Delta
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July 21, 2000

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

Subject: *Quarterly Groundwater Monitoring Report, Second Quarter 2000*
ARCO Service Station No. 4494
566 Hegenberger Road
Oakland, California
Project No. D000-319

Dear Mr. Supple:

Delta Environmental Consultants, Inc. is submitting the attached report that presents the results of the second quarter 2000 groundwater monitoring program as ARCO Products Company Service Station No. 4494, located at 566 Hegenberger Road, Oakland, 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.
California Registered Civil Engineer No. C057461
Project Manager

REGISTERED PROFESSIONAL ENGINEER
STEVEN WHITTEN MEEKS
C 057461
Exp. 12/31/01
CIVIL
STATE OF CALIFORNIA

SWM (LRP001.319.doc)
Enclosures

cc: Mr. Barney Chan – Alameda County Health Care Services

Date: July 21, 2000

ARCO QUARTERLY GROUNDWATER MONITORING REPORT

Station No.: 4494 Address:	566 Hegenberger Road, Oakland, 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.:	D000-319
Primary Agency/Regulatory ID No.	Alameda County Health Care Services/STID #3854

WORK PERFORMED THIS QUARTER

1. Performed quarterly groundwater monitoring for 2nd quarter 2000.
2. Assessed MTBE results with regulator.

WORK PROPOSED FOR NEXT QUARTER

1. Prepare and submit quarterly groundwater monitoring report for 2nd quarter 2000.
2. Perform quarterly groundwater monitoring and sampling for 3rd quarter 2000.

QUARTERLY MONITORING:

Current Phase of Project	Monitoring
Frequency of Groundwater Sampling:	Quarterly
Frequency of Groundwater Monitoring:	Quarterly
Is Free Product (FP) Present On–Site:	No
FP Recovered this Quarter:	None
Cumulative FP Recovered to Date:	0.92 feet (volume not available)
Bulk Soil Removed This Quarter:	None
Bulk Soil Removed to Date:	1,200 cubic yards
Current Remediation Techniques:	None
Approximate Depth to Groundwater:	8
Groundwater Gradient:	0.015 ft/ft North-Northeast

DISCUSSION:

- Analytical results indicate that MW-1, MW–3 and MW–7 contain MTBE concentrations.
- A review of offsite (upgradient) groundwater quality data will be necessary to adequately assess a possible source.
- The site is currently scheduled for quarterly monitoring through the remainder of 2000.

ATTACHMENTS:

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

TABLE 1

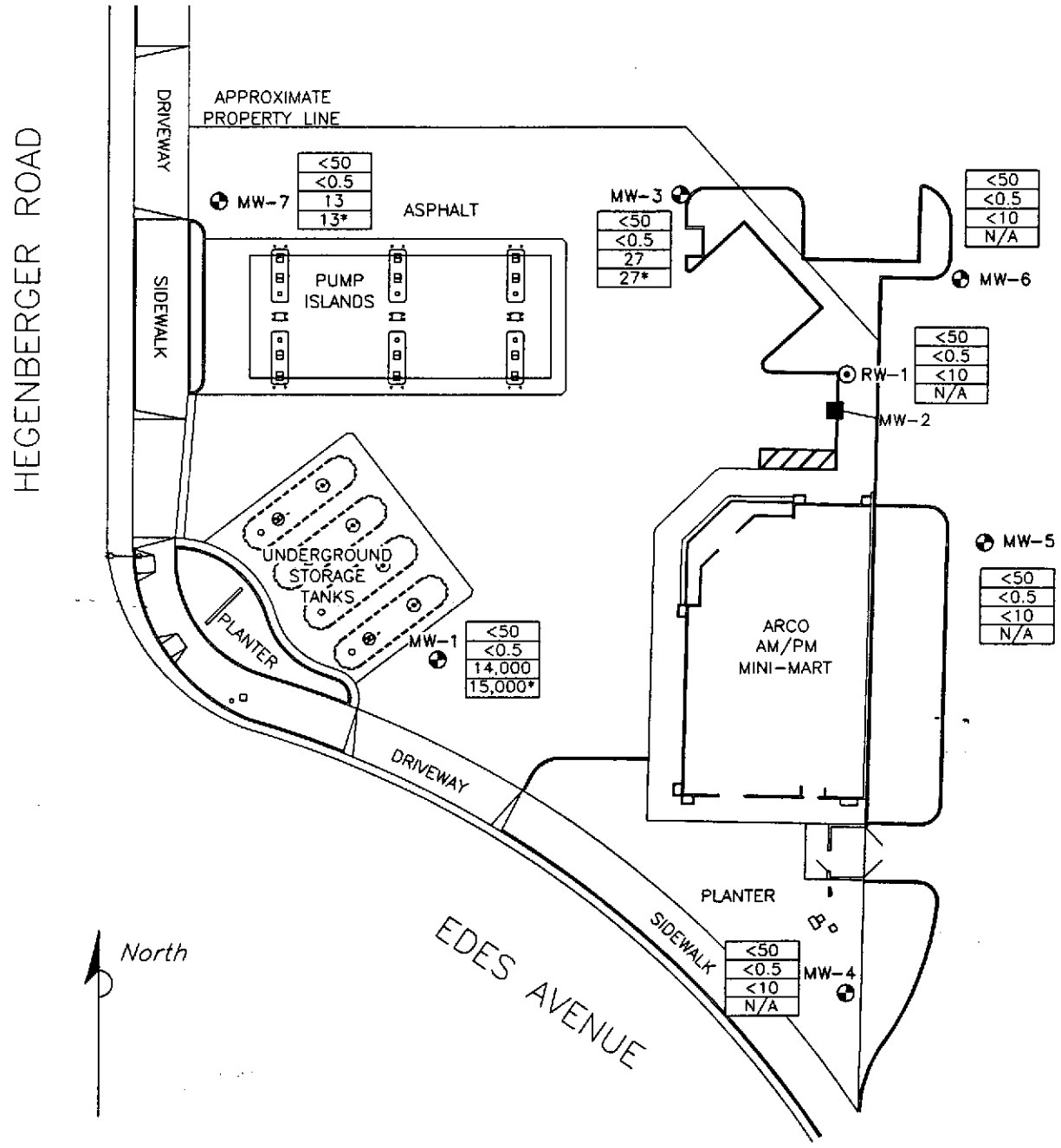
GROUNDWATER ANALYTICAL DATA

ARCO Service Station 4494
566 Hegenberger Road at Edes Avenue
Oakland, 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	106.1	7.02	99.08	<10	<10	<10	<20	<1,000	14,000/15,000[a]
MW-3	06/20/00	106.29	9.18	97.11	<0.5	<0.5	<0.5	<1.0	<50	27/27[a]
MW-4	06/20/00	107.4	8.49	98.91	<0.5	<0.5	<0.5	<1.0	<50	<10
MW-5	06/20/00	105.19	7.65	97.54	<0.5	<0.5	<0.5	<1.0	<50	<10
MW-6	06/20/00	105.07	6.24	98.83	<0.5	<0.5	<0.5	<1.0	<50	<10
MW-7	06/20/00	105.52	8.65	96.87	<0.5	<0.5	<0.5	<1.0	<50	13/13[a]
RW-1	06/20/00	NM	8.21	NC	<0.5	1.1	<0.5	<1.0	<50	<10

[a] Analyzed by EPA Method 8260

TPH = Total Petroleum Hydrocarbons
MTBE = Methyl tertiary butyl ether analyzed by EPA Method 8021B unless otherwise noted
µg/L = Micrograms per liter
NM = Not measured
NC = Not calculated



LEGEND:

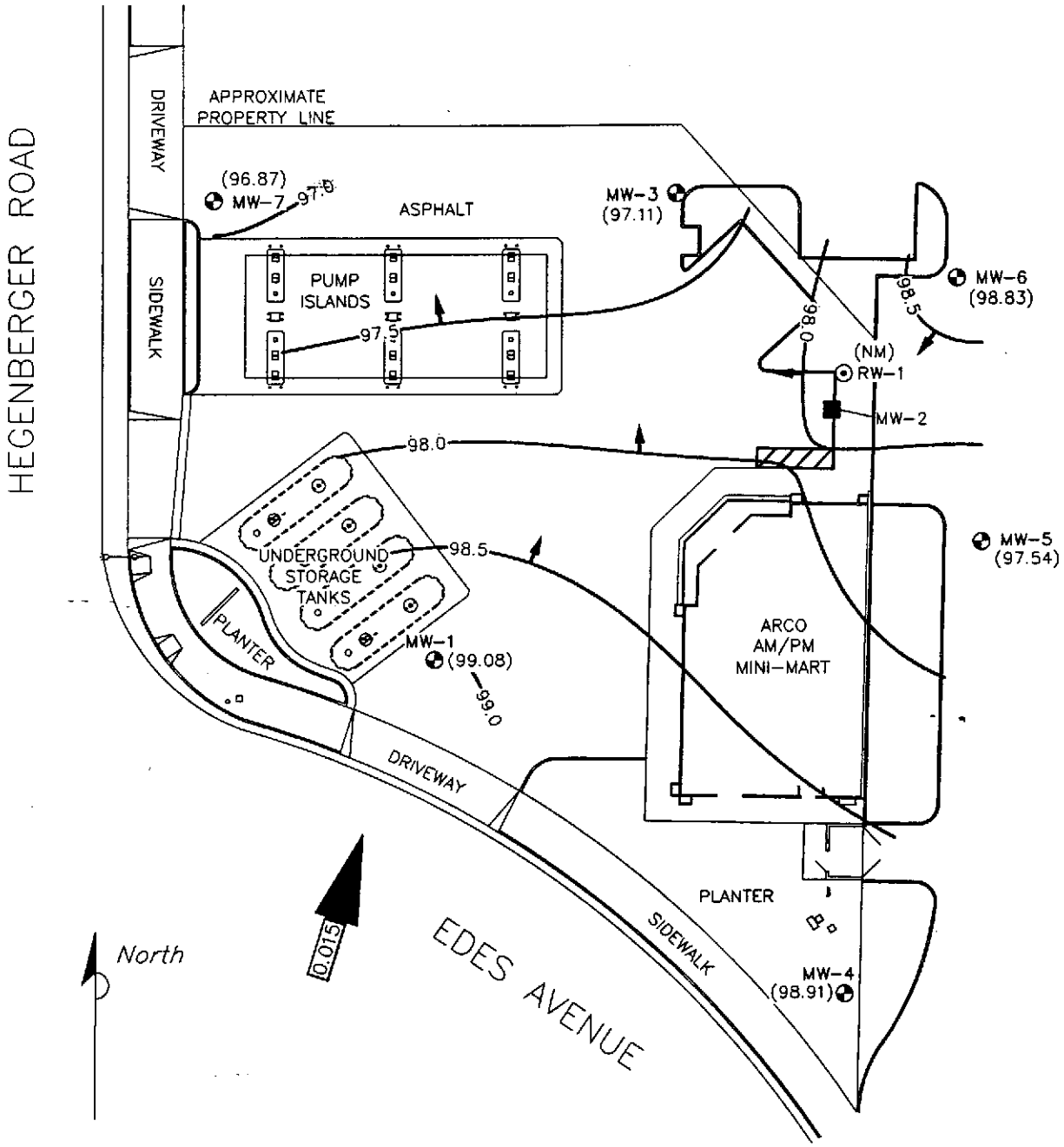
MW-7	MONITORING WELL LOCATION
RW-1	RECOVERY WELL LOCATION, INSTALLED DURING SLURRY WALL CONSTRUCTION (RESNA-APRIL 1993)
MW-2	DESTROYED MONITORING WELL (DECEMBER 1992)
<50	TPH AS GASOLINE IN MICROGRAMS PER LITER
<0.5	BENZENE IN MICROGRAMS PER LITER
14,000	MTBE IN MICROGRAMS PER LITER
15,000*	MTBE CONFIRMED BY EPA METHOD 8260
N/A	NOT APPLICABLE

NOTE: SITE MAP ADAPTED FROM RESNA INC. AND TAIT & ASSOCIATES FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

FIGURE 1
GROUND WATER ANALYTICAL SUMMARY
SECOND QUARTER 2000
ARCO STATION NO. 4494
566 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

PROJECT NO. D000-319	DRAWN BY TLA 7/20/00
FILE NO. 4494-1	PREPARED BY TLA
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.



LEGEND:

MW-7	MONITORING WELL LOCATION
RW-1	RECOVERY WELL LOCATION, INSTALLED DURING SLURRY WALL CONSTRUCTION (RESNA-APRIL 1993)
MW-2	DESTROYED MONITORING WELL (DECEMBER 1992)
(99.08)	GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (MSL)
—98.5—	WATER TABLE CONTOUR IN FEET ABOVE MSL
→	GROUND WATER FLOW DIRECTION
0.015	APPROXIMATE GROUND WATER FLOW GRADIENT

NOTE: SITE MAP ADAPTED FROM RESNA INC. AND TAIT & ASSOCIATES FIGURES. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

FIGURE 2
GROUND WATER ELEVATION CONTOUR MAP
SECOND QUARTER 2000
ARCO STATION NO. 4494
566 HEGENBERGER ROAD
OAKLAND, CALIFORNIA

PROJECT NO. D000-319	DRAWN BY TLA 7/21/00
FILE NO. 4494-1	PREPARED BY TLA
REVISION NO. 2	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

If the depth to groundwater was above the top of screens of the monitoring wells, then the wells were purged. 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. 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 was collected in storage barrels or tank(s) and transported to an ARCO approved facility for treatment and/or disposal.

APPPENDIX B

Pacific Environmental Group, Inc.
Historical Groundwater Elevation and Analytical Data Tables

Table 2
Liquid Surface Elevation Data

ARCO Service Station 4494
566 Hegenberger Road at Edes Avenue
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Depth to Liquid (feet, TOC)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-1	06/06/90	105.31	6.65	6.05	0.00	98.66
	08/16/90		7.00	7.00	0.00	98.31
	08/21/90		7.05	7.05	0.00	98.26
	09/07/90		7.24	7.24	0.00	98.07
	11/20/90		7.46	7.46	0.00	97.85
	11/29/90		7.40	7.40	0.00	97.91
	12/19/90		6.99	6.99	0.00	98.32
	01/29/91		7.23	7.23	0.00	98.08
	02/27/91		7.45	7.45	0.00	97.86
	03/07/91		6.96	6.96	0.00	98.35
	03/26/91		6.02	6.02	0.00	99.29
	05/02/91		7.04	7.04	0.00	98.27
	06/27/91		6.71	6.71	0.00	98.60
	07/24/91		6.91	6.91	0.00	98.40
	08/22/91		6.85	6.85	0.00	98.46
	09/30/91		7.04	7.04	0.00	98.27
	10/17/91		7.22	7.22	0.00	98.09
	11/21/91		7.17	7.17	0.00	98.14
	12/18/91		7.46	7.46	0.00	97.85
	01/19/92		7.44	7.44	0.00	97.87
	02/20/92		6.25	6.25	0.00	99.06
	03/20/92		6.40	6.40	0.00	98.91
	04/20/92		6.88	6.88	0.00	98.43
	05/19/92		7.10	7.10	0.00	98.21
	06/08/92		7.22	7.22	0.00	98.09
	07/15/92	106.10	7.92	7.92	0.00	97.39
	08/06/92		7.29	7.29	0.00	98.81
	10/29/92		7.34	7.34	0.00	98.76
	11/23/92		8.15	8.15	0.00	97.95
	08/16/93		7.23	7.23	0.00	98.87
	11/17/93		7.51	7.51	0.00	98.59
	02/21/94		6.56	6.56	0.00	99.54
	05/11/94		6.57	6.57	0.00	99.53
	08/12/94		7.12	7.12	0.00	98.98
	11/17/94		6.85	6.85	0.00	99.28
	02/22/95		7.35	7.35	0.00	98.75
	05/24/95		7.07	7.07	0.00	99.03
	08/23/95		7.10	7.10	0.00	99.00
	11/17/95		7.72	7.72	0.00	98.38
MW-2	06/06/90	105.78	9.92*	9.00	0.92	95.86
	08/16/90		NM	NM	0.17	NM
	08/21/90		NM	NM	0.17	NM
	09/07/90		9.34*	9.17	0.17	96.44
	11/20/90		9.20*	9.2	Sheen	96.58
	11/29/90		9.92*	9.92	Sheen	95.86
	12/19/90		8.95	8.95	0/00	96.83
	01/29/91		9.01	9.01	Sheen	96.77
	02/27/91		9.14	9.14	Sheen	96.64
	03/07/91		8.94	8.94	Sheen	96.84
	03/26/91		8.11	8.11	Sheen	97.67
	05/02/91		8.72	8.72	0	97.06

Table 2 (continued)
Liquid Surface Elevation Data

ARCO Service Station 4494
566 Hegenberger Road at Edes Avenue
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Depth to Liquid (feet, TOC)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-2	06/27/91		9.20	9.2	Sheen	96.58
(cont.)	07/24/91		9.25	9.25	0.00	96.53
	08/22/91		9.20	9.20	0.00	96.58
	09/30/91		9.31	9.31	Sheen	96.47
	10/17/91		9.39	9.39	Sheen	96.39
	11/21/91		9.20	9.2	0	96.58
	12/18/91		9.23	9.23	Sheen	96.55
	01/19/92		9.96**	9.96	Skimmer	95.82
	02/20/92		9.13**	9.13	Skimmer	96.65
	03/20/92		9.31**	9.31	Skimmer	96.47
	04/20/92		9.69	9.69	Skimmer	96.09
	05/19/92		9.92	9.92	Skimmer	95.86
	06/08/92		9.84	9.84	Skimmer	95.94
	07/15/92		10.19	10.19	Skimmer	95.59
	08/06/92	106.57	10.05	10.05	Skimmer	96.52
	10/29/92		10.00	10.00	Skimmer	96.57
	11/23/92		9.88	9.87	0.01	96.69
	12/08/92		----------	Well Destroyed	----------	
MW-3	08/16/90	105.51	8.87	8.87	0.00	96.64
	08/21/90		8.85	8.85	0.00	96.66
	09/07/90		8.98	8.98	0.00	96.53
	11/20/90		9.10	9.10	0.00	96.41
	11/29/90		9.05	9.05	0.00	96.46
	12/19/90		8.67	8.67	0.00	96.84
	01/29/91		8.96	8.96	0.00	96.55
	02/27/91		8.71	8.71	0.00	96.80
	03/07/91		8.49	8.49	0.00	97.02
	03/26/91		7.65	7.65	0.00	97.86
	05/02/91		8.62	8.62	0.00	96.89
	06/27/91		8.94	8.94	0.00	96.57
	07/24/91		8.96	8.96	0.00	96.55
	08/22/91		8.92	8.92	0.00	96.59
	09/30/91		9.04	9.04	0.00	96.47
	10/17/91		9.12	9.12	0.00	96.39
	11/21/91		8.92	8.92	0.00	96.59
	12/18/91		8.97	8.97	0.00	96.54
	01/19/92		8.69	8.69	0.00	96.82
	02/20/92		7.78	7.78	0.00	97.73
	03/20/92		8.15	8.15	0.00	97.36
	04/20/92		8.57	8.57	0.00	96.94
	05/19/92		8.76	8.76	0.00	96.75
	06/08/92		8.74	8.74	0.00	96.77
	07/15/92		9.12	9.12	0.00	96.39
	08/06/92	106.29	8.95	8.95	0.00	97.34
	10/29/92		8.78	8.78	0.00	97.51
	11/23/92		9.91	9.91	0.00	96.38
	08/16/93		8.62	8.62	0.00	97.67
	11/17/93		8.72	8.72	0.00	97.57
	02/21/94		7.91	7.91	0.00	98.38
	05/11/94		8.09	8.09	0.00	98.20

Table 2 (continued)
Liquid Surface Elevation Data

ARCO Service Station 4494
566 Hegenberger Road at Edes Avenue
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Depth to Liquid (feet, TOC)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-3	08/12/94		8.78	8.78	0.00	97.51
(cont.)	11/17/94		8.45	8.45	0.00	97.84
	02/22/95		8.95	8.95	0.00	97.34
	05/24/95		8.67	8.67	0.00	97.62
	08/23/95		9.17	9.17	0.00	97.12
	11/17/95		9.39	9.39	0.00	96.90
MW-4	08/16/90	106.61	8.16	8.16	0.00	98.45
	08/21/90		8.22	8.22	0.00	98.39
	09/07/90		8.39	8.39	0.00	98.22
	11/20/90		8.57	8.57	0.00	98.04
	11/29/90		8.53	8.53	0.00	98.08
	12/19/90		8.13	8.13	0.00	98.48
	01/29/91		8.66	8.66	0.00	97.95
	02/27/91		8.44	8.44	0.00	98.17
	03/07/91		8.18	8.18	0.00	98.43
	03/26/91		7.56	7.56	0.00	99.05
	05/02/91		8.25	8.25	0.00	98.36
	06/27/91		7.75	7.75	0.00	98.86
	07/24/91		8.12	8.12	0.00	98.49
	08/22/91		7.98	7.98	0.00	98.63
	09/30/91		8.26	8.26	0.00	98.35
	10/17/91		8.42	8.42	0.00	98.19
	11/21/91		8.65	8.65	0.00	97.96
	12/18/91		8.77	8.77	0.00	97.84
	01/19/92		8.42	8.42	0.00	98.19
	02/20/92		7.60	7.60	0.00	99.01
	03/20/92		7.61	7.61	0.00	99.00
	04/20/92		8.15	8.15	0.00	98.46
	05/19/92		8.14	8.14	0.00	98.47
	06/08/92		8.40	8.40	0.00	98.21
	07/15/92		8.72	8.72	0.00	97.89
	08/06/92	107.40	8.52	8.52	0.00	98.88
	10/29/92		8.63	8.63	0.00	98.77
	11/23/92		8.75	8.75	0.00	98.65
	08/16/93		8.69	8.69	0.00	98.71
	11/17/93		9.11	9.11	0.00	98.29
	02/21/94		8.16	8.16	0.00	99.24
	05/11/94		8.29	8.29	0.00	99.11
	08/12/94		8.75	8.75	0.00	98.65
	11/17/94		8.40	8.40	0.00	99.00
	02/22/95		8.72	8.72	0.00	98.68
	05/24/95		8.63	8.63	0.00	98.77
	08/23/95		6.50	6.50	0.00	100.90
	11/17/95		9.15	9.15	0.00	98.25
MW-5	08/06/92	105.19	7.19	7.19	0.00	98.00
	10/29/92		6.99	6.99	0.00	98.20
	11/23/92		6.90	6.90	0.00	98.29
	08/16/93		7.06	7.06	0.00	98.13
	11/17/93		6.91	6.91	0.00	98.28
	02/21/94		5.52	5.52	0.00	99.67
	05/11/94		6.18	6.18	0.00	99.01
	08/12/94		6.81	6.81	0.00	98.38
	11/17/94		5.38	5.38	0.00	99.81
	02/22/95		6.25	6.25	0.00	98.94

Table 2 (continued)
Liquid Surface Elevation Data

ARCO Service Station 4494
566 Hegenberger Road at Edes Avenue
Oakland, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Depth to Liquid (feet, TOC)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
	05/24/95		6.30	6.30	0.00	98.89
MW-5	08/23/95		6.90	6.90	0.00	98.29
(cont.)	11/17/95		7.02	7.02	0.00	98.17
	08/06/92	105.07	7.01	7.01	0.00	98.06
MW-6	10/29/92		6.70	6.70	0.00	98.37
	11/23/92		6.75	6.75	0.00	98.32
	08/16/93		6.71	6.71	0.00	98.36
	11/17/93		6.67	6.67	0.00	98.40
	02/21/94		5.31	5.31	0.00	99.76
	05/11/94		5.98	5.98	0.00	99.09
	08/12/94		6.60	6.60	0.00	98.47
	11/17/94		5.09	5.09	0.00	99.98
	02/22/95		5.85	5.85	0.00	99.22
	05/24/95		5.92	5.92	0.00	99.15
	08/23/95		6.50	6.50	0.00	98.57
	11/17/95		6.75	6.75	0.00	98.32
	08/06/92	105.52	8.28	8.28	0.00	97.24
	10/29/92		8.62	8.62	0.00	96.90
	11/23/92		8.21	8.21	0.00	97.31
	08/16/93		8.11	8.11	0.00	97.41
	11/17/93		8.11	8.11	0.00	97.41
	02/21/94		7.34	7.34	0.00	98.18
	05/11/94		7.45	7.45	0.00	98.07
	08/12/94		8.13	8.13	0.00	97.39
	11/17/94		7.90	7.90	0.00	97.62
	02/22/95		8.40	8.40	0.00	97.12
	05/24/95		8.29	8.29	0.00	97.23
	08/23/95		8.60	8.60	0.00	96.92
	11/17/95		8.73	8.73	0.00	96.79
	08/16/93	NM	——————Well Dry——————			
RW-1	11/17/93		——————Well Dry——————			
	02/21/94		7.69	7.69	0.00	NM
	05/11/94		7.96	7.96	0.00	NM
	08/12/94		7.58	7.58	0.00	NM
	11/17/94		7.66	7.66	0.00	NM
	02/22/95		8.00	8.00	0.00	NM
	05/24/95		8.10	8.10	0.00	NM
	08/23/95		8.67	8.67	0.00	NM
	11/17/95		9.15	9.15	0.00	NM

MSL = Mean sea level
TOC = Top of casing
* = Separate-phase hydrocarbons present in well.
** = Skimmer installed (12/24/91).
NM = Not measured

Table 3
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, TEPH as Diesel, and Total Oil and Grease)

ARCO Service Station 4494
566 Hegenberger Road at Edes Avenue
Oakland, California

Well Number	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	TEPH as Diesel (ppb)	Total Oil and Grease (ppm)
MW-1	06/19/90	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<5000
	08/16/90	<20	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	09/07/90	N/A	N/A	N/A	N/A	N/A	N/A	<5000
	11/29/90	<50	<0.50	0.7	<0.50	<0.50	N/A	N/A
	03/07/91	<50	<0.30	<0.30	<0.30	<0.30	N/A	N/A
	06/27/91	<50	<0.30	<0.30	<0.30	<0.30	N/A	N/A
	09/30/91	<50	<0.30	<0.30	<0.30	<0.30	N/A	N/A
	12/18/91	<50	<0.30	<0.30	<0.30	<0.30	N/A	N/A
	03/20/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	06/08/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	08/06/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	10/29/92	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/16/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	05/11/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/12/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/95	---Well Sampled Annually---						
	05/24/95	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	08/23/95	---Well Sampled Annually---						
	11/17/95	---Well Sampled Annually---						
MW-2	06/19/90	---0.92 foot of Separate-Phase Hydrocarbons---						
	08/16/90	---0.17 foot of Separate-Phase Hydrocarbons---						
	09/07/90	---Separate-Phase Hydrocarbons---						
	11/29/90	---Separate-Phase Hydrocarbons---						
	03/07/91	---Separate-Phase Hydrocarbons---						
	06/27/91	---Separate-Phase Hydrocarbons---						
	09/30/91	---Separate-Phase Hydrocarbons---						
	12/18/91	---Separate-Phase Hydrocarbons---						
	03/20/92	48,000	2,000	580	2,300	7,000	N/A	N/A
	06/08/92	43,000	2,900	940	240	5,100	N/A	N/A
	08/06/92	78,000	2,500	6,700	2,900	16,000	N/A	N/A
	10/29/92	NS	NS	NS	NS	NS	NS	NS
	12/08/92	---Well Destroyed---						
MW-3	06/19/90	<20	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	08/16/90	N/A	N/A	N/A	N/A	N/A	N/A	<5,000
	09/07/90	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	11/29/90	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	03/07/91	<50	<30	<30	<30	<30	N/A	N/A
	06/27/91	<30	<30	<30	<30	<30	N/A	N/A
	09/30/91	<30	<30	<30	<30	<30	N/A	N/A
	12/18/91	<30	<30	<30	<30	<30	N/A	N/A
	03/20/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	06/08/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	08/06/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	10/29/92	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/16/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A

Table 3 (continued)
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, TEPH as Diesel, and Total Oil and Grease)

ARCO Service Station 4494
566 Hegenberger Road at Edes Avenue
Oakland, California

Well Number	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	TEPH as Diesel (ppb)	Total Oil and Grease (ppm)
MW-3	02/22/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
(cont.)	05/11/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/12/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/95	Well Sampled Annually						
	05/24/95	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	08/23/95	Well Sampled Annually						
	11/17/95	Well Sampled Annually						
MW-4	08/16/90	<20	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	09/07/90	N/A	N/A	N/A	N/A	N/A	N/A	<5,000
	11/29/90	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	03/07/91	<50	<0.30	<0.30	<0.30	<0.30	N/A	N/A
	06/27/91	<50	0.75	1.1	<0.30	1.6	N/A	N/A
	09/30/91	<50	<0.30	<0.30	<0.30	<0.30	N/A	N/A
	12/18/91	<50	0.83	1.2	<0.30	0.58	N/A	N/A
	03/20/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	06/08/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	08/06/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	10/29/92	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/16/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	05/11/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/12/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/95	Well Sampled Annually						
	05/24/95	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	08/23/95	Well Sampled Annually						
	11/17/95	Well Sampled Annually						
MW-5	08/06/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	10/29/92	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/16/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	05/11/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/12/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/95	Well Sampled Annually						
	05/24/95	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	08/23/95	Well Sampled Annually						
	11/17/95	Well Sampled Annually						
MW-6	08/06/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	10/29/92	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/16/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	05/11/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/12/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/95	Well Sampled Annually						

Table 3 (continued)
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPPH as Gasoline, BTEX Compounds, TEPH as Diesel, and Total Oil and Grease)

ARCO Service Station 4494
566 Hegenberger Road at Edes Avenue
Oakland, California

Well Number	Date Sampled	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	TEPH as Diesel (ppb)	Total Oil and Grease (ppm)
MW-6	05/24/95	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
(cont.)	08/23/95	----------Well Sampled Annually----------						
	11/17/95	----------Well Sampled Annually----------						
MW-7	08/06/92	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	10/29/92	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/16/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/93	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	05/11/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	08/12/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	11/17/94	<50	<0.5	<0.5	<0.5	<0.5	N/A	N/A
	02/22/95	----------Well Sampled Annually----------						
	05/24/95	<50	<0.50	<0.50	<0.50	<0.50	N/A	N/A
	08/23/95	----------Well Sampled Annually----------						
	11/17/95	----------Well Sampled Annually----------						
RW-1	08/16/93	NS	NS	NS	NS	NS	NS	NS
	11/17/93	NS	NS	NS	NS	NS	NS	NS
	02/22/94	280	2,100	19	40	66	N/A	N/A
	05/11/94	3,300	32	28	87	310	N/A	N/A
	08/12/94	4,600	42	59	190	400	N/A	N/A
	11/17/94	1,400	56	21	28	210	N/A	N/A
	02/22/95	8,100	140	<10	550	560	N/A	N/A
	05/24/95	940	53	0.75	11	1.4	N/A	N/A
	08/23/95	620	2.1	2.3	0.67	0.67	N/A	N/A
	11/17/95	1,100	7.6	21	46	180	N/A	N/A

ppb = Parts per billion
ppm = Parts per million
N/A = Not applicable
NS = Not sampled

Table 4
Groundwater Analytical Data
Total Methl t-Butyl Ether

ARCO Service Station 4494
566 Hegenberger Road at Edes Avenue
Oakland, California

Well Number	Date Sampled	Methyl t-Butyl Ether (ppb)
MW-1	08/23/95	NS
MW-2	08/23/95	NS
MW-3	08/23/95	NS
MW-4	08/23/95	NS
MW-5	08/23/95	NS
MW-6	08/23/95	NS
MW-7	08/23/95	NS
RW-1	08/23/95	13

ppb = Parts per billion
NS = Not sampled
See certified analytical report for detection limit.

APPENDIX C

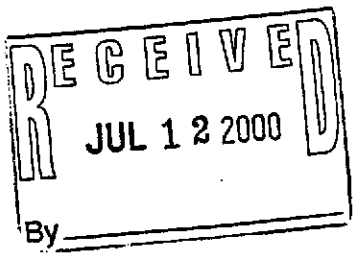
Certified Analytical Reports
With
Chain–of–Custody

Columbia Analytical Services INC.
An Employee-Owned Company

July 10, 2000

Service Request No.: S2001819

Mr. Steve Meeks
Delta Environmental Consultants
3164 Gold Camp Dr. Suite 200
Rancho Cordova, CA 95670



RE: **WA#2623700/RAT#8/4494 OAKLAND**

Dear Mr. Meeks:

Enclosed are the results of the sample(s) submitted to our laboratory on June 22, 2000. All analyses were performed in accordance with our laboratory's quality assurance program. Results are intended to be considered in their entirety and apply to the sample(s) analyzed. Columbia Analytical Services is not responsible for use of less than the complete report. Signature of this CAS Analytical Report confirms that pages 2 through 20, following, have been thoroughly reviewed and approved for release.

Columbia Analytical Services is certified for environmental analyses by the California Department of Health Services (certificate number: 2352, expiration: January 31, 2001).

If you have any questions, please call me at (408) 748-9700.

Respectfully submitted,

Columbia Analytical Services, Inc.

Bernadette Troncales
Project Chemist

Greg Jordan
Laboratory Director

COLUMBIA ANALYTICAL SERVICES, Inc.
Acronyms

A2LA	American Association for Laboratory Accreditation
ASTM	American Society for Testing and Materials
BOD	Biochemical Oxygen Demand
BTEX	Benzene, Toluene, Ethylbenzene, Xylenes
CAM	California Assessment Metals
CARB	California Air Resources Board
CAS Number	Chemical Abstract Service registry Number
CFC	Chlorofluorocarbon
CFU	Colony-Forming Unit
COD	Chemical Oxygen Demand
DEC	Department of Environmental Conservation
DEQ	Department of Environmental Quality
DHS	Department of Health Services
DLCS	Duplicate Laboratory Control Sample
DMS	Duplicate Matrix Spike
DOE	Department of Ecology
DOH	Department of Health
EPA	U. S. Environmental Protection Agency
ELAP	Environmental Laboratory Accreditation Program
GC	Gas Chromatography
GC/MS	Gas Chromatography/Mass Spectrometry
IC	Ion Chromatography
ICB	Initial Calibration Blank sample
ICP	Inductively Coupled Plasma atomic emission spectrometry
ICV	Initial Calibration Verification sample
J	Estimated concentration. The value is less than the MRL, but greater than or equal to the MDL. If the value is equal to the MRL, the result is actually <MRL before rounding.
LCS	Laboratory Control Sample
LUFT	Leaking Underground Fuel Tank
M	Modified
MBAS	Methylene Blue Active Substances
MCL	Maximum Contaminant Level. The highest permissible concentration of a substance allowed in drinking water as established by the U. S. EPA.
MDL	Method Detection Limit
MPN	Most Probable Number
MRL	Method Reporting Limit
MS	Matrix Spike
MTBE	Methyl tert-Butyl Ether
NA	Not Applicable
NAN	Not Analyzed
NC	Not Calculated
NCASI	National Council of the paper industry for Air and Stream Improvement
ND	Not Detected at or above the method reporting/detection limit (MRL/MDL)
NIOSH	National Institute for Occupational Safety and Health
NTU	Nephelometric Turbidity Units
ppb	Parts Per Billion
ppm	Parts Per Million
PQL	Practical Quantitation Limit
QA/QC	Quality Assurance/Quality Control
RCRA	Resource Conservation and Recovery Act
RPD	Relative Percent Difference
SIM	Selected Ion Monitoring
SM	Standard Methods for the Examination of Water and Wastewater, 18th Ed., 1992
STLC	Solubility Threshold Limit Concentration
SW	Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Ed., 1986 and as amended by Updates I, II, IIA, and IIB.
TCLP	Toxicity Characteristic Leaching Procedure
TDS	Total Dissolved Solids
TPH	Total Petroleum Hydrocarbons
tr	Trace level. The concentration of an analyte that is less than the PQL but greater than or equal to the MDL. If the value is equal to the PQL, the result is actually <PQL before rounding.
TRPH	Total Recoverable Petroleum Hydrocarbons
TSS	Total Suspended Solids
TTLC	Total Threshold Limit Concentration
VOA	Volatile Organic Analyte(s)

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	ARCO Products Company	**Service Request:**	L2002170
Project:	WA#2623700/RAT#8/4494 OAKLAND	**Date Collected:**	6/20/00
Sample Matrix:	Water	**Date Received:**	6/22/00

MTBE, BTEX and TPH as Gasoline

Sample Name:	MW-1-7	Units:	ug/L (ppb)
Lab Code:	L2002170-001	Basis:	NA
Test Notes:	† / C2A		

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	20	NA	6/30/00	<10	
Toluene	EPA 5030	8021B	0.5	20	NA	6/30/00	<10	
Ethylbenzene	EPA 5030	8021B	0.5	20	NA	6/30/00	<10	
Xylenes, Total	EPA 5030	8021B	1.0	20	NA	6/30/00	<20	
TPH as Gasoline	EPA 5030	8015M	50	20	NA	6/30/00	<1000	
Methyl *tert*-Butyl Ether	EPA 5030	8021B	10	20	NA	6/30/00	14000	

†	TPH as Gasoline does not include MTBE.
C2A	MRL is elevated because of matrix interferences and because the sample required diluting.

Approved By: _____ Date: 07/10/00

IS22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	ARCO Products Company	**Service Request:**	L2002170
Project:	WA#2623700/RAT#8/4494 OAKLAND	**Date Collected:**	6/20/00
Sample Matrix:	Water	**Date Received:**	6/22/00

MTBE, BTEX and TPH as Gasoline

Sample Name:	MW-3-9	Units:	ug/L (ppb)
Lab Code:	L2002170-002	Basis:	NA
Test Notes:	†		

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	6/30/00	ND	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	6/30/00	ND	
Methyl *tert*-Butyl Ether	EPA 5030	8021B	10	1	NA	6/30/00	27	

† TPH as Gasoline does not include MTBE.

Approved By: _____ Date: 07/10/00

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	ARCO Products Company	**Service Request:**	L2002170
Project:	WA#2623700/RAT#8/4494 OAKLAND	**Date Collected:**	6/20/00
Sample Matrix:	Water	**Date Received:**	6/22/00

MTBE, BTEX and TPH as Gasoline

Sample Name:	MW-4-8	Units:	ug/L (ppb)
Lab Code:	L2002170-003	Basis:	NA
Test Notes:	†		

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	6/30/00	ND	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	6/30/00	ND	
Methyl *tert*-Butyl Ether	EPA 5030	8021B	10	1	NA	6/30/00	ND	

† TPH as Gasoline does not include MTBE.

Approved By: RT Date: 07/10/00

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	ARCO Products Company	**Service Request:**	L2002170
Project:	WA#2623700/RAT#8/4494 OAKLAND	**Date Collected:**	6/20/00
Sample Matrix:	Water	**Date Received:**	6/22/00

MTBE, BTEX and TPH as Gasoline

Sample Name:	MW-5-7	Units:	ug/L (ppb)
Lab Code:	L2002170-004	Basis:	NA
Test Notes:	†		

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	6/30/00	ND	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	6/30/00	ND	
Methyl *tert* -Butyl Ether	EPA 5030	8021B	10	1	NA	6/30/00	ND	

† TPH as Gasoline does not include MTBE.

Approved By: _____ Date: 07/10/00

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	ARCO Products Company	**Service Request:**	L2002170
Project:	WA#2623700/RAT#8/4494 OAKLAND	**Date Collected:**	6/20/00
Sample Matrix:	Water	**Date Received:**	6/22/00

MTBE, BTEX and TPH as Gasoline

Sample Name:	MW-6-6	Units:	ug/L (ppb)
Lab Code:	L2002170-005	Basis:	NA
Test Notes:	†		

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	6/30/00	ND	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	6/30/00	ND	
Methyl *tert*-Butyl Ether	EPA 5030	8021B	10	1	NA	6/30/00	ND	

† TPH as Gasoline does not include MTBE.

Approved By: _____ Date: 07/10/00

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	ARCO Products Company	**Service Request:**	L2002170
Project:	WA#2623700/RAT#8/4494 OAKLAND	**Date Collected:**	6/20/00
Sample Matrix:	Water	**Date Received:**	6/22/00

MTBE, BTEX and TPH as Gasoline

Sample Name:	MW-7-8	Units:	ug/L (ppb)
Lab Code:	L2002170-006	Basis:	NA
Test Notes:	†		

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	6/30/00	ND	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	6/30/00	ND	
Methyl *tert*-Butyl Ether	EPA 5030	8021B	10	1	NA	6/30/00	13	

† TPH as Gasoline does not include MTBE.

Approved By: _____ Date: 07/10/00

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	ARCO Products Company	**Service Request:**	L2002170
Project:	WA#2623700/RAT#8/4494 OAKLAND	**Date Collected:**	6/20/00
Sample Matrix:	Water	**Date Received:**	6/22/00

MTBE, BTEX and TPH as Gasoline

Sample Name:	RW-1-8	Units:	ug/L (ppb)
Lab Code:	L2002170-007	Basis:	NA
Test Notes:	†		

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	6/30/00	1.1	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	6/30/00	ND	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	6/30/00	ND	
Methyl *tert*-Butyl Ether	EPA 5030	8021B	10	1	NA	6/30/00	ND	

† TPH as Gasoline does not include MTBE.

Approved By: _____ Date: 07/10/00

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	ARCO Products Company	**Service Request:**	L2002170
Project:	WA#2623700/RAT#8/4494 OAKLAND	**Date Collected:**	6/19/00
Sample Matrix:	Water	**Date Received:**	6/22/00

MTBE, BTEX and TPH as Gasoline

Sample Name:	TB	Units:	ug/L (ppb)
Lab Code:	L2002170-008	Basis:	NA
Test Notes:	†		

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	7/3/00	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	7/3/00	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	7/3/00	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	7/3/00	ND	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	7/3/00	ND	
Methyl *tert*-Butyl Ether	EPA 5030	8021B	10	1	NA	7/3/00	ND	

† TPH as Gasoline does not include MTBE.

Approved By: _____ Date: 07/10/00

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	ARCO Products Company	**Service Request:**	L2002170
Project:	WA#2623700/RAT#8/4494 OAKLAND	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

MTBE, BTEX and TPH as Gasoline

Sample Name:	Method Blank	Units:	ug/L (ppb)
Lab Code:	L200630-MB	Basis:	NA
Test Notes:	†		

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	6/30/00	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	6/30/00	ND	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	6/30/00	ND	
Methyl *tert*-Butyl Ether	EPA 5030	8021B	10	1	NA	6/30/00	ND	

† TPH as Gasoline does not include MTBE.

Approved By: _____ Date: 07/06/00

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	ARCO Products Company	**Service Request:**	L2002170
Project:	WA#2623700/RAT#8/4494 OAKLAND	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA

MTBE, BTEX and TPH as Gasoline

Sample Name:	Method Blank	Units:	ug/L (ppb)
Lab Code:	L200703-MB	Basis:	NA
Test Notes:	†		

Analyte	Prep Method	Analysis Method	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
Benzene	EPA 5030	8021B	0.5	1	NA	7/3/00	ND	
Toluene	EPA 5030	8021B	0.5	1	NA	7/3/00	ND	
Ethylbenzene	EPA 5030	8021B	0.5	1	NA	7/3/00	ND	
Xylenes, Total	EPA 5030	8021B	1.0	1	NA	7/3/00	ND	
TPH as Gasoline	EPA 5030	8015M	50	1	NA	7/3/00	ND	
Methyl *tert*-Butyl Ether	EPA 5030	8021B	10	1	NA	7/3/00	ND	

† TPH as Gasoline does not include MTBE.

Approved By: _____ Date: 07/10/00

1S22/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCO Products Company
Project: WA#2623700/RAT#8/4494 OAKLAND
Sample Matrix: Water

Service Request: L2002170
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 6/30/00

Matrix Spike/Duplicate Matrix Spike Summary
MTBE, BTEX and TPH as Gasoline

Sample Name: MW-3-9
Lab Code: L2002170-002MS, L2002170-002DMS
Test Notes:

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Benzene	EPA 5030	8021B	0.5	12.7	12.7	ND	17.7	17.3	139	136	39-150	2	
Toluene	EPA 5030	8021B	0.5	140	140	ND	130	130	93	93	46-148	<1	
Ethylbenzene	EPA 5030	8021B	0.5	35.2	35.2	ND	32.7	32.4	93	92	32-160	<1	
TPH as Gasoline	EPA 5030	8015M	50	2000	2000	ND	1810	1850	90	92	70-140	2	

Approved By: _____ Date: 07/10/00

DMS/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	ARCO Products Company	**Service Request:**	L2002170
Project:	WA#2623700/RAT#8/4494 OAKLAND	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	7/3/00

Matrix Spike/Duplicate Matrix Spike Summary
MTBE, BTEX and TPH as Gasoline

Sample Name:	Batch QC	Units:	ug/L (ppb)
Lab Code:	L2002173-002MS, L2002173-002dMS	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	MRL	Spike Level MS	Spike Level DMS	Sample Result	Spike Result MS	Spike Result DMS	Percent Recovery MS	Percent Recovery DMS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Benzene	EPA 5030	8021B	0.5	12.7	12.7	ND	16.0	16.4	139	136	39-150	2	
Toluene	EPA 5030	8021B	0.5	140	140	ND	125	128	93	93	46-148	2	
Ethylbenzene	EPA 5030	8021B	0.5	35.2	35.2	ND	31.3	32.2	93	92	32-160	3	
TPH as Gasoline	EPA 5030	8015M	50	2000	2000	ND	1650	1720	90	92	70-140	4	

Approved By: _____ Date: 07/10/00

DMS/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCO Products Company
Project: WA#2623700/RAT#8/4494 OAKLAND
LCS Matrix: Water

Service Request: L2002170
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 6/30/00

Laboratory Control Sample Summary
MTBE, BTEX and TPH as Gasoline

Sample Name: Lab Control Sample
Lab Code: L200630-LCS
Test Notes:

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Benzene	EPA 5030	8021B	50.0	48.7	97	39-150	
Toluene	EPA 5030	8021B	50.0	49.2	98	46-148	
Ethylbenzene	EPA 5030	8021B	50.0	51.5	103	32-160	
TPH as Gasoline	EPA 5030	8015M	2000	1850	92	70-140	

Approved By: _____ Date: 07/10/00

LCS/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCO Products Company
Project: WA#2623700/RAT#8/4494 OAKLAND
LCS Matrix: Water

Service Request: L2002170
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: 7/3/00

Laboratory Control Sample Summary
MTBE, BTEX and TPH as Gasoline

Sample Name: Lab Control Sample
Lab Code: L200703-LCS
Test Notes:

Units: ug/L (ppb)
Basis: NA

Analyte	Prep Method	Analysis Method	True Value	Result	Percent Recovery	CAS Percent Recovery Acceptance Limits	Result Notes
Benzene	EPA 5030	8021B	50.0	51.4	103	39-150	
Toluene	EPA 5030	8021B	50.0	52.2	104	46-148	
Ethylbenzene	EPA 5030	8021B	50.0	55.1	110	32-160	
TPH as Gasoline	EPA 5030	8015M	2000	1790	90	70-140	

Approved By: _____ Date: 07/10/00

LCS/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCO Products Company
Project: WA#2623700/RAT#8/4494 OAKLAND
Sample Matrix: Water

Service Request: L2002170
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
MTBE, BTEX and TPH as Gasoline

Prep Method: EPA 5030
Analysis Method: 8021B/8015M

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery 4-Bromofluorobenzene	Percent Recovery 4-Bromofluorobenzene
MW-1-7	L2002170-001		86	79
MW-3-9	L2002170-002		85	80
MW-4-8	L2002170-003		83	81
MW-5-7	L2002170-004		85	84
MW-6-6	L2002170-005		87	86
MW-7-8	L2002170-006		84	83
RW-1-8	L2002170-007		86	86
TB	L2002170-008		85	78
Method Blank	L200630-MB		77	72
MW-3-9	L2002170-002MS		95	91
MW-3-9	L2002170-002DMS		96	96
Lab Control Sample	L200630-LCS		99	92
Method Blank	L200703-MB		79	68
Batch QC	L2002173-002MS		91	83
Batch QC	L2002173-002DMS		93	84
Lab Control Sample	L200703-LCS		105	88

CAS Acceptance Limits: 60-130 60-140

Approved By: _____ Date: 07/10/00

SUR2/061197p

COLUMBIA ANALYTICAL SERVICES, INC.

Analytical Report

Client:	ARCO Products Company	**Service Request:**	L2002170
Project:	WA#2623700/RAT#8/4494 OAKLAND	**Date Collected:**	6/20/00
Sample Matrix:	Water	**Date Received:**	6/22/00

Methyl *tert*-Butyl Ether

Prep Method:	EPA 5030	Units:	ug/L (ppb)
Analysis Method:	8260B	Basis:	NA
Test Notes:			

Sample Name	Lab Code	MRL	Dilution Factor	Date Extracted	Date Analyzed	Result	Result Notes
MW-1-7	L2002170-001	5	200	NA	7/2/00	15000	
MW-3-9	L2002170-002	5	1	NA	7/2/00	27	
MW-7-8	L2002170-006	5	1	NA	7/2/00	13	
Method Blank	L200702-MB2	5	1	NA	7/2/00	ND	

Approved By: _____ Date: 07/10/00

1A/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client:	ARCO Products Company	**Service Request:**	L2002170
Project:	WA#2623700/RAT#8/4494 OAKLAND	**Date Collected:**	NA
LCS Matrix:	Water	**Date Received:**	NA
		Date Extracted:	NA
		Date Analyzed:	7/2/00

Laboratory Control Sample/Duplicate Laboratory Control Sample Summary
Methyl *tert*-Butyl Ether

Sample Name:	Duplicate Lab Control Sample	Units:	ug/L (ppb)
Lab Code:	L200702-LCS L200702-DLCS1	Basis:	NA
Test Notes:			

Analyte	Prep Method	Analysis Method	True Value LCS	True Value DLCS	Result LCS	Result DLCS	Percent Recovery LCS	Percent Recovery DLCS	CAS Acceptance Limits	Relative Percent Difference	Result Notes
Methyl tert-Butyl Ether	EPA 5030	8260B	20.0	20.0	19.1	18.9	96	94	50-150	1	

Approved By: RT Date: 07/10/00

DLCS/020597p

COLUMBIA ANALYTICAL SERVICES, INC.

QA/QC Report

Client: ARCO Products Company
Project: WA#2623700/RAT#8/4494 OAKLAND
Sample Matrix: Water

Service Request: L2002170
Date Collected: NA
Date Received: NA
Date Extracted: NA
Date Analyzed: NA

Surrogate Recovery Summary
Methyl *tert*-Butyl Ether

Prep Method: EPA 5030
Analysis Method: 8260B

Units: PERCENT
Basis: NA

Sample Name	Lab Code	Test Notes	Percent Recovery Dibromofluoromethane	Toluene-D_8	4-Bromofluorobenzene
MW-1-7	L2002170-001		100	100	96
MW-3-9	L2002170-002		101	100	95
MW-7-8	L2002170-006		97	100	96
Method Blank	L200702-MB2		98	99	96
Lab Control Sample	L200702-LCS1		97	100	99
Duplicate Lab Control Sample	L200702-DLCS1		97	100	98
CAS Acceptance Limits:			70-130	88-110	86-115

Approved By: _____ Date: 07/10/00

SUR3/020597p

ARCO Products Company ◆ Division of AtlanticRichfieldCompany

Chain of Custody

Task Order No. W.A.# 2623700

ARCO Facility no. 4494 | City (Facility) Oakland | Project manager (Consultant) Steve Meeks | Laboratory name Columbia

ARCO engineer Paul Supple | Telephone no. (ARCO) | Telephone no. (Consultant) (916) 638 2164 | Fax no. (Consultant) 916 686 8353 | Contract number

Consultant name Delta | Address (Consultant) 3164 Gold Camp Dr Suite 200 Rancho Cordova, CA | Method of shipment UPS

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/MTBE EPA 8020/8015	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals ☐ Semi VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐		
MW-1-7	(1)	4		X		X	X	6-20-00	1642		X											
MW-2-9	(2)								1541													
MW-3-8	(3)								1638													
MW-4-7	(4)								1605													
MW-5-6	(5)								1522													
MW-7-8	(6)								1732													
RW-1-8	(7)	V							1631													
TB	(8)	2		V		V	V	6-19-00	800		V											

Special detection Limit/reporting

Special QA/QC

Remarks: verify MTBE Hits by 8260

Lab number: 5200819

Turnaround time

- Priority Rush 1 Business Day ☐
- Rush 2 Business Days ☐
- Expedited 5 Business Days ☐
- Standard 10 Business Days ☒

Condition of sample:

Temperature received:

	Date	Time
Relinquished by sampler: Hal Hanson		
Received by: RAY BATTON CAS	6/22/00	1000 AM
Relinquished by		
Received by		
Relinquished by		
Received by laboratory		

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

PC-3292 (2-91)

7/7/00 RU103K

DOULOS ENVIRONMENTAL COMPANY
GROUNDWATER/LIQUID LEVEL DATA
(measurements in feet)

Project Address: Arco 4494, 556 Hegenberger Rd Date: 6-20-00
Oakland CA Project No.:
Recorded by: Hal Hansen

Well No	Time	Well Elev. TOC	Depth to Gr. Water	Measured Total Depth	Gr. Water Elevation	Depth to Product	Product Thickness	Comments
MW-1	1432	106.10	7.02	22.68	99.08			DO 2.10
MW3	1435	106.29	9.18	17.67	97.11			DO 2.01
MW-4	1439	107.40	8.49	16.25	98.91			DO 1.98
MW-5	1444	105.19	7.65	16.64	97.54			DO 1.23
MW-6	1448	105.07	6.24	17.81	98.89			DO 1.53
MW-7	1452	105.52	8.65	13.65	96.87			DO 1.54
RW-1	1455		8.21	11.04				DO 1.37

Notes:

DOULOS ENVIRONMENTAL COMPANY **SAMPLING INFORMATION SHEET**

Client: Arco Sampling Date: 6-20-00

Site: Arco # 4494 Project No.:

566 Hegenberger Rd. Well Designation: MW-1

Oakland CA.

Is setup of traffic control devices required? (NO) YES time: _____ hours
Is there standing water in well box? (NO) YES Above TOC Below TOC
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? (NO) YES If no, see remarks
Height of well casing riser (in inches): _____
Well cover type: 8" UV_____ 12" UV_____ 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI_____ 36" CNI_____ Other 12"
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment: _____2" disposable bailer _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer _X_Centrifugal pump

Sampled with: Disposable bailer: X Teflon bailer: _____

Well Diameter: 2"____ 4"X 6"____ 8"____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 1431
Depth of well: 28
Depth to water: 7.02

Recharge Measurement
Time: 1641
Depth to water: 10.10

Calculated purge: 30.5 gal
Actual purge: 30.5

Start purge: 1500 Sampling time: 1642

Time	Temp.	E.C.	pH	Turbidity	Volume
1503	25.6	3322	843	—	1
1506	25.6	3314	839	—	2
1509	25.2	3305	834	—	3
				—	

Sample appearance: clear Lock: OK

Equipment replaced: (Check all that apply) Note condition of replaced item
2" Locking Cap:_____ Lock #3753:_____ 7/32 Allenhead:_____
4" Locking Cap:_____ Lock-Dolphin:_____ 9/16 Bolt:_____
6" Locking Cap:_____ Pinned Allenhead (DWP):_____

Remarks: The well has no cap, the clearance between the well cover and the top of casing is to narrow well is open to surface

Signature: [signature]

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Arco Sampling Date: 6-20-00

Site: Arco # 4494 Project No.:

5666 Hegenberger Rd. Well Designation: MW-3

Oakland CA.

Is setup of traffic control devices required? (NO) YES time:_____ hours
Is there standing water in well box? (NO) YES Above TOC Below TOC
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): 3
Well cover type: 8" UV_____ 12" UV_____ 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI X 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment: _____2" disposable bailer _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer X Centrifugal pump

Sampled with: Disposable bailer: X Teflon bailer:_____

Well Diameter: 2"_____ 4" X 6"_____ 8"_____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 1425
Depth of well: 19.67
Depth to water: 9.18

Recharge Measurement
Time: NA
Depth to water: NA

Calculated purge: NA
Actual purge: NA

Start purge: NA Sampling time: 1541

Time	Temp.	E.C.	pH	Turbidity	Volume
				-	
	No Purge			-	
				-	

Sample appearance: clear Lock: ok

Equipment replaced: (Check all that apply) Note condition of replaced item
2" Locking Cap:_____ Lock #3753:_____ 7/32 Allenhead:_____
4" Locking Cap:_____ Lock-Dolphin:_____ 9/16 Bolt:_____
6" Locking Cap:_____ Pinned Allenhead (DWP):_____

Remarks: _____

Signature: [signature]

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Arco Sampling Date: 6-20-00

Site: Arco # 4494 Project No.:

5666 Hegenberger Rd. Well Designation: MW-4

Oakland CA.

Is setup of traffic control devices required? (NO) YES time:_____ hours
Is there standing water in well box? (NO) YES Above TOC Below TOC
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): _____
Well cover type: 8" UV_____ 12" UV_____ 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI X 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment:
_____2" disposable bailer
_____2" PVC bailer
_____4" PVC bailer
_____Submersible pump
_____Dedicated bailer
X Centrifugal pump

Sampled with: Disposable bailer: X Teflon bailer:_____

Well Diameter: 2"____ 4" X 6"____ 8"____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 1439
Depth of well: 16.5
Depth to water: 8.49

Recharge Measurement
Time: 637
Depth to water: 8.82

Calculated purge: 15.1 gal
Actual purge: 15.1

Start purge: 1545 Sampling time: 1638

Time	Temp.	E.C.	pH	Turbidity	Volume
1548	21.0	2304	7.89	———	1
1550	21.7	2344	7.81	———	2
1553	22.1	2358	7.85	———	3

Sample appearance: clear Lock: master

Equipment replaced: (Check all that apply) Note condition of replaced item
2" Locking Cap:_____ Lock #3753:_____ 7/32 Allenhead:_____
4" Locking Cap:_____ Lock-Dolphin:_____ 9/16 Bolt:_____
6" Locking Cap:_____ Pinned Allenhead (DWP):_____

Remarks: _____

Signature: _____

DOULOS ENVIRONMENTAL COMPANY **SAMPLING INFORMATION SHEET**

Client: Arco Sampling Date: 6-20-00

Site: Arco # 4494 Project No.:

5666 Hegenberger Rd. Well Designation: MW-5

Oakland CA.

Is setup of traffic control devices required? (NO) YES time:_____ hours
Is there standing water in well box? (NO) YES Above TOC Below TOC
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? (NO) YES If no, see remarks
Height of well casing riser (in inches): +10
Well cover type: 8" UV_____ 12" UV_____ 12" EMCO X 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI_____ 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment: _____2" disposable bailer _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer X Centrifugal pump

Sampled with: Disposable bailer: X Teflon bailer:_____

Well Diameter: 2" X 4"____ 6"____ 8"____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 1414
Depth of well: 17.44
Depth to water: 7.65

Recharge Measurement
Time: 1604
Depth to water: 7.82

Calculated purge: 4.3 gal
Actual purge: 4.3 g

Start purge: 1557 Sampling time: 1605

Time	Temp.	E.C.	pH	Turbidity	Volume
1558	21.5	+3999	718	———	1
1559	21.4	+3999	715	———	2
1600	21.4	+3999	714	———	3

Sample appearance: clear Lock: good

Equipment replaced: (Check all that apply) Note condition of replaced item
2" Locking Cap:_____ Lock #3753:_____ 7/32 Allenhead:_____
4" Locking Cap:_____ Lock-Dolphin:_____ 9/16 Bolt:_____
6" Locking Cap:_____ Pinned Allenhead (DWP):_____

Remarks: _____

Signature: _____

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Arco Sampling Date: 6-20-00

Site: Arco # 4494 Project No.:

5666 Hegenberger Rd. Well Designation: MW-6

Oakland CA.

Is setup of traffic control devices required? (NO) YES time:_____ hours
Is there standing water in well box? (NO) YES Above TOC Below TOC
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches):
Well cover type: 8" UV_____ 12" UV_____ 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI_____ 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment:
_____2" disposable bailer
_____2" PVC bailer
_____4" PVC bailer
_____Submersible pump
_____Dedicated bailer
X Centrifugal pump

Sampled with: Disposable bailer: X Teflon bailer:_____

Well Diameter: 2" X 4"_____ 6"_____ 8"_____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 1448
Depth of well: 11.21
Depth to water: 6.24

Recharge Measurement
Time: 1521
Depth to water: 6.44

Calculated purge: 5.6 gal
Actual purge: 5.6 "

Start purge: 1513 Sampling time: 1522

Time	Temp.	E.C.	pH	Turbidity	Volume
1514	22.1	+3999	730	———	1
1515	21.9	+3999	703	———	2
1516	21.9	+3990	7.01	———	3

Sample appearance: clear Lock: mod

Equipment replaced: (Check all that apply) Note condition of replaced item
2" Locking Cap:_____ Lock #3753:_____ 7/32 Allenhead:_____
4" Locking Cap:_____ Lock-Dolphin:_____ 9/16 Bolt:_____
6" Locking Cap:_____ Pinned Allenhead (DWP):_____

Remarks:

Signature:

DOULOS ENVIRONMENTAL COMPANY — **SAMPLING INFORMATION SHEET**

Client: Arco — Sampling Date: 6-20-00

Site: Arco # 4494 — Project No.:

5666 Hegenberger Rd. — Well Designation: MW-7

Oakland CA.

Is setup of traffic control devices required? (NO) YES time:_____ hours
Is there standing water in well box? (NO) YES Above TOC Below TOC
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): 7
Well cover type: 8" UV_____ 12" UV_____ 12" EMCO X 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI_____ 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment:
_____2" disposable bailer
_____2" PVC bailer
_____4" PVC bailer
_____Submersible pump
_____Dedicated bailer
NA Centrifugal pump

Sampled with: Disposable bailer: NA Teflon bailer:_____

Well Diameter: 2"____ 4" X 6"____ 8"____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 1452
Depth of well: 11.66
Depth to water: 8.65

Recharge Measurement
Time: NA
Depth to water: NA

Calculated purge: NA
Actual purge: NA

Start purge:_____ Sampling time: 1732

Time	Temp.	E.C.	pH	Turbidity	Volume
		No Purge			

Sample appearance: clear Lock: clear

Equipment replaced: (Check all that apply) Note condition of replaced item
2" Locking Cap:_____ Lock #3753:_____ 7/32 Allenhead:_____
4" Locking Cap:_____ Lock-Dolphin:_____ 9/16 Bolt:_____
6" Locking Cap:_____ Pinned Allenhead (DWP):_____

Remarks: _____

Signature: _____

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Arco Sampling Date: 6-20-00

Site: Arco # 4494 Project No.:

566 Hegenberger Rd. Well Designation: RW-1

Oakland CA.

Is setup of traffic control devices required? (NO) YES time:_____ hours
Is there standing water in well box? (NO) YES Above TOC Below TOC
Is top of casing cut level? NO (YES) If no, see remarks
Is well cap sealed and locked? (NO) YES If no, see remarks
Height of well casing riser (in inches): 4
Well cover type: 8" UV_____ 12" UV_____ 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI X 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment: _____2" disposable bailer _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer X Centrifugal pump

Sampled with: Disposable bailer: X Teflon bailer:_____

Well Diameter: 2" X 4"____ 6"____ 8"____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 1455
Depth of well: 27.04
Depth to water: 6.24

Recharge Measurement
Time: 1610
Depth to water: 6.47

Calculated purge: 1.4 gal
Actual purge: 1.4 "

Start purge: 1624 Sampling time: 1631

Time	Temp.	E.C.	pH	Turbidity	Volume
1625	70.4	+3999	7.28	—	1
1626	69.2	+3999	7.29	—	2
1627	69.0	+3999	7.25	—	3

Sample appearance: clear Lock: G

Equipment replaced: (Check all that apply) Note condition of replaced item
2" Locking Cap:_____ Lock #3753:_____ 7/32 Allenhead:_____
4" Locking Cap:_____ Lock-Dolphin:_____ 9/16 Bolt:_____
6" Locking Cap:_____ Pinned Allenhead (DWP):_____

Remarks: _____

Signature: _____