CAMBRIA

July 9, 2001

Ms. Eva Chu
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502

JUL 16 2001

Re: **Dispenser and Product Piping Removal Report**
ARCO Service Station No. 0771
899 Rincon Avenue
Livermore, CA
Cambria Project #438-1689

Dear Ms. Chu:

On behalf of ARCO, Cambria Environmental Technology, Inc. (Cambria) has prepared this *Dispenser and Product Piping Removal Report* for the above referenced site. This report documents the removal of the dispensers and product piping, and the associated compliance sampling activities. The product piping and dispenser removal compliance sampling was performed in accordance with the State of California Regional Water Quality Control Board guidelines.

Due to the low hydrocarbon concentrations remaining in soil and groundwater at the site, Cambria will prepare and submit a site closure summary report to the Alameda County Health Care Services Agency.

Please call me if you have questions.

Sincerely,
Cambria Environmental Technology, Inc.

Ron Scheele, RG
Senior Project Manager

Attachment: Dispenser and Product Piping Removal Report

cc: Paul Supple, ARCO, PO Box 6549, Moraga, CA 94570
Danielle Stefani, LPFD, 4550 East Avenue, Livermore, CA 94550

Oakland, CA
San Ramon, CA
Sonoma, CA

Cambria Environmental Technology, Inc.

1144 65th Street
Suite B
Oakland, CA 94608
Tel (510) 420-0700
Fax (510) 420-9170

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Dispenser and Product Piping Removal Report

Arco Service Station No. 0771
899 Rincon Ave
Livermore, CA
Cambria Project #438-1689

Prepared For:

Mr. Paul Supple
ARCO

July 9, 2001

Prepared By:

Cambria Environmental Technology, Inc.
6262 Hollis Street
Emeryville, California 94608

REGISTERED GEOLOGIST • RONALD A. SCHEELE • No. 6842 • STATE OF CALIFORNIA

Written by:

Jason D. Olson
Senior Staff Environmental Scientist

Ron Scheele, RG
Senior Project Manager

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Dispenser and Product Piping Removal Report

ARCO Service Station 6228
2747 Pinole Valley Road
Pinole, California
Cambria Project #436-1655

July 9, 2001

INTRODUCTION

On behalf of ARCO, Cambria Environmental Technology, Inc. (Cambria) has prepared this *Dispenser and Product Piping Removal Report* for the above referenced site. Cambria supervised the removal of the product piping by Paradiso Construction and performed associated dispenser and product piping removal compliance sampling activities. The site background, product piping removal activities, compliance soil sampling activities, and analytical soil results are presented below. The product piping and dispenser removal compliance sampling was performed in accordance with the State of California Regional Water Quality Control Board's *Tri-Regional Board Staff Recommendations for Preliminary Investigation and Evaluation of Underground Tank Sites* dated August 10, 1990, and under the supervision of the Alameda County Health Care Services Agency (ACHCSA) and the Livermore Pleasanton Fire Department (LPFD).

SITE BACKGROUND

Site Description: The site is located at 899 Rincon Avenue, on the southwestern corner of the intersection of Pine Street and Rincon Avenue, in Livermore, California (see Figure 1). The site is occupied by an active ARCO service station consisting of four gasoline USTs, one gasoline dispenser island, and a station building (see Figure 2).

Site Hydrogeology: The topography surrounding the site is generally flat, sloping gently towards the northwest at an elevation of approximately 450 feet above mean sea level. Based on previous investigations, the lithology beneath the site consists primarily of surficial sandy and clayey gravels from ground surface to approximately 45 feet below grade (fbg). These coarse-grained deposits are underlain by sandy clays to a total explored depth of 52 fbg. Based on Cambria's *First Quarter 2001 Monitoring Report*, groundwater flow at the site is towards the north-northeast, and depth to groundwater ranges from 19 to 35 fbg.

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PRODUCT PIPING REMOVAL ACTIVITIES

On June 15, 2001, the product piping was removed by Paradiso Construction of San Leandro, California (see Figure 2). Ms. Eva Chu, Hazardous Materials Specialist with the ACHCSA, and Ms. Danielle Stephani, Hazardous Materials Coordinator with the LPFD, observed the removal event.

COMPLIANCE SOIL SAMPLING ACTIVITIES

Sampling Procedures and Handling: All sampling was performed in accordance with Cambria's *Standard Piping and Dispenser Removal Sampling Procedures*, presented in Appendix A. The samples were placed into a cooler with ice and delivered under chain-of-custody procedures to Sequoia Analytical Labs, Inc., of Morgan Hill, California.

Piping and Dispenser Island Compliance Sampling: On June 15, 2001, Cambria performed soil sampling beneath the former dispenser island and product piping runs. The sampling was conducted under the supervision of Ms. Eva Chu of the ACHCSA and Ms. Danielle Stephani of the LPFD. Soil samples Disp-1-4.5 and Disp-2-6 were collected from beneath the dispenser islands at depths of 4.5 and 6.0 fbg, respectively. Soil samples Pipe-1-3.5 and Pipe-2-4 were collected from beneath the former product piping elbow joints at depths of 3.5 and 4.0 fbg, respectively. Soil sample locations are shown on Figure 2.

ANALYTICAL TESTING AND RESULTS

Soil samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by modified EPA Method 8015, and benzene, toluene, xylene, and ethylbenzene (BTEX), and methyl tertiary butyl ether (MTBE) by modified EPA Method 8020. Analytical results are presented in Table 1. The soil sampling analytical report is presented in Appendix B.

Dispenser Island Analytical Results (Disp-1-4.5 and Disp-2-6): TPHg was detected only in sample Disp-2-6, at a concentration of 1.0 milligrams per kilogram (mg/kg). No benzene was detected in either sample. MTBE concentrations were detected in sample Disp-1-4.5 at 0.78 mg/kg and in sample Disp-2-6 at 2.1 mg/kg.

Product Piping Analytical Results (Pipe-1-3.5 and Pipe-2-4): No TPHg, benzene, or MTBE were detected in either soil sample.

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ATTACHMENTS

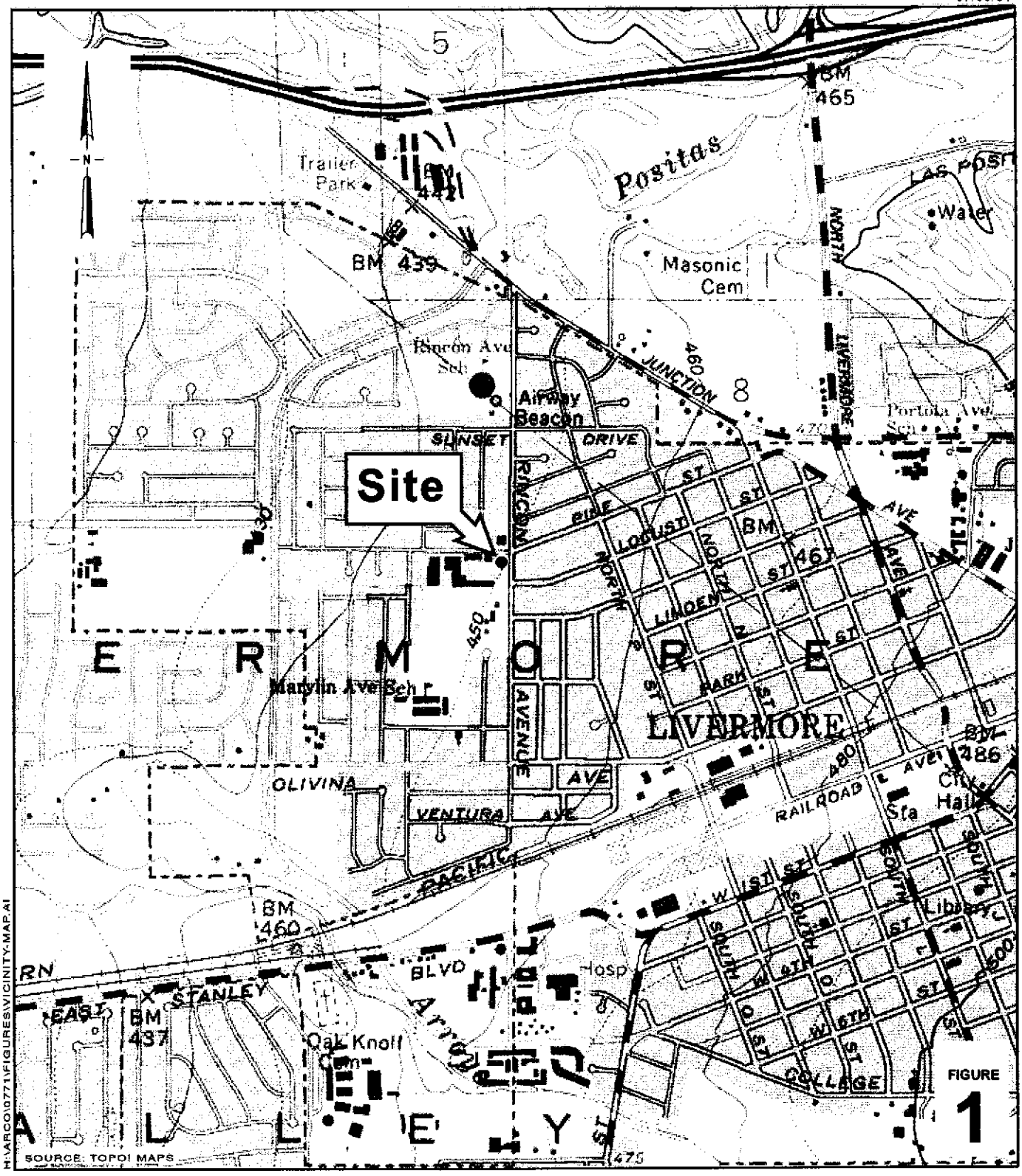
Figure 1 – Vicinity Map
Figure 2 – Site Plan and Soil Sampling Locations

Table 1 – Product Piping Removal Compliance Sampling Results

Appendix A – Standard Dispenser and Product Piping Removal Sampling Procedures
Appendix B – Soil Sampling Analytical Report

\\SERVER\IR\ARCO\0771\Reports\771 Product Piping Pull Report.doc

07/06/01



H:\ARCO\0771\FIGURES\VICINITY-MAP.AI

0 1/8 1/4 1/2 1

SCALE : 1" = 1/4 MILE

FIGURE 1

ARCO Service Station 0771

899 Rincon Avenue

Livermore, California

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Vicinity Map

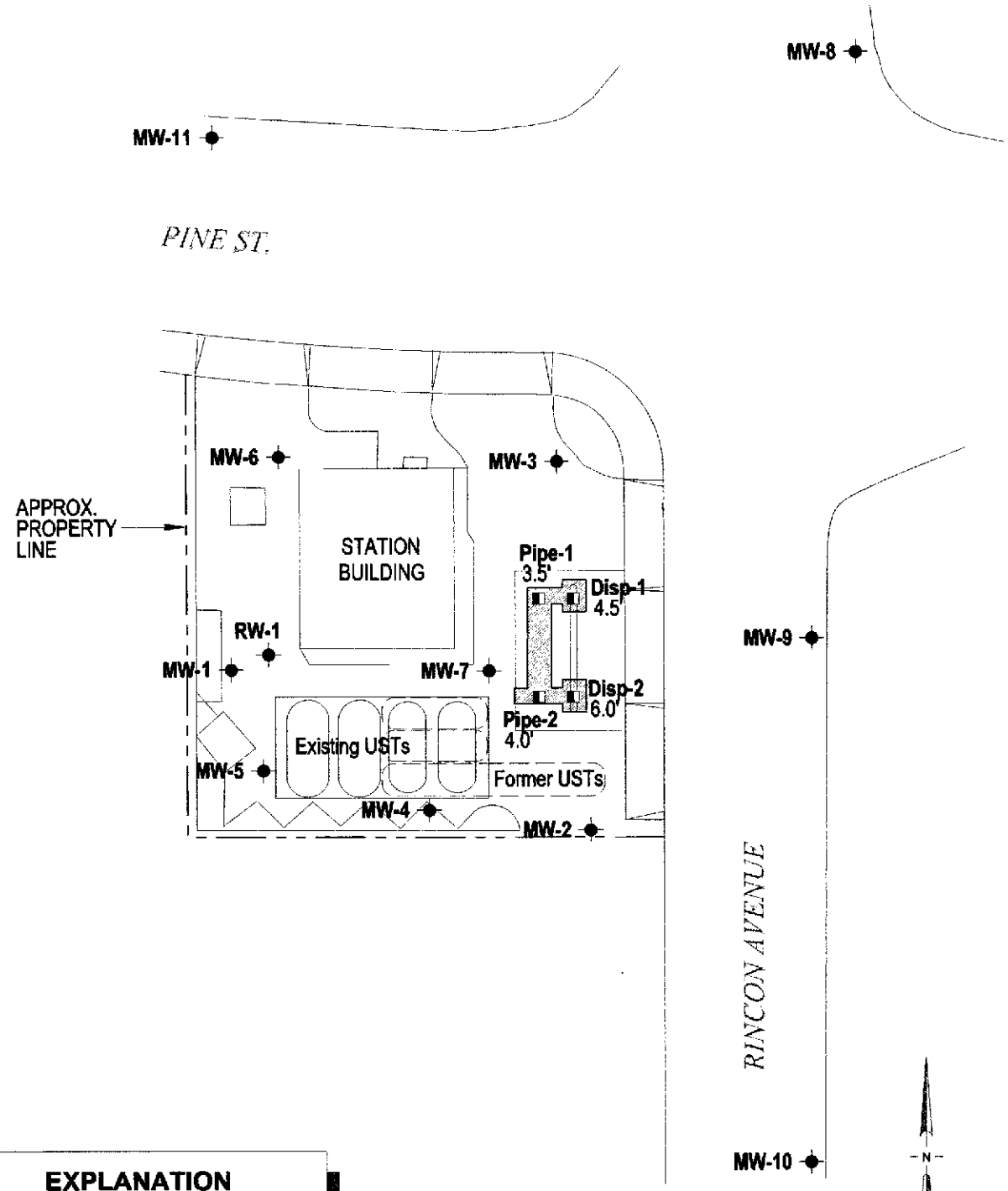

FIGURE
2

H:\ARCO\0771\FIGURES\SAMP-LOC.DWG

ARCO Service Station 0771

899 Rincon Avenue

Livermore, California

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Site Plan and Soil Sampling Locations

Table 1
Product Piping Removal Compliance Sampling Results

June 15, 2001

ARCO Service Station 0771
899 Rincon Ave, Livermore, California

Sample ID	Depth Sampled (fbg)	TPHg (mg/kg)	Benzene (mg/kg)	Toulene (mg/kg)	Ethyl-benzene (mg/kg)	Xylene (mg/kg)	MTBE (mg/kg)
Disp-1-4.5	4.5	<1.0	<0.0050	**0.017**	<0.0050	**0.019**	**0.78**
Disp-2-6	6.0	**1.0**	<0.0050	**0.017**	<0.0050	**0.049**	**2.1**
Pipe-1-3.5	3.5	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050
Pipe-2-4	4.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.050

Notes

fbg = feet below grade
mg/kg = milligrams per kilogram

TPHg = total petroluem hydrocarbons as gasoline
MTBE = methyl tert butyl ether

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APPENDIX A

Standard Dispenser and Product Piping Removal Sampling Procedures

STANDARD DISPENSER AND PRODUCT PIPING REMOVAL SAMPLING PROCEDURES

Cambria Environmental Technology, Inc. (Cambria) has developed standard operating procedures for collecting soil samples during petroleum dispenser and piping removal. These procedures ensure that the samples are collected, handled, and documented in compliance with California Administration Code Title 23: Waters; Chapter 3: Water Resources Control Board; Subchapter 16: Underground Storage Tank Regulations (Title 23). Cambria's sampling procedures are based on guidelines contained in the California State Regional Water Quality Control Board Tri-Regional Staff Recommendations for Preliminary Evaluation and Investigation of Underground Tank Sites dated August 10, 1990.

Piping and Dispenser Removal Sampling

The objective of sample collection during routine dispenser and piping removals is to determine whether hydrocarbons or other stored chemicals have leaked to the subsurface. We collect one soil sample from the native soil beneath each dispenser unit, at each piping elbow, and at every 20 ft of product piping, as applicable.

The soil samples are collected in steam cleaned brass or steel tubes from either a driven split-spoon type sampler or the bucket of a backhoe. When a backhoe is used, approximately three inches of soil are scraped from the surface and the tube is driven into the exposed soil.

Upon removal from the split-spoon sampler or the backhoe, the samples are trimmed flush, capped with Teflon sheets and plastic end caps, labeled, logged and refrigerated for delivery under chain of custody to a State certified analytic laboratory.

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APPENDIX B

Soil Sampling Analytical Report

Sequoia Analytical

885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
FAX (408) 782-6308
www.sequoialabs.com

28 June, 2001

Ron Scheele
Cambria - Emeryville
6262 Hollis St.
Emeryville, CA 94608

RE: Arco
Sequoia Report: MKF0548

Enclosed are the results of analyses for samples received by the laboratory on 06/19/01 15:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Jeff Smyly
Project Manager

CA ELAP Certificate #1210

Sequoia Analytical

885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
FAX (408) 782-6308
www.sequoialabs.com

Cambria - Emeryville	Project: Arco	
6262 Hollis St.	Project Number: Arco #771	**Reported:**
Emeryville CA, 94608	Project Manager: Ron Scheele	06/28/01 16:25

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
Disp-1-4.5	MKF0548-01	Soil	06/15/01 10:30	06/19/01 15:00
Disp-2-6	MKF0548-02	Soil	06/15/01 10:45	06/19/01 15:00
Pipe-1-3.5	MKF0548-03	Soil	06/15/01 11:00	06/19/01 15:00
Pipe-2-4	MKF0548-04	Soil	06/15/01 11:05	06/19/01 15:00

Sequoia Analytical - Morgan Hill

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Jeff Smyly, Project Manager

Sequoia Analytical

885 Jarvis Drive
Morgan Hill, CA 95037
(408) 776-9600
FAX (408) 782-6308
www.sequoialabs.com

Cambria - Emeryville	Project: Arco	
6262 Hollis St.	Project Number: Arco #771	**Reported:**
Emeryville CA, 94608	Project Manager: Ron Scheele	06/28/01 16:25

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Disp-1-4.5 (MKF0548-01) Soil Sampled: 06/15/01 10:30 Received: 06/19/01 15:00									
Purgeable Hydrocarbons	ND	1.0	mg/kg	1	1F25031	06/26/01	06/27/01	DHS LUFT	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	**0.017**	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	**0.019**	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	**0.78**	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*95.5 %*		*60-140*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*80.0 %*		*60-140*	"	"	"	"	
Disp-2-6 (MKF0548-02) Soil Sampled: 06/15/01 10:45 Received: 06/19/01 15:00									
Purgeable Hydrocarbons	**1.0**	1.0	mg/kg	1	1F25031	06/26/01	06/27/01	DHS LUFT	P-03
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	**0.017**	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	**0.049**	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	**2.1**	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*93.5 %*		*60-140*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*80.5 %*		*60-140*	"	"	"	"	
Pipe-1-3.5 (MKF0548-03) Soil Sampled: 06/15/01 11:00 Received: 06/19/01 15:00									
Purgeable Hydrocarbons	ND	1.0	mg/kg	1	1F25031	06/26/01	06/26/01	DHS LUFT	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*79.5 %*		*60-140*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*89.0 %*		*60-140*	"	"	"	"	

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Cambria - Emeryville	Project: Arco	
6262 Hollis St.	Project Number: Arco #771	**Reported:**
Emeryville CA, 94608	Project Manager: Ron Scheele	06/28/01 16:25

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
Pipe-2-4 (MKF0548-04) Soil Sampled: 06/15/01 11:05 Received: 06/19/01 15:00									
Purgeable Hydrocarbons	ND	1.0	mg/kg	1	1F25031	06/26/01	06/26/01	DHS LUFT	
Benzene	ND	0.0050	"	"	"	"	"	"	
Toluene	ND	0.0050	"	"	"	"	"	"	
Ethylbenzene	ND	0.0050	"	"	"	"	"	"	
Xylenes (total)	ND	0.0050	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	0.050	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*79.5 %*		*60-140*	"	"	"	"	
Surrogate: 4-Bromofluorobenzene		*88.0 %*		*60-140*	"	"	"	"	

Sequoia Analytical

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Morgan Hill, CA 95037
(408) 776-9600
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Cambria - Emeryville	Project: Arco	
6262 Hollis St.	Project Number: Arco #771	**Reported:**
Emeryville CA, 94608	Project Manager: Ron Scheele	06/28/01 16:25

Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT - Quality Control

Sequoia Analytical - Morgan Hill

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1F25031 - EPA 5030B [P/T]										
Blank (1F25031-BLK1)				Prepared & Analyzed: 06/26/01						
Purgeable Hydrocarbons	ND	1.0	mg/kg							
Benzene	ND	0.0050	"							
Toluene	ND	0.0050	"							
Ethylbenzene	ND	0.0050	"							
Xylenes (total)	ND	0.0050	"							
Methyl tert-butyl ether	ND	0.050	"							
Surrogate: a,a,a-Trifluorotoluene	*0.167*		"	*0.200*		*83.5*	*60-140*			
Surrogate: 4-Bromofluorobenzene	*0.180*		"	*0.200*		*90.0*	*60-140*			
LCS (1F25031-BS1)				Prepared & Analyzed: 06/26/01						
Benzene	0.186	0.0050	mg/kg	0.200		93.0	70-130			
Toluene	0.181	0.0050	"	0.200		90.5	70-130			
Ethylbenzene	0.185	0.0050	"	0.200		92.5	70-130			
Xylenes (total)	0.563	0.0050	"	0.600		93.8	70-130			
Surrogate: a,a,a-Trifluorotoluene	*0.165*		"	*0.200*		*82.5*	*60-140*			
Surrogate: 4-Bromofluorobenzene	*0.180*		"	*0.200*		*90.0*	*60-140*			
LCS (1F25031-BS2)				Prepared & Analyzed: 06/26/01						
Purgeable Hydrocarbons	4.63	1.0	mg/kg	5.00		92.6	70-130			
Surrogate: a,a,a-Trifluorotoluene	*0.187*		"	*0.200*		*93.5*	*60-140*			
Surrogate: 4-Bromofluorobenzene	*0.183*		"	*0.200*		*91.5*	*60-140*			
Matrix Spike (1F25031-MS1)		**Source: MKF0521-11**		Prepared & Analyzed: 06/26/01						
Purgeable Hydrocarbons	4.64	1.0	mg/kg	5.00	ND	89.0	60-140			
Surrogate: a,a,a-Trifluorotoluene	*0.224*		"	*0.200*		*112*	*60-140*			
Surrogate: 4-Bromofluorobenzene	*0.185*		"	*0.200*		*92.5*	*60-140*			
Matrix Spike Dup (1F25031-MSD1)		**Source: MKF0521-11**		Prepared & Analyzed: 06/26/01						
Purgeable Hydrocarbons	4.44	1.0	mg/kg	5.00	ND	85.0	60-140	4.41	25	
Surrogate: a,a,a-Trifluorotoluene	*0.187*		"	*0.200*		*93.5*	*60-140*			
Surrogate: 4-Bromofluorobenzene	*0.186*		"	*0.200*		*93.0*	*60-140*			

Sequoia Analytical

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Cambria - Emeryville	Project: Arco	
6262 Hollis St.	Project Number: Arco #771	**Reported:**
Emeryville CA, 94608	Project Manager: Ron Scheele	06/28/01 16:25

Notes and Definitions

P-03	Chromatogram Pattern: Unidentified Hydrocarbons C6-C12
DET	Analyte DETECTED
ND	Analyte NOT DETECTED at or above the reporting limit
NR	Not Reported
dry	Sample results reported on a dry weight basis
RPD	Relative Percent Difference

ARCO Products Company
Division of Atlantic-Richfield Company

Task Order No. 27946

Chain of Custody

ARCO Facility no. 771	City (Facility) Livermore	Project manager (Consultant) Ron Scheele / Jason Olson	Laboratory name SEQ
ARCO engineer Paul Supple	Telephone no. (ARCO) —	Telephone no. (Consultant) 510-450-8241	Fax no. (Consultant) 510-450-8295
Consultant name CAMBRIA	Address (Consultant) 6262 Hollis Street, Emeryville, CA 94608		Contract number

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH(G) EPA M602/8020/8015 MTBE	TPH Modified 8015 Gas X Diesel	Oil and Grease 413.1 L 413.2	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals VOA VOA Semi	CAM METALS EPA 6010/7000 TTLC STLC	Lead Org./DHS Lead EPA 7420/7421		
Disp-1-4.5'			X			X		6/15/01	10:30		X											
Disp-2-6'			↓			↓		↓	10:45		X											
Pipe-1-3.5'			↓			↓		↓	11:00		X											
Pipe-2-4'			↓			↓		↓	11:05		X											

COOLER CUSTODY SEALS INTACT ☐
NOT INTACT ☐
COOLER TEMPERATURE 5-6 °C

Special detection Limit/reporting: Lowest Possible

Special QA/QC

Remarks: TPHg/BTEX/MTBE 8015M/8020

Lab number: MKP0548

Turnaround time
- Priority Rush 1 Business Day [ ]
- Rush 2 Business Days [ ]
- Expedited 5 Business Days [ ]
- Standard 10 Business Days X

Condition of sample:

Temperature received:

	Date	Time		Date	Time
Relinquished by sampler	6/14/01	1245	Received by Lab Rep	at lab	1500
Relinquished by	6/20/01	10100	Received by	6-20-01	
Relinquished by	6-20-01	1315	Received by HP Holley (HHP)	6-20-01	1321

White copy — Laboratory; Canary copy — ARCO Environmental Engineering; Pink copy — Consultant