUBLIC WATER SYSTEM(S)
- **EAST BAY MUD** - 375 ELEVENTH STREET, OAKLAND, CA 94607

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN GROUNDWATER - HIDE VIEW ESI SUBMITTALS

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	TBA
MW-1	9/4/2013		ND	ND	ND	ND	ND	ND
MW-2	9/4/2013		ND	ND	ND	ND	ND	ND
MW-3	9/4/2013		ND	ND	ND	ND	ND	ND

MOST RECENT CONCENTRATIONS OF PETROLEUM CONSTITUENTS IN SOIL - HIDE VIEW ESI SUBMITTALS

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	TBA
MW-1 11	7/14/2009		ND	ND	ND	ND		
MW-1 12.5	7/14/2009		ND	ND	ND	ND		
MW-1 14.5	7/14/2009		ND	ND	ND	ND		
MW-1 6.5	7/14/2009		ND	ND	ND	ND		
MW-1 8	7/14/2009		ND	ND	ND	ND		
MW-1 9.5	7/14/2009		ND	ND	ND	ND		
MW-2 11	7/14/2009		ND	ND	ND	ND		

FIELD PT NAME	DATE	TPHg	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	MTBE	TBA
MW-2 12.5	7/14/2009		ND	ND	ND	ND		
MW-2 14.5	7/14/2009		ND	ND	ND	ND		
MW-2 17	7/14/2009		ND	ND	ND	ND		
MW-2 6.5	7/14/2009		ND	ND	ND	ND		
MW-2 8	7/14/2009		ND	ND	ND	ND		
MW-2 9.5	7/14/2009		ND	ND	ND	ND		
MW-3 11	7/14/2009		ND	ND	ND	ND		
MW-3 12.5	7/14/2009		ND	ND	ND	ND		
MW-3 14.5	7/14/2009		ND	ND	ND	ND		
MW-3 17	7/14/2009		ND	ND	ND	ND		
MW-3 6.5	7/14/2009		ND	ND	ND	ND		
MW-3 8	7/14/2009		ND	ND	ND	ND		
MW-3 9.5	7/14/2009		ND	ND	ND	ND		

MOST RECENT GEO_WELL DATA - HIDE VIEW ESI SUBMITTALS

FIELD PT NAME	DATE	DEPTH TO WATER (FT)	SHEEN	DEPTH TO FREE PRODUCT (FT)
MW-1	9/4/2013	9.4	N	
MW-2	9/4/2013	9.35	N	
MW-3	9/4/2013	10.92	N	

LOGGED IN AS MATTSOBY CONTACT GEOTRACKER HELP

ATTACHMENT 2

LTCP Checklist Go

ARCO #472 / PLUCKY LIQUORS (T10000000417) - MAP THIS SITE — *OPEN - ELIGIBLE FOR CLOSURE*

6415 INTERNATIONAL BLVD
OAKLAND , CA 94621
ALAMEDA COUNTY

VIEW PRINTABLE CASE SUMMARY FOR THIS SITE

ACTIVITIES REPORT

PUBLIC WEBPAGE

CLEANUP OVERSIGHT AGENCIES
ALAMEDA COUNTY LOP *(LEAD)* - *CASE #: RO0002982*
CASEWORKER: *KEITH NOWELL* - ***SUPERVISOR:*** *DILAN ROE*
SAN FRANCISCO BAY RWQCB (REGION 2) - *CASE #: NA*
CASEWORKER: *Cherie McCaulou* - ***SUPERVISOR:*** *Cheryl L. Prowell*

CR Site ID #: NOT SPECIFIED

THIS PROJECT WAS LAST MODIFIED BY ***KEITH NOWELL*** ON 12/3/2014 5:03:44 PM - HISTORY

THIS SITE HAS SUBMITTALS. CLICK HERE TO OPEN A NEW WINDOW WITH THE SUBMITTAL APPROVAL PAGE FOR THIS SITE.

CLOSURE POLICY

THIS VERSION IS FINAL AS OF 12/3/2014 — *CHECKLIST INITIATED ON 8/10/2013* — CLOSURE POLICY HISTORY

General Criteria - *The site satisfies the policy general criteria* - CLEAR SECTION ANSWERS — **NO**

a. Is the unauthorized release located within the service area of a public water system? — ◉ YES ○ NO
Name of Water System : EBMUD

b. The unauthorized release consists only of petroleum (info). — ◉ YES ○ NO

c. The unauthorized ("primary") release from the UST system has been stopped. — ◉ YES ○ NO

d. Free product has been removed to the maximum extent practicable (info). — ◉ FP Not Encountered ○ YES ○ NO

e. A conceptual site model that assesses the nature, extent, and mobility of the release has been developed (info). — ◉ YES ○ NO

f. Secondary source has been removed to the extent practicable (info). — ○ YES ◉ NO
Impediment to Removing Secondary Source (Check all that Apply):
- ☑ **Remediation Has Not Been Attempted**
- ☐ **Remediation Was Designed Incorrectly**
- ☐ **Remediation Was Shut Off Prematurely**
- ☐ **Poor Remediation O&M**
- ☑ **Other** - Potential source area near one of the two t

g. Soil or groundwater has been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15. — ○ Not Required ◉ YES ○ NO

h. Does a nuisance exist, as defined by Water Code section 13050. — ○ YES ◉ NO

1. Media-Specific Criteria: Groundwater - *The contaminant plume that exceeds water quality objectives is stable or decreasing in areal extent, and meets all of the additional characteristics of one of the five classes of sites listed below.* - CLEAR SECTION ANSWERS — **YES**

EXEMPTION - Soil Only Case (Release has not Affected Groundwater - Info) — ○ **YES** ◉ **NO**

Does the site meet any of the Groundwater specific criteria scenarios? — ◉ **YES** ○ **NO**

1.1 - The contaminant plume that exceeds water quality objectives is <100 feet in length. There is no free product. The nearest existing water supply well or surface water body is >250 feet from the defined plume boundary. — ◉ YES ○ NO

2. Media Specific Criteria: Petroleum Vapor Intrusion to Indoor Air - *The site is considered low-threat for the vapor-intrusion-to-air pathway if site-specific conditions satisfy items 2a, 2b, or 2c* - CLEAR SECTION ANSWERS — **YES**

EXEMPTION - Active Commercial Petroleum Fueling Facility — ○ **YES** ◉ **NO**

Does the site meet any of the Petroleum Vapor Intrusion to Indoor Air specific criteria scenarios? — ◉ **YES** ○ **NO**

2a - Scenario 3 (example): Dissolved Phase Benzene Concentrations Only in Groundwater (Low concentration groundwater scenarios with or without O2 measurements must satisfy one i, ii, or iii): — **YES**

i. For bioattenuation zone without oxygen measurements or oxygen <4% and benzene concentration are <100 µg/L, the bioattenuation zone: Is a continuous zone that provides a separation of at least 5 feet vertically between the dissolved phase benzene and the foundation of existing or potential building; and contain total TPH <100 mg/kg throughout the entire depth of the bioattenuation zone. — ◉ YES ○ NO

ii. For bioattenuation zone without oxygen measurements or oxygen <4% and benzene concentration are >100 µg/L but <1,000 µg/L, the bioattenuation zone: Is a continuous zone that provides a separation of at least 10 feet vertically between the dissolved phase benzene and the foundation of existing or potential building, and contain total TPH <100 mg/kg throughout the entire depth of the bioattenuation zone. — ○ YES ○ NO

iii. For bioattenuation zone with oxygen ≥ 4% and benzene concentration are <1,000 µg/L, the bioattenuation zone: Is a continuous zone that provides a separation of at least 5 feet vertically between the dissolved phase benzene and the foundation of existing or potential building, and contain total TPH <100 mg/kg throughout the entire depth of the bioattenuation zone. — ○ YES ○ NO

3. Media Specific Criteria: Direct Contact and Outdoor Air Exposure - *The site is considered low-threat for direct contact and outdoor air exposure if it meets 1, 2, or 3 below.* - CLEAR SECTION ANSWERS — **NO**

EXEMPTION - The upper 10 feet of soil is free of petroleum contamination — ○ **YES** ◉ **NO**

Does the site meet any of the Direct Contact and Outdoor Air Exposure criteria scenarios? — ○ **YES** ◉ **NO**

ADDITIONAL QUESTIONS - Please indicate only those conditions that do not meet the policy criteria:

Exposure Type :
○ Residential ○ Commercial ○ Utility Worker

Petroleum Constituents in Soil :
○ ≤ 5 Feet bgs ○ >5 Feet bgs and ≤10 Feet bgs ○ Unknown

Soil Concentrations of Benzene :
○ > 1.9 mg/kg and ≤ 2.8 mg/kg ○ > 2.8 mg/kg and ≤ 8.2 mg/kg ○ > 8.2 mg/kg and ≤ 12 mg/kg ○ > 12 mg/kg and ≤ 14 mg/kg ○ > 14 mg/kg ○ Unknown

Soil Concentrations of EthylBenzene :
○ > 21 mg/kg and ≤ 32 mg/kg ○ > 32 mg/kg and ≤ 89 mg/kg ○ > 89 mg/kg and ≤ 134 mg/kg ○ > 134 mg/kg and ≤ 314 mg/kg ○ > 314 mg/kg ○ Unknown

Soil Concentrations of Naphthalene :

○ > 9.7 mg/kg and ≤ 45 mg/kg ○ > 45 mg/kg and ≤ 219 mg/kg ○ > 219 mg/kg ◉ Unknown

Soil Concentrations of PAH :

○ > 0.063 mg/kg and ≤ 0,68 mg/kg ○ > 0.68 mg/kg and ≤ 4.5 mg/kg ○ > 4.5 mg/kg ○ Unknown

Area of Impacted Soil :

○ Area of Impacted Soil > 82 by 82 Feet ○ Unknown

Additional Information

Should this case be closed in spite of NOT meeting policy criteria?

Explain:

```
Nearest surface water body is a concrete-channelized flood control channel 950 feet down gradient from site.
Media Specific Criteria: Direct Contact and Outdoor Air Exposure - residual contamination addressed with site SMP
```

◉ YES ○ NO

Has this LTCP Checklist been updated for FY 14/15? ◉ YES ○ NO

SPELL CHECK

Save Form as Partially Completed Save Form as Complete

LOGGED IN AS MATTSOBY CONTACT GEOTRACKER HELP

ATTACHMENT 3
LTCP GROUNDWATER SPECIFIC CRITERIA

LTCP Groundwater Specific Scenario under which case was closed: Scenario 1

Site Data		LTCP Scenario 1 Criteria	LTCP Scenario 2 Criteria	LTCP Scenario 3 Criteria	LTCP Scenario 4 Criteria
Plume Length	<100 feet	**<100 feet**	<250 feet	<250 feet	<1,000 feet
Free Product	No free product	**No free product**	No free product	Removed to maximum extent practicable	No free product
Plume Stable or Decreasing	Stable (Sporadic detections of TPH. No historical detections of BTEX or MTBE.)	**Stable** or decreasing	Stable or decreasing	Stable or decreasing for minimum of 5 Years	Stable or decreasing
Distance to Nearest Water Supply Well	>1,000 feet	**>250 feet**	>1,000 feet	>1,000 feet	>1,000 feet
Distance to Nearest Surface Water and Direction	>250 feet (950 feet south and down-gradient)	**>250 feet**	>1,000 feet	>1,000 feet	>1,000 feet
Property Owner Willing to Accept a Land Use Restriction?	Not applicable	**Not applicable**	Not applicable	Yes	Not applicable

GROUNDWATER CONCENTRATIONS

Constituent	Historic Site Maximum (µg/L)	Current Site Maximum (µg/L)	LTCP Scenario 1 Criteria (µg/L)	LTCP Scenario 2 Criteria (µg/L)	LTCP Scenario 3 Criteria (µg/L)	LTCP Scenario 4 Criteria (µg/L)
Benzene	<0.50 (all wells)	<0.50 (all wells on 9/4/2013)	**No criteria**	3,000	No criteria	1,000
MTBE	<0.50 (all wells)	<0.50 (all wells on 9/4/2013)	**No criteria**	1,000	No criteria	1,000
TPH-gasoline (TPH-GRO)	1,000 (MW-1 on 9/3/2010)	<50 (all wells on 9/4/2013)	**No criteria**	No criteria	No criteria	No criteria
TPH-diesel (TPH-DRO)	600 (MW-3 on 8/15/2012)	95 (MW-3 on 9/4/2013)	**No criteria**	No criteria	No criteria	No criteria

Scenario 5: If the site does not meet scenarios 1 through 4, <u>has a determination been made</u> that under current and reasonably expected future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment and water quality objectives will be achieved within a reasonable time frame?	N/A

Attachment 3 Comments:

Water Supply Wells in Vicinity:

Per the Sensitive Receptor Survey and Additional Well Survey reports, both the Dept. of Water Resources and Alameda County Public Works Agency databases were searched within 0.5 miles and 2,000 feet of the site, respectively. There are zero (0) public water supply wells within 0.5 miles of the site. No domestic wells were identified.

Groundwater flow direction is predominantly to the south-southwest (with variations to the south-southeast) since August 2009 groundwater monitoring.

The nearest wells are listed below:

- One cathodic protection well is located 855 feet to the east and cross-gradient of the site and is not considered a receptor.
- One irrigation well is located approximately 2,000 feet north-northeast and up-gradient of the site and is not considered a receptor.

These wells are not considered receptors as they are located up-gradient and beyond the Low-Threat Closure Policy (LTCP) criteria based on *Technical Justification for Groundwater Plume Length, Indicator Constituents, Concentrations, Buffer Distances (Separation Distances) to Receptors* (LTCP Guidance; SWRCB 2012). The maximum plume length noted in the LTCP Guidance for Total Petroleum Hydrocarbons as gasoline (TPH-g) is 855 feet.

The nearest surface water bodies are:

- Unnamed drainage located approximately 950 feet south and down-gradient of the site.
- San Leandro Bay located approximately 1.1 miles southwest and down-gradient of the site.

The distance from the site indicates low potential for migration of contaminants to the drainage or the Bay taking into account the LTCP *Technical Justification for Groundwater Plume Length, Indicator Constituents, Concentrations, Buffer Distances (Separation Distances) to Receptors* (LTCP Guidance; SWRCB 2012). The maximum plume length noted in the LTCP Guidance for TPH-g is 855 feet.

ATTACHMENT 4
LTCP VAPOR SPECIFIC CRITERIA

LTCP Vapor Specific Scenario under which case was closed: Scenario 3

Not Active Fueling Station	Active as of: Not applicable

Site Data		LTCP Scenario 1 Criteria	LTCP Scenario 2 Criteria	LTCP Scenario 3A Criteria	LTCP Scenario 3B Criteria	LTCP Scenario 3C Criteria	LTCP Scenario 4 Criteria
Unweathered LNAPL	No LNAPL	LNAPL in groundwater	LNAPL in soil	**No LNAPL**	No LNAPL	No LNAPL	No criteria
Thickness of Bioattenuation Zone Beneath Foundation	≥5 feet (minimum depth-to-water is 6.8 feet btoc)	≥30 feet	≥30 feet	**≥5 feet**	≥10 feet	≥5 feet	≥5 feet
Total TPH in Soil in Bioattenuation Zone	<100 mg/kg (total TPH concentration of 10.8 mg/kg from SB04 at 8 feet bgs)	<100 mg/kg	<100 mg/kg	**<100 mg/kg**	<100 mg/kg	<100 mg/kg	<100 mg/kg
Maximum Current Benzene Concentration in Groundwater	< 0.50 µg/L (all wells)	No criteria	No criteria	**<100 µg/L**	≥100 and <1,000 µg/L	<1,000 µg/L	No criteria
Oxygen Data within Bioattenuation Zone	No oxygen data	No criteria	No criteria	**No oxygen data** or <4%	No oxygen data or <4%	≥4% at lower end of zone	≥4% at lower end of zone
Depth of soil vapor measurement beneath foundation	N/A	No criteria	No criteria	**No criteria**	No criteria	No criteria	≥5 feet

SCENARIO 4 DIRECT MEASUREMENT OF SOIL VAPOR CONCENTRATIONS

Site Soil Vapor Data			No Bioattenuation Zone		Bioattenuation Zone	
Constituent	Historic Maximum ($\mu g/m^3$)	Current Maximum ($\mu g/m^3$)	Residential	Commercial	Residential	Commercial
Benzene	----	----	<85	<280	<85,000	<280,000
Ethylbenzene	----	----	<1,100	<3,600	<1,100,000	<3,600,000
Naphthalene	----	----	<93	<310	<93,000	<310,000

If the site does not meet scenarios 1 through 4, does a site-specific risk assessment for the vapor intrusion pathway demonstrate that human health is protected?	N/A
If the site does not meet scenarios 1 through 4, has a determination been made that petroleum vapors from soil or groundwater will have no significant risk of adversely affecting human health?	N/A

Attachment 4 Comments:

Minimum depth to groundwater (DTW) historically was approximately 6.8 feet below ground surface (bgs). Depth to water data is one consideration in establishing the bio-attenuation zone thickness. Three soil samples were collected from vadose zone soils at 6.5 feet bgs from MW-1 6.5', MW-2 6.5', and MW-3 6.5'. Soil concentrations of total TPH and benzene, toluene, ethylbenzene, and xylenes (collectively BTEX) were not detected above laboratory reporting limits (RLs). Total TPH in the bio-attenuation zone was calculated from the 5 to 10 foot depth interval within the capillary fringe/smear zone/saturated zone. No soil samples were collected within the 0 to 5 feet depth interval. However, lack of BTEX detections above laboratory reporting limits in all shallow (less than 10 feet) and deep zone (greater than 10 feet) soil samples coupled with lack of BTEX detections above RLs in groundwater (except for one toluene detection of 1.2 micrograms per liter (ug/L) in well MW-3 on 8/25/2009) indicates a minimal potential for existence of volatiles in the 0 to 5 feet depth bio-attenuation zone.

ATTACHMENT 5
LTCP DIRECT CONTACT AND OUTDOOR AIR EXPOSURE CRITERIA

LTCP Direct Contact and Outdoor Air Exposure Specific Scenario under which case was closed: This case should be closed in spite of not meeting the vapor specific media criteria.

Are maximum concentrations less than those in Table 1 below?				Yes		
Constituent		Residential		Commercial/Industrial		Utility Worker
		0 to 5 feet bgs (mg/kg)	Volatilization to outdoor air (5 to 10 feet bgs) mg/kg	0 to 5 feet bgs (mg/kg)	Volatilization to outdoor air (5 to 10 feet bgs) mg/kg	0 to 10 feet bgs (mg/kg)
Site Maximum	Benzene	----	<0.001 to <0.025	----	<0.001 to <0.025	<0.001 to <0.025
LTCP Criteria	Benzene	≤1.9	≤2.8	≤8.2	≤12	≤14
Site Maximum	Ethylbenzene	----	<0.001 to <0.025	----	<0.001 to <0.025	<0.001 to <0.025
LTCP Criteria	Ethylbenzene	≤21	≤32	≤89	≤134	≤314
Site Maximum	Naphthalene	----	----	----	----	----
LTCP Criteria	Naphthalene	≤9.7	≤9.7	≤45	≤45	≤219
Site Maximum	PAHs	----	----	----	----	----
LTCP Criteria	PAHs	≤0.063	NA	≤0.68	NA	≤4.5
If maximum concentrations are greater than those in Table 1, are they less than levels from a site-specific risk assessment?				---		
If maximum concentrations are greater than those in Table 1, has a determination been made that the concentrations of petroleum in soil will have no significant risk of adversely affecting human health as a result of controlling exposure through the use of mitigation measures or through the use of institutional controls?				---		

Attachment 5 Comments:

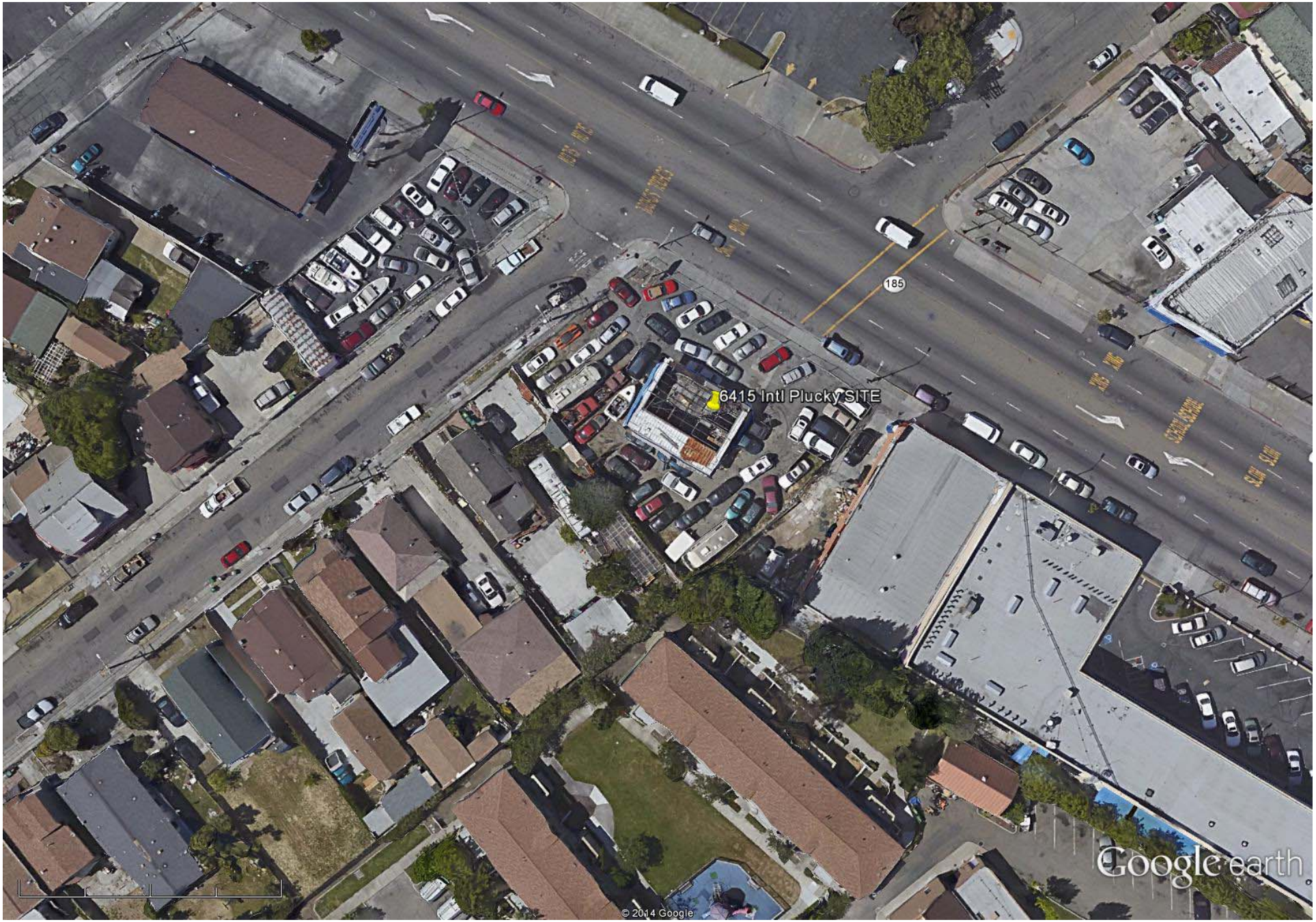
This Site does not meet the LTCP Direct Contact and Outdoor Air Exposure Specific Scenario as no soil samples were collected within the 0 to 5 feet depth interval. Within the 5 to 10 feet depth interval, soil concentrations of TPH-g and BTEX were not detected above laboratory reporting limits. Lack of TPH-g and BTEX detections above laboratory reporting limits in all 5 to 10 feet zone soil samples coupled with lack of BTEX detections above RLs in groundwater (except for one toluene detection of 1.2 ug/L in well MW-3 on 8/25/2009) and relatively low groundwater TPH-g concentrations (330 ug/L in MW-1 on 9/4/2013 with DTW of 9.4 feet bgs) indicates a minimal potential for existence of volatiles in the 0 to 5 feet depth interval.

Naphthalene was not analyzed in soil. From the California Leaking Underground Fuel Tank Manual (2012), average composition of fresh gasoline contains 2.0% benzene and 0.25% naphthalene. Using the maximum benzene concentration (<0.025 mg/kg) as a surrogate, theoretical maximum naphthalene concentration could be <0.003 mg/kg, and below the LTCP Table 1 criteria.

Per LTCP criteria, sampling and analysis for Polyaromatic Hydrocarbons (PAHs) is only necessary where soil is affected by either waste oil or Bunker C fuel. Neither waste oil nor Bunker C fuel were reported to have been used on-site.

TPH-g, TPH as diesel (TPH-d), and TPH as motor oil (TPH-mo) soil detections have the highest concentrations (95 mg/kg, 20 mg/kg, and 51 mg/kg, respectively) at soil bores SB-2 and SB-6. These soil bore locations do not strongly correlate to the historical UST location near soil bore SB-5 or the historical dispenser location near soil bore SB-4. There is a possibility that site characterization may not have identified the exact location of the release points; therefore the site is being closed under the LTCP with Site Management Requirements for minimizing the risk of direct contact during future potential earthworks.

ATTACHMENT 6



Google earth

feet 300

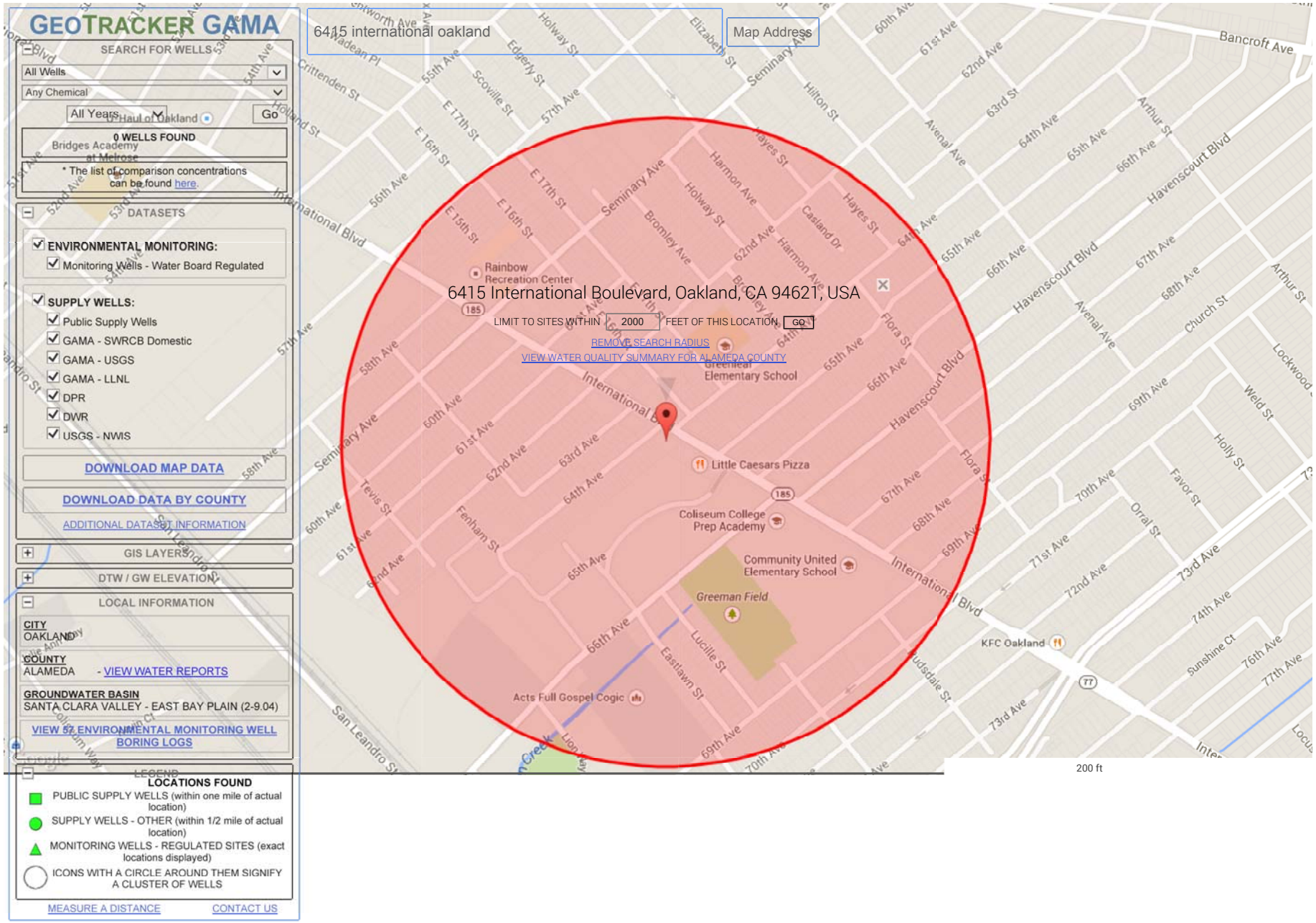
meters 100

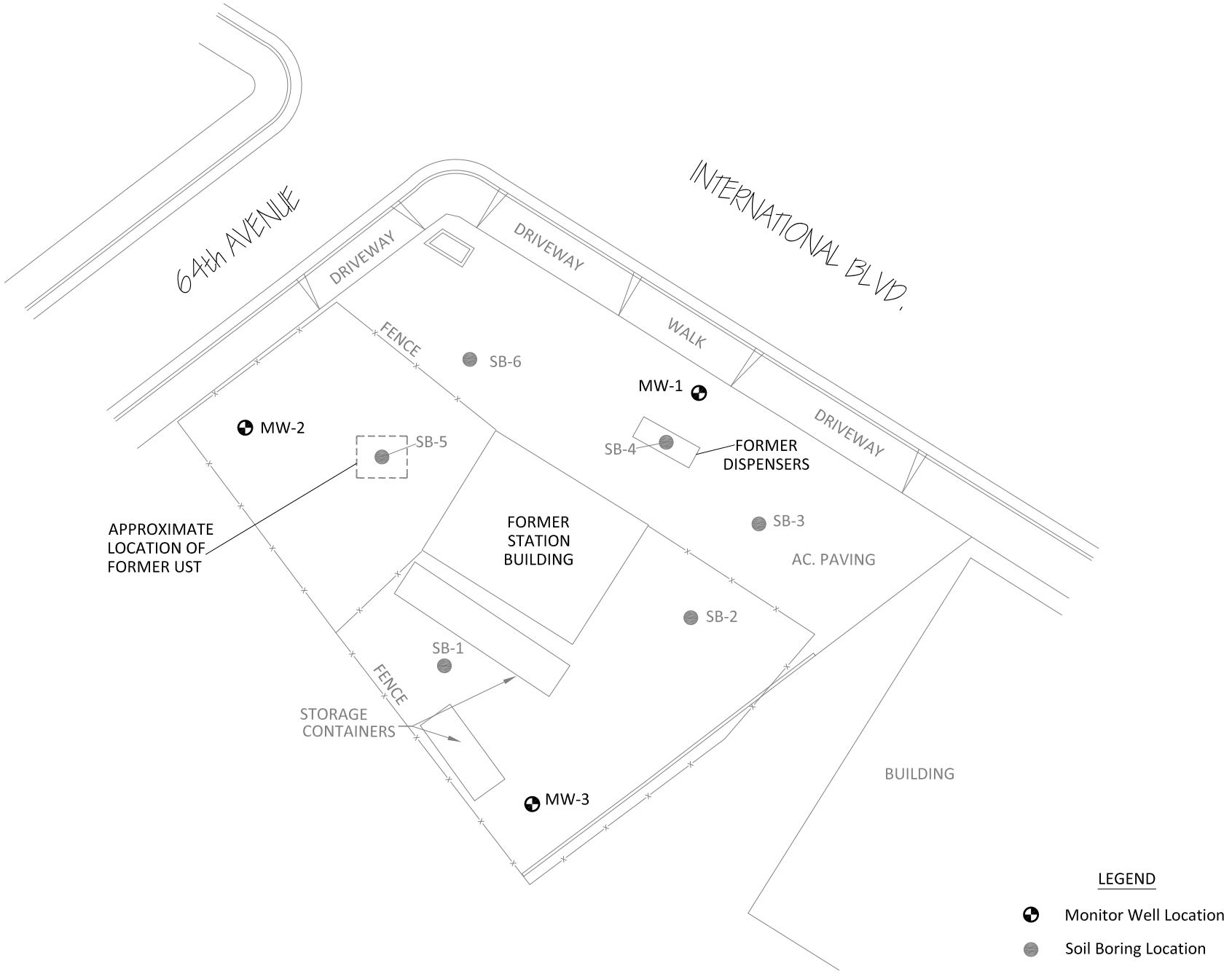
Google earth

feet 10

meters 5

Image date 9/2014


GEOTRACKER GAMA
SEARCH FOR WELLS
All Wells
Any Chemical
All Years
Go
0 WELLS FOUND
* The list of comparison concentrations can be found here.
DATASETS
ENVIRONMENTAL MONITORING:
Monitoring Wells - Water Board Regulated
SUPPLY WELLS:
Public Supply Wells
GAMA - SWRCB Domestic
GAMA - USGS
GAMA - LLNL
DPR
DWR
USGS - NWIS
DOWNLOAD MAP DATA
DOWNLOAD DATA BY COUNTY
ADDITIONAL DATASET INFORMATION
GIS LAYERS
DTW / GW ELEVATION
LOCAL INFORMATION
CITY
OAKLAND
COUNTY
ALAMEDA - VIEW WATER REPORTS
GROUNDWATER BASIN
SANTA CLARA VALLEY - EAST BAY PLAIN (2-9.04)
VIEW 57 ENVIRONMENTAL MONITORING WELL BORING LOGS
LEGEND
LOCATIONS FOUND
PUBLIC SUPPLY WELLS (within one mile of actual location)
SUPPLY WELLS - OTHER (within 1/2 mile of actual location)
MONITORING WELLS - REGULATED SITES (exact locations displayed)
ICONS WITH A CIRCLE AROUND THEM SIGNIFY A CLUSTER OF WELLS
MEASURE A DISTANCE
CONTACT US
6415 international oakland
Map Address
6415 International Boulevard, Oakland, CA 94621, USA
LIMIT TO SITES WITHIN 2000 FEET OF THIS LOCATION. GO
REMOVE SEARCH RADIUS
VIEW WATER QUALITY SUMMARY FOR ALAMEDA COUNTY
Rainbow Recreation Center
Greenleaf Elementary School
Little Caesars Pizza
Coliseum College Prep Academy
Community United Elementary School
Greeman Field
Acts Full Gospel Cogic
KFC Oakland
International Blvd
Havenscourt Blvd
Seminary Ave
Holway St
Bancroft Ave
200 ft



0 30 60

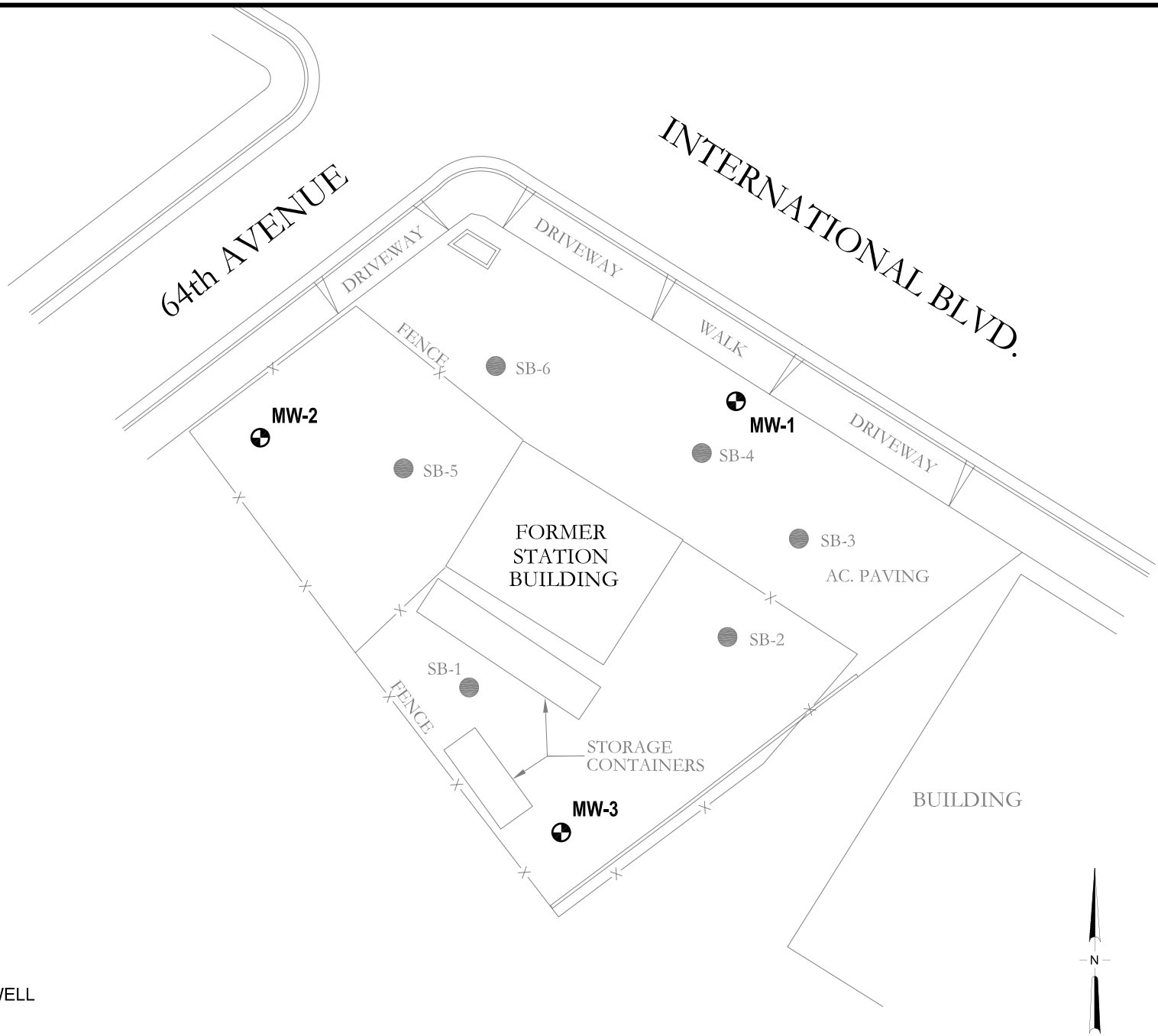
SCALE (ft)

BROADBENT
1370 Ridgewood Dr., Suite 5
Chico, California 95973
Project No.: 09-88-601 Date: 5/15/2013

Former Station #472
6415 International Boulevard
Oakland, California

Site Map with Monitoring Well
and Historic Boring Locations

Drawing
2



LEGEND

- MONITORING WELL
- SOIL BORING

0 30 60

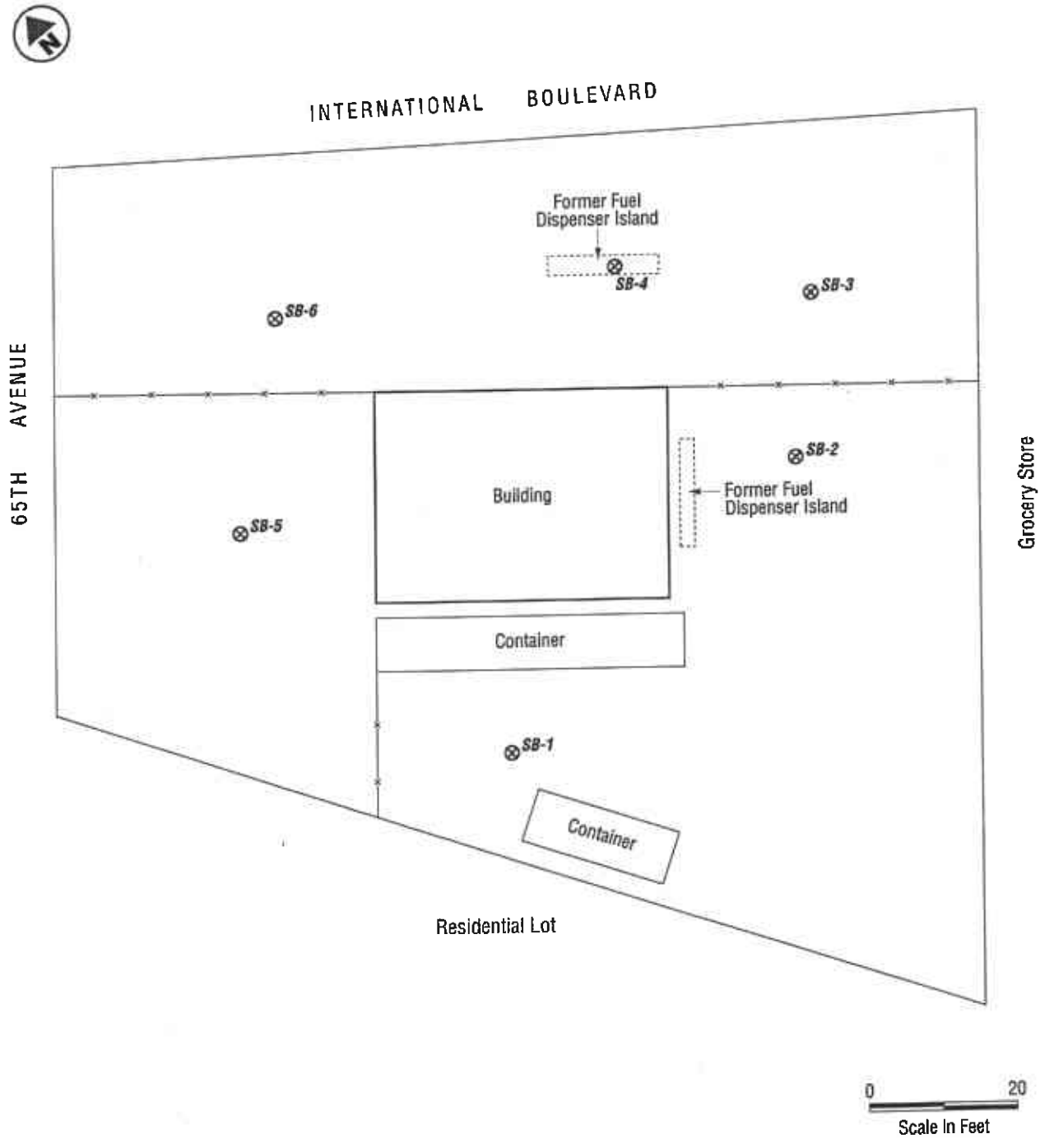
SCALE (ft)

BROADBENT & ASSOCIATES, INC.
ENGINEERING, WATER RESOURCES & ENVIRONMENTAL
1324 Mangrove Ave. Suite 212, Chico, California
Project No.: 09-88-601 Date: 8/27/09

Former Station #472
6415 International Boulevard
Oakland, California

Site Map with Soil Boring/
Monitoring Well Locations

Drawing
2



LEGEND:

SB-1 ⊗ Approximate Boring Location

—×—×— Fence

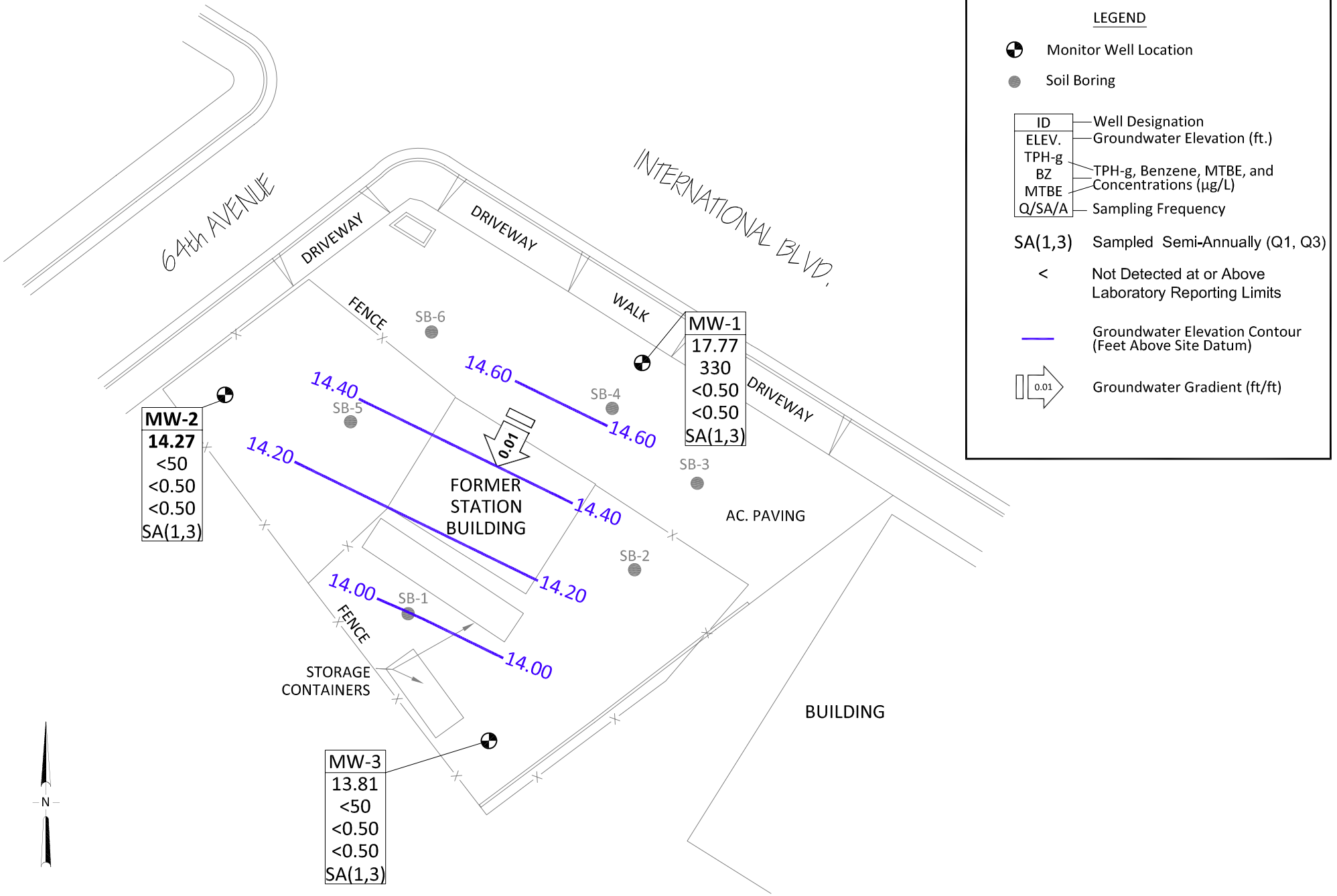
GEOCON
CONSULTANTS, INC.
6671 BRISA ST. - LIVERMORE, CA. 94550
PHONE 925 371-5900 - FAX 925 371-5915

Former Gasoline Station – Plucky's Liquor Store

6415 International Boulevard
Oakland, California

SITE PLAN

E8448-06-01	May 2008	Figure 2



0 30 60

SCALE (ft)

BROADBENT

875 Cotting Lane, Suite G
Vacaville, California 95688

Project No.: 09-88-601 Date: 10/01/2013

ARCO Former Station № 472
6415 International Boulevard
Oakland, California

Groundwater Elevation and Analytical Summary Map
September 4, 2013

Drawing
2

ATTACHMENT 7

Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses

ARCO Service Station #472, 6415 International Boulevard, Oakland, CA

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L							DO (mg/L)	pH	Footnote
							DRO/ TPHd	GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
MW-1																
8/25/2009	P	24.17	7.00	17.00	9.29	14.88	190	530	<0.50	<0.50	<0.50	<0.50	0.54	--	7.21	LX (DRO)
11/11/2009	NP		7.00	17.00	8.22	15.95	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	
2/17/2010	NP		7.00	17.00	7.36	16.81	70	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.69	7.03	LX (DRO)
6/2/2010	NP		7.00	17.00	7.61	16.56	120	110	<0.50	<0.50	<0.50	<0.50	<0.50	1.21	7.0	LW (GRO), LX (DRO)
9/3/2010	NP		7.00	17.00	8.99	15.18	190	1,000	<0.50	<0.50	<0.50	<0.50	<0.50	0.74	7.30	LW (GRO), LX (DRO)
2/8/2011	NP		7.00	17.00	7.69	16.48	53	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.64	6.8	LX (DRO)
7/18/2011	NP		7.00	17.00	7.99	16.18	110	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.70	7.2	LX (DRO)
3/1/2012	P		7.00	17.00	8.20	15.97	140	500	<0.50	<0.50	<0.50	<0.50	<0.50	0.71	7.01	
8/15/2012	P		7.00	17.00	8.89	15.28	220	490	<0.50	<0.50	<0.50	<1.0	<0.50	8.90	7.53	
2/21/2013	P		7.00	17.00	7.63	16.54	<51	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.78	7.54	
9/4/2013	**P**		**7.00**	**17.00**	**9.40**	**14.77**	**130**	**330**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**<0.50**	**1.48**	**7.37**	
MW-2																
8/25/2009	P	23.62	7.00	17.00	9.65	13.97	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	7.30	
11/11/2009	NP		7.00	17.00	8.09	15.53	--	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	
2/17/2010	P		7.00	17.00	6.80	16.82	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.62	7.15	
6/2/2010	NP		7.00	17.00	7.11	16.51	65	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.85	7.3	LX (DRO)
9/3/2010	NP		7.00	17.00	8.79	14.83	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.19	7.90	
2/8/2011	NP		7.00	17.00	7.21	16.41	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.15	7.0	
7/18/2011	--		7.00	17.00	--	--	--	--	--	--	--	--	--	--	--	Inaccessible
3/1/2012	P		7.00	17.00	7.41	16.21	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.89	7.34	
8/15/2012	P		7.00	17.00	8.79	14.83	<47	<50	<0.50	<0.50	<0.50	<1.0	<0.50	3.3	7.48	
2/21/2013	P		7.00	17.00	6.89	16.73	<52	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.35	7.73	
9/4/2013	**P**		**7.00**	**17.00**	**9.35**	**14.27**	**<48**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**<0.50**	**1.21**	**7.48**	
MW-3																
8/25/2009	P	24.73	7.00	17.00	11.07	13.66	85	63	<0.50	1.2	<0.50	<0.50	<0.50	--	7.09	
11/11/2009	NP		7.00	17.00	9.56	15.17	--	88	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	LW (GRO)

Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses

ARCO Service Station #472, 6415 International Boulevard, Oakland, CA

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L							DO (mg/L)	pH	Footnote
							DRO/ TPHd	GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
MW-3 Cont.																
2/17/2010	NP	24.73	7.00	17.00	8.52	16.21	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.04	7.09	
6/2/2010	NP		7.00	17.00	8.64	16.09	130	100	<0.50	<0.50	<0.50	<0.50	<0.50	1.22	7.1	LW (GRO), LX (DRO)
9/3/2010	NP		7.00	17.00	8.41	16.32	140	200	<0.50	<0.50	<0.50	<0.50	<0.50	0.87	6.9	LW (GRO), LX (DRO)
2/8/2011	NP		7.00	17.00	8.82	15.91	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.88	7.0	
7/18/2011	NP		7.00	17.00	9.20	15.53	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.93	6.9	
3/1/2012	P		7.00	17.00	9.13	15.60	<50	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.63	6.91	
8/15/2012	P		7.00	17.00	10.45	14.28	600	<50	<0.50	<0.50	<0.50	<1.0	<0.50	2.99	7.38	*(DRO)
2/21/2013	P		7.00	17.00	8.39	16.34	95	<50	<0.50	<0.50	<0.50	<1.0	<0.50	1.30	7.76	
9/4/2013	**P**		**7.00**	**17.00**	**10.92**	**13.81**	**<48**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**<0.50**	**0.97**	**8.01**	

Table 1. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses

ARCO Service Station #472, 6415 International Boulevard, Oakland, CA

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L							DO (mg/L)	pH	Footnote
							DRO/ TPHd	GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			

Symbols & Abbreviations:
--- = Not analyzed/applicable/measured/available
< = Not detected at or above specified laboratory reporting limit
DO = Dissolved oxygen
DRO = Diesel range organics
DTW = Depth to water in ft bgs
GRO = Gasoline range organics
GWE = Groundwater elevation measured in ft
HVOC = Halogenated volatile organic compounds
mg/L = Milligrams per liter
MTBE = Methyl tert-butyl ether
NP = Well not purged prior to sampling
P = Well purged prior to sampling
TOC = Top of casing measured in ft
TOG = Total oil and grease
TPH-d = Total petroleum hydrocarbons as diesel
TPH-g = Total petroleum hydrocarbons as gasoline
µg/L = Micrograms per liter
CEL = CalScience Environmental Laboratories, Inc.
* = Hydrocarbon result partly due to individual peak(s) in the quantitation range

Footnotes:
LW = Quantitation of unknown hydrocarbon(s) in sample based on gasoline
LX = Quantitation of unknown hydrocarbon(s) in sample based on diesel

Table 2. Summary of Fuel Additives Analytical Data

ARCO Service Station #472, 6415 International Boulevard, Oakland, CA

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-1									
8/25/2009	<300	<10	0.54	<0.50	<0.50	<0.50	<0.50	<0.50	
11/11/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
2/17/2010	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
6/2/2010	<50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	0.72 µg/L sec-Butylbenzene, 1.4 µg/L tert-Butylben
9/3/2010	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
2/8/2011	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
7/18/2011	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
3/1/2012	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	LW (GRO), LX (DRO)
8/15/2012	<150	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
2/21/2013	<150	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
9/4/2013	**<150**	**<10**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-2									
8/25/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/11/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
2/17/2010	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
6/2/2010	<50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
9/3/2010	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
2/8/2011	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
7/18/2011	--	--	--	--	--	--	--	--	Inaccessible
3/1/2012	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/15/2012	<150	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
2/21/2013	<150	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
9/4/2013	**<150**	**<10**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-3									
8/25/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/11/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
2/17/2010	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
6/2/2010	<50	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
9/3/2010	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
2/8/2011	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	

Table 2. Summary of Fuel Additives Analytical Data

ARCO Service Station #472, 6415 International Boulevard, Oakland, CA

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-3 Cont.									
7/18/2011	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
3/1/2012	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
8/15/2012	<150	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
2/21/2013	<150	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
9/4/2013	**<150**	**<10**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	

Symbols & Abbreviations:
-- = Not analyzed/applicable/measured/available
< = Not detected at or above specified laboratory reporting limit
1,2-DCA = 1,2-Dichloroethane
DIPE = Diisopropyl ether
EDB = 1,2-Dibromoethane
ETBE = Ethyl tert-butyl ether
MTBE = Methyl tert-butyl ether
TAME = tert-Amyl methyl ether
TBA = tert-Butyl alcohol
µg/L = Micrograms per Liter

Notes:
All volatile organic compounds were analyzed using EPA Method 8260B

Table 3. Historical Groundwater Gradient - Direction and Magnitude
ARCO Service Station #472, 6415 International Boulevard, Oakland, CA

Date Measured	Approximate Gradient Direction	Approximate Gradient Magnitude (ft/ft)
8/25/2009	Southwest	0.01
11/11/2009	South-Southwest	0.008
2/17/2010	South	0.006
6/2/2010	South	0.003
9/3/2010	North-Northwest	0.015
2/8/2011	South	0.006
7/18/2011	(a)	(a)
3/1/2012	South-Southeast	0.006
8/15/2012	South-Southwest	0.011
2/21/2013	South-Southeast	0.004
9/4/2013	**South-Southeast**	**0.01**

Footnotes:

a = Groundwater gradient unable to be calculated due to MW-2 being inaccessible

Table 1
Summary of Soil Sample Results
Plucky's Liquors / Former Gasoline Station
6415 International Blvd.
Oakland, California

Borehole Location	Collection Date	Depth (feet bgs)	TPHg (mg/kg)	TPHd (mg/kg)	TPHmo (mg/kg)	Benzene (ug/kg)	Toluene (ug/kg)	Ethylbenzene (ug/kg)	Total Xylenes (ug/kg)
SB-1	4/22/2008	15	7.3	6.3	5.5	<5.0	<5.0	<5.0	<15
SB-2	4/22/2008	16	21	2.6	3.5	<5.0	<5.0	<5.0	<15
SB-2	4/22/2008	20	<1.0	20	51	<5.0	<5.0	<5.0	<15
SB-3	4/22/2008	13	<1.0	5.8	5.8	<5.0	<5.0	<5.0	<15
SB-3	4/22/2008	20	<1.0	<1.0	1.6	<5.0	<5.0	<5.0	<15
SB-4	4/22/2008	8	<1.0	4.6	6.2	<5.0	<5.0	<5.0	<15
SB-5	4/22/2008	16	<1.0	7.6	6.3	<5.0	<5.0	<5.0	<15
SB-6	4/22/2008	14	95	7.8	4.4	<25	<25	<25	<75
SB-6	4/22/2008	20	<1.0	1.5	4.0	<5.0	<5.0	<5.0	<15
SB-6	4/22/2008	31	<1.0	3.2	2.7	<5.0	<5.0	<5.0	<15

Table 2
Summary of Grab Groundwater Sample Results
Plucky's Liquors / Former Gasoline Station
6415 International Blvd.
Oakland, California

Borehole Location	Collection Date	Depth (feet bgs)	TPHg (mg/l)	TPHd (mg/l)	TPHmo (mg/l)	Benzene (ug/l)	Toluene (ug/l)	Ethylbenzene (ug/l)	Total Xylenes (ug/l)
SB-1	4/22/2008	21	0.080	0.076	0.11	<0.50	<0.50	<0.50	<1.5
SB-2	4/22/2008	21	1.5	0.71	0.13	<0.50	<0.50	<0.50	<1.5
SB-3	4/22/2008	26	8.1	7.2	0.15	<5.0	<5.0	<5.0	<15
SB-5	4/22/2008	14	0.14	0.11	0.18	<0.50	<0.50	<0.50	<1.5

NOTES:
TPHg- Total Petroleum Hydrocarbons as Gasoline
TPHd - Total Petroleum Hydrocarbons as Diesel
TPHmo - Total Petroleum Hydrocarbons as Motor Oil
mg/kg- Milligrams per kilogram
ug/kg- Micrograms per kilogram
mg/l - Milligrams per liter
ug/l - Micrograms per liter

Table 1. Summary of Soil Sampling Analytical Data
Station #472, 6415 International Boulevard, Oakland, CA

Sample ID	Sample Depth (ft)	Date Sampled	DRO/ TPHd	ORO/ TPHo	GRO/ TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes
			Concentrations in (mg/kg)						
MW-1 6.5'	6.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-1 8'	8.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-1 9.5'	9.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-1 11'	11.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-1 12.5'	12.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-1 14.5'	14.5	7/14/2009	ND <5.0	ND <25	**0.87**	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-2 6.5'	6.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-2 8'	8.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-2 9.5'	9.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-2 11'	11.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-2 12.5'	12.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-2 14.5'	14.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-2 17'	17.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-3 6.5'	6.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-3 8'	8.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-3 9.5'	9.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-3 11'	11.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-3 12.5'	12.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-3 14.5'	14.5	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010
MW-3 17'	17.0	7/14/2009	ND <5.0	ND <25	ND <0.50	ND <0.0010	ND <0.0010	ND <0.0010	ND <0.0010

ND = Not Detected above the laboratory detection limit
DRO/TPHd = Diesel Range Organics/Total Petroleum Hydrocarbons in the diesel range (C10-C28)
ORO/TPHo = Oil Range Organics/Total Petroleum Hydrocarbons in the oil range (C17-C44)
GRO/TPHg = Gasoline Range Organics/Total Petroleum Hydrocarbons in the gasoline range (C6-C12)
mg/kg = milligrams per killogram