ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Director

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

December 29, 2014

Mr. Charles Carmel
Atlantic Richfield Company (A BP Affiliated Company)
P.O. Box 1257
San Ramon, CA 94583
(Sent via e-mail to: charles.carmel@bp.com)

Subject: Technical Report Request for Fuel Leak Case No. RO0002436 and GeoTracker Global ID T0600100089, ARCO #4977, 2770 Castro Valley Blvd., Castro Valley, CA 94546

Dear Mr. Carmel:

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 was closed with Site Management Requirements that limit future land use to the current commercial land use as an active fueling station. Site Management Requirements are further described in the attached Case Closure Summary.

If you have any questions, please call Karel Detterman at (510) 567-6708.

Sincerely,

Dilan Roe

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

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

cc with enclosures: Sandra Rivera, Assistant Planning Director, Alameda County Planning Department, Community Development Agency: (Sent via e-mail to:sandra.rivera@acgov.org

Kristene Tidwell, Broadbent & Associates, Inc. (Sent via e-mail to: Ktidwell@broadbentinc.com)
Rob Miller, Broadbent & Associates, Inc. (Sent via e-mail to: rhmiller@broadbentinc.com)

Dilan Roe, ACEH, (sent via e-mail to: dilan.roe@acgov.org)
Karel Detterman, ACEH, (sent via e-mail: karel.detterman@acgov.org)
Geotracker, Electronic File

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

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

REMEDIAL ACTION COMPLETION CERTIFICATION

December 29, 2014

Mr. Charles Carmel
Atlantic Richfield Company (A BP Affiliated Company)
P.O. Box 1257
San Ramon, CA 94583
(Sent via e-mail to: charles.carmel@bp.com)

Subject: Technical Report Request for Fuel Leak Case No. RO0002436 and GeoTracker Global ID T0600100089, ARCO #4977, 2770 Castro Valley Blvd., Castro Valley, CA 94546

Dear Mr. Carmel:

This letter confirms the completion of a site investigation and remedial action for the underground storage tanks formerly located at the above-described location. Thank you for your cooperation throughout this investigation. Your willingness and promptness in responding to our inquiries concerning the former underground storage tank(s) are greatly appreciated.

Based on information in the above-referenced file and with the provision that the information provided to this agency was accurate and representative of site conditions, this agency finds that the site investigation and corrective action carried out at your underground storage tank(s) site is in compliance with the requirements of subdivisions (a) and (b) of Section 25296.10 of the Health and Safety Code and with corrective action regulations adopted pursuant to Section 25299.3 of the Health and Safety Code and that no further action related to the petroleum release(s) at the site is required.

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

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

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

Sincerely,

Ariu Levi
Director

UST Case Closure Summary Form

Agency Information

Date 12/29/2014

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: 510-567-6708
Staff Person: Karel Detterman	Title: Hazardous Materials Specialist

Case Information

Facility Name: Atlantic Richfield Company Station #4497		
Facility Address: 2770 Castro Valley Boulevard, Castro Valley, California		
RB LUSTIS Case No: RB Case No. 01-0097	Local Case No.: ----	LOP Case No.: RO0002436
URF Filing Date: 6/20/2001	GeoTracker Global ID: T0600100089	
APN: 84A-160-6-3	Current Land Use: Active Fueling Station	
Responsible Party(s):	Address:	Phone:
Atlantic Richfield Company	P.O. Box 1257, San Ramon, California 94583	925-275-3803

Tank Information

Tank No.	Size (gal)	Contents	Closed in-Place/ Removed/Active	Date
----	10,000	Gasoline	Removed	3-15-2001
----	12,000	Gasoline	Removed	3-15-2001
----	12,000	Gasoline	Removed	3-15-2001

Conceptual Site Model (Attachment 1, 1 page)

Closure Criteria Met (Attachment 2, 1 page)

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)

Site maps (Attachment 6, 9 pages)

Analytical Data (Attachment 7, 13 pages)

UST Case Closure Summary Form

Additional Information:

Site Management Requirements: This fuel leak case has been evaluated for closure consistent with the State Water Resources Control Board Low-Threat Underground Storage Tank Closure Policy (LTCP). Under the current land use as an active fueling station, the site is not required to meet media-specific criteria for vapor intrusion to indoor air. Additionally, naphthalene was not an analyte in shallow soil samples. However, since the release at the site consisted primarily of gasoline and benzene and ethylbenzene concentrations in shallow soil do not exceed media-specific criteria for direct contact, naphthalene concentrations in shallow soil are not likely to exceed the LTCP media-specific criteria. Therefore, case closure is granted for the current commercial land use as an active fueling station.

If a change in land use to any residential, commercial other than as a commercial fueling station, or conservative land use, or if any redevelopment occurs, Alameda County Environmental Health (ACEH) must be notified as required by Government Code Section 65850.2.2.

Excavation or construction activities in areas of residual contamination require planning and implementation of appropriate health and safety procedures by the responsible party prior to and during excavation and construction activities.

RWQCB Notification

Notification Date: September 9, 2014

RWQCB Staff Name: Cherie McCaulou	Title: Engineering Geologist

Local Agency Representative

Prepared by: Karel Detterman, P.G.	Title: Hazardous Materials Specialist or Senior Hazardous Materials Specialist
Signature: Karel Detterman	Date: 12/29/2014
Approved by: Dilan Roe, P.E.	Title: LOP and SCP Program Manager
Signature: Dilan Roe	Date: 12/29/2014

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

ATTACHMENT 1

ARCO #4977 (T0600100089) - MAP THIS SITE

OPEN - ELIGIBLE FOR CLOSURE

2770 CASTRO VALLEY BLVD
CASTRO VALLEY , CA 94546
ALAMEDA COUNTY

VIEW PRINTABLE CASE SUMMARY FOR THIS SITE

ACTIVITIES REPORT

PUBLIC WEBPAGE

CLEANUP OVERSIGHT AGENCIES
ALAMEDA COUNTY LOP *(LEAD)* - *CASE #: RO0002436*
CASEWORKER: *KAREL DETTERMAN* - ***SUPERVISOR:*** *DILAN ROE*
SAN FRANCISCO BAY RWQCB (REGION 2) - *CASE #: 01-0097*
CASEWORKER: *Cherie McCaulou* - ***SUPERVISOR:*** *Cheryl L. Prowell*

CR Site ID #: NOT SPECIFIED

THIS PROJECT WAS LAST MODIFIED BY ***KAREL DETTERMAN*** ON 12/15/2014 5:02:14 PM - HISTORY

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

CSM REPORT - VIEW PUBLIC NOTICING VERSION OF THIS REPORT

UST CLEANUP FUND CLAIM INFORMATION (DATA PULLED FROM SCUFIIS)

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

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

SITE NAME / ADDRESS	STATUS	STATUS DATE	RELEASE REPORT DATE	AGE OF CASE	CLEANUP OVERSIGHT AGENCIES
ARCO #4977 (Global ID: T0600100089) 2770 CASTRO VALLEY BLVD CASTRO VALLEY, CA 94546	Open - Eligible for Closure	6/3/2014	6/20/2001	13	ALAMEDA COUNTY LOP *(LEAD)* - *CASE #: RO0002436* ***CASEWORKER:*** *KAREL DETTERMAN* - ***SUPERVISOR:*** *DILAN ROE* SAN FRANCISCO BAY RWQCB (REGION 2) - *CASE #: 01-0097* ***CASEWORKER:*** *Cherie McCaulou* - ***SUPERVISOR:*** *Cheryl L. Prowell*

STAFF NOTES (INTERNAL)
<NO STAFF NOTES ENTERED>

SITE HISTORY
On March 19, 2001, USTs and product piping was removed. Elevated concentrations of petroleum hydrocarbons as gasoline, benzene, and MTBE were detected in soil and groundwater samples collected at the site. In April 2002, five borings were installed at the site followed by the installation of three groundwater monitoring wells (MW-1 through MW-3). In September 2011, three borings (B3 through B5) were advanced to further evlauate the lateral and vertical extent of petroleum hydrocarbon impacted soil and groundwater. Groundwater monitoring was conducted at the site between 4/2002 and 10/2013.

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: http://ehgis.acgov.org/dehpublic/dehpublic.jsp.

RESPONSIBLE PARTIES

NAME	ORGANIZATION	ADDRESS	CITY	EMAIL
CHARLES CARMEL	ATLANTIC RICHFIELD COMPANY	P.O. BOX 1257	SAN RAMON	charles.carmel@bp.com
MICHAEL SEROY	ARCO STATION	2770 CASTRON VALLEY BLVD	CASTRO VALLEY	

CLEANUP ACTION INFO

ACTION TYPE	BEGIN DATE	END DATE	PHASE	CONTAMINANT MASS REMOVED	DESCRIPTION
EXCAVATION	3/15/2001	3/18/2001			

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

CONTAMINANTS OF CONCERN	CURRENT LAND USE	BENEFICIAL USE	DISCHARGE SOURCE	DATE REPORTED	STOP METHOD	NEARBY / IMPACTED WELLS
Benzene, Ethylbenzene, Gasoline, MTBE / TBA / Other Fuel Oxygenates	Commercial	GW - Municipal and Domestic Supply		6/20/2001	Close and Replace 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	11/14/2014	11/21/2014	1/22/2014		8/1/2014

CDPH WELLS WITHIN 1500 FEET OF THIS SITE
NONE

CALCULATED FIELDS (BASED ON LATITUDE / LONGITUDE)

APN	GW BASIN NAME	WATERSHED NAME
084A016000601		South Bay - East Bay Cities (20420)

COUNTY
Alameda

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

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

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

MOST RECENT GEO_WELL DATA - SHOW VIEW ESI SUBMITTALS

ATTACHMENT 2

ARCO #4977 (T0600100089) - MAP THIS SITE

OPEN - ELIGIBLE FOR CLOSURE

2770 CASTRO VALLEY BLVD
CASTRO VALLEY , CA 94546
ALAMEDA COUNTY

VIEW PRINTABLE CASE SUMMARY FOR THIS SITE

ACTIVITIES REPORT

PUBLIC WEBPAGE

CLEANUP OVERSIGHT AGENCIES
ALAMEDA COUNTY LOP *(LEAD)* - *CASE #: RO0002436*
CASEWORKER: *KAREL DETTERMAN* - ***SUPERVISOR:*** *DILAN ROE*
SAN FRANCISCO BAY RWQCB (REGION 2) - *CASE #: 01-0097*
CASEWORKER: *Cherie McCaulou* - ***SUPERVISOR:*** *Cheryl L. Prowell*

CR Site ID #: NOT SPECIFIED

THIS PROJECT WAS LAST MODIFIED BY ***DILAN ROE*** ON 12/16/2014 3:15:00 PM - HISTORY

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

CLOSURE POLICY

THIS VERSION IS FINAL AS OF 12/16/2014

CHECKLIST INITIATED ON 8/11/2013

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? — ◉ YES ○ NO

Name of Water System : EBMUD

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

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

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

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

f. Secondary source has been removed to the extent practicable (info). — ◉ YES ○ NO

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

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

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

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

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

1.4 - The contaminant plume that exceeds water quality objectives is <1,000 feet in length. There is no free product. The nearest existing water supply well or surface water body is >1,000 feet from the defined plume boundary. The dissolved concentrations of benzene and MTBE are both <1,000 µg/L. — ◉ YES ○ NO

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

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

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 — **YES**

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

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

3.1 - Maximum concentrations of petroleum constituents in soil are less than or equal to those listed in the following table (LINK) for the specified depth below ground surface. — ◉ YES ○ NO

Additional Information

This case should be kept OPEN in spite of meeting policy criteria. — ○ YES ◉ NO

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

SPELL CHECK

Save Form as Partially Completed | Save Form as Complete

LOGGED IN AS KDETTERMAN

CONTACT GEOTRACKER HELP

ATTACHMENT 3
LTCP GROUNDWATER SPECIFIC CRITERIA

LTCP Groundwater Specific Scenario under which case was closed: Scenario 4

Site Data		LTCP Scenario 1 Criteria	LTCP Scenario 2 Criteria	LTCP Scenario 3 Criteria	LTCP Scenario 4 Criteria
Plume Length	<1000	<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	>250 feet	>1,000 feet	>1,000 feet	>1,000 feet
Distance to Nearest Surface Water and Direction	> 1,000 feet in downgradient direction; an unnamed concrete-lined drainage channel is located 575 feet northwest and upgradient	>250 feet	>1,000 feet	>1,000 feet	>1,000 feet
Property Owner Willing to Accept a Land Use Restriction?	----	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	1,600	160	No criteria	3,000	No criteria	1,000
MTBE	1,700	33	No criteria	1,000	No criteria	1,000

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?	----

ATTACHMENT 4
LTCP VAPOR SPECIFIC CRITERIA

LTCP Vapor Specific Scenario under which case was closed: Active fueling station exempt from vapor specific criteria

Active Fueling Station	Active as of 12/29/2014

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	≥10 feet	≥30 feet	≥30 feet	≥5 feet	≥10 feet	≥5 feet	≥5 feet
Total TPH in Soil in Bioattenuation Zone	1,600 milligrams per kilogram (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	160 milligrams per liter (ug/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 ($\mu g/m^3$)	Current Maximum ($\mu g/m^3$)	Residential	Commercial	Residential	Commercial
Benzene	-----	-----	<85	<280	<85,000	<280,000
Ethylbenzene	-----	-----	<1,100	<3,600	<1,100,000	<3,600,000
Naphthalene	-----	-----	<93	<310	<93,000	<310,000

If the site does not meet scenarios 1 through 4, does a site-specific risk assessment for the vapor intrusion pathway demonstrate that human health is protected?	----
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?	----

ATTACHMENT 5
LTCP DIRECT CONTACT AND OUTDOOR AIR EXPOSURE CRITERIA

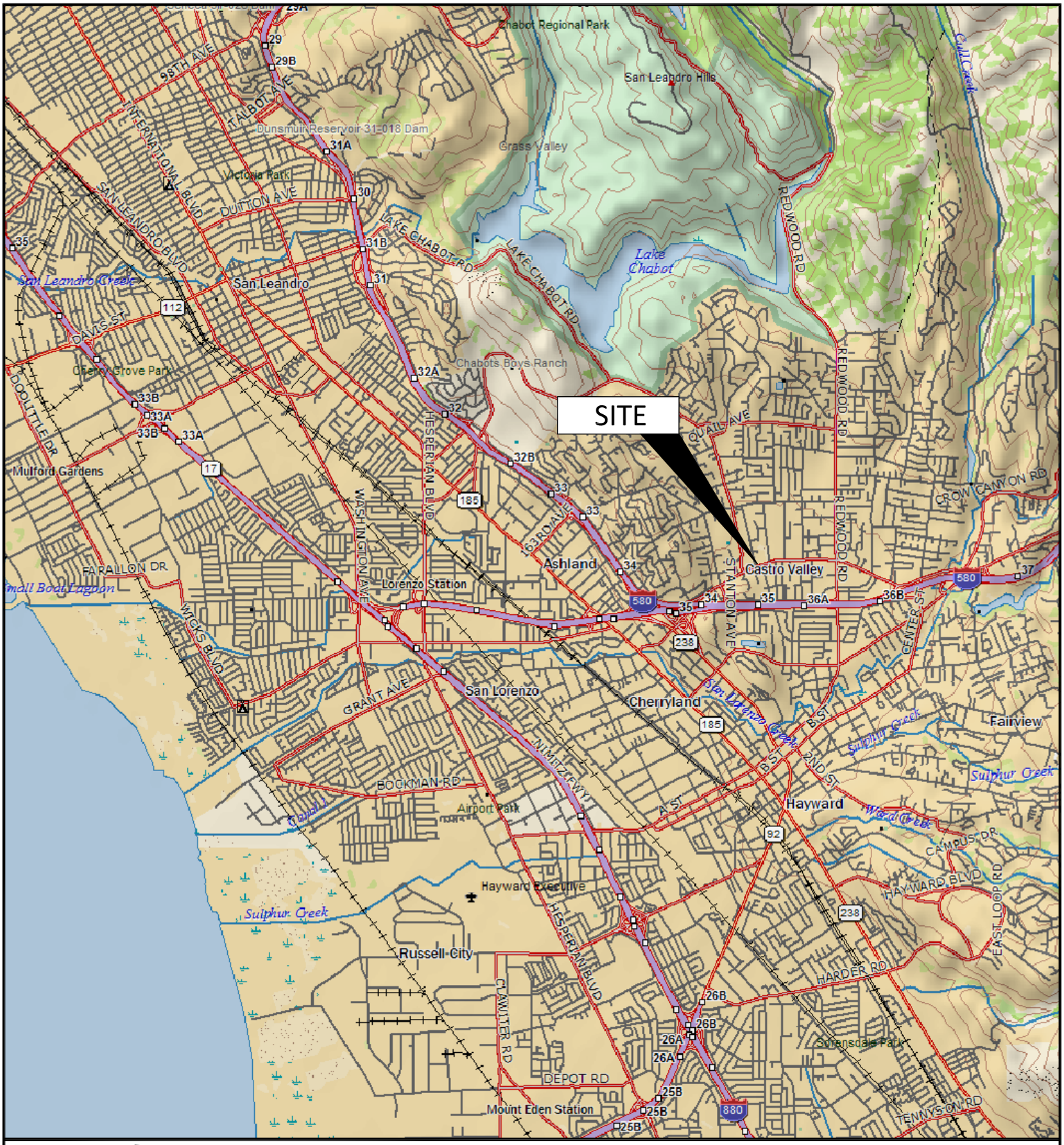
LTCP Direct Contact and Outdoor Air Exposure Specific Scenario under which case was closed: Maximum concentrations of petroleum hydrocarbons are less than or equal to those in Table 1 below.

Are maximum concentrations less than those in Table 1 below?		Yes				
Constituent		Residential		Commercial/Industrial		Utility Worker
		0 to 5 feet below ground surface (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	----	----	0.911	1.79	1.79
LTCP Criteria	Benzene	≤1.9	≤2.8	≤8.2	≤12	≤14
Site Maximum	Ethylbenzene	----	----	3.64	11.0	11.0
LTCP Criteria	Ethylbenzene	≤21	≤32	≤89	≤134	≤314
Site Maximum	Naphthalene	----	----	---- [1]	---- [1]	---- [1]
LTCP Criteria	Naphthalene	≤9.7	≤9.7	≤45	≤45	≤219
Site Maximum	PAHs	----	----	---- [2]	---- [2]	---- [2]
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?		----				

[1]Naphthalene was not included in the analysis of soil samples collected at the site. This apparent data gap can be addressed using the published relative concentrations of naphthalene and benzene in gasoline. This approach has been used by SWRCB staff in recent Closure Orders pursuant to the Policy (e.g., SWRCB WQ Order 2013-0003): Gasoline mixtures contain an average of approximately 2% benzene and 0.25% naphthalene (Potter and Simmons 1998); therefore, benzene concentrations can be directly substituted for naphthalene concentrations with a safety factor of about 10. The maximum benzene concentrations from the Site are less than the naphthalene criteria in Table 1 of the Policy. Therefore, the estimated naphthalene concentrations at the Site meet the Policy criteria for direct contact by a factor of about 10. It is highly unlikely that naphthalene concentrations in the soil, if any, exceed the Policy criteria.

[2]Soil samples were not analyzed for polyaromatic hydrocarbons (PAHs) as there was no waste oil UST present at the site.

ATTACHMENT 6



N

0 1 2

APPROXIMATE SCALE (mi)

IMAGE SOURCE: DELORME

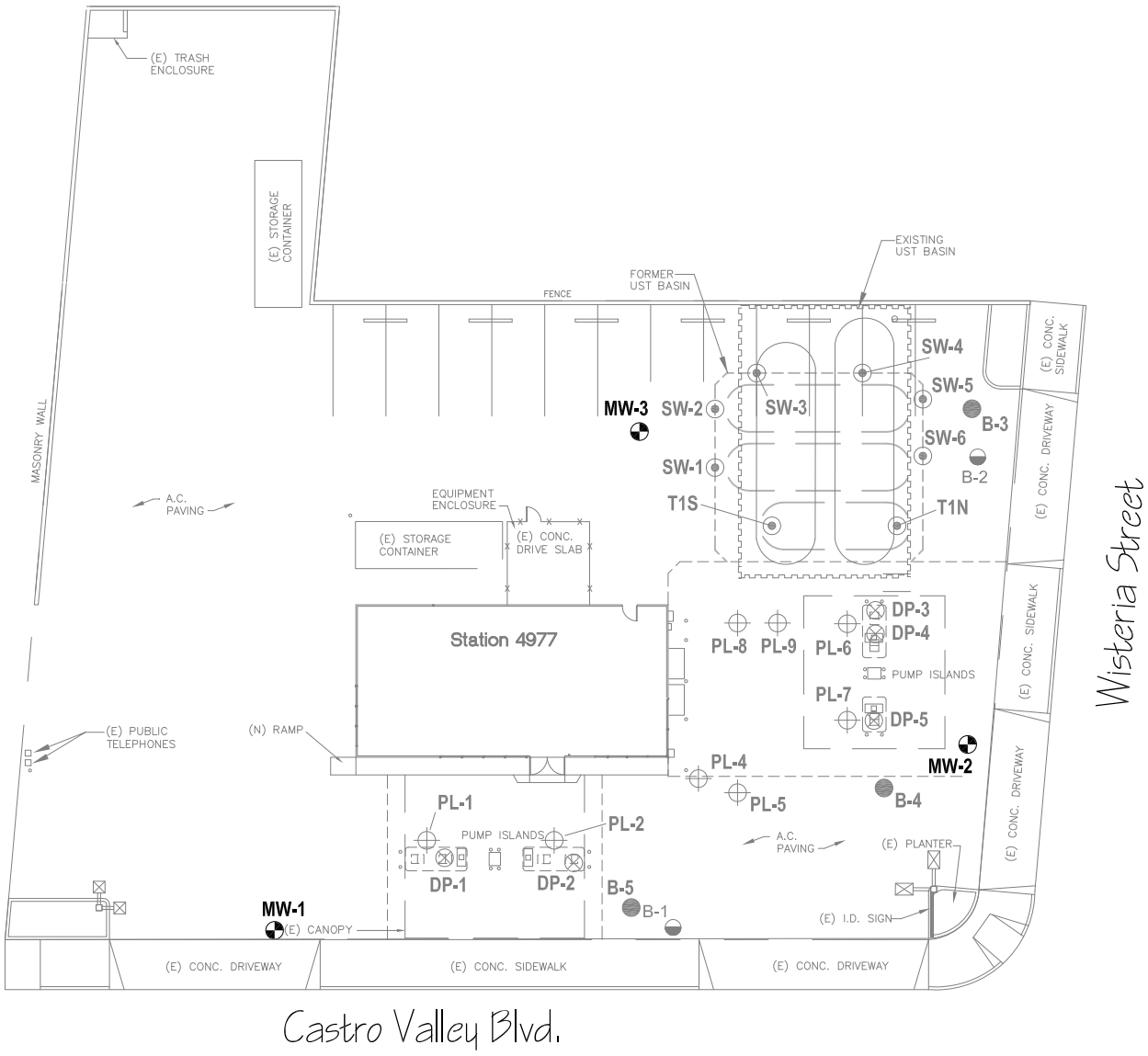
BROADBENT
1370 Ridgewood Dr., Suite 5
Chico, California 95973

Project No.: 06-82-625 Date: 11/29/2012

Station #4977
2770 Castro Valley Blvd.
Castro Valley, California

Site Location Map

Drawing
1



LEGEND

- SOIL BORING
- MONITORING WELL
- HISTORIC SOIL BORING
- DISPENSER COMPLIANCE SAMPLE
- PRODUCT LINE SAMPLES
- FORMER TANK BASIN SAMPLES

N

0 30 60

SCALE (ft)

NOTE: SITE MAP ADAPTED FROM DELTA ENVIRONMENTAL FIGURES.
SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

BROADBENT
1370 Ridgewood Dr., Suite 5
Chico, California 95973
Project No.: 06-82-625 Date: 10/27/2014

Station #4977
2770 Castro Valley Blvd.
Castro Valley, California

Site Map

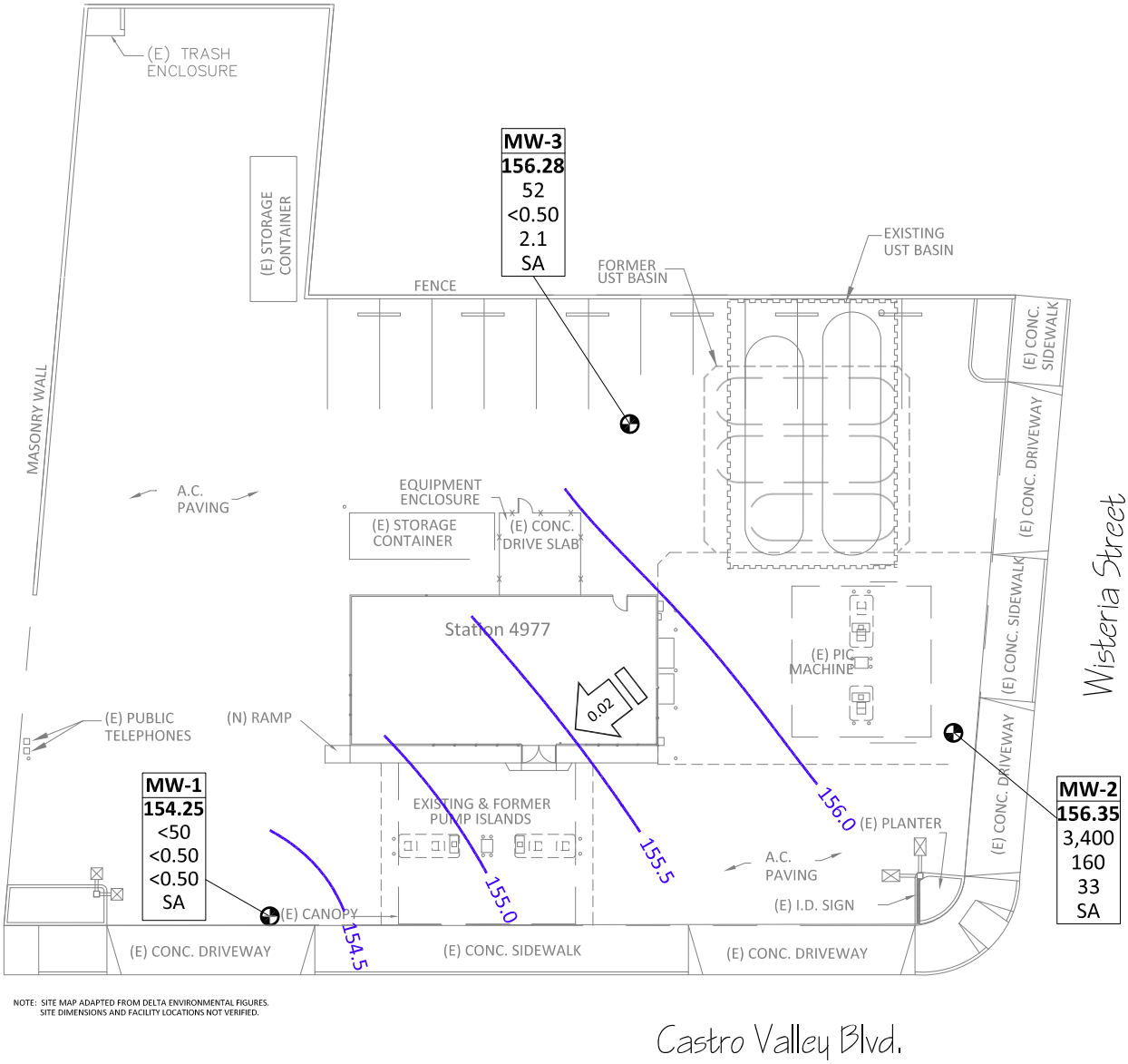
Drawing
2

BROADBENT
1370 Ridgewood Dr., Suite 5
Chico, California 95973
Project No.: 06-82-625 Date: 6/13/2014

Station #4977
2770 Castro Valley Blvd.
Castro Valley, California

Potential GRO Plume Lengths
Based on LTCP Technical Justification

Drawing
1



LEGEND

- Monitor Well Location
- Well / ELEV / GRO / BZ / MTBE / SA — Well Designation; Groundwater Elevation (ft.); Concentration of GRO, Benzene and MTBE in Groundwater (µg/L); Sampling Frequency
- < — Not Detected at or Above Laboratory Reporting Limits
- SA — Sampled Semi-Annually
- 155.0 — Groundwater Elevation Contour (ft)
- 0.02 — Approximate Groundwater Gradient (ft/ft)

N

0 30 60

SCALE (ft)

BROADBENT 1370 Ridgewood Dr., Suite 5 Chico, California 95973 Project No.: 06-82-625 Date: 1/17/2014	Station #4977 2770 Castro Valley Blvd. Castro Valley, California	Groundwater Elevation Contour and Analytical Summary Map Fourth Quarter, 2013

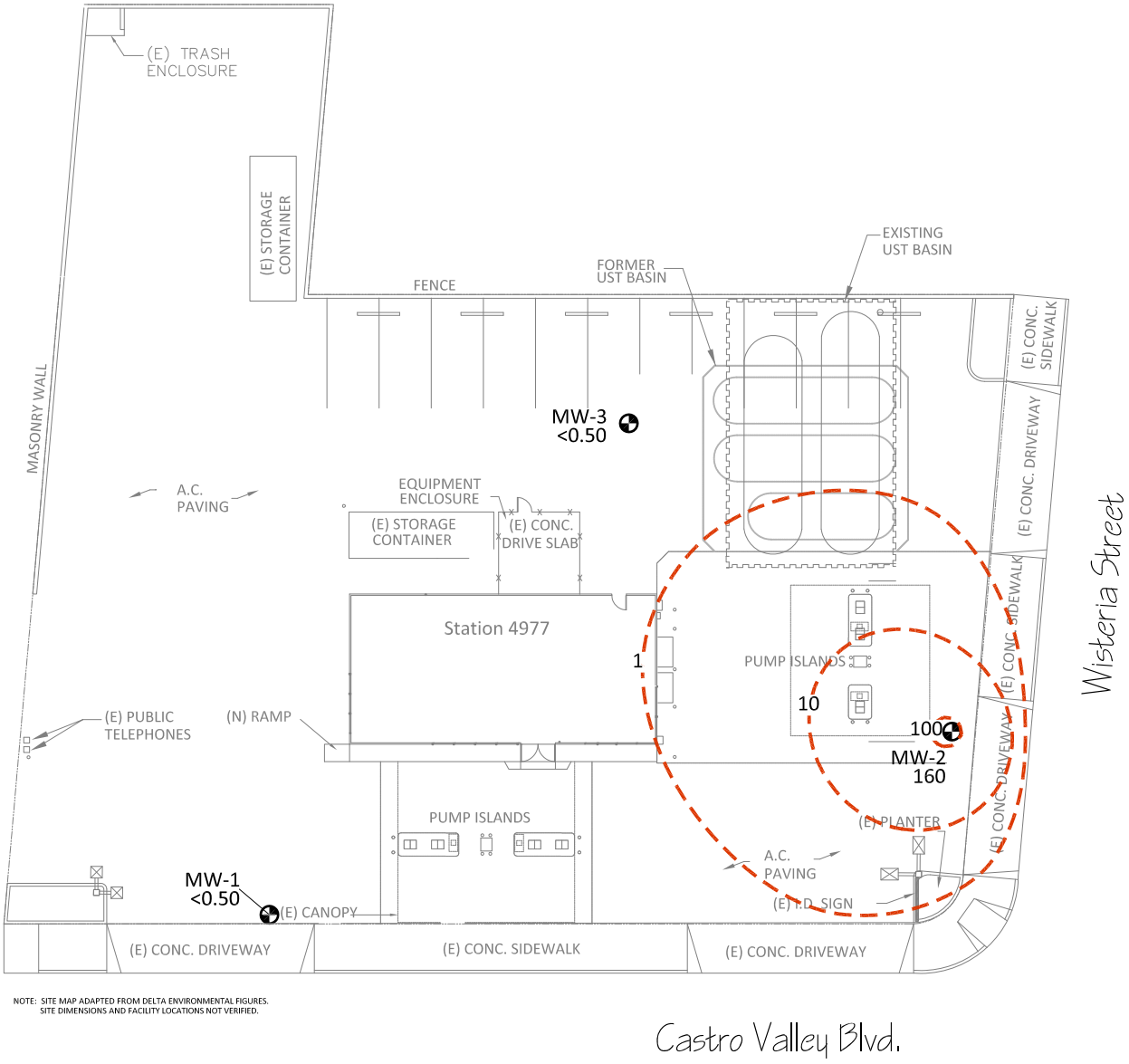
Drawing 3

Table 4. Summary of Groundwater Gradient - Direction and Magnitude

ARCO Service Station #4977, 2770 Castro Valley Blvd., Castro Valley, CA

Date Measured	Approximate Gradient Direction	Approximate Gradient Magnitude (ft/ft)
4/19/2002	Southwest	0.038
9/27/2002	Southwest	0.021
12/16/2002	Southeast	0.029
3/11/2003	South	0.024
6/17/2003	South-Southwest	0.022
9/18/2003	South-Southwest	0.022
3/11/2004	South-Southwest	0.024
6/2/2004	South	0.025
9/22/2004	South	0.025
12/15/2004	South	0.020
3/7/2005	South	0.02
6/27/2005	South	0.01
9/16/2005	Southeast	0.03
12/27/2005	South-Southeast	0.02
3/16/2006	Southeast	0.02
6/26/2006	South	0.03
9/29/2006	South	0.025
12/19/2006	South	0.024
3/29/2007	South	0.020
6/5/2007	South	0.027
9/25/2007	South	0.023
12/26/2007	South	0.027
3/25/2008	South	0.026
6/10/2008	South	0.026
9/2/2008	South	0.026
12/2/2008	South	0.028
3/5/2009	South	0.037
6/2/2009	South	0.011
11/6/2009	South-Southwest	0.025
5/20/2010	South	0.021
11/3/2010	South	0.021
5/17/2011	South-Southeast	0.042
12/16/2011	South	0.021
4/10/2012	South	0.016
10/9/2012	South	0.022
4/23/2013	South	0.02
10/9/2013	**South**	**0.02**

Notes:
The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information



NOTE: SITE MAP ADAPTED FROM DELTA ENVIRONMENTAL FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

LEGEND

Monitor Well Location with Benzene Concentration (µg/L)

Benzene Contour (µg/L)

N

0 30 60

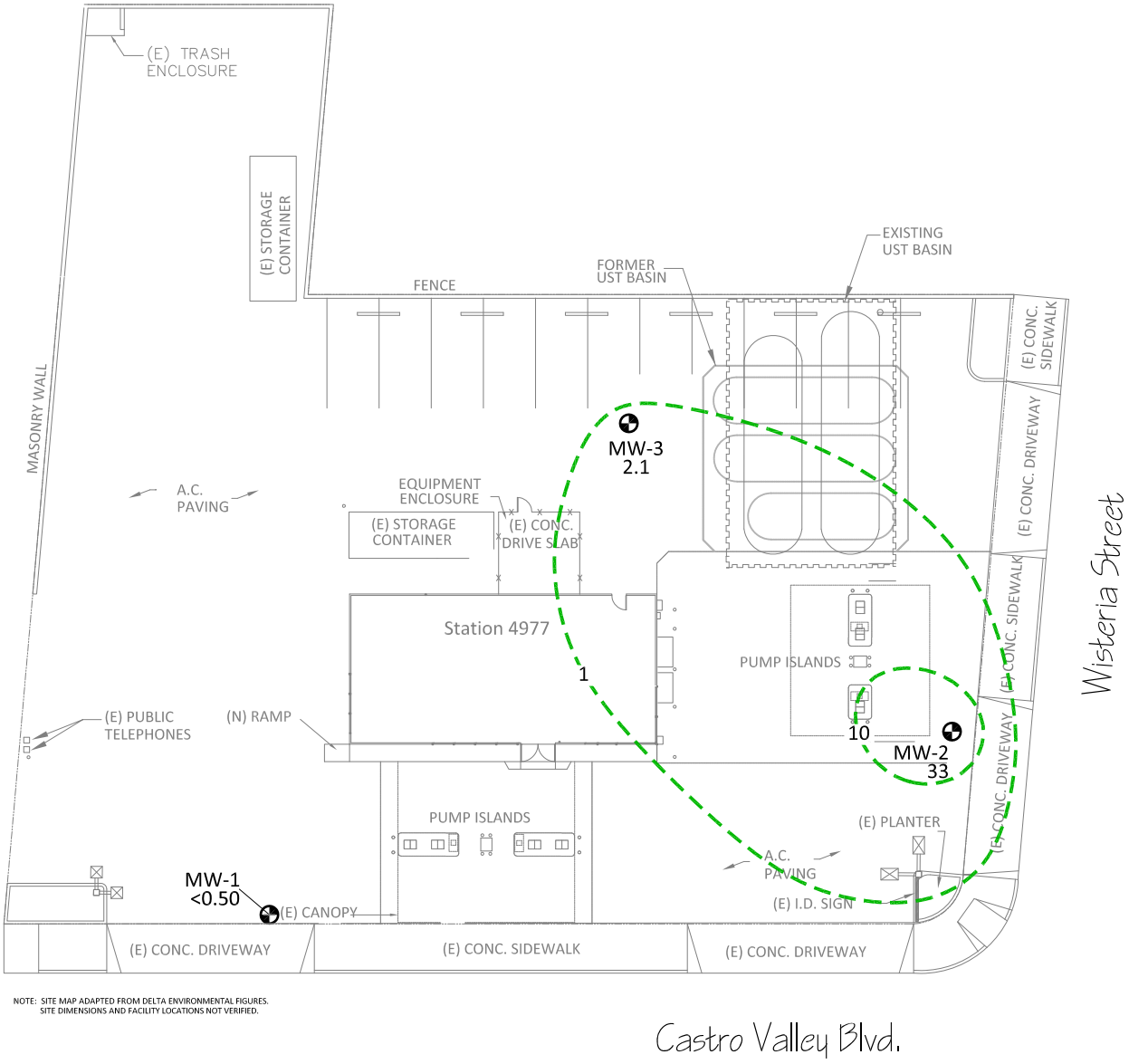
SCALE (ft)

BROADBENT
1370 Ridgewood Dr., Suite 5
Chico, California 95973
Project No.: 06-82-625 Date: 3/14/2014

Station #4977
2770 Castro Valley Blvd.
Castro Valley, California

Benzene Isoconcentration Contours
October 9, 2013

Drawing
6



LEGEND

Monitor Well Location with MTBE Concentration (µg/L)

MTBE Contour (µg/L)

N

0 30 60

SCALE (ft)

BROADBENT
1370 Ridgewood Dr., Suite 5
Chico, California 95973
Project No.: 06-82-625 Date: 2/10/2014

Station #4977
2770 Castro Valley Blvd.
Castro Valley, California

MTBE Isoconcentration Contours
October 9, 2013

Drawing
8

Figure 1 - Approximate Well Locations - ARCO #4977 - 2770 Castro Valley Blvd., Castro Valley, CA

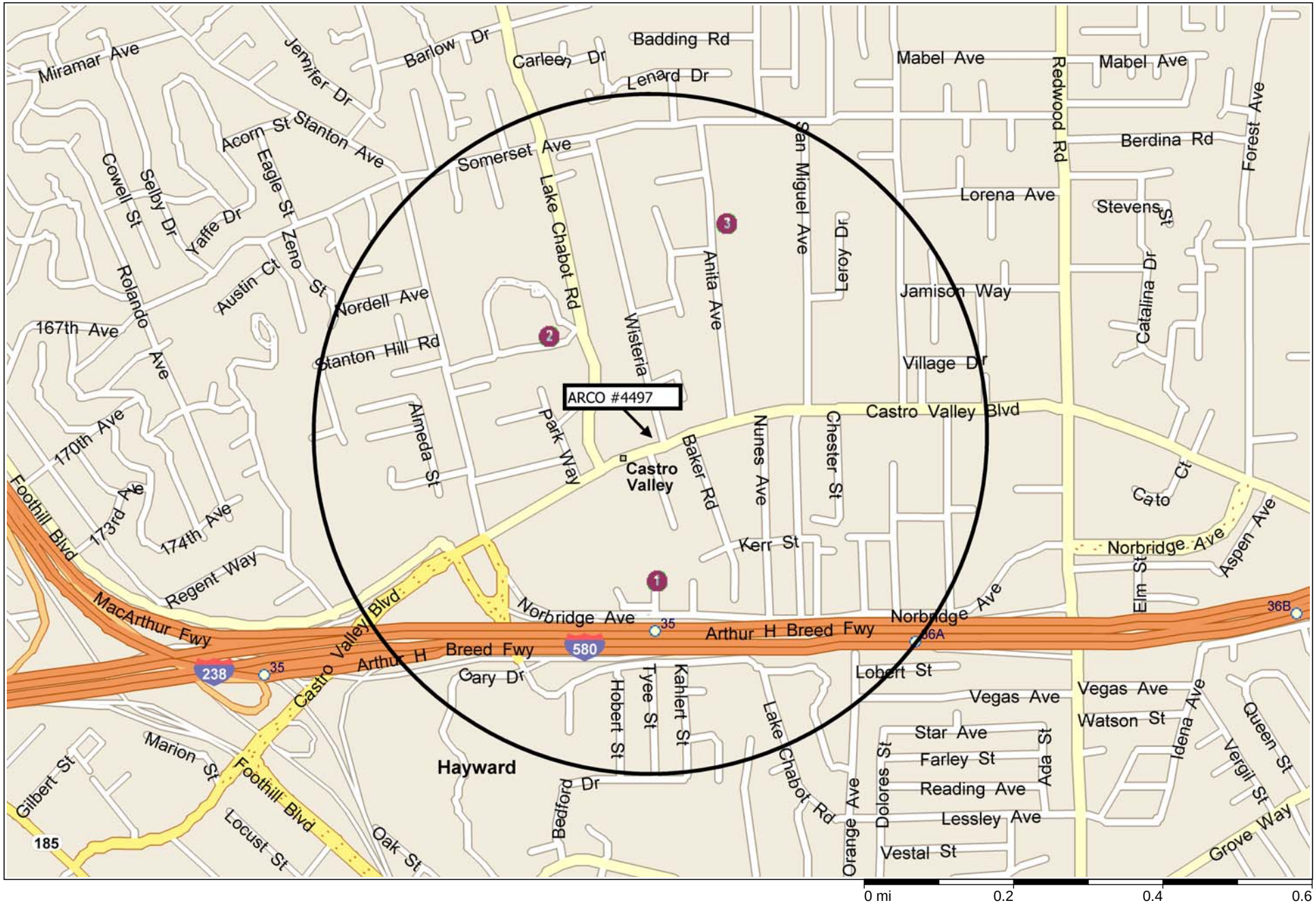


Table 1 - Wells Located Within 0.5-Mile Radius

ARCO Station No. 4977

2770 Castro Valley Boulevard

Castro Valley, California

Map ID No.	Approximate Distance from Site	Well Type	Installation Date	Screen Interval
1	1,050 ft. S	dom	Jul-53	no perforations
2	1,000 ft. NW	dom	Jul-52	no perforations
2	1,000 ft. NW	unk	Sep-52	no perforations
3	1,650 ft. NNE	dom	Feb-53	31-51 ft.

Abbreviations:

ft = feet
N = North
S = South
E = East
W = West
dom = domestic well
irr = irrigation well
mun = municipal well
pub = public well
unk = unknown

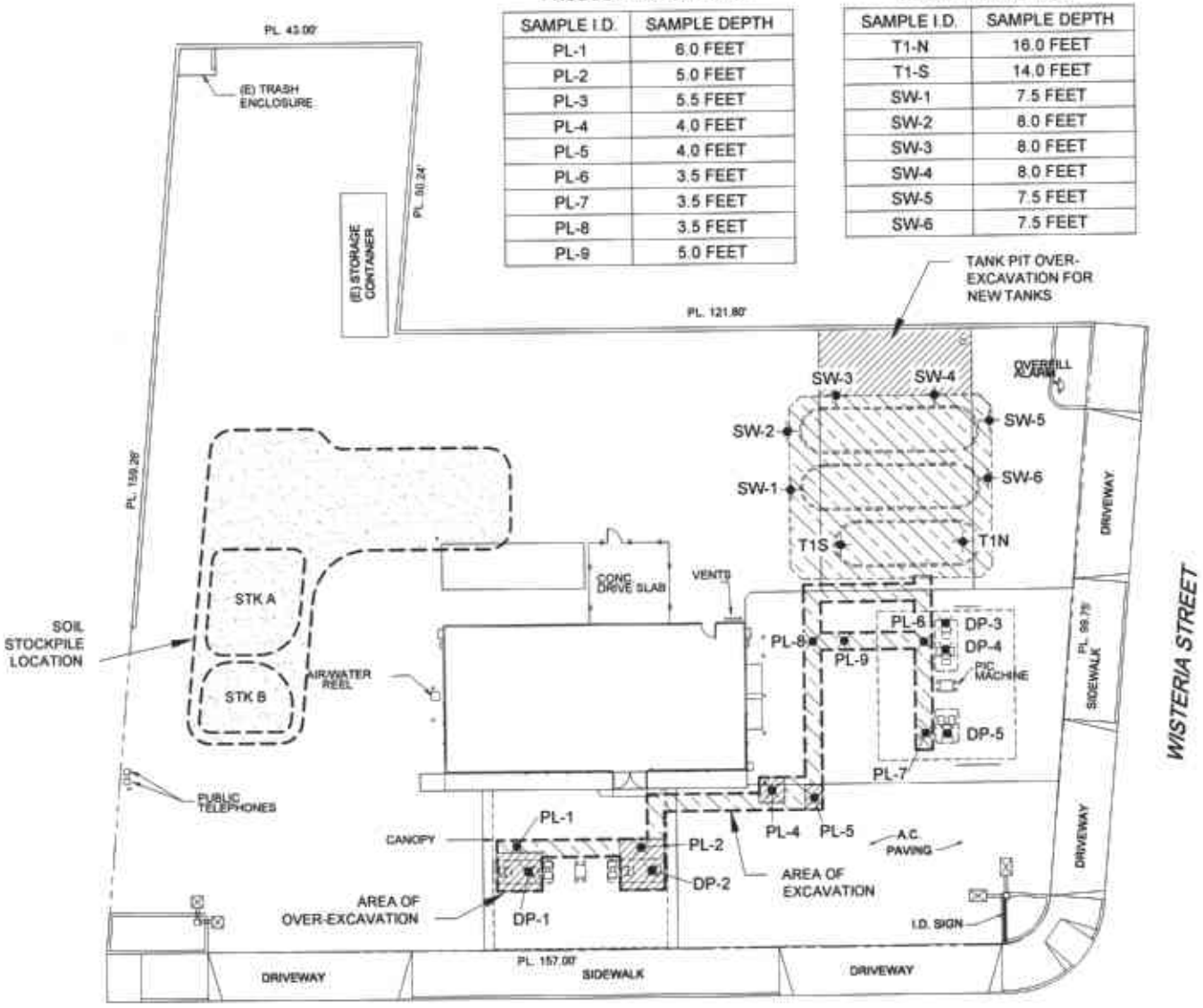
ATTACHMENT 7

PRODUCT LINE SAMPLES

SAMPLE I.D.	SAMPLE DEPTH
PL-1	6.0 FEET
PL-2	5.0 FEET
PL-3	5.5 FEET
PL-4	4.0 FEET
PL-5	4.0 FEET
PL-6	3.5 FEET
PL-7	3.5 FEET
PL-8	3.5 FEET
PL-9	5.0 FEET

FORMER TANK BASIN

SAMPLE I.D.	SAMPLE DEPTH
T1-N	16.0 FEET
T1-S	14.0 FEET
SW-1	7.5 FEET
SW-2	8.0 FEET
SW-3	8.0 FEET
SW-4	8.0 FEET
SW-5	7.5 FEET
SW-6	7.5 FEET



DISPENSER PUMP SAMPLES

SAMPLE I.D.	SAMPLE DEPTH
DP-1	6.0 FEET
DP-2	6.0 FEET
DP-3	3.0 FEET
DP-4	3.5 FEET
DP-5	3.5 FEET

CASTRO VALLEY BLVD.

North

0 30 FT

SCALE

NOTE: SITE MAP ADAPTED FROM IT CORPORATION FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

LEGEND:

- T-1N — TANK BASIN SOIL SAMPLE LOCATIONS
- PL-1 — FORMER PRODUCT LINE/ DISPENSER PUMP SOIL SAMPLE LOCATIONS
- AREA OF SOIL EXCAVATION DURING REPLACEMENT OF TANKS/ PRODUCT LINES/ DISPENSER PUMPS
- AREA OF OVER-EXCAVATION DURING REPLACEMENT OF TANKS/ PRODUCT LINES/ DISPENSER PUMPS

FIGURE 3
AREA OF EXCAVATION
AND SAMPLE LOCATION MAP

ARCO FACILITY NO. 4977
2770 CASTRO VALLEY ROAD
CASTRO VALLEY, CA.

PROJECT NO. D000-845	DRAWN BY TLA 6/15/01
FILE NO. 4977-1	PREPARED BY TLA
REVISION NO. 4	REVIEWED BY

Delta Environmental Consultants, Inc.

Table 5. Historic Soil Analytical Data
Station #4977, 2770 Castro Valley Boulevard, Castro Valley, California

Soil Boring Identification*	Sample ID	Date Collected	GRO mg/kg	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	MTBE mg/kg
DP-1	6'	3/15/2001	**235**	**0.946**	<0.025	**5.14**	**3.52**	**1.63**
DP-2	6'	3/15/2001	**1,450**	**8.05**	**2.17**	**37.3**	**127**	<10
DP-3	3'	3/15/2001	<1.0	<0.005	<0.005	<0.005	0.00746	<0.05
DP-4	3.5'	3/15/2001	**296**	<0.25	<0.25	**0.608**	**1.03**	<2.5
DP-5	3.5'	3/15/2001	**3.56**	<0.005	<0.005	**0.0174**	**0.0314**	**1.27**
PL-1	6'	3/15/2001	**398**	**1.79**	<0.1	**9.46**	**28.7**	<1.0
PL-2	5'	3/15/2001	**1,140**	**3.01**	<0.25	**25.8**	**65.7**	**4.79**
PL-3	5.5'	3/15/2001	**530**	<0.25	**0.947**	**11**	**9.76**	<2.5
PL-4	4'	3/15/2001	**8.77**	**0.077**	<0.005	**0.0335**	**0.0623**	<0.05
PL-5	4'	3/15/2001	**28.6**	**0.107**	<0.025	**0.143**	**0.195**	<0.25
PL-6	3.5'	3/15/2001	**243**	**0.911**	<0.1	**2.26**	**0.484**	**0.145**
PL-7	3.5'	3/15/2001	**128**	**0.847**	**0.438**	**2.5**	**9.13**	**8.6**
PL-8	3.5'	3/15/2001	**230**	**0.36**	<0.1	**0.919**	**0.877**	<1.0
PL-9	5'	3/15/2001	**295**	**0.82**	<0.25	**3.64**	**1.67**	<2.5
T1-S	14'	3/15/2001	<1.0	<0.005	<0.005	**0.00644**	**0.00558**	<0.1
T1-N	16'	3/15/2001	<1.0	<0.005	**0.0187**	**0.00595**	**0.0209**	<0.05
SW-1	7.5'	3/15/2001	**279**	<0.05	<0.05	**3.7**	**5.43**	<0.5
SW-2	8'	3/15/2001	**1,170**	<1.0	<1.0	**19.8**	**92.7**	<10
SW-3	8'	3/15/2001	**678**	**0.503**	<0.5	**10.4**	**57.9**	<5.0
SW-4	8'	3/15/2001	**581**	<0.25	<0.25	**5.38**	**32.9**	<2.5
SW-5	7.5'	3/15/2001	**556**	<0.25	<0.25	**3.49**	**16.6**	<2.5
SW-6	7.5'	3/15/2001	**631**	**0.326**	<0.25	**6.96**	**50.3**	<2.5
MW-1								
	MW-1-5.5'	4/11/2002	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	MW-1-10.5'	4/11/2002	**340**	**3.2**	**1.8**	**5.8**	**2.6**	<0.0050
	MW-1-12.5'	4/11/2002	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	MW-1-14'	4/11/2002	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW-2								
	MW-2-6'	4/11/2002	**12**	<0.050	<0.050	<0.050	<0.050	<0.025
	MW-2-10'	4/11/2002	**60**	**0.59**	**0.10**	**1.7**	**6.9**	**0.064**
	MW-2-12'	4/11/2002	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
	MW-2-13.5'	4/11/2002	<0.50	<0.0050	<0.0050	**0.0061**	**0.019**	**0.016**
MW-3								
	MW-3-6'	4/11/2002	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	**0.025**
	MW-3-11'	4/11/2002	**35**	**0.36**	<0.10	**0.69**	**0.43**	**0.098**
	MW-3-12.5'	4/11/2002	<0.50	**0.0067**	<0.0050	<0.0050	<0.0050	**0.12**
	MW-3-14'	4/11/2002	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	**0.10**
B-1								
	B-1-6'	4/12/2002	**95**	**0.15**	<0.050	**0.8**	**0.87**	<0.025
	B-1-10.5'	4/12/2002	**240**	**1.1**	**1.2**	**6.2**	**2.1**	<0.025
	B-1-12.5'	4/12/2002	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	**0.0098**
B-2								
	B-2-6'	4/11/2002	**1,600**	<1.0	<1.0	**25**	**150**	**0.037**
	B-2-10.5'	4/11/2002	**160**	**0.61**	**0.73**	**3**	**2.4**	**0.075**
	B-2-12.5'	4/11/2002	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	**0.023**

Table 5. Historic Soil Analytical Data
Station #4977, 2770 Castro Valley Boulevard, Castro Valley, California

Soil Boring Identification*	Sample ID	Date Collected	GRO mg/kg	Benzene mg/kg	Toluene mg/kg	Ethylbenzene mg/kg	Xylenes mg/kg	MTBE mg/kg
B-3								
	B-3-6.5'	9/23/2011	**610**	<0.40	<0.40	**4.1**	**6.8**	<0.40
	B-3-10'	9/23/2011	<0.50	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	B-3-15'	9/23/2011	<0.50	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	B-3-20'	9/23/2011	<0.50	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
B-4								
	B-4-4'	9/22/2011	**1.2 (1)**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	B-4-6.5'	9/23/2011	**490**	<0.10 (2)	<0.10 (2)	**0.12**	<0.10 (2)	<0.10 (2)
	B-4-10'	9/23/2011	**630**	**0.37**	<0.10	**9.9**	**0.38**	<0.10
	B-4-15'	9/23/2011	<0.50	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
B-5								
	B-5-4'	9/22/2011	**0.97 (1)**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
	B-5-7'	9/23/2011	**17 (1)**	<0.0010	<0.0010	**0.0022**	<0.0010	<0.0010
	B-5-10'	9/23/2011	**610**	<0.10 (2)	<0.10 (2)	**0.41**	<0.10 (2)	<0.10 (2)
	B-5-15'	9/23/2011	<0.50	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010
ESLs	--	--	83 (d & s)	0.044 (d & s)	2.9 (d & s)	2.3 (s)/3.3 (d)	2.3 (d & s)	0.023 (d & s)

Abbreviations & Symbols:

* = See Drawing 2 for soil boring locations.

Indicates area where over-excavation occurred.

(1) = Quantitated against gasoline.

(2) = Reporting limits raised due to high levels of non-target analytes.

GRO: Gasoline range organics.

Calscience Environmental Laboratories, Inc.: GRO (C6-C12)

GRO analyzed using EPA method 8015B

Benzene, Toluene, Ethylbenzene, Total Xylenes, and MTBE analyzed using EPA method 8260B.

mg/kg = Milligrams per kilogram.

ESLs = Environmental Screening Levels for deep soil (>3 meters bgs) and shallow soil (<3 meters bgs) where groundwater is a current or potential source of drinking water in a residential setting (San Francisco Bay Regional Water Quality Control Board, 2008).

bgs = Below ground surface

d = Deep soil

s = Shallow soil

Notes:

1,2-dibromoethane (EDB), 1,2-dichloroethane (1,2 DCA), tert-butyl alcohol (TBA), Di-isopropyl ether (DIPE), ethyl tert-butyl ether (ETBE), ter-amyl methyl ether (TAME), and ethanol were either not detected at or above their respective laboratory reporting limit or not analyzed for.

The last number in each Sample ID denotes the depth at which the sample was collected in feet bgs (i.e., B-3-10' was collected at a depth of 10 feet bgs)

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

ARCO Service Station #4977, 2770 Castro Valley Blvd., Castro Valley, CA

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
MW-1															
4/19/2002	--	161.11	5.00	15.00	11.21	149.90	660	12	1.3	4.3	0.8	38	--	--	
9/27/2002	--		5.00	15.00	9.29	151.82	130	7.7	0.87	5.4	0.79	39	1.7	6.9	
12/16/2002	--		5.00	15.00	8.55	152.56	77	1.8	<0.50	0.69	<1.0	42	1.6	6.9	a
3/11/2003	--		5.00	15.00	8.07	153.04	140	9.8	<0.50	5.6	<0.50	20	1.4	7.4	
6/17/2003	--		5.00	15.00	8.31	152.80	510	60	1.4	81	<1.0	23	2.2	7	
9/18/2003	--		5.00	15.00	9.45	151.66	72	2.4	1.4	1.6	1.5	39	2.7	7	b
12/11/2003	P		5.00	15.00	8.80	152.31	79	1.5	<0.50	1.5	4.4	48	2.1	7.0	
03/11/2004	P	163.44	5.00	15.00	7.61	155.83	<50	1.3	<0.50	0.77	1.3	17	1.4	6.8	
06/02/2004	P		5.00	15.00	8.95	154.49	53	1.4	<0.50	0.93	<0.50	39	2.3	7.1	
09/22/2004	P		5.00	15.00	9.42	154.02	70	<0.50	<0.50	<0.50	<0.50	48	1.7	6.8	
12/15/2004	P		5.00	15.00	7.88	155.56	63	<0.50	<0.50	<0.50	<0.50	45	1.8	6.9	
03/07/2005	P		5.00	15.00	7.02	156.42	<50	<0.50	<0.50	<0.50	<0.50	4.0	2.4	6.8	
06/27/2005	P		5.00	15.00	7.53	155.91	52	2.0	<0.50	1.9	0.78	8.1	2.8	7.1	
09/16/2005	P		5.00	15.00	9.20	154.24	<50	<0.50	<0.50	<0.50	0.76	14	1.82	6.9	
12/27/2005	P		5.00	15.00	7.60	155.84	<50	1.3	<0.50	1.5	<0.50	9.4	2.02	7.87	
03/16/2006	P		5.00	15.00	6.97	156.47	71	3.0	<0.50	3.5	<0.50	3.4	1.6	7.1	
6/26/2006	P		5.00	15.00	8.58	154.86	71	0.69	<0.50	1.1	3.5	3.2	2.2	6.9	
9/29/2006	P		5.00	15.00	8.85	154.59	<50	<0.50	<0.50	<0.50	<0.50	5.2	2.35	6.7	
12/19/2006	P		5.00	15.00	8.00	155.44	<50	<0.50	<0.50	<0.50	<0.50	4.3	4.80	7.21	
3/29/2007	P		5.00	15.00	7.70	155.74	<50	<0.50	<0.50	<0.50	<0.50	2.3	3.44	7.18	
6/5/2007	P		5.00	15.00	8.77	154.67	<50	<0.50	<0.50	<0.50	<0.50	3.2	3.45	7.29	
9/25/2007	P		5.00	15.00	9.18	154.26	<50	<0.50	<0.50	<0.50	<0.50	5.3	2.61	7.41	
12/26/2007	P		5.00	15.00	8.45	154.99	<50	<0.50	<0.50	<0.50	<0.50	2.9	5.57	7.43	
3/25/2008	P		5.00	15.00	8.29	155.15	<50	<0.50	<0.50	<0.50	<0.50	0.94	3.52	7.80	
6/10/2008	P		5.00	15.00	9.17	154.27	<50	<0.50	<0.50	<0.50	<0.50	1.3	3.38	7.01	
9/2/2008	P		5.00	15.00	9.15	154.29	<50	<0.50	<0.50	<0.50	<0.50	5.6	2.30	6.81	
12/2/2008	P		5.00	15.00	8.90	154.54	<50	<0.50	<0.50	<0.50	<0.50	2.7	2.41	6.96	
3/5/2009	P		5.00	15.00	8.05	155.39	<50	<0.50	<0.50	<0.50	<0.50	1.3	2.48	7.47	
6/2/2009	P		5.00	15.00	14.91	148.53	<50	<0.50	<0.50	<0.50	<0.50	0.60	0.83	7.01	
11/6/2009	P		5.00	15.00	8.46	154.98	<50	<0.50	<0.50	<0.50	<0.50	1.9	1.15	6.8	

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

ARCO Service Station #4977, 2770 Castro Valley Blvd., Castro Valley, CA

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
MW-1 Cont.															
5/20/2010	--	163.44	5.00	15.00	8.02	155.42	--	--	--	--	--	--	--	--	
11/3/2010	P		5.00	15.00	8.85	154.59	<50	<0.50	<0.50	<0.50	<0.50	1.4	0.80	6.3	
5/17/2011	P		5.00	15.00	7.71	155.73	<50	<0.50	<0.50	<0.50	<0.50	0.59	0.97	7.3	
12/16/2011	P		5.00	15.00	8.67	154.77	<50	<0.50	<0.50	<0.50	<0.50	2.4	3.02	7.3	
4/10/2012	P		5.00	15.00	7.67	155.77	<50	<0.50	<0.50	<0.50	<0.50	0.78	2.45	6.72	
10/9/2012	P		5.00	15.00	9.36	154.08	<50	<0.50	<0.50	<0.50	<1.0	<0.50	2.17	7.00	
4/23/2013	P		5.00	15.00	8.73	154.71	<50	<0.50	<0.50	<0.50	<1.0	<0.50	3.34	6.72	
10/9/2013	**P**		**5.00**	**15.00**	**9.19**	**154.25**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**<0.50**	**1.88**	**6.60**	
MW-2															
4/19/2002	--	161.87	5.00	15.00	6.59	155.28	28,000	970	120	860	6,900	760	--	--	
9/27/2002	--		5.00	15.00	7.18	154.69	17,000	1,400	<50	1,200	3,700	1,400	1.5	6.8	
12/16/2002	--		5.00	15.00	7.31	154.56	17,000	1,000	<50	980	3,300	980	1.9	6.8	a
3/11/2003	--		5.00	15.00	6.02	155.85	24,000	1,600	70	1,300	4,300	920	1.7	7.4	
6/17/2003	--		5.00	15.00	6.31	155.56	28,000	1,300	55	1,300	4,500	610	1.4	6.9	
9/18/2003	--		5.00	15.00	7.61	154.26	19,000	960	63	1,100	3,100	580	2.7	6.8	
12/11/2003	P		5.00	15.00	6.50	155.37	29,000	710	53	1,300	3,800	490	2.0	7.0	
03/11/2004	P	164.29	5.00	15.00	6.02	158.27	19,000	830	49	1,500	4,000	410	0.8	6.5	
06/02/2004	P		5.00	15.00	7.14	157.15	25,000	680	<50	1,300	3,900	240	4.3	7.1	
09/22/2004	--		5.00	15.00	7.63	156.66	15,000	980	<25	980	940	390	--	6.7	
12/15/2004	P		5.00	15.00	6.48	157.81	22,000	610	26	1,300	3,200	290	0.3	6.9	c
03/07/2005	P		5.00	15.00	6.08	158.21	25,000	570	33	1,400	3,900	120	2.3	6.8	
06/27/2005	P		5.00	15.00	6.90	157.39	24,000	630	32	1,200	2,900	86	2.5	7.2	
09/16/2005	P		5.00	15.00	7.66	156.63	25,000	550	<25	1,400	3,000	82	1.41	7.0	
12/27/2005	P		5.00	15.00	5.60	158.69	33,000	540	<25	1,300	2,700	100	2.26	7.19	
03/16/2006	P		5.00	15.00	7.25	157.04	29,000	710	<50	1,400	2,600	78	1.4	7.1	c
6/26/2006	P		5.00	15.00	6.60	157.69	20,000	630	<25	1,200	1,100	110	0.64	6.8	c
9/29/2006	P		5.00	15.00	6.85	157.44	24,000	530	<25	1,300	1,800	86	1.36	6.7	
12/19/2006	P		5.00	15.00	6.02	158.27	21,000	500	<25	1,400	1,700	70	1.11	7.42	
3/29/2007	P		5.00	15.00	6.03	158.26	16,000	530	<25	1,100	1,100	80	2.98	7.18	
6/5/2007	P		5.00	15.00	6.85	157.44	21,000	420	<25	1,100	1,100	50	2.09	7.20	

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

ARCO Service Station #4977, 2770 Castro Valley Blvd., Castro Valley, CA

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
MW-2 Cont.															
9/25/2007	P	164.29	5.00	15.00	7.15	157.14	25,000	620	<25	1,400	1,200	70	3.25	7.59	
12/26/2007	P		5.00	15.00	6.25	158.04	16,000	440	<5.0	760	570	80	1.84	7.66	
3/25/2008	P		5.00	15.00	6.63	157.66	16,000	530	7.8	790	470	96	1.78	7.72	
6/10/2008	P		5.00	15.00	7.04	157.25	14,000	480	<25	730	240	100	1.83	6.96	
9/2/2008	P		5.00	15.00	7.25	157.04	13,000	440	<25	690	240	91	3.09	6.61	
12/2/2008	P		5.00	15.00	6.42	157.87	31,000	490	<10	670	120	97	3.05	7.00	
3/5/2009	P		5.00	15.00	5.83	158.46	16,000	470	<10	490	130	82	2.99	7.35	
6/2/2009	P		5.00	15.00	14.51	149.78	11,000	340	<10	490	210	34	1.07	6.89	
11/6/2009	P		5.00	15.00	6.52	157.77	14,000	470	<10	400	110	76	0.32	6.8	
5/20/2010	P		5.00	15.00	6.80	157.49	12,000	430	<10	270	55	64	0.74	6.5	
11/3/2010	P		5.00	15.00	7.52	156.77	9,000	300	<10	79	<10	52	0.37	6.3	d
5/17/2011	P		5.00	15.00	5.86	158.43	14,000	230	<5.0	43	7.2	29	1.28	7.3	
12/16/2011	P		5.00	15.00	7.16	157.13	6,000	180	<5.0	87	<5.0	25	0.81	7.3	c, d
4/10/2012	P		5.00	15.00	6.08	158.21	5,400	210	<5.0	100	16	40	0.21	6.75	d
10/9/2012	P		5.00	15.00	7.54	156.75	4,700	160	1.9	23	5.9	32	1.69	7.14	
4/23/2013	P		5.00	15.00	7.21	157.08	3,100	110	3.5	21	5.4	21	1.20	6.87	
10/9/2013	**p**		**5.00**	**15.00**	**7.94**	**156.35**	**3,400**	**160**	**2.1**	**15**	**2.8**	**33**	**1.59**	**6.87**	
MW-3															
4/19/2002	--	162.14	5.00	15.00	6.94	155.20	1,200	29	1.1	43	62	1,700	--	--	
9/27/2002	--		5.00	15.00	8.26	153.88	740	7.8	<2.5	6.8	4.4	1,100	1	6.7	
12/16/2002	--		5.00	15.00	6.76	155.38	1,200	13	<10	170	88	910	2.3	6.8	a
3/11/2003	--		5.00	15.00	6.92	155.22	<2,500	<25	<25	<25	<25	470	1.7	7.5	
6/17/2003	--		5.00	15.00	7.44	154.70	<1,000	<10	<10	14	<10	530	1.9	7	
9/18/2003	--		5.00	15.00	8.43	153.71	470	4.8	<2.5	10	9.2	300	2.9	6.8	
12/11/2003	P		5.00	15.00	6.72	155.42	<500	<5.0	<5.0	7.0	13	180	1.9	6.9	
03/11/2004	P	164.53	5.00	15.00	6.09	158.44	360	1.9	<1.0	5.6	5.0	110	2.6	6.8	
06/02/2004	P		5.00	15.00	7.50	157.03	380	2.8	<0.50	8.0	2.1	43	3.6	7.3	
09/22/2004	P		5.00	15.00	8.00	156.53	270	<0.50	<0.50	0.54	<0.50	50	1.8	6.9	
12/15/2004	P		5.00	15.00	6.43	158.10	390	3.5	<0.50	20	3.7	49	1.1	6.9	
03/07/2005	P		5.00	15.00	6.12	158.41	1,900	13	<1.0	93	29	70	2.3	6.8	

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

ARCO Service Station #4977, 2770 Castro Valley Blvd., Castro Valley, CA

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
							GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
MW-3 Cont.															
06/27/2005	P	164.53	5.00	15.00	7.08	157.45	830	4.0	<0.50	13	2.8	33	3.3	7.3	
09/16/2005	P		5.00	15.00	7.28	157.25	320	2.1	<0.50	5.4	0.60	21	2.11	7.0	
12/27/2005	P		5.00	15.00	6.47	158.06	770	6.0	<0.50	33	2.7	36	2.96	7.42	
03/16/2006	P		5.00	15.00	6.10	158.43	1,600	11	<0.50	59	6.4	45	1.4	7.1	
6/26/2006	P		5.00	15.00	6.92	157.61	400	<0.50	<0.50	1.6	2.1	26	2.41	7.0	
9/29/2006	P		5.00	15.00	7.38	157.15	220	0.86	<0.50	2.2	0.58	14	1.95	7.0	
12/19/2006	P		5.00	15.00	6.65	157.88	450	4.3	<0.50	19	1.4	19	3.68	7.30	
3/29/2007	P		5.00	15.00	6.92	157.61	390	3.0	<0.50	9.1	0.60	27	1.98	7.16	
6/5/2007	P		5.00	15.00	7.01	157.52	390	1.9	<0.50	6.9	<0.50	20	1.99	7.34	
9/25/2007	P		5.00	15.00	7.52	157.01	260	1.3	<0.50	2.7	<0.50	12	3.44	7.41	
12/26/2007	P		5.00	15.00	6.65	157.88	460	3.1	<0.50	15	0.89	17	4.05	7.46	
3/25/2008	P		5.00	15.00	6.71	157.82	260	0.91	0.71	2.5	0.54	29	2.40	7.63	
6/10/2008	P		5.00	15.00	7.33	157.20	120	<0.50	<0.50	2.0	<0.50	12	2.29	7.59	
9/2/2008	P		5.00	15.00	7.53	157.00	97	<0.50	<0.50	<0.50	<0.50	9.3	3.28	6.81	
12/2/2008	P		5.00	15.00	7.38	157.15	140	<0.50	<0.50	<0.50	<0.50	8.4	3.18	7.06	
3/5/2009	P		5.00	15.00	5.21	159.32	530	3.3	<0.50	22	0.71	18	3.11	7.46	
6/2/2009	P		5.00	15.00	14.81	149.72	490	2.1	<0.50	6.2	<0.50	13	0.83	7.03	
11/6/2009	P		5.00	15.00	7.38	157.15	99	<0.50	<0.50	<0.50	<0.50	5.8	0.32	6.97	
5/20/2010	P		5.00	15.00	6.78	157.75	300	0.89	<0.50	<0.50	<0.50	14	--	6.48	
11/3/2010	P		5.00	15.00	7.73	156.80	66	<0.50	<0.50	<0.50	<0.50	4.4	1.11	6.0	d
5/17/2011	P		5.00	15.00	4.44	160.09	170	<0.50	<0.50	<0.50	<0.50	4.7	0.41	7.4	d
12/16/2011	P		5.00	15.00	7.84	156.69	<50	<0.50	<0.50	0.98	<0.50	4.0	0.39	7.2	
4/10/2012	P		5.00	15.00	6.69	157.84	95	<0.50	<0.50	<0.50	<0.50	3.5	0.16	6.83	d
10/9/2012	P		5.00	15.00	8.41	156.12	<50	<0.50	<0.50	<0.50	<1.0	1.5	1.33	7.36	
4/23/2013	P		5.00	15.00	7.37	157.16	<50	<0.50	<0.50	<0.50	<1.0	1.2	1.03	7.04	
10/9/2013	**P**		**5.00**	**15.00**	**8.25**	**156.28**	**52**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**2.1**	**1.94**	**6.80**	

Symbols & Abbreviations:
< = Not detected at or above specified laboratory reporting limits
-- = Not measured, sampled, analyzed, applicable
ft bgs = Feet below ground surface
DO = Dissolved oxygen
DTW = Depth to water in ft
GRO = Gasoline range organics
GWE = Groundwater elevation in ft
mg/L = Milligrams per liter
MTBE = Methyl tert-butyl ether analyzed by EPA Method 8021B unless otherwise noted (before 12/16/02)
P/NP = Well was purged/not purged prior to sampling
TPH-g = Total petroleum hydrocarbons as gasoline (C5-C9)
TOC = Top of casing measured in ft MSL
µg/L = Micrograms per liter

Footnotes:
a = TPH, benzene, toluene, ethylbenzene, total xylenes, and MTBE analyzed by EPA Method 8260B beginning on 4th quarter sampling event (12/16/02)
b = This sample was originally analyzed within the EPA recommended hold time. Re-analysis for confirmation or dilution was performed past the recommended hold time. The results may still be used for their intended purpose.
c = Sheen in well
d = Quantitation of unknown hydrocarbon(s) in sample based on gasoline

Notes:
Beginning in the fourth quarter 2003, the laboratory modified the reported analyte list. TPH-g was changed to GRO. The resulting data may be impacted by the potential inclusion of non-TPH-g analytes within the requested fuel range resulting in a higher concentration being reported

Wells were re-surveyed on 3/23/2004

Values for DO and pH were field measurements

Beginning in the second quarter 2004, the carbon range for GRO was changed from C6-C10 to C4-C12

GRO analysis was completed by EPA method 8260B (C4-C12) for samples collected from the time period April 2006 through February 4, 2008. The analysis for GRO was changed to EPA method 8015B (C6-C12) for samples collected from the time period February 5, 2008 through the present

The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information

Table 3. Summary of Fuel Additives Analytical Data

ARCO Service Station #4977, 2770 Castro Valley Blvd., Castro Valley, CA

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-1									
4/19/2002	--	--	38	--	--	--	--	--	
9/27/2002	--	--	39	--	--	--	--	--	
12/16/2002	<50	<5.0	42	<0.50	<0.50	<0.50	<0.50	<0.50	
3/11/2003	<100	<20	20	<0.50	<0.50	<0.50	<0.50	<0.50	
6/17/2003	<200	<40	23	<1.0	<1.0	<1.0	<1.0	<1.0	
9/18/2003	<100	<20	39	<0.50	<0.50	<0.50	<0.50	<0.50	a
12/11/2003	<100	<20	48	<0.50	<0.50	<0.50	<0.50	<0.50	
03/11/2004	<100	<20	17	<0.50	<0.50	<0.50	<0.50	<0.50	
06/02/2004	<100	<20	39	<0.50	<0.50	<0.50	<0.50	<0.50	
09/22/2004	<100	<20	48	<0.50	<0.50	<0.50	<0.50	<0.50	
12/15/2004	<100	<20	45	<0.50	<0.50	<0.50	<0.50	<0.50	a
03/07/2005	<100	<20	4.0	<0.50	<0.50	<0.50	<0.50	<0.50	
06/27/2005	<100	<20	8.1	<0.50	<0.50	<0.50	<0.50	<0.50	
09/16/2005	<100	<20	14	<0.50	<0.50	<0.50	<0.50	<0.50	
12/27/2005	<100	<20	9.4	<0.50	<0.50	<0.50	<0.50	<0.50	b
03/16/2006	<300	<20	3.4	<0.50	<0.50	<0.50	<0.50	<0.50	c
6/26/2006	<300	<20	3.2	<0.50	<0.50	<0.50	<0.50	<0.50	
9/29/2006	<300	<20	5.2	<0.50	<0.50	<0.50	<0.50	<0.50	
12/19/2006	<300	<20	4.3	<0.50	<0.50	<0.50	<0.50	--	b
3/29/2007	<300	<20	2.3	<0.50	<0.50	<0.50	<0.50	<0.50	
6/5/2007	<300	<20	3.2	<0.50	<0.50	<0.50	<0.50	<0.50	
9/25/2007	<300	<20	5.3	<0.50	<0.50	<0.50	<0.50	<0.50	
12/26/2007	<300	<20	2.9	<0.50	<0.50	<0.50	<0.50	<0.50	
3/25/2008	<300	<10	0.94	<0.50	<0.50	<0.50	<0.50	<0.50	
6/10/2008	<300	<10	1.3	<0.50	<0.50	<0.50	<0.50	<0.50	
9/2/2008	<300	<10	5.6	<0.50	<0.50	<0.50	<0.50	<0.50	
12/2/2008	<300	<10	2.7	<0.50	<0.50	<0.50	<0.50	<0.50	
3/5/2009	<300	<10	1.3	<0.50	<0.50	<0.50	<0.50	<0.50	
6/2/2009	<300	<10	0.60	<0.50	<0.50	<0.50	<0.50	<0.50	
11/6/2009	<300	<10	1.9	<0.50	<0.50	<0.50	<0.50	<0.50	
11/3/2010	<300	<10	1.4	<0.50	<0.50	<0.50	<0.50	<0.50	
5/17/2011	<300	<10	0.59	<0.50	<0.50	<0.50	<0.50	<0.50	

Table 3. Summary of Fuel Additives Analytical Data

ARCO Service Station #4977, 2770 Castro Valley Blvd., Castro Valley, CA

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-1 Cont.									
12/16/2011	<300	<10	2.4	<0.50	<0.50	<0.50	<0.50	<0.50	
4/10/2012	<300	<10	0.78	<0.50	<0.50	<0.50	<0.50	<0.50	
10/9/2012	<150	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
4/23/2013	<150	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
10/9/2013	**<150**	**<10**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-2									
4/19/2002	--	--	760	--	--	--	--	--	
9/27/2002	--	--	1,400	--	--	--	--	--	
12/16/2002	<5,000	<500	980	<50	<50	<50	<50	<50	
3/11/2003	<10,000	<2,000	920	<50	<50	<50	<50	<50	
6/17/2003	<10,000	<2,000	610	<50	<50	<50	<50	<50	
9/18/2003	<5,000	<1,000	580	<25	<25	<25	<25	<25	
12/11/2003	<5,000	<1,000	490	<25	<25	<25	<25	<25	
03/11/2004	<2,000	<400	410	<10	<10	<10	<10	<10	
06/02/2004	<10,000	<2,000	240	<50	<50	<50	<50	<50	
09/22/2004	<5,000	<1,000	390	<25	<25	<25	<25	<25	
12/15/2004	<2,000	<400	290	<10	<10	<10	<10	<10	a
03/07/2005	<5,000	<1,000	120	<25	<25	<25	<25	<25	
06/27/2005	<5,000	<1,000	86	<25	<25	<25	<25	<25	
09/16/2005	<5,000	<1,000	82	<25	<25	<25	<25	<25	
12/27/2005	<5,000	<1,000	100	<25	<25	<25	<25	<25	b
03/16/2006	<30,000	<2,000	78	<50	<50	<50	<50	<50	c
6/26/2006	<15,000	<1,000	110	<25	<25	<25	<25	<25	
9/29/2006	<15,000	<1,000	86	<25	<25	<25	<25	<25	
12/19/2006	<15,000	<1,000	70	<25	<25	<25	<25	--	b
3/29/2007	<15,000	<1,000	80	<25	<25	<25	<25	<25	
6/5/2007	<15,000	<1,000	50	<25	<25	<25	<25	<25	
9/25/2007	<15,000	<1,000	70	<25	<25	<25	<25	<25	
12/26/2007	<3,000	<200	80	<5.0	<5.0	<5.0	<5.0	<5.0	
3/25/2008	<1,500	<50	96	<2.5	<2.5	<2.5	<2.5	<2.5	
6/10/2008	<15,000	<500	100	<25	<25	<25	<25	<25	

Table 3. Summary of Fuel Additives Analytical Data

ARCO Service Station #4977, 2770 Castro Valley Blvd., Castro Valley, CA

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-2 Cont.									
9/2/2008	<15,000	<500	91	<25	<25	<25	<25	<25	
12/2/2008	<6,000	<200	97	<10	<10	<10	<10	<10	
3/5/2009	<6,000	<200	82	<10	<10	<10	<10	<10	
6/2/2009	<6,000	<200	34	<10	<10	<10	<10	<10	
11/6/2009	<6,000	<200	76	<10	<10	<10	<10	<10	
5/20/2010	<6,000	<200	64	<10	<10	<10	<10	<10	
11/3/2010	<6,000	<200	52	<10	<10	<10	11	<10	
5/17/2011	<3,000	<100	29	<5.0	<5.0	<5.0	<5.0	<5.0	
12/16/2011	<3,000	<100	25	<5.0	<5.0	<5.0	<5.0	<5.0	
4/10/2012	<3,000	<100	40	<5.0	<5.0	<5.0	<5.0	<5.0	
10/9/2012	<380	<25	32	<1.3	<1.3	<1.3	<1.3	<1.3	
4/23/2013	<150	<10	21	<0.50	<0.50	<0.50	<0.50	<0.50	
10/9/2013	**<380**	**<25**	**33**	**<1.3**	**<1.3**	**<1.3**	**<1.3**	**<1.3**	
MW-3									
4/19/2002	--	--	1,700	--	--	--	--	--	
9/27/2002	--	--	1,100	--	--	--	--	--	
12/16/2002	<1,000	<100	910	<10	<10	12	<10	<10	
3/11/2003	<5,000	<1,000	470	<25	<25	<25	<25	<25	
6/17/2003	<2,000	<400	530	<10	<10	<10	<10	<10	
9/18/2003	<500	<100	300	<2.5	<2.5	3.2	<2.5	<2.5	
12/11/2003	<1,000	<200	180	<5.0	<5.0	<5.0	<5.0	<5.0	
03/11/2004	<200	570	110	<1.0	<1.0	<1.0	<1.0	<1.0	
06/02/2004	<100	130	43	<0.50	<0.50	0.56	<0.50	<0.50	
09/22/2004	<100	28	50	<0.50	<0.50	0.51	<0.50	<0.50	
12/15/2004	<100	110	49	<0.50	0.52	0.61	<0.50	<0.50	a
03/07/2005	<200	190	70	<1.0	<1.0	<1.0	<1.0	<1.0	
06/27/2005	<100	130	33	<0.50	<0.50	<0.50	<0.50	<0.50	
09/16/2005	<100	44	21	<0.50	<0.50	<0.50	<0.50	<0.50	
12/27/2005	<100	150	36	<0.50	<0.50	<0.50	<0.50	<0.50	b
03/16/2006	<300	160	45	<0.50	<0.50	0.84	<0.50	<0.50	c
6/26/2006	<300	53	26	<0.50	<0.50	<0.50	<0.50	<0.50	

Table 3. Summary of Fuel Additives Analytical Data

ARCO Service Station #4977, 2770 Castro Valley Blvd., Castro Valley, CA

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-3 Cont.									
9/29/2006	<300	55	14	<0.50	<0.50	<0.50	<0.50	<0.50	
12/19/2006	<300	<20	19	<0.50	<0.50	<0.50	<0.50	--	b
3/29/2007	<300	130	27	<0.50	<0.50	<0.50	<0.50	<0.50	
6/5/2007	<300	77	20	<0.50	<0.50	<0.50	<0.50	<0.50	
9/25/2007	<300	30	12	<0.50	<0.50	<0.50	<0.50	<0.50	
12/26/2007	<300	76	17	<0.50	<0.50	<0.50	<0.50	<0.50	
3/25/2008	<300	100	29	<0.50	<0.50	<0.50	<0.50	<0.50	
6/10/2008	<300	25	12	<0.50	<0.50	<0.50	<0.50	<0.50	
9/2/2008	<300	<10	9.3	<0.50	<0.50	<0.50	<0.50	<0.50	
12/2/2008	<300	<10	8.4	<0.50	<0.50	<0.50	<0.50	<0.50	
3/5/2009	<300	98	18	<0.50	<0.50	<0.50	<0.50	<0.50	
6/2/2009	<300	89	13	<0.50	<0.50	<0.50	<0.50	<0.50	
11/6/2009	<300	11	5.8	<0.50	<0.50	<0.50	<0.50	<0.50	
5/20/2010	<300	100	14	<0.50	<0.50	<0.50	<0.50	<0.50	
11/3/2010	<300	<10	4.4	<0.50	<0.50	<0.50	<0.50	<0.50	
5/17/2011	<300	34	4.7	<0.50	<0.50	<0.50	<0.50	<0.50	
12/16/2011	<300	17	4.0	<0.50	<0.50	<0.50	<0.50	<0.50	
4/10/2012	<300	18	3.5	<0.50	<0.50	<0.50	<0.50	<0.50	
10/9/2012	<150	<10	1.5	<0.50	<0.50	<0.50	<0.50	<0.50	
4/23/2013	<150	<10	1.2	<0.50	<0.50	<0.50	<0.50	<0.50	
10/9/2013	**<150**	**<10**	**2.1**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	

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

Footnotes:
a = This sample was originally analyzed within the EPA recommended hold time. Re-analysis for confirmation or dilution was performed past the recommended hold time. The results may still be used for their intended purpose
b = Calibration verification for ethanol was within method limits but outside contract limits
c = Possible high bias for DIPE, 1,2-DCA, and ethanol due to CCV falling outside acceptance criteria

Notes:
The data within this table collected prior to April 2006 was provided to Broadbent & Associates, Inc. by Atlantic Richfield Company and their previous consultants. Broadbent & Associates, Inc. has not verified the accuracy of this information