

ALAMEDA COUNTY  
HEALTH CARE SERVICES  
AGENCY  
ALEX BRISCOE, Director



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

July 1, 2014

Mr. Roger Levin  
Ultramar, Inc.  
5590 B Havana Street  
Denver, CO 80239  
(Sent via E-mail to: [roger.levin@valero.com](mailto:roger.levin@valero.com))

Castro Group LLC *Address unknown*

Ms. Mary Moore  
EMB Group LLC & Mary Moore  
Re Trust 611 Marlin Court  
Redwood City, CA 94065-1214

Mr. Allen Shin  
Banya Investments LLC  
3011 Cabrillo Avenue  
San Ramon, CA 94583

Mr. Paul Wilson  
1238 Stanyan Street  
San Francisco, CA 94117

Subject: Case Closure for Fuel Leak Case No. RO0000355 and GeoTracker Global ID T0600100155, Beacon #12574, 22315 Redwood Road, Castro Valley, CA 94546

Dear Mr. Wideman, Castro Group LLC, Ms. Moore, Mr. Shin, and Mr. Wilson:

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.swrcb.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. Site Management Requirements are further described in section IV of the attached Case Closure Summary.

If you have any questions, please call Jerry Wickham at (510) 567-6791. Thank you.

Sincerely,

A handwritten signature in blue ink that reads "Dilan Roe".

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

Responsible Parties  
RO0000355  
July 1, 2014  
Page 2

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

cc: Gary Barker, Horizon Environmental, Inc., 4970 Windplay Drive, #C5, El Dorado Hills, CA 95762  
(Sent via E-mail to: [gbarker@horizonenvironmental.net](mailto:gbarker@horizonenvironmental.net))

Kenny Mateik, Horizon Environmental, Inc., 4970 Windplay Drive, #C5, El Dorado Hills, CA 95762  
(Sent via E-mail to: [kmateik@horizonenvironmental.net](mailto:kmateik@horizonenvironmental.net))

Alameda County Public Works, Building Inspection Division, 399 Elmhurst Street, Room 141,  
Hayward, CA 94544

Jerry Wickham, ACEH (Sent via E-mail to: [jerry.wickham@acgov.org](mailto:jerry.wickham@acgov.org))

GeoTracker, eFile



**REMEDIAL ACTION COMPLETION CERTIFICATION**

July 1, 2014

Mr. Roger Levin  
Ultramar, Inc.  
5590 B Havana Street  
Denver, CO 80239  
(Sent via E-mail to: [roger.levin@valero.com](mailto:roger.levin@valero.com))

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1238 Stanyan Street  
San Francisco, CA 94117

Subject: Case Closure for Fuel Leak Case No. RO0000355 and GeoTracker Global ID T0600100155, Beacon #12574, 22315 Redwood Road, Castro Valley, CA 94546

Dear Mr. Wideman, Castro Group LLC, Ms. Moore, Mr. Shin, and Mr. Wilson:

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,

A handwritten signature in black ink, appearing to read "Ariu Levi".

Ariu Levi  
Director

**CASE CLOSURE SUMMARY  
LEAKING UNDERGROUND FUEL STORAGE TANK - LOCAL OVERSIGHT PROGRAM**

**I. AGENCY INFORMATION**

Date: October 17, 2013

Agency Name: Alameda County Environmental Health	Address: 1131 Harbor Bay Parkway
City/State/Zip: Alameda, CA 94502-6577	Phone: (510) 567-6791
Responsible Staff Person: Jerry Wickham	Title: Senior Hazardous Materials Specialist

**II. CASE INFORMATION**

Site Facility Name: Beacon #12574		
Site Facility Address: 22315 Redwood Road, Castro Valley, California 94546		
RB Case No.: 01-0167	STID No.: 3579	LOP Case No.: RO0000355
URF Filing Date: 08/28/2007	Geotracker ID: T0600100155	APN: 415-100-121-2
Current Land Use: Commercial		
Responsible Parties	Addresses	Phone Numbers
Roger Levin Ultramar, Inc.	5590 B Havana Street Denver, CO 80239	No phone number
Mary Moore EMB Group LLC & Mary Moore	Re Trust 611 Marlin Court Redwood City, CA 94065-1214	No phone number
Allen Shin Banya Investments LLC	3011 Cabrillo Avenue San Ramon, CA 94583	No phone number
Castro Group LLC	<i>Address unknown</i>	No phone number
Paul Wilson	1238 Stanyan Street San Francisco, CA 94117	No phone number

Tank I.D. No	Size in Gallons	Contents	Closed In Place/Removed?	Date
T1	500	Waste Oil	Removed	05/05/1987
T2	5,000	Diesel	Removed	05/05/1987
T3	7,000	Gasoline	Removed	05/05/1987
T4	5,000	Diesel	Removed	05/05/1987
T5	8,000	Gasoline	Removed	05/05/1987
Piping			Removed	11/2012

### III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Release from underground storage tank (UST) system.		
Site characterization complete? Yes		
Monitoring wells installed? Yes	Number: 7	Proper screened interval? Yes
Highest GW Depth Below Ground Surface: 13.86 feet bgs	Lowest Depth: 23.35 feet bgs	Flow Direction: Southwest
Most Sensitive Current Groundwater Use: Potential drinking water source.		

Summary of Production Wells in Vicinity: One inactive irrigation well was observed in a backyard at 22447 Charlene Way in Castro Valley. The inactive irrigation well is approximately 400 feet south of the site. Based on the extent and decreasing size of the plume, the inactive irrigation well is not expected to be a receptor for the site. No other water supply wells were identified within 2,000 feet of the site.	
Are drinking water wells affected? No	Aquifer Name: East Bay Plain
Is surface water affected? No	Nearest Surface Water Name: Cull Creek is approximately 450 feet west of the site.
Off-Site Beneficial Use Impacts (Addresses/Locations): None identified.	
Reports on file? Yes	Where are reports filed? Alameda County Environmental Health

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL			
Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	Five	Transported to H and H Ship Service Company in San Francisco for disposal	May 1987
Piping	Not Reported	Not Reported	May 1987
Free Product	----	----	----
Soil	650 cubic yards	Aerated on site	June through July 1987
Groundwater	1,000 gallons	Extracted groundwater from a high-vacuum dual-phase extraction test that was stored in an aboveground storage tank was released to the street due to an act of vandalism on the tank. Appropriate regulatory agencies were notified of the releases of contaminated water	May 30, 2009
	600 gallons	Transported to InStrat, Inc. in Rio Vista, CA for disposal	June 2, 2009

**LTCP GROUNDWATER SPECIFIC CRITERIA**

LTCP Groundwater Specific Scenario under which case was closed: Scenario 2

Site Data		LTCP Scenario 1 Criteria (ppb)	LTCP Scenario 2 Criteria (ppb)	LTCP Scenario 3 Criteria (ppb)	LTCP Scenario 4 Criteria (ppb)
Plume Length	160 feet	<100 feet	<250 feet	<250 feet	<1,000 feet
Free Product	No free product	No free product	No free product	Removed to maximum extent practicable	No free product
Plume Stable or Decreasing	Stable and decreasing	Stable or decreasing	Stable or decreasing	Stable or decreasing for minimum of 5 Years	Stable or decreasing
Distance to Nearest Water Supply Well	>2,000 feet to nearest active water supply well	>250 feet	>1,000 feet	>1,000 feet	>1,000 feet
Distance to Nearest Surface Water and Direction	450 feet crossgradient	>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 (ppb)	Current Site Maximum (ppb)	LTCP Scenario 1 Criteria (ppb)	LTCP Scenario 2 Criteria (ppb)	LTCP Scenario 3 Criteria (ppb)	LTCP Scenario 4 Criteria (ppb)
Benzene	12,000	2,800	No criteria	3,000	No criteria	1,000
MTBE	670	77	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?

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**LTCP VAPOR SPECIFIC CRITERIA**

LTCP Vapor Specific Scenario under which case was closed: Site-specific risk assessment

Active Fueling Station	No						
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 NAPL	No NAPL	LNAPL in groundwater	LNAPL in soil	No NAPL	No NAPL	No NAPL	No criteria
Thickness of Bioattenuation Zone Beneath Foundation	Not known	≥30 feet	≥30 feet	≥5 feet	≥10 feet	≥5 feet	≥5 feet
Total TPH in Bioattenuation Zone	Not known	<100 ppm	<100 ppm	<100 ppm	<100 ppm	<100 ppm	<100 ppm
Maximum Current Benzene Concentration in Groundwater	2,800	No criteria	No criteria	<100 ppb	≥100 and <1,000 ppb	<1,000 ppb	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 below ground surface	5 feet	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	350	350	<85	<280	<85,000	<280,000
Ethylbenzene	110,000	110,000	<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?

Yes

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 as a result of controlling exposure through the use of mitigation measures or through the use of institutional controls?

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**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; however, only limited shallow soil data has been collected.

Constituent		Residential		Commercial/Industrial		Utility Worker
		0 to 5 feet bgs (ppm)	Volatilization to outdoor air (5 to 10 feet bgs) ppm	0 to 5 feet bgs (ppm)	Volatilization to outdoor air (5 to 10 feet bgs) ppm	0 to 10 feet bgs (ppm)
Site Maximum	Benzene	<0.005	<0.005	<0.005	<0.005	<0.005
LTCP Criteria	Benzene	≤1.9	≤2.8	≤8.2	≤12	≤14
Site Maximum	Ethylbenzene	0.01	0.11	0.01	0.11	0.11
LTCP Criteria	Ethylbenzene	≤21	≤32	≤89	≤134	≤314
Site Maximum	Naphthalene	----	----	----	----	----
LTCP Criteria	Naphthalene	≤9.7	≤9.7	≤45	≤45	≤219
Site Maximum	PAHs	----	----	----	----	----
LTCP Criteria	PAHs	≤0.063	NA	≤0.68	NA	≤4.5
If maximum concentrations are greater than those in Table 1, are they less than levels from a site-specific risk assessment?				----		
If maximum concentrations are greater than those in Table 1, has a determination been made that the concentrations of petroleum in soil will have no significant risk of adversely affecting human health as a result of controlling exposure through the use of mitigation measures or through the use of institutional controls?				----		



**IV. CLOSURE**

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? Yes		
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? Yes		
Does corrective action protect public health for current land use? Alameda County Environmental Health staff does not make specific determinations concerning public health risk. However, based upon the information available in our files to date, closure of this site appears to be consistent with the policies established by the State Water Resources Control Board Low-Threat Underground Storage Tank Closure Policy which became effective on August 17, 2012.		
<p>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). A site-specific risk assessment indicates that there is a low risk of vapor intrusion for the current buildings. However, the remainder of the site has not been fully evaluated. Therefore, case closure is granted for the current commercial land use and existing building configuration only.</p> <p>If a change in land use to any residential or other conservative land use, or if any redevelopment occurs, Alameda County Environmental Health (ACEH) must be notified as required by Government Code Section 65850.2.2. Due to the potential for vapor intrusion to indoor air for future buildings, ACEH will re-evaluate the case upon receipt of approved development/construction plans.</p> <p>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.</p>		
Should corrective action be reviewed if land use changes? Yes		
Was a deed restriction or deed notification filed? No		Date Recorded: ----
Monitoring Wells Decommissioned: No	Number Decommissioned: 1	Number Retained: 6
List Enforcement Actions Taken: None		
List Enforcement Actions Rescinded: ----		

## V. ADDITIONAL COMMENTS AND CONCLUSION

### Additional Comments:

At one location (SG-3) approximately 12 feet east of an existing site building, benzene and ethylbenzene were detected in soil vapor at concentrations that exceed the LTCP media-specific vapor intrusion criteria for sites without a bioattenuation zone. Sufficient data have not been collected at the site to determine whether a bioattenuation zone exists throughout the site using the LTCP criteria. A site-specific risk assessment indicates that there is a low risk of vapor intrusion for the current buildings. However, the remainder of the site has not been fully evaluated.

Cull Creek is approximately 450 feet west of the plume boundary. Based on the cross gradient location and decreasing size of the plume, Cull Creek is not expected to be a receptor for the site. San Lorenzo Creek is approximately 550 feet south of the plume boundary. Based on the cross gradient location and decreasing size of the plume, San Lorenzo Creek is not expected to be a receptor for the site.

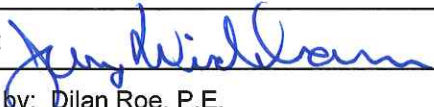

Napthalene was not an analyte in soil vapor samples. However, since the release at the site consisted primarily of gasoline and benzene and ethylbenzene concentrations in soil vapor appear to be within acceptable levels, napthalene concentrations in soil vapor are not likely to exceed the media-specific criteria in the LTCP.

Napthalene 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, napthalene concentrations in shallow soil are not likely to exceed the LTCP media-specific criteria.

### Conclusion:

Alameda County Environmental Health staff believe that the site meets the conditions for case closure under the State Water Resources Control Board Low-Threat Underground Storage Tank Closure Policy. Based upon the information available in our files to date, no further investigation or cleanup for the fuel leak case is necessary at this time. However, as specified in the Site Management Requirements, re-evaluation of this case is required if land uses changes to any residential or other conservative land use, or any redevelopment occurs.

## VI. LOCAL AGENCY REPRESENTATIVE DATA

Prepared by: Jerry Wickham, P.G.	Title: Senior Hazardous Materials Specialist
Signature: 	Date: 10/17/2013
Approved by: Dilan Roe, P.E.	Title: Program Manager – Local Oversight Program
Signature: 	Date: 10/17/2013

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.

**VII. REGIONAL BOARD AND PUBLIC NOTIFICATION**

Regional Board Staff Name: Cherie McCaulou	Title: Engineering Geologist
Regional Board Notification Date: 10/02/13	
Public Notification Date: 10/02/13	

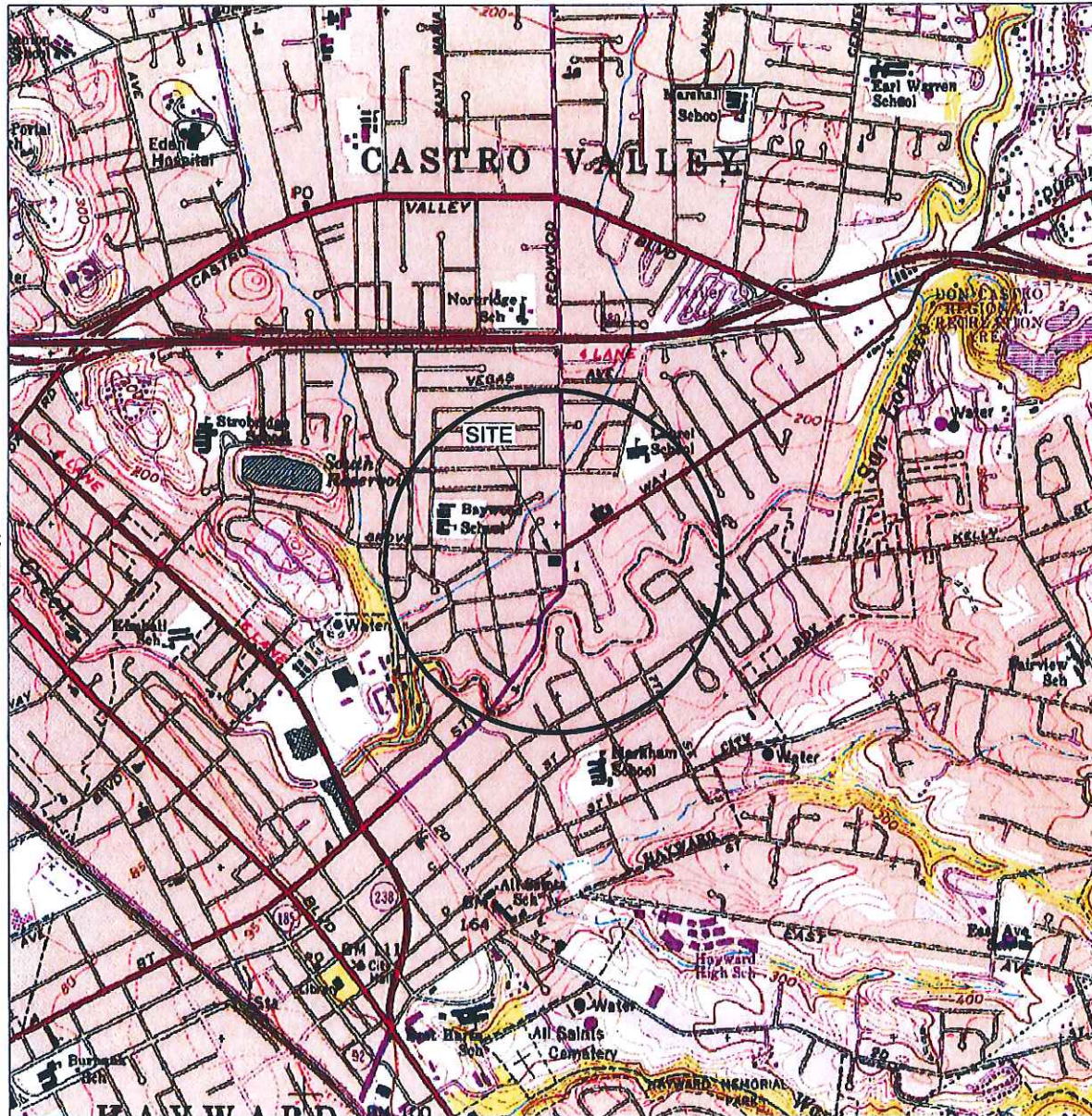
**VIII. MONITORING WELL DECOMMISSIONING**

Date Requested by ACEH: 12/4/13	Date of Well Decommissioning Report: 06/17/14	
All Monitoring Wells Decommissioned <input checked="" type="radio"/> Yes <input type="radio"/> No	Number Decommissioned: 12	Number Retained: 0
Reason Wells Retained: NA		
Additional requirements for submittal of groundwater data from retained wells: None		
ACEH Concurrence - Signature: <i>Jerry Wickham</i>	Date: 07/01/14	

Attachments:

1. Site Vicinity Map and Aerial Photo (2 pp)
2. Site Plan (1 p)
3. Groundwater Contour and Chemical Concentration Maps (3 pp)
4. Soil and Soil Vapor Analytical Data (5 pp)
5. Groundwater Analytical Data (4 pp)
6. Cross Sections (4 pp)
7. Concentration Graphs (5 pp)

This document and the related CASE CLOSURE LETTER & REMEDIAL ACTION COMPLETION CERTIFICATE shall be retained by the lead agency as part of the official site file.



GENERAL NOTES:  
 BASE MAP FROM U.S.G.S.  
 HAYWARD, CA.  
 7.5 MINUTE TOPOGRAPHIC  
 PHOTOREVISED 1980



QUADRANGLE LOCATION



SCALE 1:24,000



NORTH



**HORIZON ENVIRONMENTAL INC.**

Project Number: 1574.41  
 Prepared By: K. Liptak  
 Reviewed By: K. Matlak

Drawn By: M. LaCoste  
 Date: 10/7/04  
 Revised Date:

**SITE LOCATION MAP**

FORMER BEACON STATION NO. 12574  
 22315 REDWOOD ROAD  
 CASTRO VALLEY, CA.

**FIGURE**

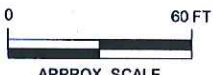
**1**



NORTH SIXTH STREET

GROVE WAY

REDWOOD ROAD



LEGEND	
	MW-6 MONITORING WELL
	MW-8 ABANDONED MONITORING WELL
	VW-3 VAPOR EXTRACTION WELL
	VP-3 SOIL VAPOR PROBE
	SG-7 SOIL GAS SAMPLING LOCATION



HORIZON ENVIRONMENTAL INC.

Project Number: 1574.13  
Prepared By: E. Kruck  
Reviewed By: K. Mateik

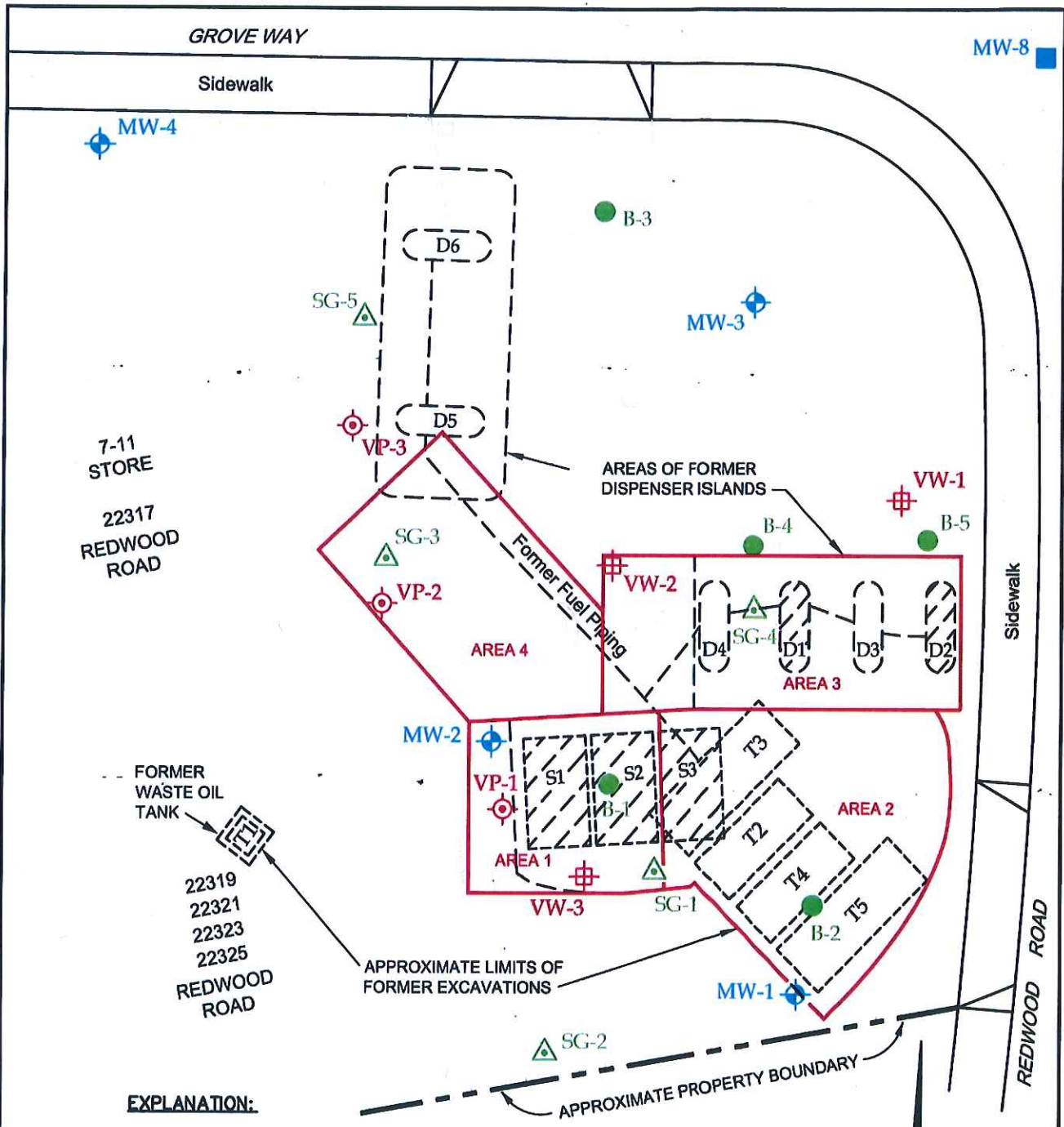
Drawn By: M LaCoste  
Date: 1/25/12  
Revised Date: 11/27/12

SITE AREA MAP

FORMER BEACON STATION NO. 12574  
22315 REDWOOD ROAD  
CASTRO VALLEY, CA.

FIGURE

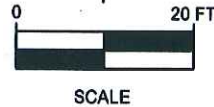
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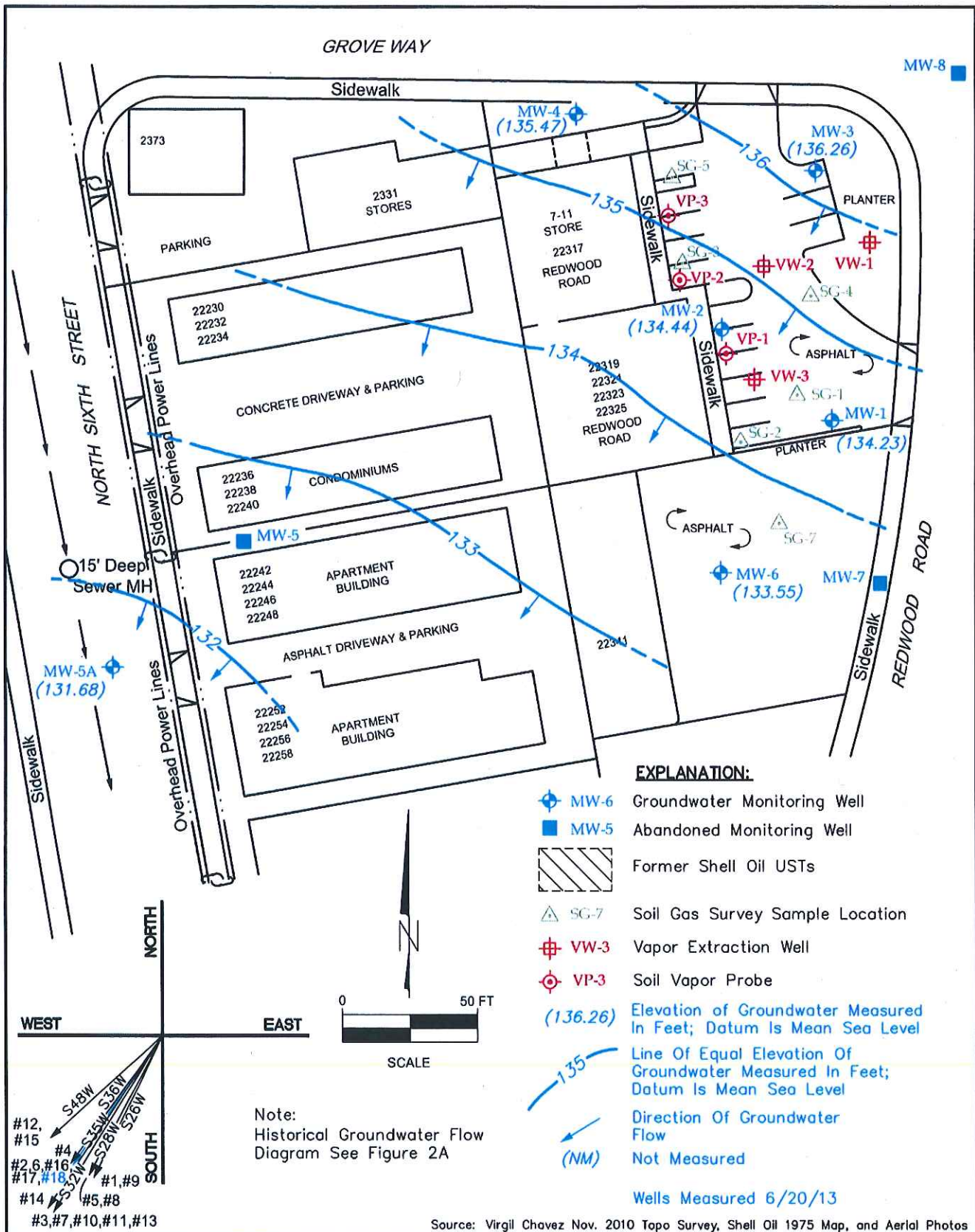
**EXPLANATION:**

- MW-6 Groundwater Monitoring Well
- SG-7 Soil Gas Survey Sample Location
- Boring Location
- Vapor Extraction Well
- Soil Vapor Probe
- Former Shell USTs and Dispensers  
S3      D2

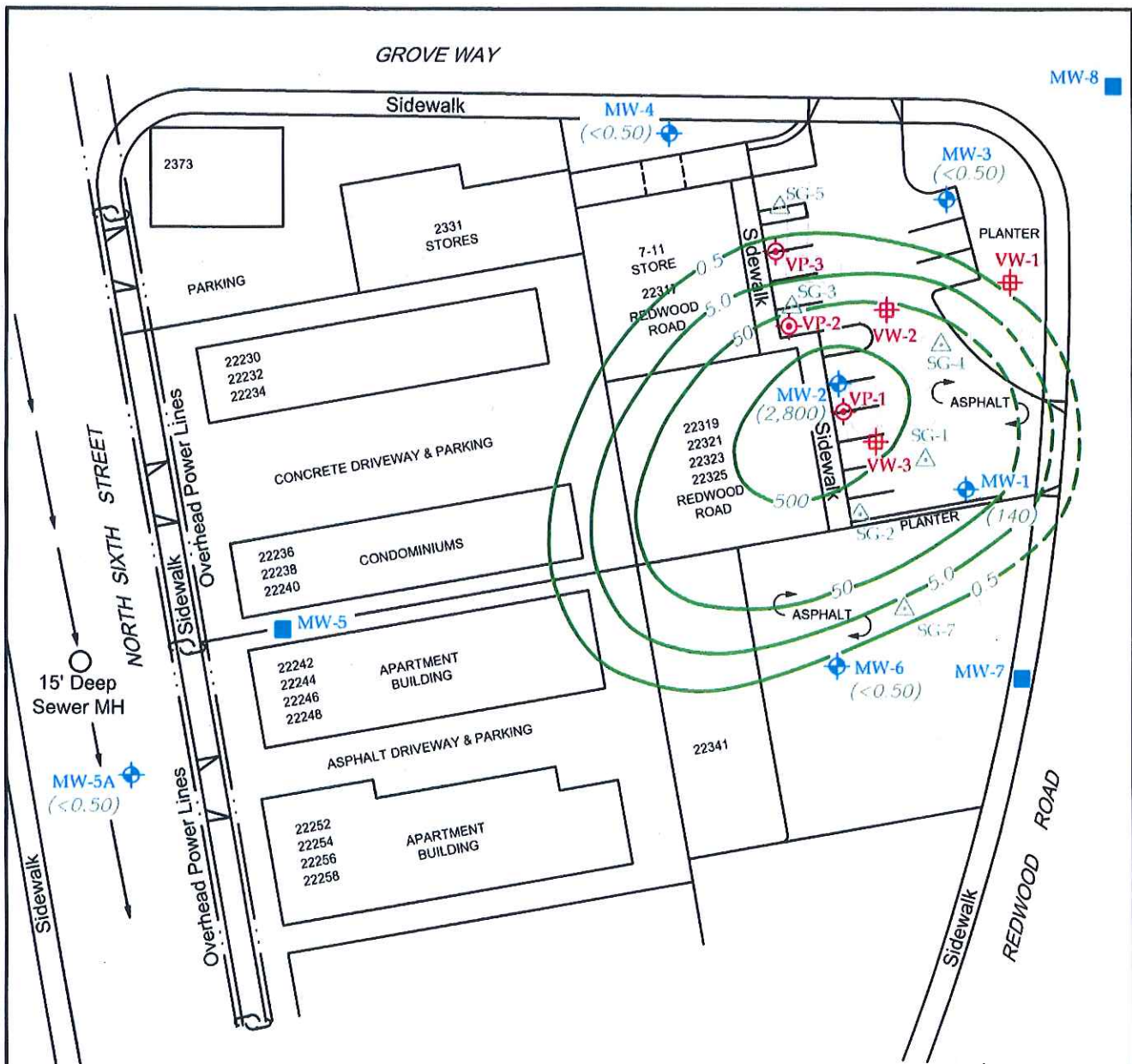
Source: Virgil Chavez Nov. 2010 Topo Survey, Shell Oil 1975 Map, and Aerial Photos



<b>HORIZON ENVIRONMENTAL INC.</b>		<b>SITE MAP WITH DISTRIBUTION OF PETROLEUM-IMPACTED SOIL AREAS</b> FORMER BEACON STATION NO. 12574 22315 REDWOOD ROAD CASTRO VALLEY, CA.	<b>FIGURE</b>  <span style="font-size: 2em;">8</span>
Project Number: 1574.13 Prepared By: E. Kruck Reviewed By: K. Mateik	Drawn By: C. Bechtell Date: 11/11 Revised Date:		



<b>HORIZON ENVIRONMENTAL INC.</b>		<b>GROUNDWATER ELEVATION CONTOUR MAP</b> FORMER BEACON STATION NO. 12574 22315 REDWOOD ROAD CASTRO VALLEY, CA.	<b>FIGURE</b>  <span style="font-size: 2em;">4</span>
Project Number: 1574.410 Prepared By: K. Liptak Reviewed By: K. Mateik	Drawn By: C. Bechtell Date: 12/12 Revised Date: 07/13		



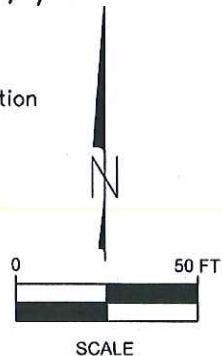
**EXPLANATION:**

- ◆ MW-6 Groundwater Monitoring Well
- MW-5 Abandoned Monitoring Well
- Former Shell Oil USTs
- △ SG-7 Soil Gas Survey Sample Location
- ⊕ VW-3 Vapor Extraction Well
- ⊙ VP-3 Soil Vapor Probe

(2800) Benzene Concentrations Measured In Parts Per Billion

— 500 Line Of Equal Concentration Of Benzene Measured In Parts Per Billion

Wells Sampled 6/20/13



Source: Virgil Chavez Nov. 2010 Topo Survey, Shell Oil 1975 Map, and Aerial Photos



**HORIZON ENVIRONMENTAL INC.**

Project Number: 1574.410  
 Prepared By: K. Liptak  
 Reviewed By: K. Matek

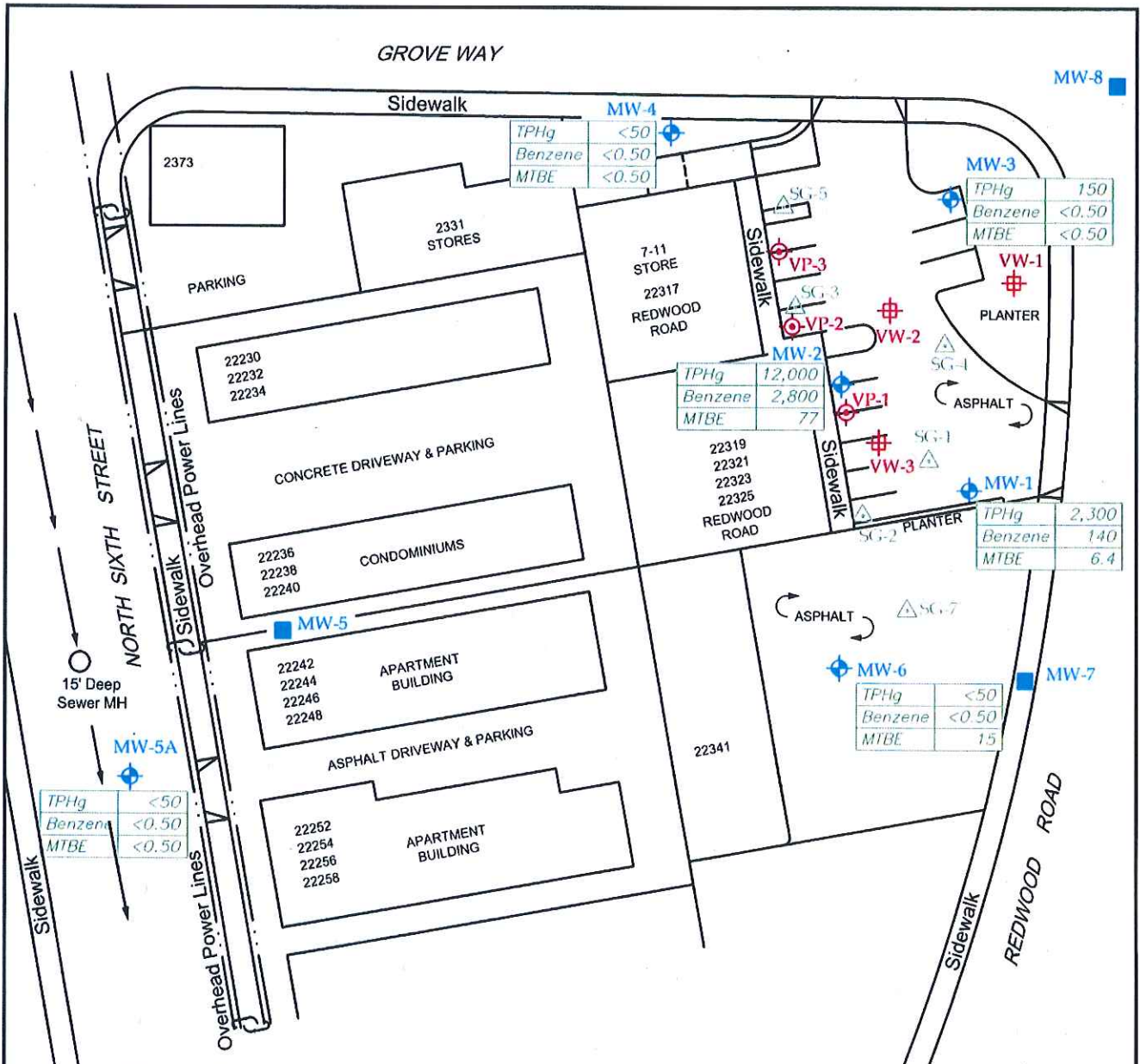
Drawn By: C. Bechtell  
 Date: 12/12  
 Revised Date: 07/13

**BENZENE  
 ISOCONCENTRATION MAP**  
 FORMER BEACON STATION NO. 12574  
 22315 REDWOOD ROAD  
 CASTRO VALLEY, CA.

**FIGURE**

**6**





**EXPLANATION:**

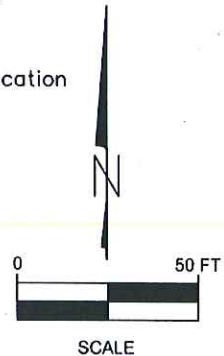
- MW-6 Groundwater Monitoring Well
- MW-5 Abandoned Monitoring Well
- Former Shell Oil USTs
- SG-7 Soil Gas Survey Sample Location
- VW-3 Vapor Extraction Well
- VP-3 Soil Vapor Probe

TPHg	12,000
Benzene	2,800
MTBE	77

TOTAL PETROLEUM HYDROCARBONS  
AS CALICULATED BY PARALLELION (ppb)  
BENZENE CONCENTRATION IN ppb  
METHYL TERT-BUTYL ETHER (ppb)

(NS) Not Sampled

Wells Sampled 6/20/13



Source: Virgil Chavez Nov. 2010 Topo Survey, Shell Oil 1975 Map, and Aerial Photos

<b>HORIZON ENVIRONMENTAL INC.</b>		<b>GROUNDWATER ANALYTICAL SUMMARY</b> FORMER BEACON STATION NO. 12574 22315 REDWOOD ROAD CASTRO VALLEY, CA.	<b>FIGURE</b>  <span style="font-size: 2em; font-weight: bold;">5</span>
Project Number: 1574.410 Prepared By: K. Liptok Reviewed By: K. Matek	Drawn By: C. Bechtell Date: 12/12 Revised Date: 07/13		

**Table 1 - Cumulative Soil Analytical Data  
Former Beacon Station No. 12574  
22315 Redwood Road, Castro Valley, California**

Sample Number	Location on Figures 2 or 3	Date Sampled	Sample Depth (bsg)	TPHd (ppm)	TPHg (ppm)	B (ppm)	T (ppm)	E (ppm)	X (ppm)	MTBE (ppm)
VW 1-15	VW-1	10/19/10	15 feet	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
VW 2-15	VW-2	10/19/10	15 feet	1.1 *	<1.0	0.031	0.014	0.010	0.049	<0.0050
VW 2-20	VW-2	10/19/10	20 feet	97 **	1,100	0.21	0.95	2.2	12	<0.0050
VW 3-10	VW-3	10/20/10	10 feet	120	1.7	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
VW 3-16	VW-3	10/20/10	16 feet	<1.0	<1.0	0.027	<0.0050	0.044	<0.0050	<0.0050
VW 3-20	VW-3	10/20/10	20 feet	<1.0	<1.0	0.019	<0.0050	<0.0050	<0.0050	<0.0050
VP 1-8	VP-1	10/20/10	8 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
VP 2-8	VP-2	10/19/10	8 feet	na	210	<0.025	<0.025	2.1	6.3	<0.025
VP 2-20	VP-2	10/19/10	20 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
VP 3-8	VP-3	10/19/10	8 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW 5A-10	MW-5A	10/20/10	10 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW 5A-20	MW-5A	10/20/10	20 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
MW 5A-30	MW-5A	10/20/10	30 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B-1-8	B1	12/23/09	8 feet	na	1.7	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B-1-18	B1	12/23/09	18 feet	na	<1.0	0.022	<0.0050	<0.0050	<0.0050	<0.0050
B-1-22	B1	12/23/09	22 feet	na	560	0.56	2.2	5.8	34	<0.090
B-1-26	B1	12/23/09	26 feet	na	17	0.038	0.070	0.12	0.87	<0.0050
B-2-12	B2	12/22/09	12 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B-2-20	B2	12/22/09	20 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B-2-24	B2	12/22/09	24 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B-2-28	B2	12/22/09	28 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050

**Table 1 - Cumulative Soil Analytical Data  
Former Beacon Station No. 12574  
22315 Redwood Road, Castro Valley, California**

Sample Number	Location on Figures 2 or 3	Date Sampled	Sample Depth (bsg)	TPHd (ppm)	TPHg (ppm)	B (ppm)	T (ppm)	E (ppm)	X (ppm)	MTBE (ppm)
B-3-20	B3	12/23/09	20 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B-3-26	B3	12/23/09	26 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050
B-4-10	B4	12/22/09	10 feet	na	930	<0.060	<0.060	0.31	0.19	<0.060
B-4-20	B4	12/22/09	20 feet	na	1,200	1.1	3.6	5.6	32	<0.15
B-4-27	B4	12/22/09	24 feet	na	<1.0	0.12	<0.0050	0.0076	<0.0050	0.11
B-5-20	B5	12/22/09	20 feet	na	2,800	2.0	26	36	210	<0.50
B-5-24	B5	12/22/09	24 feet	na	21	0.014	0.035	0.088	0.54	<0.0050
B-5-28	B5	12/22/09	28 feet	na	4.7	0.75	0.55	0.11	0.61	0.0071
MW8-5'	MW-8	05/14/93	5 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	na
MW8-10'	MW-8	05/14/93	10 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	na
MW8-15'	MW-8	05/14/93	15 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	na
MW8-20'	MW-8	05/14/93	20 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	na
MW7-5'	MW-7	05/14/93	5 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	na
MW7-10'	MW-7	05/14/93	10 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	na
MW7-15'	MW-7	05/14/93	15 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	na
MW7-20'	MW-7	05/14/93	20 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	na

**Table 1 - Cumulative Soil Analytical Data**  
**Former Beacon Station No. 12574**  
**22315 Redwood Road, Castro Valley, California**

Sample Number	Location on Figures 2 or 3	Date Sampled	Sample Depth (bsg)	TPHd (ppm)	TPHg (ppm)	B (ppm)	T (ppm)	E (ppm)	X (ppm)	MTBE (ppm)
MW6-5'	MW-6	05/14/93	5 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	na
MW6-10'	MW-6	05/14/93	10 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	na
MW6-15'	MW-6	05/14/93	15 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	na
MW6-20'	MW-6	05/14/93	20 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	na
MW5-5'	MW-5	05/14/93	5 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	na
MW5-10'	MW-5	05/14/93	10 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	na
MW5-15'	MW-5	05/14/93	15 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	na
MW5-20'	MW-5	05/14/93	20 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	na
MW4-5'	MW-4	05/14/93	5 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	na
MW4-10'	MW-4	05/14/93	10 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	na
MW4-15'	MW-4	05/14/93	15 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	na
MW4-20'	MW-4	05/14/93	20 feet	na	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	na
MW3-15'	MW-3	03/26/91	15 feet	<10	<1.0	<0.005	<0.005	<0.005	<0.005	na
MW3-20'	MW-3	03/26/91	20 feet	<10	230	<0.005	0.18	0.44	5.9	na
MW2-10'	MW-2	03/26/91	10 feet	<10	8.1	0.01	0.26	0.11	0.68	na
MW2-15'	MW-2	03/26/91	15 feet	<10	3,200	19	120	42	240	na
MW2-20'	MW-2	03/26/91	20 feet	<10	14,000	0.39	0.22	0.11	0.41	na
MW1-15'	MW-1	03/26/91	15 feet	<10	<1.0	0.16	0.10	0.010	0.050	na
MW1-20'	MW-1	03/26/91	20 feet	<10	3,200	13	110	33	300	na

**Table 1 - Cumulative Soil Analytical Data**  
**Former Beacon Station No. 12574**  
**22315 Redwood Road, Castro Valley, California**

Sample Number	Location on Figures 2 or 3	Date Sampled	Sample Depth (bsg)	TPHd (ppm)	TPHg (ppm)	B (ppm)	T (ppm)	E (ppm)	X (ppm)	MTBE (ppm)
S-20-T2Nb	T2	05/18/87	20 feet	na	8.67	na	na	na	na	na
S-20-T2S	T2	05/18/87	20 feet	na	0.73	na	na	na	na	na
S-20-T4N	T4	05/18/87	20 feet	na	125.5	na	na	na	na	na
S-20-T4Nb	T4	05/18/87	20 feet	<5	0.98	na	na	na	na	na
S-20-T4NF	T4	05/18/87	20 feet	53	208.7	na	na	na	na	na
S-20-T4d	T4	05/18/87	20 feet	1,192	1,989	na	na	na	na	na
S-20-T5N	T5	05/18/87	20 feet	na	1.27	na	na	na	na	na
S-10-T1N	T1	05/05/87	10 feet	<5	3.09	<0.05	0.07	<0.05	0.14	na
S-13-T2N	T2	05/05/87	13 feet	<5	4.38	<0.05	0.21	0.08	0.49	na
S-13-T2S	T2	05/05/87	13 feet	2,898	3,264	89	148	81	559	na
S-13-T3N	T3	05/05/87	13 feet	na	35.23	<0.05	0.62	0.70	5.50	na
S-13-T3S	T3	05/05/87	13 feet	na	4.58	<0.05	0.13	0.15	0.64	na
S-13-T4N	T4	05/05/87	13 feet	1,846	1,725	78	248	90	386	na
S-13-T4S	T4	05/05/87	13 feet	201	122.5	2.8	13.3	5.5	27.6	na
S-13-T5N	T5	05/05/87	13 feet	na	687	23	76	20	181	na
S-13-T5S	T5	05/05/87	13 feet	na	3.95	<0.05	0.18	0.09	0.37	na

**Notes:**

TPHg = total petroleum hydrocarbons as gasoline ppm = parts per million

TPHd = total petroleum hydrocarbons as diesel < = less than indicated detection level

B = benzene bsg = below surface grade

T = toluene \* = some hydrocarbons lower-boiling, some higher boiling than typical diesel

E = ethylbenzene \*\* = hydrocarbons are lower boiling than typical diesel

X = xylenes

MTBE= methyl tertiary butyl ether

**Table 4  
Cumulative Soil Gas Analytical Data  
Former Beacon Station No. 12574  
22315 Redwood Road, Castro Valley, California**

Chemical	Region 2 ESL values		CHHSL values		Date Sampled		12/21/09		12/21/09		12/21/09		12/21/09		12/21/09		12/21/09	
	Residential µg/m <sup>3</sup>	Commercial µg/m <sup>3</sup>	Residential µg/m <sup>3</sup>	Commercial µg/m <sup>3</sup>	Laboratory R L <sup>1</sup> µg/m <sup>3</sup>	SG-1 1 PV µg/m <sup>3</sup>	SG-2 1 PV µg/m <sup>3</sup>	SG-2-Dup 1 PV µg/m <sup>3</sup>	SG-3 1 PV µg/m <sup>3</sup>	SG-4 1 PV µg/m <sup>3</sup>	SG-5 1 PV µg/m <sup>3</sup>	SG-5 3 PV µg/m <sup>3</sup>	SG-5 7 PV µg/m <sup>3</sup>					
														Residential µg/m <sup>3</sup>	Commercial µg/m <sup>3</sup>			
Benzene	84	280	36.2	122	34	97	100	100	100	76	220	180	140					
Toluene	63,000	180,000	135,000	378,000	200	350	840	760	1,300	360	2,300	2,400	2,000					
Ethylbenzene	980	3,300	NL	NL	100	110	230	240	110,000	110	340	400	360					
total Xylenes	21,000	58,000	315,000	879,000	300	300	1,130	1,280	102,700	570	1,520	2,120	1,890					
MTBE	9,400	31,000	4,000	13,400	100	< 100	< 100	< 100	< 100	< 100	< 100	< 100	< 100					
1,1-DFA	NL	NL	NL	NL	10,000	< 10,000	< 10,000	< 10,000	< 10,000	< 10,000	< 10,000	< 10,000	< 10,000					
TPHg	10,000	29,000	NL	NL	10,000	3,600,000	17,000	16,000	13,000,000	< 10,000	23,000	22,000	19,000					

Chemical	Region 2 ESL values		CHHSL values		Date Sampled		10/06/10		10/06/10	
	Residential µg/m <sup>3</sup>	Commercial µg/m <sup>3</sup>	Residential µg/m <sup>3</sup>	Commercial µg/m <sup>3</sup>	Laboratory R L <sup>2</sup> µg/m <sup>3</sup>	SG-7 1 PV µg/m <sup>3</sup>	Laboratory R L µg/m <sup>3</sup>	SG-7-Dup 1 PV µg/m <sup>3</sup>		
									Residential µg/m <sup>3</sup>	Commercial µg/m <sup>3</sup>
Benzene	84	280	36.2	122	3.5	< 3.5	3.3	< 3.3		
Toluene	63,000	180,000	135,000	378,000	4.1	20	3.9	< 3.9		
Ethylbenzene	980	3,300	NL	NL	4.8	< 4.8	4.5	< 4.5		
total Xylenes	21,000	58,000	315,000	879,000	4.8	5.0	4.5	< 4.5		
MTBE	9,400	31,000	4,000	13,400	4.0	< 4.0	3.8	< 3.8		
1,1-DFA	NL	NL	NL	NL	12	< 12	11	18		
TPHg	10,000	29,000	NL	NL	220	< 220	210	< 210		

**Notes:**

- µg/m<sup>3</sup> = micrograms per cubic meter of vapor
- MTBE = Methyl-t-butyl ether
- 1,1-DFA = 1,1 Difluoroethane (leak tracing compound)
- TPHg = total petroleum hydrocarbons as gasoline (gasoline range)
- RL<sup>1</sup> = Reporting Limit by TEG mobile laboratory
- RL<sup>2</sup> = Reporting Limit by ATL laboratory
- NL = Not listed
- PV = Purge Volume

**Table 1 - Groundwater Monitoring Data**  
**Former Beacon Station No. 12574**  
**22315 Redwood Road**  
**Castro Valley, California**

Well Number	Date	Benzene ug/L	Toluene ug/L	Ethylbenzene ug/L	Xylenes ug/L	TPHg ug/L	MTBE ug/L	TBA ug/L	Depth to GW	T.O.C. Elevation	GW Elevation	Well Diam.	Screen Interval	Comments
MWV-1	02/11/02	7,600	160	1,600	4,200	41,000	640	na	22.58	158.70	136.12	4"	10' - 30'	no comments
MWV-1	08/21/02	2,000	31	220	510	7,400	270	na	23.18		135.52			no comments
MWV-1	03/04/03	6,000	130	1,300	2,900	30,000	490	na	22.43		136.27			no comments
MWV-1	09/09/03	3,900	69	760	1,700	18,000	390	na	23.02		135.68			no comments
MWV-1	03/23/04	4,500	89	1,000	2,000	24,000	410	na	21.97		136.73			no comments
MWV-1	08/31/04	4,000	77	780	1,600	22,000	290	na	23.35		135.35			no comments
MWV-1	02/01/05	6,800	160	1,800	3,000	36,000	360	na	21.98		136.72			no comments
MWV-1	07/29/05	2,400	54	480	750	14,000	170	na	22.55		136.15			no comments
MWV-1	01/16/06	2,900	61	860	1,300	18,000	200	na	21.75		136.95			no comments
MWV-1	08/30/06	1,400	22	150	240	4,800	110	na	22.74		135.96			no comments
MWV-1	02/13/07	1,100	49	210	280	5,300	110	na	22.31		136.39			no comments
MWV-1	08/13/07	2,300	49	11	630	10,000	160	na	23.10		135.60			no comments
MWV-1	02/11/08	5,400	260	2,300	3,400	30,000	150	na	21.10		137.60			no comments
MWV-1	07/29/08	1,800	28	720	220	9,900	69	na	22.95		135.75			no comments
MWV-1	02/25/09	400	7.0	53	34	1,700	33	16	21.81		136.89			no comments
MWV-1	05/21/09	160	50	120	140	1,900	15	8.4	nm		nc			slight odor / no sheen
MWV-1	08/26/09	480	130	120	240	3,000	29	13	23.09		135.61			post HVDPE sample
MWV-1	01/29/10	240	16	45	100	2,200	15	8.3	20.51		138.19			slight odor / no sheen
MWV-1	08/23/10	370	7	54	83	2,300	17	8.3	22.59		136.11			slight odor / no sheen
MWV-1	11/10/10									156.83				odor / no sheen
MWV-1	03/03/11	440	14	190	120	4,200	21	16	21.69		135.14			GPS surveying of well
MWV-1	08/24/11	170	6.3	20	26	1,600	10	7.6	22.45		134.38			odor / no sheen
MWV-1	02/13/12	180	5.4	24	43	1,400	8.4	8.6	22.60		134.23			slight odor / no sheen
MWV-1	10/02/12	300	7.1	51	74	3,100	8.2	5.3	22.60		134.23			odor / no sheen
MWV-1	06/20/13	140	5.6	34	69	2,300	8.4	<5.0	22.47		134.36			odor / no sheen
MWV-2	02/11/02	3,100	270	690	1,600	17,000	660	na	21.03	157.33	136.30	4"	10' - 30'	no comments
MWV-2	08/21/02	1,800	44	290	260	6,800	440	na	21.60		135.73			no comments
MWV-2	03/04/03	3,400	200	590	1,100	20,000	670	na	20.86		136.47			no comments
MWV-2	09/09/03	3,200	120	630	940	19,000	630	na	21.45		135.88			no comments
MWV-2	03/23/04	3,200	110	640	740	18,000	580	na	20.41		136.92			no comments
MWV-2	08/31/04	2,800	59	510	420	13,000	430	na	21.75		135.58			no comments
MWV-2	02/01/05	3,200	110	700	730	17,000	440	na	20.42		136.91			no comments
MWV-2	07/29/05	3,900	210	770	930	22,000	360	na	20.97		136.36			no comments
MWV-2	01/16/06	3,900	120	770	790	20,000	370	na	20.19		137.14			slight sheen / odor
MWV-2	08/30/06	3,000	79	480	450	14,000	390	na	21.14		136.19			no comments
MWV-2	02/13/07	3,100	110	600	620	14,000	340	na	20.73		136.60			sheen
MWV-2	08/13/07	4,600	150	560	410	14,000	240	na	21.41		135.92			no comments
MWV-2	02/11/08	12,000	4,400	1,700	5,200	46,000	150	na	19.35		137.98			no comments
MWV-2	07/29/08	9,700	840	1,400	4,000	36,000	160	na	21.38		135.95			no comments
MWV-2	02/25/09	3,600	66	400	320	11,000	130	74	20.25		137.08			odor / no sheen
MWV-2	05/21/09	2,900	710	590	1,900	19,000	97	50	nm		nc			post HVDPE sample
MWV-2	08/26/09	3,300	280	640	1,600	17,000	160	110	22.53		134.80			odor / no sheen
MWV-2	01/29/10	3,700	140	550	1,100	18,000	110	70	19.91		137.42			odor / no sheen
MWV-2	08/23/10	4,700	72	550	380	17,000	160	77	21.00		136.33			odor / no sheen
MWV-2	11/10/10									155.36				GPS surveying of well
MWV-2	03/03/11	8,200	150	1,800	2,400	33,000	73	<70	20.12		135.24			odor / no sheen
MWV-2	08/24/11	5,500	89	1,000	410	20,000	120	<70	20.85		134.51			odor / no sheen
MWV-2	02/13/12	2,800	30	310	82	9,700	75	68	22.32		133.04			odor / no sheen
MWV-2	10/02/12	4,100	120	760	310	22,000	86	72	21.01		134.35			odor / no sheen
MWV-2	06/20/13	2,800	52	200	92	12,000	77	48	20.92		134.44			odor / no sheen

**Table 1 - Groundwater Monitoring Data**  
**Former Beacon Station No. 12574**  
**22315 Redwood Road**  
**Castro Valley, California**

Well Number	Date	Benzene ug/L	Toluene ug/L	Ethylbenzene ug/L	Xylenes ug/L	TPHg ug/L	MTBE ug/L	TBA ug/L	Depth to GW	T.O.C. Elevation	GW Elevation	Well Diam.	Screen Interval	Comments
MWV-3	02/11/02	ns	ns	ns	ns	ns	ns	ns	21.55	159.23	137.68	4"	10' - 30'	not sampled
MWV-3	08/21/02	ns	ns	ns	ns	ns	ns	ns	22.00		137.23			not sampled
MWV-3	03/04/03	ns	ns	ns	ns	ns	ns	ns	21.48		137.75			not sampled
MWV-3	09/09/03	ns	ns	ns	ns	ns	ns	ns	21.84		137.39			not sampled
MWV-3	03/23/04	ns	ns	ns	ns	ns	ns	ns	20.82		138.41			not sampled
MWV-3	08/31/04	ns	ns	ns	ns	ns	ns	ns	21.93		137.30			no comments
MWV-3	02/01/05	ns	ns	ns	ns	ns	ns	ns	20.56		138.67			no comments
MWV-3	07/29/05	ns	ns	ns	ns	ns	ns	ns	21.37		137.86			no comments
MWV-3	01/16/06	ns	ns	ns	ns	ns	ns	ns	20.75		138.48			no comments
MWV-3	08/30/06	ns	ns	ns	ns	ns	ns	ns	21.60		137.63			no comments
MWV-3	02/13/07	ns	ns	ns	ns	ns	ns	ns	21.37		137.86			no comments
MWV-3	08/13/07	ns	ns	ns	ns	ns	ns	ns	nm		nm			well paved over
MWV-3	02/11/08	ns	ns	ns	ns	ns	ns	ns	nm		nm			well paved over
MWV-3	07/29/08	ns	ns	ns	ns	ns	ns	ns	nm		nm			well paved over
MWV-3	02/25/09	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	20.87		138.36			no odor / no sheen
MWV-3	08/26/09	<0.50	<0.50	0.71	<0.50	140	<0.50	<0.50	21.68		137.55			no odor / no sheen
MWV-3	01/29/10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	19.60		139.63			no odor / no sheen
MWV-3	08/23/10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	21.10		138.13			no odor / no sheen
MWV-3	11/07/10	-----	-----	-----	-----	-----	-----	-----		157.37				GPS surveying of well
MWV-3	03/03/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	20.58		136.79			no odor / no sheen
MWV-3	08/24/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	21.15		136.22			no odor / no sheen
MWV-3	02/13/12	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	21.44		135.93			no odor / no sheen
MWV-3	10/02/12	<0.50	<0.50	0.53	<0.50	51	<0.50	<0.50	21.20		136.17			no odor / no sheen
MWV-3	06/20/13	<0.50	<0.50	<0.50	<0.50	150	<0.50	<0.50	21.11		136.26			no odor / no sheen
MWV-4	02/11/02	ns	ns	ns	ns	ns	ns	ns	16.81	154.13	137.32	2"	13' - 28'	not sampled
MWV-4	08/21/02	ns	ns	ns	ns	ns	ns	ns	17.58		136.55			not sampled
MWV-4	03/04/03	ns	ns	ns	ns	ns	ns	ns	16.70		137.43			not sampled
MWV-4	09/09/03	ns	ns	ns	ns	ns	ns	ns	17.48		136.65			not sampled
MWV-4	03/23/04	ns	ns	ns	ns	ns	ns	ns	16.35		137.78			not sampled
MWV-4	08/31/04	ns	ns	ns	ns	ns	ns	ns	nm		nm			no comments
MWV-4	02/01/05	ns	ns	ns	ns	ns	ns	ns	16.70		137.43			no comments
MWV-4	07/29/05	ns	ns	ns	ns	ns	ns	ns	17.06		137.07			no comments
MWV-4	01/16/06	ns	ns	ns	ns	ns	ns	ns	16.56		137.57			no comments
MWV-4	08/30/06	ns	ns	ns	ns	ns	ns	ns	17.18		136.95			no comments
MWV-4	02/13/07	ns	ns	ns	ns	ns	ns	ns	17.01		137.12			no comments
MWV-4	08/13/07	ns	ns	ns	ns	ns	ns	ns	17.94		136.19			no comments
MWV-4	02/11/08	ns	ns	ns	ns	ns	ns	ns	15.68		138.45			no comments
MWV-4	07/29/08	ns	ns	ns	ns	ns	ns	ns	17.31		136.82			no comments
MWV-4	02/25/09	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	16.44		137.69			no odor / no sheen
MWV-4	08/26/09	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	17.41		136.72			no odor / no sheen
MWV-4	01/29/10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	16.15		137.98			no odor / no sheen
MWV-4	08/23/10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	16.78		137.35			no odor / no sheen
MWV-4	11/10/10	-----	-----	-----	-----	-----	-----	-----		152.26				GPS surveying of well
MWV-4	03/03/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	16.29		135.97			no odor / no sheen
MWV-4	08/24/11	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	16.93		135.33			no odor / no sheen
MWV-4	02/13/12	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	17.05		135.21			no odor / no sheen
MWV-4	10/02/12	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	16.89		135.37			no odor / no sheen
MWV-4	06/20/13	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	16.79		135.47			no odor / no sheen



**Table 1 - Groundwater Monitoring Data**  
**Former Beacon Station No. 12574**  
**22315 Redwood Road**  
**Castro Valley, California**

Well Number	Date	Benzene ug/L	Toluene ug/L	Ethylbenzene ug/L	Xylenes ug/L	TPHg ug/L	MTBE ug/L	TBA ug/L	Depth to GW	T.O.C. Elevation	GW Elevation	Well Diam.	Screen Interval	Comments
MW-5	02/11/02	ns	ns	ns	ns	ns	ns	ns	15.70	150.73	135.03			not sampled
MW-5	08/21/02	ns	ns	ns	ns	ns	ns	ns	16.17		134.56			not sampled
MW-5	03/04/03	ns	ns	ns	ns	ns	ns	ns	15.46		135.27			not sampled
MW-5	09/09/03	ns	ns	ns	ns	ns	ns	ns	16.05		134.68			not sampled
MW-5	03/23/04	ns	ns	ns	ns	ns	ns	ns	14.88		135.85			not sampled
MW-5	08/31/04	ns	ns	ns	ns	ns	ns	ns	nm		nm			unable to locate due to construction
MW-5	02/01/05	ns	ns	ns	ns	ns	ns	ns	nm		nm			unable to locate due to construction
MW-5	07/29/05	ns	ns	ns	ns	ns	ns	ns	nm		nm			unable to locate due to construction
MW-5A	11/01/10	<0.50	<0.50	<0.50	<0.50	<50	18	<5.0	15.11	146.36	131.25	2"	10' - 30'	no odor / no sheen
MW-5A	03/03/11	<0.50	<0.50	<0.50	<0.50	<50	17	<5.0	13.96		132.40			no odor / no sheen
MW-5A	08/24/11	<0.50	<0.50	<0.50	<0.50	<50	14	<5.0	14.82		131.54			no odor / no sheen
MW-5A	02/13/12	<0.50	<0.50	<0.50	<0.50	<50	17	<5.0	14.90		131.46			no odor / no sheen
MW-5A	10/02/12	<0.50	<0.50	<0.50	<0.50	<50	1.0	<5.0	14.97		131.49			no odor / no sheen
MW-5A	06/20/13	<0.50	<0.50	<0.50	<0.50	<50	<0.50	<5.0	14.88		131.68			no odor / no sheen
MW-6	02/11/02	ns	ns	ns	ns	ns	ns	ns	20.78	156.11	135.33	2"	15' - 30'	not sampled
MW-6	08/21/02	ns	ns	ns	ns	ns	ns	ns	21.41		134.70			not sampled
MW-6	03/04/03	ns	ns	ns	ns	ns	ns	ns	20.64		135.47			not sampled
MW-6	09/09/03	ns	ns	ns	ns	ns	ns	ns	21.23		134.88			not sampled
MW-6	03/23/04	ns	ns	ns	ns	ns	ns	ns	20.21		135.90			not sampled
MW-6	08/31/04	ns	ns	ns	ns	ns	ns	ns	21.50		134.61			no comments
MW-6	02/01/05	ns	ns	ns	ns	ns	ns	ns	20.22		135.89			no comments
MW-6	07/29/05	ns	ns	ns	ns	ns	ns	ns	20.78		135.33			no comments
MW-6	01/16/06	ns	ns	ns	ns	ns	ns	ns	19.92		136.19			no comments
MW-6	08/30/06	<0.50	<0.50	<0.50	<0.50	<50	71	ns	20.94		135.17			no comments
MW-6	02/13/07	ns	ns	ns	ns	ns	ns	ns	20.35		135.76			no comments
MW-6	08/13/07	ns	ns	ns	ns	ns	ns	ns	21.29		134.82			no comments
MW-6	02/11/08	ns	ns	ns	ns	ns	ns	ns	19.50		136.61			no comments
MW-6	07/29/08	ns	ns	ns	ns	ns	ns	ns	21.23		134.88			no comments
MW-6	02/25/09	<0.50	<0.50	<0.50	<0.50	<50	45	<5.0	19.95		136.16			no odor / no sheen
MW-6	08/26/09	<0.50	<0.50	<0.50	<0.50	<50	43	<5.0	21.27		134.84			no odor / no sheen
MW-6	01/29/10	<0.50	<0.50	<0.50	<0.50	<50	46	5.4	19.64		136.47			no odor / no sheen
MW-6	08/23/10	<0.50	<0.50	<0.50	<0.50	<50	36	<5.0	20.88		135.23			no odor / no sheen
MW-6	11/10/10	-----	-----	-----	-----	-----	-----	-----	-----	154.27	-----			GPS surveying of well
MW-6	03/03/11	<0.50	<0.50	<0.50	<0.50	<50	40	5.1	19.90		134.37			no odor / no sheen
MW-6	08/24/11	<0.50	<0.50	<0.50	<0.50	<50	29	<5.0	20.67		133.60			no odor / no sheen
MW-6	02/13/12	<0.50	<0.50	<0.50	<0.50	<50	24	<5.0	20.84		133.43			no odor / no sheen
MW-6	10/02/12	<0.50	<0.50	<0.50	<0.50	<50	14	<5.0	20.86		133.41			no odor / no sheen
MW-6	06/20/13	<0.50	<0.50	<0.50	<0.50	<50	15	<5.0	20.72		133.55			no odor / no sheen

Notes:  
 TPHg = Total Petroleum Hydrocarbons as gasoline nm = not measured  
 TPHd = Total Petroleum Hydrocarbons as diesel ns = not sampled  
 MTBE = Methyl Tertiary-Butyl Ether nc = not calculated  
 < = less than the specified laboratory detection limit na = not analyzed  
 ppb = parts per billion

T.O.C. = Top of casing GW = Groundwater  
 Depths and Elevations recorded in feet.  
 Monitoring well casing tops resurveyed in November 2010  
 to Global Positioning System (GPS) coordinates.

**Table 3 - Groundwater Analytical Data  
Former Beacon Station No. 12574  
22315 Redwood Road, Castro Valley, California**

Sample Number	Date Sampled	Sample Depth (bsg)	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenz. (ppb)	Xylenes (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	TBA (ppb)
B-1	12/23/09	~ 25 feet	46,000	8,200	3,400	1,100	5,800	27	<10	<10	<10	66
B-2	12/22/09	~ 25 feet	540	120	2.1	1.3	4.2	3.9	<0.50	<0.50	<0.50	<5.0
B-3	12/23/09	~ 23 feet	1,100	2.0	1.6	45	4.5	<0.50	<0.50	<0.50	<0.50	<5.0
B-4	12/22/09	~ 24 feet	26,000	2,800	690	490	2,000	110	<2.5	<2.5	<2.5	100
B-5	12/22/09	~ 27 feet	64,000	6,400	4,000	1,600	8,300	10	<10	<10	<10	<50

**Notes:**

TPHg = total petroleum hydrocarbons as gasoline

MTBE = methyl t-butyl ether

DIPE = diisopropyl ether

ETBE = ethyl-tert-butyl ether

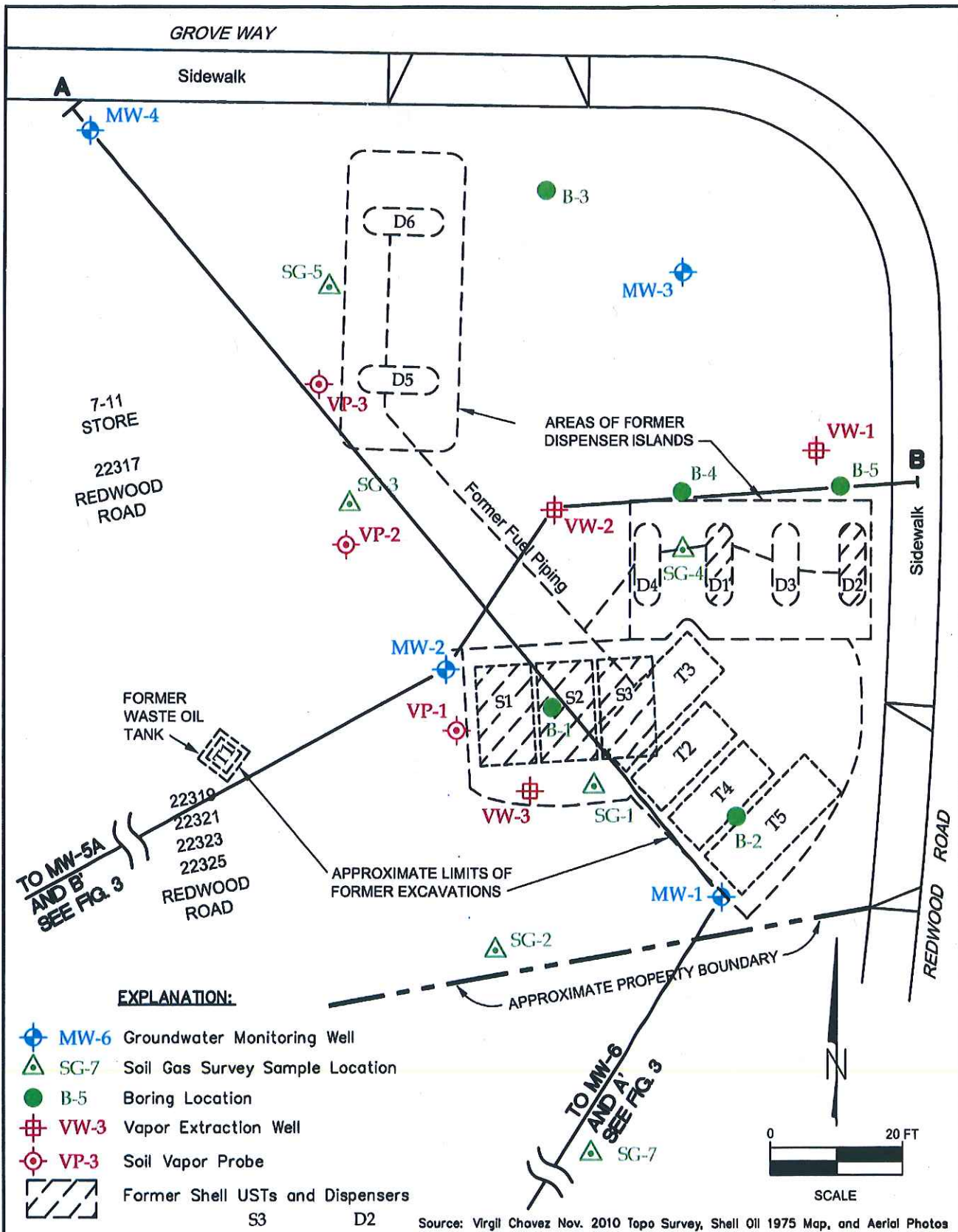
TAME = tert-aryl methyl ether

TBA = tertiary butyl alcohol

bsg = below surface grade

< = less than indicated detection level

ppb = parts per billion



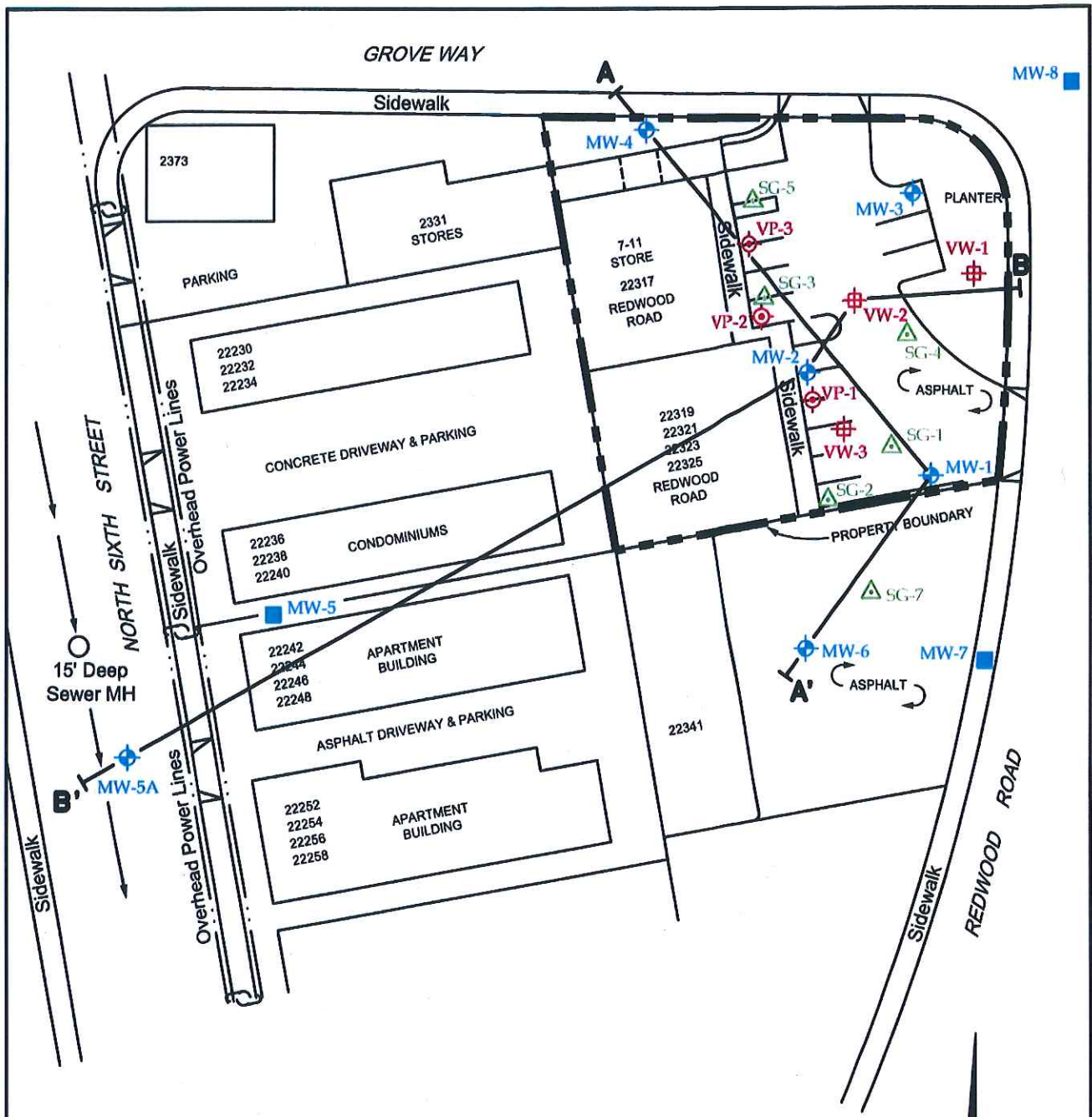
<b>HORIZON ENVIRONMENTAL INC.</b>	
Project Number: 1574.13 Prepared By: E. Kruck Reviewed By: K. Matelk	Drawn By: C. Bechtell Date: 9/11 Revised Date:

**SITE MAP WITH  
CROSS SECTION TRACES**



FORMER BEACON STATION NO. 12574  
22315 REDWOOD ROAD  
CASTRO VALLEY, CA.

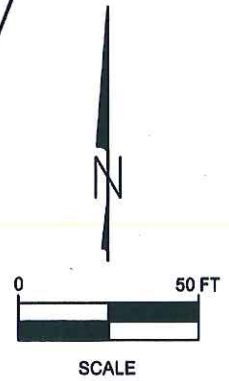
**FIGURE**

**2**



**EXPLANATION:**

-  MW-6 Groundwater Monitoring Well
-  SG-7 Soil Gas Location
-  VW-3 Vapor Extraction Well
-  VP-3 Soil Vapor Probe
-  MW-5 Abandoned Monitoring Well



Source: Virgil Chavez Nov. 2010 Topo Survey, Shell Oil 1975 Map, and Aerial Photos



**HORIZON ENVIRONMENTAL INC.**

Project Number: 1574.13  
 Prepared By: E. Kruck  
 Reviewed By: K. Mateik

Drawn By: C. Bechtell  
 Date: 9/11  
 Revised Date:

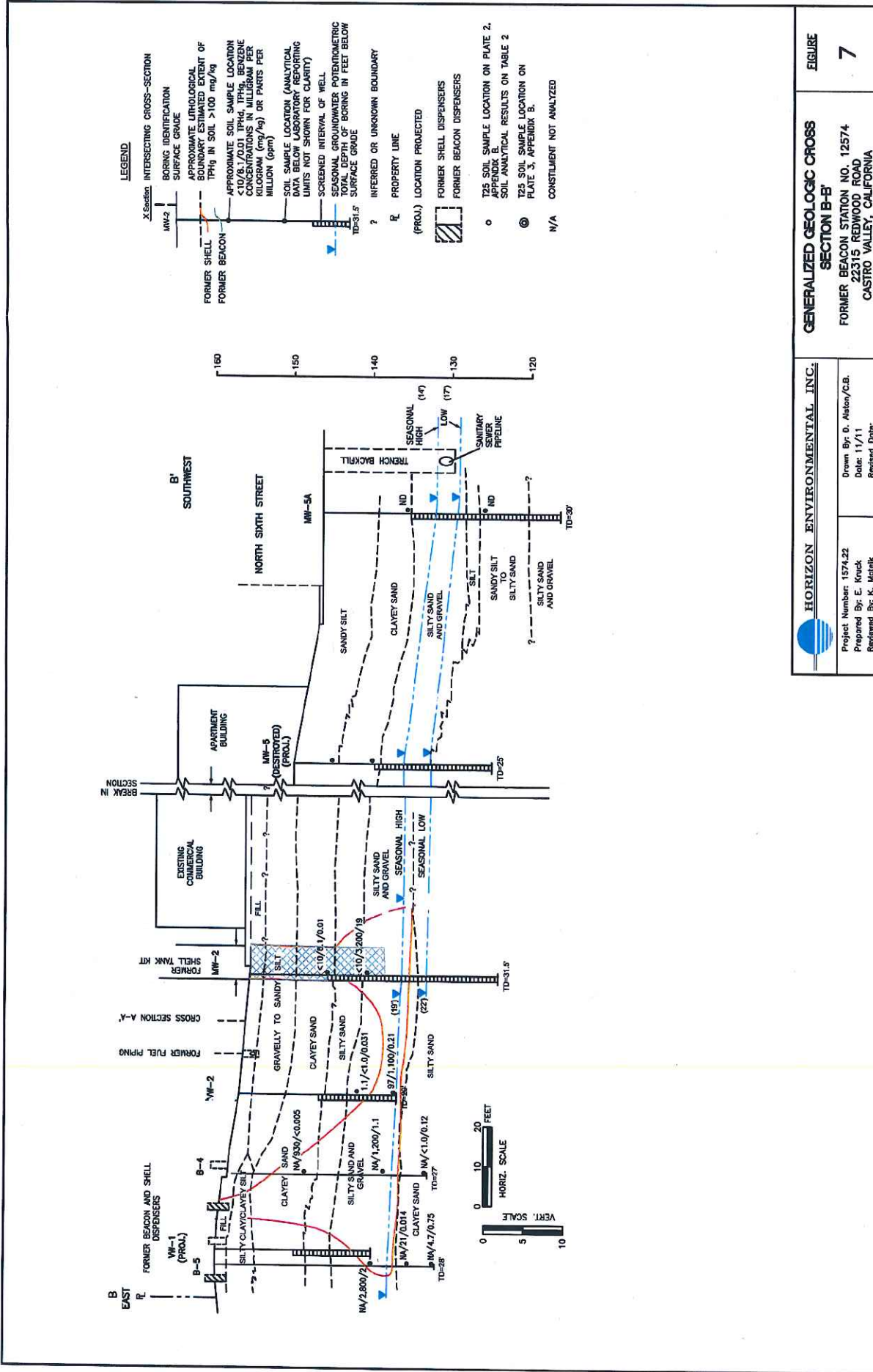
**SITE AREA MAP WITH  
 CROSS SECTION TRACES**

FORMER BEACON STATION NO. 12574  
 22315 REDWOOD ROAD  
 CASTRO VALLEY, CA.

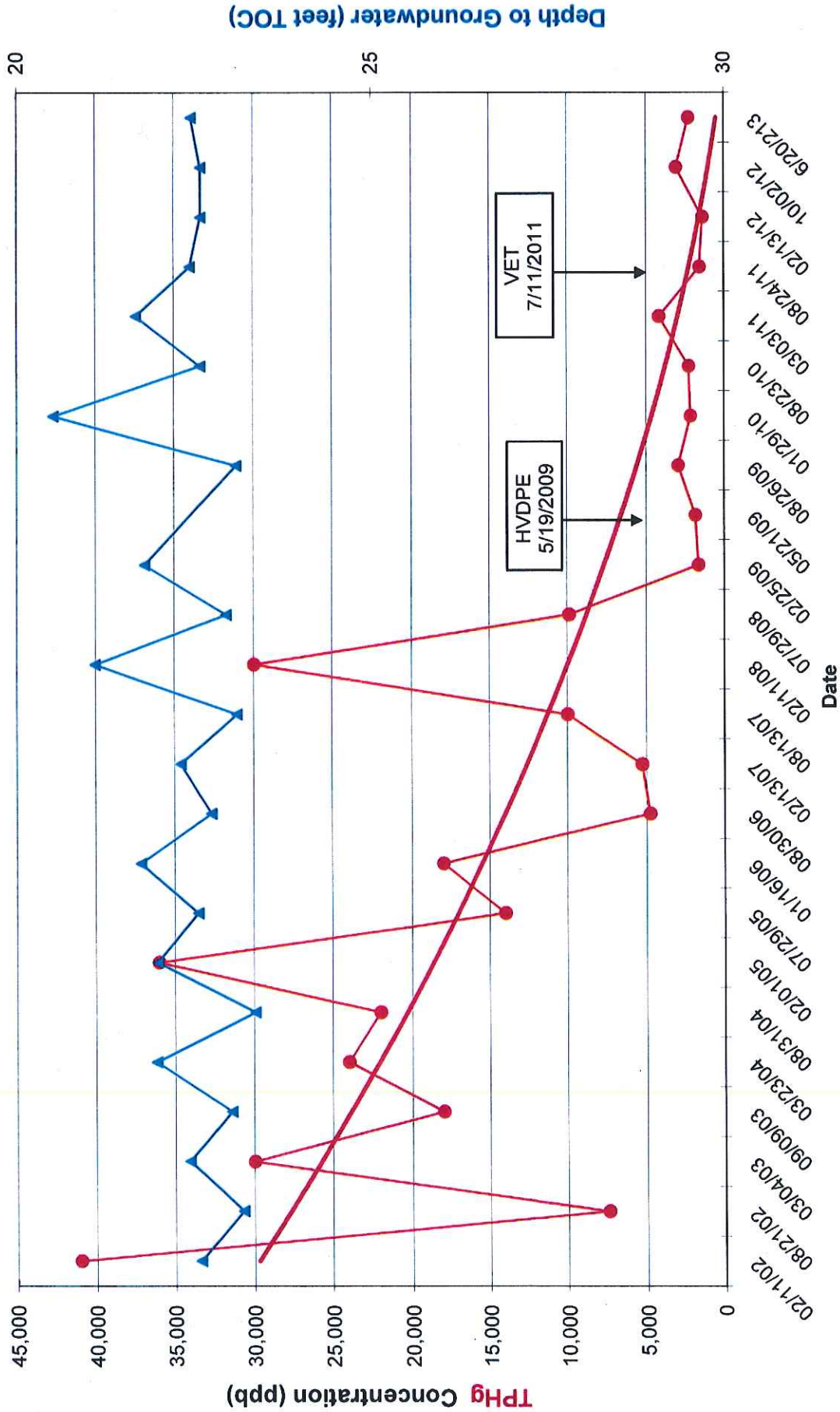
**FIGURE**

**3**

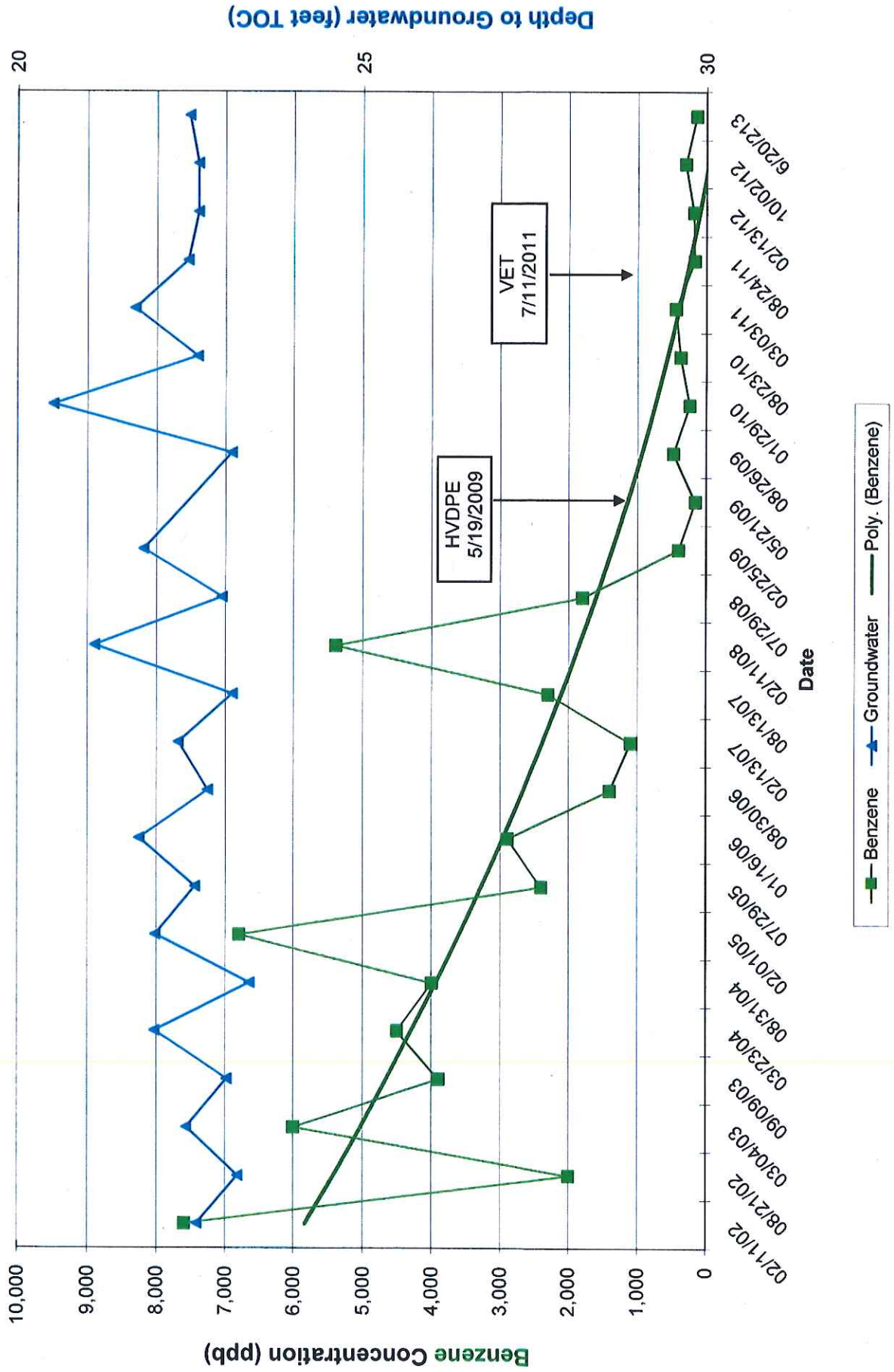




**FIGURE 7**  
**TPHg vs. Time**  
**Monitoring Well MW-1**  
**Former Beacon Station No. 12574**  
**22135 Redwood Road, Castro Valley, California**

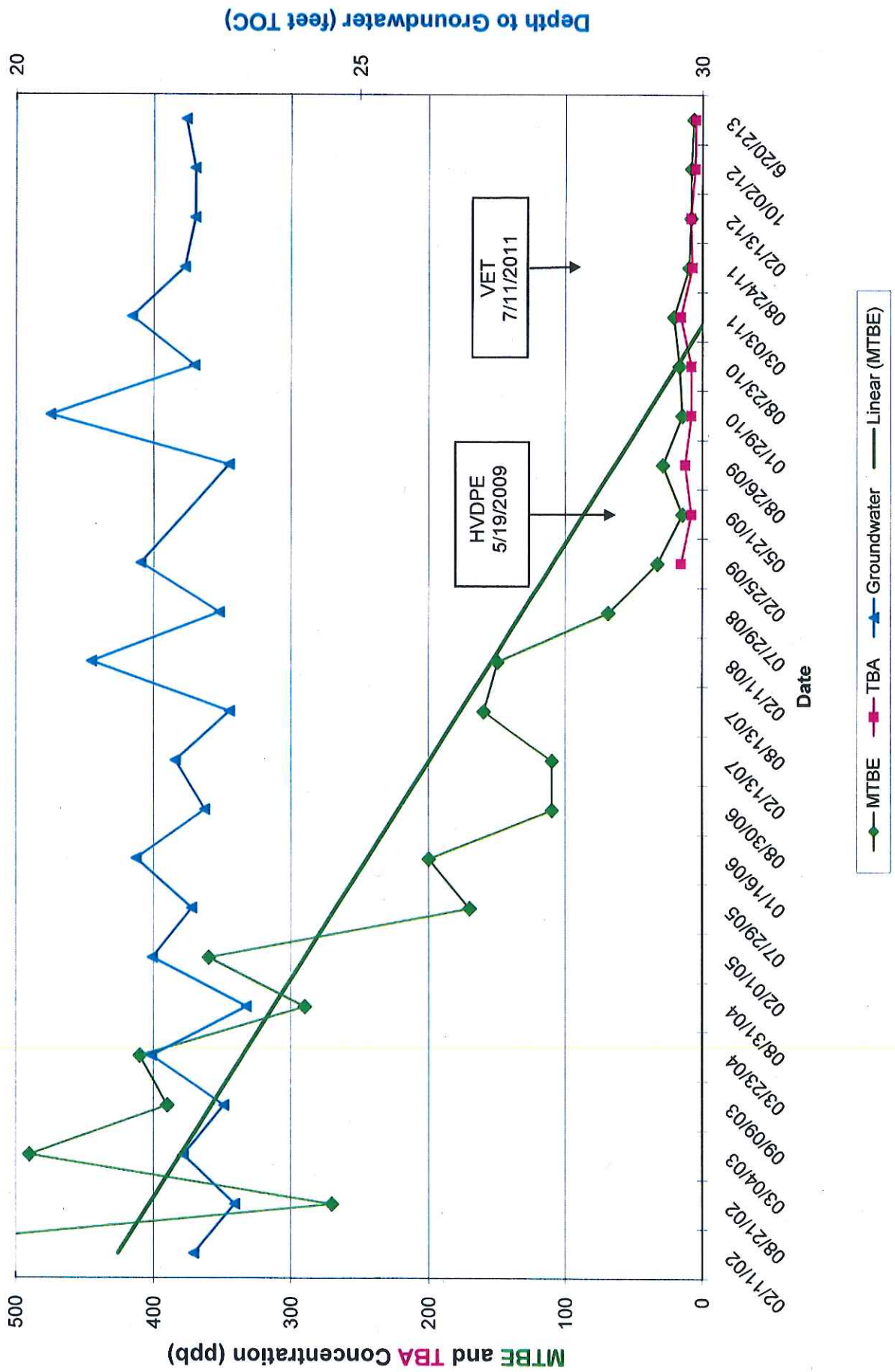


**FIGURE 8**  
**Benzene vs. Time**  
**Monitoring Well MW-1**  
**Former Beacon Station No. 12574**  
**22135 Redwood Road, Castro Valley, California**

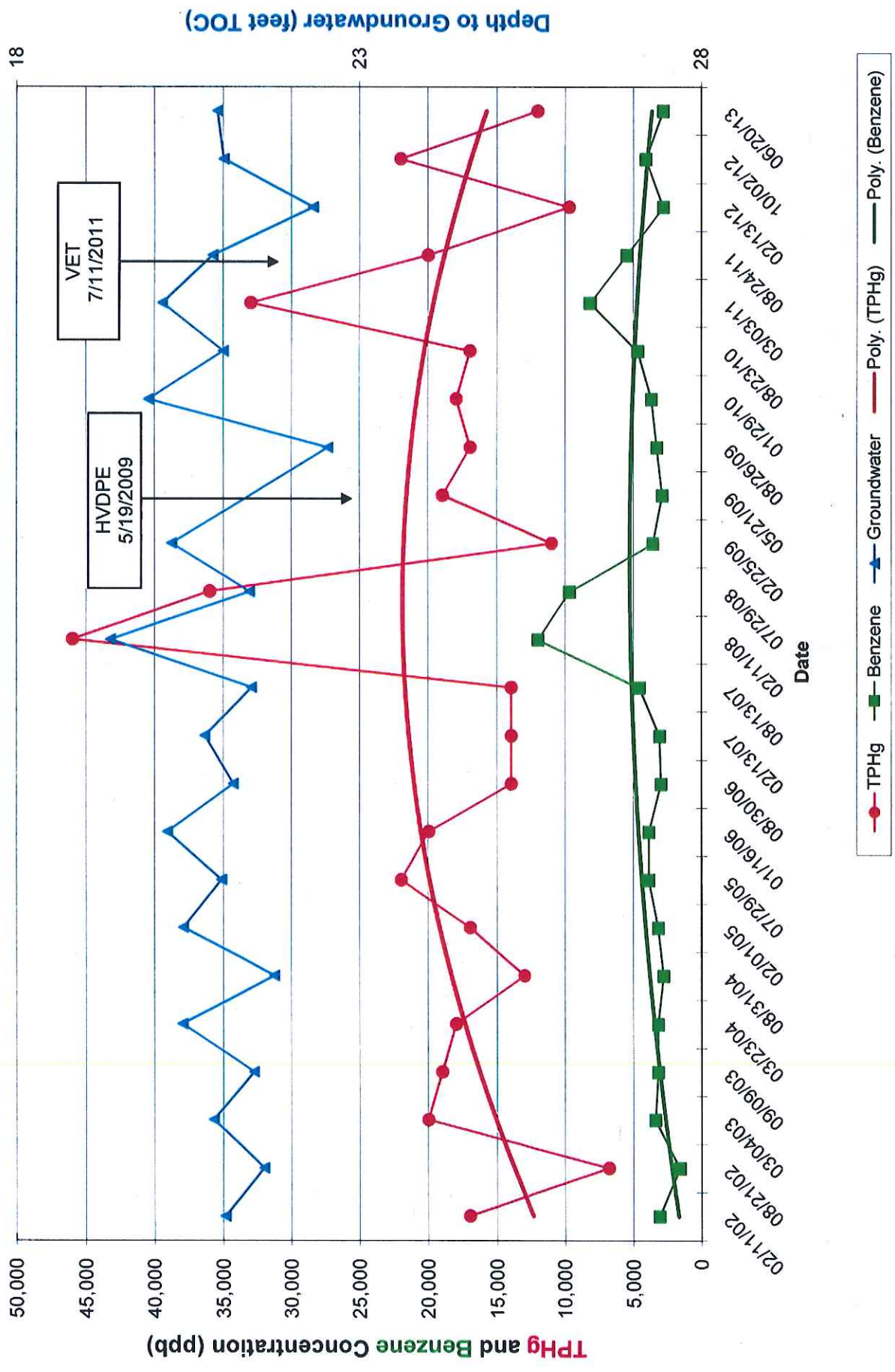




**FIGURE 9**  
**MTBE and TBA vs. Time**  
**Monitoring Well MW-1**  
**Former Beacon Station No. 12574**  
**22135 Redwood Road, Castro Valley, California**



**FIGURE 10**  
**TPHg and Benzene vs. Time**  
**Monitoring Well MW-2**  
**Former Beacon Station No. 12574**  
**22315 Redwood Road, Castro Valley, California**



**FIGURE 11**  
**MTBE and TBA vs. Time**  
**Monitoring Well MW-2**  
**Former Beacon Station No. 12574**  
**22135 Redwood Road, Castro Valley, California**

