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

September 30, 2015

Chevron Environmental Management Co.
6101 Bollinger Canyon Rd., Rm 5303
San Ramon, CA 94583
Attn: Ms. Nicole Arceneaux
(*Sent via electronic mail to Nicole.Arceneaux@Chevron.com*)

Phillips 66 Company
76 Broadway
Sacramento, CA 95818
Attn.: Mr. Ed Ralston
(*Sent via electronic mail to Ed.C.Ralston@p66.com*)

Sam and Michele Koka
802 Pacific Avenue
Alameda, CA 94501
*(Sent via email to: skauto@alamedanet.net and mjkoka@alamedanet.net)*

Tosco Corporation
2000 Crow Canyon Road, Suite 400
San Ramon, CA 94583
Attn.: Mr. David Dewitt

Subject: Case Closure for Fuel Leak Case No. RO0000450 (GeoTracker Global ID T0600102263), Unocal #0843, 1629 Webster Street, Alameda, CA 94501

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 residual contamination, the site is closed with Site Management Requirements that limit future land use to the commercial land use. Site Management Requirements are further described on Page 2 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.: Mr. Andrew Thomas, City of Alameda Planning and Building Department, 2263 Santa Clara Ave., Room 190, Alameda, CA 94501

Mr. Bob Haun, City of Alameda Public Works, 950 W. Mall Square, Alameda, CA 94501

Katherine Brant, Arcadis US, Inc. 2000 Powell Street, 7th Floor, Emeryville, CA 94608 (*Sent via E-mail to*: *Katherine.Brandt@arcadis-us.com*)

Susan Hugo, Alameda County Environmental Health, 1131 Harbor Bay Parkway, Alameda, CA 94502 (*Sent via electronic mail to: susan.hugo@acgov.org*)

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**

September 30, 2015

Chevron Environmental Management Co.
6101 Bollinger Canyon Rd., Rm 5303
San Ramon, CA 94583
Attn: Ms. Nicole Arceneaux
(*Sent via electronic mail to Nicole.Arceneaux@Chevron.com*)

Phillips 66 Company
76 Broadway
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Tosco Corporation
2000 Crow Canyon Road, Suite 400
San Ramon, CA 94583
Attn.: Mr. David Dewitt

Subject: Case Closure for Fuel Leak Case No. RO0000450 (GeoTracker Global ID T0600102263), Unocal #0843, 1629 Webster Street, Alameda, CA 94501

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,

Ronald Browder
Acting Director

# UST Case Closure Summary Form

**Agency Information** Date: 9/30/2015

| | |
|---|---|
| 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: UNOCAL #0843 | | |
| Facility Address: 1629 Webster St., Alameda, CA 94501 | | |
| RB LUSTIS Case No: 01-2455 | Local Case No.: (STID #) 2067 | LOP Case No.: RO0000450 |
| URF Filing Date: --- | GeoTracker Global ID: T0600102263 | |
| APN: 74-430-1-1 | Current Land Use: Commercial | |
| Responsible Party(s): | Address: | Phone: |
| Sam & Michelle Koka | 802 Pacific Avenue<br>Alameda, CA 94501 | (510) 865-7631 |
| Phillips 66 Company | 76 Broadway<br>Sacramento, CA 95818 | (916) 558-7633 |
| Chevron Environmental Management Company | 6101 Bollinger Canyon Road, Rm 5303<br>San Ramon, CA 94583 | (925) 790-6912 |
| Tosco Corporation | 2000 Crow Canyon Road, Suite 400<br>San Ramon, CA 94583 | ---- |

**Tank Information**

| Tank No. | Size (gal) | Contents | Closed in-Place/ Removed/Active | Date |
|---|---|---|---|---|
| ---- | 10,000 | Gasoline | Removed | 6/17/1998 |
| ---- | 10,000 | Gasoline | Removed | 6/17/1998 |
| ---- | 550 | Waste Oil | Removed | 6/17/1998 |
| ---- | Piping | | Removed | 6/17/1998 |

**Conceptual Site Model (Attachment 1, 4 pages)**

**LTCP Checklist (Attachment 2, 2 pages)**

**LTCP Groundwater Specific Criteria (Attachment 3, 1 page)**

**LTCP Vapor Specific Criteria (Attachment 4, 1 page)**

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

**Optional Site Map(s) (Attachment 6, 25 pages)**

# UST Case Closure Summary Form

**Analytical Data (Attachment 7, 19 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). Due to the presence of residual groundwater contamination beneath the site and the potential presence of residual contaminated soil, a Soil and Groundwater Management Plan has been prepared for the site to address construction activities that may encounter potentially impacted soil and/or groundwater during commercial site redevelopment. The Soil and Groundwater Management Plan is available on the Alameda County Environmental Health (ACEH) ftp and the State Water Resources Control Board's (SWRCBs) GeoTracker websites.

If a change in land use to any residential or conservative land use, ACEH must be notified as required by Government Code Section 65850.2.2. ACEH will re-evaluate the site relative to the proposed redevelopment.

**RWQCB Notification** Notification Date: 4/28/2015

| | |
|---|---|
| RWQCB Staff Name: Cherie McCaulou | Title: Engineering Geologist |

**Local Agency Representative**

| | |
|---|---|
| Prepared by: Keith Nowell | Title: Hazardous Materials Specialist |
| Signature: Keith Nowell | Date: 9/30/2015 |
| Approved by: Dilan Roe | Title: LOP and SCP Program Manager |
| Signature: Dilan Roe | Date: 9/30/2015 |

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

CSM Report Go

GEOTRACKER HOME | MANAGE PROJECTS | REPORTS | SEARCH | LOGOUT

**UNOCAL #0843 (T0600102263)** - MAP THIS SITE

*OPEN - ELIGIBLE FOR CLOSURE*

1629 WEBSTER ST
ALAMEDA , CA 94501
ALAMEDA COUNTY

ACTIVITIES REPORT

PUBLIC WEBPAGE

VIEW PRINTABLE CASE SUMMARY FOR THIS SITE

**CLEANUP OVERSIGHT AGENCIES**

ALAMEDA COUNTY LOP *(LEAD)* - *CASE #: RO0000450*
***CASEWORKER:*** *KEITH NOWELL* - ***SUPERVISOR:*** *DILAN ROE*
SAN FRANCISCO BAY RWQCB (REGION 2) - *CASE #: 01-2455*
***CASEWORKER:*** *Cherie McCaulou* - ***SUPERVISOR:*** *Cheryl L. Prowell*

**CUF Claim #:** 16157 **CUF Priority Assigned:** D **CUF Amount Paid:** $0

**CR Site ID #:** NOT SPECIFIED

**THERE ARE 2 OTHER CASES ASSOCIATED WITH THIS CASE** - SHOW

THIS PROJECT WAS LAST MODIFIED BY ***KEITH NOWELL*** ON 9/30/2015 12:05:18 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)

| | | | | | | | FIVE YEAR REVIEW INFORMATION | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| CLAIM NO | PRIORITY | CLAIMANT | SITE ADDRESS | AMT REIMB TO DATE | AGE OF LOC | IMPACTED WELLS? | REVIEW NUM | REVIEWER | FUND RECOMMENDATION | TO OVERSIGHT DATE | TO CLAIMANT DATE |
| 16157 | D | CONOCOPHILLIPS COMPANY 3900 KILROY AIRPORT WY #210, LONG BEACH CA 90806 | 1629 WEBSTER ST ALAMEDA, CA 94501 | | | | | | | | |

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

| SITE NAME / ADDRESS | STATUS | STATUS DATE | RELEASE REPORT DATE | AGE OF CASE | CLEANUP OVERSIGHT AGENCIES |
|---|---|---|---|---|---|
| UNOCAL #0843 (Global ID: T0600102263) 1629 WEBSTER ST ALAMEDA, CA 94501 | Open - Eligible for Closure | 6/3/2015 | 10/7/1998 | 17 | ALAMEDA COUNTY LOP *(LEAD)* - *CASE #: RO0000450* ***CASEWORKER:*** *KEITH NOWELL* - ***SUPERVISOR:*** *DILAN ROE* SAN FRANCISCO BAY RWQCB (REGION 2) - *CASE #: 01-2455* ***CASEWORKER:*** *Cherie McCaulou* - ***SUPERVISOR:*** *Cheryl L. Prowell* |

**STAFF NOTES (INTERNAL)**

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 Alameda County Environmental Health website at https://ehgis.acgov.org/dehpublic/dehpublic.jsp.

**SITE HISTORY**

The site is currently vacant land with proposed redevelopment consisting of first-floor commercial and residential/office suites above. In June 1998, two 10,000-gallon gasoline USTs and one 550-gallon waste-oil tank were removed. Two holes were observed near the fill pipe in the waste-oil tank. Approximately 338 tons of soil/ tank pit backfill were excavated and disposed off site as part of the tank removals. Preliminary investigations began in March 1999 after receipt of the tank soil and water results. Four on-site monitoring wells were installed at that time. Subsequently, a total of ten on- and off site wells have been installed.

In December 2002, an additional 292 tons of hydrocarbon-impacted soil was excavated from beneath the former eastern dispenser island.

In August 2008, one CPT was advanced to a maximum depth of 55 feet to vertically define groundwater contamination with discrete groundwater samples recovered at depths of 25, 35, 45, and 55 feet. MTBE was reported at concentrations of 21,000 ug/L , 260 ug/L, 1.0 ug/L, and <1.0 ug/L, respectively, indicating deeper zones of MTBE contamination were present which are not monitored by the shallow zone monitoring well network. The shallow groundwater plume appears to be defined by the network of wells screened in the 5- to 20- foot zone; however, the plume in the deeper zone(s) was not defined by the one well screened in the 20 to 25- foot zone and four wells in the 25- to 30-foot zone.

A pilot test was performed in 2008 to test ozone sparging to remediate MTBE that was discovered at depth beneath the site, and in August-September, 2009, an ozone injection pilot test was performed.

The plume appears to have commingled with contaminants from the nearby up gradient Shell Station site. Shell and Chevron performed a joint investigation to delineate leading edge of MTBE plume. Seven CPTs were advanced for the recovery of depth discrete grab groundwater samples from the intervals of 25-29', 30-34', 35-39', and 40-44' bgs. CPTs 2, 3 , 4, 6 and 7, as reported in the 12/29/2014 groundwater investigation, appears to have delineated the vertical and horizontal leading edge of the plume, addressing the last remaining data gap.

### RESPONSIBLE PARTIES

| NAME | ORGANIZATION | ADDRESS | CITY | EMAIL |
|---|---|---|---|---|
| DAVID DEWITT | TOSCO CORPORATION | 2000 CROW CANYON PL. STE 400 | SAN RAMON | |
| ED RALSTON | Phillips 66 Company | 76 BROADWAY | SACRAMENTO | ed.c.ralston@p66.com |
| NICOLE ARCENEAUX | Chevron Environmental Management Company | 6101 BOLLINGER CANYON ROAD, ROOM 5303 | SAN RAMON | nicole.arceneaux@chevron.com |
| SAM & MICHELLE J. KOKA | NA | 802 PACIFIC AVE. | ALAMEDA | |

**CLEANUP ACTION INFO**

| ACTION TYPE | BEGIN DATE | END DATE | PHASE | CONTAMINANT MASS REMOVED | DESCRIPTION |
|---|---|---|---|---|---|
| EXCAVATION | 12/4/2002 | 12/4/2002 | Soil | | Approximately 300 cu. yd. soil removed from the vicinity of the former eastern dispenser island for off-site disposal. |
| EXCAVATION | 6/17/1998 | 6/17/1998 | Soil | | 560 tons of soil and backfill from the UST cavity removed and disposed off-site. |

**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 |
|---|---|---|---|---|---|---|
| MTBE / TBA / Other Fuel Oxygenates, Gasoline | Commercial | GW - Municipal and Domestic Supply | | 10/7/1998 | Close and Remove Tank | 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 | 7/13/2015 | 9/11/2015 | 5/30/2015 | | 2/26/2015 |

**CDPH WELLS WITHIN 1500 FEET OF THIS SITE**

NONE

**CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)**

**APN**
074 043000101

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

**WATERSHED NAME**
South Bay - East Bay Cities (204.20)

**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 |
|---|---|---|---|---|---|---|---|---|
| DP-1 | 1/11/2011 | ND | ND | ND | ND | ND | 20 UG/L | ND |
| DP-2 | 1/11/2011 | 110 UG/L | ND | ND | 0.67 UG/L | 1.5 UG/L | ND | ND |
| DP-3 | 1/11/2011 | 99 UG/L | ND | ND | 1.1 UG/L | 1.6 UG/L | 10 UG/L | ND |
| DP-4 | 1/11/2011 | 50 UG/L | ND | ND | ND | 1.1 UG/L | 2.1 UG/L | ND |
| DP-5 | 1/11/2011 | 980 UG/L | ND | ND | 70 UG/L | 68 UG/L | ND | ND |
| MW-1 | 8/8/2013 | OTHER | ND | ND | ND | ND | 25 UG/L | ND |
| MW-10 | 2/12/2015 | OTHER | ND | ND | ND | ND | ND | ND |
| MW-11 | 2/12/2015 | OTHER | ND | ND | ND | ND | 1800 UG/L | ND |
| MW-1AR | 2/12/2015 | OTHER | ND | ND | ND | ND | 7.4 UG/L | ND |
| MW-1BR | 2/12/2015 | OTHER | ND | ND | ND | ND | ND | ND |
| MW-2 | 12/12/2002 | 3400 UG/L | 80 UG/L | 260 UG/L | 210 UG/L | 1000 UG/L | 380 UG/L | ND |
| MW-2A | 2/24/2009 | ND | ND | ND | ND | ND | ND | ND |
| MW-3 | 8/8/2013 | OTHER | ND | ND | ND | ND | ND | ND |
| MW-4 | 8/8/2013 | OTHER | ND | ND | ND | ND | 0.72 UG/L | ND |
| MW-5 | 2/12/2015 | OTHER | ND | ND | ND | ND | 180 UG/L | ND |
| MW-6 | 2/12/2015 | OTHER | ND | ND | ND | ND | 5.7 UG/L | ND |
| MW-7 | 2/12/2015 | OTHER | ND | ND | ND | ND | ND | ND |
| MW-8 | 2/12/2015 | OTHER | ND | ND | ND | ND | ND | ND |
| MW-9 | 2/12/2015 | OTHER | ND | ND | ND | ND | 640 UG/L | ND |
| QA | 2/12/2015 | OTHER | ND | ND | ND | ND | ND | ND |
| QCTB | 3/11/2002 | OTHER | ND | ND | ND | ND | ND | |
| TB-LB | 6/7/2002 | OTHER | ND | ND | ND | ND | ND | |
| TSP-1 | 5/14/2009 | ND | ND | ND | ND | ND | 7.1 UG/L | 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 |
|---|---|---|---|---|---|---|---|---|
| DP-1 | 1/11/2011 | ND | ND | ND | ND | ND | ND | ND |
| DP-2 | 1/11/2011 | 77 MG/KG | ND | ND | 0.068 MG/KG | 0.094 MG/KG | ND | ND |
| DP-3 | 1/11/2011 | 110 MG/KG | ND | ND | 0.27 MG/KG | 0.8 MG/KG | ND | ND |
| DP-4 | 1/11/2011 | 1.8 MG/KG | 0.0076 MG/KG | ND | 0.0057 MG/KG | 0.011 MG/KG | ND | ND |
| DP-5 | 1/11/2011 | 2.3 MG/KG | ND | ND | 0.2 MG/KG | 0.44 MG/KG | ND | ND |
| MW-10 | 5/20/2009 | 0.63 MG/KG | ND | ND | 0.059 MG/KG | ND | 0.0081 MG/KG | ND |
| MW-11 | 5/15/2009 | 0.4 MG/KG | ND | ND | ND | ND | ND | ND |
| MW-1AR | 5/13/2009 | 0.26 MG/KG | ND | ND | ND | ND | 0.25 MG/KG | ND |
| MW-1BR | 5/15/2009 | ND | ND | ND | ND | ND | 0.15 MG/KG | ND |
| MW-7 | 5/14/2009 | 4100 MG/KG | ND | ND | 38 MG/KG | 770 MG/KG | ND | ND |
| MW-8 | 5/14/2009 | ND | ND | ND | ND | ND | ND | ND |
| MW-9 | 5/13/2009 | 46 MG/KG | ND | ND | 2 MG/KG | 9.5 MG/KG | ND | ND |
| S-12-GP12 | 12/4/2001 | | ND | ND | 0.01 MG/KG | | ND | |
| S-12-GP13 | 12/4/2001 | | ND | ND | ND | | ND | |
| S-12-GP16 | 12/4/2001 | | ND | ND | ND | | ND | |
| S-16-GP15 | 12/4/2001 | | ND | ND | ND | | ND | |
| S-6-GP12 | 12/4/2001 | | ND | ND | ND | | ND | |
| S-6-GP15 | 12/4/2001 | | ND | ND | ND | | ND | |
| S-6-GP8 | 12/4/2001 | | ND | ND | ND | | ND | |
| S-6-GP9 | 12/4/2001 | | ND | ND | ND | | ND | |
| S-6.5-GP10 | 12/4/2001 | | ND | ND | ND | | ND | |
| S-6.5-GP11 | 12/4/2001 | | ND | ND | ND | | ND | |
| S-6.5-GP13 | 12/4/2001 | | ND | ND | ND | | ND | |
| S-6.5-GP16 | 12/4/2001 | | ND | ND | ND | | ND | |
| S-6.5-GP17 | 12/4/2001 | | ND | ND | ND | | ND | |
| S-6.5-GP6 | 12/4/2001 | | ND | ND | ND | | ND | |
| S-6.5-GP7 | 12/4/2001 | | ND | ND | ND | | ND | |
| S-7-GP14 | 12/4/2001 | | ND | ND | ND | | ND | |
| TSP-1 | 5/14/2009 | 0.24 MG/KG | ND | ND | ND | ND | 0.23 MG/KG | 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 | 2/12/2015 | 6.69 | N | |
| MW-10 | 2/12/2015 | 6.62 | N | |
| MW-11 | 2/12/2015 | 6.43 | N | |
| MW-1AR | 2/12/2015 | 7.01 | N | |
| MW-1BR | 2/12/2015 | 7.14 | N | |
| MW-2 | 9/12/2003 | 6.54 | U | |
| MW-2A | 2/24/2009 | 6.19 | N | |
| MW-3 | 2/12/2015 | 5.99 | N | |
| MW-4 | 2/12/2015 | 5.92 | N | |
| MW-5 | 2/12/2015 | 5.45 | N | |
| MW-6 | 2/12/2015 | 5.55 | N | |
| MW-7 | 2/12/2015 | 5.83 | N | |
| MW-8 | 2/12/2015 | 6.11 | N | |
| MW-9 | 2/12/2015 | 6.52 | N | |

LOGGED IN AS KNOWELL

CONTACT GEOTRACKER HELP

# ATTACHMENT 2

LTCP Checklist Go

GEOTRACKER HOME | MANAGE PROJECTS | REPORTS | SEARCH | LOGOUT

**UNOCAL #0843** (T0600102263) - MAP THIS SITE

*OPEN - ELIGIBLE FOR CLOSURE*

1629 WEBSTER ST
ALAMEDA , CA 94501
ALAMEDA COUNTY

VIEW PRINTABLE CASE SUMMARY FOR THIS SITE

ACTIVITIES REPORT
PUBLIC WEBPAGE

**CLEANUP OVERSIGHT AGENCIES**
ALAMEDA COUNTY LOP *(LEAD)* - *CASE #: RO0000450*
***CASEWORKER:*** *KEITH NOWELL* - ***SUPERVISOR:*** *DILAN ROE*
SAN FRANCISCO BAY RWQCB (REGION 2) - *CASE #: 01-2455*
***CASEWORKER:*** *Cherie McCaulou* - ***SUPERVISOR:*** *Cheryl L. Prowell*

**CUF Claim #:** 16157 **CUF Priority Assigned:** D **CUF Amount Paid:** $0

**CR Site ID #:** NOT SPECIFIED

**THERE ARE 2 OTHER CASES ASSOCIATED WITH THIS CASE** - SHOW

THIS PROJECT WAS LAST MODIFIED BY ***KEITH NOWELL*** ON 9/23/2015 11:36:01 AM - 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 9/23/2015***

*CHECKLIST INITIATED ON 8/19/2013*

CLOSURE POLICY HISTORY

**General Criteria** - *The site satisfies the policy general criteria* - CLEAR SECTION ANSWERS — YES

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

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

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 — NO

**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

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

**Plume Length (That Exceeds Water Quality Objectives) :**
○ ≥ 100 Feet and < 250 Feet ◉ ≥ 250 Feet and < 1,000 Feet ○ ≥ 1,000 Feet ○ Unknown

**Plume is Stable or Decreasing in AREAL Extent :**
○ No ○ Unknown

**Free Product In Groundwater :**
○ Yes ○ No ○ Unknown

**Free Product Has Been Removed to the Maximum Extent Practicable :**
○ No ○ Unknown

**For sites with free product, the Plume Has Been Stable or Decreasing for 5-Years (info) :**
○ No ○ Unknown

**For sites with free product, owner Willing to Accept a Land Use Restriction (if required) :**
○ No ○ Unknown

**Free Product Extends Offsite :**
○ Yes ○ Unknown

**Benzene Concentration :**
○ ≥ 1,000 µg/l and < 3,000 µg/l ○ ≥ 3,000 µg/l ○ Unknown

**MTBE Concentration :**
◉ ≥ 1,000 µg/l ○ Unknown

**Nearest Supply Well (From Plume Boundary) :**
○ ≤ 250 Feet ◉ > 250 Feet and ≤ 1,000 Feet ○ Unknown

**Nearest Surface Water Body (From Plume Boundary) :**
○ ≤ 250 Feet ○ > 250 Feet and ≤ 1,000 Feet ○ Unknown

**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** — O YES ◉ NO

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

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

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

**Exposure Type :**

O Residential ◉ Commercial O Utility Worker

**Petroleum Constituents In Soil :**

O ≤ 5 Feet bgs O >5 Feet bgs and ≤10 Feet bgs O Unknown

**Soil Concentrations of Benzene :**

O > 1.9 mg/kg and ≤ 2.8 mg/kg O > 2.8 mg/kg and ≤ 8.2 mg/kg O > 8.2 mg/kg and ≤ 12 mg/kg O > 12 mg/kg and ≤ 14 mg/kg O > 14 mg/kg O Unknown

**Soil Concentrations of EthylBenzene :**

O > 21 mg/kg and ≤ 32 mg/kg O > 32 mg/kg and ≤ 89 mg/kg O > 89 mg/kg and ≤ 134 mg/kg O > 134 mg/kg and ≤ 314 mg/kg O > 314 mg/kg O Unknown

**Soil Concentrations of Naphthalene :**

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

**Soil Concentrations of PAH :**

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

**Area of Impacted Soil :**

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

**Additional Information**

Should this case be closed in spite of NOT meeting policy criteria? — ◉ YES O NO

**Explain:**

Site does not meet the Media-Specific Criteria: Groundwater as MTBE concentrations exceed 1,000 ug/L, and the nearest supply (irrigation) well is estimated to be 500 feet from the lateral edged of the contaminant plume. Maximum plume length in the down gradient direction is estimated to be less than 400 feet; therefore, the cross-to down gradient well is unlikely to be impacted by the contaminant plume. ACEH determines, that based on an analysis of site specific conditions that current and reasonably anticipated near-term future scenarios, the contaminant plume poses a low threat to human health and safety and to the environment and WQO will be achieved within a reasonable period of time.

The site does not meet the Media Specific Criteria: Direct Contact and Outdoor Air Exposure as the site operated a waste oil UST (WOT), and no soil samples collected from the 0- to 5-foot bgs interval were analyzed for naphthalene or PAHs. Though holes were observed in the WOT at the time of removal, analysis of the WOT pit sidewall soil sample S-6-T3 did not reveal evidence of a release. Additionally, sample S-6-T3, collected at 6 feet bgs, just beyond the 0- to 5-foot interval, was non-detect for naphthalene and PAHs. Based on the lack of evidence of a WOT release and the proximity of sample S-6-T3 to the 0- to 5-foot bgs interval, concentrations of naphthalene and PAH in the 0- to 5-foot interval are not anticipated to be present at concentrations that would pose a significant risk of direct contact and outdoor air exposure.

Has this LTCP Checklist been updated for FY 15/16? — ◉ YES O NO

SPELL CHECK

Save Form as Partially Completed | Save Form as Complete

LOGGED IN AS KNOWELL

CONTACT GEOTRACKER HELP

# ATTACHMENT 3

ATTACHMENT 3
LTCP GROUNDWATER SPECIFIC CRITERIA

**LTCP Groundwater Specific Scenario under which case was closed: This case should be closed in spite of not meeting the groundwater specific media criteria.**

| Site Data | | LTCP Scenario 1 Criteria | LTCP Scenario 2 Criteria | LTCP Scenario 3 Criteria | LTCP Scenario 4 Criteria |
|---|---|---|---|---|---|
| Plume Length | 380 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 | Decreasing | 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 (500 feet cross to down gradient) | >250 feet | >1,000 feet | >1,000 feet | >1,000 feet |
| Distance to Nearest Surface Water and Direction | 2,300 feet up gradient | >250 feet | >1,000 feet | >1,000 feet | >1,000 feet |
| Property Owner Willing to Accept a Land Use Restriction? | Not applicable for groundwater specific criteria. | 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 | 2,070 | <0.50 | No criteria | <3,000 | No criteria | <1,000 |
| MTBE | 21,000 | 1,800 | No criteria | <1,000 | No criteria | <1,000 |
| TPH as gasoline | 34,400 | 50 | No criteria | No criteria | No criteria | No criteria |

| | |
|---|---|
| Scenario 5: If the site does not meet scenarios 1 through 4, has a determination been made 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? | Yes |

Comments: Water Supply Wells in Vicinity: Two supply wells are identified within a 2,000-foot radius of the site. The two wells are identified as irrigation wells. The nearest well, located 530 feet cross- to down gradient of the site, is approximately 500 feet from the estimated lateral edge of the contaminant plume. The second well is located 580 feet cross gradient of the site and is 580 feet from the edge of the plume. The status of the wells could not be verified. Based on the cross gradient component, extent, and decreasing size of the plume, the irrigation wells are not expected to be receptors for the site.

# ATTACHMENT 4

ATTACHMENT 4
LTCP VAPOR SPECIFIC CRITERIA

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

| Active Fueling Station | 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 | ≥30 feet | ≥30 feet | ≥5 feet | ≥10 feet | ≥5 feet | ≥5 feet |
| Total TPH in Soil in Bioattenuation Zone | < 1.0 mg/kg | <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 | 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 | ---- | 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 (µg/m³) | Current Maximum (µg/m³) | 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? | ---- |
| 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? | ---- |

Comments: ----

# ATTACHMENT 5

ATTACHMENT 5
LTCP DIRECT CONTACT AND OUTDOOR AIR EXPOSURE CRITERIA

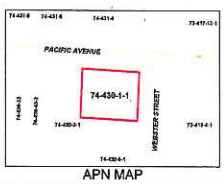
**LTCP Direct Contact and Outdoor Air Exposure Specific Scenario under which case was closed: This case should be closed in spite of not meeting the direct contact and outdoor air specific media criteria.**

| Are maximum concentrations less than those in Table 1 below? | | ---- | | | | |
|---|---|---|---|---|---|---|
| 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 | 0.04 (S-2-T1N @ 2') | 0.09 (S-8-T1N @ 8') | 0.04 | 0.09 | 0.09 |
| LTCP Criteria | Benzene | ≤1.9 | ≤2.8 | ≤8.2 | ≤12 | ≤14 |
| Site Maximum | Ethylbenzene | 0.08 (S-2-T1N @ 2') | 38 (MW-7 @ 10') | 0.08 | 38 | 38 |
| LTCP Criteria | Ethylbenzene | ≤21 | ≤32 | ≤89 | ≤134 | ≤314 |
| Site Maximum | Naphthalene | ---- | <0.3 ( S-6-T3 @ 6') | ---- | <0.3 | <0.3 |
| LTCP Criteria | Naphthalene | ≤9.7 | ≤9.7 | ≤45 | ≤45 | ≤219 |
| Site Maximum | PAHs | ---- | Non detect ( S-6-T3 @ 6') | ---- | Non detect | Non detect |
| 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? | | ---- | | | | |

Comments: The site does not meet the Media Specific Criteria: Direct Contact and Outdoor Air Exposure as the site operated a waste oil UST (WOT), and no soil samples collected from the 0- to 5-foot bgs interval were analyzed for naphthalene or PAHs. Though holes were observed in the WOT at the time of removal, analysis of the WOT pit sidewall soil sample S-6-T3 did not reveal evidence of a release. Additionally, sample S-6-T3, collected at 6 feet bgs, just beyond the 0- to 5-foot interval, was non-detect for naphthalene and PAHs. Based on the lack of evidence of a WOT release and the proximity of sample S-6-T3 to the 0- to 5-foot bgs interval, concentrations of naphthalene and PAH in the 0- to 5-foot interval are not anticipated to be present at concentrations that would pose a significant risk of direct contact and outdoor air exposure.

# ATTACHMENT 6


REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., OAKLAND WEST, CALIFORNIA, 2012.




APN MAP

0 1000' 2000'

Approximate Scale: 1 in. = 1000 ft.

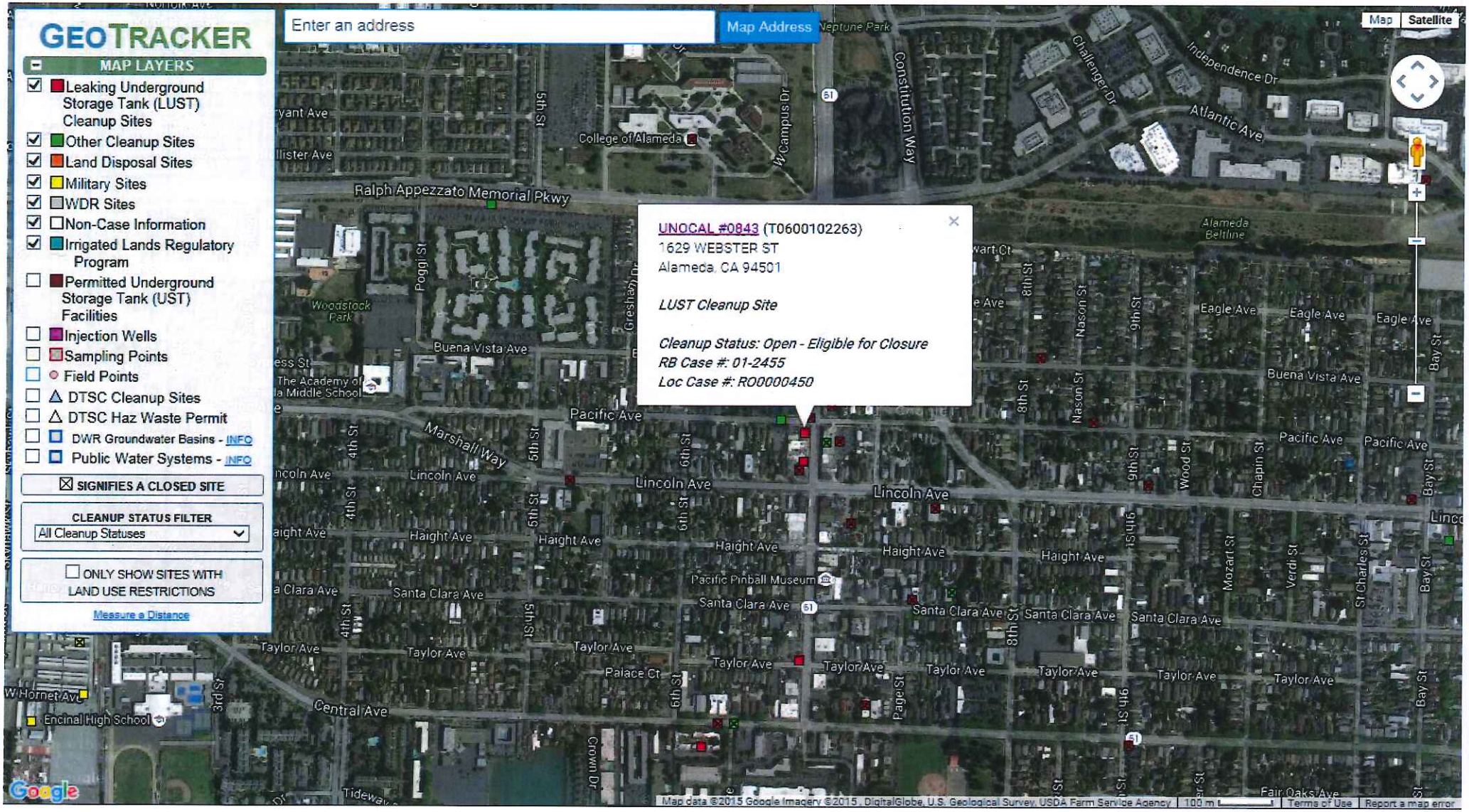

CALIFORNIA

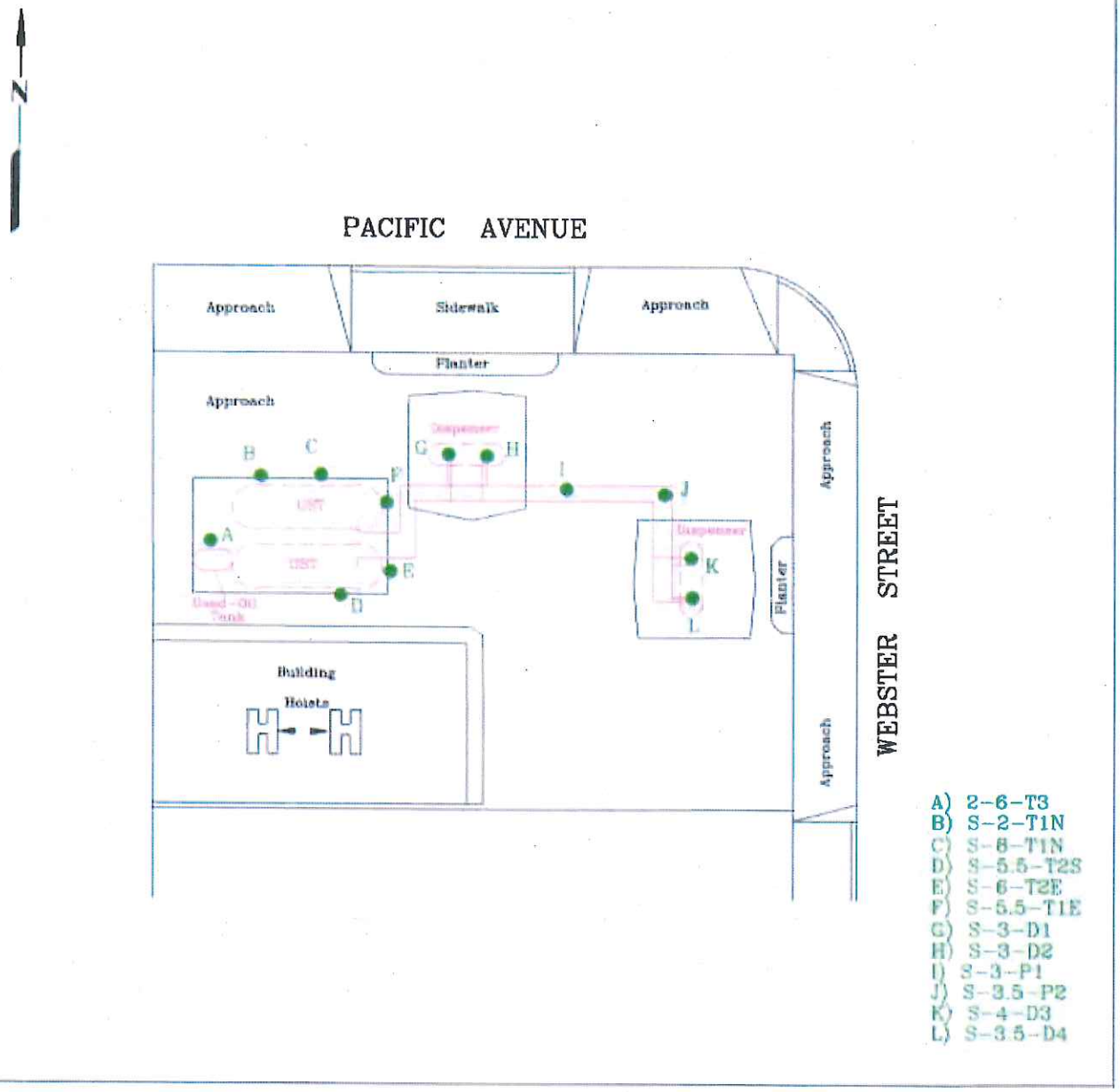
UNION OIL
FORMER FACILITY NO. 0843
1629 WEBSTER STREET
ALAMEDA, CALIFORNIA

**VICINITY MAP**

ARCADIS

FIGURE 1


GEOTRACKER
MAP LAYERS
Leaking Underground Storage Tank (LUST) Cleanup Sites
Other Cleanup Sites
Land Disposal Sites
Military Sites
WDR Sites
Non-Case Information
Irrigated Lands Regulatory Program
Permitted Underground Storage Tank (UST) Facilities
Injection Wells
Sampling Points
Field Points
DTSC Cleanup Sites
DTSC Haz Waste Permit
DWR Groundwater Basins - INFO
Public Water Systems - INFO
SIGNIFIES A CLOSED SITE
CLEANUP STATUS FILTER
All Cleanup Statuses
ONLY SHOW SITES WITH LAND USE RESTRICTIONS
Measure a Distance
Enter an address
Map Address
Map
Satellite
UNOCAL #0843 (T0600102263)
1629 WEBSTER ST
Alameda, CA 94501
LUST Cleanup Site
Cleanup Status: Open - Eligible for Closure
RB Case #: 01-2455
Loc Case #: RO0000450
Ralph Appezzato Memorial Pkwy
College of Alameda
Constitution Way
Atlantic Ave
Independence Dr
Challenger Dr
Neptune Park
Alameda Beltline
Woodstock Park
Buena Vista Ave
Pacific Ave
Lincoln Ave
Haight Ave
Santa Clara Ave
Taylor Ave
Palace Ct
Central Ave
Eagle Ave
Marshall Way
Pacific Pinball Museum
Encinal High School
W Hornet Ave
Fair Oaks Ave
Google
Map data ©2015 Google Imagery ©2015 , DigitalGlobe, U.S. Geological Survey, USDA Farm Service Agency
100 m
Terms of Use
Report a map error




FN 22480002

## EXPLANATION

L● Sample Location

S-3.5-D4 — Dispenser D4
Sample Depth
Soil

APPROXIMATE SCALE

0 30 60
FEET

SOURCE:
Modified from a map
provided by
TOSCO

ERI ENVIRONMENTAL RESOLUTIONS, INC.

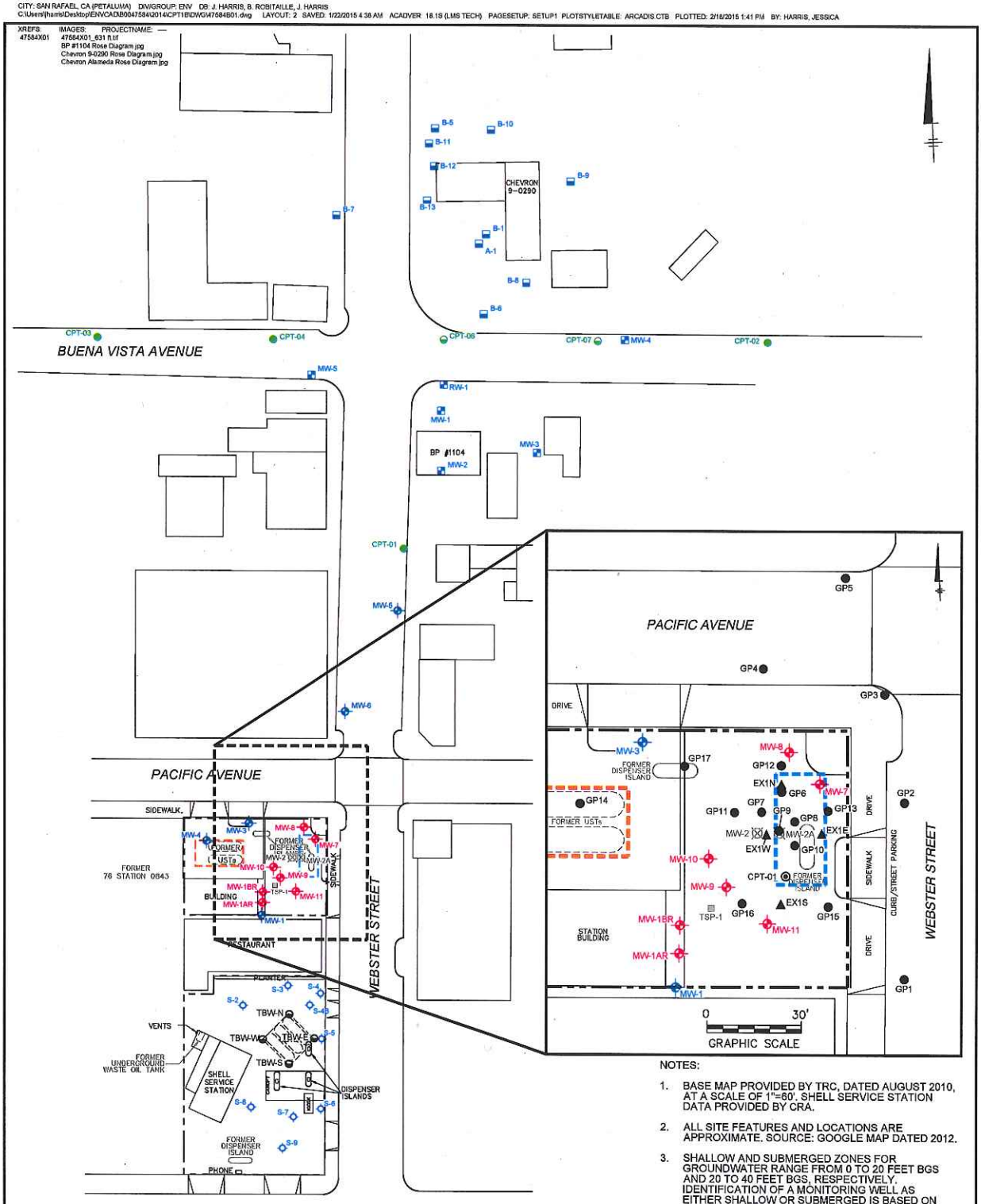
# GENERALIZED SITE PLAN

TOSCO (UNION) 76 SERVICE STATION 0843
1629 Webster Street
Alameda, California

PROJECT NO.
2248

PLATE
2

June 24, 1988




NOTES:

1. BASE MAP PROVIDED BY TRC, DATED AUGUST 2010, AT A SCALE OF 1"=60'. SHELL SERVICE STATION DATA PROVIDED BY CRA.
2. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE. SOURCE: GOOGLE MAP DATED 2012.
3. SHALLOW AND SUBMERGED ZONES FOR GROUNDWATER RANGE FROM 0 TO 20 FEET BGS AND 20 TO 40 FEET BGS, RESPECTIVELY. IDENTIFICATION OF A MONITORING WELL AS EITHER SHALLOW OR SUBMERGED IS BASED ON THE SCREEN INTERVAL.
4. FT BGS = FEET BELOW GROUND SURFACE
5. PHASE 2 CPT BORINGS WERE INSTALLED IF GROUNDWATER CONCENTRATIONS IN PHASE 1 CPT BORINGS INDICATED ADDITIONAL INVESTIGATIONAL BORINGS WERE NEEDED.

LEGEND

- PROPERTY BOUNDARY
- MW-1 SITE MONITORING WELL (SHALLOW)
- MW-1 SITE MONITORING WELL (SUBMERGED)
- TSP-1 SPARGE WELL
- S-9 SHELL SERVICE STATION MONITORING WELL (SHALLOW)
- B-1 CHEVRON SERVICE STATION MONITORING WELL (SHALLOW)
- MW-1 BP SERVICE STATION MONITORING WELL (SHALLOW)
- TBW-N SHELL TANK BACKFILL MONITORING WELL
- MW-2A ABANDONED WELL
- CPT-01 PHASE 1 CPT BORING LOCATION
- CPT-04 PHASE 2 CPT BORING LOCATION
- CPT-01 DELTA CPT BORING COMPLETED AUGUST 14, 2008
- GP1 DIRECT-PUSH SOIL BORING
- EX1E SOIL SAMPLE
- APPROXIMATE AREA OF EXCAVATION (1999)
- APPROXIMATE LIMIT OF EXCAVATION (2002)

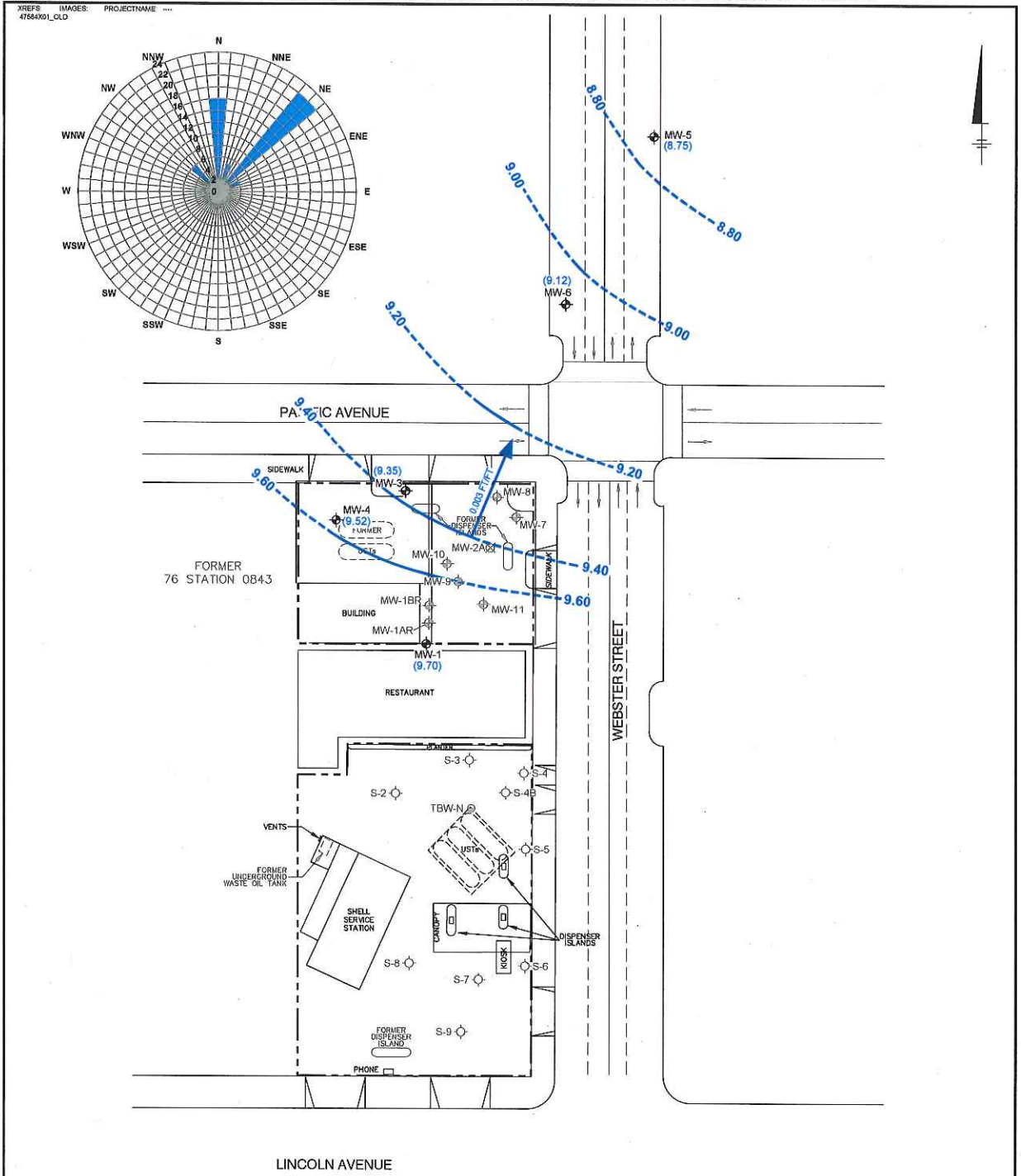
0 80' 160'
GRAPHIC SCALE

UNION OIL COMPANY OF CALIFORNIA
FORMER FACILITY NO. 0843
1629 WEBSTER STREET
ALAMEDA, CALIFORNIA

**SITE PLAN**

ARCADIS

FIGURE 2




LEGEND

- PROPERTY BOUNDARY
- MW-1 FORMER 76 STATION SHALLOW ZONE MONITORING WELL
- MW-1AR FORMER 76 STATION SUBMERGED ZONE MONITORING WELL
- S-9 SHELL SERVICE STATION MONITORING WELL
- TBW-N SHELL TANK BACKFILL MONITORING WELL
- MW-2A ABANDONED WELL
- (9.70) GROUNDWATER ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL (FT MSL)
- 9.60 GROUNDWATER ELEVATION CONTOUR (FT MSL; DASHED WHERE INFERRED)
- 0.003 FT/FT APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT (FOOT PER FOOT)

0 50' 100'
GRAPHIC SCALE

NOTES:

1. BASE MAP PROVIDED BY TRC, DATED AUGUST 2010, AT A SCALE OF 1"=60'. SHELL SERVICE STATION DATA PROVIDED BY CRA.
2. LL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
3. THE ADJACENT SHELL SITE HAS RECEIVED CLOSURE AND WILL NO LONGER BE SAMPLED.
4. SITE GROUNDWATER FLOW DIRECTION DATA ARE BASED ON APPROXIMATELY 60 MONITORING EVENTS FROM 1999 THROUGH 2014.

UNION OIL
FORMER FACILITY NO. 0843
1629 WEBSTER STREET
ALAMEDA, CALIFORNIA

**SHALLOW ZONE GROUNDWATER ELEVATION CONTOUR MAP AUGUST 13, 2014**

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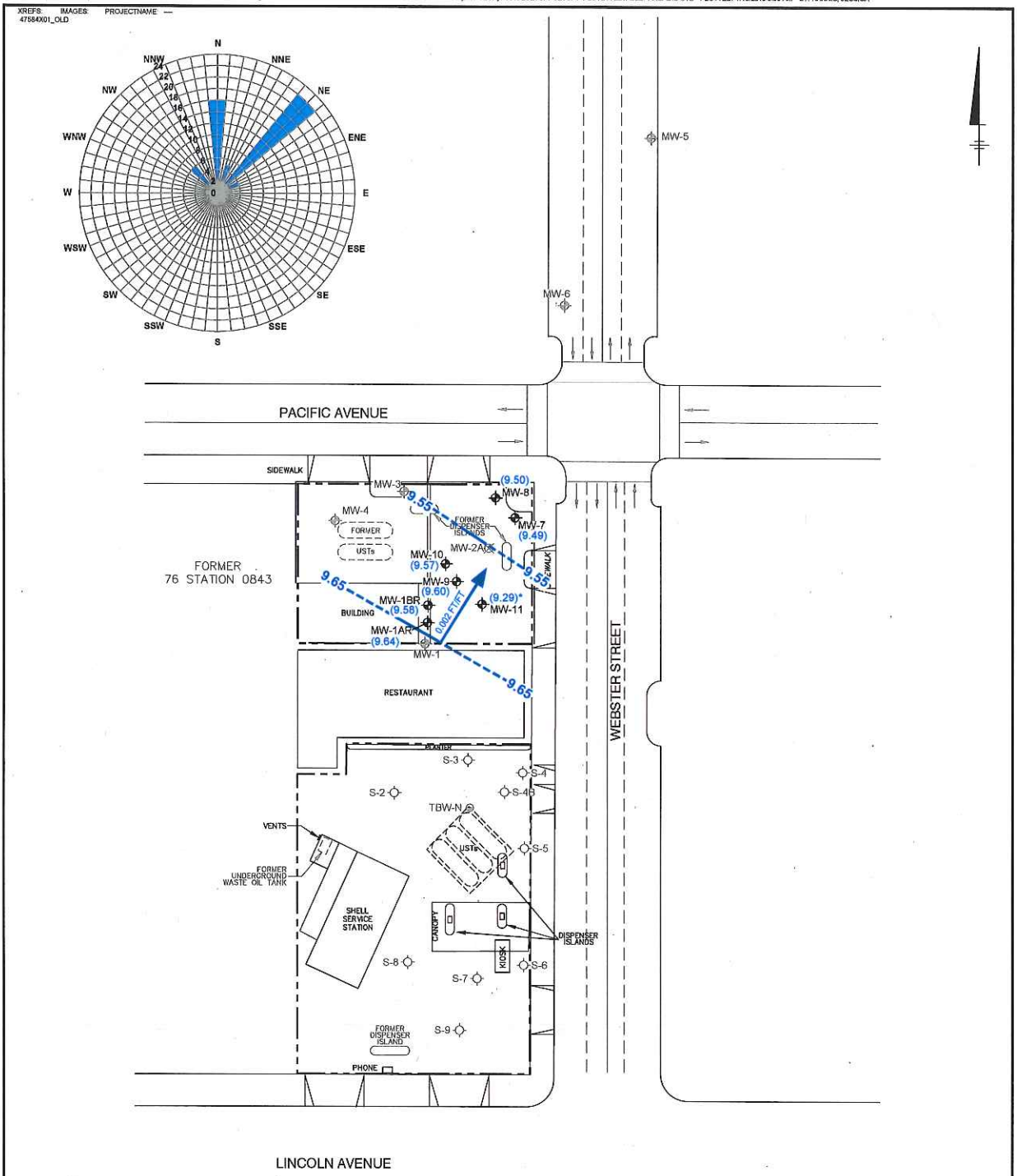
FIGURE 3




LEGEND

- PROPERTY BOUNDARY
- MW-1 — FORMER 76 STATION SHALLOW ZONE MONITORING WELL
- MW-1AR — FORMER 76 STATION SUBMERGED ZONE MONITORING WELL
- S-9 — SHELL SERVICE STATION MONITORING WELL
- TBW-N — SHELL TANK BACKFILL MONITORING WELL
- MW-2A — ABANDONED WELL
- (9.64) — GROUNDWATER ELEVATION IN FEET RELATIVE TO MEAN SEA LEVEL (FT MSL)
- 9.65 — GROUNDWATER ELEVATION CONTOUR (FT MSL; DASHED WHERE INFERRED)
- 0.002 FT/FT — APPROXIMATE GROUNDWATER FLOW DIRECTION AND GRADIENT (FOOT PER FOOT)
- * — NOT USED FOR CONTOURING; SHORT SCREEN INTERVAL; DIFFERENT CONSTRUCTION

0 50' 100'
GRAPHIC SCALE

NOTES:

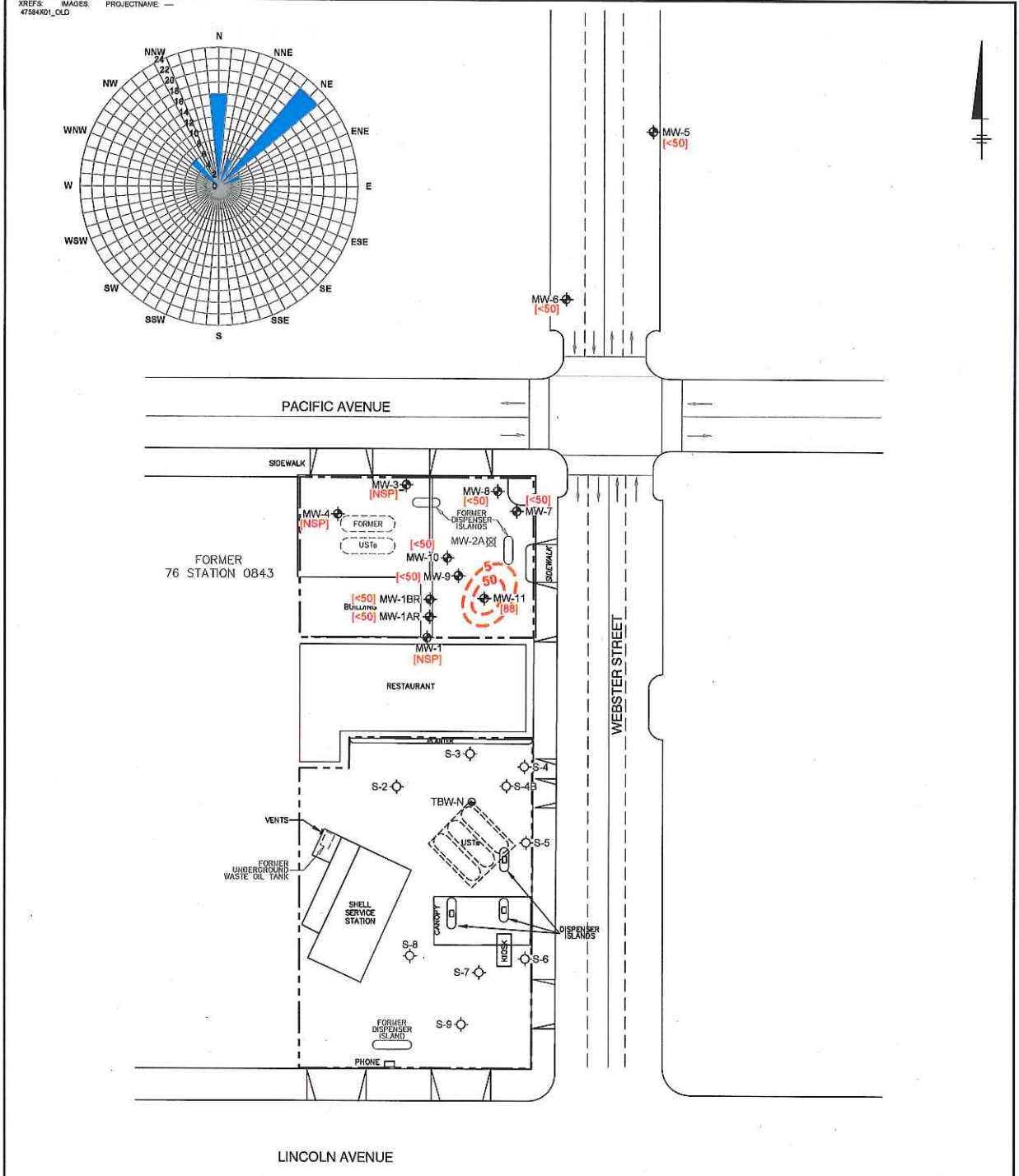
1. BASE MAP PROVIDED BY TRC, DATED AUGUST 2010, AT A SCALE OF 1"=60'. SHELL SERVICE STATION DATA PROVIDED BY CRA.
2. LL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
3. THE ADJACENT SHELL SITE HAS RECEIVED CLOSURE AND WILL NO LONGER BE SAMPLED.
4. SITE GROUNDWATER FLOW DIRECTION DATA ARE BASED ON APPROXIMATELY 60 MONITORING EVENTS FROM 1999 THROUGH 2014.

UNION OIL
FORMER FACILITY NO. 0843
1629 WEBSTER STREET
ALAMEDA, CALIFORNIA

# SUBMERGED ZONE GROUNDWATER ELEVATION CONTOUR MAP AUGUST 13, 2014

ARCADIS

FIGURE 4




LEGEND

- PROPERTY BOUNDARY
- MW-1 FORMER 76 STATION MONITORING WELL
- S-9 SHELL SERVICE STATION MONITORING WELL
- TBW-N SHELL TANK BACKFILL MONITORING WELL
- MW-2A ABANDONED WELL
- [TPH-g] TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (C4-C12) CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
- < DENOTES LESS THAN LABORATORY REPORTING LIMIT
- [NSP] NOT SAMPLED THIS EVENT IN ACCORDANCE WITH GROUNDWATER SAMPLING SCHEDULE
- 50 TPH-g ISOCONCENTRATION CONTOUR (µg/L; DASHED WHERE INFERRED)

0 50' 100'
GRAPHIC SCALE

NOTES:

1. BASE MAP PROVIDED BY TRC, DATED AUGUST 2010, AT A SCALE OF 1"=60'. SHELL SERVICE STATION DATA PROVIDED BY CRA.
2. LL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
3. THE ADJACENT SHELL SITE HAS RECEIVED CLOSURE AND WILL NO LONGER BE SAMPLED.
4. SITE GROUNDWATER FLOW DIRECTION DATA ARE BASED ON APPROXIMATELY 60 MONITORING EVENTS FROM 1999 THROUGH 2014.

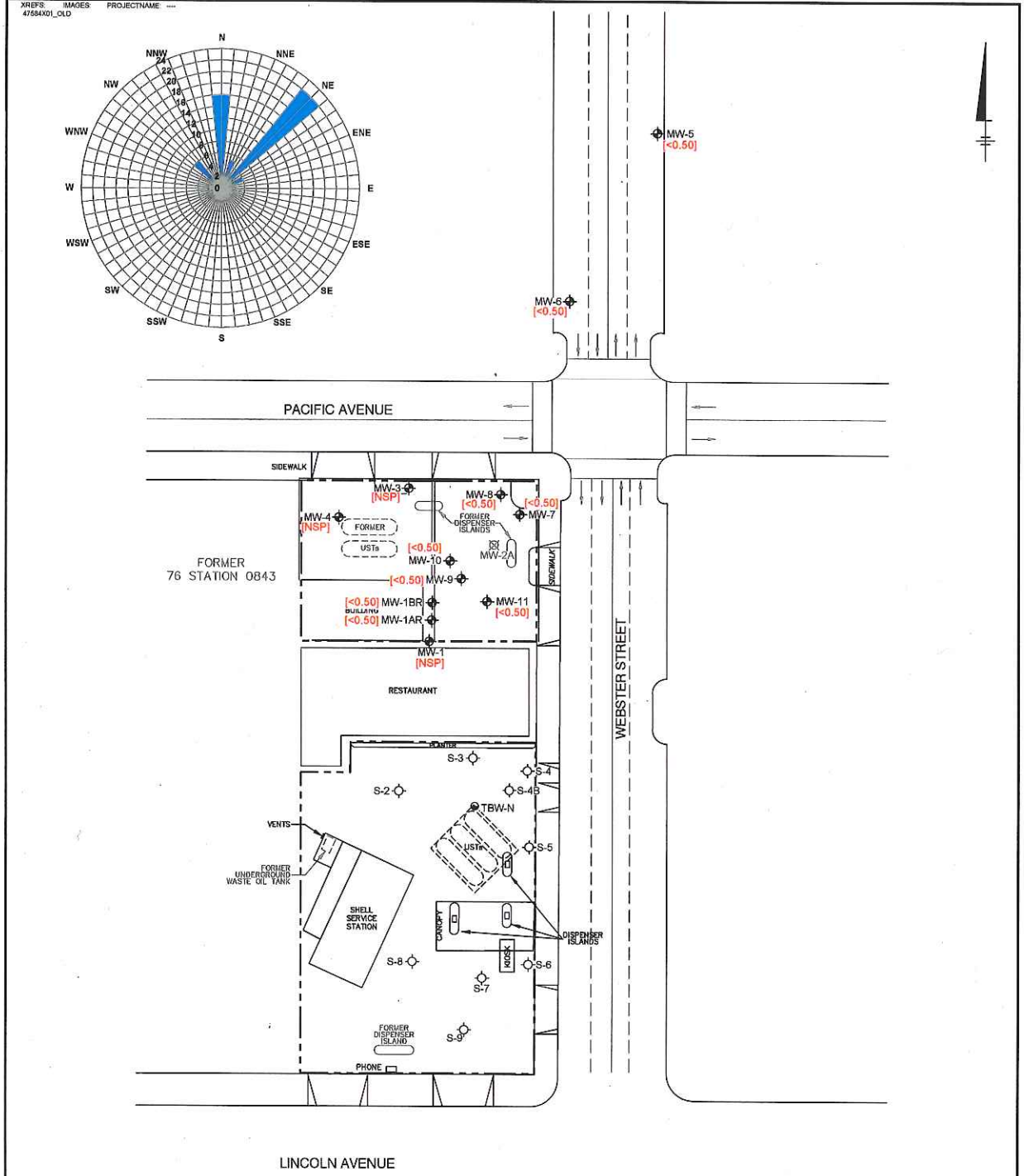
UNION OIL
FORMER FACILITY NO. 0843
1629 WEBSTER STREET
ALAMEDA, CALIFORNIA

**TPH-g CONCENTRATION MAP**
**AUGUST 13, 2014**

ARCADIS

FIGURE
5

CITY: SAN RAFAEL, CA (PETALUMA) DIV/GROUP: ENVCAD DB: J. HARRIS, J. LOVING, J. HARRIS
C:\Users\jharris\Desktop\ENVCAD\B0047584\2014\CPT1\B0W3\47584C07.dwg LAYOUT: 6 SAVED: 1/16/2015 9:14 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: SETUP1 PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 1/16/2015 9:14 AM BY: HARRIS, JESSICA
XREFS: IMAGES: PROJECTNAME: ----
47584X01_OLD




LEGEND

- PROPERTY BOUNDARY
- MW-1 FORMER 76 STATION MONITORING WELL
- S-9 SHELL SERVICE STATION MONITORING WELL
- TBW-N SHELL TANK BACKFILL MONITORING WELL
- MW-2A ABANDONED WELL
- [BENZ] BENZENE CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
- < DENOTES LESS THAN LABORATORY REPORTING LIMIT
- [NSP] WELL NOT SAMPLED THIS EVENT IN ACCORDANCE WITH GROUNDWATER SAMPLING SCHEDULE

0 50' 100'
GRAPHIC SCALE

NOTES:

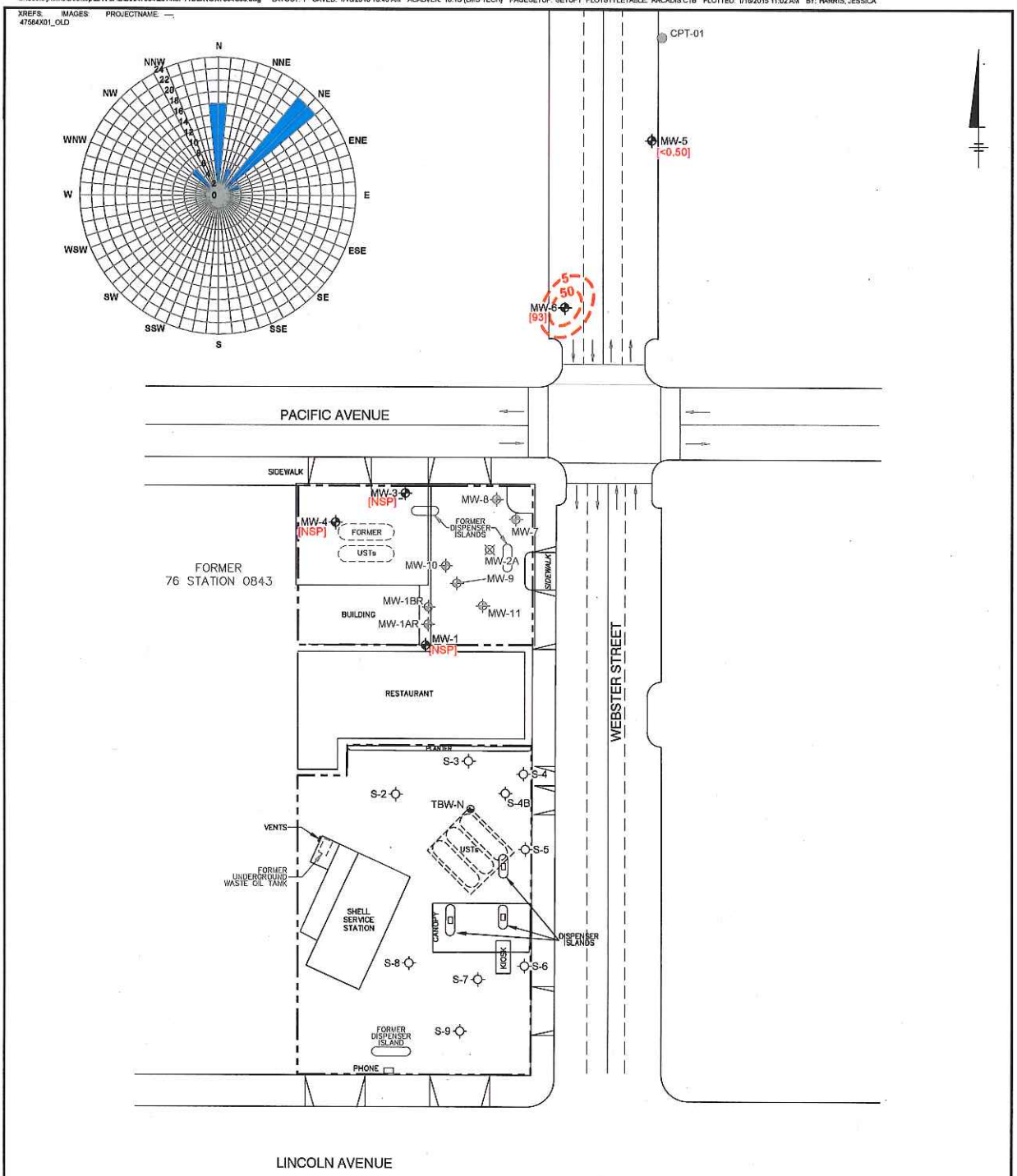
1. BASE MAP PROVIDED BY TRC, DATED AUGUST 2010, AT A SCALE OF 1"=60'. SHELL SERVICE STATION DATA PROVIDED BY CRA.
2. LL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
3. THE ADJACENT SHELL SITE HAS RECEIVED CLOSURE AND WILL NO LONGER BE SAMPLED.
4. SITE GROUNDWATER FLOW DIRECTION DATA ARE BASED ON APPROXIMATELY 60 MONITORING EVENTS FROM 1999 THROUGH 2014.

UNION OIL
FORMER FACILITY NO. 0843
1629 WEBSTER STREET
ALAMEDA, CALIFORNIA

**BENZENE CONCENTRATION MAP**
**AUGUST 13, 2014**

ARCADIS

FIGURE
6




LEGEND

- PROPERTY BOUNDARY
- MW-1 FORMER 76 STATION SHALLOW ZONE MONITORING WELL
- MW-1AR FORMER 76 STATION SUBMERGED ZONE MONITORING WELL
- S-9 SHELL SERVICE STATION MONITORING WELL
- TBW-N SHELL TANK BACKFILL MONITORING WELL
- CPT-01 PHASE 1 CPT BORING LOCATION
- MW-2A ABANDONED WELL
- [MTBE] METHYL TERTIARY BUTYL ETHER CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
- < DENOTES LESS THAN LABORATORY REPORTING LIMIT
- [NSP] WELL NOT SAMPLED THIS EVENT IN ACCORDANCE WITH GROUNDWATER SAMPLING SCHEDULE
- 50 MTBE ISOCONCENTRATION CONTOUR (µg/L; DASHED WHERE INFERRED)

NOTES:

1. BASE MAP PROVIDED BY TRC, DATED AUGUST 2010, AT A SCALE OF 1"=60'. SHELL SERVICE STATION DATA PROVIDED BY CRA.
2. LL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
3. THE ADJACENT SHELL SITE HAS RECEIVED CLOSURE AND WILL NO LONGER BE SAMPLED.
4. SITE GROUNDWATER FLOW DIRECTION DATA ARE BASED ON APPROXIMATELY 60 MONITORING EVENTS FROM 1999 THROUGH 2014.

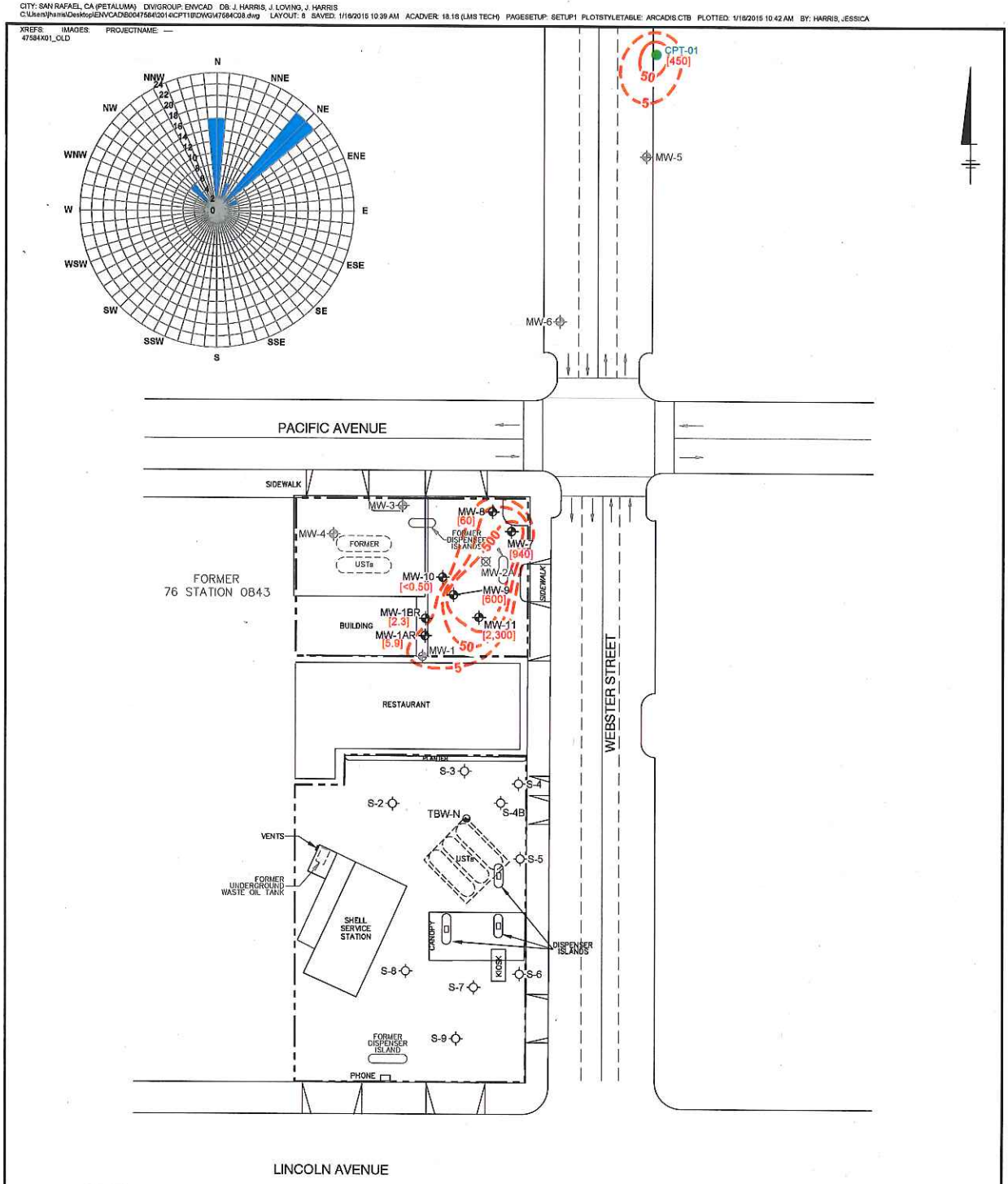
0 50' 100'
GRAPHIC SCALE

UNION OIL
FORMER FACILITY NO. 0843
1629 WEBSTER STREET
ALAMEDA, CALIFORNIA

# MTBE SHALLOW ZONE CONCENTRATION MAP AUGUST 13, 2014

ARCADIS

FIGURE 7




LEGEND

- PROPERTY BOUNDARY
- MW-1 FORMER 76 STATION SHALLOW ZONE MONITORING WELL
- MW-1AR FORMER 76 STATION SUBMERGED ZONE MONITORING WELL
- S-9 SHELL SERVICE STATION MONITORING WELL
- TBW-N SHELL TANK BACKFILL MONITORING WELL
- CPT-01 PHASE 1 CPT BORING LOCATION
- MW-2A ABANDONED WELL
- [MTBE] METHYL TERTIARY BUTYL ETHER CONCENTRATION IN MICROGRAMS PER LITER (µg/L)
- < DENOTES LESS THAN LABORATORY REPORTING LIMIT
- [NSP] WELL NOT SAMPLED THIS EVENT IN ACCORDANCE WITH GROUNDWATER SAMPLING SCHEDULE
- 50 MTBE ISOCONCENTRATION CONTOUR (µg/L; DASHED WHERE INFERRED)

NOTES:

1. BASE MAP PROVIDED BY TRC, DATED AUGUST 2010, AT A SCALE OF 1"=60'. SHELL SERVICE STATION DATA PROVIDED BY CRA.
2. LL SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
3. THE ADJACENT SHELL SITE HAS RECEIVED CLOSURE AND WILL NO LONGER BE SAMPLED.
4. SITE GROUNDWATER FLOW DIRECTION DATA ARE BASED ON APPROXIMATELY 60 MONITORING EVENTS FROM 1999 THROUGH 2014.

0 50' 100'
GRAPHIC SCALE

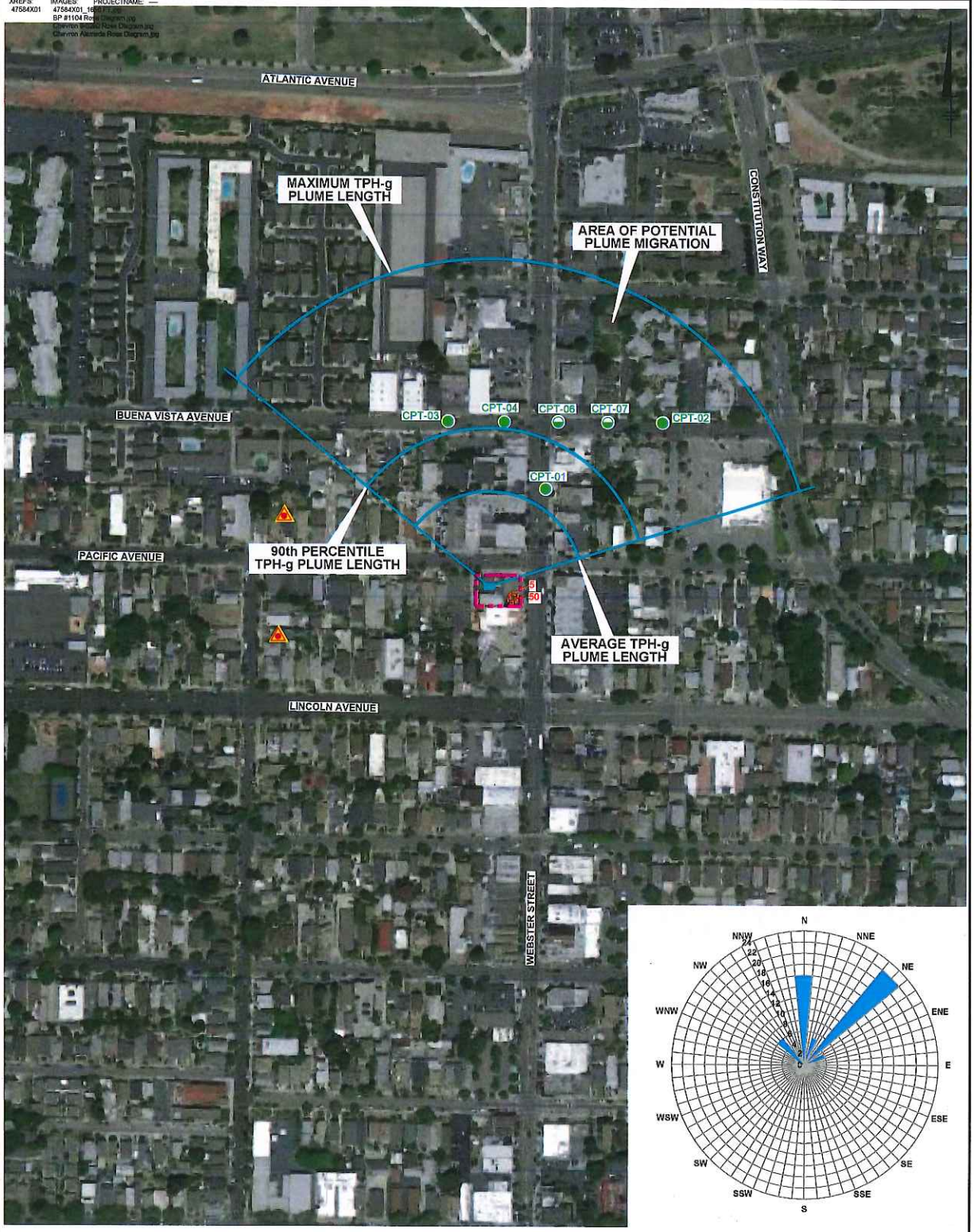
UNION OIL
FORMER FACILITY NO. 0843
1629 WEBSTER STREET
ALAMEDA, CALIFORNIA

# MTBE SUBMERGED ZONE CONCENTRATION MAP AUGUST 13, 2014

ARCADIS

FIGURE 8

CITY: SAN RAFAEL, CA (PETALUMA) DIV/GROUP: ENV DB: J. HARRIS, B. ROBITAILLE, J. HARRIS
C:\Users\jharris\Desktop\ENVCAD\B0047584\2014\CPT1\BDWG\47584C02.dwg LAYOUT: 9 SAVED: 1/16/2015 11:44 AM ACADVER: 18.1S (LMS TECH) PAGESETUP: SETUP1 PLOTSTYLETABLE: ARCADIS.CTB PLOTTED: 1/22/2015 4:34 AM BY: HARRIS, JESSICA
XREFS: 47584X01 IMAGES: PROJECTNAME: —







LEGEND

- SITE BOUNDARY
- TPPH CONCENTRATION CONTOUR (µg/L)
- TPH-g — TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
- µg/L — MICROGRAMS PER LITER
- SOURCE AREA
- GROUNDWATER FLOW DIRECTION
- CPT-01 — PHASE 1 CPT BORING LOCATION
- CPT-04 — PHASE 2 CPT BORING LOCATION
- IRRIGATION WELL

NOTES:

1. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE. SOURCE: GOOGLE™ EARTH DATE 6/9/2014.
2. SHALLOW AND SUBMERGED ZONES FOR GROUNDWATER RANGE FROM 0 TO 20 FEET BGS AND 20 TO 40 FEET BGS, RESPECTIVELY. IDENTIFICATION OF A MONITORING WELL AS EITHER SHALLOW OR SUBMERGED IS BASED ON THE SCREEN INTERVAL
3. FT BGS = FEET BELOW GROUND SURFACE
4. SITE GROUNDWATER FLOW DIRECTION DATA IS BASED ON APPROXIMATELY 60 MONITORING EVENTS FROM 1999 THROUGH 2014.
5. REFERENCE FOR PLUME LENGTH: STATE WATER RESOURCES CONTROL BOARD, 2012. *TECHNICAL JUSTIFICATION FOR GROUNDWATER MEDIA-SPECIFIC CRITERIA. APRIL 24.*
6. ONLY SENSITIVE RECEPTORS IDENTIFIED WITHIN THE MAP AREA ARE SHOWN.

0 250' 500'

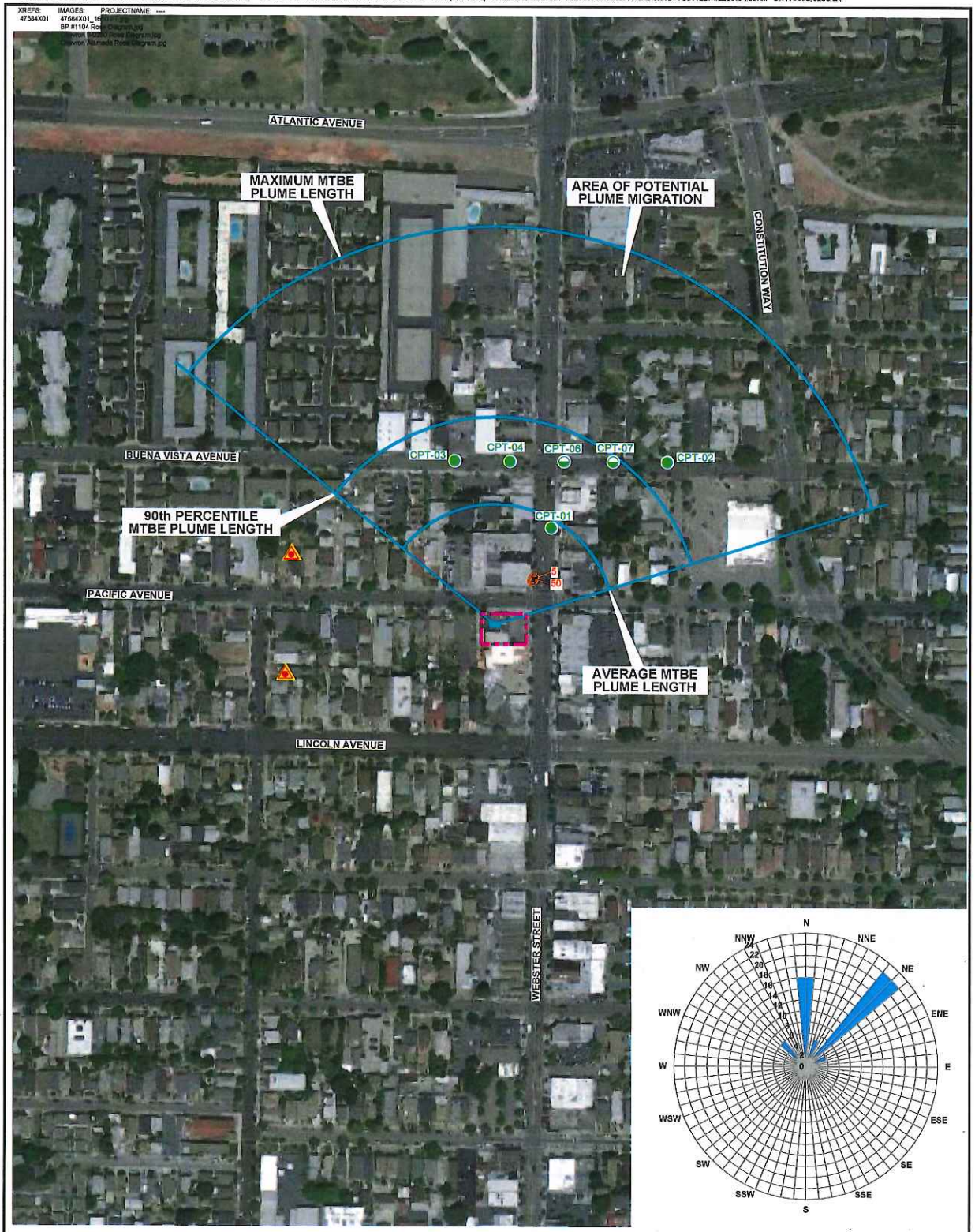
APPROXIMATE SCALE

UNION OIL COMPANY OF CALIFORNIA
FORMER FACILITY NO. 0843
1629 WEBSTER STREET
ALAMEDA, CALIFORNIA

**RESEARCH-BASED TPH-g PLUME MIGRATION ANALYSIS**

ARCADIS

FIGURE 9







LEGEND

- SITE BOUNDARY
- MTBE CONCENTRATION CONTOUR (µg/L)
- MTBE METHYL TERTIARY BUTYL ETHER
- µg/L MICROGRAMS PER LITER
- SOURCE AREA
- GROUNDWATER FLOW DIRECTION
- CPT-01 PHASE 1 CPT BORING LOCATION
- CPT-04 PHASE 2 CPT BORING LOCATION
- IRRIGATION WELL

NOTES:

1. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE. SOURCE: GOOGLE™ EARTH DATE 6/9/2014.
2. SHALLOW AND SUBMERGED ZONES FOR GROUNDWATER RANGE FROM 0 TO 20 FEET BGS AND 20 TO 40 FEET BGS, RESPECTIVELY. IDENTIFICATION OF A MONITORING WELL AS EITHER SHALLOW OR SUBMERGED IS BASED ON THE SCREEN INTERVAL
3. FT BGS = FEET BELOW GROUND SURFACE
4. SITE GROUNDWATER FLOW DIRECTION DATA IS BASED ON APPROXIMATELY 60 MONITORING EVENTS FROM 1999 THROUGH 2014.
5. REFERENCE FOR PLUME LENGTH: STATE WATER RESOURCES CONTROL BOARD, 2012. *TECHNICAL JUSTIFICATION FOR GROUNDWATER MEDIA-SPECIFIC CRITERIA. APRIL 24.*
6. ONLY SENSITIVE RECEPTORS IDENTIFIED WITHIN THE MAP AREA ARE SHOWN.

0 250' 500'
APPROXIMATE SCALE

UNION OIL COMPANY OF CALIFORNIA
FORMER FACILITY NO. 0843
1629 WEBSTER STREET
ALAMEDA, CALIFORNIA

**RESEARCH-BASED MTBE PLUME (SHALLOW ZONE) MIGRATION ANALYSIS**

ARCADIS

FIGURE 10





LEGEND

- SITE BOUNDARY
- MTBE CONCENTRATION CONTOUR (µg/L)
- MTBE METHYL TERTIARY BUTYL ETHER
- µg/L MICROGRAMS PER LITER
- SOURCE AREA
- GROUNDWATER FLOW DIRECTION
- CPT-01 PHASE 1 CPT BORING LOCATION
- CPT-04 PHASE 2 CPT BORING LOCATION
- IRRIGATION WELL

NOTES:

1. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE. SOURCE: GOOGLE™ EARTH DATE 6/9/2014.
2. SHALLOW AND SUBMERGED ZONES FOR GROUNDWATER RANGE FROM 0 TO 20 FEET BGS AND 20 TO 40 FEET BGS, RESPECTIVELY. IDENTIFICATION OF A MONITORING WELL AS EITHER SHALLOW OR SUBMERGED IS BASED ON THE SCREEN INTERVAL
3. FT BGS = FEET BELOW GROUND SURFACE
4. SITE GROUNDWATER FLOW DIRECTION DATA IS BASED ON APPROXIMATELY 60 MONITORING EVENTS FROM 1999 THROUGH 2014.
5. REFERENCE FOR PLUME LENGTH: STATE WATER RESOURCES CONTROL BOARD, 2012. *TECHNICAL JUSTIFICATION FOR GROUNDWATER MEDIA-SPECIFIC CRITERIA. APRIL 24.*
6. ONLY SENSITIVE RECEPTORS IDENTIFIED WITHIN THE MAP AREA ARE SHOWN.

0 250' 500'

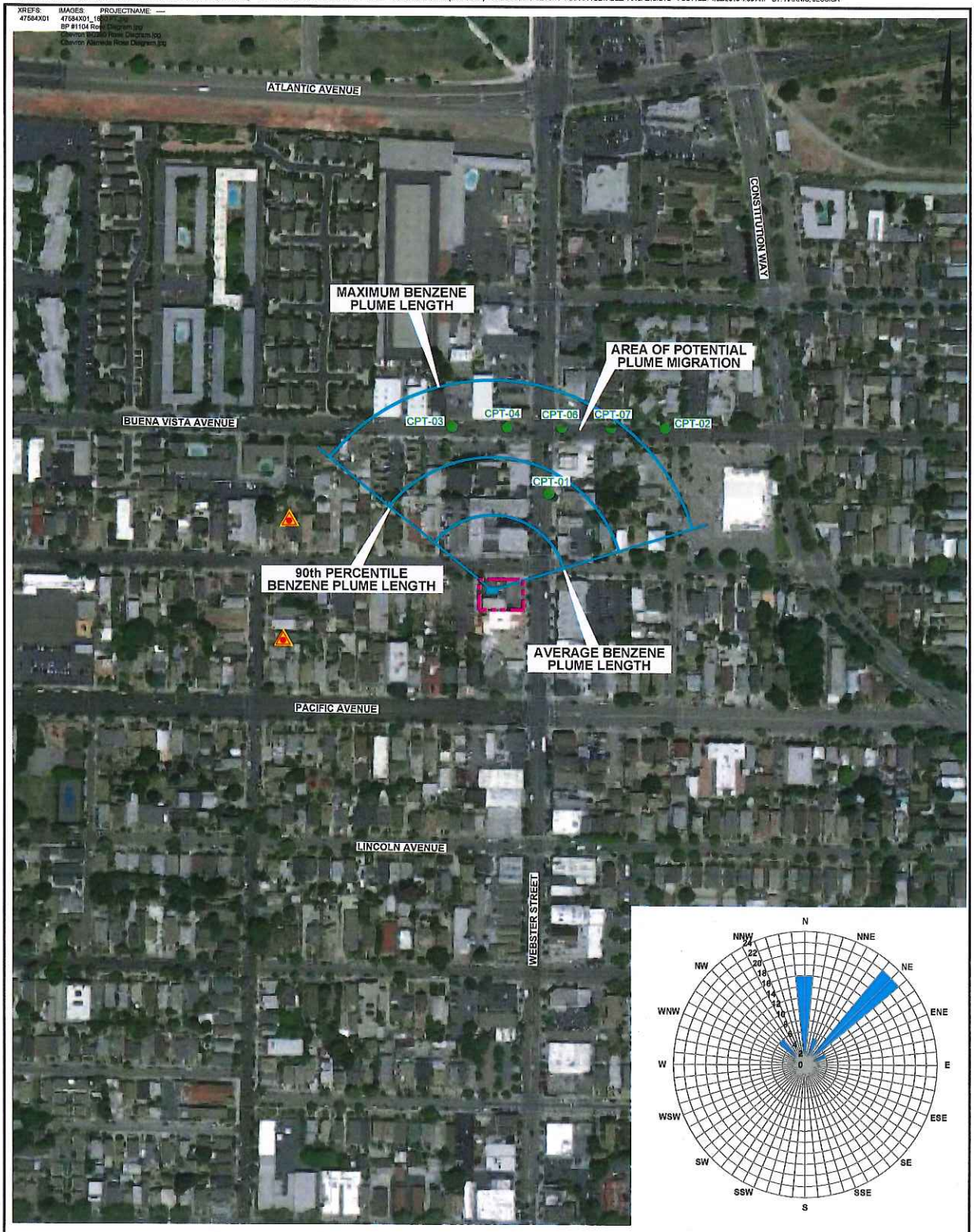
APPROXIMATE SCALE

UNION OIL COMPANY OF CALIFORNIA
FORMER FACILITY NO. 0843
1629 WEBSTER STREET
ALAMEDA, CALIFORNIA

# RESEARCH-BASED MTBE PLUME (SUBMERGED ZONE) MIGRATION ANALYSIS

ARCADIS

FIGURE 11







LEGEND

- SITE BOUNDARY
- SOURCE AREA
- GROUNDWATER FLOW DIRECTION
- CPT-01 PHASE 1 CPT BORING LOCATION
- CPT-04 PHASE 2 CPT BORING LOCATION
- IRRIGATION WELL

NOTES:

1. ALL SITE FEATURES AND LOCATIONS ARE APPROXIMATE. SOURCE: GOOGLE™ EARTH DATE 6/9/2014.
2. SHALLOW AND SUBMERGED ZONES FOR GROUNDWATER RANGE FROM 0 TO 20 FEET BGS AND 20 TO 40 FEET BGS, RESPECTIVELY. IDENTIFICATION OF A MONITORING WELL AS EITHER SHALLOW OR SUBMERGED IS BASED ON THE SCREEN INTERVAL
3. FT BGS = FEET BELOW GROUND SURFACE
4. SITE GROUNDWATER FLOW DIRECTION DATA IS BASED ON APPROXIMATELY 60 MONITORING EVENTS FROM 1999 THROUGH 2014.
5. REFERENCE FOR PLUME LENGTH: STATE WATER RESOURCES CONTROL BOARD, 2012. *TECHNICAL JUSTIFICATION FOR GROUNDWATER MEDIA-SPECIFIC CRITERIA. APRIL 24.*
6. ONLY SENSITIVE RECEPTORS IDENTIFIED WITHIN THE MAP AREA ARE SHOWN.

0 250' 500'

APPROXIMATE SCALE

UNION OIL COMPANY OF CALIFORNIA
FORMER FACILITY NO. 0843
1629 WEBSTER STREET
ALAMEDA, CALIFORNIA

**RESEARCH-BASED BENZENE PLUME MIGRATION ANALYSIS**

ARCADIS

FIGURE 12

**Table 6**
**Summary of Statistical Analysis of Groundwater Analytical Data**
Unocal Service Station No. 0843
1629 Webster Street
Alameda, California

| Constituent | Well | Cleanup Goal/Screening Level/Remediation goal (µg/L)[1] | Data Range | | | | | | Linear Regression Analysis | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | Minimum Concentration (µg/L) | Maximum Concentration (µg/L) | Concentration Measured Most Recently (µg/L) | % of Data Above Laboratory Reporting Limit | Start Date | End Date | Coefficient of Determination, R-squared[2] | p-value of Correlation (Significance of Slope) | Attenuation Half-life (days) | Trend Direction | Significance of Trend[3] | Projected Year to Screening Level |
| MTBE | MW-1 | 5 | 25 | 5,400 | 230 | 100 | 2/24/2006 | 11/6/2013 | 0.61 | <0.01 | 560 | Decreasing | Significant | 2021 |
| MTBE | MW-1AR | 5 | 0.9 | 930 | 6 | 100 | 5/28/2009 | 8/13/2014 | 0.91 | <0.01 | 196 | Decreasing | Significant | 2013 |
| MTBE | MW-1BR | 5 | *0.5* | 810 | 2 | 90 | 5/28/2009 | 8/13/2014 | 0.94 | <0.01 | 174 | Decreasing | Significant | 2013 |
| MTBE | MW-6 | 5 | 6 | 21,000 | 93 | 100 | 12/14/1999 | 8/13/2014 | 0.68 | <0.01 | 721 | Decreasing | Significant | 2020 |
| MTBE | MW-7 | 5 | 2 | 16,000 | 940 | 100 | 5/28/2009 | 8/13/2014 | 0.45 | <0.01 | 297 | Decreasing | Significant | 2019 |
| MTBE | MW-8 | 5 | *0.5* | 12,000 | 60 | 95 | 5/28/2009 | 8/13/2014 | 0.69 | <0.01 | 197 | Decreasing | Significant | 2016 |
| MTBE | MW-9 | 5 | 6 | 13,000 | 600 | 100 | 5/28/2009 | 8/13/2014 | <0.01 | 0.77 | NA | No Trend | NS | NA |
| MTBE | MW-11 | 5 | 380 | 18,000 | 2,300 | 100 | 5/28/2009 | 8/13/2014 | 0.81 | <0.01 | 385 | Decreasing | Significant | 2021 |

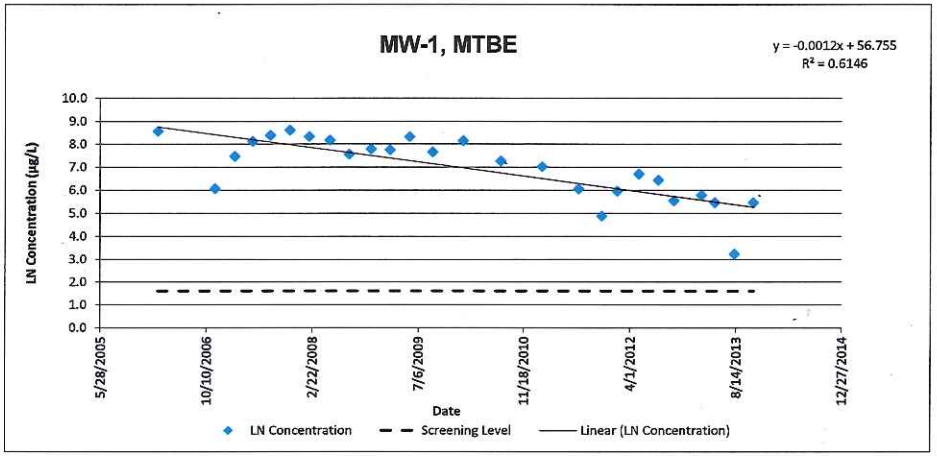
**Notes and Assumptions**
[1] Environmental Screening Levels are from the San Francisco Regional Water Quality Control Board (December 2013)
[2] Linear regression analysis with $R^2$ values <0.1 and no statistically significant trend were defined as having no apparent trend (No Trend)
[3] Statistically significant trend defined as having p-value ≤ 0.05

**Standard Abbreviations**

| | |
|---|---|
| < | less than |
| µg/L | micrograms per liter |
| MTBE | methyl tertiary butyl ether |
| NA | not applicable due to non-significant trend |
| NS | not significant |
| *italic* | Non-detect taken at reporting limit/reported value |

**Sample Information**
**Sample Location** MW-1
**Constituent** MTBE

| Data | | |
|---|---|---|
| Sample Date | Concentration | LN Concentration |
| | (ug/L) | |
| 2/24/2006 | 5,100 | 8.54 |
| 11/22/2006 | 420 | 6.04 |
| 2/23/2007 | 1,700 | 7.44 |
| 5/18/2007 | 3,300 | 8.10 |
| 8/10/2007 | 4,300 | 8.37 |
| 11/9/2007 | 5,400 | 8.59 |
| 2/8/2008 | 4,100 | 8.32 |
| 5/16/2008 | 3,500 | 8.16 |
| 8/15/2008 | 1,900 | 7.55 |
| 11/26/2008 | 2,400 | 7.78 |
| 2/24/2009 | 2,300 | 7.74 |
| 5/28/2009 | 4,100 | 8.32 |
| 9/14/2009 | 2,100 | 7.65 |
| 2/5/2010 | 3,400 | 8.13 |
| 8/3/2010 | 1,400 | 7.24 |
| 2/14/2011 | 1,100 | 7.00 |
| 8/4/2011 | 420 | 6.04 |
| 11/21/2011 | 130 | 4.87 |
| 2/2/2012 | 380 | 5.94 |
| 5/14/2012 | 800 | 6.68 |
| 8/13/2012 | 610 | 6.41 |
| 10/25/2012 | 250 | 5.52 |
| 3/5/2013 | 320 | 5.77 |
| 5/7/2013 | 230 | 5.44 |
| 8/8/2013 | 25 | 3.22 |
| 11/6/2013 | 230 | 5.44 |




**Notes:**
ND taken at reporting limit/reported value
Qualified data converted to reported value

| Data quality | |
|---|---|
| Total # of data points used in regression | 26 |
| # of nondetects | 0 |
| % of data as detects | 100 |

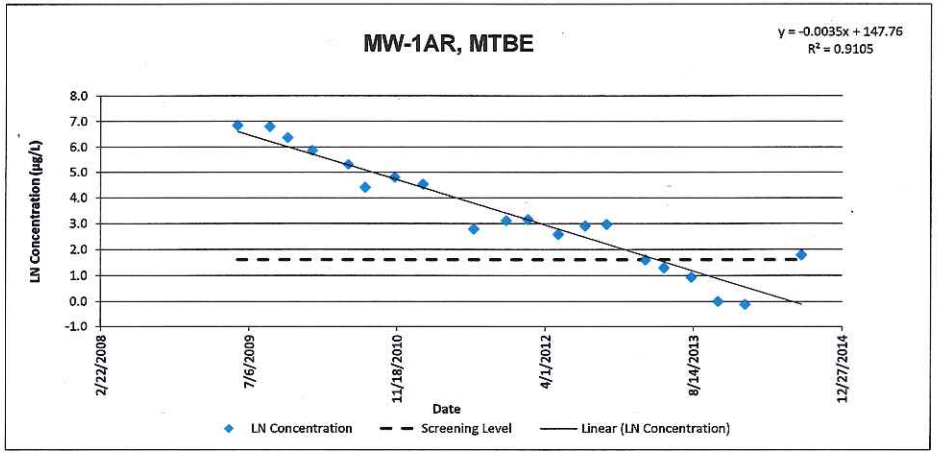
| Results | | |
|---|---|---|
| Coefficient of Determination ($R^2$) = | 0.6146 | |
| p-Value = | 2.16E-06 | |
| Attenuation Rate in Groundwater (K) = | 0.0012 | $days^{-1}$ |
| Attenuation Rate in Groundwater at 90% confidence (K) = | 0.0010 | $days^{-1}$ |
| Chemical Half Life in Groundwater ($t_{1/2}$) = | 5.60E+02 | days |

| Date Screening Level Reached | |
|---|---|
| Screening Level | 5 |
| LN Screening Level | 1.6 |
| Intercept | 56.755 |
| Slope | -0.0012 |
| Date to Screening Level | 12/12/2021 |

**Abbreviations and Notes**
ug/l = micrograms per liter
LN = Natural Logarithm

**Sample Information**
**Sample Location** MW-1AR
**Constituent** MTBE

| Data | | |
|---|---|---|
| Sample Date | Concentration (ug/L) | LN Concentration |
| 5/28/2009 | 930 | 6.84 |
| 9/14/2009 | 890 | 6.79 |
| 11/13/2009 | 580 | 6.36 |
| 2/5/2010 | 350 | 5.86 |
| 6/7/2010 | 200 | 5.30 |
| 8/3/2010 | 81 | 4.39 |
| 11/11/2010 | 120 | 4.79 |
| 2/14/2011 | 91 | 4.51 |
| 8/4/2011 | 16 | 2.77 |
| 11/21/2011 | 22 | 3.09 |
| 2/2/2012 | 23 | 3.14 |
| 5/14/2012 | 13 | 2.56 |
| 8/13/2012 | 18 | 2.89 |
| 10/25/2012 | 19 | 2.94 |
| 3/5/2013 | 4.9 | 1.59 |
| 5/7/2013 | 3.6 | 1.28 |
| 8/8/2013 | 2.5 | 0.92 |
| 11/6/2013 | 0.98 | -0.02 |
| 2/5/2014 | 0.88 | -0.13 |
| 8/13/2014 | 5.9 | 1.77 |




**Notes:**
ND taken at reporting limit/reported value
Qualified data converted to reported value

| Data quality | |
|---|---|
| Total # of data points used in regression | 20 |
| # of nondetects | 0 |
| % of data as detects | 100 |

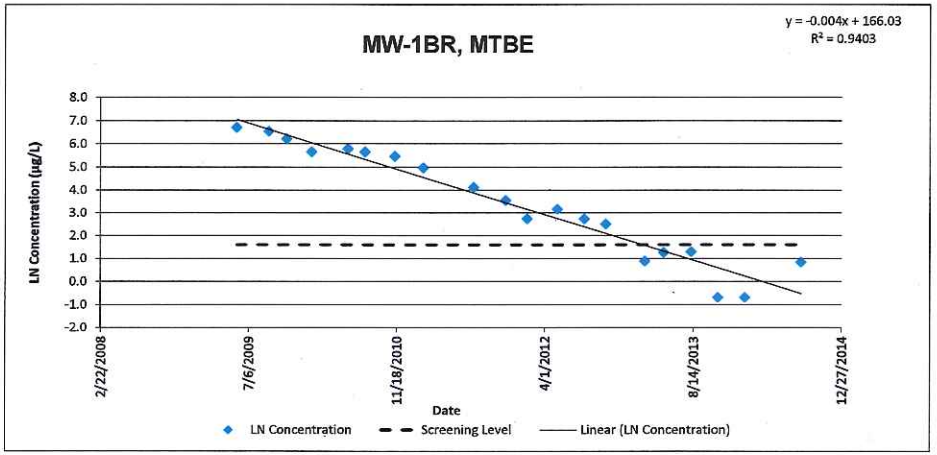
| Results | | |
|---|---|---|
| Coefficient of Determination ($R^2$) = | 0.9105 | |
| p-Value = | 7.16E-11 | |
| Attenuation Rate in Groundwater (K) = | 0.0035 | $days^{-1}$ |
| Attenuation Rate in Groundwater at 90% confidence (K) = | 0.0032 | $days^{-1}$ |
| Chemical Half Life in Groundwater ($t_{1/2}$) = | 1.96E+02 | days |

| Date Screening Level Reached | |
|---|---|
| Screening Level | 5 |
| LN Screening Level | 1.6 |
| Intercept | 147.757 |
| Slope | -0.0035 |
| Date to Screening Level | 4/12/2013 |

**Abbreviations and Notes**
ug/l = micrograms per liter
LN = Natural Logarithm

**Sample Information**
**Sample Location** MW-1BR
**Constituent** MTBE

| Data | | |
|---|---|---|
| Sample Date | Concentration (ug/L) | LN Concentration |
| 5/28/2009 | 810 | 6.70 |
| 9/14/2009 | 680 | 6.52 |
| 11/13/2009 | 490 | 6.19 |
| 2/5/2010 | 280 | 5.63 |
| 6/7/2010 | 320 | 5.77 |
| 8/3/2010 | 280 | 5.63 |
| 11/11/2010 | 230 | 5.44 |
| 2/14/2011 | 140 | 4.94 |
| 8/4/2011 | 60 | 4.09 |
| 11/21/2011 | 34 | 3.53 |
| 2/2/2012 | 15 | 2.71 |
| 5/14/2012 | 23 | 3.14 |
| 8/13/2012 | 15 | 2.71 |
| 10/25/2012 | 12 | 2.48 |
| 3/5/2013 | 2.4 | 0.88 |
| 5/7/2013 | 3.5 | 1.25 |
| 8/8/2013 | 3.6 | 1.28 |
| 11/6/2013 | 0.5 | -0.69 |
| 2/5/2014 | 0.5 | -0.69 |
| 8/13/2014 | 2.3 | 0.83 |




**Notes:**
ND taken at reporting limit/reported value
Qualified data converted to reported value

| Data quality | |
|---|---|
| Total # of data points used in regression | 20 |
| # of nondetects | 2 |
| % of data as detects | 90 |

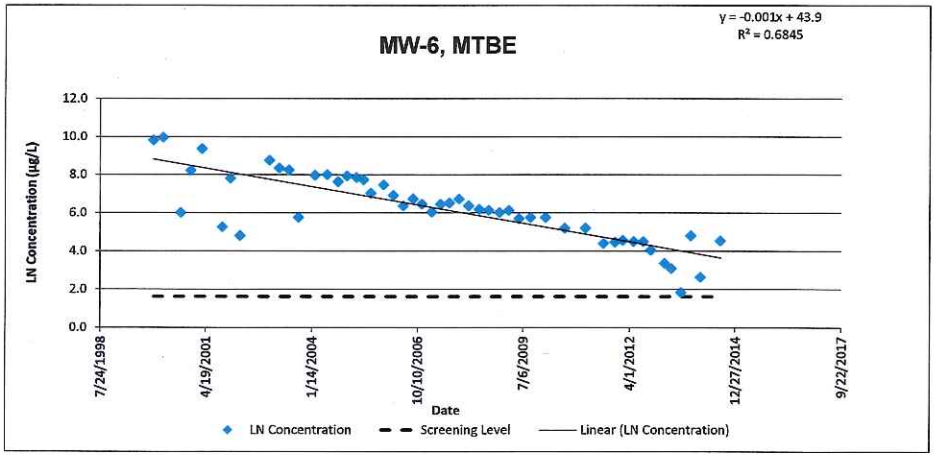
| Results | | |
|---|---|---|
| Coefficient of Determination ($R^2$) = | 0.9403 | |
| p-Value = | 1.84E-12 | |
| Attenuation Rate in Groundwater (K) = | 0.0040 | $days^{-1}$ |
| Attenuation Rate in Groundwater at 90% confidence (K) = | 0.0037 | $days^{-1}$ |
| Chemical Half Life in Groundwater ($t_{1/2}$) = | 1.74E+02 | days |

| Date Screening Level Reached | |
|---|---|
| Screening Level | 5 |
| LN Screening Level | 1.6 |
| Intercept | 166.033 |
| Slope | -0.0040 |
| Date to Screening Level | 2/24/2013 |

**Abbreviations and Notes**
ug/l = micrograms per liter
LN = Natural Logarithm

**Sample Information**
**Sample Location** MW-6
**Constituent** MTBE

| Data | | |
|---|---|---|
| Sample Date | Concentration (ug/L) | LN Concentration |
| 12/14/1999 | 18,000 | 9.80 |
| 3/14/2000 | 21,000 | 9.95 |
| 8/29/2000 | 400 | 5.99 |
| 12/1/2000 | 3,640 | 8.20 |
| 3/17/2001 | 11,500 | 9.35 |
| 9/24/2001 | 190 | 5.25 |
| 12/10/2001 | 2,400 | 7.78 |
| 3/11/2002 | 120 | 4.79 |
| 12/12/2002 | 6,200 | 8.73 |
| 3/13/2003 | 4,100 | 8.32 |
| 6/12/2003 | 3,700 | 8.22 |
| 9/12/2003 | 310 | 5.74 |
| 2/12/2004 | 2,800 | 7.94 |
| 6/7/2004 | 2,900 | 7.97 |
| 9/17/2004 | 2,000 | 7.60 |
| 12/11/2004 | 2,700 | 7.90 |
| 3/11/2005 | 2,500 | 7.82 |
| 5/17/2005 | 2,200 | 7.70 |
| 7/27/2005 | 1,100 | 7.00 |
| 11/23/2005 | 1,700 | 7.44 |
| 2/24/2006 | 990 | 6.90 |
| 5/30/2006 | 560 | 6.33 |
| 8/30/2006 | 820 | 6.71 |
| 11/22/2006 | 620 | 6.43 |
| 2/23/2007 | 410 | 6.02 |
| 5/18/2007 | 620 | 6.43 |
| 8/10/2007 | 660 | 6.49 |
| 11/9/2007 | 820 | 6.71 |
| 2/8/2008 | 570 | 6.35 |
| 5/16/2008 | 480 | 6.17 |
| 8/15/2008 | 450 | 6.11 |
| 11/26/2008 | 400 | 5.99 |
| 2/24/2009 | 450 | 6.11 |
| 5/28/2009 | 290 | 5.67 |
| 9/14/2009 | 310 | 5.74 |
| 2/5/2010 | 310 | 5.74 |
| 8/3/2010 | 180 | 5.19 |
| 2/14/2011 | 180 | 5.19 |
| 8/4/2011 | 80 | 4.38 |
| 11/21/2011 | 86 | 4.45 |
| 2/2/2012 | 94 | 4.54 |
| 5/14/2012 | 89 | 4.49 |
| 8/13/2012 | 89 | 4.49 |
| 10/25/2012 | 57 | 4.04 |
| 3/5/2013 | 29 | 3.37 |
| 5/7/2013 | 22 | 3.09 |
| 8/8/2013 | 6.2 | 1.82 |
| 11/6/2013 | 120 | 4.79 |
| 2/5/2014 | 14 | 2.64 |
| 8/13/2014 | 93 | 4.53 |




**Notes:**
ND taken at reporting limit/reported value
Qualified data converted to reported value

| Data quality | |
|---|---|
| Total # of data points used in regression | 50 |
| # of nondetects | 0 |
| % of data as detects | 100 |

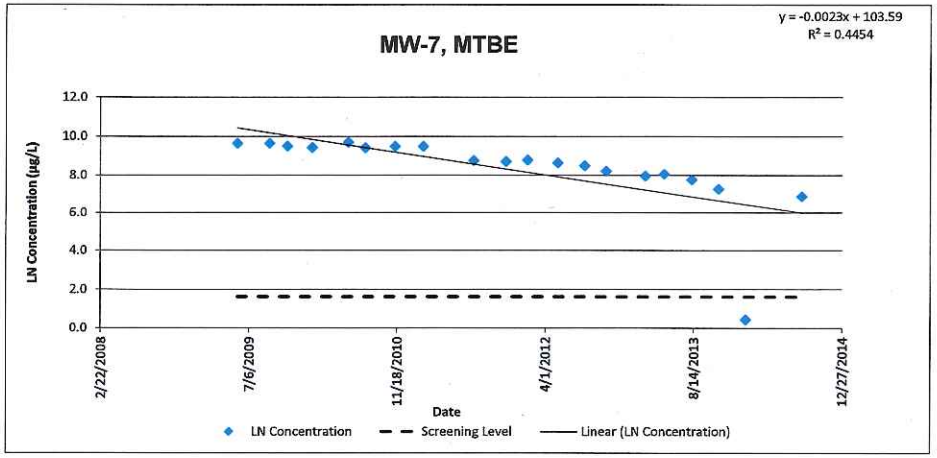
| Results | | |
|---|---|---|
| Coefficient of Determination ($R^2$) = | 0.6845 | |
| p-Value = | 1.29E-13 | |
| Attenuation Rate in Groundwater (K) = | 0.0010 | $days^{-1}$ |
| Attenuation Rate in Groundwater at 90% confidence (K) = | 0.0008 | $days^{-1}$ |
| Chemical Half Life in Groundwater ($t_{1/2}$) = | 7.21E+02 | days |

| Date Screening Level Reached | |
|---|---|
| Screening Level | 5 |
| LN Screening Level | 1.6 |
| Intercept | 43.900 |
| Slope | -0.0010 |
| Date to Screening Level | 6/20/2020 |

**Abbreviations and Notes**
ug/l = micrograms per liter
LN = Natural Logarithm

**Sample Information**
**Sample Location** MW-7
**Constituent** MTBE

| Data | | |
|---|---|---|
| Sample Date | Concentration | LN Concentration |
| | (ug/L) | |
| 5/28/2009 | 15,000 | 9.62 |
| 9/14/2009 | 15,000 | 9.62 |
| 11/13/2009 | 13,000 | 9.47 |
| 2/5/2010 | 12,000 | 9.39 |
| 6/7/2010 | 16,000 | 9.68 |
| 8/3/2010 | 12,000 | 9.39 |
| 11/11/2010 | 13,000 | 9.47 |
| 2/14/2011 | 13,000 | 9.47 |
| 8/4/2011 | 6,300 | 8.75 |
| 11/21/2011 | 5,900 | 8.68 |
| 2/2/2012 | 6,400 | 8.76 |
| 5/14/2012 | 5,600 | 8.63 |
| 8/13/2012 | 4,800 | 8.48 |
| 10/25/2012 | 3,600 | 8.19 |
| 3/5/2013 | 2,800 | 7.94 |
| 5/7/2013 | 3,100 | 8.04 |
| 8/8/2013 | 2,300 | 7.74 |
| 11/6/2013 | 1,400 | 7.24 |
| 2/5/2014 | 2 | 0.41 |
| 8/13/2014 | 940 | 6.85 |




**Notes:**
ND taken at reporting limit/reported value
Qualified data converted to reported value

| Data quality | |
|---|---|
| Total # of data points used in regression | 20 |
| # of nondetects | 0 |
| % of data as detects | 100 |

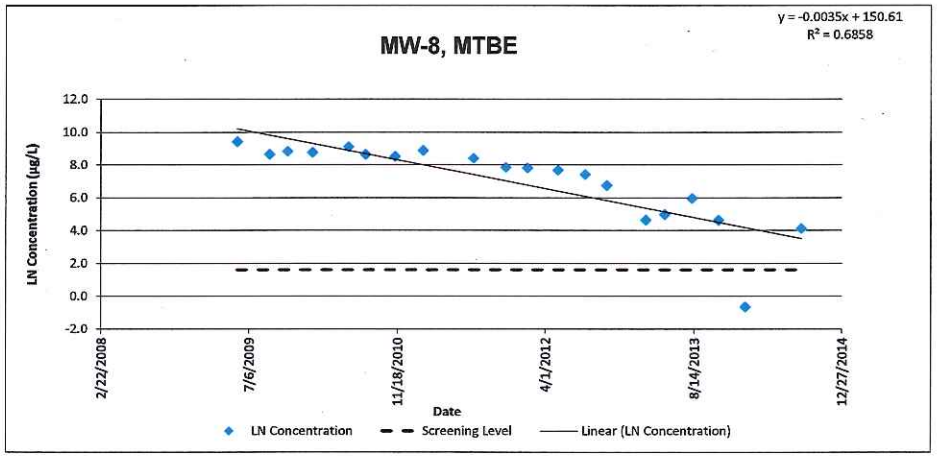
| Results | | |
|---|---|---|
| Coefficient of Determination ($R^2$) = | 0.4454 | |
| p-Value = | 1.31E-03 | |
| Attenuation Rate in Groundwater (K) = | 0.0023 | $days^{-1}$ |
| Attenuation Rate in Groundwater at 90% confidence (K) = | 0.0015 | $days^{-1}$ |
| Chemical Half Life in Groundwater ($t_{1/2}$) = | 2.97E+02 | days |

| Date Screening Level Reached | |
|---|---|
| Screening Level | 5 |
| LN Screening Level | 1.6 |
| Intercept | 103.591 |
| Slope | -0.0023 |
| Date to Screening Level | 10/2/2019 |

**Abbreviations and Notes**
ug/l = micrograms per liter
LN = Natural Logarithm

**Sample Information**
**Sample Location** MW-8
**Constituent** MTBE

| Data | | |
|---|---|---|
| Sample Date | Concentration (ug/L) | LN Concentration |
| 5/28/2009 | 12,000 | 9.39 |
| 9/14/2009 | 5,600 | 8.63 |
| 11/13/2009 | 6,700 | 8.81 |
| 2/5/2010 | 6,300 | 8.75 |
| 6/7/2010 | 9,000 | 9.10 |
| 8/3/2010 | 5,600 | 8.63 |
| 11/11/2010 | 4,900 | 8.50 |
| 2/14/2011 | 7,100 | 8.87 |
| 8/4/2011 | 4,400 | 8.39 |
| 11/21/2011 | 2,500 | 7.82 |
| 2/2/2012 | 2,400 | 7.78 |
| 5/14/2012 | 2,100 | 7.65 |
| 8/13/2012 | 1,600 | 7.38 |
| 10/25/2012 | 810 | 6.70 |
| 3/5/2013 | 100 | 4.61 |
| 5/7/2013 | 140 | 4.94 |
| 8/8/2013 | 370 | 5.91 |
| 11/6/2013 | 98 | 4.58 |
| 2/5/2014 | 0.5 | -0.69 |
| 8/13/2014 | 60 | 4.09 |




**Notes:**
ND taken at reporting limit/reported value
Qualified data converted to reported value

| Data quality | |
|---|---|
| Total # of data points used in regression | 20 |
| # of nondetects | 1 |
| % of data as detects | 95 |

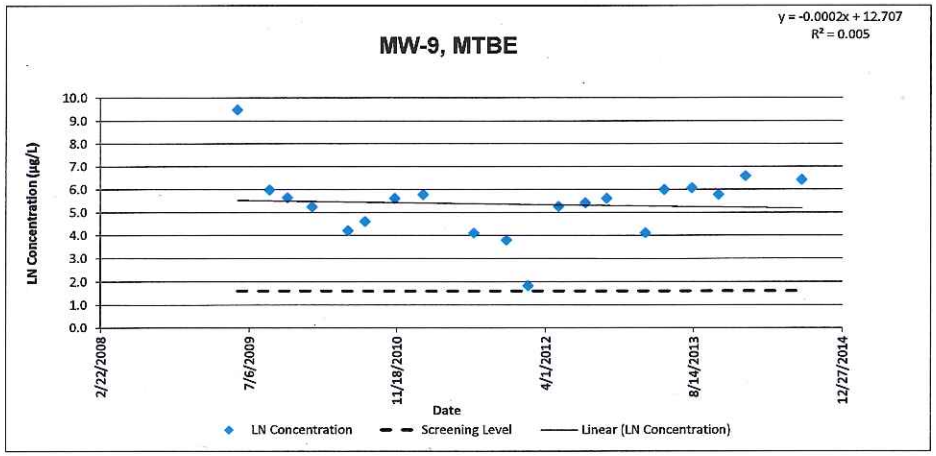
| Results | | |
|---|---|---|
| Coefficient of Determination ($R^2$) = | 0.6858 | |
| p-Value = | 6.54E-06 | |
| Attenuation Rate in Groundwater (K) = | 0.0035 | $days^{-1}$ |
| Attenuation Rate in Groundwater at 90% confidence (K) = | 0.0028 | $days^{-1}$ |
| Chemical Half Life in Groundwater ($t_{1/2}$) = | 1.97E+02 | days |

| Date Screening Level Reached | |
|---|---|
| Screening Level | 5 |
| LN Screening Level | 1.6 |
| Intercept | 150.613 |
| Slope | -0.0035 |
| Date to Screening Level | 2/6/2016 |

**Abbreviations and Notes**
ug/l = micrograms per liter
LN = Natural Logarithm

**Sample Information**
**Sample Location** MW-9
**Constituent** MTBE

| Data | | |
|---|---|---|
| Sample Date | Concentration (ug/L) | LN Concentration |
| 5/28/2009 | 13,000 | 9.47 |
| 9/14/2009 | 390 | 5.97 |
| 11/13/2009 | 280 | 5.63 |
| 2/5/2010 | 190 | 5.25 |
| 6/7/2010 | 66 | 4.19 |
| 8/3/2010 | 99 | 4.60 |
| 11/11/2010 | 270 | 5.60 |
| 2/14/2011 | 320 | 5.77 |
| 8/4/2011 | 59 | 4.08 |
| 11/21/2011 | 44 | 3.78 |
| 2/2/2012 | 6.1 | 1.81 |
| 5/14/2012 | 190 | 5.25 |
| 8/13/2012 | 220 | 5.39 |
| 10/25/2012 | 270 | 5.60 |
| 3/5/2013 | 60 | 4.09 |
| 5/7/2013 | 390 | 5.97 |
| 8/8/2013 | 420 | 6.04 |
| 11/6/2013 | 320 | 5.77 |
| 2/5/2014 | 710 | 6.57 |
| 8/13/2014 | 600 | 6.40 |




**Notes:**
ND taken at reporting limit/reported value
Qualified data converted to reported value

| Data quality | |
|---|---|
| Total # of data points used in regression | 20 |
| # of nondetects | 0 |
| % of data as detects | 100 |

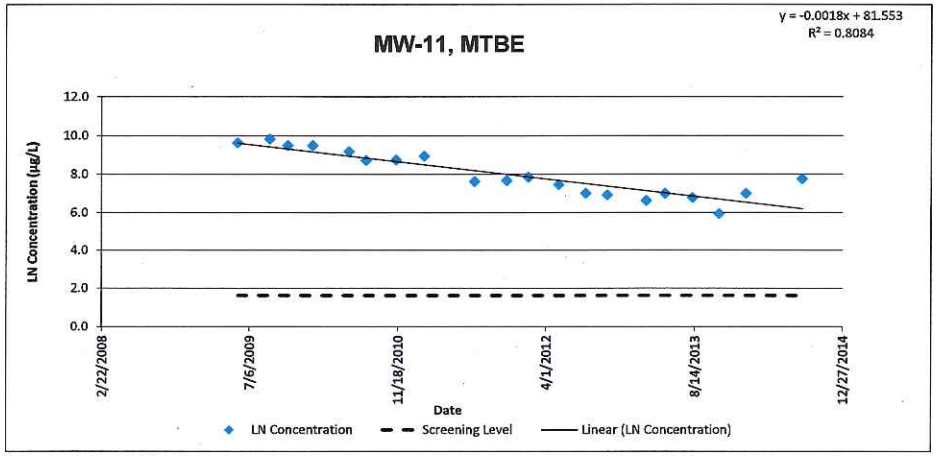
| Results | | |
|---|---|---|
| Coefficient of Determination ($R^2$) = | 0.0050 | |
| p-Value = | 7.67E-01 | |
| Attenuation Rate in Groundwater (K) = | 0.0002 | $days^{-1}$ |
| Attenuation Rate in Groundwater at 90% confidence (K) = | -0.0006 | $days^{-1}$ |
| Chemical Half Life in Groundwater ($t_{1/2}$) = | NA | days |

| Date Screening Level Reached | |
|---|---|
| Screening Level | 5 |
| LN Screening Level | 1.6 |
| Intercept | 12.707 |
| Slope | -0.0002 |
| Date to Screening Level | NA |

**Abbreviations and Notes**
ug/l = micrograms per liter
LN = Natural Logarithm

**Sample Information**
**Sample Location** MW-11
**Constituent** MTBE

| Data | | |
|---|---|---|
| Sample Date | Concentration (ug/L) | LN Concentration |
| 5/28/2009 | 15,000 | 9.62 |
| 9/14/2009 | 18,000 | 9.80 |
| 11/13/2009 | 13,000 | 9.47 |
| 2/5/2010 | 13,000 | 9.47 |
| 6/7/2010 | 9,500 | 9.16 |
| 8/3/2010 | 6,000 | 8.70 |
| 11/11/2010 | 6,100 | 8.72 |
| 2/14/2011 | 7,400 | 8.91 |
| 8/4/2011 | 2,000 | 7.60 |
| 11/21/2011 | 2,100 | 7.65 |
| 2/2/2012 | 2,500 | 7.82 |
| 5/14/2012 | 1,700 | 7.44 |
| 8/13/2012 | 1,100 | 7.00 |
| 10/25/2012 | 1,000 | 6.91 |
| 3/5/2013 | 750 | 6.62 |
| 5/7/2013 | 1,100 | 7.00 |
| 8/8/2013 | 880 | 6.78 |
| 11/6/2013 | 380 | 5.94 |
| 2/5/2014 | 1,100 | 7.00 |
| 8/13/2014 | 2,300 | 7.74 |



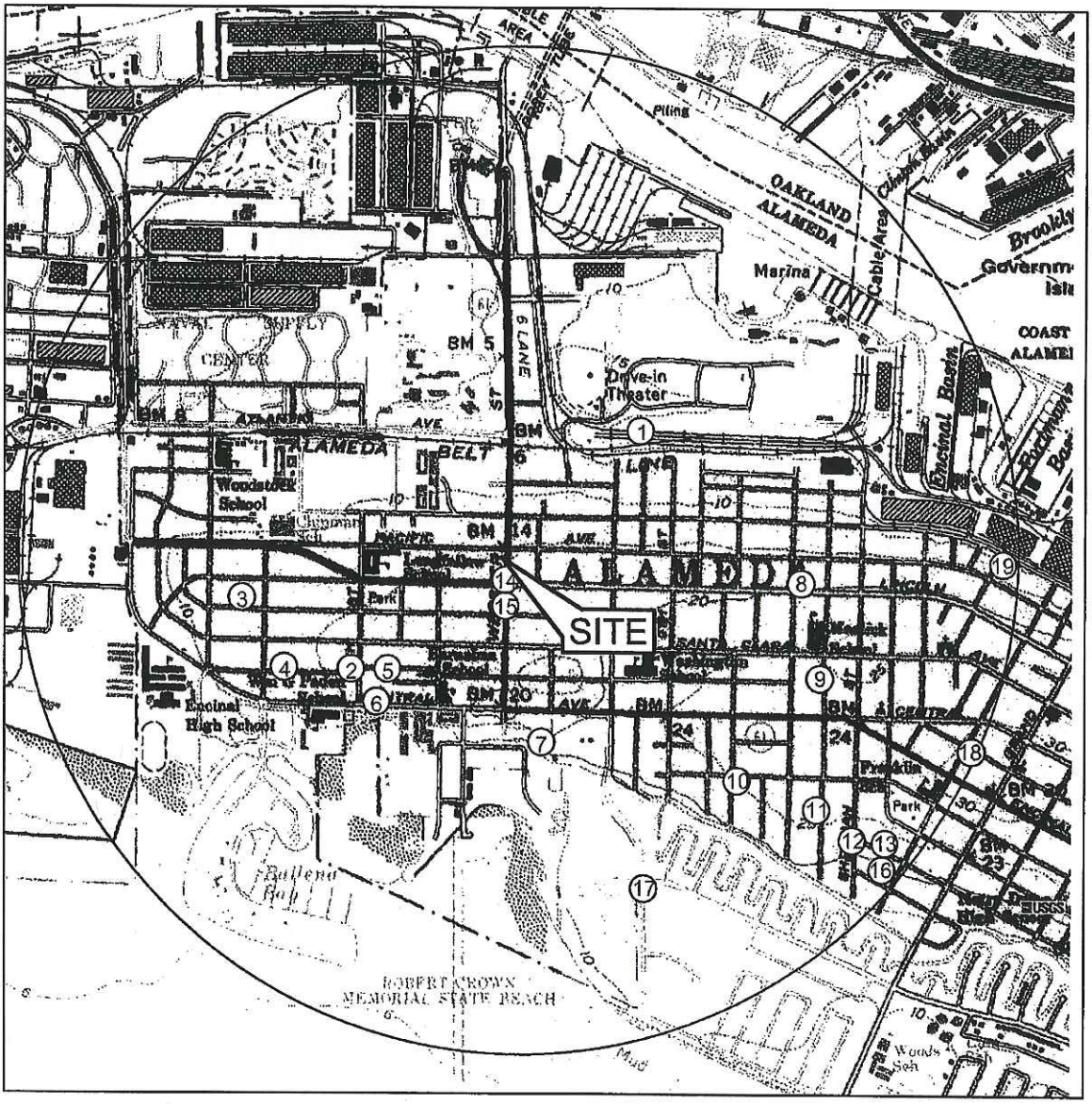

**Notes:**
ND taken at reporting limit/reported value
Qualified data converted to reported value

| Data quality | |
|---|---|
| Total # of data points used in regression | 20 |
| # of nondetects | 0 |
| % of data as detects | 100 |

| Results | | |
|---|---|---|
| Coefficient of Determination ($R^2$) = | 0.8084 | |
| p-Value = | 7.10E-08 | |
| Attenuation Rate in Groundwater (K) = | 0.0018 | $days^{-1}$ |
| Attenuation Rate in Groundwater at 90% confidence (K) = | 0.0015 | $days^{-1}$ |
| Chemical Half Life in Groundwater ($t_{1/2}$) = | 3.85E+02 | days |

| Date Screening Level Reached | |
|---|---|
| Screening Level | 5 |
| LN Screening Level | 1.6 |
| Intercept | 81.553 |
| Slope | -0.0018 |
| Date to Screening Level | 7/29/2021 |

**Abbreviations and Notes**
ug/l = micrograms per liter
LN = Natural Logarithm




SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, OAKLAND WEST QUADRANGLE, 1998

FIGURE 1

SITE LOCATOR SENSITIVE RECEPTOR MAP

76 STATION NO. 0843
1629 WEBSTER STREET
ALAMEDA, CALIFORNIA

| | |
|---|---|
| PROJECT NO. C100-843 | DRAWN BY JH 12/12/06 |
| FILE NO. Site Locator 0843 | PREPARED BY JH |
| REVISION NO. | REVIEWED BY |

DELTA

**Table 1**
One-Mile Agency Receptor Survey
ConocoPhillips Station No.0843
1629 Webster Street, Alameda, California

| | DWR[1] Well No. | Address | City | State | Zip | Owner | Well Type | Distance from Site (miles) | Direction Relative to Site |
|---|---|---|---|---|---|---|---|---|---|
| 1- | 2S/4W-2R1 | Marina Village, off Sherman St. | Alameda | CA | | Vintage Properties | Irrigation | 0.7 | NE |
| 2- | 2S/4W-10H2 | 424 Santa Clara Ave. | Alameda | CA | 94501 | Richard F. Fawcett | Domestic | 0.5 | SW |
| 3- | 2S/4W-10B1 | 132 Haight Ave. | Alameda | CA | 94501 | Idella E. McManus | Irrigation | 0.7 | W |
| 4- | 2S/4W-10G1 | 314 Santa Clara Ave. | Alameda | CA | 94501 | James GoLightly | Irrigation | 0.6 | SW |
| 5- | 2S/4W-10H3 | 462 Santa Clara Ave. | Alameda | CA | | PG&E | Cathodic protection | 0.4 | SW |
| 6- | 2S/4W-10H1 | 447 Taylor Avenue | Alameda | CA | 94501 | A.E. Bryant | Irrigation | 0.5 | SW |
| 7- | 2S/4W-11M1 | 645 Central | Alameda | CA | | Paul Merrett | Industrial | 0.3 | SW |
| 8- | 2S/4W-11A1 | Pacific Ave. east of Chapin | Alameda | CA | | PG&E | Cathodic protection | 0.5 | E |
| 9- | 2S/4W-11H1 | Santa Clara east of Verdi St. | Alameda | CA | | PG&E | Cathodic protection | 0.6 | SE |
| 10- | 2S/4W-11K2? | 920 Centennial Ave. | Alameda | CA | | Lawrence Picetti | Irrigation | 0.5 | SE |
| 11- | 2S/4W-11J2 | 1036 San Antonio Ave. | Alameda | CA | 94501 | Grover A. Chessmore | Domestic/Irrigation | 0.7 | SE |
| 12- | 2S/4W-11J3 | 1236 St. Charles | Alameda | CA | 94501 | Frank Weeden | Irrigation | 0.8 | SE |
| 13- | 2S/4W-11J4 | 1224 Bay St. | Alameda | CA | 94501 | Richard Bartalini | Irrigation | 0.8 | SE |
| 14- | 2S/4W-11D1 | 603 Pacific Ave. | Alameda | CA | 94501 | H.W. Moore | Irrigation | 0.1 | NW |
| 15- | 2S/4W-11E1 | 1614 6th St. | Alameda | CA | 94501 | Daniel C. Robinson | Irrigation | 0.1 | W |
| 16- | 2S/4W-11J1 | 1205 Bay St. | Alameda | CA | 94501 | W.E. Lyons | Irrigation | 0.9 | SE |
| 17- | 2S/4W-11Q1 | 900 Otis Drive | Alameda | CA | | Chevron USA, Inc. | Dewatering | 0.7 | SE |
| 18- | 2S/4W-12M1 | 1401 F. Cottage St. | Alameda | CA | 94501 | Central West Homeowners | Irrigation | 1.0 | SE |
| 19- | 2S/4W-12D2 | 1521 Buena Vista | Alameda | CA | 94501 | Alameda Liquid Bulk Terminal | Industrial | 0.9 | NE |
| [2]20- | 2S/4W-3E1 | Alameda Naval Air Station west side of Main Street | Alameda | CA | | U.S. Navy | | | |
| [2]21- | 2S/4W-5A1 | Naval Air Station (old PAA) | Alameda | CA | | | | | |
| [2]22- | 2S/4W-3E3 | B Avenue, Building 17 | Alameda | CA | 94501 | U.S. Naval Air Station | Cathodic protection | | |
| [2]23- | 2S/4W-1D1 | Embarcadero rail crossing (25' from rr, 300 yds from Emb.) | Oakland | CA | | Union Pacific Railroad | Cathodic protection | | |

DWR: Department of Water Resources
[1] Well Locations shown on Figure 1.
[2] Specific address cannot be located on map.

# ATTACHMENT 7

**TABLE 1**
**RESULTS OF ANALYSIS OF SOIL AND GROUNDWATER SAMPLES**
Former Tosco 76 Service Station 0843
1629 Webster Street
Alameda, California
(Page 1 of 2)

MTBE

| Sample# | Plate 2 Callout | Depth | Date | TEPHd | TPPHg | B | T | E | X | TRPH | [redacted]E | SVOC's | HVOC's | Total Lead/ Soluble Lead |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | ppm (unless otherwise noted) | | | | | | | | | | |
| **Gasoline USTs** | | | | | | | | | | | | | | |
| S-8-TIN | C | 8 | 6/17/98 | NA | 44 | 0.09 | 0.04 | 0.2 | 0.4 | NA | 280 | NA | NA | 27/NA |
| S-5.5-T1E | F | 5.5 | 6/17/98 | NA | ND | ND | ND | ND | ND | NA | ND* | NA | NA | NA |
| S-2-T1N | B | 2 | 6/17/98 | NA | ND | 0.04 | ND | 0.08 | 0.08 | NA | ND* | NA | NA | 63/NA |
| S-5.5-T2S | D | 5.5 | 6/17/98 | NA | ND | ND | ND | ND | ND | ND | ND* | NA | NA | NA |
| S-6-T2E | E | 6 | 6/17/98 | NA | ND | ND | ND | ND | ND | NA | ND* | NA | NA | NA |
| **Used - Oil UST** | | | | | | | | | | | | | | |
| S-6-T3 | A | 6 | 6/17/98 | ND** | ND | ND | ND | ND | ND | ND | ND* | ND | ND | 21/NA |
| **Product Lines and Dispensers** | | | | | | | | | | | | | | |
| S-3-D1 | G | 3 | 6/17/98 | NA | ND | ND | ND | ND | ND | NA | ND | NA | NA | NA |
| S-3-D2 | H | 3 | 6/17/98 | NA | ND | ND | ND | ND | ND | NA | ND | NA | NA | NA |
| X S-4-D3 | K | 4 | 6/17/98 | NA | ND | ND | ND | ND | ND | NA | ND | NA | NA | NA |
| X S-3.5-D4 | L | 3.5 | 6/17/98 | NA | ND | ND | ND | ND | ND | NA | ND | NA | NA | NA |
| S-3-P1 | I | 3 | 6/17/98 | NA | ND | ND | ND | ND | ND | NA | ND | NA | NA | NA |
| X S-3.5-P2 | J | 3.5 | 6/17/98 | ND | ND | ND | ND | ND | ND | NA | ND | NA | NA | NA |
| **Stockpiles** | | | | | | | | | | | | | | |
| SP-1-(1-4) | NA | NA | 6/17/98 | NA | 1,700 | 3.6 | 57 | 21 | 170 | NA | ND | NA | NA | 42/NA |
| SP-2 -(1-4) | NA | NA | 6/17/98 | NA | 460 | 0.7 | 4.6 | 3.5 | 36 | NA | ND | NA | NA | 64/2.4 |
| SP-3-(1-4) | NA | NA | 6/17/98 | 26 | 2 | ND | 0.18 | 0.005 | 0.046 | 1,193 | ND | ND-2 | ND | 110/3.5 |
| **WATER** | | | | | | | | | | | | | | |
| S-8.5-TP | NA | 8.5 | 6/17/98 | NA | [redacted] | 890 | 930 | 360 | 2,300 | NA | [redacted] | | | |

Replo

19,000

1,300 *

TABLE 1

RESULTS OF ANALYSIS OF SOIL AND GROUNDWATER SAMPLES

Former Tosco 76 Service Station 0843

1629 Webster Street

Alameda, California



Notes:

Soil Samples reported in parts per million (ppm) unless otherwise noted

Water Samples reported in parts per billion (ppb) unless otherwise noted

| | | |
|---|---|---|
| S-8-T1N | = | Soil-depth-Tank T1 North |
| D4 | = | Dispenser #4 |
| PL | = | Product Line |
| TEPHd | = | Total extractable petroleum hydrocarbons as diesel analyzed using EPA method 8015 |
| TPPHg | = | Total purgeable petroleum hydrocarbons as gasoline analyzed using EPA method 8015 |
| BTEX | = | Benzene, toluene, ethylbenzene, total xylenes analyzed using EPA mehod 8020 |
| TRPH | = | Total recoverable petroleum hydrocarbon analyzed using EPA method 5520 E&F |
| MTBE | = | Methyl tertiany butyl ether analyzed using EPA method 8020 |
| * | = | MTBE analyzed using EPA method 8260 |
| SVOCs | = | Semivolatile organic compounds analyzed using EPA method 8270 |
| HVOCs | = | Halogenated volatile organic compounds analyzed using EPA method 8010 |
| Total Lead | = | Analyzed using EPA method 6010 |
| Soluble Lead | = | Analyzed using the California Waste Extraction Test (WET) |
| ND | = | Not detected above laboratory method detection limits |
| NA | = | Not Applicable |
| ** | = | Sample analyzed 7/17/98 for TEPHd after expiration of hold time |

Sample SP-3-(1-4) ND for SVOCs except for Phenanthrene = 0.5 ppm, Fluoranthene = 0.3 ppm, Pyrene = 0 4 ppm, Cadmium = ND, Chromium = 23 ppm ; Nickel = 25 ppm; Zinc = 110 ppm

Sample S-6-T3 Analyzed For Cadmium = ND, Chromium = 26 ppm, nickel = 19 ppm ; Zinc =33 using EPA method 6010 and MTBE = ND using EPA method 8260

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

**Client:** TOSCO
**Project:** 224832TI
**Sample Matrix:** Soil

**Service Request:** S9801606
**Date Collected:** 6/17/98
**Date Received:** 6/18/98

### Halogenated Volatile Organic Compounds

Sample Name: S-6-T3
Lab Code: S9801606-001
Test Notes:

Units: mg/Kg (ppm)
Basis: Wet

| Analyte | Prep Method | Analysis Method | MRL | Dilution Factor | Date Extracted | Date Analyzed | Result | Result Notes |
|---|---|---|---|---|---|---|---|---|
| Dichlorodifluoromethane (CFC 12) | EPA 5030 | 8010 | 0.1 | 1 | 6/24/98 | 6/24/98 | ND | |
| Chloromethane | EPA 5030 | 8010 | 0.1 | 1 | 6/24/98 | 6/24/98 | ND | |
| Vinyl Chloride | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| Bromomethane | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| Chloroethane | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| Trichlorofluoromethane (CFC 11) | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| 1,1-Dichloroethene | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| Trichlorotrifluoroethane (CFC 113) | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| Methylene Chloride | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| trans-1,2-Dichloroethene | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| cis-1,2-Dichloroethene | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| 1,1-Dichloroethane | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| Chloroform | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| 1,1,1-Trichloroethane (TCA) | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| Carbon Tetrachloride | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| 1,2-Dichloroethane | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| Trichloroethene (TCE) | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| 1,2-Dichloropropane | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| Bromodichloromethane | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| 2-Chloroethyl Vinyl Ether | EPA 5030 | 8010 | 0.5 | 1 | 6/24/98 | 6/24/98 | ND | |
| trans-1,3-Dichloropropene | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| cis-1,3-Dichloropropene | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| 1,1,2-Trichloroethane | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| Tetrachloroethene (PCE) | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| Dibromochloromethane | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| Chlorobenzene | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| Bromoform | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| 1,1,2,2-Tetrachloroethane | EPA 5030 | 8010 | 0.05 | 1 | 6/24/98 | 6/24/98 | ND | |
| 1,3-Dichlorobenzene | EPA 5030 | 8010 | 0.1 | 1 | 6/24/98 | 6/24/98 | ND | |
| 1,4-Dichlorobenzene | EPA 5030 | 8010 | 0.1 | 1 | 6/24/98 | 6/24/98 | ND | |
| 1,2-Dichlorobenzene | EPA 5030 | 8010 | 0.1 | 1 | 6/24/98 | 6/24/98 | ND | |

1544/111296

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | TOSCO | **Service Request:** | S9801606 |
| **Project:** | 224832TI | **Date Collected:** | 6/17/98 |
| **Sample Matrix:** | Soil | **Date Received:** | 6/18/98 |

### Base Neutral/Acid Semivolatile Organic Compounds

| | | | |
|---|---|---|---|
| Sample Name: | S-6-T3 | Units: | mg/Kg (ppm) |
| Lab Code: | S9801606-001 | Basis: | Wet |
| Test Notes: | | | |

| Analyte | Prep Method | Analysis Method | MRL | Dilution Factor | Date Extracted | Date Analyzed | Result | Result Notes |
|---|---|---|---|---|---|---|---|---|
| N-Nitrosodimethylamine | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Aniline | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Bis(2-chloroethyl) Ether | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Phenol | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 2-Chlorophenol | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 1,3-Dichlorobenzene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 1,4-Dichlorobenzene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 1,2-Dichlorobenzene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Benzyl Alcohol | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Bis(2-chloroisopropyl) Ether | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 2-Methylphenol | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Hexachloroethane | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| N-Nitrosodi-n-propylamine | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 3- and 4-Methylphenol* | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Nitrobenzene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Isophorone | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 2-Nitrophenol | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 2,4-Dimethylphenol | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Bis(2-chloroethoxy)methane | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 2,4-Dichlorophenol | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Benzoic Acid | 3550 | 8270B | 2 | 1 | 6/23/98 | 7/1/98 | ND | |
| 1,2,4-Trichlorobenzene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Naphthalene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 4-Chloroaniline | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Hexachlorobutadiene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 4-Chloro-3-methylphenol | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 2-Methylnaphthalene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Hexachlorocyclopentadiene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 2,4,6-Trichlorophenol | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 2,4,5-Trichlorophenol | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 2-Chloronaphthalene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 2-Nitroaniline | 3550 | 8270B | 2 | 1 | 6/23/98 | 7/1/98 | ND | |
| Acenaphthylene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Dimethyl Phthalate | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 2,6-Dinitrotoluene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Acenaphthene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 3-Nitroaniline | 3550 | 8270B | 2 | 1 | 6/23/98 | 7/1/98 | ND | |
| 2,4-Dinitrophenol | 3550 | 8270B | 2 | 1 | 6/23/98 | 7/1/98 | ND | |
| Dibenzofuran | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 4-Nitrophenol | 3550 | 8270B | 2 | 1 | 6/23/98 | 7/1/98 | ND | |
| 2,4-Dinitrotoluene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Fluorene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 4-Chlorophenyl Phenyl Ether | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |

* Quantified as 4-methylphenol.

## COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

| | | | |
|---|---|---|---|
| **Client:** | TOSCO | **Service Request:** | S9801606 |
| **Project:** | 224832TI | **Date Collected:** | 6/17/98 |
| **Sample Matrix:** | Soil | **Date Received:** | 6/18/98 |

Base Neutral/Acid Semivolatile Organic Compounds

| | | | |
|---|---|---|---|
| Sample Name: | S-6-T3 | Units: | mg/Kg (ppm) |
| Lab Code: | S9801606-001 | Basis: | Wet |
| Test Notes: | | | |

| Analyte | Prep Method | Analysis Method | MRL | Dilution Factor | Date Extracted | Date Analyzed | Result | Result Notes |
|---|---|---|---|---|---|---|---|---|
| Diethyl Phthalate | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 4-Nitroaniline | 3550 | 8270B | 2 | 1 | 6/23/98 | 7/1/98 | ND | |
| 2-Methyl-4,6-dinitrophenol | 3550 | 8270B | 2 | 1 | 6/23/98 | 7/1/98 | ND | |
| N-Nitrosodiphenylamine | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 4-Bromophenyl Phenyl Ether | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Hexachlorobenzene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Pentachlorophenol | 3550 | 8270B | 2 | 1 | 6/23/98 | 7/1/98 | ND | |
| Phenanthrene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Anthracene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Di-n-butyl Phthalate | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Fluoranthene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Pyrene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Butylbenzyl Phthalate | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| 3,3'-Dichlorobenzidine | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Benz(a)anthracene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Chrysene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Bis(2-ethylhexyl) Phthalate | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Di-n-octyl Phthalate | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Benzo(b)fluoranthene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Benzo(k)fluoranthene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Benzo(a)pyrene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Indeno(1,2,3-cd)pyrene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Dibenz(a,h)anthracene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |
| Benzo(g,h,i)perylene | 3550 | 8270B | 0.3 | 1 | 6/23/98 | 7/1/98 | ND | |

* Quantified as 4-methylphenol.

**Table 3**
**Historical Soil Analytical Data**
Unocal Service Station No. 0843
1629 Webster Street
Alameda, California

| Sample Location | Date | Sample Depth (feet bgs) | TPH-G /TPPH (mg/kg) | Benzene (mg/kg) | Toluene (mg/kg) | Ethyl-benzene (mg/kg) | Total Xylenes (mg/kg) | MTBE (mg/kg) | TBA (mg/kg) | ETBE (mg/kg) | TAME (mg/kg) | DIPE (mg/kg) | EDB (mg/kg) | EDC (mg/kg) | Ethanol (mg/kg) | Sulfate (mg/kg) | Manganese (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ESL | | | 2,700 | 71 | 4,300 | 490 | 2,500 | 3,800 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-10.5-B-1 | 3/2/1999 | 10.5 | <0.40 | <0.010 | <0.0020 | <0.0020 | <0.0020 | <0.010 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-10.5-B-2 | 3/2/1999 | 10.5 | <2.0 | 0.0295 | 0.0658 | 0.0359 | 0.119 | 0.561 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-10.5-B-3 | 3/2/1999 | 10.5 | <0.40 | <0.010 | <0.0020 | <0.0020 | <0.0020 | <0.010 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-10.5-B-4 | 3/2/1999 | 10.5 | <0.40 | <0.010 | <0.0020 | <0.0020 | <0.0020 | 0.109 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-4-GP1 | 5/23/2001 | 4 | <0.20 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-5-GP-2 | 5/23/2001 | 5 | <0.20 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-10-GP2 | 5/23/2001 | 10 | <0.20 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-5-GP3 | 5/23/2001 | 5 | <0.20 | <0.0050 | <0.0050 | <0.0050 | 0.011 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-5-GP4 | 5/23/2001 | 5 | <0.20 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-4-GP5 | 5/23/2001 | 4 | <0.20 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-10-GP5 | 5/23/2001 | 10 | <0.20 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.18 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-6.5-GP6 | 12/4/2001 | 6.5 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-6.5-GP7 | 12/4/2001 | 6.5 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-6-GP8 | 12/4/2001 | 6 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-6-GP9 | 12/4/2001 | 6 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-6.5-GP10 | 12/4/2001 | 6.5 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-6.5-GP11 | 12/4/2001 | 6.5 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-6-GP12 | 12/4/2001 | 6 | <1.0 | <0.0050 | <0.0050 | 0.010 | 0.015 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-12-GP12 | 12/4/2001 | 12 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-6.5-GP13 | 12/4/2001 | 6.5 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-12-GP13 | 12/4/2001 | 12 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-7-GP14 | 12/4/2001 | 7 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-6-GP15 | 12/4/2001 | 6 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-16-GP-15 | 12/4/2001 | 16 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-6.5-GP-16 | 12/4/2001 | 6.5 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-12-GP16 | 12/4/2001 | 12 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-6.5-GP17 | 12/4/2001 | 6.5 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-10-EX1N | 12/4/2002 | 10 | <50 | <0.25 | <0.25 | 0.73 | 4.9 | <0.25 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-10-EX1S | 12/4/2002 | 10 | <1.0 | <0.0050 | <0.0050 | <0.0053 | <0.10 | <0.0050 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-10-EX1W | 12/4/2002 | 10 | <1,000 | <0.25 | 4.1 | 20 | 120 | <0.25 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| S-10-EX1E | 12/4/2002 | 10 | <50 | <0.25 | 1.2 | 0.34 | 0.82 | 0.36 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| CPT-1 | 8/14/2008 | 7 | <0.20 | <0.0050 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | <1.0 | -- | -- |
| MW-1AR | 5/14/2009 | 20 | 0.26 | <0.0050 | <0.0050 | <0.0050 | <0.010 | 0.25 | <0.050 | <0.0050 | <0.0050 | <0.0050 | -- | <0.0050 | <1.0 | 15 | 160 |
| MW-1BR | 5/14/2009 | 20 | <0.20 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | 0.15 | <0.050 | <0.0050 | <0.0050 | <0.0050 | -- | <0.0050 | <1.0 | 15 | 150 |
| MW-7 | 5/14/2009 | 10 | 4,100 | <0.50 | <0.50 | 38 | 770 | <0.50 | <5.0 | <0.50 | <0.50 | <0.50 | -- | <0.50 | <100 | 16 | 110 |
| MW-8 | 5/14/2009 | 15 | <0.20 | <0.0050 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.050 | <0.0050 | <0.0050 | <0.0050 | -- | <0.0050 | <1.0 | 10 | 120 |
| MW-9 | 5/14/2009 | 10 | 46 | <0.12 | <0.12 | 2 | 9.5 | <1.2 | <1.2 | <0.12 | <0.12 | <0.12 | -- | <0.12 | <25 | <10 | 190 |
| MW-10 | 5/14/2009 | 10 | 0.4 | <0.0050 | <0.0050 | <0.0050 | <0.010 | <0.0081 | <0.050 | <0.0050 | <0.0050 | <0.0050 | -- | <0.0050 | <1.0 | <10 | 180 |
| MW-11 | 5/14/2009 | 10 | 0.4 | <0.0050 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.050 | <0.0050 | <0.0050 | <0.0050 | -- | <0.0050 | <1.0 | 51 | 190 |
| TSP-1 | 5/14/2009 | 20 | 0.24 | <0.0050 | <0.0050 | <0.0050 | <0.010 | 0.23 | <0.050 | <0.0050 | <0.0050 | <0.0050 | -- | <0.0050 | <1.0 | 18 | 140 |

**Table 3**
**Historical Soil Analytical Data**
Unocal Service Station No. 0843
1629 Webster Street
Alameda, California

| Sample Location | Date | Sample Depth (feet bgs) | TPH-G /TPPH (mg/kg) | Benzene (mg/kg) | Toluene (mg/kg) | Ethyl-benzene (mg/kg) | Total Xylenes (mg/kg) | MTBE (mg/kg) | TBA (mg/kg) | ETBE (mg/kg) | TAME (mg/kg) | DIPE (mg/kg) | EDB (mg/kg) | EDC (mg/kg) | Ethanol (mg/kg) | Sulfate (mg/kg) | Manganese (mg/kg) |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|

**Note**
Soil samples S-10.5-B-1 through S-10.5-B-4 were later converted into monitoring wells MW-1 through MW-4.

**Standard Abbreviations**

| | | | |
|---|---|---|---|
| **BOLD** | analyte detected above its laboratory reporting limit | ETBE | ethyl tertiary butyl ether |
| bgs | below ground surface | MTBE | methyl tertiary butyl ether |
| mg/kg | milligrams per kilogram | TAME | tertiary amyl methyl ether |
| < | not detected at or above method reporting limit | TBA | tertiary butyl alcohol |
| – | not analyzed | TPH-G | total petroleum hydrocarbons as gasoline |
| DIPE | di-isopropyl ether | TPPH | total purgeable petroleum hydrocarbons |
| EDB | 1,2-dibromoethane | ESL | San Francisco Regional Water Quality Control Board Environmental Screening Level (December 2013) |
| EDC | 1,2-dichloroethane (same as ethylene dichloride) | | soil removed during excavation |

detection above ESL

**Table 4**
**CPT Grab Groundwater Analytical Data**
Unocal Service Station No. 0843
1629 Webster Street
Alameda, California

| Well ID | Date Sampled | Screen Interval (feet bgs) | TPPH 8260B (ug/L) | Benzene (ug/L) | Toluene (ug/L) | Ethyl-benzene (ug/L) | Total Xylenes (ug/L) | MTBE (ug/L) | TBA (ug/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|
| ESL | | | 100 | 1 | 40 | 30 | 20 | 5 | 12 | |
| CPT-01 | 9/24/2014 | 25-29 | **54** | <0.50 | <0.50 | <0.50 | <1.0 | **450** | <10 | |
| CPT-01 | 9/24/2014 | 30-34 | **76** | **0.62** | <0.50 | <0.50 | <1.0 | **6.4** | <10 | |
| CPT-01 | 9/24/2014 | 35-39 | **290** | <0.50 | <0.50 | <0.50 | <1.0 | **9.7** | <10 | |
| CPT-01 | 9/24/2014 | 40-44 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **0.56** | <10 | |
| CPT-02 | 9/25/2014 | 25-29 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | |
| CPT-02 | 9/25/2014 | 30-34 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | |
| CPT-02 | 9/25/2014 | 35-39 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | |
| CPT-02 | 9/25/2014 | 40-44 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | |
| CPT-03 | 9/25/2014 | 25-29 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | |
| CPT-03 | 9/25/2014 | 40-44 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | |
| CPT-04 | 9/22/2014 | 25-29 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **0.69** | <10 | |
| CPT-04 | 9/22/2014 | 30-34 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | |
| CPT-04 | 9/22/2014 | 35-39 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | |
| CPT-04 | 9/22/2014 | 40-44 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | |
| CPT-05 | Not installed. Not needed based on Phase 1 data | | | | | | | | | |
| CPT-06 | 11/7/2014 | 25-28 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **0.82** | <10 | |
| CPT-06-D | 11/7/2014 | 25-28 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **0.88** | <10 | Blind Duplicate |
| CPT-06 | 11/7/2014 | 30-33 | **0.6** | <0.0050 | <0.0050 | <0.0050 | <0.010 | <0.0050 | <0.050 | Ran as soil due to the presence of silt in the VOAs. Data in mg/kg |
| CPT-06 | 11/7/2014 | 35-39 | **140** | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | |
| CPT-07 | 11/17/2014 | 25-29 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **0.69** | <10 | |
| CPT-07 | 11/17/2014 | 30-34 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | |
| CPT-07 | 11/17/2014 | 35-39 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | |
| CPT-07 | 11/17/2014 | 40-44 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | |

**Note**

EPA Method 8260B used for BTEX/MTBE/Oxygenates

**Standard Abbreviations**

| | |
|---|---|
| < | not detected at or above method reporting limit |
| µg/L | micrograms per liter (approx. equivalent to parts per billion, ppb) |
| **BOLD** | detection above reporting limit |
| bgs | feet below ground surface |
| ESL | San Francisco Regional Water Quality Control Board's Environmental Screening Level (December 2013) |
| MTBE | methyl tertiary butyl ether |
| TBA | tertiary butyl alcohol |
| TPPH | total purgeable petroleum hydrocarbons |
| | detection above ESL |

**Table 1**
**Well Construction Details**
Unocal Service Station No. 0843
1629 Webster Street
Alameda, California

| Well ID | Installation Date | TOC Elevation (feet MSL) | Boring Depth (feet bgs) | Well Depth (feet bgs) | Boring Diameter (inches) | Well Diameter (inches) | Screen Interval (feet bgs) | Screen Size (inches) | Sand Filter Pack | Screen Zone Within Soil Type | Filter Pack Interval (feet bgs) | Seal Interval (feet bgs) | Location | Historical High GWE (feet MSL) | Historical Low GWE (feet MSL) | Status |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-1 | 3/2/1999 | 19.13 | 20.5 | 20.5 | 8 | 2 | 4.5-20.5 | 0.020 | #3 | SP/SC | 5-20.5 | 4-5 | Onsite | 12.68 | 6.67 | Active |
| MW-1AR | 5/13/2009 | 19.29 | 30.5 | 30.5 | 8 | 2 | 25-30 | 0.020 | #3 | SM | 23-30.5 | 21-23 | Onsite | 12.57 | 9.64 | Active |
| MW-1BR | 5/15/2009 | 19.13 | 35 | 35 | 8 | 2 | 30-35 | 0.020 | #3 | SM | 28-35 | 26-28 | Onsite | 12.46 | 9.58 | Active |
| MW-2 | 3/2/1999 | 15.57 | 20.5 | 20.5 | 8 | 2 | 4.5-20.5 | 0.020 | #3 | SP | 5-20.5 | 4-5 | Onsite | 10.31 | 7.92 | Destroyed |
| MW-2A | 12/5/2002 | 15.56 | NA | 11.5 | NA | 2 | NA | NA | NA | NA | NA | NA | Onsite | 12.32 | 7.44 | Destroyed |
| MW-3 | 3/2/1999 | 18.05 | 20.5 | 20.5 | 8 | 2 | 5-20 | 0.020 | #3 | ML | 5-20.5 | 4-5 | Onsite | 12.41 | 7.38 | Active |
| MW-4 | 3/2/1999 | 18.14 | 20.5 | 20.5 | 8 | 2 | 4.5-20.5 | 0.020 | #3 | ML | 5-20.5 | 4-5 | Onsite | 12.59 | 7.46 | Active |
| MW-5 | 12/8/1999 | 16.45 | 21.5 | 20 | 8 | 2 | 5-20 | 0.010 | #2/12 | CL/SM | 4.5-21.5 | 3.5-4.5 | Offsite | 11.35 | 6.52 | Active |
| MW-6 | 12/8/1999 | 16.97 | 21.5 | 20 | 8 | 2 | 5-20 | 0.010 | #2/12 | SM | 4.5-21.5 | 3.5-4.5 | Offsite | 11.77 | 7.07 | Active |
| MW-7 | 5/14/2009 | 17.81 | 30 | 30 | 8 | 2 | 25-30 | 0.020 | #3 | SC | 23-30 | 21-23 | Onsite | 12.24 | 9.31 | Active |
| MW-8 | 5/14/2009 | 18.13 | 30 | 30 | 8 | 2 | 25-30 | 0.020 | #3 | SW-SM | 23-30 | 21-23 | Onsite | 12.22 | 9.50 | Active |
| MW-9 | 5/13/2009 | 18.75 | 25 | 25 | 8 | 2 | 20-25 | 0.020 | #3 | SW-SM | 18-25 | 16-18 | Onsite | 12.51 | 9.60 | Active |
| MW-10 | 5/20/2009 | 18.84 | 30 | 30 | 8 | 2 | 25-30 | 0.020 | #3 | SM | 23-30 | 21-23 | Onsite | 12.42 | 9.57 | Active |
| MW-11 | 5/15/2009 | 18.72 | 28 | 28 | 8 | 2 | 23-28 | 0.020 | #3 | SC | 21-28 | 19-21 | Onsite | 12.54 | 9.29 | Active |
| TSP-1 | 5/14/2009 | N/A | 30.5 | 30 | 8 | 0.75 | NA | 0.020 | #3 | SM | 25-30.5 | 20-25 | Onsite | NA | NA | Active |

**Standard Abbreviations**

| | |
|---|---|
| bgs | below ground surface |
| CL | clay |
| GWE | groundwater elevation |
| ML | silty gravel |
| MSL | relative to mean sea level |
| NA | not applicable |
| SC | clayey sand |
| SM | silty sand |
| SP | poorly graded sand |
| SW | well-graded sand |
| TOC | top of casing |

**Table 5**
**Historical Groundwater Gauging and Analytical Data**
Unocal Service Station No. 0843
1629 Webster Street
Alameda, California

| Well ID | Date Sampled | TOC Elevation (feet MSL) | DTW (feet bTOC) | LPH Thickness (feet) | GW Elevation (feet MSL) | TPH-G (ug/L) | Benzene (ug/L) | Toluene (ug/L) | Ethyl-benzene (ug/L) | Total Xylenes (ug/L) | MTBE (ug/L) | TBA (ug/L) | TAME (ug/L) | ETBE (ug/L) | DIPE (ug/L) | EDB (ug/L) | EDC (ug/L) | Ethanol (ug/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ESL | | | | 100 | 1 | 40 | 30 | 20 | 5 | 12 | | | | | | | |
| MW-1 | 3/5/1999 | 16.18 | -- | -- | -- | 86.6 | ND | 2.04 | ND | 4.06 | 23.9 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 6/3/1999 | 16.18 | 6.24 | 0.00 | 9.94 | ND | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 9/2/1999 | 16.18 | 7.19 | 0.00 | 8.99 | ND | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 12/14/1999 | 16.18 | 8.07 | 0.00 | 8.11 | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 3/14/2000 | 16.18 | 5.47 | 0.00 | 10.71 | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 5/31/2000 | 16.18 | 6.22 | 0.00 | 9.96 | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 8/29/2000 | 16.18 | 6.82 | 0.00 | 9.36 | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 12/1/2000 | 16.18 | 7.54 | 0.00 | 8.64 | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 3/17/2001 | 16.18 | 5.73 | 0.00 | 10.45 | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 5/23/2001 | 16.18 | 6.43 | 0.00 | 9.75 | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 9/24/2001 | 16.18 | 7.12 | 0.00 | 9.06 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 12/10/2001 | 16.18 | 6.89 | 0.00 | 9.29 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 3/11/2002 | 16.18 | 5.61 | 0.00 | 10.57 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 6/7/2002 | 16.18 | 5.71 | 0.00 | 10.47 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 12/12/2002 | 16.18 | 7.80 | 0.00 | 8.38 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 3/13/2003 | 16.18 | 5.94 | 0.00 | 10.24 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 6/12/2003 | 16.18 | 6.10 | 0.00 | 10.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 9/12/2003 | 16.18 | 6.65 | 0.00 | 9.53 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 12/31/2003 | 16.18 | 5.74 | 0.00 | 10.44 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 2/12/2004 | 16.18 | 6.02 | 0.00 | 10.16 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 6/7/2004 | 16.18 | 6.61 | 0.00 | 9.57 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 9/17/2004 | 16.18 | 7.58 | 0.00 | 8.60 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 12/11/2004 | 16.18 | 6.49 | 0.00 | 9.69 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 3/15/2005 | 16.18 | 5.28 | 0.00 | 10.90 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 27 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 5/17/2005 | 16.18 | 5.83 | 0.00 | 10.35 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 7/27/2005 | 16.18 | 6.52 | 0.00 | 9.66 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 11/23/2005 | 16.18 | 7.28 | 0.00 | 8.90 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 2/24/2006 | 16.18 | 6.60 | 0.00 | 9.58 | 910 | <0.50 | <0.50 | <0.50 | <1.0 | 5,100 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 5/30/2006 | 16.18 | 6.48 | 0.00 | 9.70 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 8/30/2006 | 16.18 | 9.51 | 0.00 | 6.67 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 11/22/2006 | 16.18 | 7.05 | 0.00 | 9.13 | 220 | <0.50 | <0.50 | <0.50 | <0.50 | 420 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 2/23/2007 | 16.18 | 6.40 | 0.00 | 9.78 | 1,300 | <5.0 | <5.0 | <5.0 | <5.0 | 1,700 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 5/18/2007 | 16.18 | 6.65 | 0.00 | 9.53 | 2,300 | <5.0 | <5.0 | <5.0 | <5.0 | 3,300 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 8/10/2007 | 16.18 | 7.26 | 0.00 | 8.92 | 4,100 | <25 | <25 | <25 | <25 | 4,300 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 11/9/2007 | 16.18 | 7.40 | 0.00 | 8.78 | 5,700 | <25 | <25 | <25 | <25 | 5,400 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 2/8/2008 | 16.18 | 6.09 | 0.00 | 10.09 | 2,600 | <5.0 | <5.0 | <5.0 | <10 | 4,100 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 5/16/2008 | 16.18 | 6.87 | 0.00 | 9.31 | 1,800 | <12 | <12 | <12 | 42 | 3,500 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 8/15/2008 | 16.18 | 7.78 | 0.00 | 8.40 | 1,200 | <5.0 | <5.0 | <5.0 | <10 | 1,900 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 11/26/2008 | 16.18 | 8.65 | 0.00 | 7.53 | 720 | <0.50 | <0.50 | <0.50 | <1.0 | 2,400 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 2/24/2009 | 19.13 | 6.73 | 0.00 | 12.40 | 630 | <0.50 | <0.50 | <0.50 | <1.0 | 2,300 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 5/28/2009 | 19.13 | 6.46 | 0.00 | 12.67 | 1,000 | <10 | <10 | <10 | <20 | 4,100 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 9/14/2009 | 19.13 | 7.60 | 0.00 | 11.53 | 1,700 | <5.0 | <5.0 | <5.0 | <10 | 2,100 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 11/13/2009 | 19.13 | 7.83 | 0.00 | 11.30 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 2/5/2010 | 19.13 | 6.72 | 0.00 | 12.41 | 1,600 | <12 | <12 | <12 | <25 | 3,400 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 6/7/2010 | 19.13 | 6.58 | 0.00 | 12.55 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 8/3/2010 | 19.13 | 7.20 | 0.00 | 11.93 | 280 | <1.0 | <1.0 | <1.0 | <2.0 | 1,400 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 11/11/2010 | 19.13 | 8.13 | 0.00 | 11.00 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 2/14/2011 | 19.13 | 6.78 | 0.00 | 12.35 | 580 | <1.0 | <1.0 | <1.0 | <2.0 | 1,100 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 8/4/2011 | 19.13 | 6.78 | 0.00 | 12.35 | 310 | <0.50 | <0.50 | <0.50 | <1.0 | 420 | 13 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01, A90 |
| MW-1 | 11/21/2011 | 19.13 | 7.58 | 0.00 | 11.55 | 85* | <0.50 | <0.50 | <0.50 | <1.0 | 130 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01, A90 |
| MW-1 | 2/2/2012 | 19.13 | 7.60 | 0.00 | 11.53 | <50 | <0.50 | <0.50 | <0.50 | 1.0 | 380 | 94 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-1 | 5/14/2012 | 19.13 | 6.45 | 0.00 | 12.68 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 800 | 220 | 0.75 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-1 | 8/13/2012 | 19.13 | 7.33 | 0.00 | 11.80 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 610 | 120 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-1 | 10/25/2012 | 19.13 | 8.10 | 0.00 | 11.03 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 250 | 60 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-1 | 3/5/2013 | 19.13 | 6.70 | 0.00 | 12.43 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 320 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |

**Table 5**
**Historical Groundwater Gauging and Analytical Data**
Unocal Service Station No. 0843
1629 Webster Street
Alameda, California

| Well ID | Date Sampled | TOC Elevation (feet MSL) | DTW (feet bTOC) | LPH Thickness (feet) | GW Elevation (feet MSL) | TPH-G (ug/L) | Benzene (ug/L) | Toluene (ug/L) | Ethyl-benzene (ug/L) | Total Xylenes (ug/L) | MTBE (ug/L) | TBA (ug/L) | TAME (ug/L) | ETBE (ug/L) | DIPE (ug/L) | EDB (ug/L) | EDC (ug/L) | Ethanol (ug/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ESL | | | | | | 100 | 1 | 40 | 30 | 20 | 5 | 12 | | | | | | | |
| MW-1 | 5/7/2013 | 19.13 | 7.00 | 0.00 | 12.13 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 230 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-1 | 8/8/2013 | 19.13 | 8.05 | 0.00 | 11.08 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 25 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1 | 11/6/2013 | 19.13 | 9.00 | 0.00 | 10.13 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 230 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-1 | 2/5/2014 | 19.13 | 9.22 | -- | 9.91 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1 | 8/13/2014 | 19.13 | 9.43 | -- | 9.70 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-1AR | 5/28/2009 | 19.29 | 7.25 | 0.00 | 12.04 | 380 | <0.50 | <0.50 | <0.50 | <1.0 | 930 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1AR | 9/14/2009 | 19.29 | 7.83 | 0.00 | 11.46 | 480 | <1.0 | <1.0 | <1.0 | <2.0 | 890 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1AR | 11/13/2009 | 19.29 | 8.07 | 0.00 | 11.22 | 290 | <0.50 | <0.50 | <0.50 | <1.0 | 580 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1AR | 2/5/2010 | 19.29 | 7.15 | 0.00 | 12.14 | 140 | <0.50 | <0.50 | <0.50 | <1.0 | 350 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1AR | 6/7/2010 | 19.29 | 6.90 | 0.00 | 12.39 | 120 | <0.50 | <0.50 | <0.50 | <1.0 | 200 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1AR | 8/3/2010 | 19.29 | 7.48 | 0.00 | 11.81 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 81 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1AR | 11/11/2010 | 19.29 | 8.20 | 0.00 | 11.09 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 120 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1AR | 2/14/2011 | 19.29 | 7.01 | 0.00 | 12.28 | 58 | <0.50 | <0.50 | <0.50 | <1.0 | 91 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1AR | 8/4/2011 | 19.29 | 6.95 | 0.00 | 12.34 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 16 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1AR | 11/21/2011 | 19.29 | 7.82 | 0.00 | 11.47 | 21* J | <0.50 | <0.50 | <0.50 | <1.0 | 22 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1AR | 2/2/2012 | 19.29 | 8.08 | 0.00 | 11.21 | <50 | <0.50 | <0.50 | <0.50 | 1.4 | 23 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1AR | 5/14/2012 | 19.29 | 6.72 | 0.00 | 12.57 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 13 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1AR | 8/13/2012 | 19.29 | 7.62 | 0.00 | 11.67 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 18 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1AR | 10/25/2012 | 19.29 | 8.27 | 0.00 | 11.02 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 19 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1AR | 3/5/2013 | 19.29 | 6.92 | 0.00 | 12.37 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 4.9 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1AR | 5/7/2013 | 19.29 | 7.23 | 0.00 | 12.06 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 3.6 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1AR | 8/8/2013 | 19.29 | 8.25 | 0.00 | 11.04 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 2.5 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1AR | 11/6/2013 | 19.29 | 9.13 | 0.00 | 10.16 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 0.98 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1AR | 2/5/2014 | 19.29 | 9.41 | 0.00 | 9.88 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 0.88 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1AR | 8/13/2014 | 19.29 | 9.65 | 0.00 | 9.64 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 5.9 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1BR | 5/28/2009 | 19.13 | 6.70 | 0.00 | 12.43 | 290 | <0.50 | <0.50 | <0.50 | <1.0 | 810 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1BR | 9/14/2009 | 19.13 | 7.80 | 0.00 | 11.33 | 450 | <1.0 | <1.0 | <1.0 | <2.0 | 680 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1BR | 11/13/2009 | 19.13 | 7.88 | 0.00 | 11.25 | 270 | <0.50 | <0.50 | <0.50 | <1.0 | 490 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1BR | 2/5/2010 | 19.13 | 7.84 | 0.00 | 11.29 | 130 | <0.50 | <0.50 | <0.50 | <1.0 | 280 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1BR | 6/7/2010 | 19.13 | 7.28 | 0.00 | 11.85 | 180 | <0.50 | <0.50 | <0.50 | <1.0 | 320 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1BR | 8/3/2010 | 19.13 | 7.44 | 0.00 | 11.69 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 280 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1BR | 11/11/2010 | 19.13 | 8.46 | 0.00 | 10.67 | 75 | <0.50 | <0.50 | <0.50 | <1.0 | 230 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1BR | 2/14/2011 | 19.13 | 6.96 | 0.00 | 12.17 | 80 | <0.50 | <0.50 | <0.50 | <1.0 | 140 | -- | -- | -- | -- | -- | -- | -- | |
| MW-1BR | 8/4/2011 | 19.13 | 6.92 | 0.00 | 12.21 | 59 | <0.50 | <0.50 | <0.50 | <1.0 | 60 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A90 |
| MW-1BR | 11/21/2011 | 19.13 | 7.78 | 0.00 | 11.35 | 29* J | <0.50 | <0.50 | <0.50 | <1.0 | 34 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1BR | 2/2/2012 | 19.13 | 8.07 | 0.00 | 11.06 | <50 | <0.50 | <0.50 | <0.50 | 1.7 | 15 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1BR | 5/14/2012 | 19.13 | 6.67 | 0.00 | 12.46 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 23 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1BR | 8/13/2012 | 19.13 | 7.50 | 0.00 | 11.63 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 15 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1BR | 10/25/2012 | 19.13 | 8.23 | 0.00 | 10.90 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 12 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1BR | 3/5/2013 | 19.13 | 6.89 | 0.00 | 12.24 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 2.4 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1BR | 5/7/2013 | 19.13 | 7.20 | 0.00 | 11.93 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 3.5 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1BR | 8/8/2013 | 19.13 | 8.21 | 0.00 | 10.92 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 3.6 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1BR | 11/6/2013 | 19.13 | 9.02 | 0.00 | 10.11 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1BR | 2/5/2014 | 19.13 | 9.30 | 0.00 | 9.83 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-1BR | 8/13/2014 | 19.13 | 9.55 | 0.00 | 9.58 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 2.3 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-2 | 3/5/1999 | 15.57 | -- | 0.00 | -- | 34,400 | 2,070 | 7,710 | 2,340 | 8,240 | 8,460 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2 | 6/3/1999 | 15.57 | 5.96 | 0.00 | 9.61 | 51,200 | 1,820 | 7,570 | 2,510 | 7,320 | 8,800 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2 | 9/2/1999 | 15.57 | 6.85 | 0.00 | 8.72 | 17,000 | 1,000 | 3,100 | 1,400 | 3,700 | 3,720 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2 | 12/14/1999 | 15.57 | 7.65 | 0.00 | 7.92 | 83,000 | 3,000 | 22,000 | 4,500 | 17,000 | 11,000 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2 | 3/14/2000 | 15.57 | 5.26 | 0.00 | 10.31 | 31,000 | 1,600 | 4,600 | 2,300 | 7,300 | 8,700 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2 | 5/31/2000 | 15.57 | 5.60 | 0.00 | 9.97 | 9,970 | 598 | 1,030 | 487 | 2,060 | 1,670 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2 | 8/29/2000 | 15.57 | 6.35 | 0.00 | 9.22 | 7,900 | 390 | 1,500 | 280 | 1,900 | 1,300 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2 | 12/1/2000 | 15.57 | 7.06 | 0.00 | 8.51 | 87,500 | 1,860 | 17,400 | 5,590 | 19,400 | 3,790 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2 | 3/17/2001 | 15.57 | 5.98 | 0.00 | 9.59 | 4,310 | 371 | 59 | 280 | 682 | 433 | -- | -- | -- | -- | -- | -- | -- | |

**Table 5**
**Historical Groundwater Gauging and Analytical Data**
Unocal Service Station No. 0843
1629 Webster Street
Alameda, California

| Well ID | Date Sampled | TOC Elevation (feet MSL) | DTW (feet bTOC) | LPH Thickness (feet) | GW Elevation (feet MSL) | TPH-G (ug/L) | Benzene (ug/L) | Toluene (ug/L) | Ethyl-benzene (ug/L) | Total Xylenes (ug/L) | MTBE (ug/L) | TBA (ug/L) | TAME (ug/L) | ETBE (ug/L) | DIPE (ug/L) | EDB (ug/L) | EDC (ug/L) | Ethanol (ug/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ESL | | | | 100 | 1 | 40 | 30 | 20 | 5 | 12 | | | | | | | |
| MW-2 | 5/23/2001 | 15.57 | 6.97 | 0.00 | 8.60 | 45,400 | 374 | 4,490 | 2,790 | 10,900 | 406 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2 | 9/24/2001 | 15.57 | 7.56 | 0.00 | 8.01 | 76,000 | 430 | 13,000 | 4,700 | 18,000 | 480 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2 | 12/10/2001 | 15.57 | 6.52 | 0.00 | 9.05 | 82,000 | 320 | 9,100 | 4,400 | 16,000 | 270 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2 | 3/11/2002 | 15.57 | 5.51 | 0.00 | 10.06 | 14,000 | 75 | 1,400 | 1,100 | 3,600 | 150 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2 | 6/7/2002 | 15.57 | 5.73 | 0.00 | 9.84 | 14,000 | 120 | 1,200 | 1,400 | 4,700 | 200 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2 | 9/3/2002 | 15.57 | 6.81 | 0.00 | 8.76 | 10,000 | 150 | 1,200 | 610 | 2,800 | 460 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2 | 12/12/2002 | 15.57 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Replaced with MW-2A |
| MW-2A | 12/12/2002 | 15.56 | 7.45 | 0.00 | 8.11 | 3,400 | 80 | 260 | 210 | 1,000 | 400 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 3/13/2003 | -- | 5.85 | 0.00 | -- | <50 | <0.50 | <0.50 | <0.50 | 1.8 | 2.4 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 6/12/2003 | -- | 6.08 | 0.00 | -- | <50 | 0.59 | 0.69 | <0.50 | 1.2 | 4.7 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 9/12/2003 | 15.56 | 6.54 | 0.00 | 9.02 | -- | 1.8 | 4.2 | 6.1 | 20 | 6.6 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 12/31/2003 | 15.56 | 5.63 | 0.00 | 9.93 | 88 | 0.79 | 1.8 | 3.6 | 14 | 2.9 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 2/12/2004 | 15.56 | 5.68 | 0.00 | 9.88 | 160 | 2.6 | 4.8 | 13 | 48 | 7.9 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 6/7/2004 | 15.56 | 6.21 | 0.00 | 9.35 | 94 | 0.80 | 1.2 | 2.1 | 9.1 | 3.7 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 9/17/2004 | 15.56 | 7.16 | 0.00 | 8.40 | 230 | 3.5 | 6.1 | 13 | 41 | 83 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 12/11/2004 | 15.56 | 5.84 | 0.00 | 9.72 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 1.2 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 3/15/2005 | 15.56 | 5.52 | 0.00 | 10.04 | 92 | 0.84 | 1.7 | 2.4 | 9.8 | <10 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 5/17/2005 | 15.56 | 5.55 | 0.00 | 10.01 | 54 | 2.1 | 1.7 | 1.9 | 7.0 | 2.9 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 7/27/2005 | 15.56 | 6.16 | 0.00 | 9.40 | <50 | 0.66 | 1.1 | 1.3 | 4.2 | 3.7 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 11/23/2005 | 15.56 | 6.88 | 0.00 | 8.68 | 120 | 1.3 | 2.8 | 7.8 | 30 | 10 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 2/24/2006 | 15.56 | 5.79 | 0.00 | 9.77 | 84 | 0.51 | 1.2 | 4.2 | 16 | 7.2 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 5/30/2006 | 15.56 | 5.62 | 0.00 | 9.94 | 69 | 0.90 | 2.2 | 3.7 | 14 | 4.1 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 8/30/2006 | 15.56 | 6.38 | 0.00 | 9.18 | 77 | <0.50 | 0.50 | 1.0 | 3.3 | 2.5 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 11/22/2006 | 15.56 | 6.60 | 0.00 | 8.96 | <50 | <0.50 | <0.50 | <0.50 | 2.2 | 0.59 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 2/23/2007 | 15.56 | 6.05 | 0.00 | 9.51 | <50 | <0.50 | 0.66 | <0.50 | 1.1 | 0.72 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 5/18/2007 | 15.56 | 6.29 | 0.00 | 9.27 | <50 | <0.50 | <0.50 | 0.68 | 1.6 | 0.81 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 8/10/2007 | 15.56 | 6.90 | 0.00 | 8.66 | <50 | <0.50 | <0.50 | 1.6 | 3.9 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 11/9/2007 | 15.56 | 6.96 | 0.00 | 8.60 | <50 | <0.50 | <0.50 | 2.4 | 4.4 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 2/8/2008 | 15.56 | 5.76 | 0.00 | 9.80 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 5/16/2008 | 15.56 | 6.50 | 0.00 | 9.06 | <50 | <0.50 | <0.50 | 0.56 | 1.2 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 8/15/2008 | 15.56 | 7.35 | 0.00 | 8.21 | 78 | <0.50 | 0.79 | 2.9 | 6.5 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 11/26/2008 | 15.56 | 8.12 | 0.00 | 7.44 | 120 | 0.56 | 0.66 | 4.6 | 6.0 | 1.8 | -- | -- | -- | -- | -- | -- | -- | |
| MW-2A | 2/24/2009 | 18.51 | 6.19 | 0.00 | 12.32 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 3/5/1999 | 15.11 | -- | 0.00 | -- | 135 | ND | ND | ND | 4.84 | 2.46 | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 6/3/1999 | 15.11 | 5.57 | 0.00 | 9.54 | ND | ND | ND | ND | ND | 12.7 | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 9/2/1999 | 15.11 | 6.50 | 0.00 | 8.61 | ND | ND | ND | ND | ND | 11 | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 12/14/1999 | 15.11 | 7.28 | 0.00 | 7.83 | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 3/14/2000 | 15.11 | 4.87 | 0.00 | 10.24 | ND | ND | ND | ND | ND | 6.3 | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 5/31/2000 | 15.11 | 5.58 | 0.00 | 9.53 | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 8/29/2000 | 15.11 | 6.06 | 0.00 | 9.05 | ND | ND | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 12/1/2000 | 15.11 | 6.76 | 0.00 | 8.35 | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 3/17/2001 | 15.11 | 5.09 | 0.00 | 10.02 | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 5/23/2001 | 15.11 | 5.72 | 0.00 | 9.39 | ND | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 9/24/2001 | 15.11 | 6.34 | 0.00 | 8.77 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 12/10/2001 | 15.11 | 6.31 | 0.00 | 8.80 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 3/11/2002 | 15.11 | 5.15 | 0.00 | 9.96 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 6/7/2002 | 15.11 | 5.45 | 0.00 | 9.66 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 12/12/2002 | 15.11 | 7.15 | 0.00 | 7.96 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 3/13/2003 | 15.11 | 5.37 | 0.00 | 9.74 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 6/12/2003 | 15.11 | 5.51 | 0.00 | 9.60 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 9/12/2003 | 15.11 | 6.03 | 0.00 | 9.08 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 12/31/2003 | 15.11 | 5.62 | 0.00 | 9.49 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 2/12/2004 | 15.11 | 5.51 | 0.00 | 9.60 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |
| MW-3 | 6/7/2004 | 15.11 | 5.92 | 0.00 | 9.19 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- |

**Table 5**
**Historical Groundwater Gauging and Analytical Data**
Unocal Service Station No. 0843
1629 Webster Street
Alameda, California

| Well ID | Date Sampled | TOC Elevation (feet MSL) | DTW (feet bTOC) | LPH Thickness (feet) | GW Elevation (feet MSL) | TPH-G (ug/L) | Benzene (ug/L) | Toluene (ug/L) | Ethyl-benzene (ug/L) | Total Xylenes (ug/L) | MTBE (ug/L) | TBA (ug/L) | TAME (ug/L) | ETBE (ug/L) | DIPE (ug/L) | EDB (ug/L) | EDC (ug/L) | Ethanol (ug/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ESL | | | | | | 100 | 1 | 40 | 30 | 20 | 5 | 12 | | | | | | | |
| MW-3 | 9/17/2004 | 15.11 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | Unable to locate |
| MW-3 | 12/11/2004 | 15.11 | 5.94 | 0.00 | 9.17 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 3/11/2005 | 15.11 | 4.76 | 0.00 | 10.35 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 5/17/2005 | 15.11 | 5.23 | 0.00 | 9.88 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 7/27/2005 | 15.11 | 5.81 | 0.00 | 9.30 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 11/23/2005 | 15.11 | 6.60 | 0.00 | 8.51 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 2/24/2006 | 15.11 | 5.37 | 0.00 | 9.74 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **2.2** | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 5/30/2006 | 15.11 | 5.08 | 0.00 | 10.03 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **0.92** | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 8/30/2006 | 15.11 | 5.52 | 0.00 | 9.59 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | **0.51** | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 11/22/2006 | 15.11 | 6.38 | 0.00 | 8.73 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | **0.94** | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 2/23/2007 | 15.11 | 5.72 | 0.00 | 9.39 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | **0.61** | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 5/18/2007 | 15.11 | 5.94 | 0.00 | 9.17 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | **1.1** | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 8/10/2007 | 15.11 | 7.64 | 0.00 | 7.47 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 11/9/2007 | 15.11 | 6.75 | 0.00 | 8.36 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | **1.1** | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 2/8/2008 | 15.11 | 5.39 | 0.00 | 9.72 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 5/16/2008 | 15.11 | 6.17 | 0.00 | 8.94 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **1.2** | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 8/15/2008 | 15.11 | 7.01 | 0.00 | 8.10 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **1.3** | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 11/26/2008 | 15.11 | 7.73 | 0.00 | 7.38 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **2.8** | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 2/24/2009 | 18.05 | 5.98 | 0.00 | 12.07 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **1.9** | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 5/28/2009 | 18.05 | 5.64 | 0.00 | 12.41 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 9/14/2009 | 18.05 | 6.88 | 0.00 | 11.17 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 11/13/2009 | 18.05 | 7.02 | 0.00 | 11.03 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 2/5/2010 | 18.05 | 6.02 | 0.00 | 12.03 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **1.9** | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 6/7/2010 | 18.05 | 5.92 | 0.00 | 12.13 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 8/3/2010 | 18.05 | 6.47 | 0.00 | 11.58 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **0.78** | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 11/11/2010 | 18.05 | 7.40 | 0.00 | 10.65 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 2/14/2011 | 18.05 | 6.04 | 0.00 | 12.01 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **45** | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 8/4/2011 | 18.05 | 6.10 | 0.00 | 11.95 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **0.55** | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-3 | 11/21/2011 | 18.05 | 6.90 | 0.00 | 11.15 | <50* | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-3 | 2/2/2012 | 18.05 | 6.90 | 0.00 | 11.15 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **1.3** | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-3 | 5/14/2012 | 18.05 | 5.78 | 0.00 | 12.27 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **1.2** | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-3 | 8/13/2012 | 18.05 | 6.60 | 0.00 | 11.45 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-3 | 10/25/2012 | 18.05 | 7.30 | 0.00 | 10.75 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **1.0** | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-3 | 3/5/2013 | 18.05 | 5.98 | 0.00 | 12.07 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-3 | 5/7/2013 | 18.05 | 6.29 | 0.00 | 11.76 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-3 | 8/8/2013 | 18.05 | 7.30 | 0.00 | 10.75 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-3 | 11/6/2013 | 18.05 | 8.10 | 0.00 | 9.95 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-3 | 2/5/2014 | 18.05 | 8.22 | -- | 9.83 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-3 | 8/13/2014 | 18.05 | 8.70 | -- | 9.35 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-4 | 3/5/1999 | 15.17 | -- | 0.00 | -- | -- | ND | ND | ND | **2.44** | **25.2** | -- | -- | -- | -- | -- | -- | -- | |
| MW-4 | 6/3/1999 | 15.17 | 5.45 | 0.00 | 9.72 | -- | ND | ND | ND | ND | **3.96** | -- | -- | -- | -- | -- | -- | -- | |
| MW-4 | 9/2/1999 | 15.17 | 6.48 | 0.00 | 8.69 | -- | ND | ND | ND | ND | **27** | -- | -- | -- | -- | -- | -- | -- | |
| MW-4 | 12/14/1999 | 15.17 | 7.27 | 0.00 | 7.90 | -- | ND | ND | ND | ND | **270** | -- | -- | -- | -- | -- | -- | -- | |
| MW-4 | 3/14/2000 | 15.17 | 4.67 | 0.00 | 10.50 | -- | ND | ND | ND | ND | **49** | -- | -- | -- | -- | -- | -- | -- | |
| MW-4 | 5/31/2000 | 15.17 | 5.48 | 0.00 | 9.69 | -- | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-4 | 8/29/2000 | 15.17 | 6.10 | 0.00 | 9.07 | -- | ND | ND | ND | ND | **3.2** | -- | -- | -- | -- | -- | -- | -- | |
| MW-4 | 12/1/2000 | 15.17 | 6.79 | 0.00 | 8.38 | -- | ND | ND | ND | ND | **101** | -- | -- | -- | -- | -- | -- | -- | |
| MW-4 | 3/17/2001 | 15.17 | 5.01 | 0.00 | 10.16 | -- | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-4 | 5/23/2001 | 15.17 | 5.78 | 0.00 | 9.39 | -- | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-4 | 9/24/2001 | 15.17 | 6.42 | 0.00 | 8.75 | -- | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-4 | 12/10/2001 | 15.17 | 6.41 | 0.00 | 8.76 | -- | <0.50 | <0.50 | <0.50 | <0.50 | **1,300** | -- | -- | -- | -- | -- | -- | -- | |
| MW-4 | 3/11/2002 | 15.17 | 5.05 | 0.00 | 10.12 | -- | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-4 | 6/7/2002 | 15.17 | 5.42 | 0.00 | 9.75 | -- | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-4 | 9/3/2002 | 15.17 | 6.50 | 0.00 | 8.67 | -- | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- | |

**Table 5**
**Historical Groundwater Gauging and Analytical Data**
Unocal Service Station No. 0843
1629 Webster Street
Alameda, California

| Well ID | Date Sampled | TOC Elevation (feet MSL) | DTW (feet bTOC) | LPH Thickness (feet) | GW Elevation (feet MSL) | TPH-G (ug/L) | Benzene (ug/L) | Toluene (ug/L) | Ethyl-benzene (ug/L) | Total Xylenes (ug/L) | MTBE (ug/L) | TBA (ug/L) | TAME (ug/L) | ETBE (ug/L) | DIPE (ug/L) | EDB (ug/L) | EDC (ug/L) | Ethanol (ug/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ESL | | | | 100 | 1 | 40 | 30 | 20 | 5 | 12 | | | | | | | |
| MW-4 | 12/12/2002 | 15.17 | 7.18 | 0.00 | 7.99 | – | <0.50 | <0.50 | <0.50 | <0.50 | 3.3 | – | – | – | – | – | – | – | |
| MW-4 | 3/13/2003 | 15.17 | 5.42 | 0.00 | 9.75 | – | <0.50 | <0.50 | <0.50 | <0.50 | – | – | – | – | – | – | – | – | |
| MW-4 | 6/12/2003 | 15.17 | 5.60 | 0.00 | 9.57 | – | <0.50 | <0.50 | <0.50 | <0.50 | – | – | – | – | – | – | – | – | |
| MW-4 | 9/12/2003 | 15.17 | 6.07 | 0.00 | 9.10 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <2.0 | – | – | – | – | – | – | – | |
| MW-4 | 12/31/2003 | 15.17 | 5.63 | 0.00 | 9.54 | – | <5.0 | <5.0 | <5.0 | <5.0 | – | – | – | – | – | – | – | – | |
| MW-4 | 2/12/2004 | 15.17 | 5.26 | 0.00 | 9.91 | – | <0.50 | <0.50 | <0.50 | <0.50 | – | – | – | – | – | – | – | – | |
| MW-4 | 6/7/2004 | 15.17 | 5.82 | 0.00 | 9.35 | – | <0.3 | <0.3 | <0.3 | <0.6 | – | – | – | – | – | – | – | – | |
| MW-4 | 9/17/2004 | 15.17 | 6.86 | 0.00 | 8.31 | 56 | <0.50 | <0.50 | <0.50 | <1.0 | 10 | – | – | – | – | – | – | – | |
| MW-4 | 12/11/2004 | 15.17 | 6.01 | 0.00 | 9.16 | 350 | <2.5 | <2.5 | <2.5 | <5.0 | 380 | – | – | – | – | – | – | – | |
| MW-4 | 3/11/2005 | 15.17 | 4.61 | 0.00 | 10.56 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | – | – | – | – | – | – | – | |
| MW-4 | 5/17/2005 | 15.17 | 4.93 | 0.00 | 10.24 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | – | – | – | – | – | – | – | |
| MW-4 | 7/27/2005 | 15.17 | 5.74 | 0.00 | 9.43 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | – | – | – | – | – | – | – | |
| MW-4 | 11/23/2005 | 15.17 | 6.59 | 0.00 | 8.58 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 23 | – | – | – | – | – | – | – | |
| MW-4 | 2/24/2006 | 15.17 | 5.19 | 0.00 | 9.98 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 4.7 | – | – | – | – | – | – | – | |
| MW-4 | 5/30/2006 | 15.17 | 5.07 | 0.00 | 10.10 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | – | – | – | – | – | – | – | |
| MW-4 | 8/30/2006 | 15.17 | 6.02 | 0.00 | 9.15 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | – | – | – | – | – | – | – | |
| MW-4 | 11/22/2006 | 15.17 | 6.37 | 0.00 | 8.80 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | 16 | – | – | – | – | – | – | – | |
| MW-4 | 2/23/2007 | 15.17 | 5.61 | 0.00 | 9.56 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | – | – | – | – | – | – | – | |
| MW-4 | 5/18/2007 | 15.17 | 5.87 | 0.00 | 9.30 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | – | – | – | – | – | – | – | |
| MW-4 | 8/10/2007 | 15.17 | 7.49 | 0.00 | 7.68 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | – | – | – | – | – | – | – | |
| MW-4 | 11/9/2007 | 15.17 | 6.77 | 0.00 | 8.40 | 50 | <0.50 | <0.50 | <0.50 | <0.50 | 39 | – | – | – | – | – | – | – | |
| MW-4 | 2/8/2008 | 15.17 | 5.10 | 0.00 | 10.07 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | – | – | – | – | – | – | – | |
| MW-4 | 5/16/2008 | 15.17 | 6.06 | 0.00 | 9.11 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | – | – | – | – | – | – | – | |
| MW-4 | 8/15/2008 | 15.17 | 6.91 | 0.00 | 8.26 | <50 | <0.50 | <0.50 | <0.50 | 1.1 | <0.50 | – | – | – | – | – | – | – | |
| MW-4 | 11/26/2008 | 15.17 | 7.71 | 0.00 | 7.46 | 55 | <0.50 | <0.50 | <0.50 | <1.0 | 11 | – | – | – | – | – | – | – | |
| MW-4 | 2/24/2009 | 18.14 | 5.96 | 0.00 | 12.18 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 1.8 | – | – | – | – | – | – | – | |
| MW-4 | 5/28/2009 | 18.14 | 5.70 | 0.00 | 12.44 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | – | – | – | – | – | – | – | |
| MW-4 | 9/14/2009 | 18.14 | 6.76 | 0.00 | 11.38 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | – | – | – | – | – | – | – | |
| MW-4 | 11/13/2009 | 18.14 | 6.97 | 0.00 | 11.17 | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| MW-4 | 2/5/2010 | 18.14 | 5.55 | 0.00 | 12.59 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 0.91 | – | – | – | – | – | – | – | |
| MW-4 | 6/7/2010 | 18.14 | 5.78 | 0.00 | 12.36 | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| MW-4 | 8/3/2010 | 18.14 | 6.47 | 0.00 | 11.67 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | – | – | – | – | – | – | – | |
| MW-4 | 11/11/2010 | 18.14 | 7.42 | 0.00 | 10.72 | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| MW-4 | 2/14/2011 | 18.14 | 5.94 | 0.00 | 12.20 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | – | – | – | – | – | – | – | |
| MW-4 | 8/4/2011 | 18.14 | 6.00 | 0.00 | 12.14 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-4 | 11/21/2011 | 18.14 | 6.80 | 0.00 | 11.34 | <50* | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-4 | 2/2/2012 | 18.14 | 6.83 | 0.00 | 11.31 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 10 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-4 | 5/14/2012 | 18.14 | 5.66 | 0.00 | 12.48 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-4 | 8/13/2012 | 18.14 | 6.55 | 0.00 | 11.59 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 5.0 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-4 | 10/25/2012 | 18.14 | 7.23 | 0.00 | 10.91 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 11 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-4 | 3/5/2013 | 18.14 | 5.88 | 0.00 | 12.26 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-4 | 5/7/2013 | 18.14 | 6.21 | 0.00 | 11.93 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-4 | 8/8/2013 | 18.14 | 7.22 | 0.00 | 10.92 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 0.7 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-4 | 11/6/2013 | 18.14 | 7.98 | 0.00 | 10.16 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 0.6 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-4 | 2/5/2014 | 18.14 | 8.20 | – | 9.94 | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| MW-4 | 8/13/2014 | 18.14 | 8.62 | – | 9.52 | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| MW-5 | 12/14/1999 | 13.34 | 6.45 | 0.00 | 6.89 | – | ND | ND | ND | ND | 3.8 | – | – | – | – | – | – | – | |
| MW-5 | 3/14/2000 | 13.34 | 4.46 | 0.00 | 8.88 | – | ND | ND | ND | ND | – | – | – | – | – | – | – | – | |
| MW-5 | 5/31/2000 | 13.34 | 5.18 | 0.00 | 8.16 | – | ND | ND | ND | ND | – | – | – | – | – | – | – | – | |
| MW-5 | 8/29/2000 | 13.34 | 5.46 | 0.00 | 7.88 | – | ND | ND | ND | ND | – | – | – | – | – | – | – | – | |
| MW-5 | 12/1/2000 | 13.34 | 5.95 | 0.00 | 7.39 | – | ND | ND | ND | ND | – | – | – | – | – | – | – | – | |
| MW-5 | 3/17/2001 | 13.34 | 5.36 | 0.00 | 7.98 | – | ND | ND | ND | ND | – | – | – | – | – | – | – | – | |
| MW-5 | 5/23/2001 | 13.34 | 5.09 | 0.00 | 8.25 | – | ND | ND | ND | ND | – | – | – | – | – | – | – | – | |
| MW-5 | 9/24/2001 | 13.34 | 5.58 | 0.00 | 7.76 | – | <0.50 | <0.50 | <0.50 | <0.50 | – | – | – | – | – | – | – | – | |
| MW-5 | 12/10/2001 | 13.34 | 5.51 | 0.00 | 7.83 | – | <0.50 | <0.50 | <0.50 | <0.50 | – | – | – | – | – | – | – | – | |

**Table 5**
**Historical Groundwater Gauging and Analytical Data**
Unocal Service Station No. 0843
1629 Webster Street
Alameda, California

| Well ID | Date Sampled | TOC Elevation (feet MSL) | DTW (feet bTOC) | LPH Thickness (feet) | GW Elevation (feet MSL) | TPH-G (ug/L) | Benzene (ug/L) | Toluene (ug/L) | Ethyl-benzene (ug/L) | Total Xylenes (ug/L) | MTBE (ug/L) | TBA (ug/L) | TAME (ug/L) | ETBE (ug/L) | DIPE (ug/L) | EDB (ug/L) | EDC (ug/L) | Ethanol (ug/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ESL | | | | 100 | 1 | 40 | 30 | 20 | 5 | 12 | | | | | | | |
| MW-5 | 3/11/2002 | 13.34 | 4.70 | 0.00 | 8.64 | -- | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 12/12/2002 | 13.34 | 6.42 | 0.00 | 6.92 | -- | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 3/13/2003 | 13.34 | 5.12 | 0.00 | 8.22 | -- | <0.50 | 0.54 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 6/12/2003 | 13.34 | 5.24 | 0.00 | 8.10 | -- | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 9/12/2003 | 13.34 | 5.53 | 0.00 | 7.81 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <2.0 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 12/31/2003 | 13.34 | 5.11 | 0.00 | 8.23 | -- | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 2/12/2004 | 13.34 | 5.02 | 0.00 | 8.32 | -- | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 6/7/2004 | 13.34 | 5.35 | 0.00 | 7.99 | -- | <0.3 | <0.3 | <0.3 | <0.6 | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 9/17/2004 | 13.34 | 6.10 | 0.00 | 7.24 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 12/11/2004 | 13.34 | 5.53 | 0.00 | 7.81 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 3/11/2005 | 13.34 | 4.96 | 0.00 | 8.38 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 5/17/2005 | 13.34 | 5.04 | 0.00 | 8.30 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 7/27/2005 | 13.34 | 5.31 | 0.00 | 8.03 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 11/23/2005 | 13.34 | 5.86 | 0.00 | 7.48 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 2/24/2006 | 13.34 | 5.08 | 0.00 | 8.26 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 5/30/2006 | 13.34 | 5.01 | 0.00 | 8.33 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 8/30/2006 | 13.34 | 5.65 | 0.00 | 7.69 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 11/22/2006 | 13.34 | 5.82 | 0.00 | 7.52 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 2/23/2007 | 13.34 | 4.47 | 0.00 | 8.87 | <50 | <0.50 | <0.50 | <0.50 | **0.53** | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 5/18/2007 | 13.34 | 5.51 | 0.00 | 7.83 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 8/10/2007 | 13.34 | 6.05 | 0.00 | 7.29 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 11/9/2007 | 13.34 | 6.10 | 0.00 | 7.24 | <50 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 2/8/2008 | 13.34 | 5.06 | 0.00 | 8.28 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 5/16/2008 | 13.34 | 5.69 | 0.00 | 7.65 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 8/15/2008 | 13.34 | 6.35 | 0.00 | 6.99 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 11/26/2008 | 13.34 | 6.82 | 0.00 | 6.52 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 2/24/2009 | 16.45 | 5.10 | 0.00 | 11.35 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 5/28/2009 | 16.45 | 5.12 | 0.00 | 11.33 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 9/14/2009 | 16.45 | 6.29 | 0.00 | 10.16 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 11/13/2009 | 16.45 | 6.23 | 0.00 | 10.22 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 2/5/2010 | 16.45 | 5.38 | 0.00 | 11.07 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 6/7/2010 | 16.45 | 5.39 | 0.00 | 11.06 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 8/3/2010 | 16.45 | 5.89 | 0.00 | 10.56 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 11/11/2010 | 16.45 | 6.36 | 0.00 | 10.09 | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 2/14/2011 | 16.45 | 5.49 | 0.00 | 10.96 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | -- | -- | -- | -- | -- | -- | -- | |
| MW-5 | 8/4/2011 | 16.45 | 5.63 | 0.00 | 10.82 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-5 | 11/21/2011 | 16.45 | 6.28 | 0.00 | 10.17 | **12* J** | <0.50 | <0.50 | <0.50 | <1.0 | **1.2** | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-5 | 2/2/2012 | 16.45 | 6.22 | 0.00 | 10.23 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **2.1** | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-5 | 5/14/2012 | 16.45 | 5.25 | 0.00 | 11.20 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-5 | 8/13/2012 | 16.45 | 6.06 | 0.00 | 10.39 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-5 | 10/25/2012 | 16.45 | 6.62 | 0.00 | 9.83 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **2.5** | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-5 | 3/5/2013 | 16.45 | 5.50 | 0.00 | 10.95 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **2.6** | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-5 | 5/7/2013 | 16.45 | 5.78 | 0.00 | 10.67 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-5 | 8/8/2013 | 16.45 | 6.70 | 0.00 | 9.75 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-5 | 11/6/2013 | 16.45 | 7.15 | 0.00 | 9.30 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **590** | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-5 | 2/5/2014 | 16.45 | 7.31 | 0.00 | 9.14 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | **570** | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-5 | 8/13/2014 | 16.45 | 7.70 | 0.00 | 8.75 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-6 | 12/14/1999 | 14.08 | 6.64 | 0.00 | 7.44 | -- | ND | ND | ND | ND | **18,000** | -- | -- | -- | -- | -- | -- | -- | |
| MW-6 | 3/14/2000 | 14.08 | 4.72 | 0.00 | 9.36 | -- | ND | ND | ND | ND | **21,000** | -- | -- | -- | -- | -- | -- | -- | |
| MW-6 | 5/31/2000 | 14.08 | 5.28 | 0.00 | 8.80 | -- | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-6 | 8/29/2000 | 14.08 | 5.39 | 0.00 | 8.69 | -- | ND | ND | ND | ND | **400** | -- | -- | -- | -- | -- | -- | -- | |
| MW-6 | 12/1/2000 | 14.08 | 6.11 | 0.00 | 7.97 | -- | ND | ND | ND | ND | **3,640** | -- | -- | -- | -- | -- | -- | -- | |
| MW-6 | 3/17/2001 | 14.08 | 6.02 | 0.00 | 8.06 | -- | **2,950** | **989** | **1,040** | **3,000** | **11,500** | -- | -- | -- | -- | -- | -- | -- | |
| MW-6 | 5/23/2001 | 14.08 | 5.82 | 0.00 | 8.26 | -- | ND | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | -- | |
| MW-6 | 9/24/2001 | 14.08 | 6.59 | 0.00 | 7.49 | -- | <0.50 | <0.50 | <0.50 | <0.50 | **190** | -- | -- | -- | -- | -- | -- | -- | |

**Table 5**
**Historical Groundwater Gauging and Analytical Data**
Unocal Service Station No. 0843
1629 Webster Street
Alameda, California

| Well ID | Date Sampled | TOC Elevation (feet MSL) | DTW (feet bTOC) | LPH Thickness (feet) | GW Elevation (feet MSL) | TPH-G (ug/L) | Benzene (ug/L) | Toluene (ug/L) | Ethyl-benzene (ug/L) | Total Xylenes (ug/L) | MTBE (ug/L) | TBA (ug/L) | TAME (ug/L) | ETBE (ug/L) | DIPE (ug/L) | EDB (ug/L) | EDC (ug/L) | Ethanol (ug/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | ESL | | | | 100 | 1 | 40 | 30 | 20 | 5 | 12 | | | | | | | |
| MW-6 | 12/10/2001 | 14.08 | 6.50 | 0.00 | 7.58 | – | <0.50 | <0.50 | <0.50 | <0.50 | 2,400 | – | – | – | – | – | – | – | |
| MW-6 | 3/11/2002 | 14.08 | 4.81 | 0.00 | 9.27 | – | <0.50 | <0.50 | <0.50 | <0.50 | 120 | – | – | – | – | – | – | – | |
| MW-6 | 12/12/2002 | 14.08 | 6.51 | 0.00 | 7.57 | – | <0.50 | <0.50 | <0.50 | <0.50 | 6,200 | – | – | – | – | – | – | – | |
| MW-6 | 3/13/2003 | 14.08 | 5.20 | 0.00 | 8.88 | – | <5.0 | <5.0 | <5.0 | <5.0 | 4,100 | – | – | – | – | – | – | – | |
| MW-6 | 6/12/2003 | 14.08 | 5.38 | 0.00 | 8.70 | – | <10 | <10 | <10 | <10 | 3,700 | – | – | – | – | – | – | – | |
| MW-6 | 9/12/2003 | 14.08 | 6.29 | 0.00 | 7.79 | <250 | <2.5 | <2.5 | <2.5 | <5.0 | 310 | – | – | – | – | – | – | – | |
| MW-6 | 12/31/2003 | 14.08 | 5.38 | 0.00 | 8.70 | – | <25 | <25 | <25 | <25 | – | – | – | – | – | – | – | – | |
| MW-6 | 2/12/2004 | 14.08 | 5.06 | 0.00 | 9.02 | – | <10 | <10 | <10 | <10 | 2,800 | – | – | – | – | – | – | – | |
| MW-6 | 6/7/2004 | 14.08 | 5.45 | 0.00 | 8.63 | – | <3 | <3 | <3 | <6 | 2,900 | – | – | – | – | – | – | – | |
| MW-6 | 9/17/2004 | 14.08 | 6.20 | 0.00 | 7.88 | 1,300 | <10 | <10 | <10 | <20 | 2,000 | – | – | – | – | – | – | – | |
| MW-6 | 12/11/2004 | 14.08 | 5.60 | 0.00 | 8.48 | 1,800 | <10 | <10 | <10 | <20 | 2,700 | – | – | – | – | – | – | – | |
| MW-6 | 3/11/2005 | 14.08 | 4.71 | 0.00 | 9.37 | <1,000 | <10 | <10 | <10 | <20 | 2,500 | – | – | – | – | – | – | – | |
| MW-6 | 5/17/2005 | 14.08 | 4.98 | 0.00 | 9.10 | <1,000 | <0.50 | <0.50 | <0.50 | <1.0 | 2,200 | – | – | – | – | – | – | – | |
| MW-6 | 7/27/2005 | 14.08 | 5.48 | 0.00 | 8.60 | <1,000 | <0.50 | <0.50 | <0.50 | <1.0 | 1,100 | – | – | – | – | – | – | – | |
| MW-6 | 11/23/2005 | 14.08 | 6.01 | 0.00 | 8.07 | 590 | <0.50 | <0.50 | <0.50 | <1.0 | 1,700 | – | – | – | – | – | – | – | |
| MW-6 | 2/24/2006 | 14.08 | 5.12 | 0.00 | 8.96 | 400 | <0.50 | <0.50 | <0.50 | <1.0 | 990 | – | – | – | – | – | – | – | |
| MW-6 | 5/30/2006 | 14.08 | 5.04 | 0.00 | 9.04 | <1,200 | <12 | <12 | <12 | <25 | 560 | – | – | – | – | – | – | – | |
| MW-6 | 8/30/2006 | 14.08 | 7.01 | 0.00 | 7.07 | 930 | <5.0 | <5.0 | <5.0 | <5.0 | 820 | – | – | – | – | – | – | – | |
| MW-6 | 11/22/2006 | 14.08 | 6.16 | 0.00 | 7.92 | 690 | <5.0 | <5.0 | <5.0 | <5.0 | 620 | – | – | – | – | – | – | – | |
| MW-6 | 2/23/2007 | 14.08 | 5.44 | 0.00 | 8.64 | 190 | <0.50 | <0.50 | <0.50 | <0.50 | 410 | – | – | – | – | – | – | – | |
| MW-6 | 5/18/2007 | 14.08 | 5.63 | 0.00 | 8.45 | 390 | <0.50 | <0.50 | <0.50 | <0.50 | 620 | – | – | – | – | – | – | – | |
| MW-6 | 8/10/2007 | 14.08 | 6.71 | 0.00 | 7.37 | 390 | <0.50 | <0.50 | <0.50 | <0.50 | 660 | – | – | – | – | – | – | – | |
| MW-6 | 11/9/2007 | 14.08 | 6.17 | 0.00 | 7.91 | 580 | <0.50 | <0.50 | <0.50 | <0.50 | 820 | – | – | – | – | – | – | – | |
| MW-6 | 2/8/2008 | 14.08 | 5.20 | 0.00 | 8.88 | 360 | <0.50 | <0.50 | <0.50 | <1.0 | 570 | – | – | – | – | – | – | – | |
| MW-6 | 5/16/2008 | 14.08 | 5.70 | 0.00 | 8.38 | 200 | <0.50 | <0.50 | <0.50 | <1.0 | 480 | – | – | – | – | – | – | – | |
| MW-6 | 8/15/2008 | 14.08 | 6.46 | 0.00 | 7.62 | 160 | <0.50 | <0.50 | <0.50 | <1.0 | 450 | – | – | – | – | – | – | – | |
| MW-6 | 11/26/2008 | 14.08 | 7.01 | 0.00 | 7.07 | 300 | <0.50 | <0.50 | <0.50 | <1.0 | 400 | – | – | – | – | – | – | – | |
| MW-6 | 2/24/2009 | 16.97 | 5.20 | 0.00 | 11.77 | 250 | <0.50 | <0.50 | <0.50 | <1.0 | 450 | – | – | – | – | – | – | – | |
| MW-6 | 5/28/2009 | 16.97 | 5.26 | 0.00 | 11.71 | 74 | <0.50 | <0.50 | <0.50 | <1.0 | 290 | – | – | – | – | – | – | – | |
| MW-6 | 9/14/2009 | 16.97 | 6.30 | 0.00 | 10.67 | 230 | <0.50 | <0.50 | <0.50 | <1.0 | 310 | – | – | – | – | – | – | – | |
| MW-6 | 11/13/2009 | 16.97 | 6.40 | 0.00 | 10.57 | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| MW-6 | 2/5/2010 | 16.97 | 5.89 | 0.00 | 11.08 | 130 | <0.50 | <0.50 | <0.50 | <1.0 | 310 | – | – | – | – | – | – | – | |
| MW-6 | 6/7/2010 | 16.97 | 5.52 | 0.00 | 11.45 | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| MW-6 | 8/3/2010 | 16.97 | 5.96 | 0.00 | 11.01 | 71 | <0.50 | <0.50 | <0.50 | <1.0 | 180 | – | – | – | – | – | – | – | |
| MW-6 | 11/11/2010 | 16.97 | 6.54 | 0.00 | 10.43 | – | – | – | – | – | – | – | – | – | – | – | – | – | |
| MW-6 | 2/14/2011 | 16.97 | 5.63 | 0.00 | 11.34 | 110 | <0.50 | <0.50 | <0.50 | <1.0 | 180 | – | – | – | – | – | – | – | |
| MW-6 | 8/4/2011 | 16.97 | 5.69 | 0.00 | 11.28 | 75 | <0.50 | <0.50 | <0.50 | <1.0 | 80 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A90 |
| MW-6 | 11/21/2011 | 16.97 | 6.36 | 0.00 | 10.61 | 55* | <0.50 | <0.50 | <0.50 | <1.0 | 86 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-6 | 2/2/2012 | 16.97 | 6.31 | 0.00 | 10.66 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 94 | 21 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-6 | 5/14/2012 | 16.97 | 5.38 | 0.00 | 11.59 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 89 | 33 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-6 | 8/13/2012 | 16.97 | 6.08 | 0.00 | 10.89 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 89 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-6 | 10/25/2012 | 16.97 | 6.69 | 0.00 | 10.28 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 57 | 11 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-6 | 3/5/2013 | 16.97 | 5.57 | 0.00 | 11.40 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 29 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-6 | 5/7/2013 | 16.97 | 5.85 | 0.00 | 11.12 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 22 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-6 | 8/8/2013 | 16.97 | 6.77 | 0.00 | 10.20 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 6.2 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-6 | 11/6/2013 | 16.97 | 7.15 | 0.00 | 9.82 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 120 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-6 | 2/5/2014 | 16.97 | 7.43 | 0.00 | 9.54 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 14 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-6 | 8/13/2014 | 16.97 | 7.85 | 0.00 | 9.12 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 93 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-7 | 5/28/2009 | 17.81 | 8.29 | 0.00 | 9.52 | 1,100 | <0.50 | <0.50 | 1.4 | 7.1 | 15,000 | – | – | – | – | – | – | – | |
| MW-7 | 9/14/2009 | 17.81 | 6.77 | 0.00 | 11.04 | 7,900 | <25 | <25 | <25 | <50 | 15,000 | – | – | – | – | – | – | – | |
| MW-7 | 11/13/2009 | 17.81 | 6.78 | 0.00 | 11.03 | 5,700 | <10 | <10 | <10 | <20 | 13,000 | – | – | – | – | – | – | – | |
| MW-7 | 2/5/2010 | 17.81 | 8.50 | 0.00 | 9.31 | 4,300 | <12 | <12 | <12 | <25 | 12,000 | – | – | – | – | – | – | – | |
| MW-7 | 6/7/2010 | 17.81 | 5.74 | 0.00 | 12.07 | 7,100 | <12 | <12 | <12 | <25 | 16,000 | – | – | – | – | – | – | – | |
| MW-7 | 8/3/2010 | 17.81 | 6.36 | 0.00 | 11.45 | 1,600 | <10 | <10 | <10 | <20 | 12,000 | – | – | – | – | – | – | – | |
| MW-7 | 11/11/2010 | 17.81 | 7.23 | 0.00 | 10.58 | 2,600 | <5.0 | <5.0 | <5.0 | <10 | 13,000 | – | – | – | – | – | – | – | |

**Table 5**
**Historical Groundwater Gauging and Analytical Data**
Unocal Service Station No. 0843
1629 Webster Street
Alameda, California

| Well ID | Date Sampled | TOC Elevation (feet MSL) | DTW (feet bTOC) | LPH Thickness (feet) | GW Elevation (feet MSL) | TPH-G (ug/L) | Benzene (ug/L) | Toluene (ug/L) | Ethyl-benzene (ug/L) | Total Xylenes (ug/L) | MTBE (ug/L) | TBA (ug/L) | TAME (ug/L) | ETBE (ug/L) | DIPE (ug/L) | EDB (ug/L) | EDC (ug/L) | Ethanol (ug/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ESL | | | | | | 100 | 1 | 40 | 30 | 20 | 5 | 12 | | | | | | | |
| MW-7 | 2/14/2011 | 17.81 | 6.33 | 0.00 | 11.48 | 7,900 | <50 | <50 | <50 | <100 | 13,000 | -- | -- | -- | -- | -- | -- | -- | |
| MW-7 | 8/4/2011 | 17.81 | 5.85 | 0.00 | 11.96 | 2,300 | <0.50 | <0.50 | <0.50 | <1.0 | 6,300 | 2,200 | 6.7 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01, A90 |
| MW-7 | 11/21/2011 | 17.81 | 6.67 | 0.00 | 11.14 | 1,400* | <0.50 | <0.50 | <0.50 | <1.0 | 5,900 | 2,200 | 6.4 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A90 |
| MW-7 | 2/2/2012 | 17.81 | 6.69 | 0.00 | 11.12 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 6,400 | 2,800 | 5.0 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-7 | 5/14/2012 | 17.81 | 5.57 | 0.00 | 12.24 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 5,600 | 2,300 | 4.4 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-7 | 8/13/2012 | 17.81 | 6.42 | 0.00 | 11.39 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 4,800 | 2,000 | 3.9 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-7 | 10/25/2012 | 17.81 | 7.19 | 0.00 | 10.62 | 290 | <0.50 | <0.50 | <0.50 | <1.0 | 3,600 | 2,000 | 3.4 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-7 | 3/5/2013 | 17.81 | 6.02 | 0.00 | 11.79 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 2,800 | 510 | 2.3 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-7 | 5/7/2013 | 17.81 | 6.15 | 0.00 | 11.66 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 3,100 | 490 | 2.5 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-7 | 8/8/2013 | 17.81 | 7.05 | 0.00 | 10.76 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 2,300 | 1,600 | 2.7 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-7 | 11/6/2013 | 17.81 | 7.72 | 0.00 | 10.09 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 1,400 | 210 | 1.5 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-7 | 2/5/2014 | 17.81 | 7.95 | 0.00 | 9.86 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 2 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-7 | 8/13/2014 | 17.81 | 8.32 | 0.00 | 9.49 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 940 | 330 | 0.77 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-8 | 5/28/2009 | 18.13 | 7.42 | 0.00 | 10.71 | 850 | <0.50 | <0.50 | <0.50 | <1.0 | 12,000 | -- | -- | -- | -- | -- | -- | -- | |
| MW-8 | 9/14/2009 | 18.13 | 6.97 | 0.00 | 11.16 | 3,500 | <25 | <25 | <25 | <50 | 5,600 | -- | -- | -- | -- | -- | -- | -- | |
| MW-8 | 11/13/2009 | 18.13 | 7.11 | 0.00 | 11.02 | 3,200 | <5.0 | <5.0 | <5.0 | <10 | 6,700 | -- | -- | -- | -- | -- | -- | -- | |
| MW-8 | 2/5/2010 | 18.13 | 7.38 | 0.00 | 10.75 | 2,400 | <10 | <10 | <10 | <20 | 6,300 | -- | -- | -- | -- | -- | -- | -- | |
| MW-8 | 6/7/2010 | 18.13 | 6.07 | 0.00 | 12.06 | 4,200 | <10 | <10 | <10 | <20 | 9,000 | -- | -- | -- | -- | -- | -- | -- | |
| MW-8 | 8/3/2010 | 18.13 | 6.56 | 0.00 | 11.57 | 1,200 | <5.0 | <5.0 | <5.0 | <10 | 5,600 | -- | -- | -- | -- | -- | -- | -- | |
| MW-8 | 11/11/2010 | 18.13 | 7.60 | 0.00 | 10.53 | <5,000 | <50 | <50 | <50 | <100 | 4,900 | -- | -- | -- | -- | -- | -- | -- | |
| MW-8 | 2/14/2011 | 18.13 | 6.22 | 0.00 | 11.91 | 3,900 | <25 | <25 | <25 | <50 | 7,100 | -- | -- | -- | -- | -- | -- | -- | |
| MW-8 | 8/4/2011 | 18.13 | 6.23 | 0.00 | 11.90 | 2,000 | <0.50 | <0.50 | <0.50 | <1.0 | 4,400 | 370 | 4.9 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01, A90 |
| MW-8 | 11/21/2011 | 18.13 | 7.02 | 0.00 | 11.11 | 900* | <0.50 | <0.50 | <0.50 | <1.0 | 2,500 | 250 | 2.6 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-8 | 2/2/2012 | 18.13 | 6.97 | 0.00 | 11.16 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 2,400 | 740 | 2.3 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-8 | 5/14/2012 | 18.13 | 5.91 | 0.00 | 12.22 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 2,100 | 590 | 1.7 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-8 | 8/13/2012 | 18.13 | 6.71 | 0.00 | 11.42 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 1,600 | 450 | 1.2 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-8 | 10/25/2012 | 18.13 | 7.39 | 0.00 | 10.74 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 810 | 380 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-8 | 3/5/2013 | 18.13 | 6.15 | 0.00 | 11.98 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 100 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-8 | 5/7/2013 | 18.13 | 6.41 | 0.00 | 11.72 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 140 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-8 | 8/8/2013 | 18.13 | 7.40 | 0.00 | 10.73 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 370 | 180 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-8 | 11/6/2013 | 18.13 | 8.13 | 0.00 | 10.00 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 98 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-8 | 2/5/2014 | 18.13 | 8.31 | 0.00 | 9.82 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-8 | 8/13/2014 | 18.13 | 8.63 | 0.00 | 9.50 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 60 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-9 | 5/28/2009 | 18.75 | 6.24 | 0.00 | 12.51 | 1,200 | <0.50 | <0.50 | 0.75 | 15 | 13,000 | -- | -- | -- | -- | -- | -- | -- | |
| MW-9 | 9/14/2009 | 18.75 | 7.36 | 0.00 | 11.39 | 280 | <0.50 | <0.50 | <0.50 | <1.0 | 390 | -- | -- | -- | -- | -- | -- | -- | |
| MW-9 | 11/13/2009 | 18.75 | 7.56 | 0.00 | 11.19 | 170 | <0.50 | <0.50 | <0.50 | <1.0 | 280 | -- | -- | -- | -- | -- | -- | -- | |
| MW-9 | 2/5/2010 | 18.75 | 6.70 | 0.00 | 12.05 | 100 | <0.50 | <0.50 | <0.50 | <1.0 | 190 | -- | -- | -- | -- | -- | -- | -- | |
| MW-9 | 6/7/2010 | 18.75 | 6.59 | 0.00 | 12.16 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 66 | -- | -- | -- | -- | -- | -- | -- | |
| MW-9 | 8/3/2010 | 18.75 | 7.00 | 0.00 | 11.75 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 99 | -- | -- | -- | -- | -- | -- | -- | |
| MW-9 | 11/11/2010 | 18.75 | 8.02 | 0.00 | 10.73 | 83 | <0.50 | <0.50 | <0.50 | <1.0 | 270 | -- | -- | -- | -- | -- | -- | -- | |
| MW-9 | 2/14/2011 | 18.75 | 6.69 | 0.00 | 12.06 | 170 | <0.50 | <0.50 | <0.50 | <1.0 | 320 | -- | -- | -- | -- | -- | -- | -- | |
| MW-9 | 8/4/2011 | 18.75 | 6.59 | 0.00 | 12.16 | 62 | <0.50 | <0.50 | <0.50 | <1.0 | 59 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A90 |
| MW-9 | 11/21/2011 | 18.75 | 7.45 | 0.00 | 11.30 | 33* J | <0.50 | <0.50 | <0.50 | <1.0 | 44 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-9 | 2/2/2012 | 18.75 | 7.47 | 0.00 | 11.28 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 6.1 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-9 | 5/14/2012 | 18.75 | 6.30 | 0.00 | 12.45 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 190 | 51 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-9 | 8/13/2012 | 18.75 | 7.12 | 0.00 | 11.63 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 220 | 36 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-9 | 10/25/2012 | 18.75 | 7.87 | 0.00 | 10.88 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 270 | 88 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-9 | 3/5/2013 | 18.75 | 6.54 | 0.00 | 12.21 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 60 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-9 | 5/7/2013 | 18.75 | 6.80 | 0.00 | 11.95 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 390 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-9 | 8/8/2013 | 18.75 | 7.80 | 0.00 | 10.95 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 420 | 190 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-9 | 11/6/2013 | 18.75 | 8.62 | 0.00 | 10.13 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 320 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-9 | 2/5/2014 | 18.75 | 8.95 | 0.00 | 9.80 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 710 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-9 | 8/13/2014 | 18.75 | 9.15 | 0.00 | 9.60 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 600 | <10 | 0.51 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-10 | 5/28/2009 | 18.84 | 6.69 | 0.00 | 12.15 | 700 | <0.50 | <0.50 | <0.50 | <1.0 | 3,500 | -- | -- | -- | -- | -- | -- | -- | |
| MW-10 | 9/14/2009 | 18.84 | 7.50 | 0.00 | 11.34 | 3,300 | <6.2 | <6.2 | <6.2 | <12 | 4,900 | -- | -- | -- | -- | -- | -- | -- | |

**Table 5**
**Historical Groundwater Gauging and Analytical Data**
Unocal Service Station No. 0843
1629 Webster Street
Alameda, California

| Well ID | Date Sampled | TOC Elevation (feet MSL) | DTW (feet bTOC) | LPH Thickness (feet) | GW Elevation (feet MSL) | TPH-G (ug/L) | Benzene (ug/L) | Toluene (ug/L) | Ethyl-benzene (ug/L) | Total Xylenes (ug/L) | MTBE (ug/L) | TBA (ug/L) | TAME (ug/L) | ETBE (ug/L) | DIPE (ug/L) | EDB (ug/L) | EDC (ug/L) | Ethanol (ug/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ESL | | | | | | 100 | 1 | 40 | 30 | 20 | 5 | 12 | | | | | | | |
| MW-10 | 11/13/2009 | 18.84 | 7.70 | 0.00 | 11.14 | 1,500 | <2.5 | <2.5 | <2.5 | <5.0 | 3,300 | -- | -- | -- | -- | -- | -- | -- | |
| MW-10 | 2/5/2010 | 18.84 | 6.66 | 0.00 | 12.18 | 110 | <0.50 | <0.50 | <0.50 | <1.0 | 260 | -- | -- | -- | -- | -- | -- | -- | |
| MW-10 | 6/7/2010 | 18.84 | 6.56 | 0.00 | 12.28 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 8 | -- | -- | -- | -- | -- | -- | -- | |
| MW-10 | 8/3/2010 | 18.84 | 7.14 | 0.00 | 11.70 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 2 | -- | -- | -- | -- | -- | -- | -- | |
| MW-10 | 11/11/2010 | 18.84 | 8.16 | 0.00 | 10.68 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 2 | -- | -- | -- | -- | -- | -- | -- | |
| MW-10 | 2/14/2011 | 18.84 | 6.71 | 0.00 | 12.13 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 2 | -- | -- | -- | -- | -- | -- | -- | |
| MW-10 | 8/4/2011 | 18.84 | 6.73 | 0.00 | 12.11 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 7.4 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-10 | 11/21/2011 | 18.84 | 7.52 | 0.00 | 11.32 | <50* | <0.50 | <0.50 | <0.50 | <1.0 | 1.4 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-10 | 2/2/2012 | 18.84 | 7.52 | 0.00 | 11.32 | <50 | <0.50 | <0.50 | <0.50 | 3.2 | 1.4 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-10 | 5/14/2012 | 18.84 | 6.42 | 0.00 | 12.42 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 1.5 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-10 | 8/13/2012 | 18.84 | 7.24 | 0.00 | 11.60 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-10 | 10/25/2012 | 18.84 | 7.95 | 0.00 | 10.89 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-10 | 3/5/2013 | 18.84 | 6.64 | 0.00 | 12.20 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 1.2 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-10 | 5/7/2013 | 18.84 | 6.92 | 0.00 | 11.92 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 2.1 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-10 | 8/8/2013 | 18.84 | 7.93 | 0.00 | 10.91 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 3.6 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-10 | 11/6/2013 | 18.84 | 8.75 | 0.00 | 10.09 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.50 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-10 | 2/5/2014 | 18.84 | 8.99 | 0.00 | 9.85 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 1.2 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-10 | 8/13/2014 | 18.84 | 9.27 | 0.00 | 9.57 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | <0.5 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-11 | 5/28/2009 | 18.72 | 6.18 | 0.00 | 12.54 | 920 | <0.50 | <0.50 | <0.50 | <1.0 | 15,000 | -- | -- | -- | -- | -- | -- | -- | |
| MW-11 | 9/14/2009 | 18.72 | 7.45 | 0.00 | 11.27 | 11,000 | <25 | <25 | <25 | <50 | 18,000 | -- | -- | -- | -- | -- | -- | -- | |
| MW-11 | 11/13/2009 | 18.72 | 7.51 | 0.00 | 11.21 | 6,200 | <10 | <10 | <10 | <20 | 13,000 | -- | -- | -- | -- | -- | -- | -- | |
| MW-11 | 2/5/2010 | 18.72 | 7.50 | 0.00 | 11.22 | 4,500 | <12 | <12 | <12 | <25 | 13,000 | -- | -- | -- | -- | -- | -- | -- | |
| MW-11 | 6/7/2010 | 18.72 | 6.36 | 0.00 | 12.36 | 4,300 | <10 | <10 | <10 | <20 | 9,500 | -- | -- | -- | -- | -- | -- | -- | |
| MW-11 | 8/3/2010 | 18.72 | 6.90 | 0.00 | 11.82 | 1,400 | <5.0 | <5.0 | <5.0 | <10 | 6,000 | -- | -- | -- | -- | -- | -- | -- | |
| MW-11 | 11/11/2010 | 18.72 | 8.00 | 0.00 | 10.72 | 1,600 | <5.0 | <5.0 | <5.0 | <10 | 6,100 | -- | -- | -- | -- | -- | -- | -- | |
| MW-11 | 2/14/2011 | 18.72 | 6.52 | 0.00 | 12.20 | 3,500 | <6.2 | <6.2 | <6.2 | <12 | 7,400 | -- | -- | -- | -- | -- | -- | -- | |
| MW-11 | 8/4/2011 | 18.72 | 6.54 | 0.00 | 12.18 | 1,400 | <0.50 | <0.50 | <0.50 | <1.0 | 2,000 | 110 | 2.4 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01, A90 |
| MW-11 | 11/21/2011 | 18.72 | 7.36 | 0.00 | 11.36 | 850* | <0.50 | <0.50 | <0.50 | <1.0 | 2,100 | 270 | 2.1 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| MW-11 | 2/2/2012 | 18.72 | 7.32 | 0.00 | 11.40 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 2,500 | 730 | 2.0 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-11 | 5/14/2012 | 18.72 | 6.21 | 0.00 | 12.51 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 1,700 | 570 | 1.4 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-11 | 8/13/2012 | 18.72 | 7.03 | 0.00 | 11.69 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 1,100 | 280 | 0.87 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-11 | 10/25/2012 | 18.72 | 7.77 | 0.00 | 10.95 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 1,000 | 590 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-11 | 3/5/2013 | 18.72 | 6.47 | 0.00 | 12.25 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 750 | 180 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-11 | 5/7/2013 | 18.72 | 6.75 | 0.00 | 11.97 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 1,100 | 140 | 0.81 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-11 | 8/8/2013 | 18.72 | 7.75 | 0.00 | 10.97 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 880 | 680 | 0.91 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-11 | 11/6/2013 | 18.72 | 8.64 | 0.00 | 10.08 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 380 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-11 | 2/5/2014 | 18.72 | 8.88 | 0.00 | 9.84 | <50 | <0.50 | <0.50 | <0.50 | <1.0 | 1,100 | <10 | <0.50 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | A01 |
| MW-11 | 8/13/2014 | 18.72 | 9.43 | 0.00 | 9.29 | 88 | <0.50 | <0.50 | <0.50 | <1.0 | 2,300 | 180 | 2.9 | <0.50 | <0.50 | <0.50 | <0.50 | <250 | |
| W-10-GP1 | 5/23/2001 | -- | -- | -- | -- | ND | ND | ND | ND | ND | 4 | -- | -- | -- | -- | -- | -- | -- | Collected from 10' bgs |
| W-10-GP2 | 5/23/2001 | -- | -- | -- | -- | ND | 1.1 | 0.67 | ND | ND | ND | -- | -- | -- | -- | -- | -- | -- | Collected from 10' bgs |
| W-9-GP3 | 5/23/2001 | -- | -- | -- | -- | ND | 1.2 | ND | 0.55 | 3.9 | ND | -- | -- | -- | -- | -- | -- | -- | Collected from 9' bgs |
| W-6-GP4 | 5/23/2001 | -- | -- | -- | -- | ND | 0.70 | ND | ND | 0.011 | 96 | -- | -- | -- | -- | -- | -- | -- | Collected from 6' bgs |
| W-10-GP5 | 5/23/2001 | -- | -- | -- | -- | 2100 | 39 | 16 | ND | 17 | 2,200 | -- | -- | -- | -- | -- | -- | -- | Collected from 10' bgs |

**Table 5**
**Historical Groundwater Gauging and Analytical Data**
Unocal Service Station No. 0843
1629 Webster Street
Alameda, California

| Well ID | Date Sampled | TOC Elevation (feet MSL) | DTW (feet bTOC) | LPH Thickness (feet) | GW Elevation (feet MSL) | TPH-G (ug/L) | Benzene (ug/L) | Toluene (ug/L) | Ethyl-benzene (ug/L) | Total Xylenes (ug/L) | MTBE (ug/L) | TBA (ug/L) | TAME (ug/L) | ETBE (ug/L) | DIPE (ug/L) | EDB (ug/L) | EDC (ug/L) | Ethanol (ug/L) | Comments |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| ESL | | | | | | 100 | 1 | 40 | 30 | 20 | 5 | 12 | | | | | | | |

**Notes**

Gas chromatography–mass spectrometry method for TPH-g was used August 17, 2004 through February 14, 2011
EPA Method 8015B used for TPH-G from March 5, 1999 through June 7, 2004 and August 4, 2011 to present
EPA Method 8260B used for BTEX/MTBE/Oxygenates

**Standard Abbreviations**

| | | | | | |
|---|---|---|---|---|---|
| < | not detected at or above MRL | EDC | 1,2-dichloroethane (same as ethylene dichloride) | TOC | top of casing (surveyed reference elevation) |
| – | not analyzed | ETBE | ethyl tertiary butyl ether | TPH-G | total petroleum hydrocarbons as gasoline |
| * | TPH-g (C6 through C12) | GW | groundwater | | detection above ESL |
| µg/L | micrograms per liter (approx. equivalent to parts per billion, ppb) | J | estimated value | | |
| A01 | PQL's and MDL's are raised due to sample dilution | LPH | liquid-phase hydrocarbons | | |
| A90 | TPH-g does not exhibit a "gasoline" pattern; TPH-g is entirely due to MTBE | MDL | method detection limit | | |
| **BOLD** | detection above reporting limit | MSL | relative to mean sea level | | |
| bTOC | below top of casing | MTBE | methyl tertiary butyl ether | | |
| DIPE | di-isopropyl ether | PQL | practical quantitation limit | | |
| DTW | depth to water | TAME | tertiary amyl methyl ether | | |
| EDB | 1,2-dibromoethane | TBA | tertiary butyl alcohol | | |