70-190

Delta
Environmental
Consultants, Inc.

3164 Gold Camp Drive
Suite 200
Rancho Cordova, CA 95670-6021
U.S.A.
916/638-2085
FAX: 916/638-8385

MAR 28 2002

March 25, 2002

Mr. Paul Supple
ARCO
P.O. Box 6549
Moraga, CA 94570

Subject: *Quarterly Groundwater Monitoring Report, Fourth Quarter 2001*
ARCO Service Station No. 2162
15135 Hesperian Boulevard
San Leandro, California
Project No. D000-310

Dear Mr. Supple:

Delta Environmental Consultants, Inc. is submitting the attached report that presents the results of the fourth quarter 2001 groundwater monitoring program at ARCO Service Station No. 2162, located at 15135 Hesperian Boulevard, San Leandro, California. The monitoring program complies with the Alameda County Health Care Services Agency requirements regarding underground tank investigations.

The interpretations contained in this report represent our professional opinions and are based, in part, on information supplied by the client. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeological and engineering practices at this time and location. Other than this, no warranty is implied or intended.

If you have any questions concerning this project, please contact Steven W. Meeks at (916) 536-2613.

Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.

Steven W. Meeks, P.E.
Project Manager
California Registered Civil Engineer No. C057461

TLA (Lrp007.310.doc)
Enclosures

cc: Mr. Scott Seery – Alameda County Health Care Services Agency
Mr. John Jang – California Regional Water Quality Control Board, San Francisco Bay Region
Mr. Mike Bakaldin – City of San Leandro Fire Department

Date: March 25, 2002

ARCO QUARTERLY GROUNDWATER MONITORING REPORT

Station No.: 2162 Address:	15135 Hesperian Boulevard, San Leandro, CA
ARCO Environmental Engineer/Phone No.:	Paul Supple 925-299-8891
Consulting Co./Contact Person	Delta Environmental Consultants, Inc. Steven W. Meeks, P.E.
Consultant Project No.:	D000-310
Primary Agency/Regulatory ID No.	Alameda County Health Care Services Agency

WORK PERFORMED THIS QUARTER

1. Performed quarterly groundwater monitoring for fourth quarter 20001
2. Prepared quarterly groundwater monitoring report for third quarter 2001.

WORK PROPOSED FOR NEXT QUARTER

1. Prepare and submit quarterly groundwater monitoring report for fourth quarter 2001.
2. Perform quarterly groundwater monitoring and sampling for first quarter 2002.

QUARTERLY MONITORING:

Current Phase of Project	Monitoring
Frequency of Groundwater Sampling:	Quarterly: MW-1, MW-2, MW-3, MW-4
Frequency of Groundwater Monitoring:	Quarterly
Is Free Product (FP) Present On–Site:	No
FP Recovered this Quarter:	N/A
Cumulative FP Recovered to Date:	None
Bulk Soil Removed This Quarter:	None
Bulk Soil Removed to Date:	None
Current Remediation Techniques:	Natural Attenuation
Approximate Depth to Groundwater:	8.16 feet
Groundwater Gradient:	0.010 ft/ft toward southwest

DISCUSSION:

- Total petroleum hydrocarbons as gasoline were detected in a sample collected from MW-2 at 130 µg/L.
- Methyl tertiary butyl ether (MTBE) was detected in samples collected from MW-3 and MW-4 at a concentration of 6.2 and 4.3 µg/L, respectively.
- The travel blank (TB) sample results showed traces of MTBE (3.4 µg/L) possibly due to cross-contaminated TB source water.

ATTACHMENTS:

- Table 1 Groundwater Elevation and Analytical Data
- Table 2 Groundwater Flow Direction and Gradient
- Figure 1 Groundwater Analytical Summary Map
- Figure 2 Groundwater Elevation Contour Map
- Appendix A Sampling and Analysis Procedures
- Appendix B Historical Data Tables (IT Corporation)
- Appendix C Certified Analytical Reports with Chain–of–Custody Documentation
- Appendix D Field Sampling Data

TABLE 1

GROUNDWATER ANALYTICAL DATA

ARCO Service Station No. 2162
15135 Hesperian Boulevard
San Leandro, California

Well Number	Date Sampled	Top of Riser Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH as Gasoline (µg/L)	MTBE (µg/L)
MW-1	06/20/00	31.19	8.33	22.86	<0.5	0.8	<0.5	<1.0	<50	<10
	09/29/00		9.07	22.12	<0.5	<0.5	<0.5	<0.5	<50	<2.5
	12/17/00		8.69	22.50	<0.5	<0.5	<0.5	<0.5	<50	<2.5
	03/23/01		8.19	23.00	<0.5	<0.5	<0.5	<0.5	<50	<2.5
	06/20/01		8.97	22.22	<0.5	<0.5	<0.5	<0.5	<50	<2.5
	09/22/01		9.56	21.63	<0.5	<0.5	<0.5	<0.5	<50	<2.5
	12/28/01		8.4	22.79	<0.5	<0.5	<0.5	0.63	<50	<2.5
MW-2	06/20/00	30.38	7.38	23.00	NS	NS	NS	NS	NS	NS
	09/29/00		8.08	22.30	<0.5	<0.5	<0.5	<0.5	266	<2.5
	12/17/00		7.80	22.58	<0.5	<0.5	0.659	<0.5	175	<2.5
	03/23/01		7.23	23.15	<0.5	<0.5	0.912	<0.5	351	<2.5
	06/20/01		7.98	22.40	<0.5	<0.5	0.74	<0.5	360	<2.5
	09/22/01		8.55	21.83	<0.5	<0.5	<0.5	<0.5	190	<2.5
	12/28/01		7.53	22.85	<0.5	0.93	<0.5	0.51	130	<2.5
MW-3	06/20/00	30.30	7.75	22.55	NS	NS	NS	NS	NS	NS
	09/29/00		8.46	21.84	<0.5	<0.5	<0.5	<0.5	<50	128
	12/17/00		8.01	22.29	<0.5	<0.5	<0.5	<0.5	<50	46.7
	03/23/01		7.70	22.60	<0.5	<0.5	<0.5	<0.5	<50	26.8
	06/20/01		8.23	22.07	<0.5	<0.5	<0.5	<0.5	<50	30
	09/22/01		8.89	21.41	<0.5	<0.5	<0.5	<0.5	<50	12
	12/28/01		7.83	22.47	<0.5	<0.5	<0.5	<0.5	<50	6.2

TABLE 1

GROUNDWATER ANALYTICAL DATA

ARCO Service Station No. 2162
15135 Hesperian Boulevard
San Leandro, California

Well Number	Date Sampled	Top of Riser Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH as Gasoline (µg/L)	MTBE (µg/L)
MW-4	06/20/00	30.39	8.87	21.52	NS	NS	NS	NS	NS	NS
	09/29/00		9.61	20.78	1.02	<0.5	<0.5	<0.5	<50	12.2
	12/17/00		9.17	21.22	<0.5	<0.5	<0.5	<0.5	<50	5.81
	03/23/01		8.70	21.69	<0.5	<0.5	<0.5	<0.5	<50	3.04
	06/20/01		9.51	20.88	<0.5	<0.5	<0.5	<0.5	<50	<2.5
	09/22/01		10.06	20.33	<0.5	<0.5	<0.5	<0.5	<50	5.2
	12/28/01		8.86	21.53	<0.5	<0.5	<0.5	<0.5	<50	4.3

TPH = Total Petroleum Hydrocarbons

MTBE = Methyl tertiary butyl ether analyzed by EPA Method 8021B unless otherwise noted

µg/L = Micrograms per liter

NS = Not sampled

Note: Please refer to Appendix B for Historical Groundwater Elevation and Analytical Data Tables developed by IT Corporation

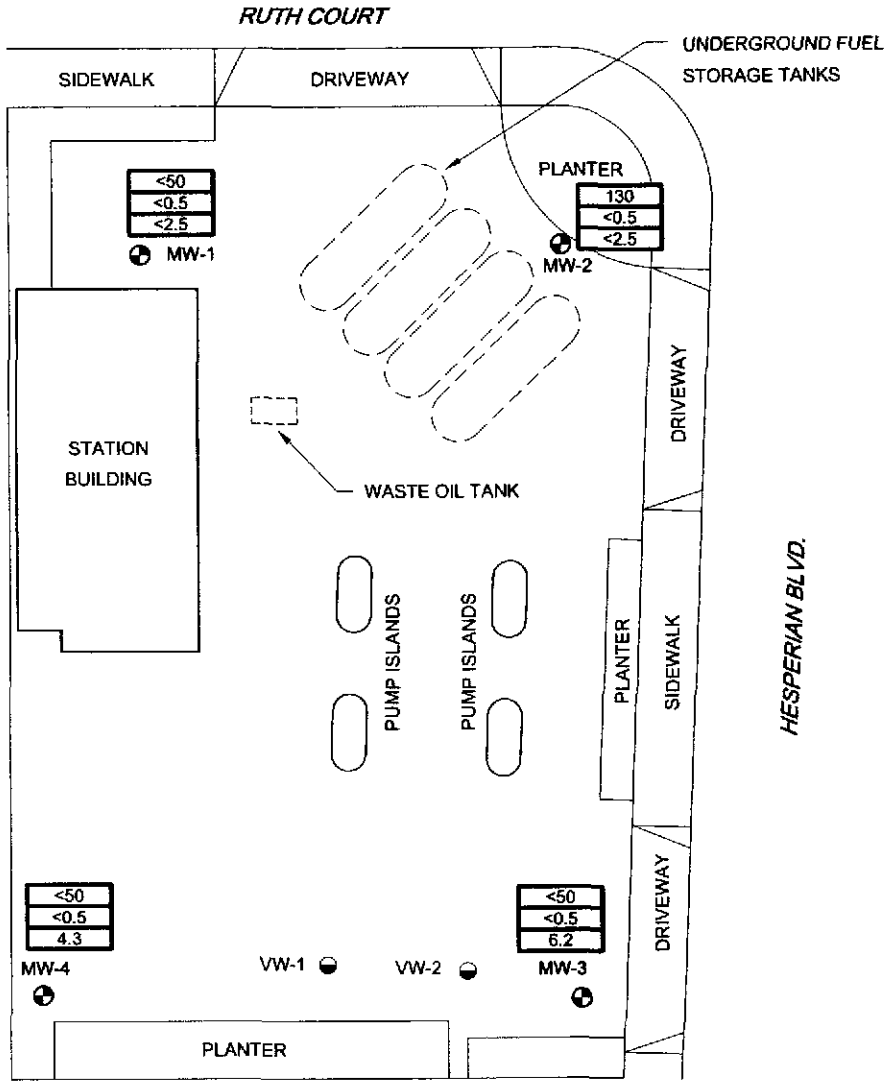
TABLE 2

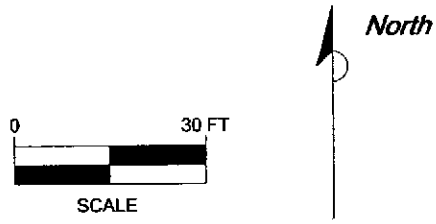
GROUNDWATER FLOW DIRECTION AND GRADIENT

ARCO Service Station No. 2162
15135 Hesperian Boulevard
San Leandro, California

Date Measured	Average Flow Direction	Average Hydraulic Gradient
06/20/00	Southwest	0.010
09/29/00	Southwest	0.010
12/17/00	Southwest	0.010
03/23/01	Southwest	0.011
06/20/01	Southwest	0.013
09/22/01	Southwest	0.012
12/28/01	Southwest	0.010

Note: Please refer to Appendix B for Historical Groundwater Elevation and Analytical Data Tables developed by IT Corporation





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

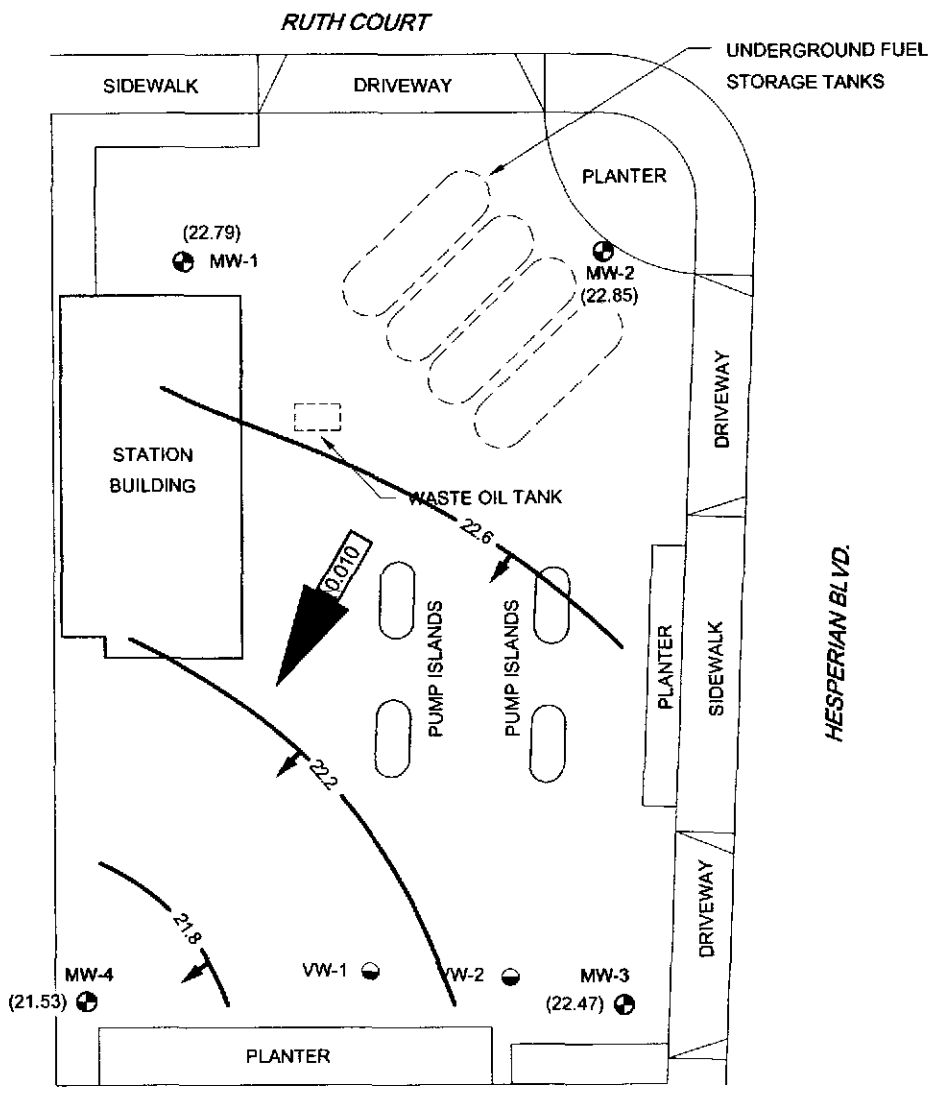
LEGEND:

MW-1	MONITORING WELL LOCATION
VW-1	SOIL VAPOR EXTRACTION WELL LOCATION
<50 / <0.5 / <2.5	TPH AS GASOLINE IN MICROGRAMS PER LITER / BENZENE IN MICROGRAMS PER LITER / MTBE IN MICROGRAMS PER LITER
NS	NOT SAMPLED

FIGURE 1
GROUND WATER ANALYTICAL SUMMARY
FOURTH QUARTER 2001 (12/28/01)
ARCO STATION NO. 2162
15135 HESPERIAN BOULEVARD
SAN LEANDRO, CALIFORNIA

PROJECT NO. D000-310	DRAWN BY TLA 3/18/02
FILE NO. 2162-1	PREPARED BY TLA
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.



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

LEGEND:

MW-1	MONITORING WELL LOCATION
VW-1	SOIL VAPOR EXTRACTION WELL LOCATION
(22.79)	GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (MSL)
22.2	WATER TABLE CONTOUR IN FEET ABOVE MSL
	GROUND WATER FLOW DIRECTION
0.010	APPROXIMATE GROUND WATER FLOW GRADIENT

FIGURE 2
GROUND WATER ELEVATION CONTOUR MAP
FOURTH QUARTER 2001 (12/28/01)
ARCO STATION NO. 2162
15135 HESPERIAN BOULEVARD
SAN LEANDRO, CALIFORNIA

PROJECT NO. D000-310	DRAWN BY TLA 3/18/02
FILE NO. 2162-1	PREPARED BY TLA
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.

FIELD METHODS AND PROCEDURES

1.0 GROUND WATER AND LIQUID-PHASE HYDROCARBON DEPTH ASSESSMENT

A water/liquid-phase hydrocarbon (LPH) interface probe was used to assess the thickness of LPH, if present, and a water level indicator was used to measure ground water depth in monitoring wells that did not contain LPH. Depth to ground water was measured from the top of each monitoring well casing. The tip of the water level indicator was subjectively analyzed for LPH sheen. All measurements and physical observations were recorded in the field.

2.0 SUBJECTIVE ANALYSIS OF GROUND WATER

Prior to purging, a water sample was collected from the monitoring well for subjective analysis. The sample was retrieved by gently lowering a clean, disposable bailer to approximately one-half the bailer length past the air/liquid interface. The bailer was then retrieved and the sample contained within the bailer was examined for LPH and the appearance of a LPH sheen.

3.0 MONITORING WELL PURGING AND SAMPLING

Monitoring wells were purged using a centrifugal pump or disposable bailers until pH, temperature, and conductivity of the purge water had stabilized and a minimum of three to four well volumes of water had been removed. Ground water removed from the wells was stored in 55-gallon barrels at the site. The barrels were labeled with corresponding monitoring well numbers and the date of purging. After purging, ground water levels were allowed to stabilize. A ground water sample was then removed from each of the wells using a dedicated disposable bailer. If the well was purged dry, it was allowed to sufficiently recharge and a sample was collected. Samples were collected in air-tight vials, appropriately labeled, and stored on ice from the time of collection through the time of delivery to the laboratory. A chain-of-custody form was completed to document possession of the samples. Ground water samples were transported to the laboratory and analyzed within the EPA-specified holding times for the requested analyses. Purge water will be collected from the storage barrels in a vacuum truck and transported to an appropriate facility for treatment and/or disposal.

If the depth to groundwater was above the top of screens of the monitoring wells, then the wells were purged. Before sampling occurred, a polyvinyl chloride (PVC) bailer, centrifugal pump, low–flow submersible pump, or Teflon bailer was used to purge standing water in the casing and gravel pack from the monitoring well. Monitoring wells were purged according to the protocol previously stated in the first paragraph of this sub-section. In most monitoring wells, the amount of water purged before sampling was greater than or equal to three casing volumes. Some monitoring wells were expected to be evacuated to dryness after removing fewer than three casing volumes. These low–yield monitoring wells were allowed to recharge for up to 24 hours. Samples were obtained as soon as the monitoring wells recharged to a level sufficient for sample collection. If insufficient water recharged after 24 hours, the monitoring well was recorded as dry for the sampling event.

APPENDIX B

Historical Data Tables

IT Corporation

APPPENDIX C

Certified Analytical Reports
And
Chain-of-Custody Documentation

Sequoia
Analytical

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11 January, 2002

Steven Meeks
Delta Environmental Consultants (Rancho Cordova)
3164 Gold Camp Drive Ste. 200
Rancho Cordova, CA 95670

RE: ARCO 2162, San Leandro, CA
Sequoia Report: S201011

Enclosed are the results of analyses for samples received by the laboratory on 01/02/02 14:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ron Chew
Client Services Representative

Lito Diaz
Laboratory Director

CA ELAP Certificate #1624

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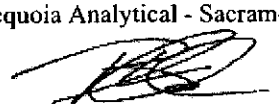
Delta Environmental Consultants (Rancho Cordova	Project: ARCO 2162, San Leandro, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 2162, San Leandro, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	01/11/02 12:51

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	S201011-01	Water	12/28/01 08:15	01/02/02 14:15
MW-2	S201011-02	Water	12/28/01 08:30	01/02/02 14:15
MW-3	S201011-03	Water	12/28/01 07:55	01/02/02 14:15
MW-4	S201011-04	Water	12/28/01 08:05	01/02/02 14:15
TB	S201011-05	Water	12/28/01 06:00	01/02/02 14:15

Sequoia Analytical - Sacramento



Ron Chew, Client Services Representative

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.

Sequoia Analytical

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 2162, San Leandro, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 2162, San Leandro, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	01/11/02 12:51

Total Purgeable Hydrocarbon, BTEX and MTBE by DHS LUFT

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (S201011-01) Water Sampled: 12/28/01 08:15 Received: 01/02/02 14:15									
Purgeable Hydrocarbons	ND	50	ug/l	1	2010089	01/07/02	01/07/02	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	**0.63**	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*77.5 %*		*60-140*		"	"	"	
MW-2 (S201011-02) Water Sampled: 12/28/01 08:30 Received: 01/02/02 14:15									
Purgeable Hydrocarbons	**130**	50	ug/l	1	2010089	01/07/02	01/07/02	DHS LUFT	HC-12
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	**0.93**	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	**0.51**	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*1.50 %*		*60-140*		"	"	"	*S-04*
MW-3 (S201011-03) Water Sampled: 12/28/01 07:55 Received: 01/02/02 14:15									
Purgeable Hydrocarbons	ND	50	ug/l	1	2010116	01/08/02	01/08/02	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**6.2**	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*85.1 %*		*60-140*		"	"	"	

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 2162, San Leandro, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 2162, San Leandro, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	01/11/02 12:51

Total Purgeable Hydrocarbon, BTEX and MTBE by DHS LUFT

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-4 (S201011-04) Water Sampled: 12/28/01 08:05 Received: 01/02/02 14:15									
Purgeable Hydrocarbons	ND	50	ug/l	1	2010089	01/07/02	01/07/02	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**4.3**	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*76.1 %*		*60-140*		"	"	"	
TB (S201011-05) Water Sampled: 12/28/01 06:00 Received: 01/02/02 14:15									
Purgeable Hydrocarbons	ND	50	ug/l	1	2010089	01/07/02	01/07/02	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	**3.4**	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		*78.2 %*		*60-140*		"	"	"	

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3164 Gold Camp Drive Ste. 200	Project Number: 2162, San Leandro, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	01/11/02 12:51

Total Purgeable Hydrocarbon, BTEX and MTBE by DHS LUFT - Quality Control

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2010089 - EPA 5030B (P/T)										
Blank (2010089-BLK1)				Prepared & Analyzed: 01/07/02						
Purgeable Hydrocarbons	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	*9.00*		"	*10.0*		*90.0*	*60-140*			
LCS (2010089-BS1)				Prepared & Analyzed: 01/07/02						
Benzene	8.65	0.50	ug/l	10.0		86.5	70-130			
Toluene	9.03	0.50	"	10.0		90.3	70-130			
Ethylbenzene	9.08	0.50	"	10.0		90.8	70-130			
Xylenes (total)	27.8	0.50	"	30.0		92.7	70-130			
Methyl tert-butyl ether	8.35	2.5	"	10.0		83.5	70-130			
Surrogate: a,a,a-Trifluorotoluene	*9.82*		"	*10.0*		*98.2*	*60-140*			
Matrix Spike (2010089-MS1)		**Source: S201010-01**		Prepared & Analyzed: 01/07/02						
Benzene	11.3	0.50	ug/l	10.0	2.7	86.0	60-140			
Toluene	8.99	0.50	"	10.0	ND	89.9	60-140			
Ethylbenzene	8.47	0.50	"	10.0	ND	84.7	60-140			
Xylenes (total)	25.5	0.50	"	30.0	ND	85.0	60-140			
Methyl tert-butyl ether	12.9	2.5	"	10.0	20	-71.0	60-140			QM-07
Surrogate: a,a,a-Trifluorotoluene	*8.03*		"	*10.0*		*80.3*	*60-140*			
Matrix Spike Dup (2010089-MSD1)		**Source: S201010-01**		Prepared: 01/07/02 Analyzed: 01/08/02						
Benzene	11.1	0.50	ug/l	10.0	2.7	84.0	60-140	1.79	25	
Toluene	8.78	0.50	"	10.0	ND	87.8	60-140	2.36	25	
Ethylbenzene	8.22	0.50	"	10.0	ND	82.2	60-140	3.00	25	
Xylenes (total)	24.9	0.50	"	30.0	ND	83.0	60-140	2.38	25	
Methyl tert-butyl ether	14.7	2.5	"	10.0	20	-53.0	60-140	13.0	25	QM-07
Surrogate: a,a,a-Trifluorotoluene	*7.71*		"	*10.0*		*77.1*	*60-140*			

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3164 Gold Camp Drive Ste. 200	Project Number: 2162, San Leandro, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	01/11/02 12:51

Total Purgeable Hydrocarbon, BTEX and MTBE by DHS LUFT - Quality Control

Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 2010116 - EPA 5030B (P/T)										
Blank (2010116-BLK1)				Prepared & Analyzed: 01/08/02						
Purgeable Hydrocarbons	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
Surrogate: a,a,a-Trifluorotoluene	*9.45*		"	*10.0*		*94.5*	*60-140*			
LCS (2010116-BS1)				Prepared & Analyzed: 01/08/02						
Benzene	9.43	0.50	ug/l	10.0		94.3	70-130			
Toluene	9.32	0.50	"	10.0		93.2	70-130			
Ethylbenzene	9.10	0.50	"	10.0		91.0	70-130			
Xylenes (total)	27.6	0.50	"	30.0		92.0	70-130			
Methyl tert-butyl ether	9.01	2.5	"	10.0		90.1	70-130			
Surrogate: a,a,a-Trifluorotoluene	*10.1*		"	*10.0*		*101*	*60-140*			
Matrix Spike (2010116-MS1)		**Source: S201020-04**		Prepared: 01/08/02 Analyzed: 01/09/02						
Benzene	9.10	0.50	ug/l	10.0	ND	91.0	60-140			
Toluene	9.20	0.50	"	10.0	ND	92.0	60-140			
Ethylbenzene	8.70	0.50	"	10.0	ND	87.0	60-140			
Xylenes (total)	26.8	0.50	"	30.0	ND	89.3	60-140			
Methyl tert-butyl ether	9.24	2.5	"	10.0	ND	92.4	60-140			
Surrogate: a,a,a-Trifluorotoluene	*8.89*		"	*10.0*		*88.9*	*60-140*			
Matrix Spike Dup (2010116-MSD1)		**Source: S201020-04**		Prepared: 01/08/02 Analyzed: 01/09/02						
Benzene	7.95	0.50	ug/l	10.0	ND	79.5	60-140	13.5	25	
Toluene	8.04	0.50	"	10.0	ND	80.4	60-140	13.5	25	
Ethylbenzene	7.50	0.50	"	10.0	ND	75.0	60-140	14.8	25	
Xylenes (total)	23.1	0.50	"	30.0	ND	77.0	60-140	14.8	25	
Methyl tert-butyl ether	8.88	2.5	"	10.0	ND	88.8	60-140	3.97	25	
Surrogate: a,a,a-Trifluorotoluene	*8.04*		"	*10.0*		*80.4*	*60-140*			

Sequoia Analytical

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Delta Environmental Consultants (Rancho Cordova	Project: ARCO 2162, San Leandro, CA	
3164 Gold Camp Drive Ste. 200	Project Number: 2162, San Leandro, CA	**Reported:**
Rancho Cordova CA, 95670	Project Manager: Steven Meeks	01/11/02 12:51

Notes and Definitions

HC-12	Hydrocarbon pattern is present in the requested fuel quantitation range but does not resemble the pattern of the requested fuel.
QM-07	The spike recovery was outside control limits for the MS and/or MSD. The batch was accepted based on acceptable LCS recovery.
S-04	The surrogate recovery for this sample is outside control limits due to interference from the sample matrix.
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

Chain of Custody

Work Authorization No. 2599700

ARCO Facility No. 2162	City (Facility) San Leandro	Project Manager (Consultant) Steve Meeks	Laboratory name Sequoia
ARCO engineer Paul Supple	Telephone no. (ARCO)	Telephone no. (Consultant) 638 2085	Fax no. (Consultant) 638 8385
Company name (Consultant) Delta		Address (Consultant) Rancho Cordova	Contract number

Method of shipment

Special detection Limit/reporting

Special QA/QC

Remarks

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8021	BTEX/TPH+MTBE EPA M602/8021/8015	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM503E	BTEX + MTBE EPA 8260	BTEX + Standard Oxygenates EPA 8260	Semi TCLP Metals ☐ VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐			
MW-1		2		X		X	X	12-28-01	815		X								201011-01			
MW-2		↓		↓		↓	↓	↓	830		↓								-02			
MW-3									755										-03			
MW-4									805										-04			
TB		↓		↓		↓	↓	↓	600		↓								-05			

Type or Work
- ☐ Dispenser Work
- ☐ Line Job
- ☐ Routine Sampling
- ☐ Site Acquisitions
- ☐ Site Assessment
- ☐ UST Removal
- ☐ UST Replacement
- ☐ Other _____

Lab number

Turnaround time

Priority Rush
1 Business Day ☐

Rush
2 Business Days ☐

Expedited
5 Business Days ☐

Standard
10 Business Days ☒

Condition of sample:

Temperature received: 7.3°C

Relinquished by sampler Hal Hansen	Date 0-1-202 ~~0-2-202~~	Time 1415	Received by Monica Gregson 1/2/02 1415
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by laboratory / Date / Time

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

Delta Environmental Consultants, Inc.

3164 Gold Camp Drive, Suite 200
Rancho Cordova, California 95670
Direct: (916) 638-2085
Fax: (916) 638-8385

Arco Site Address:	15135 Hesperian Blvd San Leandro, California	Arco Site Number:	Arco 2162
		Delta Project No.:	D000-310
Arco Project Manager:	Paul Supple	Delta Project PM:	Steve Meeks
Site Sampled By:	Doulos	Date Sampled:	12/28/01

Site Contact & Phone Number: ____________________

Water Level Data						Purge Volume Calculations					Sampling Analytes					Sample Record		
Well ID	Time	Depth to Water (feet)	Top of Screen Interval (feet)	Total Depth of Well (feet)	Check if Purge Not Required	Casing Water Column (A)	Well Diameter (inches)	Multiplier Value (B)	Three Casing Volumes (gallons)	Actual Water Purged (gallons)	BTEX (8020) VOA	TPH-g (8015M) VOA	MTBE (8020) VOA	Other ____ ____ ____	Dissolved Oxygen (mg/L)	Sample Freqency (A, S, Q)	Sample I.D.	Sample Time
MW-1	8:13	8.40	8.0	15.9	☑	7.45	4 inch	2.0	14.9	NP	☑	☑	☑	☐	1.22	Q/2,5,8,11	MW-1	8:15
MW-2	8:10	7.53	8.0	15.9	☐	8.34	4 inch	2.0	16.7	16.1	☑	☑	☑	☐	0.94	Q/2,5,8,11	MW-2	8:30
MW-3	7:35	7.83	9.0	14.8	☐	6.93	4 inch	2.0	13.9	13.9	☑	☑	☑	☐	0.50	Q/2,5,8,11	MW-3	7:55
MW-4	8:01	8.86	8.0	17.5	☑	8.59	4 inch	2.0	17.2	NP	☑	☑	☑	☐	0.89	Q/2,5,8,11	MW-4	8:05
					☐						☐	☐	☐	☐				
					☐						☐	☐	☐	☐				
					☐						☐	☐	☐	☐				
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					☐						☐	☐	☐	☐				

(A)-Casing Water Column: Depth to Bottom - Depth to Water **(B)-Multiplier Values:** (2" Well: 0.5) (4" Well: 2.0) (6" Well: 4.4) **Sampling Sequence: Quarterly:** MW-3, MW-4, MW-1, MW-2

Sampling Notes: List depth of Sample on C.O.C. [I.e. MW-1(30)]. Make Sure to Note on C.O.C. "Provide Lowest Reporting Limit Available." Original Copies of Field Sampling Sheets are Located in Project File
If the water level is below the top of the screen, take a grab sample and check box for NO PURGE (NP). If the water level is above the screen, purge as normal.

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Site Contact & Phone Number: ____________________

Arco Site Address: 15135 Hesperian Blvd, San Leandro, California

Arco Project Manager: Paul Supple

Site Sampled By: Doulos

Arco Site Number: Arco 2162

Delta Project No.: D000-310

Delta Project PM: Steve Meeks

Date Sampled: 12/28/01

Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons
MW-1	No Purge																
MW-2	8:22	69.3	7.96	432	5												
	8:23	69.2	8.61	428	10												
	8:24	69.0	8.84	412	16												
MW-3	7:48	69.4	7.16	523	4.6												
	7:47	69.4	7.14	496	8.6												
	7:50	69.3	7.09	485	13.9												
MW-4	No Purge																

Notes: NP = NO PURGE

Original Copies of Field Sampling Sheets are Located in Project File