Atlantic Richfield Company

Chuck Carmel
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October 1, 2013

Re: Conceptual Site Model and Case Closure Request
Atlantic Richfield Company Station #2035
1001 San Pablo Avenue, Albany, California
ACEH Case #RO0000100

I declare that to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct.

Submitted by,

Chuck Carmel

Remediation Management Project Manager

Attachment

CONCEPTUAL SITE MODEL AND CASE CLOSURE REQUEST
Atlantic Richfield Company Station No.2035
1001 San Pablo Avenue
Albany, California

Prepared for

Mr. Chuck Carmel
Remediation Management Project Manager
Atlantic Richfield Company
P.O. Box 1257
San Ramon, California 94583

Prepared by

875 Cotting Lane, Suite G
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October 1, 2013

Project No. 06-88-610

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October 1, 2013

Project No. 06-88-610

Atlantic Richfield Company
P.O. Box 1257
San Ramon, CA 94583
Submitted via ENFOS

Attn.: Mr. Chuck Carmel

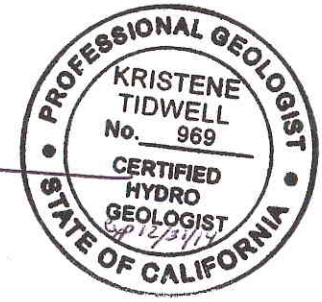
Re: Conceptual Site Model and Case Closure Request, Atlantic Richfield Company Station No. 2035, 1001 San Pablo Avenue, Albany, California; ACEH Case No. RO0000100; Geo Tracker Global ID # T0600100081

Dear Mr. Carmel:

Broadbent & Associates, Inc. (Broadbent) is pleased to submit this *Conceptual Site Model and Case Closure Request* for Atlantic Richfield Company Station No. 2035 located at 1001 San Pablo Avenue, Albany, California (Site). This document was prepared in order to evaluate this Site for case closure under the *Low Threat Underground Storage Tank Case Closure Policy* (Low Threat UST Closure Policy; CSWRCB, 2012). After completion of the CSM and comparing the current Site conditions to the Low Threat UST Closure Policy, case closure is recommended.

Should you have questions or require additional information, please do not hesitate to contact us at (707) 455-7290.

Sincerely,
BROADBENT & ASSOCIATES, INC.



Kristene Tidwell, P.G., C.HG.
Senior Geologist

Enclosures

cc: Ms. Dilan Roe, Alameda County Environmental Health (Submitted via ACEH ftp site)
Electronic copy uploaded to GeoTracker

CONCEPTUAL SITE MODEL AND CASE CLOSURE REQUEST
Atlantic Richfield Company Station No. 2035
1001 San Pablo Avenue, Albany, California
Fuel Leak Case No. RO0000100

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CONCEPTUAL SITE MODEL AND CASE CLOSURE REQUEST
Atlantic Richfield Company Station No. 2035
1001 San Pablo Avenue, Albany, California
Fuel Leak Case No. RO0000100

1.0 INTRODUCTION

On behalf of the Atlantic Richfield Company– (ARC, a BP affiliated company) Broadbent & Associates, Inc. (Broadbent) has prepared this *Conceptual Site Model and Case Closure Request* (CSM and CCR) for the Atlantic Richfield Company (ARCO) Station No. 2035 (herein referred to as Station No. 2035), located at 1001 San Pablo Avenue, Albany, California (Site). This CSM and CCR was prepared in order to evaluate the Site's eligibility to be closed under the California State Water Resources Control Board's (CSWRCB) *Low Threat Underground Storage Tank Case Closure Policy* (Low Threat UST Closure Policy; CSWRCB, 2012). This CSM and CCR includes discussions on the Site background and previous environmental activities, regional and Site geology and hydrogeology, and justification for case closure.

1.1 Site Setting

The Site is located at 1001 San Pablo Avenue, Albany, California. It is an active ARCO-brand gasoline station (Station No. 2035) with a station building. Current structures at the Site include four 10,000-gallon underground storage tanks (USTs), two fuel dispenser islands with a total of four dispensers, and a station building. The majority of the Site is paved with asphalt and concrete. The location of the Site is presented in Drawing 1. A Site Plan depicting current well locations is provided as Drawing 2. A Groundwater Elevation Contour Map depicting the most current groundwater data (December 6, 2012) is provided as Drawing 3.

The Site is bounded by the four lane Marin Avenue to the north, the four lane San Pablo Avenue to the west, multi-family residential dwellings to the east, and a commercial building (Continental Auto Body & Paint Work) to the south. Across San Pablo Avenue, to the west, is a large vacant lot. Across Marin Avenue, to the north, is a Shell-branded service station. The Shell Station #13-5037 is an active leaking UST case, ACEH Fuel Leak Case No. RO0000121 / GeoTracker Global ID No. T0600101277.

1.2 Site Background

The Site has operated as a gasoline fueling station since the environmental case was open in 1989. The Site is likely to remain a service station for the foreseeable future. A detailed history of previous Site activities is presented in Appendix A. Historic soil and groundwater data are presented in Appendix B. Copies of available soil boring and monitoring well construction logs are provided in Appendix C.

1.3 Document Purpose and Organization

The purpose of this document is to summarize and present current Site conditions in the form of a CSM and evaluate these conditions and data gathered for Site closure based on the Low Threat UST Closure Policy. The following section presents justification for closure based on the CSM. The CSM is presented as Table 1. Tables 2 and 3 present historical and current groundwater analytical data. Table 4 summarizes historical and current groundwater gradient.

In order to evaluate Site condition against the Low Threat UST Closure Policy, each category in the policy has been individually evaluated using the data presented in the CSM presented in Table 1. These evaluations are presented in the following section.

2.0 JUSTIFICATION FOR SITE CLOSURE

As indicated in Section 1.3 above, the Site was evaluated for Closure based on comparing data presented in the CSM (Table 1) against the Low Threat UST Closure Policy (CSWRCB, 2012). Closure criteria in the Low Threat UST Closure Policy are organized into the following categories:

- General Criteria
- Media Specific Criteria-Groundwater
- Media Specific Criteria – Petroleum Vapor Intrusion to Indoor Air
- Media Specific Criteria – Direct Contact and Outdoor Air Exposure

The following sections present the details of the evaluation.

2.1 General Criteria

The general criteria relate to the Site use, presence of free product, sources, and completeness of the Site understanding. As evidenced in the data presented in the CSM, a sufficiently good understanding of Site conditions, on- and offsite receptors, and Site history has been established. These general criteria and a discussion on how the Site is consistent with these criteria are presented below.

The unauthorized release is located within the service area of a public water system
The Site is located within the East Bay Municipal Utilities District Service Area.

The unauthorized release consists only of petroleum
The release at the Site occurred in the area of the former UST farm, near the former waste oil tank, and near the northern dispensers. Additionally, all analytical data collected to date has shown no indication of any other contaminant releases other than petroleum (Tables 2, Table 3, and Appendix B). The Site has been a retail service station since 1989 and there is no evidence that any other activities have occurred at the Site which may have caused non-petroleum releases.

The unauthorized release has been stopped
The USTs and waste oil tank where the releases occurred have been removed, and the dispensers have been replaced; thereby, removing the leak sources (Table 1).

Free product has been removed to the maximum extent practicable
Approximately 2,500 gallons of impacted groundwater with floating product were removed from RW-1 during a step-drawdown test conducted on Site. In addition, free product has not been measured in Site wells since 1995. As free product has not been observed for some time now, removal of the free product has been completed to the maximum extent practicable.

A conceptual site model (CSM) that assesses the nature, extent, and mobility of the release has been developed
A CSM has been prepared for this Site and is presented as Table 1.

Secondary source has been removed to the extent practical
Soils around the former UST complex and former waste oil tank have been overexcavated. Approximately 350 cubic yards of petroleum impacted soil was removed and disposed of offsite in 1991. Furthermore, operation of the air sparge (AS) and soil vapor extraction (SVE) system performed

between 1993 and 2004 removed approximately 4,500 pounds of total hydrocarbons (total purgeable petroleum hydrocarbons as gasoline and benzene) from the Site.

Soil and groundwater have been tested for MTBE and results reported in accordance with Health and Safety Code 25296.15

Soil and groundwater samples collected have been analyzed for methyl tert-butyl ether (MTBE). Historical MTBE analytical data are included in Tables 2 and 3 and Appendix B.

Nuisance as defined by the Water Code section 13050 does not exist at this site

A nuisance as defined by the water code does not exist at this Site.

2.2 Media-Specific Criteria - Groundwater

The Low Threat UST Closure Policy lists four scenarios for groundwater plumes. According to the plume sizes indicated in Drawings 4 through 6, the plume is slightly over 100 feet in length; therefore, does not apply to the first scenario. For this reason, the Site hydrocarbon plume falls into the second scenario. In addition, as discussed in the CSM (Table 1), the plume size is defined to terminate in the center of Marin Avenue, based on current data showing higher petroleum hydrocarbon concentrations in onsite Shell Station wells. Historic soil and groundwater data for the adjacent Shell Station are presented in Appendix D. Current benzene and MTBE concentrations are well below the maximum levels for this scenario (3,000 ug/L and 1,000 ug/L, respectively). The Site has not contained free product since 1995. The nearest water supply well and the San Francisco Bay are over 2,000 feet away, as presented in the CSM table (Table 1). Additionally, maximum current benzene and MTBE concentrations are significantly lower than the maximum allowable concentrations for the second scenario, and all wells at the Site show a strong decreasing trend which indicates a shrinking plume. The concentration trend graphs for GRO and benzene are provided in Appendix E. The combination of these factors indicates a very low threat to surface water or nearby wells from the petroleum plume at the Site.

2.3 Media Specific Criteria – Petroleum Vapor Intrusion to Indoor Air

The Site is an active service station, and therefore the Low Threat UST Closure Policy considers that petroleum vapors from onsite fueling activities are a far greater risk than those associated with exposure to vapors from historic petroleum releases. Therefore, this Site meets this criteria for closure according to the Low Threat UST Closure Policy.

Historically, onsite receptors for the vapor intrusion pathway have been evaluated. Soil vapor samples from wells SG-1 through SG-5 were collected in 2010 and 2011. The results of both of these investigations indicated that very little to no petroleum compounds were present in soil vapor, and any concentrations were well below Tier 1 risked-based screening levels. Therefore, it was concluded that the vapor intrusion pathway was not complete. Furthermore, any potential offsite migration is travelling to San Pablo Avenue where vapor intrusion is not a concern. In addition, monitoring well MW-6 and Shell Station well S-9 have shown the plume does not extend beyond San Pablo Avenue.

2.4 Media Specific Criteria – Direct Contact and Outdoor Air Exposure

For the direct contact and outdoor air exposure, only relatively current soil data was considered. Based on historical data, there are two locations (borings B-4 and B-16) where benzene concentrations

exceeded the maximum concentrations for Commercial/Industrial or utility worker limits listed in Table 1 of the Low Threat UST Closure Policy. Soil analytical data from these locations is presented in Appendix B. However, since these samples were collected, the impacted soil has been treated by the operation of the AS/SVE system (Table 1). In addition, three soil borings were advanced at the Site in 2009, and soil samples were collected from locations near former source areas (Appendix B). Soil samples collected during the 2009 investigation showed a maximum detection of benzene at 1.8 mg/kg and of ethylbenzene at 4.3 mg/kg. Since these borings are more representative of current Site conditions, benzene and ethylbenzene concentrations do not exceed the concentration levels in Table 1 of the Low Threat Policy. Naphthalene has not been historically analyzed at the Site; however, based on the low concentrations of petroleum constituents in soil, it is not anticipated to be a significant risk on Site. Geologic Cross-Sections depicting soil lithology and select historic soil analytical data are included in Appendix F.

2.5 Recommendation for Case Closure

As presented above and in the attached CSM table (Table 1), this Site appears to meet all applicable criteria for case closure under the Low Threat Closure Policy. Over 20 years of groundwater monitoring data has shown that petroleum hydrocarbons exhibit a strong decreasing trend at the Site, and the plume is shrinking in size. The nearest surface water body is the San Francisco Bay, located approximately 3,500 ft cross gradient and downgradient of the Site. The extensive distance between the Site and the bay makes it a minimal possibility of the bay being a sensitive receptor. Adequate Site characterization both on- and offsite, evaluation of receptors, historical descriptions, and technical analysis have been performed at the Site and in this document to support a recommendation for case closure. We hereby recommend that a determination of No Further Action be made for this Site. Upon concurrence of this recommendation from the ACEH, closure activities including well decommissioning should be carried out.

3.0 REFERENCES

Closure Solutions, Inc., 28 October 2011. *Sensitive Receptor Survey, ARCO Station No. 2035, 1001 San Pablo Avenue, Albany, CA.*

Conestoga-Rovers & Associates, 27 November 2012. *Site Conceptual Model and Closure Request, 999 San Pablo Avenue, CA.*

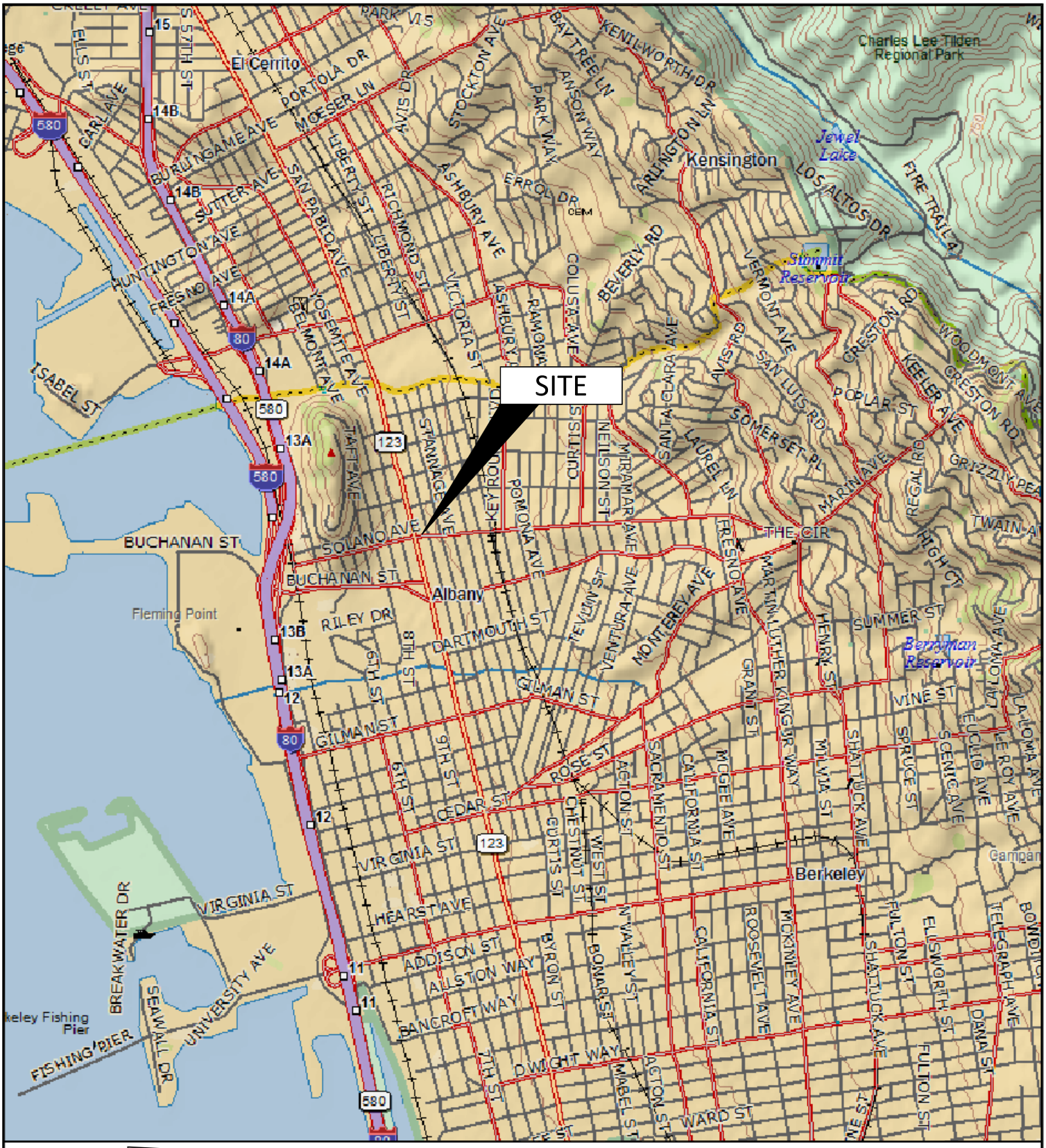
RESNA, 11 September 1991b. *Underground Gasoline-Storage Tank Removal and Replacement, ARCO Station #2035, 1001 San Pablo Avenue, CA.*

RESNA, 30 April 1993. *Additional On-Site and Initial Off-Site Subsurface Investigation, ARCO Station #2035, 1001 San Pablo Avenue, Albany, CA.*

State Water Resources Control Board, 2012. Low-Threat Underground Storage Tank Case Closure Policy, August 17.

APPENDIX A

Summary of Previous Site Activities

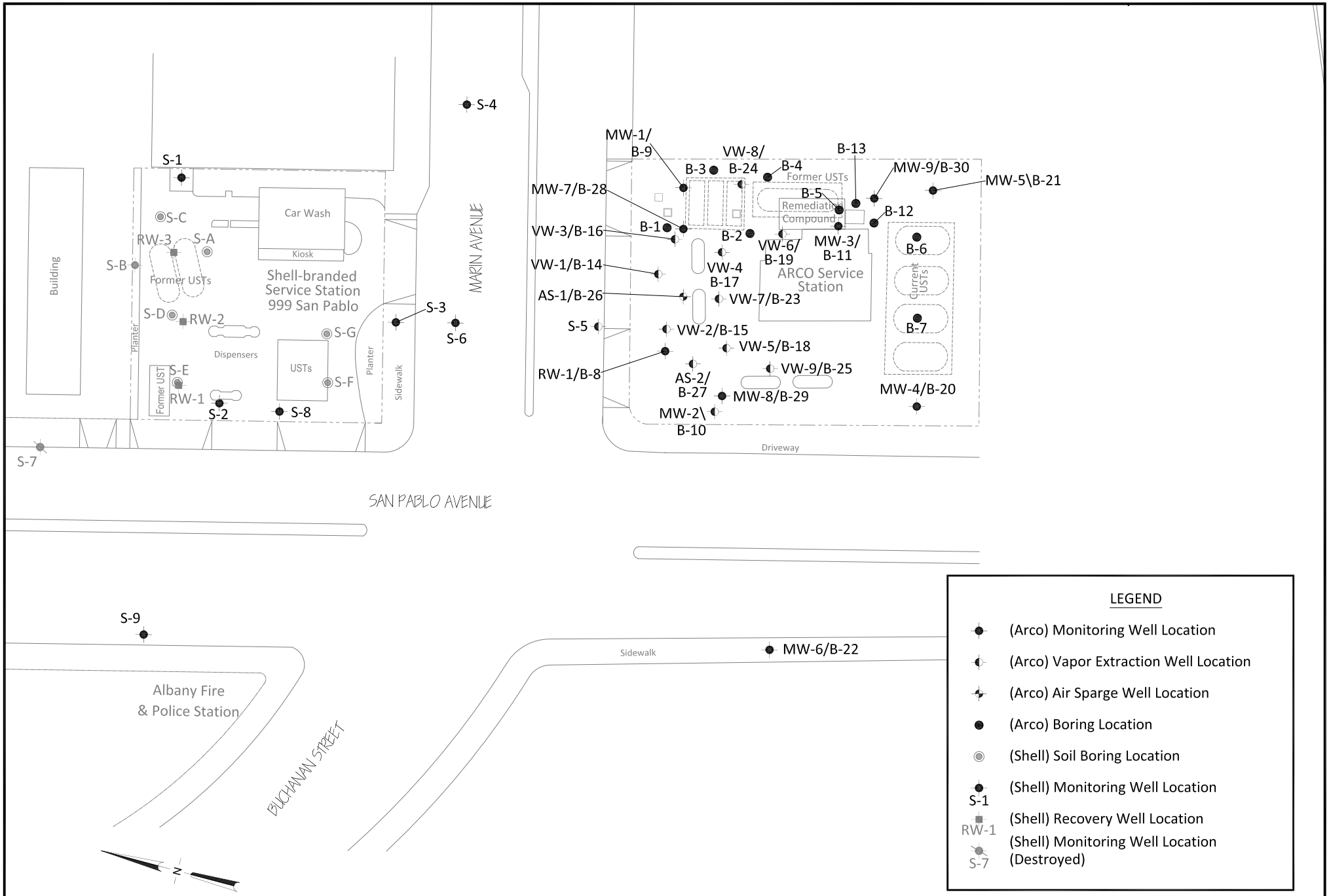


BROADBENT
1370 Ridgewood Dr., Suite 5
Chico, California 95973
Project No.: 06-88-610 Date: 4/9/2013

ARCO Service Station #2035
1001 San Pablo Avenue
Albany, California

Site Location Map

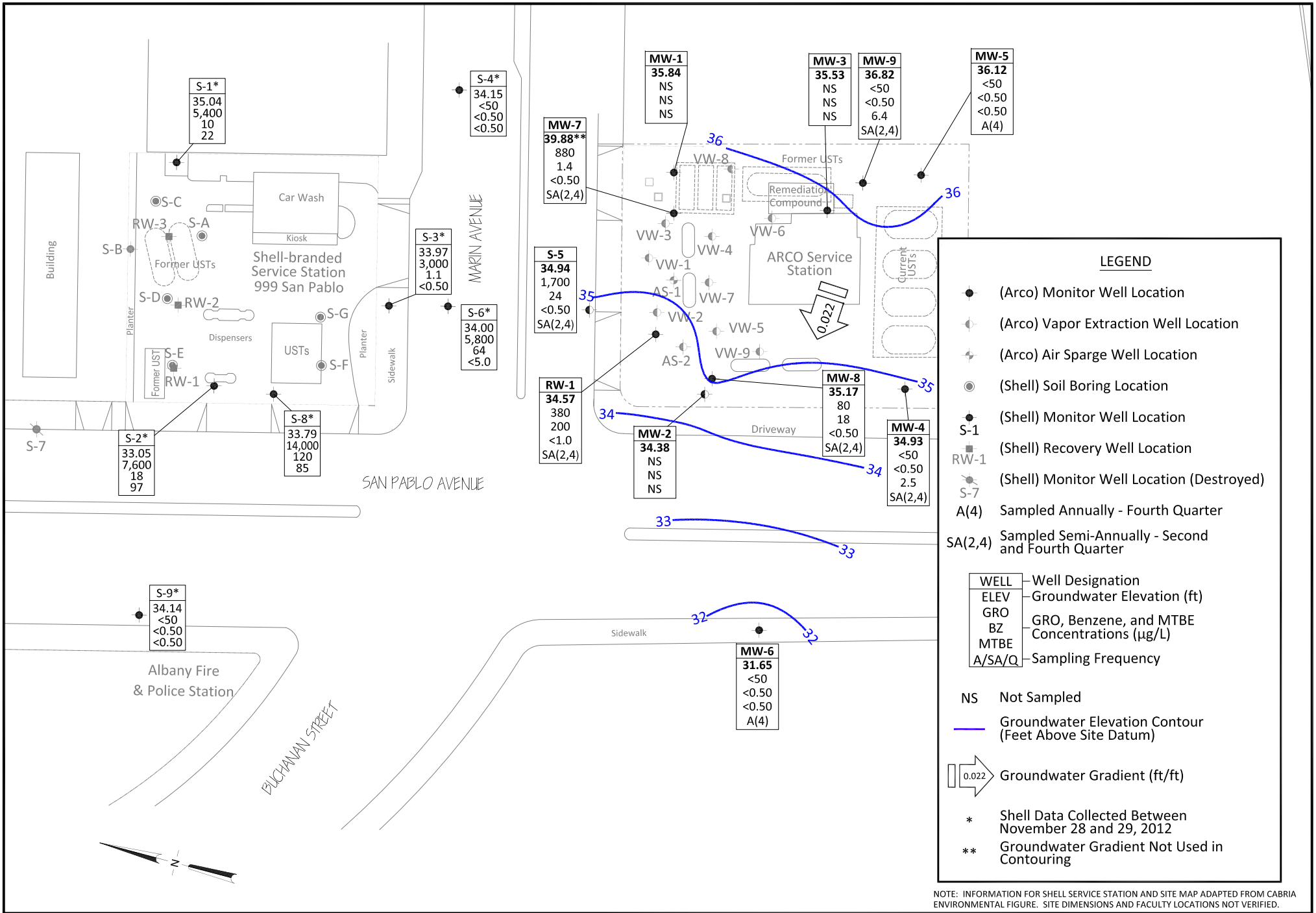
Drawing
1



NOTE: INFORMATION FOR SHELL SERVICE STATION AND SITE MAP ADAPTED FROM CABRIA ENVIRONMENTAL FIGURE. SITE DIMENSIONS AND FACULTY LOCATIONS NOT VERIFIED.

0 50 100 SCALE (ft)	BROADBENT 1370 Ridgewood Dr., Suite 5 Chico, California 95973 Project No.: 06-88-610 Date: 5/20/2013	ARCO Service Station #2035 1001 San Pablo Avenue Albany, California	Site Map with Monitoring Well, Historical Boring, and Soil Vapor Sampling Locations

Drawing
2



NOTE: INFORMATION FOR SHELL SERVICE STATION AND SITE MAP ADAPTED FROM CABRIA ENVIRONMENTAL FIGURE. SITE DIMENSIONS AND FACULTY LOCATIONS NOT VERIFIED.

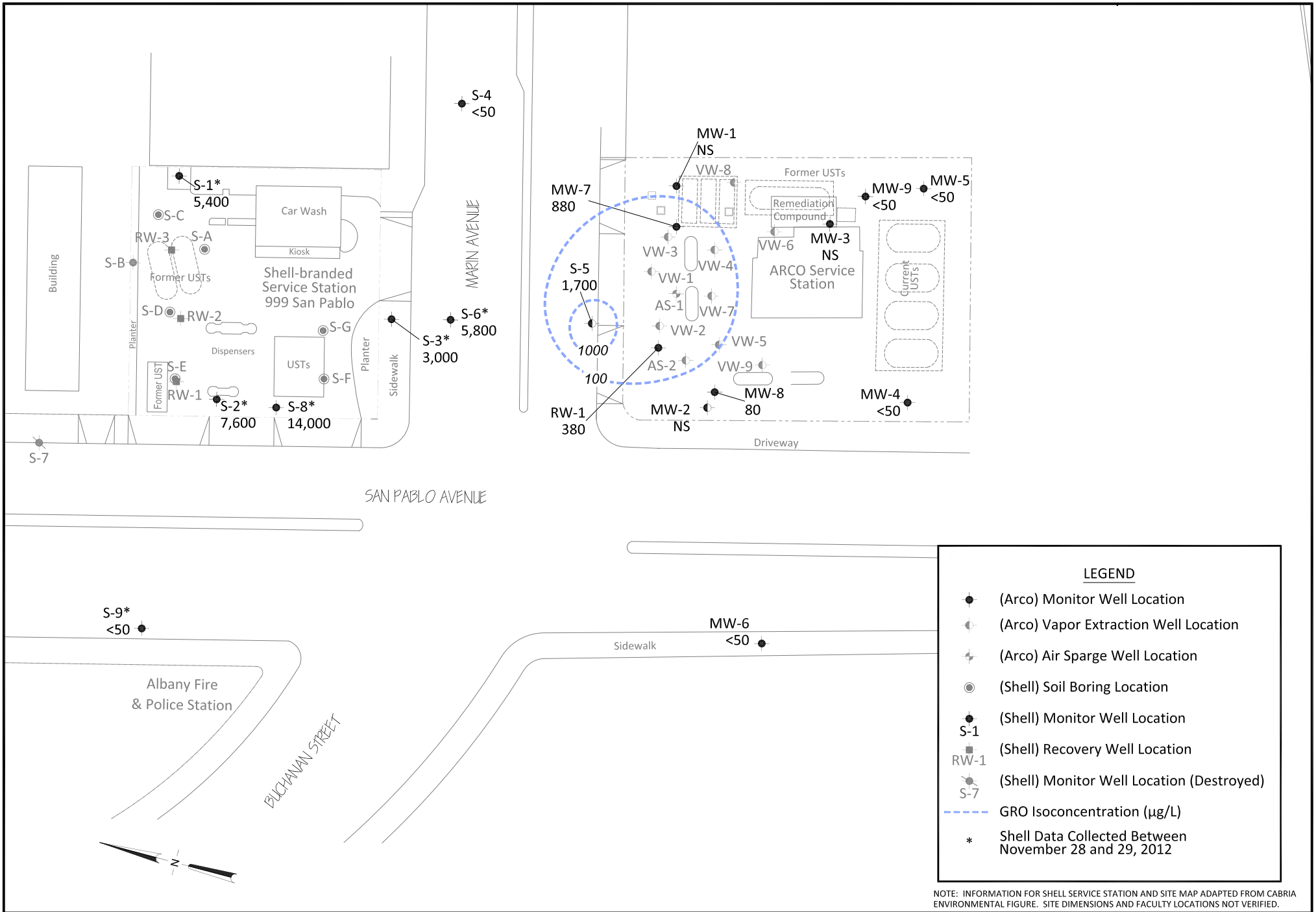
0 50 100
SCALE (ft)

BROADBENT
1370 Ridgewood Dr., Suite 5
Chico, California 95973
Project No.: 06-88-610 Date: 5/31/2013

ARCO Service Station #2035
1001 San Pablo Avenue
Albany, California

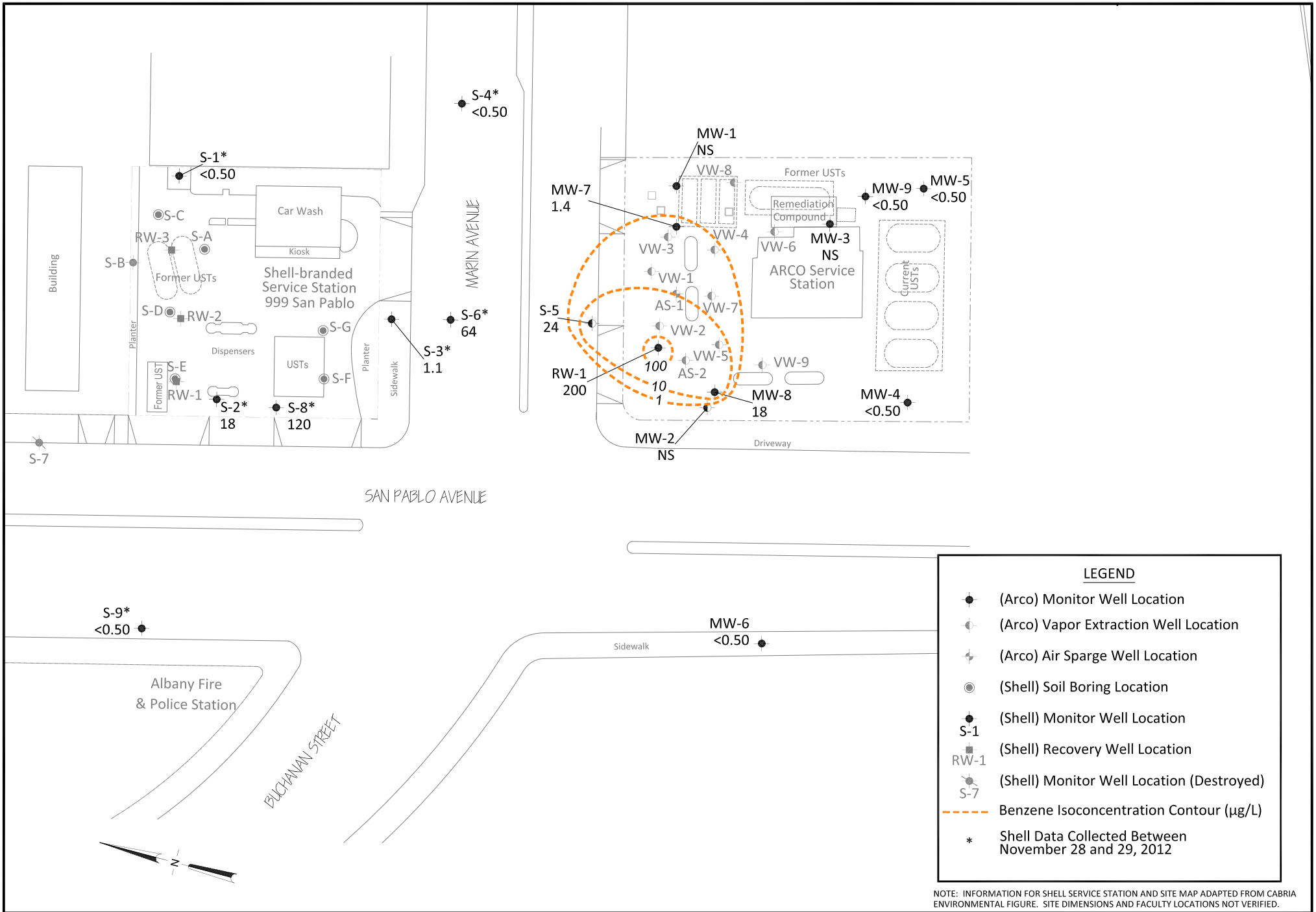
Groundwater Elevation Contour Map
December 6, 2012

Drawing
3



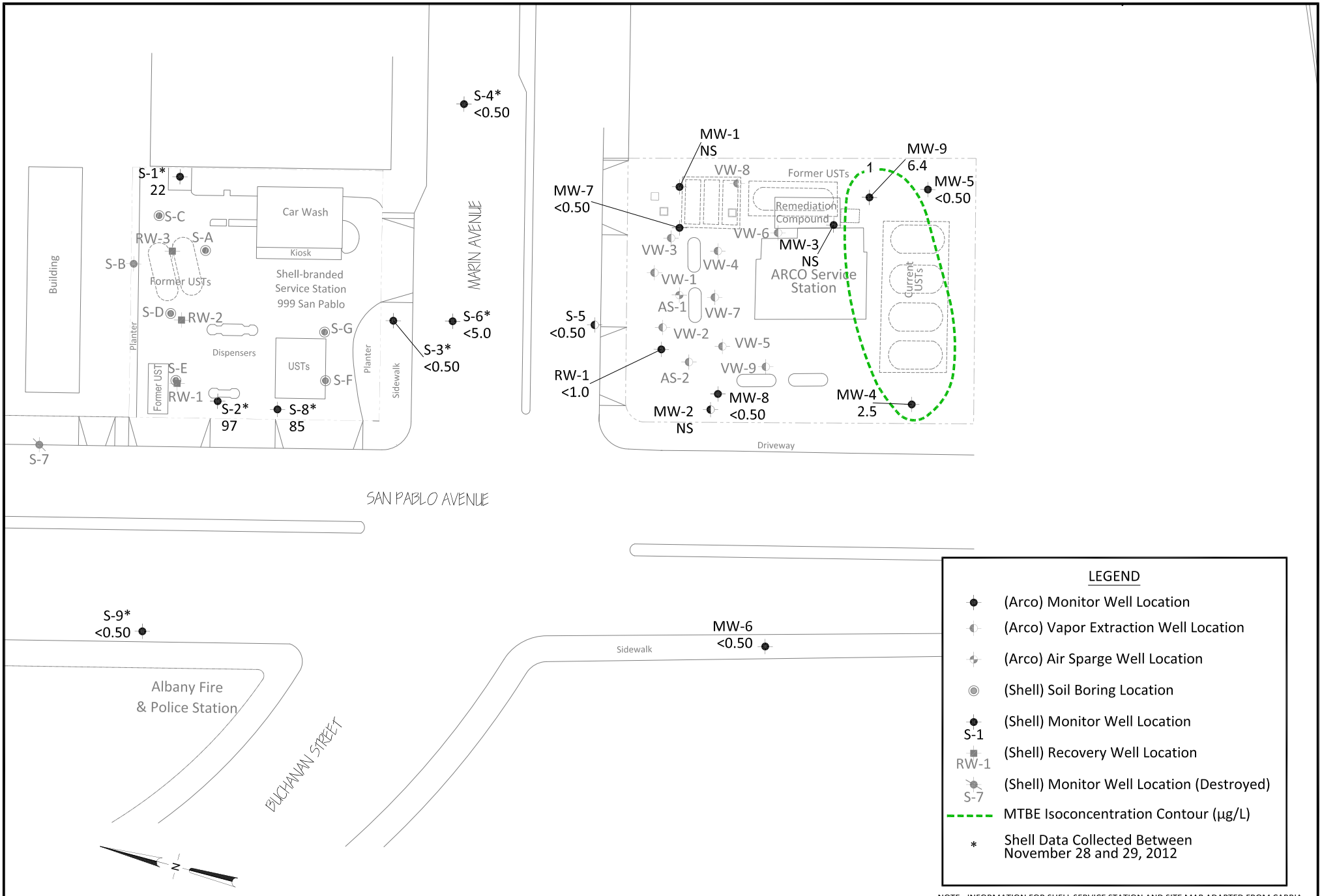
NOTE: INFORMATION FOR SHELL SERVICE STATION AND SITE MAP ADAPTED FROM CABRIA ENVIRONMENTAL FIGURE. SITE DIMENSIONS AND FACULTY LOCATIONS NOT VERIFIED.

0 50 100 SCALE (ft)	BROADBENT 1370 Ridgewood Dr., Suite 5 Chico, California 95973 Project No.: 06-88-610 Date: 6/4/2013	ARCO Service Station #2035 1001 San Pablo Avenue Albany, California	GRO Isoconcentration Contour Map December 6, 2012	Drawing 4



NOTE: INFORMATION FOR SHELL SERVICE STATION AND SITE MAP ADAPTED FROM CABRIA ENVIRONMENTAL FIGURE. SITE DIMENSIONS AND FACULTY LOCATIONS NOT VERIFIED.

0 50 100 SCALE (ft)	BROADBENT 1370 Ridgewood Dr., Suite 5 Chico, California 95973 Project No.: 06-88-610 Date: 6/4/2013	ARCO Service Station #2035 1001 San Pablo Avenue Albany, California	Benzene Isoconcentration Contour Map December 6, 2012	Drawing 5



NOTE: INFORMATION FOR SHELL SERVICE STATION AND SITE MAP ADAPTED FROM CABRIA ENVIRONMENTAL FIGURE. SITE DIMENSIONS AND FACULTY LOCATIONS NOT VERIFIED.

0 50 100
SCALE (ft)

BROADBENT
1370 Ridgewood Dr., Suite 5
Chico, California 95973
Project No.: 06-88-610 Date: 6/4/2013

ARCO Service Station #2035
1001 San Pablo Avenue
Albany, California

MTBE Isoconcentration Contour Map
December 6, 2012

Drawing
6

TABLE 1

CONCEPTUAL SITE MODEL
Atlantic Richfield Company Station 2035
1001 San Pablo Avenue
Albany, California

CSM Element	CSM Sub-Element	Description	Data Gap	How to Address
Site Use		The Site is currently an active ARCO-brand gasoline retail outlet located on the southeast corner of San Pablo and Marin Avenues in Albany, California. The land use in the immediate vicinity of the Site is mixed commercial and residential. The Site consists of a service station building, four gasoline USTs, two dispenser islands with two pump dispensers on each island, and associated piping. The Site is primarily covered with asphalt or concrete surfacing.	None	NA
Geology and Hydrogeology	Regional	The Site is located within the northwestern portion of the Berkeley Sub-Area of the San Francisco East Bay Plain Groundwater Basin. The Berkeley Sub-Area contains a series of alluvial fans deposited on a west sloping bedrock surface. The alluvial deposits range in thickness from 10 to 300 ft and average 200 ft. The Regional Water Board reports that there is no evidence that groundwater resources in the area are sufficient for municipal use. In the Berkeley Sub-Area, particularly in West Berkeley, first encountered groundwater is frequently reported as being semi-confined. Throughout most of the Alameda County portion of the East Bay Plain, from Hayward north to Albany, water level contours show that the general groundwater flow direction is from east to west. East Bay Plain cities do not have plans to develop local groundwater resources for drinking water purposes because of existing or potential saltwater intrusion, contamination, or poor or limited quantity. The SFRWQCB Basin Plan lists existing beneficial uses of Site groundwater as municipal and domestic supply, industrial process supply, industrial service supply, and agricultural supply.	None	NA
	Site	Sediments encountered during previous Site investigations consists of beds and lenses of varying thicknesses of sandy clay, clay, clayey and silty sand, and sandy clay with gravel near surface to approximately 19 ft bgs. The groundwater was first encountered in soil at an approximate depth ranging from 10 to 23 ft bgs. Historical depth to groundwater in Site wells have ranged from 3.30 to 20.61 ft bgs. Historical groundwater gradient has generally been to the west with average hydraulic gradient ranging from 0.007 to 0.08 ft/ft (Table 4 and Appendix B). According to the cross-sections presented in Appendix F lithology is consistent with the geologic environment of alluvial deposits, and consistent with the regional geologic environment.	None	NA

TABLE 1

CONCEPTUAL SITE MODEL
Atlantic Richfield Company Station 2035
1001 San Pablo Avenue
Albany, California

CSM Element	CSM Sub-Element	Description	Data Gap	How to Address
Surface Water Bodies		The nearest surface water body is the San Francisco Bay, located approximately 3,500 ft west-northwest of the Site. A seasonal creek is located about 200 ft south-southwest of the Site.	None	NA
Nearby Wells		In 1991, a Sensitive Receptor Survey was carried out to identify the presence of water wells within a half mile radius of the Site. Based on the review, 10 wells were found within a half mile radius from the Site: three cathodic protection wells, three monitoring wells, and four test wells. Two cathodic protection wells belong to Pacific Gas & Electric, and one belongs to Exxon Oil Company. The test and monitoring wells belong to Shell Oil Company. A second Sensitive Receptor Survey was carried out in October 2011 by Closure Solutions, Inc. Based on a review of well completion reports furnished by the Department of Water Resources, no municipal, domestic, or irrigation wells were identified within a half mile radius of the Site (Closure Solutions, 2011).	None	NA
Constituents of Concern	Light-Non Aqueous Phase Liquid (LNAPL)	LNAPL was first detected at the Site in well RW-1 on October 29, 1991. Historically, LNAPL has been detected in monitoring well RW-1 at a maximum thickness of 3.26 ft (January 19, 1992). A total of 2,500 gallons of groundwater and floating product were removed from well RW-1 during a step-drawdown test; however, the exact amount of LNAPL was not measured. Measurable LNAPL has not been observed in any groundwater monitoring well since August 22, 1995.	None	NA
	Gasoline Range Organics (GRO)	Historically, concentrations of GRO have been detected in monitoring wells MW-1, MW-3, MW-7, MW-8, and RW-1, located in the northern portion of the Site, with the exception of MW-3 which is located east of the station building. GRO concentrations have not been detected in offsite well MW-6. Concentrations of GRO in well MW-3 have been generally low (below 316 µg/L), with the exception of one detection at 18,000 µg/L on February 1, 2000. Since concentrations of GRO have been observed at low concentrations prior to and after the February 1, 2000 sampling event in well MW-3, it is assumed that the single high detection was an anomaly. Historical maximum detected concentration of GRO was reported in well RW-1 at 244,000 µg/L in May 4, 2001. Maximum detected concentration	None	NA

TABLE 1

CONCEPTUAL SITE MODEL
Atlantic Richfield Company Station 2035
1001 San Pablo Avenue
Albany, California

CSM Element	CSM Sub-Element	Description	Data Gap	How to Address
Constituents of Concern (continued)	(GRO) (continued)	within the last four monitoring events was reported in well RW-1 at 1,600 µg/L, indicating a strong decreasing GRO trend over time. Based on recent and historical data, the GRO plume has been delineated, except to the north where further delineation is not necessary due to the presence of the adjacent Shell Station. However, low concentrations of petroleum compounds in well S-5 compared to Shell Station wells S-6 and S-3 indicate the Shell Station plume is responsible for concentration in these wells; therefore, the extent of the GRO plume is considered to be the middle of Marin Avenue. A GRO isoconcentration contour map for the most recent groundwater monitoring and sampling event (4Q12) is presented as Drawing 4. GRO concentration trend graphs for wells RW-1 and S-5 are included in Appendix E. These graphs and data presented in Table 2 show a strong decreasing trend for GRO in all Site wells, indicating a shrinking plume.		
	Benzene	Historically, concentrations of benzene have been detected in monitoring wells MW-1, MW-2, MW-3, MW-7, MW-8, and RW-1, located in the northern portion of the Site, with the exception of MW-3 which is located east of the station building. Benzene concentrations have not been detected in offsite well MW-6. Concentrations of benzene in wells MW-2, MW-3, and MW-7 have been low (below 15.7 µg/L), with the exception of one detection in well MW-3 at 1,000 µg/L on February 1, 2000. Since concentrations of benzene have been observed at low levels prior to and after the February 1, 2000 sampling event in well MW-3, it is assumed that the single high detection was an anomaly. Historical maximum concentration of benzene was reported in well MW-8 at 9,900 µg/L in November 24, 2009. Maximum detected concentration within the last four monitoring events was reported in well MW-8 at 290 µg/L, indicating a strong decreasing benzene trend over time. Based on recent and historical data, the benzene plume has been delineated, except to the north where further delineation is not necessary due to the presence of the adjacent Shell Station. However, low concentrations of petroleum compounds in well S-5 compared to Shell Station wells S-6 and S-3 indicate the Shell Station plume is responsible for hydrocarbon concentration in these wells;	None	NA

TABLE 1

CONCEPTUAL SITE MODEL
Atlantic Richfield Company Station 2035
1001 San Pablo Avenue
Albany, California

CSM Element	CSM Sub-Element	Description	Data Gap	How to Address
Constituents of Concern (continued)	Benzene (continued)	therefore, the extent of the plume to the north is considered to be the middle of Marin Avenue. A benzene isoconcentration contour map for the most recent groundwater monitoring and sampling event (4Q12) is presented as Drawing 5. Benzene concentration trend graphs for wells RW-1 and S-5 are included in Appendix E. These graphs and data presented in Table 2 show a strong decreasing trend for benzene in all Site wells, indicating a shrinking plume.		
	Methyl tert-butyl ether (MTBE)	Historically, concentrations of MTBE have been detected in all monitoring wells (MW-1 through MW-6, MW-8, MW-9, and RW-1), except MW-7. Historical maximum concentration of MTBE was reported in well RW-1 at 26,200 µg/L in November 6, 2000. Detected concentrations of MTBE within the last four monitoring events have been reported at less than 10 µg/L, indicating a strong decreasing MTBE trend over time. In all monitoring wells, except monitoring well MW-9, current concentrations of MTBE did not exceed 5 µg/L, indicating that MTBE in groundwater has almost completely degraded. Based on recent and historical data, the MTBE plume has been delineated, except in well MW-9. An MTBE isoconcentration contour map for the most recent groundwater monitoring and sampling event (4Q12) is presented as Drawing 6. These graphs and the data presented in Table 2 show a strong decreasing trend for MTBE in all Site wells, indicating a shrinking plume.	None	NA
Potential Sources	Onsite	The exact release source and volume released at the Site is unknown; however, it is assumed that the source was the former UST and former waste oil tank complex located at the northeastern and western portion of the Site, respectively. These assumptions are supported by historical data including proximity to historical free product and higher dissolved-phase petroleum hydrocarbon concentrations. Additional areas of documented soil contamination occurred beneath product pipelines and dispensers, particularly the northern end of the Site. An unknown amount of residual petroleum hydrocarbon contamination is presently bound within the soil matrix in these areas, and dissolved in groundwater beneath and downgradient of the Site. A fluctuating groundwater table has likely caused a contaminant smear zone where the residual hydrocarbon mass remains. However, the	None	NA

TABLE 1

CONCEPTUAL SITE MODEL
Atlantic Richfield Company Station 2035
1001 San Pablo Avenue
Albany, California

CSM Element	CSM Sub-Element	Description	Data Gap	How to Address
Potential Sources (continued)	Onsite (continued)	trends for the residual petroleum compounds in groundwater indicate that the remaining concentrations in this smear zone have degraded over time and are impacting the groundwater beneath the Site to a far lesser degree than in the past, and will continue to degrade over time (Appendix E). The removal and replacement of the storage and dispensing system was conducted to stop the potential release. The initial UST removal and replacement activities were documented in the *Underground Gasoline Storage Tank Removal and Replacement, ARCO Service Station #2035* (RESNA, 1991).		
	Offsite	A Shell Service Station is located just north of the Site at 999 San Pablo Avenue, Albany, California. Petroleum hydrocarbons were detected in soil and groundwater samples collected during a Site investigation in 1990. The former USTs, five dispensers, and associated product piping were excavated and replaced in 1996. Groundwater monitoring activities have been conducted at the Shell Service Station since 1991. Fuel dispensers were replaced and additional soil was excavated in 2007. The Shell Service Station will be reviewed for potential closure upon completion of downgradient delineation. In the past, concentrations of petroleum compounds in wells between the Site and the Shell Service Station site have indicated that the two plumes connect along the northern portion of the Site. However, the Shell Service Station is likely the hydrocarbon source on Marin Avenue, based on current data showing higher petroleum hydrocarbon concentrations in onsite Shell Station wells. Thus, indicating the on Site hydrocarbon plume terminates in the middle of Marin Avenue and prior to the Shell Service Station site. Three additional open Cleanup Sites are located within 500 ft of the Site: City of Albany Fire Department located at 1001 Marin Avenue, Albany, California; former Exxon Service Station located at 990 San Pablo Avenue, Albany, California; and former Firestone Tires located at 969 San Pablo Avenue, Albany, California.	None	NA

TABLE 1

CONCEPTUAL SITE MODEL
Atlantic Richfield Company Station 2035
1001 San Pablo Avenue
Albany, California

CSM Element	CSM Sub-Element	Description	Data Gap	How to Address
Potential Sources (continued)	Offsite (continued)	The Albany Fire Department is located approximately 500 ft northwest (crossgradient) of the Site. In April 1998, the Albany Fire Department removed two USTs from site, one 1,000-gallon diesel UST and one 10,000-gallon gasoline UST. Trace petroleum hydrocarbons were found after the removal of the USTs; however, groundwater contained concentrations of petroleum hydrocarbons at levels of concern. The former Exxon Service Station is located approximately 450 ft north-northwest (crossgradient) of the Site. A Phase II environmental site assessment was performed in 2008 to assess the former gasoline station that was present in this site. Petroleum hydrocarbons were detected in groundwater and in soil. An additional investigation is scheduled to be performed to further delineate the extent of petroleum hydrocarbons. The former Firestone Tire site is located approximately 450 ft north (crossgradient) of the Site. In 1990, a waste oil UST was removed and over-excavated from the former Firestone Tires site. Five hydraulic lifts were identified in the shop area building during a Phase I investigation and removed at a later date. Quarterly groundwater monitoring occurred between April 1998 and September 2000 and confirmed VOCs were over MCLs in downgradient wells. Since September 2009, no further work had been conducted at this site. Since these sites are not upgradient of the Site, and are located 400 to 500 ft from the Site, and based on the historic and current groundwater gradient direction (to the west), the three sites are not likely a hydrocarbon source at the Site.		
Nature and Extent of Environmental Impacts	Extent in Soil	Soil contamination appears defined at the Site. A downgradient and offsite soil boring performed by RESNA in 1992 contained no concentrations of GRO or BTEX (RESNA, 1993). Based on historical data, the highest concentrations of GRO and benzene were detected at the northern portion of the Site, near the former UST complex and the former dispensers. The highest concentrations were consistently reported at approximately 5.5 to 10 ft bgs, which is consistent with the capillary fringe	None	NA

TABLE 1

CONCEPTUAL SITE MODEL
Atlantic Richfield Company Station 2035
1001 San Pablo Avenue
Albany, California

CSM Element	CSM Sub-Element	Description	Data Gap	How to Address
Nature and Extent of Environmental Impacts (continued)	Extent in Soil (continued)	zone at the Site. A remediation system was installed and operated on Site between 1993 and 2004. In 2009, additional soil borings were performed in the areas of historical high petroleum hydrocarbon concentrations to evaluate the effect of the remediation system. The highest GRO concentration (110 mg/kg) was detected near the former waste oil tank. Soil was defined laterally to non-detect for all petroleum compounds to the north (B-28), south (B-6 and B-7), southeast (B-13), and west (B-22), and to 3.1 mg/kg benzene to the north-east. Further definition to the north was not necessary due to the presence of an adjacent Shell station in that area. Since source areas have been removed and these concentrations were representative of overall groundwater concentrations at the time of sampling, it is likely that these concentrations have further attenuated over the last 20 years. In boring B-9 (MW-1), benzene concentrations in soil were 0.74 mg/kg in 1991, petroleum impact in groundwater have decreased by several orders of magnitude since that time. Based on data and observations from current groundwater conditions, soil at the Site appears to be adequately defined.		
	Extent in Shallow Groundwater	The groundwater monitoring network at the Site includes source area wells (RW-1, MW-1, MW-3, MW-7, and MW-8); upgradient wells (MW-5 and MW-9); crossgradient wells (MW-4 and Shell Service Station well S-5); and downgradient wells (MW-2 and MW-6). Isoconcentration maps for the most recent groundwater monitoring and sampling event (4Q12) for GRO, benzene, and MTBE are included as Drawings 4 through 6, respectively. Although wells MW-1, MW-2, and MW-3 have not been sampled since 2008, concentrations in nearby wells (MW-7, MW-9, and MW-8) have decreased significantly since that time (Appendix B). In addition, wells MW-1, MW-2, and MW-3 contained low to non-detect concentrations of petroleum compounds in 2008. Based on these drawings, the extent of petroleum compounds is well defined in all directions, and is predominately limited to onsite, with the exception of the northern end of the plume which is adjacent to the Shell Service where higher concentrations associated with a release at their site have been observed. The northern extent of the Site plume is defined as being between both the Site and the Shell Service station, located in the	None	NA

TABLE 1

CONCEPTUAL SITE MODEL
Atlantic Richfield Company Station 2035
1001 San Pablo Avenue
Albany, California

CSM Element	CSM Sub-Element	Description	Data Gap	How to Address
Nature and Extent of Environmental Impacts (continued)	Extent in Shallow Groundwater (continued)	center of Marin Avenue. Based on the observed decreasing trends, the extent of petroleum compounds is small and the plume appears to be shrinking (Appendix B). Additionally, free product has not been observed at the Site since 1995 and dissolved petroleum concentrations are decreasing. The data is adequate for understanding the CSM.		
	Extent in Deeper Groundwater	The extent of environmental impact in deeper groundwater has not been investigated at the Site. However, based on the lithology observed during environmental investigations performed on Site, the hydrocarbon plume is believed to be within the sand layer where it is encompassed by a layer of silty clay below (Appendix F). A review of the neighboring Shell Site indicated that vertical characterization has not been conducted at that site. Based on Site lithology, vertical characterization is not considered a data gap, even though no deeper groundwater samples have been collected.	None	NA
	Extent in Soil Vapor	A soil vapor assessment was performed on the northern portion of the Site, around the former UST complex and former dispensers. The locations of the soil vapor samples (VW-1 through VW-6 and SG-1 through SG-5) are indicated in Drawing 2. The samples were analyzed for petroleum compounds including GRO and BTEX. Additionally, soil vapor samples SG-1 through SG-5 were analyzed for MTBE, ETBE, DIPE, TAME, TBA, ethanol, oxygen and argon, carbon dioxide, and methane. Analytical results from samples VW-1 through VW-6 had maximum detections of GRO at 27,000 mg/m^3, benzene at 330 mg/m^3, toluene at 220 mg/m^3, and total xylenes at 36 mg/m^3. Analytical results from samples SG-1 through SG-5 had maximum detections of benzene at 0.0032 mg/m^3, toluene at 0.015 mg/m^3, ethanol at 0.039 mg/m^3, oxygen and argon at 21.8 %, and carbon dioxide at 6.65 %. Oxygen and carbon dioxide were detected in soil vapor samples, indicating the possible occurrence of petroleum biodegradation in soil. It is possible that higher petroleum impacts are present near the former source areas; however, much of the soil in these areas have been treated by the operation of a remediation system. Any residual petroleum compounds in soil vapor do not extend to offsite receptors, and are therefore adequately defined.	None	NA

TABLE 1

CONCEPTUAL SITE MODEL
Atlantic Richfield Company Station 2035
1001 San Pablo Avenue
Albany, California

CSM Element	CSM Sub-Element	Description	Data Gap	How to Address
Migration Pathways	Potential Conduits	In a Site Conceptual Model and Closure Request report prepared for the adjacent Shell site, by CRA, a review of the City of Albany engineering maps was performed by Cambria. Based on the review conducted in January 2000, a sanitary sewer and storm drain along the east side of San Pablo Avenue and the south side of Marin Avenue were identified (CRA, 2012). Groundwater could potentially be intercepted by the sewer and storm drain and cause groundwater to migrate within the utility trenches. However, current and historic groundwater monitoring data from down gradient well MW-6 (Table 2) and Shell Station well S-9 (Appendix D) have not contained any hydrocarbon concentrations since their installation, indicating migration through the utility trenches have not occurred. In addition, monitoring well MW-2, located down gradient of the Site and up gradient of the sewer and storm drain, has not contained any concentrations of hydrocarbon since its installation, with the exception of a few sporadic detections. Furthermore, the hydrocarbon plumes have significantly decreased over time and will continue to decrease on Site, thus alleviating signigicant concerns regarding migration of higher levels of contaminants through the utility trenches. Further delineation along San Pablo Avenue is not feasible due to heavy traffic activity along the street. In addition, groundwater monitoring and sampling of wells MW-2, MW-6, and Shell Station well S-9 have delineated the extent of hydrocarbon migration downgradient of the Site; therefore, addressing the potential migration pathway through the sewer and storm drain.	None	NA
Potential Receptors	Onsite	No onsite water supply wells or surface water bodies exists. The only potential onsite receptor would be onsite workers exposed to gasoline vapors. However, the exposure from current fueling operations represents a greater risk than any associated with potential groundwater or soil vapor exposure (CSWRCB, 2012).	None	NA

TABLE 1

CONCEPTUAL SITE MODEL
Atlantic Richfield Company Station 2035
1001 San Pablo Avenue
Albany, California

CSM Element	CSM Sub-Element	Description	Data Gap	How to Address
Potential Receptors (continued)	Offsite	As discussed above, the nearest surface water body is the San Francisco Bay, located approximately 3,500 ft cross gradient and downgradient of the Site. Results of two receptor surveys noted above indicate no domestic or municipal supply wells were identified within a half mile radius of the Site.	None	NA

Notes:
ACEH = Alameda County Environmental Health
ARCO = Atlantic Richfield Company
bgs = below ground surface
BTEX = benzene, toluene, ethylbenzene, xylenes
Cambria = Cambria Environmental Technology, Inc.
CRA = Conestoga-Rovers & Associates
CSM = Conceptual Site Model
CSWRCB = California State Water Resources Control Board
DIPE = Di-isoprpyl ether
ETBE = Ethyl tert-butyl ether
ft = foot
ft/ft = foot per foot
GRO = Gasoline Range Organics
LNAPL = Light-Non Aqueous Phase Liquid
MCL = Method Control Limit, as defined by the SFRWQCB in the Interim Final – November 2007
mg/kg = milligrams per kilogram
mg/m^3 = milligrams per cubic meter
MTBE = Methyl tert-butyl Ether
NA = Not Applicable
No. = Number
SFRWQCB = California Regional Water Quality Control Board – San Francisco Bay Region
TAME = Tert-amyl methyl ether
TBA = Tert-butyl alcohol
UST = Underground Storage Tank
VOC = Volatile Organic Compound
µg/L = micrograms per liter

All report references are included in Section 3 of the preceding report

Table 2. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses

ARCO Service Station #2035, 1001 San Pablo Ave., Albany, CA

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Product Thickness (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																
4/11/2002	P	41.41	15.00	30.00	10.73	0.00	30.68	800	360	<5.0	<5.0	<5.0	<50	--	--	
11/27/2002	P		15.00	30.00	10.22	0.00	31.19	<50	<0.50	<0.50	<0.50	<0.50	1.7	1.1	--	
6/3/2003	--		15.00	30.00	9.14	0.00	32.27	1,700	430	<5.0	24	11	8.6	1.7	--	
11/13/2003	P	43.55	15.00	30.00	10.17	0.00	33.38	<50	<0.50	<0.50	<0.50	<0.50	0.95	2.3	6.5	a
05/12/2004	P		15.00	30.00	9.28	0.00	34.27	120	7.2	<0.50	<0.50	<0.50	3.0	1.6	6.0	
12/01/2004	P		15.00	30.00	9.16	0.00	34.39	<50	0.94	<0.50	<0.50	1.1	2.4	5.2	6.6	
05/02/2005	P		15.00	30.00	8.58	0.00	34.97	1,300	390	<5.0	12	6.4	8.8	2.8	6.5	
11/16/2005	P		15.00	30.00	9.50	0.00	34.05	<50	<0.50	<0.50	<0.50	0.54	0.92	1.7	6.4	
5/31/2006	P		15.00	30.00	7.36	0.00	36.19	850	200	<2.5	5.4	<2.5	4.0	2.4	6.5	
12/6/2006	P		15.00	30.00	9.91	0.00	33.64	<50	0.52	<0.50	<0.50	<0.50	0.72	4.50	6.99	
5/15/2007	P		15.00	30.00	9.65	0.00	33.90	67	6.6	<0.50	<0.50	<0.50	1.8	2.43	6.96	
11/29/2007	P		15.00	30.00	9.11	0.00	34.44	<50	<0.50	<0.50	<0.50	<0.50	0.98	4.51	6.81	
5/6/2008	P		15.00	30.00	8.25	0.00	35.30	890	140	0.53	5.4	5.8	<0.50	1.89	6.61	
11/24/2008	P		15.00	30.00	10.55	0.00	33.00	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.83	6.67	
4/9/2009	--		15.00	30.00	9.02	0.00	34.53	--	--	--	--	--	--	--	--	d
11/24/2009	--		15.00	30.00	9.24	0.00	34.31	--	--	--	--	--	--	--	--	
5/26/2010	--		15.00	30.00	8.47	0.00	35.08	--	--	--	--	--	--	--	--	
11/30/2010	--		15.00	30.00	8.62	0.00	34.93	--	--	--	--	--	--	--	--	
2/16/2011	P		15.00	30.00	8.64	0.00	34.91	--	--	--	--	--	--	--	--	
5/11/2011	--		15.00	30.00	8.24	0.00	35.31	--	--	--	--	--	--	--	--	
11/28/2011	--		15.00	30.00	9.48	0.00	34.07	--	--	--	--	--	--	--	--	
6/5/2012	--		15.00	30.00	8.62	0.00	34.93	--	--	--	--	--	--	--	--	
12/6/2012	**--**		**15.00**	**30.00**	**7.71**	**0.00**	**35.84**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	
MW-2																
4/11/2002	P	40.38	20.00	29.00	11.05	0.00	29.33	<50	<0.50	<0.50	<0.50	<0.50	24	--	--	
11/27/2002	P		20.00	29.00	10.51	0.00	29.87	<50	<0.50	<0.50	<0.50	<0.50	5.4	2.6	--	
6/3/2003	--		20.00	29.00	9.78	0.00	30.60	<50	<0.50	<0.50	<0.50	<0.50	23	1.7	--	
11/13/2003	P	42.52	20.00	29.00	10.69	0.00	31.83	<50	<0.50	<0.50	<0.50	<0.50	9.5	2.3	6.5	a
05/12/2004	P		20.00	29.00	10.34	0.00	32.18	<250	<2.5	<2.5	<2.5	<2.5	27	2.2	6.6	
12/01/2004	P		20.00	29.00	10.28	0.00	32.24	<50	<0.50	<0.50	<0.50	0.70	17	3.9	6.6	

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								GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE			
MW-2 Cont.																
05/02/2005	P	42.52	20.00	29.00	9.50	0.00	33.02	<50	<0.50	<0.50	<0.50	<0.50	25	3.1	6.6	
11/16/2005	P		20.00	29.00	10.50	0.00	32.02	<50	<0.50	<0.50	<0.50	0.50	7.6	2.8	6.4	
5/31/2006	P		20.00	29.00	10.03	0.00	32.49	<50	<0.50	<0.50	<0.50	<0.50	24	2.0	6.6	
12/6/2006	P		20.00	29.00	10.28	0.00	32.24	<50	<0.50	<0.50	<0.50	<0.50	1.6	3.72	6.91	
5/15/2007	P		20.00	29.00	10.00	0.00	32.52	<50	<0.50	<0.50	<0.50	<0.50	44	2.90	6.69	
11/29/2007	P		20.00	29.00	10.13	0.00	32.39	<50	<0.50	<0.50	<0.50	<0.50	1.9	4.83	6.89	
5/6/2008	P		20.00	29.00	9.55	0.00	32.97	<50	<0.50	<0.50	<0.50	<0.50	35	1.88	6.62	
11/24/2008	P		20.00	29.00	10.70	0.00	31.82	<50	<0.50	<0.50	<0.50	<0.50	4.3	1.83	6.74	
4/9/2009	--	42.57	20.00	29.00	9.68	0.00	32.89	--	--	--	--	--	--	--	--	d
11/24/2009	--		20.00	29.00	10.48	0.00	32.09	--	--	--	--	--	--	--	--	
5/26/2010	--		20.00	29.00	9.65	0.00	32.92	--	--	--	--	--	--	--	--	
11/30/2010	--		20.00	29.00	9.84	0.00	32.73	--	--	--	--	--	--	--	--	
2/16/2011	P		20.00	29.00	9.39	0.00	33.18	--	--	--	--	--	--	--	--	
5/11/2011	--		20.00	29.00	9.68	0.00	32.89	--	--	--	--	--	--	--	--	
11/28/2011	--		20.00	29.00	10.12	0.00	32.45	--	--	--	--	--	--	--	--	
6/5/2012	--		20.00	29.00	10.20	0.00	32.37	--	--	--	--	--	--	--	--	
12/6/2012	**--**		**20.00**	**29.00**	**8.19**	**0.00**	**34.38**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	
MW-3																
4/11/2002	P	41.44	13.00	33.00	11.05	0.00	30.39	250	9.4	<0.50	<0.50	<0.50	120	--	--	
11/27/2002	P		13.00	33.00	10.49	0.00	30.95	<100	<1.0	<1.0	<1.0	2.5	56	2.2	--	
6/3/2003	--		13.00	33.00	9.44	0.00	32.00	130	<0.50	<0.50	<0.50	<0.50	47	4.1	--	
11/13/2003	P	43.62	13.00	33.00	10.68	0.00	32.94	53	<0.50	<0.50	<0.50	<0.50	36	3.8	6.8	a
05/12/2004	P		13.00	33.00	9.95	0.00	33.67	65	<0.50	<0.50	<0.50	<0.50	39	4.2	6.9	
12/01/2004	P		13.00	33.00	10.32	0.00	33.30	140	<0.50	<0.50	<0.50	<0.50	37	4.3	6.9	
05/02/2005	P		13.00	33.00	9.12	0.00	34.50	140	<0.50	<0.50	<0.50	<0.50	23	3.1	6.7	
11/16/2005	P		13.00	33.00	10.58	0.00	33.04	<50	<0.50	<0.50	<0.50	<0.50	32	4.1	6.5	
5/31/2006	P		13.00	33.00	9.41	0.00	34.21	<50	<0.50	<0.50	<0.50	<0.50	20	4.3	6.8	
12/6/2006	P		13.00	33.00	10.25	0.00	33.37	<50	<0.50	<0.50	<0.50	<0.50	20	2.71	7.00	
5/15/2007	P		13.00	33.00	9.70	0.00	33.92	<50	<0.50	<0.50	<0.50	<0.50	40	5.89	7.07	
11/29/2007	P		13.00	33.00	10.08	0.00	33.54	90	<0.50	<0.50	<0.50	<0.50	35	4.74	6.61	

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								GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE			
MW-3 Cont.																
5/6/2008	P	43.62	13.00	33.00	10.02	0.00	33.60	<50	<0.50	<0.50	<0.50	<0.50	14	2.05	6.61	
11/24/2008	P		13.00	33.00	10.80	0.00	32.82	<50	<1.0	<1.0	<1.0	<1.0	28	1.98	6.77	
4/9/2009	--	43.63	13.00	33.00	9.55	0.00	34.08	--	--	--	--	--	--	--	--	d
11/24/2009	--		13.00	33.00	10.29	0.00	33.34	--	--	--	--	--	--	--	--	
5/26/2010	--		13.00	33.00	9.76	0.00	33.87	--	--	--	--	--	--	--	--	
11/30/2010	--		13.00	33.00	10.15	0.00	33.48	--	--	--	--	--	--	--	--	
2/16/2011	P		13.00	33.00	9.22	0.00	34.41	--	--	--	--	--	--	--	--	
5/11/2011	--		13.00	33.00	9.55	0.00	34.08	--	--	--	--	--	--	--	--	
11/28/2011	--		13.00	33.00	10.06	0.00	33.57	--	--	--	--	--	--	--	--	
6/5/2012	--		13.00	33.00	9.92	0.00	33.71	--	--	--	--	--	--	--	--	
12/6/2012	**--**		**13.00**	**33.00**	**8.10**	**0.00**	**35.53**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	
MW-4																
4/11/2002	NP	40.33	9.00	26.00	10.81	0.00	29.52	<50	<0.50	<0.50	<0.50	<0.50	11	--	--	
11/27/2002	NP		9.00	26.00	10.09	0.00	30.24	<50	<0.50	<0.50	<0.50	<0.50	6.5	1.8	--	
6/3/2003	--		9.00	26.00	8.62	0.00	31.71	<250	<2.5	<2.5	<2.5	<2.5	120	1.1	--	
11/13/2003	NP	42.48	9.00	26.00	9.98	0.00	32.50	<50	<0.50	<0.50	<0.50	<0.50	20	1.3	6.2	a
05/12/2004	P		9.00	26.00	9.48	0.00	33.00	<250	<2.5	<2.5	<2.5	<2.5	79	2.9	6.6	
12/01/2004	NP		9.00	26.00	9.60	0.00	32.88	<50	<0.50	<0.50	<0.50	<0.50	1.8	1.9	6.7	
05/02/2005	NP		9.00	26.00	8.67	0.00	33.81	<50	<0.50	<0.50	<0.50	<0.50	11	2.8	6.6	
11/16/2005	NP		9.00	26.00	10.00	0.00	32.48	<50	<0.50	<0.50	<0.50	<0.50	0.93	1.7	6.3	
5/31/2006	NP		9.00	26.00	8.52	0.00	33.96	<50	<0.50	<0.50	<0.50	<0.50	2.4	1.0	7.0	
12/6/2006	NP		9.00	26.00	9.90	0.00	32.58	<50	<0.50	<0.50	<0.50	<0.50	7.8	0.85	7.10	
5/15/2007	NP		9.00	26.00	9.18	0.00	33.30	<50	<0.50	<0.50	<0.50	<0.50	2.2	1.37	6.85	
11/29/2007	NP		9.00	26.00	9.10	0.00	33.38	<50	<0.50	<0.50	<0.50	<0.50	9.1	1.81	7.14	
5/6/2008	P		9.00	26.00	9.40	0.00	33.08	<50	<0.50	<0.50	<0.50	<0.50	10	2.61	6.91	
11/24/2008	NP		9.00	26.00	10.20	0.00	32.28	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.67	6.88	
4/9/2009	P	42.51	9.00	26.00	9.00	0.00	33.51	<50	<0.50	<0.50	<0.50	<0.50	12	2.51	7.11	d
11/24/2009	P		9.00	26.00	9.89	0.00	32.62	<50	<0.50	<0.50	<0.50	<0.50	1.7	0.80	6.58	
5/26/2010	P		9.00	26.00	8.79	0.00	33.72	<50	<0.50	<0.50	<0.50	<0.50	1.4	0.98	6.0	
11/30/2010	P		9.00	26.00	9.31	0.00	33.20	--	--	--	--	--	--	1.40	6.4	f

Table 2. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses

ARCO Service Station #2035, 1001 San Pablo Ave., Albany, CA

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
								GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE			
MW-4 Cont.																
2/16/2011	P	42.51	9.00	26.00	8.50	0.00	34.01	<50	<0.50	<0.50	<0.50	<0.50	2.1	0.91	7.1	
5/11/2011	P		9.00	26.00	8.80	0.00	33.71	<50	<0.50	<0.50	<0.50	<0.50	0.75	1.43	6.8	
11/28/2011	P		9.00	26.00	9.53	0.00	32.98	<50	<0.50	0.61	<0.50	0.69	0.67	0.75	6.8	
6/5/2012	P		9.00	26.00	9.40	0.00	33.11	<50	<0.50	<0.50	<0.50	<0.50	1.2	1.66	6.67	
12/6/2012	**P**		**9.00**	**26.00**	**7.58**	**0.00**	**34.93**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**2.5**	**4.27**	**7.50**	
MW-5																
4/11/2002	NP	41.84	8.00	25.00	10.63	0.00	31.21	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	
11/27/2002	NP		8.00	25.00	10.65	0.00	31.19	--	--	--	--	--	--	--	--	
6/3/2003	--		8.00	25.00	8.92	0.00	32.92	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.8	--	
11/13/2003	NP	44.03	8.00	25.00	10.58	0.00	33.45	<50	<0.50	<0.50	<0.50	<0.50	0.79	1.4	5.7	a
05/12/2004	--		8.00	25.00	9.95	0.00	34.08	--	--	--	--	--	--	--	--	
12/01/2004	NP		8.00	25.00	10.05	0.00	33.98	<50	<0.50	<0.50	<0.50	<0.50	0.55	1.8	6.3	
05/02/2005	--		8.00	25.00	8.75	0.00	35.28	--	--	--	--	--	--	--	--	
11/16/2005	NP		8.00	25.00	10.37	0.00	33.66	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.3	6.2	
5/31/2006	--		8.00	25.00	9.07	0.00	34.96	--	--	--	--	--	--	--	--	
12/6/2006	NP		8.00	25.00	10.25	0.00	33.78	<50	<0.50	<0.50	<0.50	<0.50	0.99	1.24	6.88	
5/15/2007	--		8.00	25.00	9.51	0.00	34.52	--	--	--	--	--	--	--	--	
11/29/2007	NP		8.00	25.00	9.95	0.00	34.08	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.93	6.98	
5/6/2008	--		8.00	25.00	9.67	0.00	34.36	--	--	--	--	--	--	--	--	
11/24/2008	NP		8.00	25.00	10.62	0.00	33.41	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.43	6.52	
4/9/2009	--		8.00	25.00	12.00	0.00	32.03	--	--	--	--	--	--	--	--	d
11/24/2009	P		8.00	25.00	10.34	0.00	33.69	<50	<0.50	1.4	<0.50	<0.50	0.89	0.94	6.1	
5/26/2010	--		8.00	25.00	9.21	0.00	34.82	--	--	--	--	--	--	--	--	
11/30/2010	P		8.00	25.00	9.85	0.00	34.18	--	--	--	--	--	--	--	6.17	f
2/16/2011	P		8.00	25.00	9.01	0.00	35.02	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.23	6.9	
5/11/2011	--		8.00	25.00	9.44	0.00	34.59	--	--	--	--	--	--	--	--	
11/28/2011	P		8.00	25.00	10.06	0.00	33.97	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.10	6.5	
6/5/2012	--		8.00	25.00	9.88	0.00	34.15	--	--	--	--	--	--	--	--	
12/6/2012	**P**		**8.00**	**25.00**	**7.91**	**0.00**	**36.12**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**<0.50**	**4.44**	**7.26**	

Table 2. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses

ARCO Service Station #2035, 1001 San Pablo Ave., Albany, CA

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
								GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE			
MW-6																
4/11/2002	NP	40.13	8.00	25.00	11.42	0.00	28.71	<50	<0.50	<0.50	<0.50	<0.50	<5.0	--	--	
11/27/2002	NP		8.00	25.00	13.11	0.00	27.02	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.3	--	
6/3/2003	--		8.00	25.00	12.48	0.00	27.65	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.1	--	
11/13/2003	NP	42.26	8.00	25.00	13.11	0.00	29.15	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.2	6.8	a
05/12/2004	--		8.00	25.00	12.68	0.00	29.58	--	--	--	--	--	--	--	--	
12/01/2004	NP		8.00	25.00	12.68	0.00	29.58	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.7	7.3	
05/02/2005	--		8.00	25.00	12.25	0.00	30.01	--	--	--	--	--	--	--	--	
11/16/2005	NP		8.00	25.00	12.98	0.00	29.28	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.2	6.7	
5/31/2006	--		8.00	25.00	12.35	0.00	29.91	--	--	--	--	--	--	--	--	
12/6/2006	NP		8.00	25.00	12.98	0.00	29.28	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.24	6.86	
5/15/2007	--		8.00	25.00	12.55	0.00	29.71	--	--	--	--	--	--	--	--	
11/29/2007	NP		8.00	25.00	12.75	0.00	29.51	<50	<0.50	<0.50	<0.50	<0.50	<0.50	--	6.93	
5/6/2008	--		8.00	25.00	12.91	0.00	29.35	--	--	--	--	--	--	--	--	
11/24/2008	NP		8.00	25.00	13.20	0.00	29.06	<50	<0.50	<0.50	<0.50	<0.50	<0.50	2.28	7.25	
4/9/2009	--	42.31	8.00	25.00	12.52	0.00	29.79	--	--	--	--	--	--	--	--	d
11/24/2009	P		8.00	25.00	12.90	0.00	29.41	<50	<0.50	<0.50	<0.50	<0.50	<0.50	0.83	6.59	
5/26/2010	--		8.00	25.00	12.17	0.00	30.14	--	--	--	--	--	--	--	--	
11/30/2010	P		8.00	25.00	12.45	0.00	29.86	--	--	--	--	--	--	1.20	7.2	f
2/16/2011	P		8.00	25.00	11.95	0.00	30.36	<50	<0.50	<0.50	<0.50	<0.50	<0.50	1.02	6.9	
5/11/2011	--		8.00	25.00	12.35	0.00	29.96	--	--	--	--	--	--	--	--	
11/28/2011	P		8.00	25.00	12.62	0.00	29.69	<50	<0.50	0.74	<0.50	0.64	<0.50	0.91	7.2	
6/5/2012	--		8.00	25.00	12.60	0.00	29.71	--	--	--	--	--	--	--	--	
12/6/2012	**P**		**8.00**	**25.00**	**10.66**	**0.00**	**31.65**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**<0.50**	**3.33**	**7.85**	
MW-7																
4/9/2009	P	43.18	6.00	16.00	6.73	0.00	36.45	4,100	5.2	1.7	21	21	<0.50	8.41	7.79	d
11/24/2009	P		6.00	16.00	8.31	0.00	34.87	2,700	4.1	1.1	3.3	3.0	<0.50	0.60	6.8	c
5/26/2010	P		6.00	16.00	6.62	0.00	36.56	1,800	1.2	0.53	2.2	0.84	<0.50	0.71	6.6	
11/30/2010	P		6.00	16.00	6.84	0.00	36.34	--	--	--	--	--	--	0.79	6.7	f
2/16/2011	P		6.00	16.00	5.44	0.00	37.74	2,000	1.4	0.84	8.0	1.4	<0.50	0.56	7.0	g
5/11/2011	P		6.00	16.00	6.98	0.00	36.20	84	<0.50	<0.50	<0.50	<0.50	<0.50	1.76	7.1	lw

Table 2. Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses

ARCO Service Station #2035, 1001 San Pablo Ave., Albany, CA

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
								GRO/ TPHg	Benzene	Toluene	Ethyl-Benzene	Total Xylenes	MTBE			
MW-7 Cont.																
11/28/2011	P	43.18	6.00	16.00	7.13	0.00	36.05	850	0.55	1.3	<0.50	2.5	<0.50	0.38	7.3	lw
6/5/2012	P		6.00	16.00	7.65	0.00	35.53	1,300	0.97	0.59	0.95	0.64	<0.50	1.95	7.04	
12/6/2012	**P**		**6.00**	**16.00**	**3.30**	**0.00**	**39.88**	**880**	**1.4**	**0.57**	**1.4**	**<1.0**	**<0.50**	**4.90**	**7.78**	
MW-8																
4/9/2009	P	42.36	6.00	19.00	9.50	0.00	32.86	4,300	940	260	150	590	110	2.09	7.62	d
11/24/2009	P		6.00	19.00	10.25	0.00	32.11	28,000	9,900	670	1,300	2,200	<100	0.64	6.48	c
5/26/2010	P		6.00	19.00	9.25	0.00	33.11	1,400	420	<10	21	<10	<10	0.78	6.6	
11/30/2010	P		6.00	19.00	9.68	0.00	32.68	--	--	--	--	--	--	2.26	6.6	f
2/16/2011	P		6.00	19.00	8.95	0.00	33.41	960	270	<5.0	50	<5.0	<5.0	3.35	6.9	g
5/11/2011	P		6.00	19.00	9.43	0.00	32.93	1,200	290	<4.0	57	4.5	<4.0	0.94	7.2	lw
11/28/2011	P		6.00	19.00	9.85	0.00	32.51	<50	<0.50	0.59	<0.50	0.53	<0.50	3.64	7.2	
6/5/2012	P		6.00	19.00	9.72	0.00	32.64	890	170	1.9	92	16	2.1	1.31	6.99	
12/6/2012	**P**		**6.00**	**19.00**	**7.19**	**0.00**	**35.17**	**80**	**18**	**<0.50**	**6.8**	**1.2**	**<0.50**	**6.59**	**8.01**	
MW-9																
4/9/2009	P	43.77	6.00	16.00	8.95	0.00	34.82	<50	<0.50	<0.50	<0.50	<0.50	2.1	2.81	7.58	d
11/24/2009	P		6.00	16.00	10.11	0.00	33.66	<50	<0.50	<0.50	<0.50	<0.50	3.8	--	6.3	
5/26/2010	P		6.00	16.00	8.88	0.00	34.89	<50	<0.50	<0.50	<0.50	<0.50	1.9	0.66	5.7	
11/30/2010	P		6.00	16.00	9.56	0.00	34.21	--	--	--	--	--	--	0.64	6.3	f
2/16/2011	P		6.00	16.00	8.65	0.00	35.12	<50	<0.50	<0.50	<0.50	<0.50	3.8	0.55	6.6	
5/11/2011	P		6.00	16.00	9.06	0.00	34.71	<50	<0.50	<0.50	<0.50	<0.50	1.2	1.22	6.6	
11/28/2011	P		6.00	16.00	9.75	0.00	34.02	<50	<0.50	0.70	<0.50	0.72	9.1	0.50	6.8	
6/5/2012	P		6.00	16.00	9.57	0.00	34.20	<50	<0.50	<0.50	<0.50	<0.50	4.8	1.45	6.32	
12/6/2012	**P**		**6.00**	**16.00**	**6.95**	**0.00**	**36.82**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**6.4**	**2.25**	**7.23**	
RW-1																
4/11/2002	P	40.33	11.00	26.00	9.20	0.00	31.13	15,000	750	2,000	380	2,000	1,500	--	--	
11/27/2002	P		11.00	26.00	10.31	0.00	30.02	<2,500	720	<25	<25	<25	<25	1.8	--	
6/3/2003	--		11.00	26.00	9.54	0.00	30.79	470	78	0.97	4.3	9	48	1.4	--	
11/13/2003	P	42.35	11.00	26.00	10.35	0.00	32.00	130	29	<0.50	<0.50	<0.50	44	1.3	6.6	a
05/12/2004	P		11.00	26.00	9.80	0.00	32.55	<250	66	<2.5	<2.5	<2.5	<2.5	1.9	6.9	

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ARCO Service Station #2035, 1001 San Pablo Ave., Albany, CA

Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
								GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE			
RW-1 Cont.																
09/02/2004	--	42.35	11.00	26.00	10.42	0.00	31.93	--	--	--	--	--	--	--	--	
10/07/2004	--		11.00	26.00	10.36	0.00	31.99	--	--	--	--	--	--	--	--	
11/04/2004	--		11.00	26.00	9.93	0.00	32.42	--	--	--	--	--	--	--	--	
12/01/2004	P		11.00	26.00	10.02	0.00	32.33	<250	96	<2.5	<2.5	<2.5	16	1.8	6.7	
05/02/2005	P		11.00	26.00	9.20	0.00	33.15	230	100	<1.0	<1.0	<1.0	50	2.5	6.6	
11/16/2005	P		11.00	26.00	10.96	0.00	31.39	<100	28	<1.0	<1.0	<1.0	32	1.0	6.5	
5/31/2006	P		11.00	26.00	9.34	0.00	33.01	320	32	<0.50	<0.50	<0.50	28	1.3	6.8	
12/6/2006	P		11.00	26.00	10.10	0.00	32.25	50	27	<0.50	<0.50	<0.50	19	1.49	7.54	
5/15/2007	P		11.00	26.00	9.42	0.00	32.93	280	32	<0.50	<0.50	<0.50	18	2.61	7.10	
11/29/2007	P		11.00	26.00	9.75	0.00	32.60	<50	14	<0.50	<0.50	<0.50	18	4.86	8.14	
5/6/2008	P		11.00	26.00	9.71	0.00	32.64	610	110	<2.5	<2.5	<2.5	2.6	2.48	6.95	
11/24/2008	P		11.00	26.00	10.48	0.00	31.87	73	31	<0.50	<0.50	<0.50	11	2.53	6.88	
4/9/2009	P	42.23	11.00	26.00	9.46	0.00	32.77	720	36	<0.50	1.0	1.2	4.0	2.58	7.73	d
11/24/2009	P		11.00	26.00	10.15	0.00	32.08	<50	2.0	<0.50	<0.50	<0.50	6.5	0.85	6.6	
5/26/2010	P		11.00	26.00	9.12	0.00	33.11	90	11	<0.50	<0.50	<0.50	0.94	1.46	6.4	
11/30/2010	P		11.00	26.00	9.38	0.00	32.85	--	--	--	--	--	--	2.10	7.2	f
2/16/2011	P		11.00	26.00	9.15	0.00	33.08	1,600	370	2.9	2.6	2.9	1.3	0.76	7.0	
5/11/2011	P		11.00	26.00	9.56	0.00	32.67	1,600	79	<2.0	<2.0	2.0	<2.0	0.91	7.4	lw
11/28/2011	P		11.00	26.00	9.69	0.00	32.54	<50	<0.50	0.54	<0.50	<0.50	<0.50	3.05	7.3	
6/5/2012	P		11.00	26.00	9.63	0.00	32.60	1,000	49	1.3	<0.50	0.86	<0.50	1.43	6.75	
12/6/2012	**P**		**11.00**	**26.00**	**7.66**	**0.00**	**34.57**	**380**	**200**	**1.5**	**<1.0**	**<2.0**	**<1.0**	**1.52**	**7.34**	
S-5																
4/11/2002	P	40.33	6.00	16.00	10.17	0.00	30.16	30,000	390	1,400	410	7,400	<500	--	--	
11/27/2002	P		6.00	16.00	9.77	0.00	30.56	55,000	1,300	450	1,400	13,000	<50	4.3	--	
6/3/2003	--		6.00	16.00	9.03	0.00	31.30	44,000	680	260	1,100	9,900	<25	1.9	--	
6/3/2003	--		6.00	16.00	9.12	0.00	31.21	44,000	680	260	1,100	9,900	<25	1.9	--	
6/3/2003	--		6.00	16.00	9.03	0.00	31.30	--	--	--	--	--	<25	1.4	--	
6/3/2003	--		6.00	16.00	9.12	0.00	31.21	--	--	--	--	--	<25	1.4	--	
11/13/2003	P	41.83	6.00	16.00	9.12	0.00	32.71	31,000	520	120	690	5,900	<50	1.4	6.5	a
05/12/2004	P		6.00	16.00	9.95	0.00	31.88	28,000	760	79	910	5,000	<50	1.9	6.6	

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Well ID and Date Monitored	P/NP	TOC (feet)	Top of Screen (ft bgs)	Bottom of Screen (ft bgs)	DTW (feet)	Product Thickness (feet)	Water Level Elevation (feet)	Concentrations in µg/L						DO (mg/L)	pH	Footnote
								GRO/ TPHg	Benzene	Toluene	Ethyl- Benzene	Total Xylenes	MTBE			
S-5 Cont.																
12/01/2004	P	41.83	6.00	16.00	9.61	0.00	32.22	26,000	1,500	64	1,400	4,000	<25	--	6.5	b
05/02/2005	P		6.00	16.00	8.80	0.00	33.03	13,000	700	18	260	1,300	<5.0	1.8	6.4	
11/16/2005	P		6.00	16.00	9.80	0.00	32.03	15,000	1,400	25	570	850	<5.0	1.1	6.3	
5/31/2006	P		6.00	16.00	8.89	0.00	32.94	9,800	170	<5.0	490	390	<5.0	1.4	6.6	
12/6/2006	P		6.00	16.00	9.65	0.00	32.18	16,000	1,100	<25	1,700	970	<25	1.23	6.95	
5/15/2007	P		6.00	16.00	8.89	0.00	32.94	10,000	140	<5.0	340	310	<5.0	3.63	7.10	
11/29/2007	P		6.00	16.00	9.48	0.00	32.35	13,000	770	8.6	500	360	<2.5	5.42	7.28	c (Benzene)
5/6/2008	P		6.00	16.00	9.30	0.00	32.53	7,400	320	2.8	580	130	<0.50	3.37	6.88	
11/24/2008	P		6.00	16.00	10.00	0.00	31.83	7,700	400	<10	390	14	<10	3.22	6.43	
4/9/2009	P		6.00	16.00	8.90	0.00	32.93	7,700	230	<10	370	35	<10	3.14	7.77	
11/24/2009	--		6.00	16.00	--	--	--	--	--	--	--	--	--	--	--	e
5/26/2010	--		6.00	16.00	--	--	--	--	--	--	--	--	--	--	--	e
11/30/2010	P		6.00	16.00	8.92	0.00	32.91	--	--	--	--	--	--	0.62	6.6	f
2/16/2011	P		6.00	16.00	8.57	0.00	33.26	2,700	26	<0.50	11	3.2	<0.50	1.34	7.5	
5/11/2011	P		6.00	16.00	8.85	0.00	32.98	1,500	19	0.58	9.7	2.2	<0.50	0.72	6.8	lw
11/28/2011	--		6.00	16.00	--	--	--	--	--	--	--	--	--	--	--	e
6/5/2012	P		6.00	16.00	9.00	0.00	32.83	1,700	29	0.99	2.1	0.60	<0.50	1.44	6.68	
12/6/2012	**P**		**6.00**	**16.00**	**6.89**	**0.00**	**34.94**	**1,700**	**24**	**1.7**	**3.3**	**2.0**	**<0.50**	**2.95**	**7.51**	

Symbols & Abbreviations:
-- = Not analyzed/applicable/measured/available
< = Not detected at or above laboratory reporting limit
ft bgs = Feet below ground surface
BTEX = Benzene, toluene, ethylbenzene and xylenes
DO = Dissolved oxygen
DTW = Depth to water in ft bgs
GRO = Gasoline range organics, range C4-C12
GWE = Groundwater elevation measured in ft
mg/L = Milligrams per liter
MTBE = Methyl tert butyl ether
NP = Not purged before sampling
P = Purged before sampling
TOC = Top of casing measured in ft
TPH-g = Total petroleum hydrocarbons as gasoline, analyzed using EPA Method 8015, Modified
µg/L = Micrograms per liter
SEQ/SEQM = Sequoia Analytical/Sequoia Morgan Hill Laboratories

Footnotes:
a = Site resurveyed by URS on 10/15/03 to NAVD '88
b = Sheen in well
c = Sample taken from VOA vial with air bubble >6mm
d = Well surveyed on 4/20/09
e = Well not monitored or sampled due to traffic control safety concerns
f = Samples were collected on 11/30/2010 but not able to be analyzed (frozen). Subsequent re-sampling could not occur in 4Q 2010
g = Quantitation of unknown hydrocarbon(s) in sample based on gasoline
lw = Quantitated against gasoline

Notes:
No sampling occurs at this site during the first and third quarters of each calendar year

TPH-g analyzed using EPA Method 8015, Modified and BTEX and MTBE by EPA method 8260B

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 of non-TPH-g analytes within the requested fuel range resulting in a higher concentration being reported

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

Values for DO and pH were obtained through field measurements

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 #2035, 1001 San Pablo Ave., Albany, CA

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-1									
4/11/2002	--	--	<50	--	--	--	--	--	
11/27/2002	--	--	1.7	--	--	--	--	--	
6/3/2003	<1000	<200	8.6	<5.0	<5.0	<5.0	<5.0	<5.0	
11/13/2003	<100	<20	0.95	<0.50	<0.50	<0.50	--	--	
05/12/2004	<100	<20	3.0	<0.50	<0.50	<0.50	<0.50	<0.50	
12/01/2004	<100	<20	2.4	<0.50	<0.50	<0.50	<0.50	<0.50	
05/02/2005	<1,000	220	8.8	<5.0	<5.0	<5.0	<5.0	<5.0	
11/16/2005	<100	<20	0.92	<0.50	<0.50	<0.50	<0.50	<0.50	a
5/31/2006	<1,500	<100	4.0	<2.5	<2.5	<2.5	<2.5	<2.5	a
12/6/2006	<300	<20	0.72	<0.50	<0.50	<0.50	<0.50	<0.50	
5/15/2007	<300	<20	1.8	<0.50	<0.50	<0.50	<0.50	<0.50	
11/29/2007	<300	<20	0.98	<0.50	<0.50	<0.50	<0.50	<0.50	
5/6/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/24/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-2									
4/11/2002	--	--	24	--	--	--	--	--	
11/27/2002	--	--	5.4	--	--	--	--	--	
6/3/2003	<100	<20	23	<0.50	<0.50	<0.50	0.94	<0.50	
11/13/2003	<100	<20	9.5	<0.50	<0.50	<0.50	--	--	
05/12/2004	<500	<100	27	<2.5	<2.5	<2.5	<2.5	<2.5	
12/01/2004	<100	<20	17	<0.50	<0.50	<0.50	0.74	<0.50	
05/02/2005	<100	75	25	<0.50	<0.50	<0.50	<0.50	<0.50	
11/16/2005	<100	<20	7.6	<0.50	<0.50	<0.50	0.79	<0.50	a
5/31/2006	<300	<20	24	<0.50	<0.50	<0.50	0.66	<0.50	a
12/6/2006	<300	<20	1.6	<0.50	<0.50	<0.50	<0.50	<0.50	a
5/15/2007	<300	<20	44	<0.50	<0.50	<0.50	1.2	<0.50	
11/29/2007	<300	<20	1.9	<0.50	<0.50	<0.50	<0.50	<0.50	
5/6/2008	<300	<10	35	<0.50	<0.50	<0.50	0.93	<0.50	
11/24/2008	<300	<10	4.3	<0.50	<0.50	<0.50	<0.50	<0.50	
MW-3									

Table 3. Summary of Fuel Additives Analytical Data

ARCO Service Station #2035, 1001 San Pablo Ave., Albany, CA

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-3 Cont.									
4/11/2002	--	--	120	--	--	--	--	--	
11/27/2002	--	--	56	--	--	--	--	--	
6/3/2003	<100	<20	47	<0.50	<0.50	<0.50	<0.50	<0.50	
11/13/2003	<100	<20	36	<0.50	<0.50	<0.50	--	--	
05/12/2004	<100	<20	39	<0.50	<0.50	<0.50	<0.50	<0.50	
12/01/2004	<100	<20	37	<0.50	<0.50	<0.50	<0.50	<0.50	
05/02/2005	<100	<20	23	<0.50	<0.50	<0.50	<0.50	<0.50	
11/16/2005	<100	<20	32	<0.50	<0.50	<0.50	<0.50	<0.50	a
5/31/2006	<300	<20	20	<0.50	<0.50	<0.50	<0.50	<0.50	a
12/6/2006	<300	<20	20	<0.50	<0.50	<0.50	<0.50	<0.50	a
5/15/2007	<300	<20	40	<0.50	<0.50	<0.50	<0.50	<0.50	
11/29/2007	<300	<20	35	<0.50	<0.50	<0.50	<0.50	<0.50	
5/6/2008	<300	<10	14	<0.50	<0.50	<0.50	<0.50	<0.50	
11/24/2008	<600	<20	28	<1.0	<1.0	<1.0	<1.0	<1.0	
MW-4									
4/11/2002	--	--	11	--	--	--	--	--	
11/27/2002	--	--	6.5	--	--	--	--	--	
6/3/2003	<500	<100	120	<2.5	<2.5	<2.5	<2.5	<2.5	
11/13/2003	<100	<20	20	<0.50	<0.50	<0.50	--	--	
05/12/2004	<500	<100	79	<2.5	<2.5	<2.5	<2.5	<2.5	
12/01/2004	<100	<20	1.8	<0.50	<0.50	<0.50	<0.50	<0.50	
05/02/2005	<100	75	11	<0.50	<0.50	<0.50	<0.50	<0.50	
11/16/2005	<100	<20	0.93	<0.50	<0.50	<0.50	<0.50	<0.50	a
5/31/2006	<300	<20	2.4	<0.50	<0.50	<0.50	<0.50	<0.50	a
12/6/2006	<300	<20	7.8	<0.50	<0.50	<0.50	<0.50	<0.50	a
5/15/2007	<300	<20	2.2	<0.50	<0.50	<0.50	<0.50	<0.50	
11/29/2007	<300	<20	9.1	<0.50	<0.50	<0.50	<0.50	<0.50	
5/6/2008	<300	<10	10	<0.50	<0.50	<0.50	<0.50	<0.50	
11/24/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
4/9/2009	<300	<10	12	<0.50	<0.50	<0.50	<0.50	<0.50	
11/24/2009	<300	<10	1.7	<0.50	<0.50	<0.50	<0.50	<0.50	

Table 3. Summary of Fuel Additives Analytical Data

ARCO Service Station #2035, 1001 San Pablo Ave., Albany, CA

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-4 Cont.									
5/26/2010	<300	<10	1.4	<0.50	<0.50	<0.50	<0.50	<0.50	
2/16/2011	<300	<10	2.1	<0.50	<0.50	<0.50	<0.50	<0.50	
5/11/2011	<300	<10	0.75	<0.50	<0.50	<0.50	<0.50	<0.50	
11/28/2011	<300	<10	0.67	<0.50	<0.50	<0.50	<0.50	<0.50	
6/5/2012	<300	<10	1.2	<0.50	<0.50	<0.50	<0.50	<0.50	
12/6/2012	**<150**	**<10**	**2.5**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-5									
4/11/2002	--	--	<5.0	--	--	--	--	--	
6/3/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/13/2003	<100	<20	0.79	<0.50	<0.50	<0.50	--	--	
12/01/2004	<100	<20	0.55	<0.50	<0.50	<0.50	<0.50	<0.50	
11/16/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	a
12/6/2006	<300	<20	0.99	<0.50	<0.50	<0.50	<0.50	<0.50	a
11/29/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/24/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/24/2009	<300	<10	0.89	<0.50	<0.50	<0.50	<0.50	<0.50	
2/16/2011	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/28/2011	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
12/6/2012	**<150**	**<10**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-6									
4/11/2002	--	--	<5.0	--	--	--	--	--	
11/27/2002	--	--	<0.50	--	--	--	--	--	
6/3/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/13/2003	<100	<20	<0.50	<0.50	<0.50	<0.50	--	--	
12/01/2004	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/16/2005	<100	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	a
12/6/2006	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	a
11/29/2007	<300	<20	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/24/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/24/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	

Table 3. Summary of Fuel Additives Analytical Data

ARCO Service Station #2035, 1001 San Pablo Ave., Albany, CA

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
MW-6 Cont.									
2/16/2011	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/28/2011	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
12/6/2012	**<150**	**<10**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-7									
4/9/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/24/2009	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	b
5/26/2010	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
2/16/2011	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
5/11/2011	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/28/2011	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
6/5/2012	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
12/6/2012	**<150**	**<10**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-8									
4/9/2009	<300	330	110	5.5	<0.50	<0.50	34	<0.50	
11/24/2009	<60,000	<2,000	<100	<100	<100	<100	<100	<100	b
5/26/2010	<6,000	<200	<10	<10	<10	<10	<10	<10	
2/16/2011	<3,000	<100	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
5/11/2011	<2,400	<80	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0	
11/28/2011	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
6/5/2012	<300	38	2.1	<0.50	<0.50	<0.50	<0.50	<0.50	
12/6/2012	**<150**	**<10**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	
MW-9									
4/9/2009	<300	<10	2.1	<0.50	<0.50	<0.50	<0.50	<0.50	
11/24/2009	<300	<10	3.8	<0.50	<0.50	<0.50	<0.50	<0.50	
5/26/2010	<300	<10	1.9	<0.50	<0.50	<0.50	<0.50	<0.50	
2/16/2011	<300	<10	3.8	<0.50	<0.50	<0.50	<0.50	<0.50	
5/11/2011	<300	<10	1.2	<0.50	<0.50	<0.50	<0.50	<0.50	
11/28/2011	<300	<10	9.1	<0.50	<0.50	<0.50	<0.50	<0.50	
6/5/2012	<300	<10	4.8	<0.50	<0.50	<0.50	<0.50	<0.50	
12/6/2012	**<150**	**<10**	**6.4**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	

Table 3. Summary of Fuel Additives Analytical Data

ARCO Service Station #2035, 1001 San Pablo Ave., Albany, CA

Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
RW-1									
4/11/2002	--	--	1,500	--	--	--	--	--	
11/27/2002	--	--	<25	--	--	--	--	--	
6/3/2003	<100	22	48	<0.50	<0.50	<0.50	<0.50	<0.50	
11/13/2003	<100	<20	44	<0.50	<0.50	<0.50	--	--	
05/12/2004	<500	<100	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
12/01/2004	<500	<100	16	<2.5	<2.5	<2.5	<2.5	<2.5	
05/02/2005	<200	<40	50	<1.0	<1.0	<1.0	<1.0	<1.0	
11/16/2005	<200	<40	32	<1.0	<1.0	<1.0	<1.0	<1.0	a
5/31/2006	<300	<20	28	<0.50	<0.50	<0.50	<0.50	<0.50	a
12/6/2006	<300	<20	19	<0.50	<0.50	<0.50	<0.50	<0.50	a
5/15/2007	<300	<20	18	<0.50	<0.50	<0.50	<0.50	<0.50	
11/29/2007	<300	<20	18	<0.50	<0.50	<0.50	<0.50	<0.50	
5/6/2008	<1,500	<50	2.6	<2.5	<2.5	<2.5	<2.5	<2.5	
11/24/2008	<300	<10	11	<0.50	<0.50	<0.50	<0.50	<0.50	
4/9/2009	<300	<10	4.0	<0.50	<0.50	<0.50	<0.50	<0.50	
11/24/2009	<300	<10	6.5	<0.50	<0.50	<0.50	<0.50	<0.50	
5/26/2010	<300	<10	0.94	<0.50	<0.50	<0.50	<0.50	<0.50	
2/16/2011	<300	<10	1.3	<0.50	<0.50	<0.50	<0.50	<0.50	
5/11/2011	<1,200	<40	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	
11/28/2011	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
6/5/2012	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
12/6/2012	**<300**	**<20**	**<1.0**	**<1.0**	**<1.0**	**<1.0**	**<1.0**	**<1.0**	
S-5									
4/11/2002	--	--	<500	--	--	--	--	--	
11/27/2002	--	--	<50	--	--	--	--	--	
6/3/2003	<5,000	<1,000	<25	<25	<25	<25	<25	<25	
6/3/2003	<5,000	<1,000	<25	<25	<25	<25	<25	<25	
6/3/2003	<5,000	<1,000	<25	<25	<25	<25	<25	<25	
6/3/2003	<5,000	<1,000	<25	<25	<25	<25	<25	<25	
11/13/2003	<10,000	<2,000	<50	<50	<50	<50	--	--	
05/12/2004	<10,000	<2,000	<50	<50	<50	<50	<50	<50	

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Well ID and Date Monitored	Concentrations in µg/L								Footnote
	Ethanol	TBA	MTBE	DIPE	ETBE	TAME	1,2-DCA	EDB	
S-5 Cont.									
12/01/2004	<5,000	<1,000	<25	<25	<25	<25	<25	<25	
05/02/2005	<1,000	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
11/16/2005	<1,000	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	a
5/31/2006	<3,000	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	a
12/6/2006	<15,000	<1,000	<25	<25	<25	<25	<25	<25	a
5/15/2007	<3,000	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	
11/29/2007	<1,500	<100	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	
5/6/2008	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
11/24/2008	<6,000	<200	<10	<10	<10	<10	<10	<10	
4/9/2009	<6,000	<200	<10	<10	<10	<10	<10	<10	
2/16/2011	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
5/11/2011	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
6/5/2012	<300	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<0.50	
12/6/2012	**<150**	**<10**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	

Symbols & Abbreviations:
-- = Not analyzed/applicable/measured/available
< = Not detected at or above the 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

Footnote:
a = Calibration verification for ethanol was within method limits but outside contract limits
b = Sample taken from VOA vial with air bubble > 6mm diameter
c = LW Quantitated against gasoline

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

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 4. Historical Groundwater Gradient - Direction and Magnitude

ARCO Service Station #2035, 1001 San Pablo Ave., Albany, CA

Date Measured	Approximate Gradient Direction	Approximate Gradient Magnitude (ft/ft)
4/11/2002	Southwest	0.012
11/27/2002	West	0.021
6/3/2003	West	0.024
11/13/2003	West (offsite Northwest)	0.015
5/12/2004	West	0.020
12/1/2004	West	0.030
5/2/2005	West	0.02
11/16/2005	West	0.03
5/31/2006	West	0.04
12/6/2006	West	0.01
5/15/2007	West	0.02
11/29/2007	West	0.02
5/6/2008	West	0.007
11/24/2008	West	0.02
4/9/2009	West	0.02
11/24/2009	West	0.03
5/26/2010	West	0.02
11/30/2010	West-Southwest	0.02
2/16/2011	West	0.03
5/11/2011	West-Southwest	0.03
11/28/2011	West-Southwest	0.02
6/5/2012	West	0.02
12/6/2012	**West**	**0.02**

Notes:
Site resurveyed by URS on 10/15/03 by datum NAVD '88

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

APPENDIX A

Summary of Previous Site Activities

Previous Environmental Activities at Site

On August 9, 1989, Applied GeoSystems (AGS) performed an environmental investigation on Site. A total of five soil borings (B-1 through B-5) were advanced to a maximum depth of 20.5 feet (ft) below ground surface (bgs) near the vicinity of the existing gasoline USTs prior to their removal and replacement. During drilling activities, first groundwater was encountered at approximately 17 ft bgs. A total of 15 soil samples were collected during this field investigation and analyzed for total petroleum hydrocarbons (TPH) as gasoline (TPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX). Maximum detected concentrations include TPHg at 2,400 milligrams per kilogram (mg/kg), benzene at 33 mg/kg, toluene at 140 mg/kg, ethylbenzene at 40 mg/kg, and total xylenes at 220 mg/kg (AGS, 1990).

On June 27, 1991, RESNA Industries, Inc. (RESNA) oversaw the installation of two soil borings (B-6 and B-7) to depths of 18 and 19.5 ft bgs, respectively, in advance of the new UST installation. Groundwater was encountered at 17.5 ft bgs (B-6) and 19.5 ft bgs (B-7). A total of nine soil samples were collected and analyzed for TPHg and BTEX, none of which were detected in any sample (RESNA, 1991b).

In July 1991, RESNA oversaw the excavation and removal of four gasoline USTs, and accompanying product lines and dispensers, and oversaw excavation of a tank pit for four new 10,000 gallon gasoline-storage tanks. During removal activities, visible punctures were observed in the USTs. Soil in the vicinity of the former UST was excavated to approximately 12 ft bgs, and approximately 350 cubic yards of petroleum hydrocarbon impacted soil was removed. Native soil samples were collected at depths between 12 and 13 ft bgs, beneath the UST locations, and a total of 19 soil samples were collected from beneath the product lines and dispensers. Native soil samples beneath the former UST, former product lines, and dispensers were analyzed for TPHg and BTEX. One soil sample from beneath the southern end of the tanks (T4) was also analyzed for total oil and grease (TOG) and volatile organic compounds (VOCs). Maximum detected concentrations from the native soil samples beneath the former USTs included TPHg at 65 parts per million (ppm), benzene at 1.2 ppm, toluene at 2.4 ppm, ethylbenzene at 1.0 ppm, and total xylenes at 3.9 ppm. Maximum detected concentrations from beneath the former project lines and dispensers included TPHg at 4,200 ppm, benzene at 36 ppm, toluene at 320 ppm, ethylbenzene at 100 ppm, and total xylenes at 640 ppm. In the new UST pit location, approximately 450 cubic yards of soil was removed, analyzed, and the non-impacted soil was used to backfill the former UST excavation. Thirty seven soil samples along the excavated area of the new tank pit were collected and analyzed for TPHg and BTEX. Maximum detected concentrations from the new tank pit excavation included benzene at 0.025 ppm, toluene at 0.027 ppm, ethylbenzene at 0.014 ppm, and total xylenes at 0.056 ppm (RESNA, 1991b).

Between October 14 and 16, 1991, RESNA oversaw the advancement of four soil borings (B-8 through B-11), which were converted into groundwater monitoring wells RW-1, MW-1, MW-2, and MW-3, respectively. The monitoring wells were installed to further evaluate the presence and extent of gasoline hydrocarbons in soil and groundwater at the Site and to collect hydrologic data necessary for evaluation of aquifer characteristics. A total of 27 soil samples were collected at intervals of 5 feet or less from a total depth of approximately 34.5 feet, and analyzed for TPHg and BTEX. Since boring B-11 was advanced in the vicinity of the former waste oil tank, B-11 samples were also analyzed for cadmium (Cd), chromium (Cr), lead (Pb), nickel (Ni), zinc (Zn), VOCs, TPH as diesel (TPHd), and TOG. During drilling activities, first encountered groundwater was observed between 19 and 23.5 ft bgs. Well RW-1 was completed with a 6-inch diameter casing and screened between 11 and 26 ft bgs. Wells MW-1 through MW-3 were completed with a 4-inch diameter casing and screened across first encountered

groundwater (around 15 through 30 ft bgs). Based on the results from drilling activities, the majority of petroleum hydrocarbon impacted soil is estimated at depths between 10 and 15 ft bgs. Groundwater samples were analyzed for TPHg and BTEX. Monitoring well MW-3 (boring B-11) was also analyzed for Pb, Cd, Cr, Ni, Zn, VOCs, and TOG. Maximum detected concentrations in groundwater samples include TPHg at 620 parts per billion (ppb) and benzene at 76 ppb (RESNA, 1991a).

On November 7, 1991, RESNA conducted a step-drawdown test at well RW-1 to determine the optimum pumping rate for an aquifer test. After one hour, the pumping rate of 1 gallon per minute (gpm) had a drawdown of 2.7 feet, and a pumping rate of 2 gpm had a drawdown of 8.7 feet. A pumping rate of 1.7 gpm was selected for the long term constant discharge pumping test. An 18-hour pump test and 6-hour recovery test were then conducted between November 14 and 15, 1991. RW-1 was utilized as the pumping well and wells MW-1, MW-2, and MW-3 were used as observation wells. Based on the results of the pump test, a predicted zone of capture was determined to be large enough to capture the majority of the impacted groundwater and floating product at the Site. A total of 2,500 gallons were discharged and properly disposed of offsite by a licensed waste hauler during the pump test (RENSA, 1991a).

A well survey was conducted by RESNA in 1991, which identified 10 wells within a ½ mile radius from the Site: three cathodic protection wells, three monitoring wells, and four test wells. Two cathodic protection wells owned by Pacific Gas & Electric (PG&E) and one owned by Exxon Oil Company. The test and monitoring wells are owned by Shell Oil Company. RESNA also conducted a records research for the Site and found four facilities, which had the potential for being secondary sources, located within 1,500 feet of the Site: Shell service station located at 999 San Pablo Avenue, Albany, California; Nickson Auto Repair located at 1111 San Pablo Avenue, Albany, California; Foreign Auto Center located at 1197 San Pablo Avenue, Berkeley, California; and E.C. Buehrer and Associates, Inc. located on Eastshore Highway, Albany, California. All four sites had histories of known leaks or spills (RESNA, 1991a).

Between August 19 and 21, 1992, RESNA observed the advancement of eight soil borings (B-12 through B-19), six of which (B-14 through B-19) were converted into four-inch diameter soil vapor extraction wells VW-1 through VW-6, respectively. Borings B-12 and B-13, near the former waste oil tank, were advanced to an approximate depth of 21.5 ft bgs. Borings B-14 through B-19 advanced to approximate depths ranging between 15.5 and 18.5 ft bgs. First encountered groundwater ranged between 10 and 21 ft bgs in borings B-12, B-13, B-16, and B-19. Groundwater was not observed in any additional borings. A total of 24 soil samples were collected at approximately five foot intervals and analyzed for TPHg and BETX. Soil samples collected from B-12 and B-13 were also analyzed for TPHd, TOG, VOCs, semi-volatile organics (SVOCs), polychlorinated biphenyls (PCB), Cd, Cr, Ni, Zn, and Pb. The majority of hydrocarbon impacted soil is estimated between 5 and 15 ft bgs. Soil vapor samples were collected and analyzed for TPHg, BTEX, and VOCs. Maximum detected concentrations in soil vapor samples include TPHg at 27,000 milligrams per cubic meter (mg/m^3) and benzene at 330 mg/m^3 (RESNA, 1992).

On August 25, 1992, RESNA performed a soil vapor extraction (SVE) test to collect specific Site data and evaluate the feasibility of SVE as a soil remediation alternative. Based on the SVE test, it was determined that relatively large air flow rates could be extracted from the wells VW-1 through VW-6 at applied vacuum ranges from 30 to 100 inches water column. According to RESNA, the results obtained during this test indicated that SVE was a viable remediation technology based on observed flow rates, concentrations, and radius of influence (RESNA, 1992).

Between November 24 and 25, 1992, RESNA oversaw the advancement of two onsite (B-20 and B-21) and one offsite (B-22) soil borings. In the southern portion of the Site, borings B-20 and B-21 were converted into four-inch diameter casing groundwater monitoring wells MW-4 and MW-5, respectively. On the western side of San Pablo Avenue, boring B-22 was converted into a two-inch diameter casing groundwater monitoring well, MW-6. The soil borings and groundwater monitoring wells were installed to further investigate the presence and extent of gasoline hydrocarbons downgradient of the former USTs. A total of nine soil samples were collected at approximately five foot intervals and analyzed for TPHg and BTEX. No detections of TPHg and BTEX were reported above the laboratory detection limits (RESNA, 1993).

Between June 14 and 16, 1993, RESNA oversaw the advancement of five soil borings (B-23 through B-27). Borings B-23, B-24, and B-25 were converted into four-inch diameter casing SVE wells (VW-7, VW-8, and VW-9, respectively), and borings B-26 and B-27 were converted into dual nested air sparge (AS) and SVE wells (AS-1 and AS-2, respectively). A total of 17 soil samples were collected at approximately five foot intervals and analyzed for TPHg and BTEX. Maximum detected concentrations included TPHg at 1,600 ppm and benzene at 8.8 ppm (RESNA 1994).

Between August 25 and 26, 1993, RESNA performed an AS/SVE pilot test at the Site to evaluate the feasibility of utilizing air sparging to remove gasoline hydrocarbons from groundwater beneath the Site. Well AS-1 was used as the injection point, well AS-2 was used as the vapor extraction point, and wells RW-1, MW-1, and MW-2 were used as monitoring points. Based on the evaluation of the pilot test, an injection pressure of 24 (psi) was necessary to achieve an injection flowrate of 2.5 (acfm), and bubble propagation was observed from AS-1 to RW-1, a distance of 22 feet, after sparging was initiated. It was determined that AS/SVE would be a practical remedial strategy for the Site. Groundwater samples were collected pre- and post-sparging activities from wells AS-1, AS-2, and MW-2, and analyzed for TPHg, benzene, and dissolved oxygen (DO). Results of the AS/SVE pilot test indicated AS/SVE would be a viable remediation alternative at the Site (RESNA 1994).

In November 1993, construction of a remediation system onsite was completed. The system included both a groundwater extraction system (GWE) and AS/SVE system. A total of 12 wells were used for the operation of remediation system: nine SVE wells (VW-1 through VW-9), one groundwater extraction well (RW-1), and two AS/SVE wells (AS-1 and AS-2). In December 1993, initial startup of the AS/SVE system took place. According to historic reports, the GWE system was never operated onsite. The AS/SVE system operated intermittently through February 2004, at which time it was shut down due to minimal influent concentrations. Approximately 3,967 pounds of TPHg and 528 pounds of benzene were removed by the AS/SVE system during operation.

Between March 25 and 26, 2009, Stratus oversaw the advancement of three soil borings (B-28, B-29, and B-30), which were converted into three four-inch diameter casing monitoring wells (MW-7, MW-8, and MW-9), respectively, for the purpose of evaluating the remedial effectiveness of the AS/SVE system which operated between 1993 and 2004. Wells MW-7 and MW-9 were screened between 6 and 16 ft bgs, and wells MW-8 was screened between 6 and 19 ft bgs. A total of 12 samples were collected and analyzed for gasoline range organics (GRO), BTEX, methyl tert-butyl ether (MTBE), ethyl tert-butyl ether (ETBE), tert-amyl methyl ether (TAME), di-isopropyl ether (DIPE), tert-butyl alcohol (TBA), 1,2-dichloroethane (1,2-DCA), and 1,2-dibromoethane (EDB). Based on analytical data from collected soil and groundwater samples, remediation activities were deemed successful. Broadbent & Associates, Inc. (Broadbent) recommended the AS/SVE system be shut down permanently and that monitored natural attenuation be continued at the Site (Broadbent, 2009).

In March and May 2010, Broadbent oversaw the installation of five soil vapor sampling wells (SG-1 through SG-5). A six-inch soil vapor probe was set between 3 and 3.5 ft bgs. Soil vapor samples were collected on April 16, 2010, and analyzed for GRO, BTEX, MTBE, ethanol, TBA, DIPE, ETBE, TAME, oxygen and argon, carbon dioxide, and methane. The maximum detected soil vapor concentrations during both sampling events did not exceed the Environmental Screening Level (ESL) for shallow soil gas in residential land use and commercial or industrial land use, with the exception of a duplicate sample from SG-4 collected during the second sampling event (Broadbent, 2010).

On March 31, 2011, Broadbent conducted additional soil vapor samples from wells SG-1, SG-2, and SG-5, and analyzed the samples for GRO, BTEX, MTBE, TBA, DIPE, ETBE, TAME, ethanol, oxygen and argon, carbon dioxide, methane, and helium. The maximum detected soil vapor concentrations did not exceed the ESL for shallow soil gas in residential land use and commercial or industrial land use. Based on the analytical data for soil vapor samples collected from this and previous events, vapor intrusion to indoor air was not a health risk (Broadbent, 2011).

Groundwater monitoring and sampling began on October 1991. The groundwater elevation on Site has ranged between 19.72 (RW-1, November 9, 1995) and 39.88 (MW-7, December 6, 2012) ft above mean sea level. Approximate groundwater gradient at the Site has generally been calculated to the west. Historically, light non-aqueous phase liquid (LNAPL) has been detected in monitoring well RW-1 at a maximum thickness of 3.26 ft (January 19, 1992); however, LNAPL has not been observed in any groundwater monitoring well since August 22, 1995. Petroleum hydrocarbons have generally been detected in wells MW-1, MW-7, MW-8, RW-1, and S-5, which are located on the northern side of the Site. Historical maximum detected groundwater concentrations include TPHg at 310,000 micrograms per liter (µg/L) (S-5), benzene at 9,900 µg/L (MW-8), toluene at 56,000 µg/L (RW-1), ethylbenzene at 5,660 µg/L (RW-1), total xylenes 36,200 µg/L (RW-1), MTBE at 26,000 µg/L (RW-1), TBA at 330 µg/L (MW-8), DIPE at 5.5 µg/L (MW-8), and 1,2-DCA at 34 µg/L (MW-8). Based on recent monitoring and sampling events, petroleum hydrocarbons in wells MW-1, MW-7, MW-8, RW-1, and S-5 have significantly declined since their initial sampling. Monitoring wells MW-1 through MW-6 and MW-9 have not had detections of TPHg and BTEX since November 2008 and/or since their installation, with the exception of minor detections of toluene and/or total xylenes (Broadbent, 2013).

References

Applied GeoSystems, 24 January 1990. *Report Limited Environmental Site Assessment, ARCO Station #2035, 1001 San Pablo Avenue, CA.*

RESNA, 6 March 1991a. *Subsurface Environmental Investigation and Pump Test, ARCO Station #2035, 1001 San Pablo Avenue, Albany, CA.*

RESNA, 11 September 1991b. *Underground Gasoline-Storage Tank Removal and Replacement, ARCO Station #2035, 1001 San Pablo Avenue, CA.*

RESNA, 30 November 1992. *Additional Subsurface Environmental Investigation and Vapor Extraction Test, ARCO Station #2035, 1001 San Pablo Avenue, Albany, CA.*

RESNA, 30 April 1993. *Additional On-Site and Initial Off-Site Subsurface Investigation, ARCO Station #2035, 1001 San Pablo Avenue, Albany, CA.*

RESNA, 13 April 1994. *Report of Findings Air Sparge Pilot Test, ARCO Station #2035, 1001 San Pablo Avenue, Albany, CA.*

Broadbent & Associates, Inc., 20 May 2009. *Soil & Ground-Water Investigation Report, ARCO Station #2035, 1001 San Pablo Avenue, Albany, CA.*

Broadbent & Associates, Inc., 30 July 2010. *Vapor Intrusion Assessment Report, ARCO Station #2035, 1001 San Pablo Avenue, Albany, CA.*

Broadbent & Associates, Inc., 13 June 2011. *Vapor Intrusion Assessment Report, ARCO Station #2035, 1001 San Pablo Avenue, Albany, CA.*

Broadbent & Associates, Inc., 31 January 2013. *Fourth Quarter 2012 Monitoring Report, ARCO Station #2035, 1001 San Pablo Avenue, Albany, CA.*

APPENDIX B

Historic Site Data

5.0 RESULTS OF INVESTIGATION

Soil samples were shipped to Calscience Environmental Laboratories, Inc. (Garden Grove), a California State-certified laboratory, under chain-of-custody protocol. Samples were analyzed for Gasoline Range Organics (GRO, hydrocarbon chain lengths between C6-C12) by EPA Method 8015B; and for Benzene, Toluene, Ethylbenzene, and Total Xylenes (BTEX), Methyl Tert-Butyl Ether (MTBE), Ethyl Tert-Butyl Ether (ETBE), Tert-Amyl Methyl Ether (TAME), Di-Isopropyl Ether (DIPE), Tert-Butyl Alcohol (TBA), 1,2-Dichloroethane (1,2-DCA), and 1,2-Dibromoethane (EDB) using EPA Method 8260B. During the GRO analyses, the laboratory noted an unknown hydrocarbon(s) in samples MW-9 8', MW-9 9', and MW-9 11'. No other significant irregularities were reported during laboratory analysis of the soil boring samples. Soil laboratory analytical results are also summarized in tabular format below.

Laboratory Analytical Results of Soil Boring Samples
(milligrams per kilogram, mg/kg)

Well ID	GRO	B	T	E	X	1,2-DCA	MTBE	TBA
MW-7 8'	<0.50	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010
MW-7 13'	**200**	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<1.0
MW-7 14'	**860**	<0.10	<0.10	**1.9**	**0.10**	<0.10	<0.10	<1.0
MW-7 15'	**5.2**	<0.0010	<0.0010	**0.024**	**0.020**	<0.0010	<0.0010	<0.010
MW-8 11'	**4.1**	**0.51**	<0.10	**0.29**	**1.2**	<0.10	<0.10	<1.0
MW-8 13'	**74**	**1.8**	**1.7**	**4.3**	**20**	<0.10	<0.10	<1.0
MW-8 16'	<0.50	<0.0010	<0.0010	<0.0010	<0.0010	**0.0021**	**0.0013**	**0.068**
MW-8 19'	<0.50	**0.0011**	<0.0010	<0.0010	<0.0010	<0.0010	**0.0074**	**0.021**
MW-9 8'	**11**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010
MW-9 9'	**110**	<0.0010	**0.0013**	<0.0010	**0.0010**	<0.0010	<0.0010	<0.010
MW-9 11'	**61**	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010
MW-9 13'	<0.50	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.0010	<0.010

Petroleum hydrocarbon concentrations above the various laboratory method reporting limits are represented with bold-typed font. The tested analytes were not detected above their respective reporting limits in two of the 12 soil samples collected (MW-7 8' and MW-9 13'). Concentrations of EDB, DIPE, ETBE, and TAME are not included in the above table as the results for these constituents were below their respective laboratory reporting limits for each sample. A copy of the laboratory analytical report with chain-of-custody documentation is provided in Appendix B. Laboratory analytical results (EDF) were uploaded to the GeoTracker AB2886 database. Upload confirmation pages are provided in Appendix C.

6.0 CONCLUSIONS

On behalf of the Atlantic Richfield Company, RM – a BP affiliated company, BAI prepared this Soil & Water Investigation Report for Station No.2035, located at 1001 San Pablo Avenue,

Table 1
Groundwater Monitoring Data

ARCO Service Station No. 2035
1001 San Pablo Avenue, Albany, California

Well Number	Date Gauged	TOC Elevation (ft-MSL)	Depth to Water (feet)	FP Thickness (feet)	Groundwater Elevation [1] (ft-MSL)	Date Sampled	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B* (µg/L)	MTBE 8240/8260 (µg/L)	Dissolved Oxygen (mg/L)	Purged/ Not Purged (P/NP)
MW-1	03-24-95	41.41	6.21	0.00	35.20	03-24-95	8,800	3,600	<50	62	99	--	--	--	--
MW-1	05-24-95	41.41	9.37	0.00	32.04	05-24-95	4,800	2,000	<20	52	<20	--	--	--	--
MW-1	08-22-95	41.41	10.30	0.00	31.11	08-22-95	780	310	<2.5	12	<2.5	14	--	--	--
MW-1	11-09-95	41.41	12.25	0.00	29.16	11-09-95	58	14	<0.5	<0.5	<0.5	--	--	--	--
MW-1	02-27-96	41.41	9.08	0.00	32.33	02-27-96	2,700	930	12	18	32	51	--	--	--
MW-1	04-22-96	41.41	9.11	0.00	32.30	04-22-96	2,700	1,000	<10	22	<10	<60	--	--	--
MW-1	08-15-96	41.41	10.37	0.00	31.04	08-15-96	300	52	<0.5	0.9	<0.5	22	--	--	--
MW-1	12-10-96	41.41	8.79	0.00	32.62	12-10-96	270	63	0.7	<0.5	1	25	--	--	--
MW-1	03-27-97	41.41	9.80	0.00	31.61	03-27-97	1,500	610	<5	15	7	56	--	--	--
MW-1	05-22-97	41.41	9.65	0.00	31.76	05-22-97	110	6	<0.5	<0.5	0.7	10	--	--	--
MW-1	09-04-97	41.41	10.22	0.00	31.19	09-04-97	180	40	<0.5	1.2	0.5	26	--	--	--
MW-1	11-03-97	41.41	10.68	0.00	30.73	11-03-97	83	8	<0.5	<0.5	<0.5	13	--	--	--
MW-1	02-20-98	41.41	6.92	0.00	34.49	02-20-98	1,800	540	7	27	31	46	--	--	--
MW-1	05-18-98	41.41	9.28	0.00	32.13	05-18-98	4,500	1,300	20	57	20	<60	--	--	--
MW-1	08-20-98	41.41	10.05	0.00	31.36	08-21-98	530	110	<5	<5	<5	400	--	--	--
MW-1	10-20-98	41.41	10.42	0.00	30.99	10-20-98	66	9.1	<0.5	<0.5	<0.5	8	--	--	--
MW-1	02-16-99	41.41	8.10	0.00	33.31	02-16-99	1,200	390	<5	<5	6	45	--	--	--
MW-1	05-24-99	41.41	9.53	0.00	31.88	05-24-99	1,300	600	3	13	3	26	--	--	--
MW-1	08-24-99	41.41	10.03	0.00	31.38	08-24-99	100	21	1.3	<0.5	<0.5	8	--	0.55	P
MW-1	11-16-99	41.41	9.80	0.00	31.61	11-16-99	99	10	0.6	<0.5	<1	7	--	2.1	P
MW-1	02-01-00	41.41	8.82	0.00	32.59	02-02-00	400	93	1.6	3.6	3.7	19	--	1.0	P
DUP 1	06-21-00	--	--	--	--	06-21-00	416	88.4	<2.50	4.61	1.56	<5.00	--	--	--
MW-1	06-21-00	41.41	9.60	0.00	31.81	06-21-00	444	100	<2.50	4.15	<2.50	15.9	--	1.7	P
MW-1	11-06-00	41.41	9.50	0.00	31.91	11-06-00	73.2	17.8	<0.500	<0.500	<0.500	7.80	--	1.04	P
MW-1	05-04-01	41.41	9.28	0.00	32.13	05-04-01	714	392	<5.00	<5.00	<5.00	26.1	--	--	P
MW-1	**10-03-01**	**41.41**	**10.50**	**0.00**	**30.91**	**10-03-01**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.5**	**--**	**0.59**	**P**
DUP 1	**10-03-01**	**--**	**--**	**--**	**--**	**10-03-01**	**<50**	**<0.50**	**<0.50**	**<0.50**	**0.52**	**<2.5**	**--**	**--**	**--**

Table 1
Groundwater Monitoring Data

ARCO Service Station No. 2035
1001 San Pablo Avenue, Albany, California

Well Number	Date Gauged	TOC Elevation (ft-MSL)	Depth to Water (feet)	FP Thickness (feet)	Groundwater Elevation [1] (ft-MSL)	Date Sampled	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B* (µg/L)	MTBE 8240/8260 (µg/L)	Dissolved Oxygen (mg/L)	Purged/ Not Purged (P/NP)
MW-2	03-24-95	40.38	6.96	0.00	33.42	03-24-95	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
MW-2	05-24-95	40.38	10.02	0.00	30.36	05-24-95	Not sampled: well sampled semi-annually, during the first and third quarters								
MW-2	08-22-95	40.38	10.87	0.00	29.51	08-22-95	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--	--
MW-2	11-09-95	40.38	13.12	0.00	27.26	11-09-95	Not sampled: well sampled semi-annually, during the first and third quarters								
MW-2	02-27-96	40.38	10.25	0.00	30.13	02-27-96	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--	--
MW-2	04-22-96	40.38	9.98	0.00	30.40	04-22-96	Not sampled: well sampled semi-annually, during the first and third quarters								
MW-2	08-15-96	40.38	11.10	0.00	29.28	08-15-96	<50	<0.5	<0.5	<0.5	<0.5	4	--	--	--
MW-2	12-10-96	40.38	10.00	0.00	30.38	12-10-96	Not sampled: well sampled semi-annually, during the first and third quarters								
MW-2	03-27-97	40.38	10.38	0.00	30.00	03-27-97	<50	<0.5	<0.5	<0.5	<0.5	12	--	--	--
MW-2	05-22-97	40.38	10.65	0.00	29.73	05-22-97	Not sampled: well sampled semi-annually, during the first and third quarters								
MW-2	09-04-97	40.38	10.87	0.00	29.51	09-04-97	<50	<0.5	<0.5	<0.5	<0.5	19	--	--	--
MW-2	11-03-97	40.38	11.25	0.00	29.13	11-03-97	<50	<0.5	<0.5	<0.5	<0.5	18	--	--	--
MW-2	02-20-98	40.38	7.69	0.00	32.69	02-20-98	<50	0.5	<0.5	<0.5	<0.5	12	--	--	--
MW-2	05-18-98	40.38	9.88	0.00	30.50	05-18-98	<50	<0.5	<0.5	<0.5	<0.5	10	--	--	--
MW-2	08-20-98	40.38	10.62	0.00	29.76	08-21-98	<50	<0.5	<0.5	<0.5	<0.5	3	--	--	--
MW-2	10-20-98	40.38	11.00	0.00	29.38	10-20-98	<50	<0.5	<0.5	<0.5	<0.5	31	--	--	--
MW-2	02-16-99	40.38	9.04	0.00	31.34	02-16-99	<50	<0.5	<0.5	<0.5	<0.5	13	--	--	--
MW-2	05-24-99	40.38	9.90	0.00	30.48	05-24-99	<50	0.6	<0.5	<0.5	<0.5	47	--	--	--
MW-2	08-24-99	40.38	10.60	0.00	29.78	08-24-99	<50	<0.5	<0.5	<0.5	<0.5	20	--	0.88	P
MW-2	11-16-99	40.38	10.45	0.00	29.93	11-16-99	<50	<0.5	<0.5	<0.5	<1	<3	--	2.5	P
MW-2	02-01-00	40.38	9.49	0.00	30.89	02-02-00	<50	<0.5	<0.5	<0.5	<1	59	--	1.0	P
MW-2	06-21-00	40.38	10.30	0.00	30.08	06-21-00	<50.0	<0.500	<0.500	<0.500	<0.500	4.17	--	1.5	P
MW-2	11-06-00	40.38	10.19	0.00	30.19	11-06-00	<50.0	<0.500	<0.500	<0.500	<0.500	30.6	--	1.27	P
MW-2	05-04-01	40.38	10.15	0.00	30.23	05-04-01	<50.0	<0.500	<0.500	<0.500	<0.500	32.7	--	--	P
DUP	05-04-01	--	--	--	--	05-04-01	<50.0	<0.500	<0.500	<0.500	1.18	31.5	--	--	--
MW-2	**10-03-01**	**40.38**	**10.97**	**0.00**	**29.41**	**10-03-01**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.5**	--	**0.63**	**P**

Table 1
Groundwater Monitoring Data

ARCO Service Station No. 2035
1001 San Pablo Avenue, Albany, California

Well Number	Date Gauged	TOC Elevation (ft-MSL)	Depth to Water (feet)	FP Thickness (feet)	Groundwater Elevation [1] (ft-MSL)	Date Sampled	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B* (µg/L)	MTBE 8240/8260 (µg/L)	Dissolved Oxygen (mg/L)	Purged/ Not Purged (P/NP)
MW-3	03-24-95	41.44	7.29	0.00	34.15	03-24-95	51	0.8	<0.5	2.4	<0.5	--	--	--	--
MW-3	05-24-95	41.44	9.53	0.00	31.91	05-24-95	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
MW-3	08-22-95	41.44	11.19	0.00	30.25	08-22-95	<50	<0.5	<0.5	<0.5	<0.5	79	--	--	--
MW-3	11-09-95	41.44	12.77	0.00	28.67	11-09-95	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
MW-3	02-27-96	41.44	9.41	0.00	32.03	02-27-96	120	3.6	<0.5	2.2	3.7	90	--	--	--
MW-3	04-22-96	41.44	9.63	0.00	31.81	04-22-96	<50	<0.5	<0.5	<0.5	<0.5	90	--	--	--
MW-3	08-15-96	41.44	11.12	0.00	30.32	08-15-96	<50	<0.5	<0.5	<0.5	<0.5	54	--	--	--
MW-3	12-10-96	41.44	10.34	0.00	31.10	12-10-96	71	<0.5	<0.5	<0.5	<0.5	130	--	--	--
MW-3	03-27-97	41.44	10.28	0.00	31.16	03-27-97	<100	<1	<1	<1	<1	170	--	--	--
MW-3	05-22-97	41.44	10.40	0.00	31.04	05-22-97	<100	<1	<1	<1	<1	95	--	--	--
MW-3	09-04-97	41.44	10.75	0.00	30.69	09-04-97	<50	<0.5	<0.5	<0.5	<0.5	37	--	--	--
MW-3	11-03-97	41.44	11.44	0.00	30.00	11-03-97	<200	<2	<2	<2	<2	130	--	--	--
MW-3	02-20-98	41.44	7.48	0.00	33.96	02-20-98	<200	<2	5	<2	8	140	--	--	--
MW-3	05-18-98	41.44	9.87	0.00	31.57	05-18-98	<100	<1	<1	<1	<1	150	--	--	--
MW-3	08-20-98	41.44	10.72	0.00	30.72	08-21-98	<200	<2	<2	<2	<2	210	--	--	--
MW-3	10-20-98	41.44	11.30	0.00	30.14	10-20-98	<200	<2	<2	<2	<2	270	--	--	--
MW-3	02-16-99	41.44	8.60	0.00	32.84	02-16-99	<500	<5	<5	<5	<5	700	--	--	--
MW-3	05-24-99	41.44	9.87	0.00	31.57	05-24-99	<50	<0.5	<0.5	<0.5	<0.5	150	140	--	--
MW-3	08-24-99	41.44	10.83	0.00	30.61	08-24-99	<50	<0.5	<0.5	<0.5	<0.5	54	71	0.41	P
MW-3	11-16-99	41.44	10.54	0.00	30.90	11-16-99	100	<0.5	3.3	<0.5	<1	500	--	6.2	P
MW-3	02-01-00	41.44	5.69	0.00	35.75	02-02-00	18,000	1,000	45	1,500	940	100	--	2.12	P
MW-3	06-21-00	41.44	9.99	0.00	31.45	06-21-00	90.9	1.52	<0.500	<0.500	<0.500	187	--	2.6	P
MW-3	11-06-00	41.44	10.15	0.00	31.29	11-06-00	138	2.37	<0.500	<0.500	<0.500	216	--	0.47	P
MW-3	05-04-01	41.44	10.17	0.00	31.27	05-04-01	316	15.7	1.14	<0.500	<0.500	178	--	--	P
MW-3	**10-03-01**	**41.44**	**10.99**	**0.00**	**30.45**	**10-03-01**	**120**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**120**	**--**	**0.47**	**P**

Table 1
Groundwater Monitoring Data

ARCO Service Station No. 2035
1001 San Pablo Avenue, Albany, California

Well Number	Date Gauged	TOC Elevation (ft-MSL)	Depth to Water (feet)	FP Thickness (feet)	Groundwater Elevation [1] (ft-MSL)	Date Sampled	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B* (µg/L)	MTBE 8240/8260 (µg/L)	Dissolved Oxygen (mg/L)	Purged/ Not Purged (P/NP)
MW-4	03-24-95	40.33	5.92	0.00	34.41	03-24-95	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
MW-4	05-24-95	40.33	9.23	0.00	31.10	05-24-95	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
MW-4	08-22-95	40.33	10.61	0.00	29.72	08-22-95	<50	<0.5	<0.5	<0.5	<0.5	99	--	--	--
MW-4	11-09-95	40.33	11.97	0.00	28.36	11-09-95	<50	<0.5	<0.5	<0.5	<0.5	--	89	--	--
MW-4	02-27-96	40.33	8.84	0.00	31.49	02-27-96	<50	0.8	<0.5	<0.5	<0.5	<3	--	--	--
MW-4	04-22-96	40.33	9.15	0.00	31.18	04-22-96	Not sampled: well sampled annually, during the first quarter							--	--
MW-4	08-15-96	40.33	10.35	0.00	29.98	08-15-96	Not sampled: well sampled annually, during the first quarter							--	--
MW-4	12-10-96	40.33	8.70	0.00	31.63	12-10-96	Not sampled: well sampled annually, during the first quarter							--	--
MW-4	03-27-97	40.33	9.75	0.00	30.58	03-27-97	<5,000	<50	<50	<50	<50	4,200	--	--	--
MW-4	05-22-97	40.33	9.91	0.00	30.42	05-22-97	Not sampled: well sampled annually, during the first quarter							--	--
MW-4	09-04-97	40.33	10.25	0.00	30.08	09-04-97	Not sampled: well sampled annually, during the first quarter							--	--
MW-4	11-03-97	40.33	10.79	0.00	29.54	11-03-97	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--	--
MW-4	02-20-98	40.33	6.78	0.00	33.55	02-20-98	<2,000	<20	<20	<20	<20	3,300	--	--	--
MW-4	05-18-98	40.33	9.26	0.00	31.07	05-18-98	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--	--
MW-4	08-20-98	40.33	10.10	0.00	30.23	08-21-98	<50	<0.5	<0.5	<0.5	<0.5	9	--	--	--
MW-4	10-20-98	40.33	10.43	0.00	29.90	10-20-98	<50	<0.5	<0.5	<0.5	<0.5	17	--	--	--
MW-4	02-16-99	40.33	8.56	0.00	31.77	02-16-99	<500	<5	<5	<5	<5	400	--	--	--
MW-4	05-24-99	40.33	9.52	0.00	30.81	05-24-99	<50	<0.5	<0.5	<0.5	<0.5	10	7.6	--	--
MW-4	08-24-99	40.33	9.99	0.00	30.34	08-24-99	<2,500	<25	<25	<25	<25	1,200	1,300	0.84	NP
MW-4	11-16-99	40.33	9.80	0.00	30.53	11-16-99	<50	<0.5	<0.5	<0.5	<1	<3	--	0.0	NP
MW-4	02-01-00	40.33	9.11	0.00	31.22	02-02-00	<50	<0.5	<0.5	<0.5	<1	1,200	--	1.0	NP
MW-4	06-21-00	40.33	9.60	0.00	30.73	06-21-00	<50.0	<0.500	<0.500	<0.500	<0.500	60.5	--	1.3	NP
MW-4	11-06-00	40.33	9.53	0.00	30.80	11-06-00	<50.0	<0.500	<0.500	<0.500	<0.500	14.0	--	0.71	NP
MW-4	05-04-01	40.33	9.21	0.00	31.12	05-04-01	<50.0	<0.500	<0.500	<0.500	<0.500	83.6	--	--	NP
MW-4	**10-03-01**	**40.33**	**10.74**	**0.00**	**29.59**	**10-03-01**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**260**	**--**	**0.59**	**NP**

Table 1
Groundwater Monitoring Data

ARCO Service Station No. 2035
1001 San Pablo Avenue, Albany, California

Well Number	Date Gauged	TOC Elevation (ft-MSL)	Depth to Water (feet)	FP Thickness (feet)	Groundwater Elevation [1] (ft-MSL)	Date Sampled	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B* (µg/L)	MTBE 8240/8260 (µg/L)	Dissolved Oxygen (mg/L)	Purged/ Not Purged (P/NP)
MW-5	03-24-95	41.84	6.23	0.00	35.61	03-24-95	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
MW-5	05-24-95	41.84	9.61	0.00	32.23	05-24-95	Not sampled: well sampled annually, during the first quarter							--	--
MW-5	08-22-95	41.84	11.12	0.00	30.72	08-22-95	Not sampled: well sampled annually, during the first quarter							--	--
MW-5	11-09-95	41.84	12.52	0.00	29.32	11-09-95	Not sampled: well sampled annually, during the first quarter							--	--
MW-5	02-27-96	41.84	9.52	0.00	32.32	02-27-96	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--	--
MW-5	04-22-96	41.84	9.44	0.00	32.40	04-22-96	Not sampled: well sampled annually, during the first quarter							--	--
MW-5	08-15-96	41.84	10.83	0.00	31.01	08-15-96	Not sampled: well sampled annually, during the first quarter							--	--
MW-5	12-10-96	41.84	9.20	0.00	32.64	12-10-96	Not sampled: well sampled annually, during the first quarter							--	--
MW-5	03-27-97	41.84	10.10	0.00	31.74	03-27-97	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--	--
MW-5	05-22-97	41.84	10.28	0.00	31.56	05-22-97	Not sampled: well sampled annually, during the first quarter							--	--
MW-5	09-04-97	41.84	10.73	0.00	31.11	09-04-97	Not sampled: well sampled annually, during the first quarter							--	--
MW-5	11-03-97	41.84	11.23	0.00	30.61	11-03-97	Not sampled: well sampled annually, during the first quarter							--	--
MW-5	02-20-98	41.84	6.67	0.00	35.17	02-20-98	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--	--
MW-5	05-18-98	41.84	9.61	0.00	32.23	05-18-98	Not sampled: well sampled annually, during the first quarter							--	--
MW-5	08-20-98	41.84	10.58	0.00	31.26	08-21-98	Not sampled: well sampled annually, during the first quarter							--	--
MW-5	10-20-98	41.84	10.66	0.00	31.18	10-20-98	Not sampled: well sampled annually, during the first quarter							--	--
MW-5	02-16-99	41.84	8.35	0.00	33.49	02-16-99	Not sampled							--	--
MW-5	05-24-99	41.84	9.95	0.00	31.89	05-24-99	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--	--
MW-5	08-24-99	41.84	10.51	0.00	31.33	08-24-99	<50	<0.5	<0.5	<0.5	<0.5	<3	--	0.79	NP
MW-5	11-16-99	41.84	10.37	0.00	31.47	11-16-99	Not sampled: well sampled annually, during the second quarter							--	--
MW-5	02-01-00	41.84	9.35	0.00	32.49	02-02-00	<50	<0.5	<0.5	<0.5	<1	<3	--	1.0	NP
MW-5	06-21-00	41.84	10.03	0.00	31.81	06-21-00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	3.1	NP
MW-5	11-06-00	41.84	9.89	0.00	31.95	11-06-00	Not sampled: well sampled annually, during the second quarter							--	--
MW-5	05-04-01	41.84	9.42	0.00	32.42	05-04-01	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	--	NP
MW-5	**10-03-01**	**41.84**	**10.55**	**0.00**	**31.29**	**10-03-01**	**Not sampled: well sampled annually, during the second quarter**							--	--

Table 1
Groundwater Monitoring Data

ARCO Service Station No. 2035
1001 San Pablo Avenue, Albany, California

Well Number	Date Gauged	TOC Elevation (ft-MSL)	Depth to Water (feet)	FP Thickness (feet)	Groundwater Elevation [1] (ft-MSL)	Date Sampled	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B* (µg/L)	MTBE 8240/8260 (µg/L)	Dissolved Oxygen (mg/L)	Purged/ Not Purged (P/NP)
MW-6	03-24-95	40.13	9.03	0.00	31.10	03-24-95	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--
MW-6	05-24-95	40.13	12.45	0.00	27.68	05-24-95	Not sampled: well sampled annually, during the first quarter							--	--
MW-6	08-22-95	40.13	13.32	0.00	26.81	08-22-95	Not sampled: well sampled annually, during the first quarter							--	--
MW-6	11-09-95	40.13	14.13	0.00	26.00	11-09-95	Not sampled: well sampled annually, during the first quarter							--	--
MW-6	02-27-96	40.13	11.86	0.00	28.27	02-27-96	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--	--
MW-6	04-22-96	40.13	12.35	0.00	27.78	04-22-96	Not sampled: well sampled annually, during the first quarter							--	--
MW-6	08-15-96	40.13	13.18	0.00	26.95	08-15-96	Not sampled: well sampled annually, during the first quarter							--	--
MW-6	12-10-96	40.13	11.94	0.00	28.19	12-10-96	Not sampled: well sampled annually, during the first quarter							--	--
MW-6	03-27-97	40.13	13.10	0.00	27.03	03-27-97	<50	<0.5	<0.5	<0.5	<0.5	<3	--	--	--
MW-6	05-22-97	40.13	13.00	0.00	27.13	05-22-97	Not sampled: well sampled annually, during the first quarter							--	--
MW-6	09-04-97	40.13	13.30	0.00	26.83	09-04-97	Not sampled: well sampled annually, during the first quarter							--	--
MW-6	11-03-97	40.13	13.42	0.00	26.71	11-03-97	<50	<0.5	<0.5	<0.5	<0.5	19	--	--	--
MW-6	02-20-98	40.13	10.57	0.00	29.56	02-20-98	<100	<1	<1	<1	<1	95	--	--	--
MW-6	05-18-98	40.13	12.64	0.00	27.49	05-18-98	<100	<1	<1	<1	<1	180	--	--	--
MW-6	08-20-98	40.13	13.13	0.00	27.00	08-21-98	<100	<1	<1	<1	<1	180	--	--	--
MW-6	10-20-98	40.13	13.48	0.00	26.65	10-20-98	<100	<1	<1	<1	<1	180	--	--	--
MW-6	02-16-99	40.13	11.92	0.00	28.21	02-16-99	<200	<2	<2	<2	<2	200	--	--	--
MW-6	05-24-99	40.13	12.80	0.00	27.33	05-24-99	<50	<0.5	<0.5	<0.5	<0.5	120	--	--	--
MW-6	08-24-99	40.13	13.03	0.00	27.10	08-24-99	<50	<0.5	<0.5	<0.5	<0.5	44	--	0.46	NP
MW-6	11-16-99	40.13	12.70	0.00	27.43	11-16-99	<50	<0.5	<0.5	<0.5	<1	17	17	0.0	NP
MW-6	02-01-00	40.13	8.61	0.00	31.52	02-02-00	<50	<0.5	<0.5	<0.5	<1	6	--	1.0	NP
MW-6	06-21-00	40.13	12.88	0.00	27.25	06-21-00	<50.0	<0.500	<0.500	<0.500	<0.500	2.57	--	2.8	NP
MW-6	11-06-00	40.13	12.74	0.00	27.39	11-06-00	<50.0	<0.500	<0.500	<0.500	<0.500	3.77	--	1.51	NP
DUP	11-06-00	--	--	--	--	11-06-00	<50.0	<0.500	<0.500	<0.500	<0.500	4.03	--	--	--
MW-6	05-04-01	40.13	11.29	0.00	28.84	05-04-01	<50.0	<0.500	<0.500	<0.500	<0.500	10.5	12.3	--	NP
MW-6	**10-03-01**	**40.13**	**11.35**	**0.00**	**28.78**	**10-03-01**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**5.8**	**4.8**	**0.61**	**NP**

Table 1
Groundwater Monitoring Data

ARCO Service Station No. 2035
1001 San Pablo Avenue, Albany, California

Well Number	Date Gauged	TOC Elevation (ft-MSL)	Depth to Water (feet)	FP Thickness (feet)	Groundwater Elevation [1] (ft-MSL)	Date Sampled	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B* (µg/L)	MTBE 8240/8260 (µg/L)	Dissolved Oxygen (mg/L)	Purged/ Not Purged (P/NP)
RW-1	03-24-95	40.33	9.32	0.01	31.02	03-24-95	11,000	560	660	150	1,700	--	--	--	--
RW-1	05-24-95	40.33	9.75	0.03	30.60	05-24-95	Not sampled: well contained floating product							--	--
RW-1	08-22-95	40.33	10.86	0.02	29.48	08-22-95	Not sampled: well contained floating product							--	--
RW-1	11-09-95	40.33	20.61	0.00	19.72	11-09-95	1,600	79	46	13	240	--	--	--	--
RW-1	02-27-96	40.33	16.56	0.00	23.77	02-27-96	210	44	7.5	2.5	24	29	--	--	--
RW-1	04-22-96	40.33	9.65	0.00	30.68	04-22-96	36,000	7,400	3,700	580	3,400	<300	--	--	--
RW-1	08-15-96	40.33	10.60	0.00	29.73	08-15-96	1,800	31	38	15	150	<30	--	--	--
RW-1	12-10-96	40.33	8.72	0.00	31.61	12-10-96	25,000	1,900	1,000	330	3,200	<100	--	--	--
RW-1	03-27-97	40.33	10.33	0.00	30.00	03-27-97	7,200	1,900	59	95	240	480	--	--	--
RW-1	05-22-97	40.33	10.10	0.00	30.23	05-22-97	3,000	630	84	45	340	<60	--	--	--
RW-1	09-04-97	40.33	10.42	0.00	29.91	09-04-97	7,100	120	55	14	160	<60	--	--	--
RW-1	11-03-97	40.33	9.10	0.00	31.23	11-03-97	<200	14	19	3	19	140	--	--	--
RW-1	02-20-98	40.33	7.49	0.00	32.84	02-20-98	3,800	1,000	85	64	220	950	--	--	--
RW-1	05-18-98	40.33	8.90	0.00	31.43	05-18-98	<200	45	<2	2	4	220	--	--	--
RW-1	08-20-98	40.33	11.06	0.00	29.27	08-21-98	480	200	<2	<2	30	180	--	--	--
RW-1	10-20-98	40.33	11.12	0.00	29.21	10-20-98	110	36	2.9	<0.5	4.1	5	--	--	--
RW-1	02-16-99	40.33	7.70	0.00	32.63	02-17-99	250	61	2	2	19	94	--	--	--
RW-1	05-24-99	40.33	11.12	0.00	29.21	05-24-99	4,500	2,000	7	<2	180	35	--	--	--
RW-1	08-24-99	40.33	10.15	0.00	30.18	08-24-99	2,600	1,100	6.3	2.3	17	39	--	0.52	NP
RW-1	11-16-99	40.33	9.95	0.00	30.38	11-16-99	1,200	2,600	16	86	41	140	--	1.4	P
RW-1	02-01-00	40.33	11.88	0.00	28.45	02-02-00	11,000	980	230	200	1,400	38	--	1.0	NP
RW-1	06-21-00	40.33	9.83	0.00	30.50	06-21-00	899	278	<2.50	8.70	8.46	61.1	--	1.3	NP
RW-1	11-06-00	40.33	8.45	0.00	31.88	11-06-00	156,000	3,260	28,800	4,570	25,700	26,200	--	0.63	P
RW-1	05-04-01	40.33	8.57	0.00	31.76	05-04-01	244,000	8,420	56,000	5,660	36,200	23,400	11,000	--	P
RW-1	**10-03-01**	**40.33**	**9.13**	**0.00**	**31.20**	**10-03-01**	**120,000**	**2,500**	**33,000**	**3,800**	**21,000**	**3,300**	**--**	**0.38**	**P**
S-5	05-31-01	--	--	--	--	05-31-01	310,000	3,000	11,000	4,000	34,000	<2,500	--	--	--
S-5	**10-03-01**	**--**	**10.00**	**--**	**--**	**10-03-01**	**70,000**	**1,800**	**7,800**	**1,400**	**20,000**	**<120**	**--**	**0.25**	**NP**

Table 1
Groundwater Monitoring Data

ARCO Service Station No. 2035
1001 San Pablo Avenue, Albany, California

Well Number	Date Gauged	TOC Elevation (ft-MSL)	Depth to Water (feet)	FP Thickness (feet)	Groundwater Elevation [1] (ft-MSL)	Date Sampled	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE 8021B* (µg/L)	MTBE 8240/8260 (µg/L)	Dissolved Oxygen (mg/L)	Purged/ Not Purged (P/NP)

TOC: top of casing
ft-MSL: elevation in feet, relative to mean sea level
TPH: total petroleum hydrocarbons as gasoline, California DHS LUFT Method
BTEX: benzene, toluene, ethylbenzene, total xylenes by EPA method 8021B. (EPA method 8020 prior to 11/16/99).
MTBE: Methyl tert-butyl ether
µg/L: micrograms per liter
mg/L: milligrams per liter
- -: not analyzed or not applicable
<: denotes concentration not present at or above laboratory detection limit stated to the right.
[1] = Computed by adding correction factor to groundwater elevation. Correction factor = free product thickness times 0.73 (approximate specific gravity of gasoline).
*: EPA method 8020 prior to 11/16/99
**: For previous historical groundwater elevation and analytical data please refer to *Fourth Quarter 1995 Groundwater Monitoring Program Results and Remediation System Performance Evaluation Report, ARCO Service Station 2035, Albany, California*, (EMCON, March 25, 1996).
DUP: duplicate sample

Table 2
Groundwater Flow Direction and Gradient

ARCO Service Station No. 2035
1001 San Pablo Avenue, Albany, California

Date Measured	Average Flow Direction	Average Hydraulic Gradient
03-24-95	Northwest	0.037
05-24-95	West-Northwest	0.013
08-22-95	Southwest	0.012
11-09-95	West-Southwest	0.01
02-27-96	Southwest	0.009
04-22-96	West-Southwest	0.014
08-15-96	Southwest	0.011
12-10-96	West-Southwest	0.023
03-27-97	West-Southwest	0.026
05-22-97	West-Southwest	0.024
09-04-97	West	0.019
11-03-97	Southwest	0.038
02-20-98	West	0.031
05-18-98	West	0.02
08-20-98	West	0.02
10-20-98	West	0.02
02-16-99	West	0.03
05-24-99	West-Southwest	0.03
08-24-99	West-Southwest	0.01
11-16-99	West-Southwest	0.02
02-01-00	Northwest	0.08
06-21-00	West	0.023
11-06-00	West	0.018
05-04-01	West-Southwest	0.015
10-03-01	**Southwest**	**0.013**

TABLE 1
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF SOIL SAMPLES FROM BORINGS
ARCO Station 2035
Albany, California
(Page 1 of 3)

Date / Sample ID	TPHg	B	T	E	X	TPHd	VOC,PCB, TOG and SVOC	Cd	Cr	Pb	Ni	Zn
August 1989												
S-10-B1	1,900	<4	15	8	53	NA	NA	NA	NA	NA	NA	NA
S-15-B1	<1.0	<0.005	0.006	0.006	<0.005	NA	NA	NA	NA	NA	NA	NA
S-19½-B1	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA
S-10-B2	51	1.9	0.35	0.81	4.0	NA	NA	NA	NA	NA	NA	NA
S-14½-B2	<1.0	0.063	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA
S-20-B2	<1.0	0.039	0.044	0.007	0.041	NA	NA	NA	NA	NA	NA	NA
S-10-B3	75	3.1	8.2	1.8	11.0	NA	NA	NA	NA	NA	NA	NA
S-14½-B3	<1.0	0.21	<0.025	<0.025	0.039	NA	NA	NA	NA	NA	NA	NA
S-20-B3	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA
S-10-B4	2,400	33	140	40	220	NA	NA	NA	NA	NA	NA	NA
S-15-B4	520	<1.0	6.9	6.2	6.3	NA	NA	NA	NA	NA	NA	NA
S-19-B4	<1.0	<0.005	0.007	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA
S-9½-B5	<1.0	0.007	0.006	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA
S-15-B5	<1.0	<0.005	0.006	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA
S-20-B5	<1.0	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	NA	NA
June 1991												
S-5½-B6	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA
S-10½-B6	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA
S-15½-B6	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA
S-17-B6	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA
S-5½-B7	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA
S-10½-B7	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA
S-15½-B7	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA
S-17-B7	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA
S-18½-B7	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA
October 1991												
S-6-B8	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA
S-11-B8	35	1.2	1.7	0.42	2.0	NA	NA	NA	NA	NA	NA	NA
S-16-B8	3.0	0.45	0.13	0.11	0.47	NA	NA	NA	NA	NA	NA	NA
'S-30-B8	240	3.6	5.0	4.1	16	NA	NA	NA	NA	NA	NA	NA
S-6-B9	25	0.60	0.58	0.44	1.8	NA	NA	NA	NA	NA	NA	NA
S-10¼-B9	13	0.74	0.72	0.18	0.95	NA	NA	NA	NA	NA	NA	NA
S-16-B9	<1.0	0.015	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA
S-31-B9	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA

See notes on Page 3 of 3

TABLE 1
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF SOIL SAMPLES FROM BORINGS
ARCO Station 2035
Albany, California
(Page 2 of 3)

Date / Sample ID	TPHg	B	T	E	X	TPHd	TOG	VOC,PCB, and SVOC	Cd	Cr	Pb	Ni	Zn
October 1991cont.													
S-5½-B10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
S-13-B10	4.0	0.13	0.15	0.041	0.16	NA	NA	NA	NA	NA	NA	NA	NA
S-20½-B10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
S-30½-B10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
S-6-B11	<1.0	0.010	<0.0050	<0.0050	<0.0050	3.9	80	ND[b]	<0.50	49	7.7	97	41
S-11-B11	110	<0.0050	<0.0050	<0.0050	0.27	71	43	ND[b]	<0.50	80	5.8	77	69
S-16-B11	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	57	ND[b]	<0.50	33	7.5	25	45
S-21-B11	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	74	ND[b]	<0.50	39	7.2	32	56
August 1992													
S-4½-B12	10	<0.0050	<0.0050	0.0070	0.050	45[e]	250	ND	<0.50	59	<5.0	58	40
S-9-B12	9.1	<0.0050	<0.0050	0.0060	0.082	250[e]	100	ND	<0.50	42	<5.0	46	37
S-14½-B12	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<50	ND	<0.50	49	7.4	49	69
S-4½-B13	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<50	ND	<0.50	68	<5.0	65	43
S-7½-B13	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	1.1[e]	1,800	ND[d]	<0.50	51	<5.0	81	46
S-17½-B13	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<50	ND	<0.50	43	5.6	51	69
S-5½-B14	430	4.0	16	7.3	42	NA	NA	NA	NA	NA	NA	NA	NA
S-10½-B14	1,300	20	82	31	170	NA	NA	NA	NA	NA	NA	NA	NA
S-15½-B14	<1.0	0.012	0.034	0.011	0.055	NA	NA	NA	NA	NA	NA	NA	NA
S-5½-B15	47	0.22	0.56	0.76	4.3	NA	NA	NA	NA	NA	NA	NA	NA
S-10-B15	310	3.8	15	7.1	37	NA	NA	NA	NA	NA	NA	NA	NA
S-13½-B15	110	1.5	4.3	2.1	12	NA	NA	NA	NA	NA	NA	NA	NA
S-4½-B16	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
S-10-B16	4,300	21	110	51	580	NA	NA	NA	NA	NA	NA	NA	NA
S-14½-B16	<1.0	0.010	0.032	0.018	0.18	NA	NA	NA	NA	NA	NA	NA	NA
S-5½-B17	1.4	0.045	0.0080	<0.0050	0.028	NA	NA	NA	NA	NA	NA	NA	NA
S-10½-B17	1,100	16	71	27	140	NA	NA	NA	NA	NA	NA	NA	NA
S-15½-B17	27	2.1	0.40	0.75	1.3	NA	NA	NA	NA	NA	NA	NA	NA
S-5½-B18	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
S-10½-B18	380	4.8	21	8.7	46	NA	NA	NA	NA	NA	NA	NA	NA
S-15½-B18	2.6	0.78	0.48	0.059	0.29	NA	NA	NA	NA	NA	NA	NA	NA
S-5½-B19	<1.0	0.017	0.0090	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
S-10½-B19	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	NA	NA	NA	NA	NA	NA	NA	NA
S-15½-B19	<1.0	0.15	0.012	0.029	0.032	NA	NA	NA	NA	NA	NA	NA	NA

See notes on Page 3 of 3

TABLE 1
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF SOIL SAMPLES FROM BORINGS
ARCO Station 2035
Albany, California
(Page 3 of 3)

Date Sample ID	TPHg	B	T	E	X	TPHd	VOC,PCB, TOG and SVOC	Cd	Cr	Pb	Ni	Zn
August 1992cont.												
S-0821-SPAD	550	2.6	9.5	5.4	47	NA	NA	NA	NA	NA	NA	NA

Results for TPHg, BTEX, TPHd, TOG and metals in parts per million (ppm).
Results for VOC, PCB and SVOC in parts per billion (ppb).
TPHg: Total petroleum hydrocarbons as gasoline by EPA method 5030/8015/8020.
B: benzene, T: toluene, E: ethylbenzene, X: total xylenes isomers
BTEX: Analyzed by EPA method 5030/8015/8020.
TPHd: Total Petroleum Hydrocarbons as diesel by EPA method 3550/8015.
TOG: Total oil and grease by Standard method 5520 E&F.
VOC: Volatile organic compounds by EPA method 8240.
PCB: Polychlorinated biphenyls by EPA method 8080.
SVOC: Semi-volatile organic compounds by EPA method 8270.
Cd: Cadmium by EPA method 6010.
Cr: Chromium by EPA method 6010.
Ni: Nickel by EPA method 6010.
Zn: Zinc by EPA method 6010.
Pb: Lead by EPA method 6010.
NA: Not analyzed.
<: Results reported below the laboratory detection limit.
ND: All compounds tested were nondetectable. Detection limits varied for different compounds.
[a]: Sample collected from the saturated zone, analyzed for site characterization purposes only.
[b]: Only VOCs tested.
[c]: Identified as a non-diesel mixture. The mixture in B-12 contained C9 - C14 plus >C16 and >C17. The mixture in B-13 was >C17.
[d]: All compounds tested were nondetectable except ethylbenzene.

Sample Identification:

S-15½-B19
- Boring number
- Depth in feet
- Soil Sample

S-0821-SPAD
- Composite sample
- Soil pile
- Date sampled
- Soil Sample

TABLE 2
LABORATORY ANALYSES OF NEW TANK PIT SOIL SAMPLES
ARCO Station 2035
Albany, California
(Page 1 of 2)

Sample ID	B	T	E	X	TPHg
July 8, 1991					
S-15-EWC	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
S-15-SE	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
S-16-SW1	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
S-15-SW	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
S-15-NWC	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
S-15-WWC	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
S-15-NWF	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
S-9-NWW	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
S-8-NW	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
S-15-NW	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
July 9, 1991					
S-0709-NP1(10')	0.025	0.027	0.0060	0.024	<1.0
S-0709-NP2(14')	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
S-0709-NP3(10')	<0.0050	0.0050	<0.0050	0.018	<1.0
S-0709-NP4(15)	0.0050	0.0050	<0.0050	<0.0050	<1.0
S-0709-NP5(5')	0.012	0.013	<0.0050	0.0080	<1.0
S-0709-NP6(15')	0.017	0.021	0.014	0.056	<1.0
S-0709-NP7(3')	0.0060	0.0060	<0.0050	<0.0050	<1.0
S-0709-NP8(14')	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
S-0709-NP9(9')	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
S-0709-NP10(10')	0.0090	0.0060	<0.0050	<0.0050	<1.0
S-0709-NP11(8')	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
S-0709-NP12(14')	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
S-0709-NP13(2')	<0.0050	<0.0050	<0.0050	<0.0050	<1.0
S-0709-NP14(6')	<0.0050	<0.0050	0.0050	0.0080	<1.0
S-0709-NP15(5')	<0.0060	<0.0050	<0.0050	0.0060	<1.0
S-0709-NP16(16')	<0.0050	<0.0050	0.0050	0.0080	<1.0
S-0709-NP17(10')	<0.0050	<0.0050	0.0050	0.0080	<1.0
S-0709-NP18(11')	<0.0050	<0.0050	0.0050	0.0080	<1.0

See notes on Page 2 of 2

TABLE 2
LABORATORY ANALYSES OF NEW TANK PIT SOIL SAMPLES
ARCO Station 2035
Albany, California
(Page 2 of 2)

Sample ID	B	T	E	X	TPHg

Notes:
Results in parts per million (ppm).
B: benzene, T: toluene, E: ethylbenzene, X: total xylenes
TPHg: Total petroleum hydrocarbons as gasoline (TPHg with BTEX distinction measured by EPA Methods 5030/8015/8020)
<: Less than the indicated laboratory detection limit.
Sample Identification:

Excavation Samples: S-0709-NP1(10')

- S-0709-NP1(10') — Soil sample
- S-0709-NP1(10') — Date of sample
- S-0709-NP1(10') — New tank pit consecutive number (sample depth)

Sidewall and Floor Samples: S-15-EWC

- S-15-EWC — Soil sample
- S-15-EWC — Depth of sample
- S-15-EWC — Location identifier

TABLE 3
LABORATORY ANALYSES OF FORMER GASOLINE TANK PIT SOIL SAMPLES
ARCO Station 2035
Albany, California
(Page 1 of 1)

Sample ID	B	T	E	X	TPHg	TOG	VOC	Pb
July 3, 1991								
S-12-T1W	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	NA	NA	NA
S-12-T1E	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	NA	NA	NA
S-12-T2W	0.031	<0.0050	0.0080	<0.0050	<1.0	NA	NA	NA
S-12-T2E	0.019	<0.0050	<0.0050	<0.0050	<1.0	NA	NA	NA
S-12-T3W	1.2	2.4	1.0	3.8	48	NA	NA	<0.05
S-12-T3E	0.2	0.51	0.97	3.9	65	NA	NA	<0.05
S-13-T4N	0.45	0.039	0.18	0.33	6.2	NA	NA	NA
S-13-T4S	0.061	0.034	0.0080	0.15	<1.0	<30	ND	NA
	(0.160)			(0.430)				

Results in parts per million (ppm).
NA: Not analyzed.
<: Less than the indicated laboratory detection limit
ND: Less than laboratory limit for each compound, except benzene and total xylenes
( ): Indicates results measured by EPA Method 8240
B: benzene, T: toluene, E: ethylbenzene, X: total xylenes
TPHg: Total petroleum hydrocarbons as gasoline
(TPHg with BTEX distinction measured by EPA Methods 5030/8015/8020)
TOG: Total oil and grease (measured by Standard Method 5520 E and F)
VOC: Volatile organic compounds (measured by EPA Method 8240)
Pb: Organic lead (measured by California LUFT Manual Method, 12/87)

Sample Identification: S-12-T1W

- Tank number and locator
- Depth of sample
- Soil sample

TABLE 4
LABORATORY ANALYSES OF PRODUCT-LINE
AND PRODUCT-DISPENSER SOIL SAMPLES
ARCO Station 2035
Albany, California
(Page 1 of 1)

Sample ID	B	T	E	X	TPHg
July 19, 1991					
S-2½-PL1	<0.005	<0.005	<0.005	<0.005	<1.0
S-2½-PL2	<0.005	<0.005	<0.005	<0.005	<1.0
S-1-PL3	0.005	0.02	0.016	0.12	1.7
S-1-PL4	36	320	100	640	4,200
S-1-PL5	<0.005	<0.005	<0.005	<0.005	<1.0
S-1-PL6	<0.005	<0.005	<0.005	<0.005	<1.0
S-1-PL7	0.10	0.37	0.16	1.2	11
S-1-PL8	3.6	28	29	200	1,900
S-1-PL9	0.2	0.78	0.36	3.1	110
S-1-PL10	0.09	0.43	0.72	2.8	84
S-2½-PD1	<0.005	<0.005	<0.005	<0.005	<1.0
S-2½-PD2	<0.005	<0.005	<0.005	<0.005	<1.0
S-1-PD3	<0.005	<0.005	<0.005	<0.005	<1.0
S-1-PD4	<0.005	<0.005	<0.005	12	330
S-1-PD5	<0.005	<0.005	<0.005	<0.005	<1.0
S-1-PD6	0.13	0.28	0.48	3.8	87
S-1-PD7	0.35	2.1	1.1	47	1,000
S-1-PD8	<0.005	<0.005	<0.005	<0.005	<1.0
August 9, 1991					
S-1½-PL4	0.21	0.040	0.15	0.12	4.1

Results in parts per million (ppm).
<: Less than the laboratory detection limit.
B: benzene, T: toluene, E: ethylbenzene, X: total xylenes
BTEX: Measured by EPA Method.
TPHg: Total petroleum hydrocarbons as gasoline (measured by EPA Method).

Sample Identification: S-1½-PL1

- Product-line number
- Depth of sample
- Soil sample

TABLE 5
VAPOR EXTRACTION TEST FIELD MONITORING DATA
ARCO Station 2035
Albany, California
(Page 1 of 3)

Influent Air Stream from VW-5					Observation Wells			
					MW-2	RW-1	VW-2	VW-1
Flow	Concentration	Applied Vacuum	Temp.	Elapsed Time (min)	Induced Vacuum	Induced Vacuum	Induced Vacuum	Induced Vacuum
30.0	1,500	20	--	0	0.0	0.0	0.015	0.0
78.0	0	>100	--	8	0.0	0.0	0.06	0.0
83.0	NM	>100	--	15	0.05	0.01	0.11	0.0
83.0	300	>100	--	20	0.0	0.0	0.11	0.0
68.0	NM	80	--	--	NM	NM	NM	NM
57.0	NM	60	--	--	NM	NM	NM	NM
44.0	NM	40	--	--	NM	NM	NM	NM
0	NM	20	--	--	NM	NM	NM	NM
DTW_i : 11.7 DTW_f : 13.2 (top of casing)								
Distance from extraction well VW-5 (feet):					25.0	25.0	24.0	40.0
Well Screen Interval (FT BGS): 4.5'-14.5'					20-29	11-26	5-17	5-17
Approximate exposed well screen: = 4.5'-13.2' ($\Delta \approx 8.7'$)					none	none	5-13.2	5-9.3

Influent Air Stream from VW-4					Observation Wells					
					VW-6	VW-5	VW-3	VW-2	VW-1	MW-1
Flow	Concentration	Applied Vacuum	Temp.	Elapsed Time (min)	Induced Vacuum	Induced Vacuum	Induced Vacuum	Induced Vacuum	Induced Vacuum	Induced Vacuum
44.0	300	41	--	0	0.0	0.065	--	0.01	0.0	0.0
83.0	400	100	--	10	0.0	0.05	0.05	0.05	0.005	0.0
83.0	300	100	--	35	0.0	0.05	0.05	0.07	0.1	0.05
DTW_i : 10.7 DTW_f : 14.3 (top of casing)										
Distance from extraction well VW-4 (feet):					24.0	39.0	19.0	40.0	27.0	30.0
Well Screen Interval (FT BGS): 5-17'					5-12	4.5-14.5	4.5-9.5	5-17	5-17	15-30
Approximate exposed well screen: 5-14.3' ($\Delta \approx 6.3'$)					5-7.2	4.5-13.2	4.5-8.7	5-13.2	5-9.3	none

TABLE 5
VAPOR EXTRACTION TEST FIELD MONITORING DATA
ARCO Station 2035
Albany, California
(Page 2 of 3)

Influent Air Stream from VW-6					Observation Wells				
					VW-4	VW-3	VW-1	MW-1	MW-3
Flow	Concentration	Applied Vacuum	Temp.	Elapsed Time (min)	Induced Vacuum	Induced Vacuum	Induced Vacuum	Induced Vacuum	Induced Vacuum
65.0	NM	60	–	0	0.03	0.0	0.0	0.0	0.11
87.0	NM	100	–	5	0.005	0.0	0.0	0.0	0.10
87.0	NM	100	–	20	0.0	0.0	0.0	0.0	0.06
87.0	600	100	–	35	0.0	0.0	0.0	0.0	0.0
DTW_i : 11.2' DTW_f : 12.1' (Top of Casing)									
Distance from extraction well VW-6 (feet):					24.5	44.5	54.0	42.7	22.5
Well Screen Interval (FT BGS): 5-12.5'					5-17	4.5-9.5	5-17	15-30	15-25
Approximate Exposed Well Screen: 5-12.1' (Δ≈7.1')					5-14	4.5-8.7	5-9.3	none	none

Influent Air Stream from VW-3					Observation Wells					
					VW-6	VW-4	MW-1	VW-2	VW-1	VW-5
Flow	Concentration	Applied Vacuum	Temp.	Elapsed Time (min)	Induced Vacuum	Induced Vacuum	Induced Vacuum	Induced Vacuum	Induced Vacuum	Induced Vacuum
79.0	700	84	–	5	0.17	0.40	0.0	0.76	0.20	0.12
74.0	700	80	–	30	0.14	0.48	0.0	0.90	0.21	0.19
DTW_i : 8.9 DTW_f : 8.7' (Top of Casing)										
Distance from extraction well VW-3 (feet):					46.0	19.0	21.0	38.0	16.0	49.0
Well Screen Interval (FT BGS): 4.5-9.5'					5-12.5	5-17	15-30	5-17	5-17	4.5-14.5
Approximate exposed well screen: 4.5-8.7' (Δ≈4.2')					5-12.1'	5-14.3	none	5-13.2	5-9.3	4.5-13.2'

Influent Air Stream from VW-2					Observation Wells				
					VW-1	VW-3	VW-4	MW-2	VW-5
Flow	Concentration	Applied Vacuum	Temp.	Elapsed Time (min)	Induced Vacuum	Induced Vacuum	Induced Vacuum	Induced Vacuum	Induced Vacuum
35.0	NM	26	–	0	0.0	0.5	0.0	0.0	0.0
39.0	3,000	30	–	15	0.17	0.27	0.0	0.05	0.085
39.0	3,500	30	–	30	0.16	0.26	0.01	0.0	0.09
DTW_i : 11.1' DTW_f : 13.2' (Top of Casing)									
Distance from extraction well VW-2 (feet):					24.0	40.0	40.0	36.0	24.0
Well Screen Interval (FT BGS): 5-17'					5-17	4.5-9.5	5-17	20-29	4.5-14.5
Approximate exposed well screen: 5-13.2' (Δ≈8.2')					5-9.3'	4.5-8.7'	5-14.3	none	4.5-13.2

TABLE 5
VAPOR EXTRACTION TEST FIELD MONITORING DATA
ARCO Station 2035
Albany, California
(Page 3 of 3)

Influent Air Stream from VW-1					Observation Wells				
					VW-4	VW-3	VW-2	VW-5	MW-2
Flow	Concentration	Applied Vacuum	Temp.	Elapsed Time (min)	Induced Vacuum	Induced Vacuum	Induced Vacuum	Induced Vacuum	Induced Vacuum
79.0	100	100	--	15	0.0	0.70	0.64	0.08	0.0
79.0	200	99	--	30	0.0	0.78	0.68	0.095	0.0
79.0	NM	98	--	40	0.0	0.80	0.70	0.09	0.0
79.0	NM	98	--	70	0.02	0.90	0.78	0.105	NM
79.0	NM	90	--	90	0.05	0.86	0.72	0.10	NM
74.0	300	90	--	105	0.05	0.86	0.74	0.115	NM
78.0	200	90	--	120	0.05	0.88	0.74	0.105	NM
61.0	NM	60	--	--	NM	NM	NM	NM	NM
39.0	NM	40	--	--	NM	NM	NM	NM	NM
0.0	NM	20	--	--	NM	NM	NM	NM	NM
DTW_i : 11.1' DTW_f : 9.3'									
Distance from extraction well VW-1 (feet):					27.0	16.0	24.0	40.0	59.0
Well Screen Interval (FT BGS): 5-17'					5-17	4.5-9.5	5-17	4.5-14.5	20-29
Approximate Exposed Well Screen: 5-9.3' ($\triangle \approx 4.3'$)					5-14.3	4.5-8.7	5-13.2	4.5-13.2	none

Flow measured in cubic feet per minute (CFM).
Concentration measured in parts per million by volume (ppmv) on Combustible Gas Meter.
Vacuum measured in inches of water column.
Temperature measured in degrees Fahrenheit.
DTWi = Initial depth to water prior to VET and pumping or bailing operations (measured from top of well casing).
DTWf = Final depth to water after VET (measured from top of well casing).
NM = Not Measured.
FT BGS = Feet Below Grade Surface

Note: Exposed Well Screen refers to well screened intervals above the potentiometric water surface. Values are only approximate since depth to water is measured from top of casing and screened intervals are referenced from grade surface.

TABLE 6
LABORATORY ANALYSIS OF AIR SAMPLES
ARCO Station 2035
Albany, California
(Page 1 of 1)

Sample ID	Sample Location	Elapsed Time of Sample	TPHg	B	T	E	X	Pb
A-VW1-30	VW-1	30	57	<5	<5	<5	<5	NA
A-VW1-EFF	EFFLUENT*	30	110	<5	<5	<5	<5	NA
A-VW1-120	VW-1	120	14	<5	<5	<5	<5	0.004
A-VW2-30	VW-2	30	6,800	83	16	<5	<5	NA
A-VW3-30	VW-3	30	<10	<5	<5	<5	<5	NA
A-VW4-30	VW-4	30	14	<5	<5	<5	<5	NA
A-VW5-30	VW-5	30	27,000	330	220	<25**	36	NA
A-VW6-30	VW-6	30	20	<5	5.2	<5	5.7	NA

Concentrations reported in milligrams per cubic meter (mg/m^3), which is equivalent to ($\mu g/\ell$).
< : Below the minimum laboratory detection limit for air.
NA: Not analyzed.
TPHg: Total petroleum hydrocarbons as gasoline (analyzed by EPA Method 8015).
B: benzene, T: toluene, E: ethylbenzene, X: total xylene isomers
BTEX: Analyzed by EPA Method 8240
*: Effluent vapors sampled after abatement by the internal combustion engine.
**: Laboratory Reported that sample was diluted due to matrix interference.

TABLE 7
CUMULATIVE GROUNDWATER MONITORING DATA
ARCO Station 2035
Albany, California
(Page 1 of 2)

Well / Date	Elevation of Wellhead	Depth to Water	Elevation of Groundwater	Evidence of Product
MW-1				
10/29/91	41.41	11.86	29.55	None
11/07/91		10.94	30.47	None
11/14/91		10.97	30.44	None
01/19/92		10.06	31.35	None
02/19/92		8.65	32.76	None
03/19/92		8.33	33.08	None
04/21/92		9.32	32.09	None
05/12/92		9.82	31.59	None
06/12/92		10.50	30.91	None
07/15/92		10.69	30.72	None
08/07/92		10.53	30.88	None
09/08/92		11.04	30.37	None
10/26/92		11.24	30.17	None
11/23/92		10.90	30.51	None
12/16/92		9.40	32.01	None
MW-2				
10/29/91	40.38	11.10	29.28	None
11/07/91		11.20	29.18	None
11/14/91		11.21	29.17	None
01/19/92		10.44	29.94	None
02/19/92		8.70	31.68	None
03/19/92		8.84	31.54	None
04/21/92		9.80	30.58	None
05/12/92		10.29	30.09	None
06/12/92		10.95	29.43	None
07/15/92		11.15	29.23	None
08/07/92		11.01	29.37	None
09/08/92		11.41	28.97	None
10/26/92		11.60	28.78	None
11/23/92		7.31	33.07	None
12/16/92		9.82	30.56	None
MW-3				
10/29/91	41.44	11.62	29.82	None
11/07/91		11.52	29.92	None
11/14/91		11.50	29.94	None
01/19/92		10.56	30.88	None
02/19/92		9.52	31.92	None
03/19/92		9.01	32.43	None
04/21/92		9.70	31.74	None
05/12/92		10.29	31.15	None

See notes on Page 2 of 2.

TABLE 7
CUMULATIVE GROUNDWATER MONITORING DATA
ARCO Station 2035
Albany, California
(Page 2 of 2)

Well / Date	Elevation of Wellhead	Depth to Water	Elevation of Groundwater	Evidence of Product
MW-3cont.				
06/12/92		11.26	30.18	None
07/15/92		11.28	30.16	None
08/07/92		11.15	30.29	None
09/08/92		11.70	29.74	None
10/26/92		12.15	29.29	None
11/23/92		12.55	28.89	None
12/16/92		10.15	31.29	None
RW-1				
10/29/91	40.33	10.85	29.48	Sheen
11/07/91		11.97	28.36	0.01
11/14/91		11.03	29.30	0.01
01/19/92		10.22*	30.11*	3.26
02/19/92		8.49*	31.84*	2.14
03/19/92		8.50*	31.83*	0.50
04/21/92		9.68*	30.65	0.03
05/12/92		10.47	29.86	Product not measured
06/12/92		11.41	28.92	Product not measured
07/15/92		11.35	28.98	None
08/07/92		10.80*	29.53*	0.02
09/08/92		10.80*	29.53*	0.62
10/26/92		11.42*	28.91*	0.04
11/23/92		10.94	29.39	Sheen
12/16/92		9.78*	30.55*	0.51

Wellhead Elevation based on benchmark (B1198): A standard Bronze Disk in the sidewalk 0.8' behind the face of curb on the northerly side of Marin Avenue 6' +/- westerly of the curb return at the northeast corner of Marin Avenue and San Pablo Avenue at an elevation of 40.426 feet above mean sea level, City of Albany, California.

Depth-to-water measurements in feet below the top of the well casing.

*Adjusted water level due to product. The recorded thickness of the floating product was multiplied by 0.80 to obtain an approximate value for the displacement of water by the floating product. This approximate displacement value was then subtracted from the measured depth to water to obtain a calculated depth to water. These calculated groundwater depths were subtracted from surveyed wellhead elevations to calculate the differences in groundwater elevations.

TABLE 8
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF WATER SAMPLES - TPHg and BTEX
ARCO Station 2035
Albany, California
(Page 1 of 2)

WELL DATE	TPHg	B	T	E	X
MW-1					
10/29/91	620	76	69	15	60
03/19/92	6,500	2,600	89	42	290
06/12/92	2,900	1,100	25	21	15
09/08/92	820	350	<5*	<5*	<5*
10/26/92	190	68	<0.5	0.6	<0.5
1/13/93	430	130	5.3	5.0	9.0
MW-2					
10/29/91	<60	2.4	4.6	0.48	2.3
03/19/92	<50	6.8	0.9	<0.5	1.1
06/12/92	<50	<0.5	<0.5	<0.5	<0.5
09/08/92	<50	<0.5	<0.5	<0.5	<0.5
10/26/92	<50	<0.5	<0.5	<0.5	<0.5
1/13/93	<50	<0.5	<0.5	<0.5	<0.5
MW-3					
10/29/91	32	2.1	2.8	0.35	1.8
03/19/92	2,100	780	8.8	16	58
06/12/92	720	210	<2.5*	23	4.0
09/08/92	<50	5.3	<0.5	<0.5	<0.5
10/26/92	<50	0.6	<0.5	<0.5	<0.5
1/13/93	<50	1.1	<0.5	<0.5	
RW-1					
10/29/91	Not sampled--sheen				
03/19/92	Not sampled--floating product				
06/12/92	Not sampled--floating product				
09/08/92	Not sampled--floating product				
10/23/92	Not sampled--floating product				
1/13/93	Not sampled--floating product				
MCL:	—	1	—	680	1,750
DWAL:	—	—	100	—	—

Results in parts per billion (ppb).

TPHg: Total petroleum hydrocarbons as gasoline by EPA Method 5030/8015/8020.
B: benzene, T: toluene, E: ethylbenzene, X: total xylenes isomers
BTEX: Analyzed by EPA Method 5030/8015/8020.
<: Results reported below the laboratory detection limit.
*: Laboratory Raised Methods Reporting Limit (MRL) due to high analyte concentration requiring sample dilution.
MCL: State Maximum Contaminant Level (October 1990).
DWAL: State Drinking Water Action Level (October 1990).

TABLE 8
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF WATER SAMPLES - TPHg and BTEX
ARCO Station 2035
Albany, California
(Page 2 of 2)

WELL DATE	TPHg	B	T	E	X
MW-4 1/13/93	<50	<0.5	1.3	<0.5	1.6
MW-5 1/13/93	<50	<0.5	<0.5	<0.5	<0.5
MW-6 1/13/93	<50	<0.5	<0.5	<0.5	<0.5
MCL:	—	1	—	680	1,750
DWAL:	—	—	100	—	—

Results in parts per billion (ppb).

TPHg: Total petroleum hydrocarbons as gasoline by EPA Method 5030/8015/8020.
B: benzene, T: toluene, E: ethylbenzene, X: total xylenes isomers
BTEX: Analyzed by EPA Method 5030/8015/8020.
<: Results reported below the laboratory detection limit.
*: Laboratory Raised Methods Reporting Limit (MRL) due to high analyte concentration requiring sample dilution.
MCL: State Maximum Contaminant Level (October 1990).
DWAL: State Drinking Water Action Level (October 1990).

TABLE 9
CUMULATIVE RESULTS OF LABORATORY ANALYSES OF WATER SAMPLES
- TPHd, TOG, VOC, SVOC, PCB and Metals
ARCO Station 2035
Albany, California
(Page 1 of 1)

WELL DATE	TPHd	TOG	VOC	SVOC	PCB	Cd	Cr	Pb	Ni	Zn
MW-3										
10/29/91	NA	<5,000	ND[a]	NA	NA	<10	<10	<5	<50	45
03/19/92	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
06/12/92	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
09/08/92	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
10/26/92	<50	600	ND[b]	NA	NA	NA	NA	NA	NA	NA
12/01/92	NA	NA	NA	ND[c]	ND[d]	NA	NA	NA	NA	NA
1/13/93	<50	1.1[e]/0.78[f]	<0.5	NA	NA	NA	NA	NA	NA	NA
MCL:	—	—	—	—	—	10	50	50	—	—

Results in parts per billion (ppb).

TPHd: Total petroleum hydrocarbons as diesel by EPA Method 3510/California DHS LUFT Method.
TOG: Total oil and grease by Standard Method 5520 B&F or 5520 C&F.
VOC: Volatile organic compounds by EPA Method 624.
SVOC: Semivolatile organic compounds by EPA Method 3510/8270.
PCB: Polychlorinated biphenyls by EPA Method 3510/8080.
Cd: Cadmium by EPA Method 200.7.
Cr: Chromium by EPA Method 200.7.
Ni: Nickel by EPA Method 200.7.
Zn: Zinc by EPA Method 200.7.
Pb: Lead by EPA Method 3010.
NA: Not analyzed.
<: Results reported below the laboratory detection limit.
ND: Not detected; detection limit varied according to analyte.
[a]: All 37 compounds were nondetectable except for toluene (3.0 ppb).
[b]: All 41 compounds analyzed were nondetectable.
[c]: All 34 compounds analyzed were nondetectable.
[d]: All 7 compounds analyzed were nondetectable.
e: Total oil and grease by Standard Method 5520F.
f: Total oil and grease by Standard Method 5520C.
MCL: State Maximum Contaminant Level (October 1990).

TABLE 10
APPROXIMATE CUMULATIVE PRODUCT RECOVERED
ARCO Station 2035
Albany, California
(Page 1 of 1)

Well Date	Product Thickness (feet)	Product Recovered (gallons)
YEAR: 1992		
RW-1		
01/29/92	3.35	5.0
02/28/92	2.58	3.8
03/12/92	1.28	2.0
03/25/92	0.91	0.5
05/29/92	0.23	0.3
06/08/92	0.60	0.5
06/30/92	0.15	0.25
07/23/92	0.27	0.5
08/05/92	0.45	0.25
08/17/92	0.50	0.5
09/10/92	0.75	0.5
09/22/92	0.80	1.2
10/06/92	0.65	1.0
10/21/92	0.50	1.0
11/04/92	0.48	1.5
11/17/92	0.40	0.75
12/02/92	0.41	0.75
12/17/92	0.39	1.0
12/29/92	0.53	1.0
	1992 TOTAL:	22.30

Product measured and bailed by RESNA personnel.

APPENDIX C

Soil Boring and Well Construction Logs

UNIFIED SOIL CLASSIFICATION SYSTEM

MAJOR DIVISIONS		LTR	DESCRIPTION
Coarse-grained soils	Gravel and gravelly soils	GW	Well-graded gravels of gravel-sand mixtures, little or no fines
		GP	Poorly-graded gravels or gravel-sand mixtures, little or no fines
		GM	Silty gravels, gravel-sand-silt mixtures
		GC	Clayey gravels, gravel-sand-clay mixtures
	Sand and sandy soils	SW	Well-graded sand of gravelly sands, little or no fines
		SP	Poorly-graded sands or gravelly sands, little or no fines
		SM	Silty sands, sand-silt mixtures
		SC	Clayey sands, sand-clay mixtures

MAJOR DIVISIONS		LTR	DESCRIPTION
Fine-grained soils	Silts and clays LL<50	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity
		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
		OL	Organic silts and organic silt-clays of low plasticity
	Silts and clays LL>50	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils. Elastic silts
		CH	Inorganic clays of high plasticity, fat clays
		OH	Organic clays of medium to high plasticity, organic silts
Highly organic soils		PT	Peat and other highly organic soils

Depth through which sampler is driven

Relatively undisturbed sample

No sample recovered

Static water level observed in well

Initial water level observed in boring

S-10 Sample number

Sand pack

Bentonite annular seal

Neat cement annular seal

Caved native soil

Blank PVC

Machine-slotted PVC

P.I.D. Photoionization detector

BLOWS REPRESENT THE NUMBER OF BLOWS OF A 140-POUND HAMMER FALLING 30 INCHES TO DRIVE THE SAMPLER THROUGH EACH 6 INCHES OF AN 18-INCH PENETRATION.

DASHED LINES SEPARATING UNITS ON THE LOG REPRESENT APPROXIMATE BOUNDARIES ONLY. ACTUAL BOUNDARIES MAY BE GRADUAL. LOGS REPRESENT SUBSURFACE CONDITIONS AT THE BORING LOCATION AT THE TIME OF DRILLING ONLY.

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PROJECT NO. 69036-1

UNIFIED SOIL CLASSIFICATION SYSTEM AND SYMBOL KEY
ARCO Service Station No. 2035
Marin and San Pablo Avenues
Albany, California

PLATE
P - 3

Total depth of boring: 20 feet **Diameter of boring:** 8 inches **Date drilled:** 8-9-89

Casing diameter: N/A **Length:** N/A **Slot size:** N/A

Screen diameter: N/A **Length:** N/A **Material type:** N/A

Drilling Company: Exploration Geoservices **Driller:** Mike & Kurt

Method Used: Hollow-Stem Auger **Field Geologist:** Steve Bittman

Signature of Registered Professional:

Registration No.: **State:** CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0						
					Asphalt (6 inches) over baserock (6 inches).	
		12		CH	Silty clay with occasional sand, brown, black and orange mottled, damp, hard, high plasticity, noticeable odor.	
2	S-2	21	20			
		21				
4		16				
		35		CL	Gravelly clay with pebbles, brown, damp, hard, low plasticity, noticeable odor.	
	S-5	50	30			
6						
				GW	Sandy gravel with clay gravel, brown, moist, very dense, obvious odor.	
8						
		21				
		35				
10	S-10	42	400			
		22				
		34				
12	S-11.5	47	50			
		24				
	S-13	38	2	CH	Silty clay, slightly sand, light gray, orange and brown mottled, damp, hard, high plasticity, noticeable odor.	
14		50				
		12				
	S-15	16	0		Interbed with orange brown sandy silt, moist, hard, high plasticity.	
		21				
16					▽	
				GM	Silty gravel with pebbles, orange-brown, wet, very dense, noticeable odor.	
18						
		25				
	S-19.5	50	12			
20					Total Depth = 20 feet.	

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PROJECT NO. 69036-1

LOG OF BORING B - 1

ARCO Service Station No. 2035
Marin and San Pablo Avenues
Albany, California

PLATE

P - 4

Total depth of boring: 20–1/2 feet **Diameter of boring:** 8 inches **Date drilled:** 8–9–89

Casing diameter: N/A **Length:** N/A **Slot size:** N/A

Screen diameter: N/A **Length:** N/A **Material type:** N/A

Drilling Company: Exploration Geoservices **Driller:** Mike & Kurt

Method Used: Hollow–Stem Auger **Field Geologist:** Steve Bittman

Signature of Registered Professional: _____

Registration No.: _____ **State:** CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0						
					Asphalt (6 inches) over baserock (6 inches).	
2	S–2	8, 15, 23	2	CH	Silty clay, brown, blue and green mottled, moist, hard, high plasticity, noticeable odor.	
4				CL	Gravelly clay with clayey sand interbed, brown, black mottled, damp, very dense, noticeable odor.	
6	S–5	10, 25, 36	175			
8				GW	Sandy gravel with clay, brown and gray, moist, very dense, obvious odor.	
10	S–10	15, 36, 40	450			
12						
14	S–14.5	25, 50	25	CL	Sandy clay with silty gravel, gray, brown mottled, damp, hard, low plasticity, noticeable odor.	
16						
18				GW	Silty gravel with sand, brown and gray, wet, very dense, noticeable odor.	
20	S–20	27, 50	5			
					Total Depth = 20–1/2 feet.	

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PROJECT NO. 69036-1

LOG OF BORING B - 2

ARCO Service Station No. 2035
Marin and San Pablo Avenues
Albany, California

PLATE

P - 5

Total depth of boring: 20–1/2 feet **Diameter of boring:** 8 inches **Date drilled:** 8–9–89

Casing diameter: N/A **Length:** N/A **Slot size:** N/A

Screen diameter: N/A **Length:** N/A **Material type:** N/A

Drilling Company: Exploration Geoservices **Driller:** Mike & Kurt

Method Used: Hollow–Stem Auger **Field Geologist:** Steve Bittman

Signature of Registered Professional:

Registration No.: **State:** CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0						
					Asphalt (6 inches) over baserock (6 inches).	
2	S–2	9 15 18	8	CH	Silty clay with occasional small gravel, brown, gray mottled, damp, high plasticity, very stiff, noticeable odor.	
4		12 19		CL	Gravelly clay, brown, black mottled, damp, low plasticity, very stiff, noticeable odor.	
6	S–5	23	25			
8				SC	Clayey sand with gravel, gray, brown mottled, very dense, obvious odor.	
10	S–10	10 15 45	480			
12						
14	S–14.5	44 50	75	CL	Sandy clay, brown, gray mottled, damp, hard, medium plasticity, noticeable odor.	
16					▽	
18				GM	Silty gravel, brown, wet, very dense.	
20	S–20	35 50	.3			
					Total Depth = 20–1/2 feet.	

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PROJECT NO. 69036-1

LOG OF BORING B - 3

ARCO Service Station No. 2035
Marin and San Pablo Avenues
Albany, California

PLATE

P - 6

Total depth of boring: 19-1/2 feet **Diameter of boring:** 8 inches **Date drilled:** 8-9-89

Casing diameter: N/A **Length:** N/A **Slot size:** N/A

Screen diameter: N/A **Length:** N/A **Material type:** N/A

Drilling Company: Exploration Geoservices **Driller:** Mike & Kurt

Method Used: Hollow-Stem Auger **Field Geologist:** Steve Bittman

Signature of Registered Professional: _____

Registration No.: _____ **State:** CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0						
					Asphalt (6 inches) over baserock (6 inches).	
2	S-2	5, 10, 12	40	CH	Silty clay, gray, damp, high plasticity, very stiff, noticeable odor.	
4				CL	Gravelly clay, brown, damp, hard, medium plasticity, noticeable odor.	
6	S-5	10, 26, 8	100			
8						
10	S-10	11, 27, 39	540			
12						
14				SM	Silty sand with gravel, brown and gray, damp, hard, low plasticity, obvious odor.	
16	S-15	25, 45, 50	511			
18				SW	Gravelly sand with silt, brown, wet, very dense.	
20	S-19	50	1		Total Depth = 19-1/2 feet.	

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PROJECT NO. 69036-1

LOG OF BORING B - 4

ARCO Service Station No. 2035
Marin and San Pablo Avenues
Albany, California

PLATE

P - 7

Total depth of boring: 20–1/2 feet **Diameter of boring:** 8 inches **Date drilled:** 8–9–89

Casing diameter: N/A **Length:** N/A **Slot size:** N/A

Screen diameter: N/A **Length:** N/A **Material type:** N/A

Drilling Company: Exploration Geoservices **Driller:** Mike & Kurt

Method Used: Hollow–Stem Auger **Field Geologist:** Steve Bittman

Signature of Registered Professional:

Registration No.: **State:** CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
					Asphalt (6 inches) over baserock (6 inches).	
0				CH	Silty clay with some sand, gray–brown, moist, high plasticity, very stiff, noticeable odor.	
2	S–2	8 12 15	1			
4		13 45		CL	Gravelly clay with sand, yellow brown, damp, hard, low plasticity, noticeable odor.	
6	S–5	50	15			
8						
10	S–9.5	30 50	5	GW	Sandy gravel, clayey, yellow brown, moist, very dense, noticeable odor.	
12						
14		36 36		SC	Clayey sand with gravel, yellow brown, damp, very dense.	
16	S–15	43	0			
18						
20		30 40		CH	Silty clay, gray and brown, moist, hard, high plasticity.	
	S–20	50	0			
					Total Depth = 20–1/2 feet.	

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PROJECT NO. 69036-1

LOG OF BORING B - 5

ARCO Service Station No. 2035
Marin and San Pablo Avenues
Albany, California

PLATE

P - 8

Depth of boring: 18 feet Diameter of boring: 8 inches Date drilled: 6-25-91

Well depth: NA Material type: NA Casing diameter: NA

Screen interval: NA Slot size: NA

Drilling Company: Exceltech Driller: Gene & Richard

Method Used: Hollow-Stem Auger Field Geologist: Joel Coffman

Signature of Registered Professional: _____

Registration No.: _____ State: _____

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0						
					Asphalt.	
				SM	Silty sand, brown, dry, loose: fill.	
2				CL	Sandy clay, green-brown, dry to damp, medium plasticity, soft.	
4						
	S-5.5	14 23 30	0		Brown, low plasticity, stiff.	
6						
8						
10	S-10.5	11 12 22	0		Color change to green-brown.	
12						
14						
	S-15.5	12 15 33	0			
16	S-17	30 48 50	0	SC	Clayey sand, brown, moist, medium dense.	
				▽	Wet.	
18					Total Depth = 18 feet.	
20						

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PROJECT: 69036.03

LOG OF BORING B-6

ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE

B2

Depth of boring: 19-1/2 feet Diameter of boring: 8 inches Date drilled: 6-25-91

Well depth: NA Material type: NA Casing diameter: NA

Screen interval: NA Slot size: NA

Drilling Company: Exceltech Driller: Gene & Richard

Method Used: Hollow-Stem Auger Field Geologist: Joel Coffman

Signature of Registered Professional: _____

Registration No.: _____ State: _____

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0					Asphalt.	
				SM	Silty sand, brown, dry, loose: fill.	
2				CL	Sandy clay, dark brown, dry, medium plasticity, medium plasticity, soft.	
					Old concrete slab, possible part of old foundation.	
4				CL	Sandy clay, brown, dry to damp, low plasticity, very stiff.	
	S-5.5	30 40 30	0			
6						
8				GC	Clayey gravel, brown-gray, damp, dense.	
10	S-10.5	22 22 30	6.8	SC	Clayey sand, brown, damp, dense.	
12						
14				CL	Sandy clay, brown-olive, damp, low to medium plasticity, stiff.	
	S-15.5	11 11 18	0			
16	S-17	20 24 25	1.7			
18	S-18.5	25 40 50	0			
				SC ▽	Clayey sand, brown, damp, dense. Wet	
20					Total Depth = 18 feet.	

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PROJECT: 69036.03

LOG OF BORING B-7

ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE B3

Depth of boring: 30-1/2 feet Diameter of boring: 13 inches Date drilled: 10/15/91

Well depth: 29 feet Material type: Sch 80 PVC Casing diameter: 6 inches

Screen interval: 11 to 26 feet Slot size: 0.020-inch

Drilling Company: Exceltech Drilling Driller: Dan and Kenny

Method Used: Hollow-Stem Auger Field Geologist: Rob Campbell

Signature of Registered Professional:

Registration No.: RCE 044600 State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
					Paved area.	
0					Asphalt (3 inches) and baserock (9 inches).	
2				CH	Silty clay, black, moist, high plasticity; obvious product odor, abundant organics.	
4					PID alarm at 4 feet.	
6	S-6	7 15 20	5681	CL	Silty clay, dark gray mottled with green, moist, medium plasticity, hard; obvious product odor.	
8					Gradational color change from gray to brown.	
10	S-11	11 11 11	*	ML	(10/29/91) Gravelly silt, brown mottled with green, damp, low plasticity, very stiff; obvious product odor. Large caliche clasts.	
14						
16	S-16	15 21 28	*	SC	Clayey sand with some gravel, brown mottled with orange damp, dense; noticeable product odor.	
18					Encountered water at 19 feet (10/15/91).	
20	S-21	19 32 45	0	SM	Increasing sand. Silty sand with gravel, brown, damp, very dense.	
					(Section continues downward)	

*Hydrocarbon vapors overloaded OVM.

RESNA

PROJECT: 69036.02

LOG OF BORING B-8/RW-1

ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE 5

Depth	Sample No.	BLOWS	P.I.D.	USCS Code	Description	Well Const.
22				SM	Silty sand with gravel, brown, damp, very dense.	
24						
26	S-26	11 18 25	10			
28				CL	Silty clay, gray with brown streaks, damp to moist, medium, plasticity, hard; noticeable product odor.	
30	S-30	30 50	0	SM	Silty sand with gravel, brown, damp to wet, very dense, no odor.	
32					Total depth = 30-1/2 feet.	
34						
36						
38						
40						
42						
44						
46						
48						
50						

RESNA

PROJECT 69036.02

LOG OF BORING B-8/RW-1
ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE 6

Depth of boring: 31-1/2 feet Diameter of boring: 13 inches Date drilled: 10/14/91

Well depth: 30 feet Material type: Sch 40 PVC Casing diameter: 4 inches

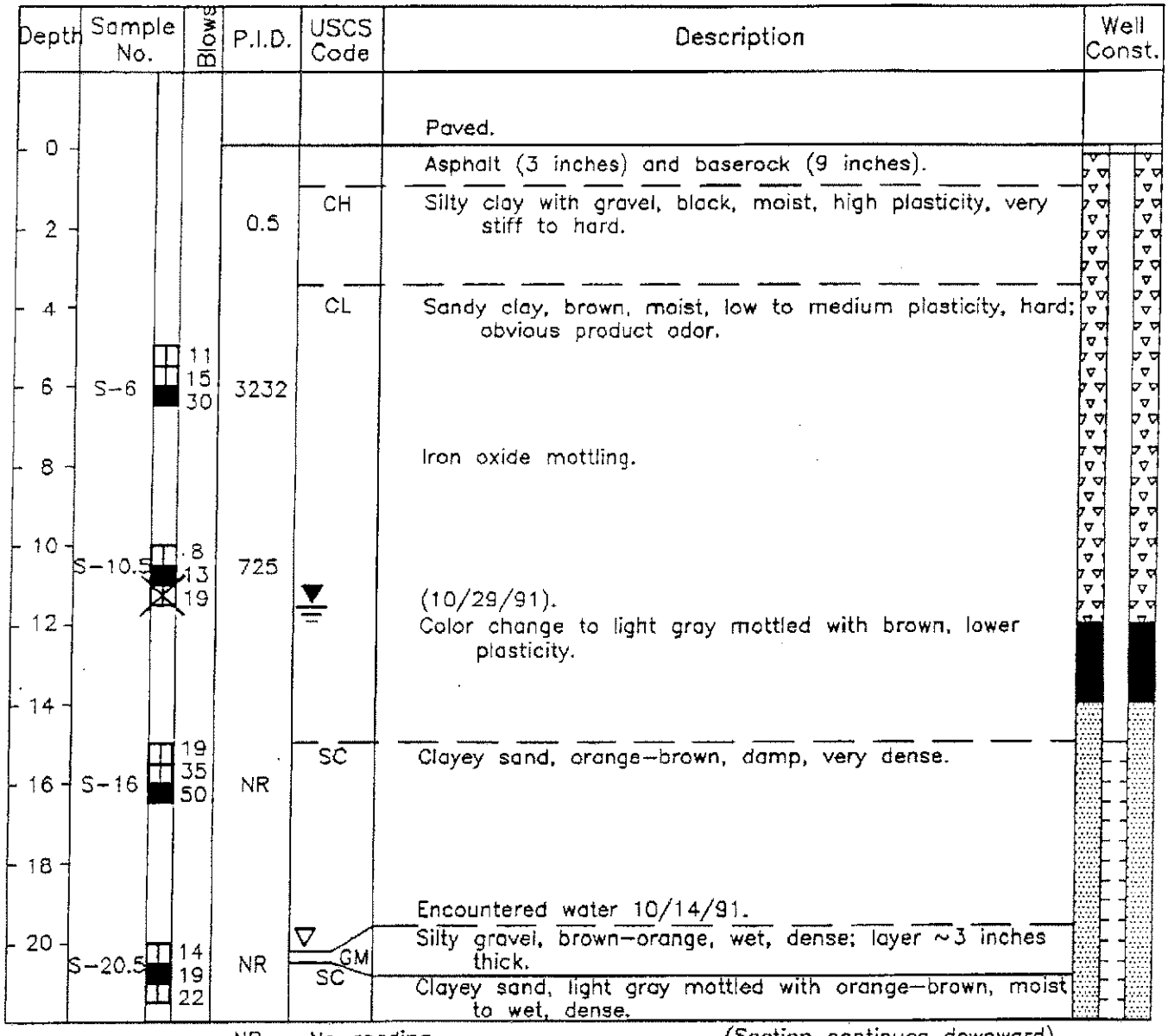
Screen interval: 15 to 30 feet Slot size: 0.020-inch

Drilling Company: Exceltech Drilling Driller: Don and Kenny

Method Used: Hollow-Stem Auger Field Geologist: Rob Campbell

Signature of Registered Professional:

Registration No.: RCE 044600 State: CA



NR = No reading.

(Section continues downward)

RESNA	LOG OF BORING B-9/MW-1 ARCO Station 2035 1001 San Pablo Avenue Albany, California	PLATE 7
PROJECT: 69036.02		

Depth	Sample No.	BLOWS	P.I.D.	USCS Code	Description	Well Const.
22				SC	Clayey sand, light gray mottled with orange-brown, moist to wet, dense.	
24						
26	S-26	19 35 40	NR		Alternating seams of wet and moist.	
28						
					Smoother drilling at 29 feet.	
30	S-31	9 12 19	NR	CL	Silty clay, gray, damp, medium plasticity, very stiff.	
32					Total depth = 31-1/2 feet.	
					NR = No reading.	
34						
36						
38						
40						
42						
44						
46						
48						
50						

RESNA

PROJECT 69036.02

LOG OF BORING B-9/MW-1
ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE 8

Depth of boring: 33 feet Diameter of boring: 10 inches Date drilled: 10/16/91

Well depth: 29 feet Material type: Sch 40 PVC Casing diameter: 4 inches

Screen interval: 20 to 29 feet Slot size: 0.020-inch

Drilling Company: Exceltech Drilling Driller: Don and Kenny

Method Used: Hollow-Stem Auger Field Geologist: Steve Strausz

Signature of Registered Professional:

Registration No.: RCE 044600 State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
					Asphalt surface.	
0					Asphalt (2 inches) and baserock (6 inches).	
				CL	Silty clay, dark brown, damp, medium plasticity, stiff.	
2					Color change to lighter gray at 3 feet.	
4					Very stiff.	
	S-5.5	18 23 26	11.8			
6				GM	Silty gravel with minor clay, fine gravel, dark blue-gray, damp, very dense; noticeable product odor.	
8				CL	Smooth drilling at 8 feet. Sandy clay, gray, damp to moist, medium plasticity, hard; minor fine gravel; noticeable product odor.	
10	S-10.5	9 13 19	73.4	▼	(10/29/91).	
12					Rougher drilling at 12 feet.	
	S-13	11 26 30	274	GP	Sandy gravel with clay, brown, moist, dense; obvious product odor.	
14				SC	Clayey sand, gray, moist, very dense.	
	S-15.5	7 11 12	31.9	ML	Clayey silt, light brown, very moist, medium plasticity, very stiff; noticeable product odor.	
16						
18						
20	S-20.5	8 12 17	2.3	▽	Encountered water 10/16/91.	
				SM	Silty sand, fine-grained, light gray, wet, dense.	

(Section continues downward)

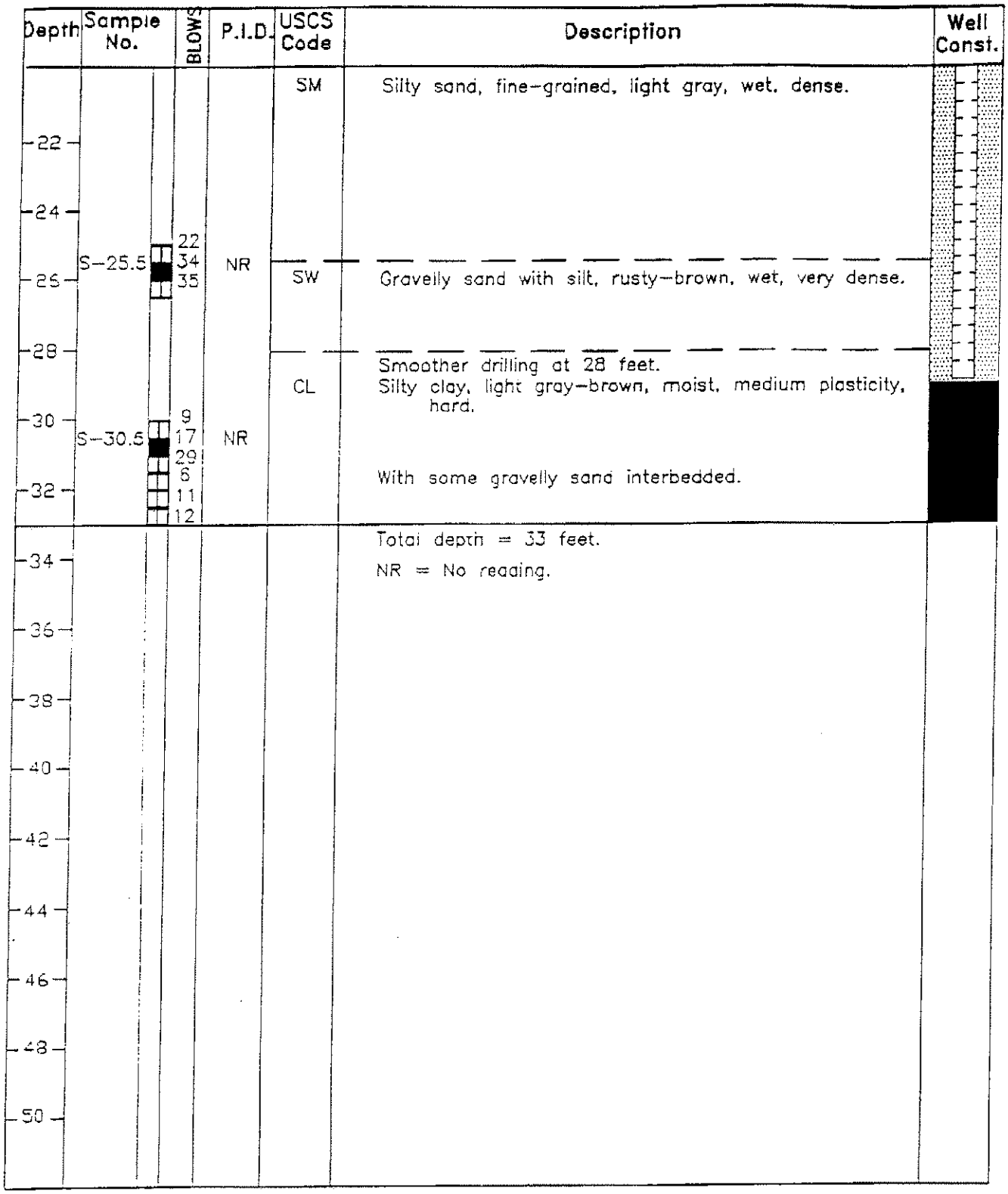
RESNA

PROJECT: 69036.02

LOG OF BORING B-10/MW-2

ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE 9



RESNA

PROJECT 69036.02

LOG OF BORING B-10/MW-2
ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE
10

Depth of boring: 34-1/2 feet Diameter of boring: 10 inches Date drilled: 10/16/91

Well depth: 32-1/2 feet Material type: Sch 40 PVC Casing diameter: 4 inches

Screen interval: 12-1/2 to 32-1/2 feet Slot size: 0.020-inch

Drilling Company: Exceltech Drilling Driller: Don and Kenny

Method Used: Hollow-Stem Auger Field Geologist: Rob Campbell

Signature of Registered Professional:

Registration No.: RCE 044600 State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
					Asphalt surface.	
0					Asphalt (3 inches) and baserock (9 inches).	
2				CH	Silty clay, black, moist, high plasticity, stiff to very stiff; noticeable product odor.	
4						
6	S-6	5 13 14	NR	CL	Silty clay with some gravel, brown with green mottling, moist, low to medium plasticity, very stiff; noticeable product odor.	
8						
10	S-11	6 8 10	NR		(10/29/92).	
12				ML	Clayey silt with medium-grained sand, brown with green mottling, moist, medium plasticity, very stiff, noticeable product odor.	
14						
16	S-16	6 8 10	NR	SC	Clayey sand, gray with orange mottling, damp, medium dense, noticeable product odor.	
18						
20	S-21	8 11 23	NR		(Section continues downward)	

NR = No reading.

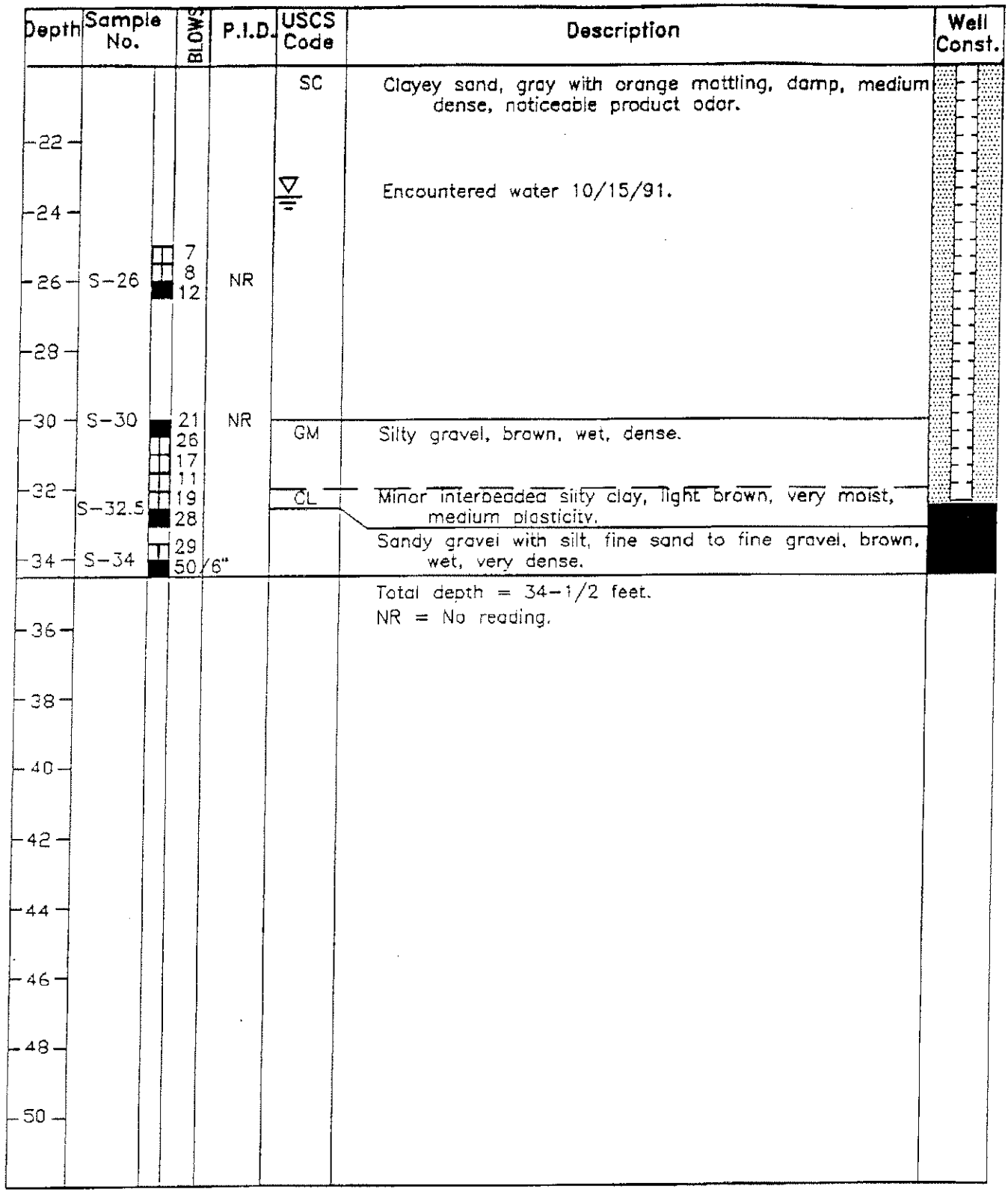
RESNA

PROJECT: 69036.02

LOG OF BORING B-11/MW-3

ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE 11



RESNA

PROJECT 69036.02

LOG OF BORING B-11/MW-3
ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE
12

Depth of boring: 21-1/2 feet Diameter of boring: 8 inches Date drilled: 08/20/92

Well depth: N/A Material type: N/A Casing diameter: N/A

Screen interval: N/A Slot size: N/A

Drilling Company: Bayland Drilling Driller: Frank and John

Method Used: Hollow-Stem Auger Field Geologist: Barbara Sieminski

Signature of Registered Professional:

Registration No.: RCE 044600 State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
					Asphalt-covered surface.	
0					Asphalt (4 inches).	
				GP	Sandy gravel, gray, damp, dense: baserock.	
				CL	Sandy clay, dark brown, damp, medium plasticity, stiff.	
2					Color change to brown.	
4	S-4.5	5 10 15	7.3			
				GC	Clayey gravel with sand, brown, damp, medium dense.	
6				CL	Sandy clay with fine gravel, brown, damp, medium plasticity, very stiff.	
	S-7.5	11 12 13	44			
8				GC	Clayey gravel with sand, gray, damp, medium dense; product odor.	
	S-9	4 5 10	86			
10						
12				SC	Clayey sand with gravel, fine-grained sand, light gray with orange mottling, moist, medium dense.	
14	S-14.5	7 11 13	4			
16						
				ML	Sandy silt, orange-brown, moist, low plasticity, stiff.	
18	S-19	3 6 10	0			
20					Increasing sand, moist.	
	S-20.5	8 10 16	0	▽ SC	Clayey sand with gravel, olive-orange, very moist, medium dense.	
					Total depth = 21-1/2 feet.	

RESNA
Working to Restore Nature

PROJECT 69036.05

LOG OF BORING B-12

ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE 4

Depth of boring: 21-1/2 feet Diameter of boring: 8 inches Date drilled: 08/19/92

Well depth: N/A Material type: N/A Casing diameter: N/A

Screen interval: N/A Slot size: N/A

Drilling Company: Bayland Drilling Driller: Frank and Robert

Method Used: Hollow-Stem Auger Field Geologist: Barbara Sieminski

Signature of Registered Professional

Registration No. RCE 044600 State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0					Asphalt-covered surface.	
					Asphalt (4 inches).	
				GP	Sandy gravel, gray, damp, dense: baserock.	
2				CH	Sandy clay, dark brown, damp, high plasticity, soft.	
				CL	Silty clay, brown, damp, medium plasticity, stiff.	
4	S-4.5	2 7 17	0			
				GC	Clayey gravel with sand, brown, damp, medium dense; noticeable product odor.	
6				CL	Sandy clay, brown, damp, medium plasticity, stiff; noticeable product odor.	
	S-7.5	5 10 14	47			
8	S-9	7 9 11	17	GC	Clayey gravel with sand, brown mottled gray, damp, medium dense.	
10						
12				SC	Clayey sand with gravel, fine-grained sand, light gray with orange mottling, dense.	
14	S-14.5	6 14 18	0			
16						
	S-17.5	11 20 21	0			
18					With sandy silt lenses.	
	S-19	4 6 10	0			
	S-20	14 17 19	0		Increasing gravel.	
20					Decreasing clay, wet.	
					Total depth = 21-1/2 feet.	

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PROJECT 69036.05

LOG OF BORING B-13
ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE 5

Depth of boring: 18-1/2 feet Diameter of boring: 10 inches Date drilled: 08/20/92

Well depth: 17 feet Material type: Sch 40 PVC Casing diameter: 4 inches

Screen interval: 5 to 17 feet Slot size: 0.100-inch

Drilling Company: Bayland Drilling Driller: Frank and John

Method Used: Hollow-Stem Auger Field Geologist: Barbara Sieminski

Signature of Registered Professional:

Registration No.: RCE 044600 State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
					Concrete.	
0					Concrete (7 inches).	
				GP	Sandy gravel, gray, damp, dense; baserock.	
				CH	Silty clay, dark brown, damp, high plasticity, soft; product odor.	
2			146			
				CL	Sandy clay, trace fine gravel, brown, damp, medium plasticity, very stiff; product odor.	
4						
	S-5.5	5 8 9	709			
6						
8						
				SC	Clayey sand with gravel, fine- to coarse-grained sand, dark gray, damp, loose; obvious product odor.	
10	S-10.5	5 5 5	576			
				CL	Gravelly clay with sand, brown mottled gray, moist, low plasticity, stiff; product odor.	
12						
14						
				SC/ML	Clayey sand, fine-grained, with clayey silt lenses, light gray mottled orange, moist, medium dense; noticeable product odor.	
	S-15.5	2 4 8	59			
16						
	S-17.5	7 24 26	12		With gravel, less clay, orange-brown.	
18						
					Total Depth = 18-1/2 feet.	
20						

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LOG OF BORING B-14/VW-1

ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE 6

Depth of boring: 17-1/2 feet Diameter of boring: 10 inches Date drilled: 08/19/92

Well depth: 17 feet Material type: Sch 40 PVC Casing diameter: 4 inches

Screen interval: 5 to 17 feet Slot size: 0.100-inch

Drilling Company: Bayland Drilling Driller: Frank and Robert

Method Used: Hollow-Stem Auger Field Geologist: Barbara Sieminski

Signature of Registered Professional:

Registration No.: RCE 044600 State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0					Asphalt-covered surface.	
					Asphalt (4 inches).	
				GP	Sandy gravel, brown, damp, dense: baserock.	
2				CL/CH	Silty clay, black, damp, medium to high plasticity, stiff; product odor.	
4				CL	Silty clay with sand and fine gravel, brown mottled gray, damp, medium plasticity, very stiff; product odor.	
6	S-5.5	4 8 12	364			
8	S-8.5	8 10 12	522	SC	Clayey sand, fine- to coarse-grained, grayish-brown, moist, medium dense; product odor.	
10	S-10	5 7 11	726	ML	Gravelly silt with sand, brown, moist, low plasticity, very stiff; obvious product odor.	
12	S-12	5 20 14			Color change to brown mottled orange, damp.	
14	S-13.5	7 11 20	610	SC/ML	Clayey sand, fine-grained, with sandy silt lenses, greenish brown, moist, dense; product odor.	
	S-15	7 19	65			
16		20 11 19 24	94		Increasing sand, grayish-brown.	
18					Total depth = 17-1/2 feet.	
20						

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PROJECT 69036.05

LOG OF BORING B-15/VW-2

ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE 7

Depth of boring: 15-1/2 feet Diameter of boring: 10 inches Date drilled: 08/19/92

Well depth: 9-1/2 feet Material type: Sch 40 PVC Casing diameter: 4 inches

Screen interval: 4-1/2 to 9-1/2 feet Slot size: 0.100-inch

Drilling Company: Bayland Drilling Driller: Frank and Robert

Method Used: Hollow-Stem Auger Field Geologist: Barbara Sieminski

Signature of Registered Professional:

Registration No.: RCE 044600 State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0					Asphalt-covered surface.	
					Asphalt (4 inches).	
				GP	Sandy gravel, gray, damp, dense: baserock.	
2				CL	Sandy clay, brown, moist, medium plasticity, very soft; product odor.	
4	S-4.5	1 1 1	74			
6						
8					▼	
10	S-10	1 1 2	142	▽SM	Silty sand, fine-grained, dark gray, wet, very loose; product odor.	
12					Some gravel.	
14	S-14.5	2 3 4	7.7	CL	Silty clay with sand, light gray mottled orange, damp to moist, low plasticity, firm.	
16					Total depth = 15-1/2 feet.	
18						
20						

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LOG OF BORING B-16/VW-3
ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE 8

Depth of boring: 18-1/2 feet Diameter of boring: 10 inches Date drilled: 08/20/92

Well depth: 17 feet Material type: Sch 40 PVC Casing diameter: 4 inches

Screen interval: 5 to 17 feet Slot size: 0.100-inch

Drilling Company: Bayland Drilling Driller: Frank and John

Method Used: Hollow-Stem Auger Field Geologist: Barbara Sieminski

Signature of Registered Professional:

Registration No.: RCE 044600 State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
					Concrete.	
0					Concrete (7 inches).	
				GP	Sandy gravel, brown, damp, dense; baserock.	
2				CH	Silty clay, dark brown, damp, high plasticity, firm.	
4				CL	Sandy clay, brown, damp, medium plasticity, very stiff; obvious product odor.	
6	S-5.5	5 10 14	592		Increasing sand, with fine gravel, grayish-brown.	
8						
10	S-10.5	5 6 6	854	SC	Clayey sand, fine-grained, gray, damp to moist, medium dense; product odor.	
12				CL	Gravelly clay with sand, brown mottled gray, moist, low plasticity, stiff; product odor.	
14				SC/ML	Clayey sand, fine-grained, with clayey silt lenses, light gray mottled orange, moist, medium dense; noticeable product odor.	
16	S-15.5	6 8 10	80			
	S-17.5	1 18 30	225		Less clay, with gravel, orange-brown.	
18					Total depth = 18-1/2 feet.	
20						

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LOG OF BORING B-17/VW-4
ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE 9

Depth of boring: 16-1/2 feet Diameter of boring: 10 inches Date drilled: 08/21/92

Well depth: 14-1/2 feet Material type: Sch 40 PVC Casing diameter: 4 inches

Screen interval: 4-1/2 to 14-1/2 feet Slot size: 0.100-inch

Drilling Company: Bayland Drilling Driller: Frank and John

Method Used: Hollow-Stem Auger Field Geologist: Barbara Sieminski

Signature of Registered Professional

Registration No.: RCE 044600 State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
					Asphalt-covered surface.	
0					Asphalt (4 inches).	
				GP	Sandy gravel, gray, damp, dense: baserock.	
2				CL/CH	Silty clay, dark brown, damp, medium to high plasticity, firm.	
4				CL	Sandy clay, brown, damp, medium plasticity, stiff.	
	S-5.5	7 12 12	39	GC	Clayey gravel with sand, grayish-brown, damp, medium dense.	
6						
8						
10					Increasing sand.	
	S-10.5	12 10 8	143			
12				CL	Gravelly clay with sand, grayish-brown, damp to moist, low plasticity, very stiff; product odor.	
14						
	S-15.5	18 12 18	896	SC	Clayey sand with gravel, fine-grained sand, light gray mottled orange, moist, medium dense; product odor.	
16					Total depth = 16-1/2 feet.	
18						
20						

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LOG OF BORING B-18/VW-5
ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE 10

Depth of boring: 16-1/2 feet Diameter of boring: 10 inches Date drilled: 08/21/92

Well depth: 12-1/2 feet Material type: Sch 40 PVC Casing diameter: 4 inches

Screen interval: 5 to 12-1/2 feet Slot size: 0.100-inch

Drilling Company: Bayland Drilling Driller: Frank and John

Method Used: Hollow-Stem Auger Field Geologist: Barbara Sieminski

Signature of Registered Professional:

Registration No.: RCE 044600 State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0					Asphalt-covered surface.	
					Asphalt (4 inches).	
				GP	Sandy gravel, gray, damp, dense: baserock.	
2				CL/CH	Silty clay, black, damp, medium to high plasticity, stiff; product odor.	
4				CL	Silty clay, brownish-gray, moist, medium plasticity, very stiff; noticeable product odor.	
					Color change to brown.	
6	S-5.5	6 12 21	43	GC	Clayey gravel with sand, grayish-brown, moist, dense; noticeable product odor.	
8				CL	Silty clay, trace fine gravel, brown, damp, medium plasticity, stiff.	
10	S-10.5	3 6 9	0		With clayey sand lenses.	
12					▽	
14				SC/CL	Clayey sand, fine-grained, with sandy clay lenses, brown, wet, medium dense.	
16	S-15.5	3 5 8	56			
					Total depth = 16-1/2 feet.	
18						
20						

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LOG OF BORING B-19/VW-6

ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE 11

Depth of boring: 29 feet Diameter of boring: 10 inches Date drilled: 11/24/92

Well depth: 25-1/2 feet Material type: Sch 40 PVC Casing diameter: 4 inches

Screen interval: 8-1/2 to 25-1/2 feet Filter pack: #3 Sand Slot size: 0.020-inch

Drilling Company: Bayland Drilling Driller: John and Tom

Method Used: Hollow-Stem Auger Field Geologist: Barbara Sieminski

Signature of Registered Professional:

Registration No.: CEG 1463 State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
					Asphalt-covered surface.	
0				GC	Asphalt (4 inches).	
					Clayey gravel, brown, damp, dense: baserock.	
2				ML	Sandy silt with clay, dark brown, damp, low plasticity, stiff.	
4				CL	Sandy clay, brown, damp, medium plasticity, very stiff.	
6	S-5.5	5 8 11	0	SC	Clayey sand, fine- to medium-grained, trace fine gravel, brown, damp, medium dense.	
8						
10	S-9.5	11 12 14	0		Increasing gravel.	
	S-11	3 8 8	0	GC	Clayey gravel with sand, brown mottled orange and black, moist, medium dense.	
12					▼	
14					▽	
				SP≡SC	Gravelly sand with clay, medium- to coarse-grained sand, brown, very moist to wet, medium dense.	
16	S-15.5	5 8 10	0			
18	S-18.5	6 9 10	0	SM/ML	Silty sand, fine-grained, light gray mottled orange, wet, medium dense, interbedded with sandy silt and clay, light gray mottled orange, moist to wet, low plasticity, very stiff.	
20						

(Section continues downward)

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LOG OF BORING B-20/MW-4
ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE 5

Depth	Sample No.	BLOWS	P.I.D.	USCS Code	Description	Well Const.
22				SM/ML	Silty sand, fine-grained, light gray mottled orange, wet, medium dense; interbedded with sandy silt and clay, light gray mottled orange, moist to wet, low plasticity, very stiff.	
24	S-24.5	10 11 12	0		Increasing silt, moist.	
26	S-26.5	8 15	0	ML	Clayey silt, light gray mottled orange, damp, low plasticity, very stiff.	
28	S-28	25 10 25 50/6"	0	SP	Gravelly sand, fine- to medium-grained sand, orange-brown, damp, dense.	
30					Total depth = 29 feet.	
32						
34						
36						
38						
40						
42						
44						
46						
48						
50						

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LOG OF BORING B-20/MW-4
ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE
6

Depth of boring: 26-1/2 feet Diameter of boring: 10 inches Date drilled: 11/24/92

Well depth: 25 feet Material type: Sch 40 PVC Casing diameter: 4 inches

Screen interval: 8-1/2 to 25 feet Filter pack: #3 Sand Slot size: 0.020-inch

Drilling Company: Bayland Drilling Driller: John and Tom

Method Used: Hollow-Stem Auger Field Geologist: Barbara Sieminski

Signature of Registered Professional:

Registration No.: CEG 1463 State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
					Asphalt-covered surface.	
0				GP	Asphalt (4 inches).	
					Sandy gravel, gray, damp, dense: baserock.	
2				CL	Sandy clay, dark brown, damp, medium plasticity, stiff.	
					Color change to brown.	
4						
6	S-5.5	4 6 9	0			
				GC	Clayey gravel with sand, brown with black and orange mottling, damp, medium dense.	
8						
10	S-10.5	9 10 14	0			
12						
				SP=SC	Gravelly sand with clay, fine- to medium-grained sand, orange-brown, very moist to wet, medium dense.	
14						
16	S-15.5	6 9 11	0			
18						
20	S-20.5	15 25 30	0			

(Section continues downward)

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LOG OF BORING B-21/MW-5

ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE 7

Depth	Sample No.	BLOWS	P.I.D.	USCS Code	Description	Well Const.
22				SP–SC	Gravelly sand with clay, fine– to medium–grained sand, orange–brown, very moist to wet, medium dense.	
24				SM/ML	Silty sand, fine–grained, light gray mottled orange, moist, medium dense; interbedded with sandy silt and clay, light gray mottled orange, damp, low plasticity, very stiff.	
26	S–26	8 11 12	0	ML	Clayey silt, light gray mottled orange, damp, low plasticity, very stiff.	
					Total depth = 26–1/2 feet.	
28						
30						
32						
34						
36						
38						
40						
42						
44						
46						
48						
50						

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PROJECT 69036.07

LOG OF BORING B–21/MW–5
ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE
8

Depth of boring: 26-1/2 feet Diameter of boring: 8 inches Date drilled: 11/25/92

Well depth: 25 feet Material type: Sch 40 PVC Casing diameter: 2 inches

Screen interval: 8 to 25 feet Filter pack: #3 Sand Slot size: 0.020-inch

Drilling Company: Bayland Drilling Driller: John and Tom

Method Used: Hollow-Stem Auger Field Geologist: Barbara Sieminski

Signature of Registered Professional:

Registration No.: CEG 1463 State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
					Concrete surface.	
0				GP	Concrete (2 inches).	
				ML	Sandy gravel, grayish-brown, damp, dense: baserock.	
2				CL	Sandy silt, dark brown, damp, low plasticity, stiff; with roots.	
					Sandy clay, brown, damp, medium plasticity, very stiff; with roots.	
4						
6	S-5.5	8 10 15	0			
8				SP-SC	Gravelly sand with clay, fine- to medium-grained sand, brown, damp, medium dense.	
10	S-9.5	8 15 11	0			
		10		SC	Clayey sand, fine-grained, light brown, damp, medium dense.	
12	S-11.5	15 14	0			
				GC	Clayey gravel with sand, brown mottled orange, moist, medium dense.	
14				SP	Gravelly sand, medium-grained sand, brown, wet, medium dense.	
	S-15.5	6 7 9	0			
16				SM/ML	Silty sand, fine-grained, light gray mottled orange, wet, medium dense; interbedded with sandy silt and clay, light gray mottled orange, moist to wet, low plasticity, stiff.	
18						
20	S-20.5	8 10 14	0			

(Section continues downward)

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LOG OF BORING B-22/MW-6
ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE 9

Depth	Sample No.	BLOWS	P.I.D.	USCS Code	Description	Well Const.
22				SM/ML	Silty sand, fine-grained, light gray mottled orange, wet, medium dense; interbedded with sandy silt sand clay, light gray mottled orange, moist to wet, low plasticity, stiff. With gravel.	
24						
26	S-26	5 6 7	0	ML	Clayey silt, light gray mottled orange, damp to moist, low plasticity, stiff.	
					Total depth = 26-1/2 feet.	
28						
30						
32						
34						
36						
38						
40						
42						
44						
46						
48						
50						

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LOG OF BORING B-22/MW-6
ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE
10

Total depth of boring: 15-1/2 feet
Diameter of boring: 10 inches
Date drilled: 6-16-93
Drilling Company: Exploration Geoservices
Driller: Dave and Dennis
Drilling method: Hollow-Stem Auger

Casing diameter: 4 inches
Casing material: Sch 40 PVC
Slot size: 0.10-inch
Sand size: 3/8" pea gravel
Screen Interval: 6 feet to 15 feet
Field Geologist: Erin McLucas

Signature of Registered Professional: _____

Registration No.: CEG 1463 State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0				CL	Concrete (7 inches).	
2					Silty clay, black, damp, medium plasticity, stiff.	
4				SC	Clayey sand, trace gravel, tan, damp, dense; abundant black rootlets.	
6	S-5					
8				GP	Sandy gravel, tan to orange, damp, very dense.	
10	S-10			GC	Clayey gravel, olive, damp, very dense.	
12						
14				CL	Sandy clay with silt, light gray to olive with orange mottling, damp, medium plasticity, hard; tan rootlets.	
16	S-15				Total Depth = 15-1/2 feet.	
18						
20						
22						
24						
26						
28						
30						
32						
34						
36						
38						
40						

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LOG OF BORING B-23/VW-7
ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE
A-2

Total depth of boring:	15-1/2 feet	Casing diameter:	4 inches
Diameter of boring:	10 inches	Casing material:	Sch 40 PVC
Date drilled:	6-15-93	Slot size:	0.10-inch
Drilling Company:	Exploration Geoservices	Sand size:	3/8" pea gravel
Driller:	John and Dennis	Screen interval:	6 feet to 15 feet
Drilling method:	Hollow-Stem Auger	Field Geologist:	Erin McLucas

Signature of Registered Professional: _____

Registration No.: CEG 1463 State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
				GP	Asphalt (4 inches).	
2				CL	Sandy gravel, brown, damp, dense.	
					Silty clay, dark brown to black, damp, medium plasticity, stiff.	
4				GC	Clayey gravel, fine, orange-brown, damp, very dense.	
6	S-6	14 50/ 6				
8						
10	S-10.5	10 14 30				
12				CL	Silty clay, gray with orange mottling, damp, medium plasticity, hard. With sand.	
14	S-15	13 48 40		GC	Clayey gravel, orange-brown, damp, very dense.	
16					Total Depth = 15 feet.	
18						
20						
22						
24						
26						
28						
30						
32						
34						
36						
38						
40						

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PROJECT: 69036.10

LOG OF BORING B-24/VW-8
ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE
A-3

Total depth of boring:	15-1/2 feet	Casing diameter:	4 inches
Diameter of boring:	10 inches	Casing material:	Sch 40 PVC
Date drilled:	6-21-93	Slot size:	0.10-inch
Drilling Company:	Exploration Geoservices	Sand size:	3/8" pea gravel
Driller:	John and Dennis	Screen Interval:	6 feet to 15 feet
Drilling method:	Hollow-Stem Auger	Field Geologist:	Erin McLucas

Signature of Registered Professional: _____

Registration No.: CEG 1463 State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0					Concrete (6-1/2 inches).	
2				CL	Silty clay, dark brown to black, damp, medium plasticity, stiff.	
4				GP	Sandy to clayey gravel, fine grained, brown, damp, very dense.	
6	S-5.5					
8				CL	Silty clay, light gray to blue, damp, medium plasticity, hard.	
10	S-9.5			GP-GC	Sandy to clayey gravel, fine grained, brown to olive, damp, very dense.	
12						
14				CL	Silty clay, light gray to olive with orange and black mottling, damp, medium plasticity, hard.	
	S-15					
16					Total Depth = 15-1/2 feet.	
18						
20						
22						
24						
26						
28						
30						
32						
34						
36						
38						
40						

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PROJECT: 69036.10

LOG OF BORING B-25/VW-9
ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE
A-4

Total depth of boring:	32-1/2 feet	Casing diameter:	2 inches
Diameter of boring:	12 inches	Casing material:	Sch 40 PVC
Date drilled:	6-16-93	Slot size:	0.10-inch/0.020-inch
Drilling Company:	Exploration Geoservices	Sand size:	3/8" Pea gravel/No. 3 Sand
Driller:	Dave and Dennis	Screen Interval:	5 to 15 feet/29 to 31 feet
Drilling method:	Hollow-Stem Auger	Field Geologist:	Erin McLucas

Signature of Registered Professional: _____

Registration No.: CEG 1463 State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0					Concrete (7 inches).	
2				CL	Silty clay, black, damp, medium plasticity, stiff.	
4					Tan to olive.	
6	S-5			GP	Sandy gravel, orange-brown, damp, very dense.	
8				GP-GC	With clay.	
10	S-10			CL	Silty clay with fine sand, light gray, damp, medium plasticity, hard.	
12						
14				CL	Sandy clay, light gray with brown mottling, damp, medium plasticity, hard.	
16	S-15			GP-GC	Sandy gravel with clay, orange-brown, damp, very dense.	
18				▽		
20	S-19				Wet.	
22				SM	Silty sand, fine to medium grained, tan to olive with orange mottling, wet, very dense.	
24						
26	S-25			GP/GC	Sandy to clayey gravel, orange-brown, wet, very dense.	
28						
30						
32	S-31			CL	Silty clay, gray with orange mottling, damp, medium plasticity, hard.	
34					Total Depth = 32-1/2 feet.	
36						
38						
40						

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PROJECT: 69036.10

LOG OF BORING B-26/AS-1
ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE
A-5

Total depth of boring:	32 feet	Casing diameter:	2 inches
Diameter of boring:	12 inches	Casing material:	Sch 40 PVC
Date drilled:	6-16-93	Slot size:	0.10-inch/0.020-inch
Drilling Company:	Exploration Geoservices	Sand size:	3/8" Pea gravel/No. 3 Sand
Driller:	John and Dennis	Screen Interval:	5 to 15 feet/29-1/2 to 31-1/2 feet
Drilling method:	Hollow-Stem Auger	Field Geologist:	Erin McLucas

Signature of Registered Professional: _____

Registration No.: CEG 1463 State: CA

Depth	Sample No.	Blows	P.I.D.	USCS Code	Description	Well Const.
0				GP/GW	Asphalt (4 inches).	
2				GP/GW	Sandy gravel, medium brown, damp, dense; baserock.	
4				CL	Silty clay, brown to black, damp, medium plasticity, stiff.	
6	S-5	21, 40, 35		CL	Brown to olive, trace sand and gravel, hard.	
8	S-7.5	21, 48, 37		SM	Silty sand with gravel, brown to olive, damp, very dense.	
10	S-10	10, 18, 20		SP	Gravelly sand, coarse grained, gray to olive, damp, very dense.	
12	S-12	11, 15, 24		SP	Sand, fine grained with gravel, brown to gray and olive, dense.	
14	S-15	9, 18, 24		GP	Sandy gravel, brown to olive damp, dense.	
16	S-16.5	10, 11, 16		SM	Silty sand, olive with orange mottling, damp, dense.	
18		13, 35, 50/6		GP	Sandy gravel, orange brown, damp to wet; with product.	
20	S-19.5	22, 50, 50/4		CL	Silty clay, light gray to olive with orange mottling, damp, medium plasticity, very stiff.	
22		20, 31, 50/4		GP	Sandy gravel, orange-brown, damp, very dense.	
24		22, 50/6			Trace silty clay.	
26	S-25	3, 50/5			Moist.	
28		24, 50/3			Wet.	
30		28, 30, 50/4				
32	S-31	31, 50/4				
34		26, 50/6				
36		31, 50/4				
38		50/6		CL	Silty clay, trace fine-grained sand, gray with orange mottling, damp, medium plasticity, hard.	
40		27, 50/6			Total Depth = 32 feet.	

RESNA
Working to Restore Nature

PROJECT: 69036.10

LOG OF BORING B-27/AS-2
ARCO Station 2035
1001 San Pablo Avenue
Albany, California

PLATE
A-6

SOIL BORING LOG **Boring No. MW-7** **Sheet: 1 of 1**

Client	ARCO 2035	Date	March 26, 2009
Address	1001 San Pablo Avenue	Drilling Co.	RSI Drilling rig type: CME-75
	Albany, CA	Driller	Ramiro
Project No.	E2035	Method	Hollow Stem Auger Hole Diameter: 10 inches
Logged By:	Collin Fischer	Sampler:	18-inch length split spoon
Well Pack	sand: 4 ft. to 16 ft	Well Construction	Casing Material: Schedule 40 PVC Screen Interval: 6 ft. to 16 ft.
	bent.: 2 ft. to 4 ft.		Casing Diameter: 4 in. Screen Slot Size: 0.010-in.
	grout: 0 ft. to 2 ft.	Depth to GW:	▽ first encountered: 10' bgs. static ▼

Sample Type	Sample No.	Blow Count	Sample Time	Sample Recov.	Depth Scale	Lithologic Column	Descriptions of Materials and Conditions	PID (PPM)
							Cleared to 6.5' bgs. with air knife	
S	MW-7 8'	2 5	1200	100	8	CL	Sandy clay, CL, dark brown, moist, medium stiff, medium plasticity 80% clay, 20% fine grained sand	0
		6 5			9		Clay, CL, dark grayish brown, moist, stiff, medium plasticity 100% clay	
		5 4			10	▽ SC		0
		1 1			11		Clayey sand, SC, dark grayish brown, moist to wet, very loose 60% fine to medium grained sand, 40% clay	
		3 10			12	CL		0
S	MW-7 13'	14 23	1225	100	13		Sandy clay with gravel, CL, dark grayish brown, moist, hard, low plasticity 50% clay, 30% coarse grained sand, 20% fine gravel	898
S	MW-7 14'	3 5	1245	100	14	SM	Silty sand, SM, dark gray, wet, loose, 90% medium grained sand, 10% silt	1143
S	MW-7 15'	15 34	1255	100	15			136
		50/6" -			16	CL	Sandy clay, CL, dark yellowish brown, moist, hard, low plasticity 60% clay, 40% fine to medium grained sand	
					17			
					18			
					19			
					20			

Recovery

Sample

Comments:

STRATUS ENVIRONMENTAL, INC.

SOIL BORING LOG **Boring No. MW-8** **Sheet: 1 of 1**

Client	ARCO 2035	Date	March 26, 2009
Address	1001 San Pablo Avenue	Drilling Co.	RSI Drilling rig type: CME-75
	Albany, CA	Driller	Ramiro
Project No.	E2035	Method	Hollow Stem Auger Hole Diameter: 10 inches
Logged By:	Collin Fischer	Sampler:	18-inch length split spoon
Well Pack	sand: 4 ft. to 19 ft	Well Construction	Casing Material: Schedule 40 PVC Screen Interval: 6 ft. to 19 ft.
	bent.: 2 ft. to 4 ft.		Casing Diameter: 4 in. Screen Slot Size: 0.010-in.
	grout: 0 ft. to 2 ft.	Depth to GW:	▽ first encountered: 16.5' bgs. static ▼

Sample Type	Sample No.	Blow Count	Sample Time	Sample Recov.	Depth Scale	Lithologic Column	Descriptions of Materials and Conditions	PID (PPM)
					1		Cleared to 6.5' bgs. with air knife	
					2			
					3			
					4			
					5			
					6			
					7			
					8			
					9			
					10			
S	MW-8 11'	4 7	0840	100	11		Sandy clay with gravel, CL, dark brown, moist, stiff, medium plasticity 75% clay, 30% medium to coarse grained sand	0
		14 11			12		Clay, CL, dark grayish brown, moist, very stiff, medium plasticity 100% clay	
S	MW-8 13'	15 24	0845	100	13	CL	Sandy clay with gravel, CL, dark grayish brown, moist, hard, low plasticity 50% clay, 30% coarse grained sand, 20% fine gravel	2158
		13 14			14			
		17 21			15		Clay, CL, dark grayish brown, moist, hard, medium plasticity 100% clay	136
S	MW-8 16'	21 21	0912	100	16		Sandy clay with gravel, CL, dark grayish brown, moist, hard, low plasticity 50% clay, 30% coarse grained sand, 20% fine gravel	85
		13 14			17		▽	0
		16 6			18	SC	Clayey sand, SC, dark yellowish brown, wet, medium dense 65% fine to medium grained sand, 35% clay	
S	MW-8 19'	9 13	0955	100	19	CL	Sandy clay, CL, dark yellowish brown, moist to wet, very stiff medium plasticity, 60% clay, 40% fine to medium grained sand	0
					20			

Recovery

Sample

Comments:

STRATUS ENVIRONMENTAL, INC.

SOIL BORING LOG **Boring No. MW-9** **Sheet: 1 of 1**

Client	ARCO 2035	Date	March 26, 2009
Address	1001 San Pablo Avenue	Drilling Co.	RSI Drilling rig type: CME-75
	Albany, CA	Driller	Ramiro
Project No.	E2035	Method	Hollow Stem Auger Hole Diameter: 10 inches
Logged By:	Collin Fischer	Sampler:	18-inch length split spoon
Well Pack	sand: 4 ft. to 16 ft	Well Construction	Casing Material: Schedule 40 PVC Screen Interval: 6 ft. to 16 ft.
	bent.: 2 ft. to 4 ft.		Casing Diameter: 4 in. Screen Slot Size: 0.010-in.
	grout: 0 ft. to 2 ft.	Depth to GW:	▽ first encountered: 10' bgs. static ▼

Sample Type	Sample No.	Blow Count	Sample Time	Sample Recov.	Well Details	Depth Scale	Lithologic Column	Descriptions of Materials and Conditions	PID (PPM)
								Cleared to 6.5' bgs. with air knife	
						1			
						2			
						3			
						4			
						5			
						6			
						7			
		16						Sandy clay with gravel, CL, dark grayish brown, moist, hard, low plasticity	
S	MW-9 8'	20	1510	100		8		50% clay, 30% coarse grained sand, 20% fine gravel	149
		18					CL	Clay, CL, dark grayish brown, moist, very stiff, medium plasticity	
S	MW-9 9'	12	1520	100		9		100% clay	
		14						Sandy clay with gravel, CL, dark grayish brown, moist, hard, low plasticity	
		22				10 ▽		50% clay, 30% coarse grained sand, 20% fine gravel	55
		2							
S	MW-9 11'	4	1530	100		11			
		12					SM	Silty sand with clay, SM, dark grayish brown, wet, medium dense	
		20				12		70% medium grained sand, 20% silt, 10% clay	15
		29							
S	MW-9 13'	31	1540	100		13			0
		29					CL	Sandy clay with gravel, CL, dark yellowish brown, dry to moist, hard	
		34				14		medium plasticity, 50% clay, 30% coarse grained sand, 20% medium gravel	
		45							
		28				15			0
		30						Sandy clay with gravel, CL, dark yellowish brown, dry to moist, hard	
		37				16		medium plasticity, 50% clay, 30% coarse grained sand, 20% coarse gravel	0
						17			
						18			
						19			
						20			

Recovery

Sample

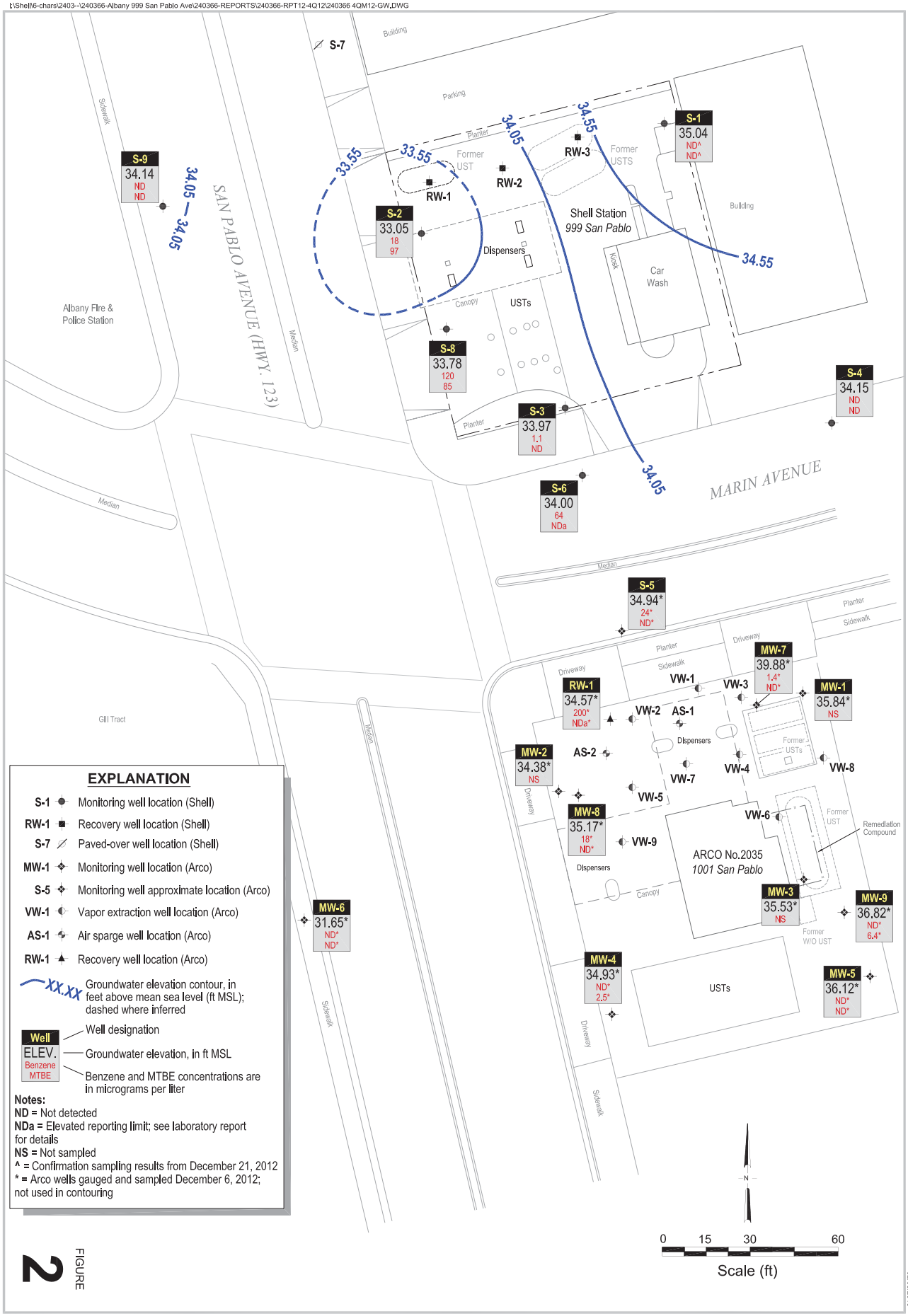
Comments:

STRATUS ENVIRONMENTAL, INC.

APPENDIX D

Adjacent Shell Station Data

I:\Shell\6-chars\2403-~\240366-Albany 999 San Pablo Ave\240366-REPORTS\240366-RPT12-4Q12\240366 4QM12-GW.DWG



EXPLANATION

- S-1 — Monitoring well location (Shell)
- RW-1 — Recovery well location (Shell)
- S-7 — Paved-over well location (Shell)
- MW-1 — Monitoring well location (Arco)
- S-5 — Monitoring well approximate location (Arco)
- VW-1 — Vapor extraction well location (Arco)
- AS-1 — Air sparge well location (Arco)
- RW-1 — Recovery well location (Arco)
- XX.XX — Groundwater elevation contour, in feet above mean sea level (ft MSL); dashed where inferred

Well
ELEV.
Benzene
MTBE

- Well designation
- Groundwater elevation, in ft MSL
- Benzene and MTBE concentrations are in micrograms per liter

Notes:
ND = Not detected
NDa = Elevated reporting limit; see laboratory report for details
NS = Not sampled
^ = Confirmation sampling results from December 21, 2012
***** = Arco wells gauged and sampled December 6, 2012; not used in contouring

FIGURE 2

02/05/2013

Shell-branded Service Station
999 San Pablo Avenue
Albany, California

CONESTOGA-ROVERS & ASSOCIATES

Groundwater Contour and Chemical Concentration Map

November 28-29, 2012

TABLE 1

GROUNDWATER DATA
SHELL-BRANDED SERVICE STATION
999 SAN PABLO AVENUE, ALBANY, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-1	05/13/1991	1,500	20	2.6	86	74	---	---	---	---	---	---	42.73	8.24	34.49	---	---
S-1	08/23/1991	2,900	27	<2.5	75	18	---	---	---	---	---	---	42.73	8.37	34.36	---	---
S-1	11/07/1991	2,900	8.0	2.5	46	26	---	---	---	---	---	---	42.73	8.30	34.43	---	---
S-1	01/28/1992	2,000	11	<2.5	60	20	---	---	---	---	---	---	42.73	7.84	34.89	---	---
S-1	05/06/1992	1,200	5.5	<2.5	80	36	---	---	---	---	---	---	42.73	7.95	34.78	---	---
S-1	08/26/1992	2,000	9.4	<2.5	130	<2.5	---	---	---	---	---	---	42.73	8.24	34.49	---	---
S-1	10/28/1992	1,300	27	3.2	72	13	---	---	---	---	---	---	42.73	8.52	34.21	---	---
S-1	01/19/1993	1,500	13	3.0	29	31	---	---	---	---	---	---	42.73	6.54	36.19	---	---
S-1	04/29/1993	2,000	15	<2.5	82	<6.5	---	---	---	---	---	---	42.73	7.93	34.80	---	---
S-1	07/22/1993	620	1.1	4.2	3.5	13	---	---	---	---	---	---	42.73	8.09	34.64	---	---
S-1	10/21/1993	1,200	34	25	15	9.5	---	---	---	---	---	---	42.73	9.43	33.30	---	---
S-1	01/04/1994	860	<2.5	<2.5	5.7	5.3	---	---	---	---	---	---	42.73	8.25	34.48	---	---
S-1	04/13/1994	---	---	---	---	---	---	---	---	---	---	---	42.73	8.02	34.71	---	---
S-1	07/25/1994	1,200	8.3	7.4	15	20	---	---	---	---	---	---	42.73	8.22	34.51	---	---
S-1	10/10/1994	---	---	---	---	---	---	---	---	---	---	---	42.73	8.29	34.44	---	---
S-1	01/26/1995	1,000	12	0.60	12	420	---	---	---	---	---	---	42.73	6.88	35.85	---	---
S-1	04/21/1995	---	---	---	---	---	---	---	---	---	---	---	42.73	7.65	35.08	---	---
S-1	07/28/1995	660	7.2	1.0	11	8.9	---	---	---	---	---	---	42.73	7.90	34.83	---	4
S-1	10/31/1995	---	---	---	---	---	---	---	---	---	---	---	42.73	7.72	35.01	---	---
S-1	01/10/1996	1,100	3.5	7.0	5.1	9.4	---	---	---	---	---	---	42.73	8.24	34.49	---	7.4
S-1	04/25/1996	---	---	---	---	---	---	---	---	---	---	---	42.73	7.74	34.99	---	---
S-1	07/23/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	42.73	7.92	34.81	---	2.7
S-1	12/10/1996	---	---	---	---	---	---	---	---	---	---	---	42.73	7.56	35.17	---	0.6
S-1	02/20/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	42.73	7.95	34.78	---	3
S-1	05/22/1997	---	---	---	---	---	---	---	---	---	---	---	42.73	8.11	34.62	---	0.5
S-1	08/22/1997	810	18	<2.0	5.1	4.4	18	---	---	---	---	---	42.73	7.86	34.87	---	3
S-1	11/03/1997	---	---	---	---	---	---	---	---	---	---	---	42.73	8.35	34.38	---	1.1
S-1	02/20/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	42.73	6.09	36.64	---	2.9
S-1	05/18/1998	---	---	---	---	---	---	---	---	---	---	---	42.73	7.69	35.04	---	1.1
S-1	08/20/1998	390	6.7	<0.50	0.64	<0.50	14	---	---	---	---	---	42.73	8.20	34.53	---	1.9
S-1	11/06/1998	---	---	---	---	---	---	---	---	---	---	---	42.73	8.23	34.50	---	---
S-1	02/16/1999	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	42.73	7.47	35.26	---	1.5
S-1	05/28/1999	---	---	---	---	---	---	---	---	---	---	---	42.73	7.60	35.13	---	1.3
S-1	08/24/1999	72.4	<0.500	<0.500	<0.500	<0.500	<2.50	---	---	---	---	---	42.73	7.95	34.78	---	1.4
S-1	11/16/1999	---	---	---	---	---	---	---	---	---	---	---	42.73	7.87	34.86	---	1.3

GROUNDWATER DATA
SHELL-BRANDED SERVICE STATION
999 SAN PABLO AVENUE, ALBANY, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-1	02/02/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	---	---	---	---	---	42.73	7.26	35.47	---	1.4
S-1	05/09/2000	---	---	---	---	---	---	---	---	---	---	---	42.73	8.13	34.60	---	1.0
S-1	08/03/2000	209	6.42	<0.500	<0.500	<0.500	<2.50	---	---	---	---	---	42.73	8.12	34.61	---	1.4
S-1	11/15/2000	---	---	---	---	---	---	---	---	---	---	---	42.73	8.06	34.67	---	1.0
S-1	02/14/2001	179	4.46	<0.500	<0.500	<0.500	8.72	---	---	---	---	---	42.73	8.08	34.65	---	1.1
S-1	05/31/2001	---	---	---	---	---	---	---	---	---	---	---	42.73	8.05	34.68	---	1.0
S-1	08/15/2001	270	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	42.73	8.40	34.33	---	1.3
S-1	12/31/2001	---	---	---	---	---	---	---	---	---	---	---	42.73	7.42	35.31	---	0.4
S-1	02/06/2002	<50	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	42.73	7.60	35.13	---	2.2
S-1	06/04/2002	---	---	---	---	---	---	---	---	---	---	---	42.73	8.16	34.57	---	0.8
S-1	07/25/2002	230	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	42.57	7.84	34.73	---	0.9
S-1	11/27/2002	---	---	---	---	---	---	---	---	---	---	---	42.57	8.01	34.56	---	0.6
S-1	01/30/2003	310	<0.50	<0.50	3.6	1.6	---	<5.0	---	---	---	---	42.57	7.56	35.01	---	1.5
S-1	06/03/2003	---	---	---	---	---	---	---	---	---	---	---	42.57	7.87	34.70	---	1.6
S-1	08/08/2003	730	<0.50	<0.50	12	6.4	---	<0.50	---	---	---	---	42.57	7.95	34.62	---	1.3
S-1	11/13/2003	---	---	---	---	---	---	---	---	---	---	---	42.57	7.90	34.67	---	0.8
S-1	02/04/2004	220	<0.50	<0.50	1.8	1.1	---	<0.50	---	---	---	---	42.57	7.37	35.20	---	1.2
S-1	05/12/2004	---	---	---	---	---	---	---	---	---	---	---	42.57	8.05	34.52	---	1.1
S-1	08/23/2004	110 d	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	42.57	8.10	34.47	---	0.6
S-1	12/01/2004	---	---	---	---	---	---	---	---	---	---	---	42.57	7.84	34.73	---	---
S-1	02/07/2005	53 d	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	42.57	7.48	35.09	---	0.49
S-1	05/02/2005	---	---	---	---	---	---	---	---	---	---	---	42.57	8.05	34.52	---	---
S-1	08/04/2005	850	<0.50	<0.50	4.5	1.0	---	<0.50	---	---	---	---	42.57	8.05	34.52	---	0.01
S-1	11/16/2005	---	---	---	---	---	---	---	---	---	---	---	42.57	8.19	34.38	---	---
S-1	03/02/2006	170	<0.50	<0.50	2.4	0.91	---	<0.50	---	---	---	---	42.57	7.58	34.99	---	0.32
S-1	05/31/2006	---	---	---	---	---	---	---	---	---	---	---	42.57	8.03	34.54	---	---
S-1	08/29/2006	<50.0	<0.500	<0.500	<0.500	<0.500	---	<0.500	---	---	---	---	42.57	7.99	34.58	---	1.05
S-1	12/06/2006	---	---	---	---	---	---	---	---	---	---	---	42.57	8.07	34.50	---	0.4
S-1	01/30/2007	640	<0.50	<0.50	1.9	<1.0	---	<0.50	---	---	---	---	42.57	8.32	34.25	---	1.20
S-1	05/15/2007	---	---	---	---	---	---	---	---	---	---	---	42.57	7.85	34.72	---	0.16
S-1	08/29/2007	980 f	0.37 g	<1.0	3.3	<1.0	---	<1.0	<10	<2.0	<2.0	<2.0	42.57	7.87	34.70	---	2.54
S-1	11/29/2007	---	---	---	---	---	---	---	---	---	---	---	42.57	8.18	34.39	---	0.28
S-1	02/21/2008	430 f	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	42.57	7.94	34.63	---	0.27
S-1	05/06/2008	---	---	---	---	---	---	---	---	---	---	---	42.57	8.00	34.57	---	0.1
S-1	08/27/2008	170	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	42.57	8.45	34.12	---	0.21

TABLE 1

GROUNDWATER DATA
SHELL-BRANDED SERVICE STATION
999 SAN PABLO AVENUE, ALBANY, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-1	11/24/2008	---	---	---	---	---	---	---	---	---	---	---	42.57	8.49	34.08	---	0.06
S-1	01/28/2009	390	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	42.57	8.29	34.28	---	1.70
S-1	05/26/2009	---	---	---	---	---	---	---	---	---	---	---	42.57	8.11	34.46	---	---
S-1	11/24/2009	230	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	42.57	8.34	34.23	---	1.47
S-1	05/26/2010	490	<0.50	<1.0	1.3	2.1	---	<1.0	---	---	---	---	42.57	7.99	34.58	---	0.38
S-1	11/30/2010	220	1.7	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	42.57	7.98	34.59	---	0.65
S-1	05/11/2011	<50	<0.50	<0.50	<0.50	1.0	---	<1.0	---	---	---	---	42.57	8.19	34.38	---	1.49
S-1	11/28/2011	56	<0.500	<0.500	<0.500	<0.500	---	<0.500	---	---	---	---	42.57	7.97	34.60	---	1.62
S-1	06/05/2012	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	42.57	8.22	34.35	---	1.46
S-1	**11/28/2012**	**5,400**	**10**	**3.4**	**2.8**	**6.6**	**---**	**22**	**---**	**---**	**---**	**---**	**42.57**	**7.53**	**35.04**	**---**	**1.54**
S-1	**12/21/2012**	**79**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**---**	**<0.50**	**---**	**---**	**---**	**---**	**42.57**	**7.70**	**34.87**	**---**	**---**
S-2	05/13/1991	23,000	3,900	230	1,100	3,200	---	---	---	---	---	---	40.73	8.50	32.23	---	---
S-2	08/23/1991	23,000	4,400	260	1,900	2,400	---	---	---	---	---	---	40.73	8.80	31.93	---	---
S-2	11/07/1991	40,000	4,000	160	1,020	3,400	---	---	---	---	---	---	40.73	8.61	32.12	---	---
S-2	01/28/1992	22,000	1,600	70	420	1,700	---	---	---	---	---	---	40.73	7.80	32.93	---	---
S-2	05/06/1992	20,000	2,600	110	860	1,900	---	---	---	---	---	---	40.73	8.10	32.63	---	---
S-2	08/26/1992	42,000	5,000	160	1,100	3,500	---	---	---	---	---	---	40.73	8.37	32.36	---	---
S-2	10/28/1992	34,000	4,800	330	1,600	2,900	---	---	---	---	---	---	40.73	8.64	32.09	---	---
S-2	01/19/1993	20,000	2,300	370	660	1,300	---	---	---	---	---	---	40.73	5.82	34.91	---	---
S-2	04/29/1993	40,000	2,000	67	900	1,900	---	---	---	---	---	---	40.73	7.70	33.03	---	---
S-2	07/22/1993	22,000	3,000	120	1,000	1,600	---	---	---	---	---	---	40.73	8.38	32.35	---	---
S-2 (D)	07/22/1993	17,000	3,000	110	1,000	1,500	---	---	---	---	---	---	40.73	8.38	32.35	---	---
S-2	10/21/1993	14,000	2,800	74	870	1,100	---	---	---	---	---	---	40.73	8.58	32.15	---	---
S-2 (D)	10/21/1993	13,000	3,200	53	960	820	---	---	---	---	---	---	40.73	8.58	32.15	---	---
S-2	01/04/1994	21,000	2,100	67	990	770	---	---	---	---	---	---	40.73	7.70	33.03	---	---
S-2 (D)	01/04/1994	22,000	2,000	64	910	750	---	---	---	---	---	---	40.73	7.70	33.03	---	---
S-2	04/13/1994	---	---	---	---	---	---	---	---	---	---	---	40.73	7.62	33.11	---	---
S-2	07/25/1994	43,000	2,600	490	990	1,300	---	---	---	---	---	---	40.73	7.86	32.87	---	---
S-2	10/10/1994	---	---	---	---	---	---	---	---	---	---	---	40.73	8.12	32.61	---	---
S-2	01/26/1995	21,000	790	12	290	570	---	---	---	---	---	---	40.73	6.38	34.35	---	5.5
S-2	04/21/1995	---	---	---	---	---	---	---	---	---	---	---	40.73	7.01	33.72	---	---
S-2	07/28/1995	14,000	2,400	360	960	370	---	---	---	---	---	---	40.73	7.82	32.91	---	4
S-2	10/31/1995	---	---	---	---	---	---	---	---	---	---	---	40.73	7.57	33.16	---	---
S-2	01/10/1996	17,000	1,400	<50	480	170	---	---	---	---	---	---	40.73	8.13	32.60	---	7.2

TABLE 1

GROUNDWATER DATA
SHELL-BRANDED SERVICE STATION
999 SAN PABLO AVENUE, ALBANY, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-2	04/25/1996	---	---	---	---	---	---	---	---	---	---	---	40.73	7.72	33.01	---	---
S-2	07/23/1996	16,000	2,700	69	1,100	110	9,500	---	---	---	---	---	40.73	8.10	32.63	---	2.2
S-2 (D)	07/23/1996	11,000	2,600	68	1,000	96	10,000	11,000	---	---	---	---	40.73	8.10	32.63	---	2.2
S-2	12/10/1996	---	---	---	---	---	---	---	---	---	---	---	40.73	8.57	32.16	---	0.5
S-2	02/20/1997	10,000	500	<10	90	130	6,400	---	---	---	---	---	40.73	8.15	32.58	---	4
S-2	05/22/1997	---	---	---	---	---	---	---	---	---	---	---	40.73	8.79	31.94	---	1.1
S-2	08/22/1997	23,000	1,300	65	740	290	4,500	---	---	---	---	---	40.73	8.05	32.68	---	3.2
S-2 (D)	08/22/1997	20,000	1,200	<100	630	250	3,900	---	---	---	---	---	40.73	8.05	32.68	---	3.2
S-2	11/03/1997	---	---	---	---	---	---	---	---	---	---	---	40.73	8.75	31.98	---	1.2
S-2	02/20/1998	450	28	1.3	7.4	12	35	---	---	---	---	---	40.73	6.34	34.39	---	0.4
S-2	05/18/1998	---	---	---	---	---	---	---	---	---	---	---	40.73	7.95	32.78	---	0.8
S-2	08/20/1998	22,000	290	44	420	410	7,300	---	---	---	---	---	40.73	7.73	33.00	---	1.9
S-2	11/06/1998	---	---	---	---	---	---	---	---	---	---	---	40.73	8.47	32.26	---	---
S-2	02/16/1999	27,000	200	<200	770	840	5,400	---	---	---	---	---	40.73	7.24	33.49	---	1.4
S-2	05/28/1999	---	---	---	---	---	---	---	---	---	---	---	40.73	7.82	32.91	---	1.3
S-2	08/24/1999	13,400	196	<25.0	439	113	597	---	---	---	---	---	40.73	8.61	32.12	---	1.2
S-2	11/16/1999	---	---	---	---	---	---	---	---	---	---	---	40.73	8.17	32.56	---	1.1
S-2	02/02/2000	7,850	176	88.0	134	111	540	---	---	---	---	---	40.73	7.57	33.16	---	1.2
S-2	05/09/2000	---	---	---	---	---	---	---	---	---	---	---	40.73	7.94	32.79	---	1.3
S-2	08/03/2000	35,000	255	122	842	224	905	726 b	---	---	---	---	40.73	8.07	32.66	---	1.1
S-2	11/15/2000	---	---	---	---	---	---	---	---	---	---	---	40.73	8.13	32.60	---	1.3
S-2	02/14/2001	13,000	147	<25.0	309	54.4	581	---	---	---	---	---	40.73	6.39	34.34	---	1.4
S-2	05/31/2001	---	---	---	---	---	---	---	---	---	---	---	40.73	7.21	33.52	---	1.5
S-2	08/15/2001	15,000	67	4.1	220	33	---	440	---	---	---	---	40.73	8.27	32.46	---	0.6
S-2	12/31/2001	---	---	---	---	---	---	270	---	---	---	---	40.73	6.07	34.66	---	0.2
S-2	02/06/2002	15,000	53	2.8	120	31	---	220	---	---	---	---	40.73	7.98	32.75	---	1.8
S-2	06/04/2002	---	---	---	---	---	---	---	---	---	---	---	40.73	6.70	34.03	---	0.2
S-2	07/25/2002	9,000	75	4.0	180	24	---	460	---	---	---	---	40.63	7.67	32.96	---	0.9
S-2	11/27/2002	---	---	---	---	---	---	---	---	---	---	---	40.63	7.84	32.79	---	0.7
S-2	01/30/2003	15,000	26	<2.5	92	22	---	210	---	---	---	---	40.63	7.29	33.34	---	15.6
S-2	06/03/2003	17,000	<25	<25	130	<50	---	290	---	---	---	---	40.63	7.87	32.76	---	5.4
S-2	08/08/2003	4,500	<2.5	<2.5	9.4	<5.0	---	140	---	---	---	---	40.63	8.18	32.45	---	16.2
S-2	11/13/2003	10,000	18	<10	47	21	---	180	---	---	---	---	40.63	7.98	32.65	---	19.5
S-2	02/04/2004	5,700	54	<10	54	<20	---	270	---	---	---	---	40.63	7.21	33.42	---	>15
S-2	05/12/2004	8,200	18	<10	<10	<20	---	250	---	---	---	---	40.63	8.07	32.56	---	3.1

GROUNDWATER DATA
SHELL-BRANDED SERVICE STATION
999 SAN PABLO AVENUE, ALBANY, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-2	08/23/2004	4,100	<10	<10	<10	<20	---	84	<100	<40	<40	<40	40.63	8.52	32.11	---	10.7
S-2	12/01/2004	2,000	3.4	<2.5	6.2	<5.0	---	77	---	---	---	---	40.63	8.70	31.93	---	11.8
S-2	02/07/2005	7,400	32	1.6	29	3.1	---	210	---	---	---	---	40.63	7.58	33.05	---	0.11
S-2	05/02/2005	8,100	84	4.9	83	5.5	---	320	---	---	---	---	40.63	7.45	33.18	---	0.6
S-2	08/04/2005	4,900	48	2.1	19	2.8	---	330	55	<4.0	<4.0	<4.0	40.63	7.90	32.73	---	0.4
S-2	11/16/2005	13,700	43.8	2.79	25.1	5.92	---	156	---	---	---	---	40.63	8.33	32.30	---	0.5
S-2	03/02/2006	5,800	44	3.2	20	5.6	---	190	---	---	---	---	40.63	6.74	33.89	---	0.63
S-2	05/31/2006	11,100	72.0	4.20	22.4	5.36	---	308	---	---	---	---	40.63	7.46	33.17	---	0.6
S-2	08/29/2006	37,400	72.1	5.08	39.6	6.89	---	377	46.7	<0.500	<0.500	<0.500	40.63	8.02	32.61	---	0.70
S-2	12/06/2006	5,000	41	3.2	11	5.2	---	170	---	---	---	---	40.63	8.04	32.59	---	0.5
S-2	01/30/2007	4,200	24	1.7	5.9	2.3	---	140	---	---	---	---	40.63	8.08	32.55	---	0.11
S-2	05/15/2007	8,100 f	48	3.5	19	6.2 g	---	180	---	---	---	---	40.63	8.05	32.58	---	0.11
S-2	08/29/2007	8,400 f	60	3.8	12	4.68 g	---	270	64	<4.0	<4.0	<4.0	40.63	8.01	32.62	---	1.02
S-2	11/29/2007	4,100 f	48	4.8 h	11	12.3	---	280	---	---	---	---	40.63	8.25	32.38	---	0.55
S-2	02/21/2008	7,300 f	57	4.0	13	4.7	---	250	---	---	---	---	40.63	7.25	33.38	---	0.40
S-2	05/06/2008	8,900	42	3.1	9.8	4.1	---	270	---	---	---	---	40.63	6.30	34.34	0.01	0.10/2.0
S-2	08/27/2008	9,400	67	<5.0	27	6.0	---	240	67	<10	<10	<10	40.63	8.33	32.30	---	0.15
S-2	11/24/2008	7,100	55	<5.0	9.3	<5.0	---	210	---	---	---	---	40.63	8.43	32.20	---	0.7
S-2	01/28/2009	6,000	29	<5.0	6.5	<5.0	---	130	---	---	---	---	40.63	8.19	32.44	---	0.15
S-2	05/26/2009	20,000	52	3.2	13	6.0	---	330	---	---	---	---	40.63	7.85	32.78	---	0.43
S-2	11/24/2009	5,200	19	<2.0	6.8	4.7	---	120	80	<4.0	<4.0	<4.0	40.63	8.32	32.31	---	0.18
S-2	05/26/2010	7,500	78	<5.0	11	<5.0	---	330	---	---	---	---	40.63	7.62	33.01	---	0.34
S-2	11/30/2010	7,000	32	2.7	4.5	5.0	---	170	86	<4.0	<4.0	<4.0	40.63	7.74	32.89	---	0.65
S-2	05/11/2011	13,000	61	4.0	16	7.0	---	210	---	---	---	---	40.63	7.60	33.03	---	0.97
S-2	11/28/2011	4,800	31.0	2.65	5.73	7.13	---	143	<10.0	<0.500	<0.500	<0.500	40.63	7.70	32.93	---	1.08
S-2	06/05/2012	9,100	71	4.6	16	8.3	---	280	---	---	---	---	40.63	7.89	32.74	---	0.88
S-2	**11/28/2012**	**7,600**	**18**	**2.1**	**5.4**	**4.4**	**---**	**97**	**47**	**---**	**---**	**---**	**40.63**	**7.58**	**33.05**	**---**	**1.08**
S-3	05/13/1991	3,300	30	3.6	26	13	---	---	---	---	---	---	41.46	7.90	33.56	---	---
S-3	08/23/1991	2,000	25	4.0	9.3	4.5	---	---	---	---	---	---	41.46	8.14	33.32	---	---
S-3	11/07/1991	4,000	20	3.9	5.0	4.9	---	---	---	---	---	---	41.46	7.91	33.55	---	---
S-3	01/28/1992	2,100	21	7.6	6.7	15	---	---	---	---	---	---	41.46	7.53	33.93	---	---
S-3 (D)	01/28/1992	2,100	18	6.1	7.1	14	---	---	---	---	---	---	41.46	7.53	33.93	---	---
S-3	05/06/1992	6,600	38	51	45	65	---	---	---	---	---	---	41.46	7.55	33.91	---	---
S-3	08/26/1992	5,800	18	12	29	60	---	---	---	---	---	---	41.46	7.53	33.93	---	---

TABLE 1

GROUNDWATER DATA
SHELL-BRANDED SERVICE STATION
999 SAN PABLO AVENUE, ALBANY, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-3	10/28/1992	3,000	55	11	16	32	---	---	---	---	---	---	41.46	7.95	33.51	---	---
S-3	01/19/1993	3,100	<5	5.1	11	16	---	---	---	---	---	---	41.46	6.12	35.34	---	---
S-3	04/29/1993	3,000	31	22	<5	14	---	---	---	---	---	---	41.46	7.27	34.19	---	---
S-3	07/22/1993	2,600	3.1	43	23	53	---	---	---	---	---	---	41.46	7.62	33.84	---	---
S-3	10/21/1993	2,500	73	14	16	32	---	---	---	---	---	---	41.46	7.81	33.65	---	---
S-3	01/04/1994	4,800	13	21	<12.5	33	---	---	---	---	---	---	41.46	7.49	33.97	---	---
S-3	04/13/1994	---	---	---	---	---	---	---	---	---	---	---	41.46	7.32	34.14	---	---
S-3	07/25/1994	2,600	6.1	4.0	3.8	12	---	---	---	---	---	---	41.46	7.66	33.80	---	---
S-3	10/10/1994	---	---	---	---	---	---	---	---	---	---	---	41.46	7.49	33.97	---	---
S-3	01/26/1995	3,600	30	6.8	5.6	19	---	---	---	---	---	---	41.46	6.50	34.96	---	---
S-3 (D)	01/26/1995	2,200	9.9	15	14	22	---	---	---	---	---	---	41.46	6.50	34.96	---	---
S-3	04/21/1995	---	---	---	---	---	---	---	---	---	---	---	41.46	6.79	34.67	---	---
S-3	07/28/1995	3,700	27	9.3	20	34	---	---	---	---	---	---	41.46	7.28	34.18	---	4
S-3	10/31/1995	---	---	---	---	---	---	---	---	---	---	---	41.46	6.74	34.72	---	---
S-3	01/10/1996	4,000	10	<0.50	13	28	---	---	---	---	---	---	41.46	7.48	33.98	---	6.1
S-3	04/25/1996	---	---	---	---	---	---	---	---	---	---	---	41.46	6.90	34.56	---	---
S-3	07/23/1996	2,100	20	<0.50	<0.50	<0.50	<25	---	---	---	---	---	41.46	7.04	34.42	---	2.1
S-3	12/10/1996	---	---	---	---	---	---	---	---	---	---	---	41.46	7.96	33.50	---	0.7
S-3	02/20/1997	3,500	83	<5.0	18	16	130	---	---	---	---	---	41.46	7.44	34.02	---	3
S-3 (D)	02/20/1997	3,000	69	<5.0	14	12	70	---	---	---	---	---	41.46	7.44	34.02	---	3
S-3	05/22/1997	---	---	---	---	---	---	---	---	---	---	---	41.46	7.13	34.33	---	0.6
S-3	08/22/1997	4,700	60	12	19	21	40	---	---	---	---	---	41.46	6.81	34.65	---	2.9
S-3	11/03/1997	---	---	---	---	---	---	---	---	---	---	---	41.46	7.40	34.06	---	0.9
S-3	02/20/1998	3,400	<10	<10	14	18	85	---	---	---	---	---	41.46	6.55	34.91	---	0.8
S-3 (D)	02/20/1998	3,100	8.6	7.8	12	16	57	---	---	---	---	---	41.46	6.55	34.91	---	0.8
S-3	05/18/1998	---	---	---	---	---	---	---	---	---	---	---	41.46	6.81	34.65	---	0.7
S-3	08/20/1998	4,400	67	23	9.8	22	240	---	---	---	---	---	41.46	6.98	34.48	---	2.2
S-3	11/06/1998	---	---	---	---	---	---	---	---	---	---	---	41.46	6.96	34.50	---	---
S-3	02/16/1999	2,000	6.9	6.2	3.7	4.8	47	---	---	---	---	---	41.46	6.93	34.53	---	2.0
S-3	05/28/1999	---	---	---	---	---	---	---	---	---	---	---	41.46	6.74	34.72	---	1.8
S-3	08/24/1999	4,170	54.8	14.2	6.65	13.7	43.4	---	---	---	---	---	41.46	9.05	32.41	---	1.9
S-3	11/16/1999	---	---	---	---	---	---	---	---	---	---	---	41.46	7.09	34.37	---	1.6
S-3	02/02/2000	2,410	133	112	24.9	104	46.0	---	---	---	---	---	41.46	6.59	34.87	---	1.9
S-3	05/09/2000	---	---	---	---	---	---	---	---	---	---	---	41.46	7.13	34.33	---	1.9
S-3	08/03/2000	3,890	17.2	21.9	<10.0	<10.0	166	---	---	---	---	---	41.46	6.82	34.64	---	1.8

GROUNDWATER DATA
SHELL-BRANDED SERVICE STATION
999 SAN PABLO AVENUE, ALBANY, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-3	11/15/2000	---	---	---	---	---	---	---	---	---	---	---	41.46	6.98	34.48	---	1.6
S-3	02/14/2001	2,800	35.8	5.57	3.83	2.94	1,070	1,250	---	---	---	---	41.46	6.57	34.89	---	1.1
S-3	05/31/2001	---	---	---	---	---	---	---	---	---	---	---	41.46	6.72	34.74	---	1.6
S-3	08/15/2001	2,700	2.0	0.52	<0.50	2.0	---	140	---	---	---	---	41.46	7.44	34.02	---	0.6
S-3	12/31/2001	2,300	<2.0	<2.0	<2.0	<2.0	---	470	---	---	---	---	41.46	6.62	34.84	---	0.6
S-3	02/06/2002	2,000	2.6	1.6	4.3	7.8	---	170	---	---	---	---	41.46	7.22	34.24	---	2.2
S-3	06/04/2002	2,400	1.0	1.1	0.54	4.5	---	120	---	---	---	---	41.46	7.34	34.12	---	0.5
S-3	07/25/2002	3,100	0.86	<0.50	<0.50	2.0	---	92	---	---	---	---	41.37	6.98	34.39	---	1.0
S-3	11/27/2002	2,600	2.0	0.55	<0.50	2.1	---	44	---	---	---	---	41.37	7.62	33.75	---	0.7
S-3	01/30/2003	1,200	2.1	1.3	1.6	3.4	---	42	---	---	---	---	41.37	7.14	34.23	---	13.6
S-3	06/03/2003	2,700	2.9	<0.50	0.50	2.8	---	43	---	---	---	---	41.37	7.25	34.12	---	1.7
S-3	08/08/2003	1,400	2.4	0.71	<0.50	2.2	---	32	---	---	---	---	41.37	7.67	33.70	---	>20
S-3	11/13/2003	5,200	5.1	2.4	<1.0	5.6	---	69	---	---	---	---	41.37	7.56	33.81	---	19.6
S-3	02/04/2004	2,800	1.9	<1.0	1.0	2.6	---	20	---	---	---	---	41.37	7.12	34.25	---	>15
S-3	05/12/2004	1,900	2.8	<1.0	<1.0	2.2	---	9.7	---	---	---	---	41.37	7.94	33.43	---	4.0
S-3	08/23/2004	1,400	7.6	1.1	<1.0	2.9	---	13	<10	<4.0	<4.0	<4.0	41.37	8.09	33.28	---	13.3
S-3	12/01/2004	950	1.9	<1.0	<1.0	<2.0	---	5.6	---	---	---	---	41.37	8.21	33.16	---	13.0
S-3	02/07/2005	1,800	1.4	<1.0	<1.0	2.1	---	9.9	---	---	---	---	41.37	7.69	33.68	---	0.25
S-3	05/02/2005	4,000	2.3	1.1	1.6	3.0	---	9.9	---	---	---	---	41.37	7.20	34.17	---	0.5
S-3	08/04/2005	3,600	2.1	<1.0	<2.0	3.6	---	8.5	33	<4.0	<4.0	<4.0	41.37	8.14	33.23	---	0.2
S-3	11/16/2005	6,000	2.24	0.800	0.660	3.35	---	3.83	---	---	---	---	41.37	8.39	32.98	---	0.6
S-3	03/02/2006	1,500	1.3	<0.50	0.57	2.0	---	5.1	---	---	---	---	41.37	7.09	34.28	---	0.52
S-3	05/31/2006	5,560	1.71	0.730	1.24	3.89	---	8.01 e	---	---	---	---	41.37	7.95	33.42	---	0.5
S-3	08/29/2006	4,850	1.82	0.680	1.19	2.22	---	3.16	<10.0	<0.500	<0.500	<0.500	41.37	6.35	35.02	---	0.88
S-3	12/06/2006	2,900	1.1	<0.50	<0.50	2.2	---	<0.50	---	---	---	---	41.37	8.41	32.96	---	0.3
S-3	01/30/2007	2,100	1.0	<0.50	0.53	1.8	---	5.7	---	---	---	---	41.37	8.31	33.06	---	0.36
S-3	05/15/2007	3,500 f	1.1	0.51 g	0.76 g	2.38 g	---	8.0	---	---	---	---	41.37	7.60	33.77	---	0.11
S-3	08/29/2007	<50 f	1.5	0.48 g	0.50 g	2.81 g	---	<1.0	<10	<2.0	<2.0	<2.0	41.37	8.64	32.73	---	0.57
S-3	11/29/2007	3,800 f	1.8	0.80 g,h	0.65 g	3.34 g	---	5.9	---	---	---	---	41.37	8.36	33.01	---	0.22
S-3	02/21/2008	2,900 f	0.60	<1.0	<1.0	1.2	---	5.0	---	---	---	---	41.37	7.35	34.02	---	0.44
S-3	05/06/2008	2,400	1.2	<1.0	<1.0	1.7	---	<1.0	---	---	---	---	41.37	8.00	33.37	---	0.2/1.4
S-3	08/27/2008	3,100	1.5	<1.0	<1.0	2.3	---	<1.0	<10	<2.0	<2.0	<2.0	41.37	8.56	32.81	---	0.13
S-3	11/24/2008	2,900	1.5	<1.0	<1.0	2.2	---	<1.0	---	---	---	---	41.37	8.71	32.66	---	0.32
S-3	01/28/2009	3,900	1.4	<1.0	<1.0	2.2	---	<1.0	---	---	---	---	41.37	8.22	33.15	---	0.48
S-3	05/26/2009	3,600	1.1	<1.0	<1.0	1.5	---	5.2	---	---	---	---	41.37	8.23	33.14	---	1.54

TABLE 1

GROUNDWATER DATA
SHELL-BRANDED SERVICE STATION
999 SAN PABLO AVENUE, ALBANY, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-3	11/24/2009	2,200	0.98	<1.0	<1.0	1.7	---	<1.0	<10	<2.0	<2.0	<2.0	41.37	8.71	32.66	---	0.42
S-3	05/26/2010	2,800	1.0	<1.0	<1.0	2.4	---	7.8	---	---	---	---	41.37	7.80	33.57	---	0.32
S-3	11/30/2010	3,800	0.94	<1.0	<1.0	1.9	---	4.5	<10	<2.0	<2.0	<2.0	41.37	7.65	33.72	---	0.87
S-3	05/11/2011	3,000	0.77	0.51	<0.50	1.8	---	7.4	---	---	---	---	41.37	8.01	33.36	---	0.80
S-3	11/28/2011	1,800	0.720	0.500	<0.500	2.51	---	4.20	<10.0	<0.500	<0.500	<0.500	41.37	7.84	33.53	---	0.73
S-3	06/05/2012	2,700	<0.50	<0.50	<0.50	1.2	---	5.9	---	---	---	---	41.37	8.30	33.07	---	0.65
S-3	**11/28/2012**	**3,000**	**1.1**	**0.56**	**0.59**	**1.4**	**---**	**<0.50**	**<10**	**---**	**---**	**---**	**41.37**	**7.40**	**33.97**	**---**	**1.21**
S-4	05/13/1991	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	41.10	7.44	33.66	---	---
S-4	08/23/1991	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	41.10	8.32	32.78	---	---
S-4	11/07/1991	260	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	41.10	8.32	32.78	---	---
S-4	01/28/1992	110 d	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	41.10	7.40	33.70	---	---
S-4	05/06/1992	54	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	41.10	7.21	33.89	---	---
S-4	08/26/1992	67	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	41.10	8.13	32.97	---	---
S-4	10/28/1992	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	41.10	8.73	32.37	---	---
S-4	01/19/1993	86	1.2	0.70	2.7	15	---	---	---	---	---	---	41.10	5.86	35.24	---	---
S-4	04/29/1993	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	41.10	7.02	34.08	---	---
S-4 (D)	04/29/1993	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	41.10	7.02	34.08	---	---
S-4	07/22/1993	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	41.10	7.76	33.34	---	---
S-4	10/21/1993	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	41.10	8.53	32.57	---	---
S-4	01/04/1994	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	41.10	7.92	33.18	---	---
S-4	04/13/1994	---	---	---	---	---	---	---	---	---	---	---	41.10	7.71	33.39	---	---
S-4	07/25/1994	---	---	---	---	---	---	---	---	---	---	---	41.10	7.82	33.28	---	---
S-4	10/10/1994	---	---	---	---	---	---	---	---	---	---	---	41.10	8.15	32.95	---	---
S-4	01/26/1995	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	41.10	5.73	35.37	---	---
S-4	04/21/1995	---	---	---	---	---	---	---	---	---	---	---	41.10	6.26	34.84	---	---
S-4	07/28/1995	---	---	---	---	---	---	---	---	---	---	---	41.10	7.80	33.30	---	---
S-4	10/31/1995	---	---	---	---	---	---	---	---	---	---	---	41.10	8.45	32.65	---	---
S-4	01/10/1996	<50	1.0	2.8	<0.50	2.1	---	---	---	---	---	---	41.10	8.26	32.84	---	2.8
S-4	04/25/1996	---	---	---	---	---	---	---	---	---	---	---	41.10	7.14	33.96	---	---
S-4	07/23/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	41.10	8.18	32.92	---	3.8
S-4	12/10/1996	---	---	---	---	---	---	---	---	---	---	---	41.10	7.04	34.06	---	3.9
S-4	02/20/1997	<50	<0.50	<0.50	<0.50	<0.50	6.7	---	---	---	---	---	41.10	7.07	34.03	---	5
S-4	05/22/1997	---	---	---	---	---	---	---	---	---	---	---	41.10	6.63	34.47	---	0.8
S-4	08/22/1997	---	---	---	---	---	---	---	---	---	---	---	41.10	7.69	33.41	---	3.7

TABLE 1

GROUNDWATER DATA
SHELL-BRANDED SERVICE STATION
999 SAN PABLO AVENUE, ALBANY, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-4	11/03/1997	---	---	---	---	---	---	---	---	---	---	---	41.10	8.26	32.84	---	1.3
S-4	02/20/1998	130	6.9	4.6	5.2	17	2.8	---	---	---	---	---	41.10	5.57	35.53	---	1.8
S-4	05/18/1998	---	---	---	---	---	---	---	---	---	---	---	41.10	7.13	33.97	---	1.4
S-4	08/20/1998	---	---	---	---	---	---	---	---	---	---	---	41.10	7.77	33.33	---	4.0
S-4	11/06/1998	---	---	---	---	---	---	---	---	---	---	---	41.10	7.85	33.25	---	---
S-4	02/16/1999	<50	<0.50	<0.50	<0.50	<0.50	23	---	---	---	---	---	41.10	6.51	34.59	---	3.6
S-4	05/28/1999	---	---	---	---	---	---	---	---	---	---	---	41.10	7.00	34.10	---	3.2
S-4	08/24/1999	---	---	---	---	---	---	---	---	---	---	---	41.10	9.13	31.97	---	1.9
S-4	11/16/1999	---	---	---	---	---	---	---	---	---	---	---	41.10	7.79	33.31	---	1.7
S-4	02/02/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	---	---	---	---	---	41.10	7.19	33.91	---	1.9
S-4	05/09/2000	---	---	---	---	---	---	---	---	---	---	---	41.10	7.51	33.59	---	1.8
S-4	08/03/2000	---	---	---	---	---	---	---	---	---	---	---	41.10	7.83	33.27	---	1.9
S-4	11/15/2000	---	---	---	---	---	---	---	---	---	---	---	41.10	7.69	33.41	---	1.5
S-4	02/14/2001	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	---	---	---	---	---	41.10	6.20	34.90	---	1.6
S-4	05/31/2001	---	---	---	---	---	---	---	---	---	---	---	41.10	6.56	34.54	---	1.6
S-4	08/15/2001	---	---	---	---	---	---	---	---	---	---	---	41.10	7.90	33.20	---	0.6
S-4	12/31/2001	---	---	---	---	---	---	---	---	---	---	---	41.10	5.62	35.48	---	2.7
S-4	02/06/2002	<50	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	41.10	7.29	33.81	---	0.2
S-4	06/04/2002	---	---	---	---	---	---	---	---	---	---	---	41.10	7.45	33.65	---	0.6
S-4	07/25/2002	---	---	---	---	---	---	---	---	---	---	---	41.04	7.39	33.65	---	0.8
S-4	11/27/2002	---	---	---	---	---	---	---	---	---	---	---	41.04	7.60	33.44	---	---
S-4	01/30/2003	<50	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	41.04	8.45	32.59	---	---
S-4	06/03/2003	---	---	---	---	---	---	---	---	---	---	---	41.04	6.82	34.22	---	---
S-4	08/08/2003	---	---	---	---	---	---	---	---	---	---	---	41.04	7.36	33.68	---	---
S-4	11/13/2003	---	---	---	---	---	---	---	---	---	---	---	41.04	7.56	33.48	---	---
S-4	02/04/2004	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	41.04	6.47	34.57	---	---
S-4	05/12/2004	---	---	---	---	---	---	---	---	---	---	---	41.04	7.10	33.94	---	---
S-4	08/23/2004	---	---	---	---	---	---	---	---	---	---	---	41.04	7.60	33.44	---	---
S-4	12/01/2004	---	---	---	---	---	---	---	---	---	---	---	41.04	7.23	33.81	---	---
S-4	02/07/2005	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	41.04	6.12	34.92	---	---
S-4	05/02/2005	---	---	---	---	---	---	---	---	---	---	---	41.04	6.50	34.54	---	---
S-4	08/04/2005	---	---	---	---	---	---	---	---	---	---	---	41.04	7.13	33.91	---	---
S-4	11/16/2005	---	---	---	---	---	---	---	---	---	---	---	41.04	7.43	33.61	---	---
S-4	03/02/2006	<50	<0.50	<0.50	<0.50	<0.50	---	<0.50	---	---	---	---	41.04	6.05	34.99	---	---
S-4	05/31/2006	---	---	---	---	---	---	---	---	---	---	---	41.04	6.64	34.40	---	---

GROUNDWATER DATA
SHELL-BRANDED SERVICE STATION
999 SAN PABLO AVENUE, ALBANY, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-4	08/29/2006	---	---	---	---	---	---	---	---	---	---	---	41.04	7.25	33.79	---	---
S-4	12/06/2006	---	---	---	---	---	---	---	---	---	---	---	41.04	7.39	33.65	---	---
S-4	01/30/2007	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	41.04	7.24	33.80	---	---
S-4	05/15/2007	---	---	---	---	---	---	---	---	---	---	---	41.04	6.60	34.44	---	---
S-4	08/29/2007	---	---	---	---	---	---	---	---	---	---	---	41.04	7.42	33.62	---	---
S-4	11/29/2007	---	---	---	---	---	---	---	---	---	---	---	41.04	7.22	33.82	---	---
S-4	02/21/2008	<50 f	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	41.04	6.20	34.84	---	---
S-4	05/06/2008	---	---	---	---	---	---	---	---	---	---	---	41.04	7.19	33.85	---	---
S-4	08/27/2008	---	---	---	---	---	---	---	---	---	---	---	41.04	7.52	33.52	---	---
S-4	11/24/2008	---	---	---	---	---	---	---	---	---	---	---	41.04	7.73	33.31	---	---
S-4	01/28/2009	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	41.04	7.21	33.83	---	---
S-4	05/26/2009	---	---	---	---	---	---	---	---	---	---	---	41.04	6.95	34.09	---	---
S-4	11/24/2009	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	41.04	7.43	33.61	---	---
S-4	05/26/2010	---	---	---	---	---	---	---	---	---	---	---	41.04	6.68	34.36	---	---
S-4	11/30/2010	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	41.04	6.87	34.17	---	---
S-4	05/11/2011	<50	<0.50	<0.50	<0.50	<1.0	---	<1.0	---	---	---	---	41.04	6.90	34.14	---	---
S-4	11/28/2011	<50	<0.500	<0.500	<0.500	<0.500	---	4.76	---	---	---	---	41.04	7.00	34.04	---	---
S-4	06/05/2012	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	41.04	7.11	33.93	---	---
S-4	**11/28/2012**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**---**	**41.04**	**6.89**	**34.15**	**---**	**---**
S-4	**11/29/2012**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<1.0**	**---**	**<0.50**	**---**	**---**	**---**	**---**	**41.04**	**---**	**---**	**---**	**---**
S-5	05/13/1991	---	---	---	---	---	---	---	---	---	---	---	39.99	14.60	30.57	6.48	---
S-5	08/23/1991	---	---	---	---	---	---	---	---	---	---	---	39.99	15.14	29.25	5.50	---
S-5	11/07/1991	---	---	---	---	---	---	---	---	---	---	---	39.99	15.10	29.17	5.35	---
S-5	01/28/1992	---	---	---	---	---	---	---	---	---	---	---	39.99	14.05	29.86	4.90	---
S-5	05/06/1992	---	---	---	---	---	---	---	---	---	---	---	39.99	14.31	30.21	5.66	---
S-5	08/26/1992	---	---	---	---	---	---	---	---	---	---	---	39.99	14.26	28.77	3.80	---
S-5	10/28/1992	---	---	---	---	---	---	---	---	---	---	---	39.99	14.22	28.82	3.81	---
S-5	01/19/1993	---	---	---	---	---	---	---	---	---	---	---	39.99	12.36	30.80	3.96	---
S-5	04/29/1993	---	---	---	---	---	---	---	---	---	---	---	39.99	9.64	31.07	0.90	---
S-5	07/22/1993	---	---	---	---	---	---	---	---	---	---	---	39.99	9.55	31.16	0.90	---
S-5	10/21/1993	---	---	---	---	---	---	---	---	---	---	---	39.99	11.23	29.34	0.73	---
S-5	01/04/1994	---	---	---	---	---	---	---	---	---	---	---	39.99	11.69	29.82	1.90	---
S-5	04/13/1994	---	---	---	---	---	---	---	---	---	---	---	39.99	11.42	29.87	1.62	---
S-5	07/25/1994	---	---	---	---	---	---	---	---	---	---	---	39.99	12.01	29.41	1.79	---

TABLE 1

GROUNDWATER DATA
SHELL-BRANDED SERVICE STATION
999 SAN PABLO AVENUE, ALBANY, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-5	10/10/1994	---	---	---	---	---	---	---	---	---	---	---	39.99	12.05	29.38	1.80	---
S-5	01/26/1995	---	---	---	---	---	---	---	---	---	---	---	39.99	8.42	32.95	1.72	---
S-5	04/21/1995	---	---	---	---	---	---	---	---	---	---	---	39.99	10.03	30.90	1.17	---
S-5	07/28/1995	---	---	---	---	---	---	---	---	---	---	---	39.99	11.42	30.07	1.87	---
S-5	10/31/1995	---	---	---	---	---	---	---	---	---	---	---	39.99	13.21	27.21	0.54	---
S-5	01/10/1996	---	---	---	---	---	---	---	---	---	---	---	39.99	12.05	28.04	0.13	---
S-5	04/25/1996	---	---	---	---	---	---	---	---	---	---	---	39.99	9.68	30.33	0.03	---
S-5	07/23/1996	---	---	---	---	---	---	---	---	---	---	---	39.99	9.82	30.20	0.04	---
S-5	12/10/1996	270,000	8,800	29,000	5,200	37,000	<2,500	---	---	---	---	---	39.99	9.10	30.91	0.03	---
S-5 (D)	12/10/1996	400,000	9,200	32,000	7,200	50,000	<2,500	---	---	---	---	---	39.99	9.10	30.91	0.03	---
S-5	02/20/1997	88,000	2,000	11,000	1,600	19,000	<500	---	---	---	---	---	39.99	8.93	31.06	---	5
S-5	05/22/1997	---	---	---	---	---	---	---	---	---	---	---	39.99	10.07	29.94	0.02	---
S-5	08/22/1997	---	---	---	---	---	---	---	---	---	---	---	39.99	10.24	29.77	0.02	---
S-5	11/03/1997	---	---	---	---	---	---	---	---	---	---	---	39.99	10.91	29.10	0.02	---
S-5	02/20/1998	---	---	---	---	---	---	---	---	---	---	---	39.99	7.81	32.20	0.03	---
S-5	05/18/1998	---	---	---	---	---	---	---	---	---	---	---	39.99	9.64	30.37	0.02	---
S-5	05/31/2001	---	---	---	---	---	---	---	---	---	---	---	39.99	10.13	29.86	---	---
S-6	05/13/1991	13,000	600	140	210	310	---	---	---	---	---	---	40.12	7.82	32.30	---	---
S-6	08/23/1991	9,800	480	80	120	150	---	---	---	---	---	---	40.12	9.58	30.54	---	---
S-6	11/07/1991	6,200	240	23	25	27	---	---	---	---	---	---	40.12	10.86	29.26	---	---
S-6	01/28/1992	5,600	250	15	41	36	---	---	---	---	---	---	40.12	8.97	31.15	---	---
S-6	05/06/1992	7,100	330	29	110	210	---	---	---	---	---	---	40.12	8.27	31.85	---	---
S-6	08/26/1992	13,000	240	<50	56	780	---	---	---	---	---	---	40.12	9.57	31.55	---	---
S-6	10/28/1992	10,000	470	210	67	170	---	---	---	---	---	---	40.12	8.90	32.22	---	---
S-6	01/19/1993	4,800	100	26	27	45	---	---	---	---	---	---	40.12	4.84	35.28	---	---
S-6	04/29/1993	7,000	430	20	<12.5	42	---	---	---	---	---	---	40.12	5.61	34.51	---	---
S-6	07/22/1993	5,800	260	120	65	150	---	---	---	---	---	---	40.12	6.56	33.56	---	---
S-6	10/21/1993	5,500	270	69	120	140	---	---	---	---	---	---	40.12	8.73	31.39	---	---
S-6	01/04/1994	7,100	180	58	63	62	---	---	---	---	---	---	40.12	7.14	32.98	---	---
S-6	04/13/1994	---	---	---	---	---	---	---	---	---	---	---	40.12	7.21	32.91	---	---
S-6	07/25/1994	12,000	190	52	30	39	---	---	---	---	---	---	40.12	6.85	33.27	---	---
S-6 (D)	07/25/1994	7,200	170	32	31	34	---	---	---	---	---	---	40.12	6.85	33.27	---	---
S-6	10/10/1994	---	---	---	---	---	---	---	---	---	---	---	40.12	6.20	33.92	---	---
S-6	01/26/1995	5,800	120	23	24	44	---	---	---	---	---	---	40.12	4.89	35.23	---	---

TABLE 1

GROUNDWATER DATA
SHELL-BRANDED SERVICE STATION
999 SAN PABLO AVENUE, ALBANY, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-6	04/21/1995	---	---	---	---	---	---	---	---	---	---	---	40.12	5.61	34.51	---	---
S-6	07/28/1995	4,400	210	23	34	60	---	---	---	---	---	---	40.12	5.30	34.82	---	3
S-6 (D)	07/28/1995	6,100	230	20	38	59	---	---	---	---	---	---	40.12	5.30	34.82	---	3
S-6	10/31/1995	---	---	---	---	---	---	---	---	---	---	---	40.12	4.98	35.14	---	---
S-6	01/10/1996	6,800	170	87	35	105	---	---	---	---	---	---	40.12	5.67	34.45	---	2.2
S-6 (D)	01/10/1996	7,800	230	120	50	210	---	---	---	---	---	---	40.12	5.67	34.45	---	2.2
S-6	04/25/1996	---	---	---	---	---	---	---	---	---	---	---	40.12	5.23	34.89	---	---
S-6	07/23/1996	2,600	170	<0.50	<0.50	8.5	<25	---	---	---	---	---	40.12	5.40	34.72	---	1.4
S-6	12/10/1996	---	---	---	---	---	---	---	---	---	---	---	40.12	6.68	33.44	---	0.7
S-6	02/20/1997	6,300	160	7.7	14	31	77	---	---	---	---	---	40.12	5.70	34.42	---	2
S-6	05/22/1997	---	---	---	---	---	---	---	---	---	---	---	40.12	5.49	34.63	---	0.9
S-6	08/22/1997	6,200	160	26	15	27	49	---	---	---	---	---	40.12	5.71	34.41	---	2.8
S-6	11/03/1997	---	---	---	---	---	---	---	---	---	---	---	40.12	6.15	33.97	---	1.4
S-6	02/20/1998	4,100	150	<10	<10	15	55	---	---	---	---	---	40.12	5.25	34.87	---	0.4
S-6	05/18/1998	---	---	---	---	---	---	---	---	---	---	---	40.12	5.69	34.43	---	0.4
S-6	08/20/1998	7,800	240	38	16	39	110	---	---	---	---	---	40.12	6.04	34.08	---	1.5
S-6 (D)	08/20/1998	8,400	270	30	19	31	130	---	---	---	---	---	40.12	6.04	34.08	---	1.5
S-6	11/06/1998	---	---	---	---	---	---	---	---	---	---	---	40.12	6.10	34.02	---	---
S-6	02/16/1999	6,000	190	19	14	20	<2.5	---	---	---	---	---	40.12	5.84	34.28	---	1.7
S-6	05/28/1999	---	---	---	---	---	---	---	---	---	---	---	40.12	9.51	30.61	---	1.9
S-6	08/24/1999	6,870	193	32.1	18.8	36.4	<25.0	---	---	---	---	---	40.12	8.29	31.83	---	2.7
S-6	11/16/1999	---	---	---	---	---	---	---	---	---	---	---	40.12	5.93	34.19	---	2.6
S-6	02/02/2000	2,310	164	122	28.6	133	63.1	---	---	---	---	---	40.12	5.33	34.79	---	2.6
S-6	05/09/2000	---	---	---	---	---	---	---	---	---	---	---	40.12	6.41	33.71	---	2.4
S-6	08/03/2000	5,600	188	27.4	<10.0	25.2	174	---	---	---	---	---	40.12	5.84	34.28	---	2.7
S-6	11/15/2000	---	---	---	---	---	---	---	---	---	---	---	40.12	5.58	34.54	---	2.3
S-6	02/14/2001	6,140	126	13.2	8.01	18.0	205	---	---	---	---	---	40.12	5.50	34.62	---	1.3
S-6	05/31/2001	---	---	---	---	---	---	---	---	---	---	---	40.12	5.52	34.60	---	1.2
S-6	08/15/2001	6,000	160	9.1	5.8	24	---	51	---	---	---	---	40.12	6.04	34.08	---	0.4
S-6	12/31/2001	6,900	120	12	6.6	24	---	44	---	---	---	---	40.12	5.52	34.60	---	0.4
S-6	02/06/2002	4,300	110	7.3	4.8	18	---	39	---	---	---	---	40.12	6.34	33.78	---	0.5
S-6	06/04/2002	4,300	140	8.4	4.9	22	---	26	---	---	---	---	40.12	6.19	33.93	---	0.4
S-6	07/25/2002	3,900	140	9.0	5.5	23	---	31	---	---	---	---	39.92	6.05	33.87	---	0.7
S-6	11/27/2002	5,200	160	9.6	4.9	24	---	26	---	---	---	---	39.92	6.26	33.66	---	---
S-6	01/30/2003	4,700	200	9.6	5.5	25	---	30	---	---	---	---	39.92	5.73	34.19	---	---

TABLE 1

GROUNDWATER DATA
SHELL-BRANDED SERVICE STATION
999 SAN PABLO AVENUE, ALBANY, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-6	06/03/2003	3,900	160	10	<10	25	---	30	---	---	---	---	39.92	5.52	34.40	---	---
S-6	08/08/2003	2,900	150	8.8	3.6	18	---	18	---	---	---	---	39.92	6.14	33.78	---	---
S-6	11/13/2003	8,300	220	19	11	35	---	28	---	---	---	---	39.92	5.85	34.07	---	---
S-6	02/04/2004	7,400	310	17	10	31	---	30	---	---	---	---	39.92	5.51	34.41	---	---
S-6	05/12/2004	4,000	230	10	5.5	24	---	21	---	---	---	---	39.92	6.10	33.82	---	---
S-6	08/23/2004	6,000	260	16	9.0	32	---	19	---	---	---	---	39.92	6.38	33.54	---	---
S-6	12/01/2004	9,600	280	23	11	47	---	24	---	---	---	---	39.92	6.41	33.51	---	---
S-6	02/07/2005	7,100	300	14	8.4	35	---	21	---	---	---	---	39.92	5.94	33.98	---	---
S-6	05/02/2005	6,100	250	12	8.1	30	---	16	---	---	---	---	39.92	5.90	34.02	---	---
S-6	08/04/2005	5,200	180	13	8.0	31	---	15	---	---	---	---	39.92	6.67	33.25	---	---
S-6	11/16/2005	9,950	147	15.3	9.82	32.3	---	10.8	---	---	---	---	39.92	6.64	33.28	---	---
S-6	03/02/2006	2,400	72	9.2	7.0	21	---	6.4	---	---	---	---	39.92	5.92	34.00	---	---
S-6	05/31/2006	9,460	182	13.6	8.80	33.5	---	11.4 e	---	---	---	---	39.92	6.28	33.64	---	---
S-6	08/29/2006	8,840	108	26.6	12.4	37.7	---	10.1	---	---	---	---	39.92	7.19	32.73	---	---
S-6	12/06/2006	4,900	130	17	8.2	35	---	9.4	---	---	---	---	39.92	7.06	32.86	---	---
S-6	01/30/2007	4,500	100	22	12	38	---	8.1	---	---	---	---	39.92	6.94	32.98	---	---
S-6	05/15/2007	6,900 f	120	9.2	6.7	27.6	---	6.4	---	---	---	---	39.92	6.30	33.62	---	---
S-6	08/29/2007	9,300 f	110	30	14	52	---	6.4	<50	5.3 g	<10	<10	39.92	7.27	32.65	---	---
S-6	11/29/2007	4,300 f	110	19 h	14	53	---	8.7	---	---	---	---	39.92	6.87	33.05	---	---
S-6	02/21/2008	5,600 f	110	8.6	5.0	28.3	---	6.4	---	---	---	---	39.92	5.75	34.17	---	---
S-6	05/06/2008	5,900	110	12	7.5	30.1	---	<1.0	---	---	---	---	39.92	6.60	33.32	---	---
S-6	08/27/2008	6,200	58	15	7.0	27.9	---	<2.0	---	---	---	---	39.92	7.40	32.52	---	---
S-6	11/24/2008	6,100	80	20	12	40	---	<2.0	---	---	---	---	39.92	7.30	32.62	---	---
S-6	11/24/2008	6,100	80	20	12	40	---	<2.0	---	---	---	---	39.92	7.30	32.62	---	---
S-6	01/28/2009	5,300	80	10	6.3	26	---	<1.0	---	---	---	---	39.92	6.61	33.31	---	---
S-6	05/26/2009	6,600	130	6.6	4.4	21	---	4.9	---	---	---	---	39.92	6.70	33.22	---	---
S-6	11/24/2009	6,200	69	13	8.4	32	---	4.5	---	---	---	---	39.92	7.03	32.89	---	---
S-6	05/26/2010	5,100	130	8.3	4.8	27	---	6.1	---	---	---	---	39.92	6.24	33.68	---	---
S-6	11/30/2010	5,500	74	10	6.2	32	---	5.6	---	---	---	---	39.92	6.12	33.80	---	---
S-6	05/11/2011	8,900	73	7.8	6.8	31	---	4.2	---	---	---	---	39.92	6.30	33.62	---	---
S-6	11/28/2011	3,300	74.1	7.49	5.33	30.0	---	4.17	---	---	---	---	39.92	6.45	33.47	---	---
S-6	06/05/2012	5,000	78	11	8.6	38	---	4.5	---	---	---	---	39.92	6.71	33.21	---	---
S-6	**11/28/2012**	---	---	---	---	---	---	---	---	---	---	---	**39.92**	**5.92**	**34.00**	---	---
S-6	**11/29/2012**	**5,800**	**64**	**7.1**	**5.1**	**26**	---	**<5.0**	---	---	---	---	**39.92**	---	---	---	---

GROUNDWATER DATA
SHELL-BRANDED SERVICE STATION
999 SAN PABLO AVENUE, ALBANY, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-7	05/13/1991	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	40.10	10.56	29.54	---	---
S-7	08/23/1991	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	40.10	11.16	28.94	---	---
S-7	11/07/1991	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	40.10	11.48	28.62	---	---
S-7	01/28/1992	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	40.10	10.72	29.38	---	---
S-7	05/06/1992	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	40.10	10.34	29.76	---	---
S-7	08/26/1992	160	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	40.10	11.13	28.97	---	---
S-7	10/28/1992	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	40.10	11.52	28.58	---	---
S-7	01/19/1993	50	1.1	0.60	1.9	9.2	---	---	---	---	---	---	40.10	8.68	31.42	---	---
S-7	04/29/1993	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	40.10	9.90	30.20	---	---
S-7	07/22/1993	Well inaccessible		---	---	---	---	---	---	---	---	---	40.10	---	---	---	---
S-7	10/21/1993	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	40.10	11.10	29.00	---	---
S-7	01/04/1994	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	40.10	10.40	29.70	---	---
S-7	04/13/1994	<50	1.4	0.61	<0.50	0.64	---	---	---	---	---	---	40.10	10.20	29.90	---	---
S-7 (D)	04/13/1994	<50	1.4	0.61	<0.50	0.66	---	---	---	---	---	---	40.10	10.20	29.90	---	---
S-7	07/25/1994	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	40.10	10.48	29.62	---	---
S-7 a	10/10/1994	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	40.10	10.64	29.46	---	---
S-7	01/26/1995	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	40.10	7.75	32.35	---	4.6
S-7	04/21/1995	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	40.10	8.51	31.59	---	---
S-7	07/28/1995	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	40.10	10.20	29.90	---	3
S-7	10/31/1995	<50	<0.50	<0.50	<0.50	<0.50	---	---	---	---	---	---	40.10	10.86	29.24	---	4.9
S-7	01/10/1996	<50	<0.50	2.0	<0.50	2.6	---	---	---	---	---	---	40.10	10.33	29.77	---	7.6
S-7	04/25/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	40.10	9.13	30.97	---	6.2
S-7	07/23/1996	<50	<0.50	<0.50	<0.50	<0.50	14	---	---	---	---	---	40.10	10.18	29.92	---	3.7
S-7	12/10/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	40.10	9.04	31.06	---	4.6
S-7	02/20/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	40.10	9.60	30.50	---	5
S-7	05/22/1997	<50	1.3	<0.50	<0.50	<0.50	5.5	---	---	---	---	---	40.10	10.63	29.47	---	0.8
S-7	08/22/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	40.10	10.95	29.15	---	2.6
S-7	11/03/1997	<50	2.2	1.7	0.58	3.4	<2.5	---	---	---	---	---	40.10	11.29	28.81	---	2.6
S-7	02/20/1998	350	23	13	14	42	3.8	---	---	---	---	---	40.10	7.73	32.37	---	4.6
S-7	05/18/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	40.10	10.29	29.81	---	4.4
S-7	08/20/1998	Well inaccessible		---	---	---	---	---	---	---	---	---	40.10	11.00	29.10	---	5.4
S-7	11/06/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	---	---	---	---	---	40.10	11.19	28.91	---	5.2
S-7	02/16/1999	Well inaccessible		---	---	---	---	---	---	---	---	---	40.10	---	---	---	---
S-7	05/28/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	---	---	---	---	---	40.10	9.76	30.34	---	2.7
S-7	08/24/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	---	---	---	---	---	40.10	10.61	29.49	---	2.1

GROUNDWATER DATA
SHELL-BRANDED SERVICE STATION
999 SAN PABLO AVENUE, ALBANY, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-7	11/16/1999	<50.0	<0.500	<0.500	<0.500	<0.500	3.68	---	---	---	---	---	40.10	10.90	29.20	---	2.3
S-7	02/02/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	---	---	---	---	---	40.10	10.30	29.80	---	2.1
S-7	05/09/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	---	---	---	---	---	40.10	10.25	29.85	---	2.7
S-7	08/03/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	---	---	---	---	---	40.10	10.65	29.45	---	2.5
S-7	11/15/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	---	---	---	---	---	40.10	10.53	29.57	---	4.6
S-7	02/14/2001	Well inaccessible		---	---	---	---	---	---	---	---	---	40.10	---	---	---	---
S-7	05/31/2001	<50	<0.50	<0.50	<0.50	0.77	---	4.6	---	---	---	---	40.10	9.46	30.64	---	2.1
S-7	08/15/2001	<50	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	40.10	10.93	29.17	---	2.0
S-7	12/31/2001	<50	<0.50	<0.50	<0.50	<0.50	---	6.0	---	---	---	---	40.10	9.14	30.96	---	3.0
S-7	02/06/2002	<50	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	40.10	8.61	31.49	---	3.2
S-7	06/04/2002	<50	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	40.10	10.41	29.69	---	0.9
S-7	07/25/2002	<50	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	39.91	10.37	29.54	---	1.1
S-7	11/27/2002	<50	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	39.91	10.52	29.39	---	---
S-7	01/30/2003	<50	<0.50	<0.50	<0.50	<0.50	---	<5.0	---	---	---	---	39.91	9.38	30.53	---	---
S-7	06/03/2003	<50	<0.50	<0.50	<0.50	<1.0	---	0.72	---	---	---	---	39.91	10.18	29.73	---	---
S-7	08/08/2003	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	39.91	10.43	29.48	---	---
S-7	11/13/2003	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	39.91	10.39	29.52	---	---
S-7	02/04/2004	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	39.91	9.17	30.74	---	---
S-7	05/12/2004	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	39.91	10.20	29.71	---	---
S-7	08/23/2004	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	39.72 c	10.53	29.19	---	---
S-7	12/01/2004	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	39.72	10.36	29.36	---	---
S-7	02/07/2005	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	39.72	8.78	30.94	---	---
S-7	05/02/2005	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	39.72	9.46	30.26	---	---
S-7	08/04/2005	Well paved over		---	---	---	---	---	---	---	---	---	---	---	---	---	---
S-8	05/10/2004	---	---	---	---	---	---	---	---	---	---	---	40.52	10.85	29.67	---	---
S-8	05/12/2004	<1,300	<13	<13	<13	<25	---	2,500	---	---	---	---	40.52	10.95	29.57	---	---
S-8	08/23/2004	1,300	15	<13	<13	<25	---	2,500	570	<50	<50	<50	40.52	11.40	29.12	---	---
S-8	12/01/2004	1,400 d	<13	<13	<13	<25	---	2,700	---	---	---	---	40.52	11.10	29.42	---	---
S-8	02/07/2005	6,400	240	27	290	100	---	370	---	---	---	---	40.52	10.22	30.30	---	---
S-8	05/02/2005	6,300	160	25	200	74	---	190	---	---	---	---	40.52	10.05	30.47	---	---
S-8	08/04/2005	2,500	130	7.5	<6.0	14	---	290	92	<8.0	<8.0	<8.0	40.52	10.88	29.64	---	---
S-8	11/16/2005	27,700	43.2	4.36	637	1,200	---	638	---	---	---	---	40.52	11.28	29.24	---	---
S-8	03/02/2006	9,900	160	13	490	530	---	110	---	---	---	---	40.52	8.85	31.67	---	---
S-8	05/31/2006	14,300	270	53.1	283	246	---	102 e	---	---	---	---	40.52	10.34	30.18	---	---

TABLE 1

GROUNDWATER DATA
SHELL-BRANDED SERVICE STATION
999 SAN PABLO AVENUE, ALBANY, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-8	08/29/2006	14,700	107	9.42	196	195	---	278	36.1	<0.500	<0.500	<0.500	40.52	11.17	29.35	---	---
S-8	12/06/2006	7,800	150	8.6	120	110	---	200	---	---	---	---	40.52	11.21	29.31	---	---
S-8	01/30/2007	7,500	220	18	180	96	---	170	---	---	---	---	40.52	10.72	29.80	---	---
S-8	05/15/2007	9,600 f	---	24	160	112	---	130	---	---	---	---	40.52	10.50	30.02	---	---
S-8	08/29/2007	---	---	---	---	---	---	---	---	---	---	---	40.52	11.44	29.11	0.04	---
S-8	08/30/2007	6,100 f	35	2.7	140	234	---	170	820	<4.0	<4.0	<4.0	40.52	11.37	29.25	0.13	---
S-8	09/25/2007	---	---	---	---	---	---	---	---	---	---	---	40.52	11.56	29.22	0.32	---
S-8	10/29/2007	---	---	---	---	---	---	---	---	---	---	---	40.52	11.23	29.50	0.26	---
S-8	11/29/2007	---	---	---	---	---	---	---	---	---	---	---	40.52	11.08	29.60	0.20	---
S-8	12/11/2007	---	---	---	---	---	---	---	---	---	---	---	40.52	10.61	30.03	0.15	---
S-8	01/24/2008	---	---	---	---	---	---	---	---	---	---	---	40.52	9.61	30.97	0.08	---
S-8	02/21/2008	---	---	---	---	---	---	---	---	---	---	---	40.52	9.11	31.43	0.03	---
S-8	03/20/2008	---	---	---	---	---	---	---	---	---	---	---	40.52	10.22	30.40	0.12	---
S-8	04/30/2008	---	---	---	---	---	---	---	---	---	---	---	40.52	10.91	29.67	0.07	---
S-8	05/06/2008	---	---	---	---	---	---	---	---	---	---	---	40.52	10.50	30.05	0.04	---
S-8	06/04/2008	---	---	---	---	---	---	---	---	---	---	---	40.52	11.34	29.24	0.07	---
S-8	07/29/2008	---	---	---	---	---	---	---	---	---	---	---	40.52	11.83	28.71	0.03	---
S-8	08/27/2008	---	---	---	---	---	---	---	---	---	---	---	40.52	11.40	29.14	0.03	---
S-8	09/30/2008	---	---	---	---	---	---	---	---	---	---	---	40.52	12.08	28.46	0.03	---
S-8	10/31/2008	---	---	---	---	---	---	---	---	---	---	---	40.52	11.35	29.37	0.25	---
S-8	11/24/2008	---	---	---	---	---	---	---	---	---	---	---	40.52	10.79	29.89	0.20	---
S-8	12/30/2008	---	---	---	---	---	---	---	---	---	---	---	40.52	8.90	31.75	0.16	---
S-8	01/14/2009	---	---	---	---	---	---	---	---	---	---	---	40.52	9.87	30.83	0.22	---
S-8	01/28/2009	---	---	---	---	---	---	---	---	---	---	---	40.52	9.52	31.10	0.13	---
S-8	03/31/2009	---	---	---	---	---	---	---	---	---	---	---	40.52	8.56	32.11	0.19	---
S-8	04/21/2009	---	---	---	---	---	---	---	---	---	---	---	40.52	8.90	31.75	0.16	---
S-8	05/26/2009	---	---	---	---	---	---	---	---	---	---	---	40.52	9.04	31.57	0.11	---
S-8	06/30/2009	---	---	---	---	---	---	---	---	---	---	---	40.52	10.28	30.32	0.10	---
S-8	07/23/2009	---	---	---	---	---	---	---	---	---	---	---	40.52	10.37	30.25	0.13	---
S-8	08/31/2009	---	---	---	---	---	---	---	---	---	---	---	40.52	10.78	29.80	0.08	---
S-8	11/24/2009	---	---	---	---	---	---	---	---	---	---	---	40.52	9.73	30.84	0.06	---
S-8	05/26/2010	59,000	150	32	2,100	4,400	---	78	---	---	---	---	40.52	7.59	32.93	0.00	---
S-8	11/30/2010	---	---	---	---	---	---	---	---	---	---	---	40.52	8.34	32.23	0.06	---
S-8	02/10/2011	---	---	---	---	---	---	---	---	---	---	---	40.52	8.28	32.30	0.08	---
S-8	05/11/2011	---	---	---	---	---	---	---	---	---	---	---	40.52	8.39	32.15	0.02	---

TABLE 1

GROUNDWATER DATA
SHELL-BRANDED SERVICE STATION
999 SAN PABLO AVENUE, ALBANY, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-8	08/10/2011	---	---	---	---	---	---	---	---	---	---	---	40.52	8.72	31.81	0.01	---
S-8	11/28/2011	25,000	169	11.8	874	1,170	---	101	<10.0	<0.500	<0.500	<0.500	40.52	8.97	31.55	---	---
S-8	02/28/2012	---	---	---	---	---	---	---	---	---	---	---	40.52	8.64	31.88	---	---
S-8	06/05/2012	32,000	160	15	600	660	---	75	---	---	---	---	40.52	9.63	30.89	---	---
S-8	08/29/2012	---	---	---	---	---	---	---	---	---	---	---	40.52	10.39	30.15	0.03	---
S-8	11/28/2012	---	---	---	---	---	---	---	---	---	---	---	40.52	6.74	33.79	0.01	---
S-8	11/29/2012	14,000	120	5.9	280	290	---	85	<50	---	---	---	40.52	---	---	---	---
S-9	05/10/2004	---	---	---	---	---	---	---	---	---	---	---	39.72	10.34	29.38	---	---
S-9	05/12/2004	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	39.72	10.42	29.30	---	---
S-9	08/23/2004	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	39.72	11.32	28.40	---	---
S-9	12/01/2004	Unable to locate		---	---	---	---	---	---	---	---	---	39.72	---	---	---	---
S-9	02/07/2005	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	39.72	8.74	30.98	---	---
S-9	05/02/2005	Well inaccessible		---	---	---	---	---	---	---	---	---	39.72	---	---	---	---
S-9	08/04/2005	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	39.72	8.79	30.93	---	---
S-9	11/16/2005	<50.0	<0.500	<0.500	<0.500	<0.500	---	<0.500	---	---	---	---	39.72	10.30	29.42	---	---
S-9	03/02/2006	<50	<0.50	<0.50	<0.50	<0.50	---	<0.50	---	---	---	---	39.72	5.86	33.86	---	---
S-9	05/31/2006	<50.0	<0.500	<0.500	<0.500	0.540	---	<0.500	---	---	---	---	39.72	9.85	29.87	---	---
S-9	08/29/2006	<50.0	<0.500	<0.500	<0.500	<0.500	---	<0.500	---	---	---	---	39.72	10.75	28.97	---	---
S-9	12/06/2006	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	39.72	10.60	29.12	---	---
S-9	01/30/2007	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	39.72	10.45	29.27	---	---
S-9	05/15/2007	61 d,f	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	39.72	10.15	29.57	---	---
S-9	08/29/2007	71 f	<0.50	<1.0	1.3	2.1	---	<1.0	<10	<2.0	<2.0	<2.0	39.72	10.96	28.76	---	---
S-9	11/29/2007	Well inaccessible		---	---	---	---	---	---	---	---	---	39.72	---	---	---	---
S-9	02/21/2008	<50 f	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	39.72	7.36	32.36	---	---
S-9	05/06/2008	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	39.72	10.49	29.23	---	---
S-9	08/27/2008	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	39.72	11.19	28.53	---	---
S-9	11/24/2008	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	39.72	10.91	28.81	---	---
S-9	01/28/2009	Well inaccessible			---	---	---	---	---	---	---	---	39.72	---	---	---	---
S-9	05/26/2009	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	39.72	10.20	29.52	---	---
S-9	11/24/2009	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	39.72	10.52	29.20	---	---
S-9	05/26/2010	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	39.72	7.09	32.63	---	---
S-9	11/30/2010	<50	<0.50	<1.0	<1.0	<1.0	---	<1.0	---	---	---	---	39.72	7.42	32.30	---	---
S-9	05/11/2011	Well inaccessible		---	---	---	---	---	---	---	---	---	39.72	---	---	---	---
S-9	11/28/2011	Well inaccessible		---	---	---	---	---	---	---	---	---	39.72	---	---	---	---

GROUNDWATER DATA
SHELL-BRANDED SERVICE STATION
999 SAN PABLO AVENUE, ALBANY, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)
S-9	12/02/2011	<50	<0.500	<0.500	<0.500	<0.500	---	<0.500	---	---	---	---	39.72	8.80	30.92	---	---
S-9	06/05/2012	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	39.72	10.17	29.55	---	---
S-9	11/28/2012	---	---	---	---	---	---	---	---	---	---	---	39.72	5.58	34.14	---	---
S-9	11/29/2012	<50	<0.50	<0.50	<0.50	<1.0	---	<0.50	---	---	---	---	39.72	---	---	---	---

Notes:
TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B; prior to May 31, 2001, analyzed by EPA Method 8015 unless otherwise noted.
BTEX = Benzene, toluene, ethylbenzene, and total xylenes analyzed by EPA Method 8260B; prior to May 31, 2001, analyzed by EPA Method 8020.
MTBE = Methyl tertiary-butyl ether analyzed by method noted
TBA = Tertiary-butyl alcohol analyzed by EPA Method 8260B
DIPE = Di-isopropyl ether analyzed by EPA Method 8260B
ETBE = Ethyl tertiary-butyl ether analyzed by EPA Method 8260B
TAME = Tertiary-amyl methyl ether analyzed by EPA Method 8260B
TOC = Top of casing elevation, in feet relative to mean sea level
SPH = Separate-phase hydrocarbon
GW = Groundwater
DO = Dissolved oxygen
µg/L = Micrograms per liter
ft = Feet
MSL = Mean sea level
mg/L = Milligrams per liter
<x = Not detected at reporting limit x
--- = Not analyzed or not available
(D) = Duplicate sample

a = Sample analyzed for total dissolved solids (450 mg/L).
b = Concentration is an estimated value above the linear quantitation range.
c = TOC lowered 0.19 feet due to wellhead maintenance.
d = Hydrocarbon reported does not match the laboratory standard.
e = Secondary ion abundances were outside method requirements. Identification based on analytical judgment.
f = Analyzed by EPA Method 8015B (M).
g = Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
h = Analyte was present in the associated method blank.

When SPHs are present, GW elevation is adjusted using the relation:

TABLE 1

GROUNDWATER DATA
SHELL-BRANDED SERVICE STATION
999 SAN PABLO AVENUE, ALBANY, CALIFORNIA

Well ID	Date	TPHg (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE 8020 (µg/L)	MTBE 8260 (µg/L)	TBA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	TOC (ft MSL)	Depth to Water (ft TOC)	GW Elevation (ft MSL)	SPH Thickness (ft)	DO Reading (mg/L)

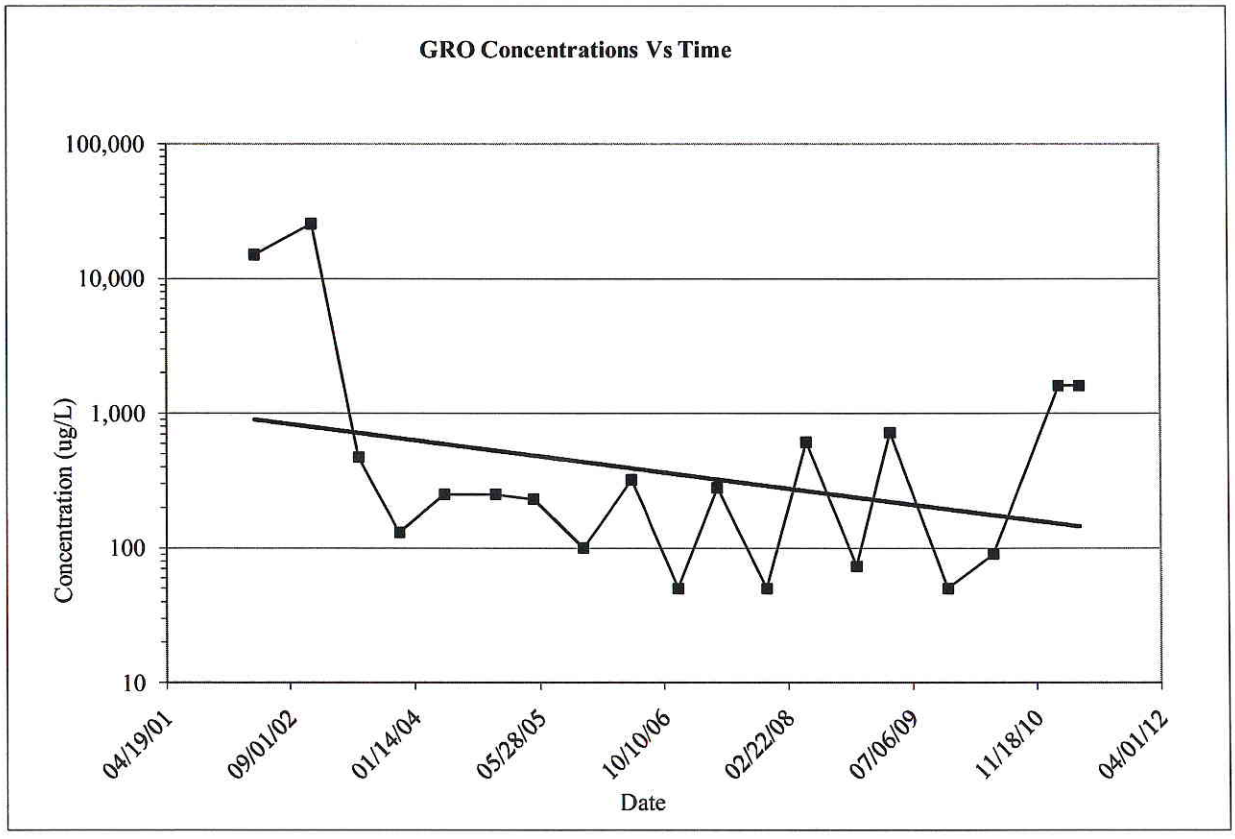
Corrected GW elevation = TOC - depth to water + (0.8 x hydrocarbon thickness).
Since April 2002 well S-5 has been monitored by Arco.
Prior to July 25, 2002 depth to water referenced to top of well box.
Site wells surveyed January 9, 2002 by Virgil Chavez Land Surveying
Wells S-8 and S-9 surveyed May 11, 2004 by Virgil Chavez Land Surveying

APPENDIX E

GRO and Benzene Concentration Trend Graphs

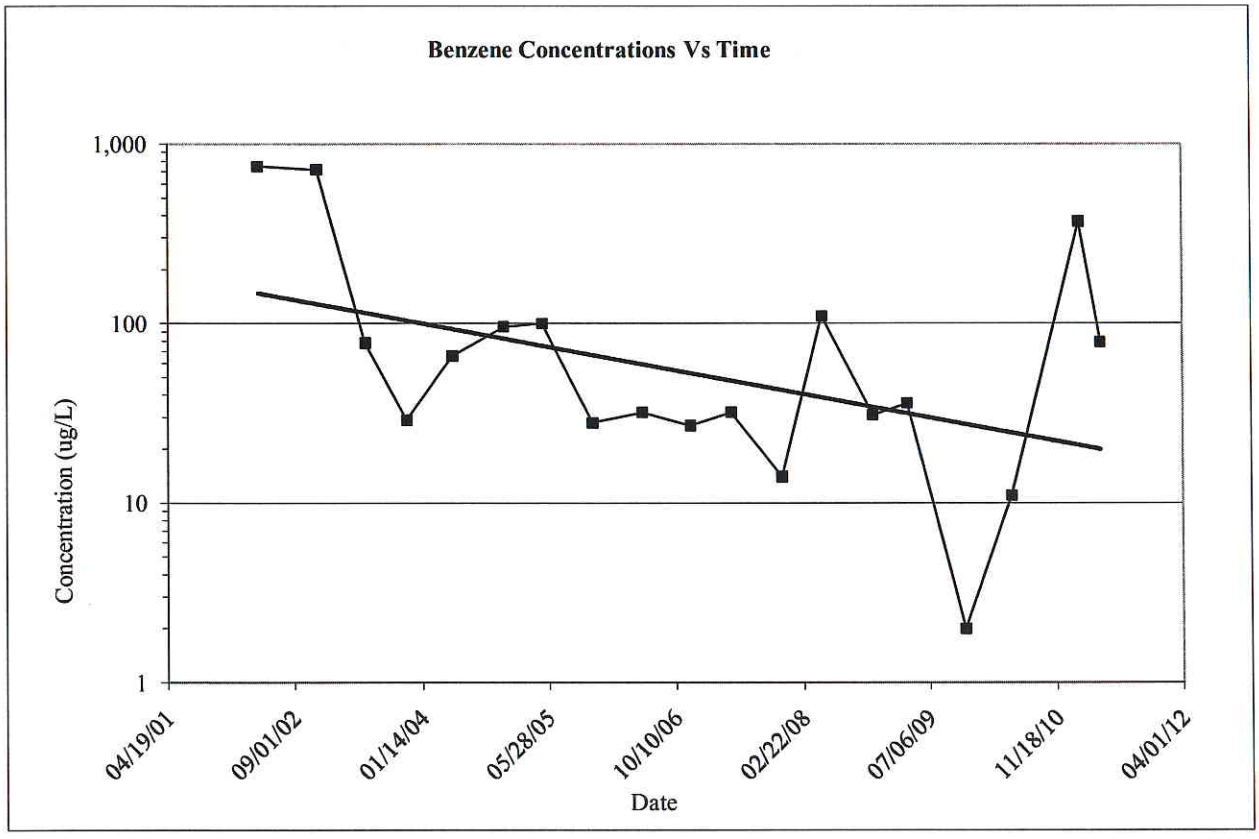
ARCO Service Station No. 2035

Well ID: **RW-1**
Constituent: **GRO**



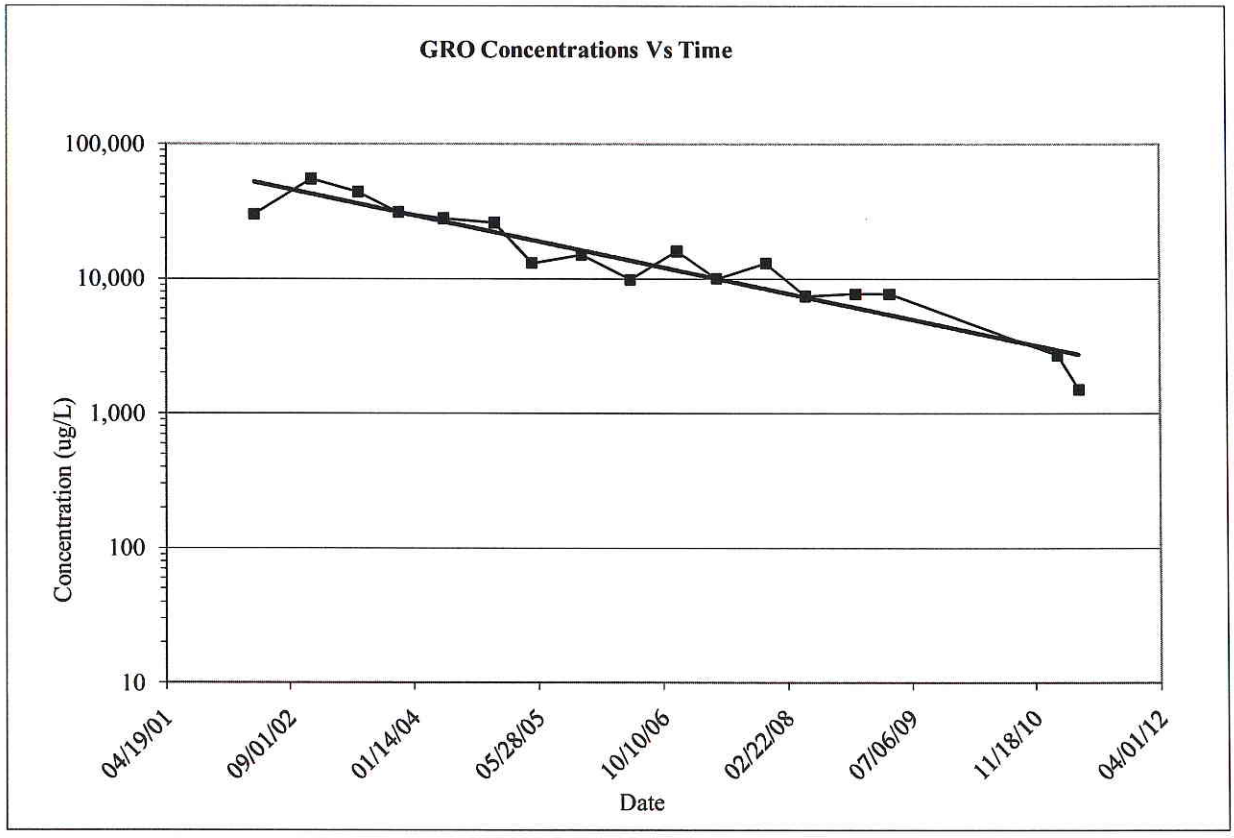
ARCO Service Station No. 2035

Well ID: **RW-1**
Constituent: **Benzene**



ARCO Service Station No. 2035

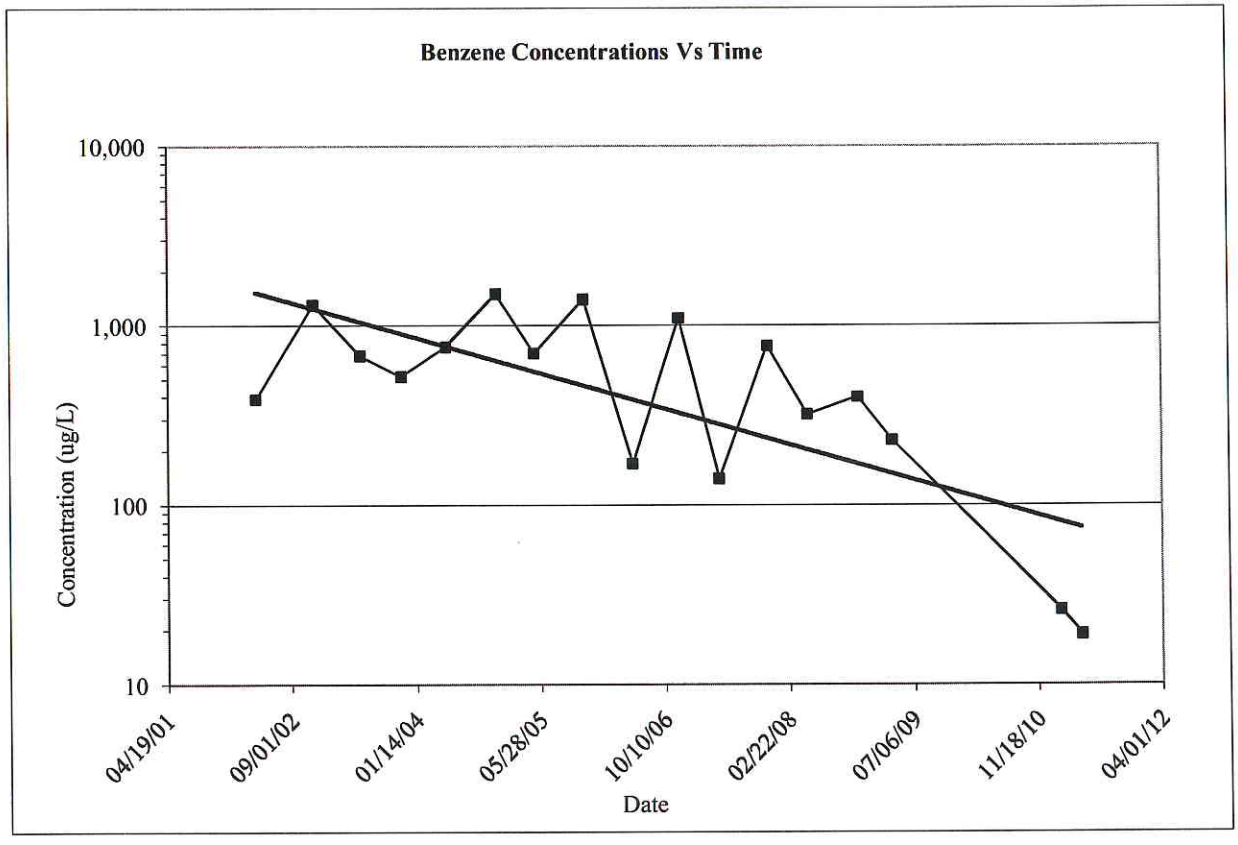
Well ID: **S-5**
Constituent: **GRO**



ARCO Service Station No. 2035

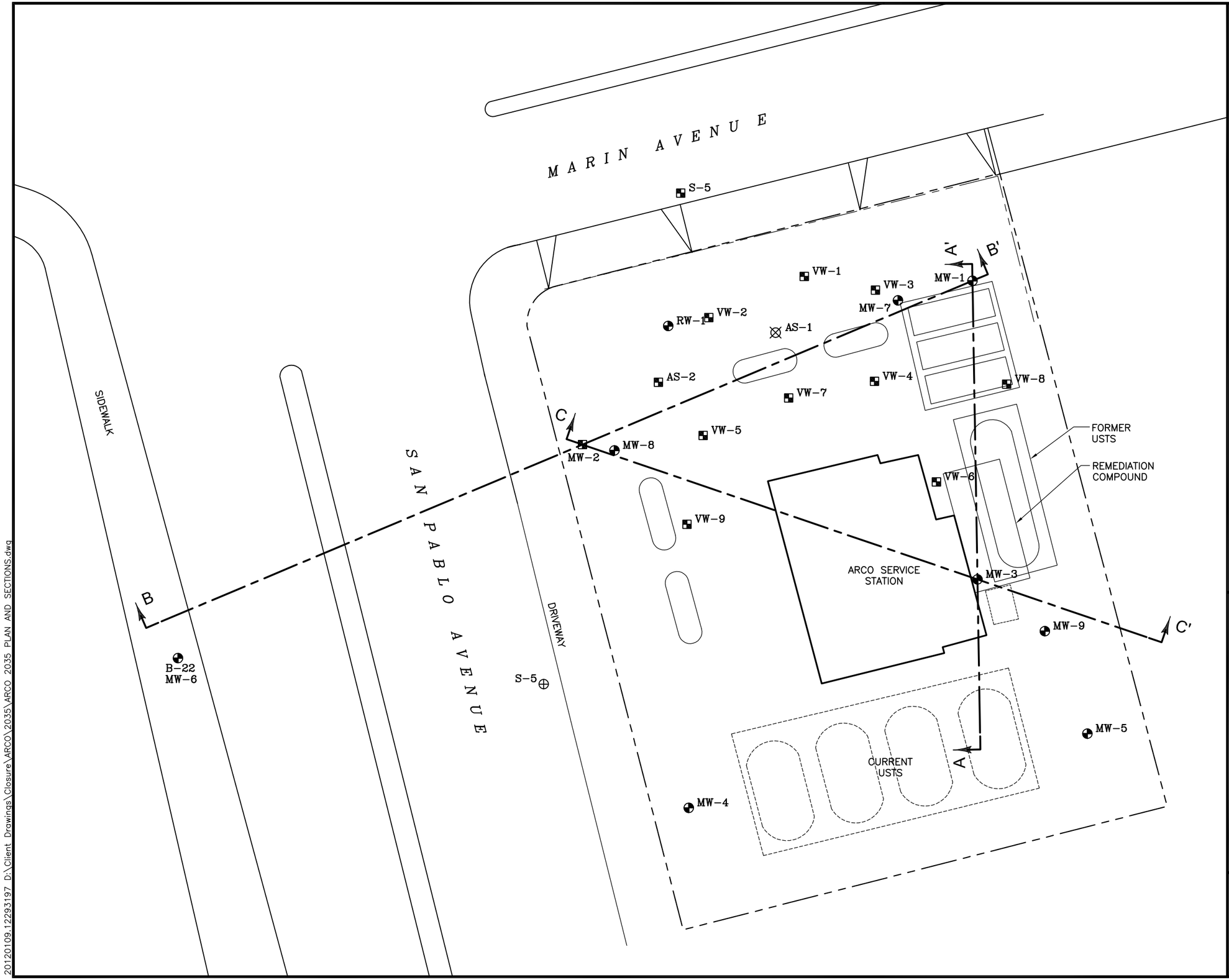
Well ID: **S-5**

Constituent: **Benzene**



APPENDIX F

Geologic Cross-Sections



SCALE IN FEET

0 50 100

LEGEND:

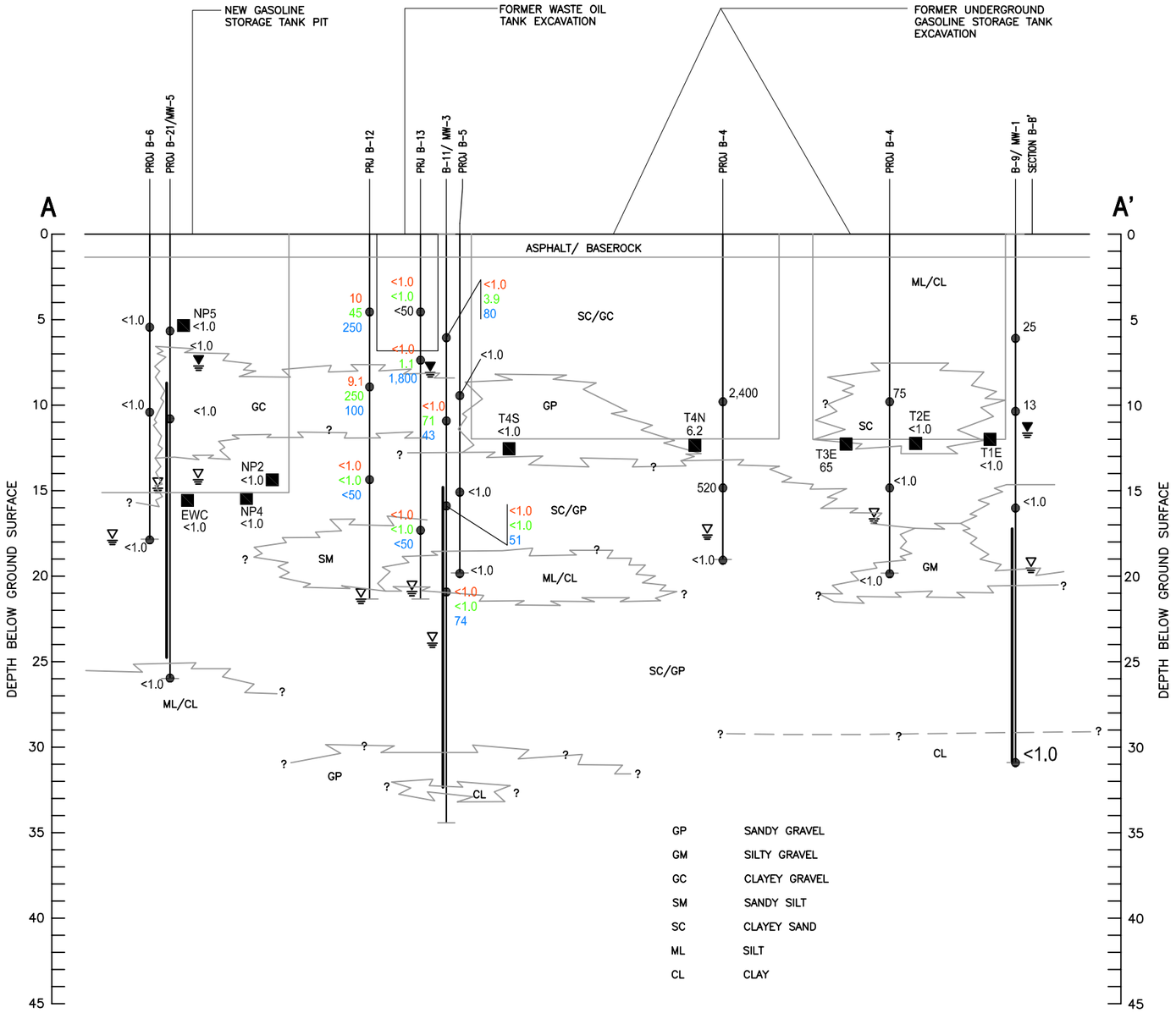
- (ARCO) MONITORING WELL
- (ARCO) VAPOR EXTRACTION WELL
- (ARCO) AIR SPARGE WELL
- (SHELL) MONITORING WELL
- A A' GEOLOGIC CROSS SECTION LOCATION

FIGURE 1

SITE MAP WITH CROSS SECTION LOCATIONS

ARCO STATION NO. 2035
1001 SAN PABLO AVENUE
ALBANY, CALIFORNIA

CLOSURE SOLUTIONS, INC.
4600 Northgate Boulevard • Suite 230
Sacramento • California • 95834
Phone: (800) 988-7880



HORIZONTAL SCALE

0 15 30

2X VERTICAL EXAGGERATION

LEGEND:

P-9

<1.0
71
43

LABORATORY ANALYZED SOIL SAMPLE SHOWING CONCENTRATION OF TPHg (RED), TPHd (GREEN) AND TOG (BLUE) IN PPM

WELL CASING

WELL SCREEN

INITIAL WATER LEVEL IN BORING

STATIC WATER LEVEL IN WELL (2-22-93)

T4S
<1.0

PROJECTED TANK PIT SAMPLE SHOWING CONCENTRATION OF TPHg IN PPM

NOTES:

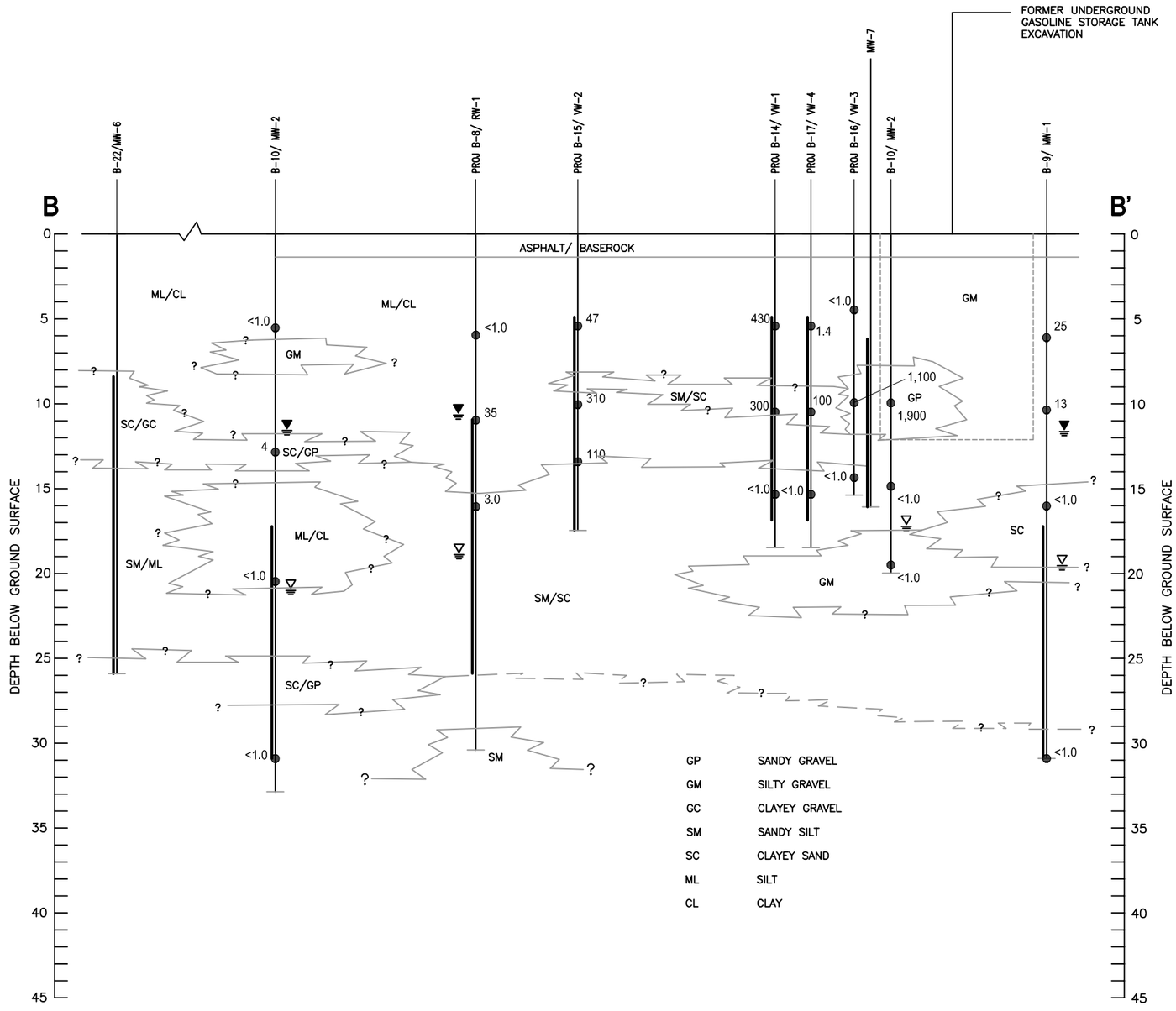
CROSS-SECTION DETAILS AND ANALYTICAL ADAPTED FROM RESNA ENVIRONMENTAL 1992/ 1993

FIGURE 2

GEOLOGIC CROSS SECTION A-A'

ARCO STATION NO. 2035
1001 SAN PABLO AVENUE
ALBANY, CALIFORNIA

CLOSURE SOLUTIONS, INC.
4600 Northgate Boulevard • Suite 230
Sacramento • California • 95834
Phone: (800) 988-7880



HORIZONTAL SCALE

0 15 30

2X VERTICAL EXAGGERATION

LEGEND:

P-9
<1.0 LABORATORY ANALYZED SOIL SAMPLE SHOWING CONCENTRATION OF TPHg (RED), TPHd (GREEN) AND TOG (BLUE) IN PPM
71
43
WELL CASING
WELL SCREEN
INITIAL WATER LEVEL IN BORING
STATIC WATER LEVEL IN WELL (2-22-93)
T4S PROJECTED TANK PIT SAMPLE
<1.0 SHOWING CONCENTRATION OF TPHg IN PPM

NOTES:

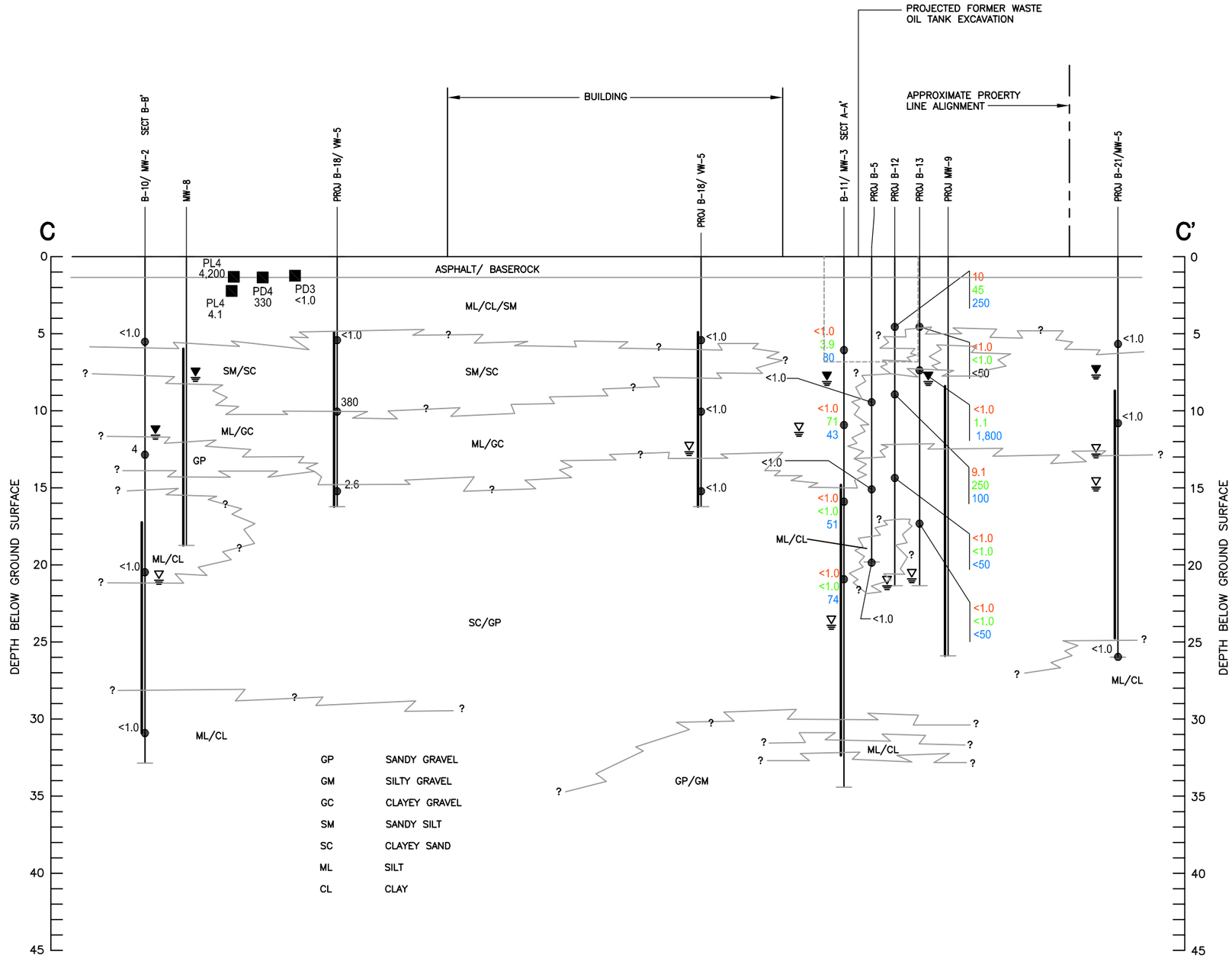
CROSS-SECTION DETAILS AND ANALYTICAL ADAPTED FROM RESNA ENVIRONMENTAL 1992/ 1993

FIGURE 3

GEOLOGIC CROSS SECTION B-B'

ARCO STATION NO. 2035
1001 SAN PABLO AVENUE
ALBANY, CALIFORNIA

CLOSURE SOLUTIONS, INC.
4600 Northgate Boulevard • Suite 230
Sacramento • California • 95834
Phone: (800) 988-7880



HORIZONTAL SCALE
0 15 30

2X VERTICAL EXAGGERATION

LEGEND:

LABORATORY ANALYZED SOIL SAMPLE SHOWING CONCENTRATION OF TPHg (RED), TPHd (GREEN) AND TOG (BLUE) IN PPM

PROJECTED TANK PIT SAMPLE SHOWING CONCENTRATION OF TPHg IN PPM

NOTES:

CROSS-SECTION DETAILS AND ANALYTICAL ADAPTED FROM RESNA ENVIRONMENTAL 1992/ 1993

FIGURE 4

GEOLOGIC CROSS SECTION C-C'

ARCO STATION NO. 2035
1001 SAN PABLO AVENUE
ALBANY, CALIFORNIA

CLOSURE SOLUTIONS, INC.
4600 Northgate Boulevard • Suite 230
Sacramento • California • 95834
Phone: (800) 988-7880