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916/638-2085  
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March 21, 2001

Re: MAR 30 2001

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

Subject: *Quarterly Groundwater Monitoring Report, Fourth Quarter 2000*  
ARCO Service Station No. 4931  
Oakland, California  
Project No. D000-313

Dear Mr. Supple:

Delta Environmental Consultants, Inc. is submitting the attached report that presents the results of the fourth quarter 2000 groundwater monitoring program at ARCO Products Company Service Station No. 4931, located at 731 West MacArthur Boulevard, Oakland, California. The monitoring program complies with the Alameda County Health Care Services Agency requirements regarding underground tank investigations.

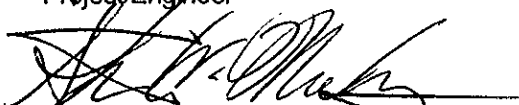
The interpretations contained in this report represent our professional opinions and are based, in part, on information supplied by the client. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeological and engineering practices 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.**

  
Trevor L. Atkinson  
Project Engineer

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



3/26/01

TLA (Lrp003.313.doc)  
Enclosures

cc: Ms. Susan Hugo – Alameda County Health Care Services Agency  
Mr. John Kaiser – California Regional Water Quality Control Board, San Francisco Bay Region

Date: March 21, 2001

## ARCO QUARTERLY GROUNDWATER MONITORING REPORT

Station No.: 4931 Address: 731 West MacArthur Boulevard, 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.: D000-313  
Primary Agency/Regulatory ID No. Alameda County Health Care Services Agency

### WORK PERFORMED THIS QUARTER

1. Performed quarterly groundwater monitoring for the fourth quarter 2000.

### WORK PROPOSED FOR NEXT QUARTER

1. Prepare and submit quarterly groundwater monitoring report for fourth quarter 2000.
2. Perform quarterly groundwater monitoring and sampling for first quarter 2001.

### QUARTERLY MONITORING:

Current Phase of Project	<u>Monitoring/Remediation</u>
Frequency of Groundwater Sampling:	<u>Annual (2<sup>nd</sup> Quarter): A-7, A-13</u>
	<u>Semi-Annual (2<sup>nd</sup>/4<sup>th</sup> Quarter): A-3, A-5, A-11, A-12</u>
	<u>Quarterly: A-2, A-4, A-6, A-8, A-9</u>
Frequency of Groundwater Monitoring:	<u>Quarterly</u>
Is Free Product (FP) Present On-Site:	<u>No</u>
FP Recovered this Quarter:	<u>N/A</u>
Cumulative FP Recovered to Date:	<u>Unknown</u>
Bulk Soil Removed This Quarter:	<u>None</u>
Bulk Soil Removed to Date:	<u>Unknown</u>
Current Remediation Techniques:	<u>Intrinsic Bioremediation Enhancement using ORC</u>
Approximate Depth to Groundwater:	<u>9.03 feet</u>
Groundwater Gradient:	<u>0.028 ft/ft West</u>
Cumulative TPHg/Benzene Removed:	<u>0.45/0.06 gallons</u>

### DISCUSSION:

- Bioremediation enhancement is ongoing using oxygen release compound (ORC) in wells A-4, A-8, A-9 and AR-1.
- MTBE was reported in A-3, A-4, A-5, A-8 and A-12 at concentrations ranging from 7.11 (A-3) to 2,230 (A-8) micrograms per liter.
- TPHg was reported in A-4, A-5 and A-8 at concentrations ranging from 525 (A-5) to 7,700 (A-8) micrograms per liter.
- A-13 was not sampled since the well appears to have been paved over.

### 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 Remedial System Performance Summary
- Appendix E Field Sample Data

TABLE 1

## GROUNDWATER ANALYTICAL DATA

ARCO Service Station No. 4931  
731 West Macarthur Boulevard  
Oakland, California

Well Number	Date Sampled	Top of Riser Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	TPH as Gasoline (µg/L)	MTBE (µg/L)
A-2	06/21/00	55.48	6.85	48.63	<0.5	<0.5	<0.5	<1.0	<50	<3.0
	09/20/00		10.45	45.03	< 0.5	< 0.5	<0.5	<0.5	<50	<2.5
	12/26/00		6.27	49.21	< 0.5	< 0.5	< 0.5	<0.5	< 50	<2.5
A-3	06/21/00	54.66	9.48	45.18	<0.5	<0.5	<0.5	<1.0	<50	46
	09/20/00		10.24	44.42	< 0.5	< 0.5	<0.5	<0.5	<50	89.6
	12/26/00		9.58	45.08	< 0.5	< 0.5	< 0.5	<0.5	< 50	7.11
A-4	06/21/00	54.73	9.49	45.24	110	2.1	11	5.9	2,100	2,000
	09/20/00		10.33	44.4	127	<5.0	9.07	7.42	1,540	1,940
	12/26/00		9.34	45.39	42.7	<5.0	11	10.9	1,550	1,210
A-5	06/21/00	54.17	9.29	44.88	<0.5	<0.5	<0.5	<1.0	980	2,000
	09/20/00		10.23	43.94	NS	NS	NS	NS	NS	NS
	12/26/00		9.65	44.52	<0.5	<0.5	<0.5	<0.5	525	1,200
A-6	06/21/00	55.17	8.67	46.50	<0.5	<0.5	<0.5	<1.0	<50	<3.0
	09/20/00		9.34	45.83	< 0.5	< 0.5	<0.5	<0.5	<50	<2.5
	12/26/00		8.65	46.52	< 0.5	< 0.5	< 0.5	<0.5	< 50	<2.5
A-7	06/21/00	54.71	8.58	46.13	<0.5	<0.5	<0.5	<1.0	<50	<3.0
	09/20/00		9.19	45.52	NS	NS	NS	NS	NS	NS
	12/26/00		8.50	46.21	NS	NS	NS	NS	NS	NS
A-8	06/21/00	53.77	9.07	44.70	<0.5	<0.5	<0.5	810	810	1,500
	09/20/00		9.72	44.05	2,680	46	439	370	10,800	4,410
	12/26/00		9.20	44.57	1,440	<50	202	106	7,700	2,230

TABLE 1

## GROUNDWATER ANALYTICAL DATA

ARCO Service Station No. 4931  
731 West Macarthur Boulevard  
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)
A-9	06/21/00	53.04	8.56	44.48	<0.5	<0.5	<0.5	<1.0	<50	5.0
	09/20/00		9.05	43.99	< 0.5	< 0.5	<0.5	<0.5	<50	<2.5
	12/26/00		8.49	44.55	< 0.5	< 0.5	< 0.5	<0.5	< 50	<2.5
A-10	06/21/00	54.26	10.47	43.79	NS	NS	NS	NS	NS	NS
	09/20/00		10.76	43.50	NS	NS	NS	NS	NS	NS
	12/26/00		NM	NC	NS	NS	NS	NS	NS	NS
A-11	06/21/00	53.74	9.54	44.20	<0.5	<0.5	<0.5	<1.0	<50	4.0
	09/20/00		10.62	43.12	NS	NS	NS	NS	NS	NS
	12/26/00		10.03	43.71	< 0.5	< 0.5	< 0.5	<0.5	< 50	<2.5
A-12	06/21/00	52.05	9.28	42.77	<0.5	<0.5	<0.5	<1.0	<50	18
	09/20/00		9.55	42.50	NS	NS	NS	NS	NS	NS
	12/26/00		9.05	43.00	< 0.5	< 0.5	< 0.5	<0.5	< 50	17.3
A-13	06/21/00	55.11	NM	NC	NS	NS	NS	NS	NS	NS
	09/20/00		NM	NC	NS	NS	NS	NS	NS	NS
	12/26/00		NM	NC	NS	NS	NS	NS	NS	NS
AR-1	06/21/00	54.72	NM	NC	NS	NS	NS	NS	NS	NS
	09/20/00		NM	NC	NS	NS	NS	NS	NS	NS
	12/26/00		9.95	44.77	NS	NS	NS	NS	NS	NS
AR-2	06/21/00	54.77	NM	NC	NS	NS	NS	NS	NS	NS
	09/20/00		NM	NC	NS	NS	NS	NS	NS	NS
	12/26/00		NM	NC	NS	NS	NS	NS	NS	NS

TABLE 1

GROUNDWATER ANALYTICAL DATA

ARCO Service Station No. 4931  
 731 West Macarthur Boulevard  
 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)
AR-3	06/21/00	54.19	NM	NC	NS	NS	NS	NS	NS	NS
	09/20/00		NM	NC	NS	NS	NS	NS	NS	NS
	12/26/00	9.70	44.49	NS	NS	NS	NS	NS	NS	

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

NS = Not sampled

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

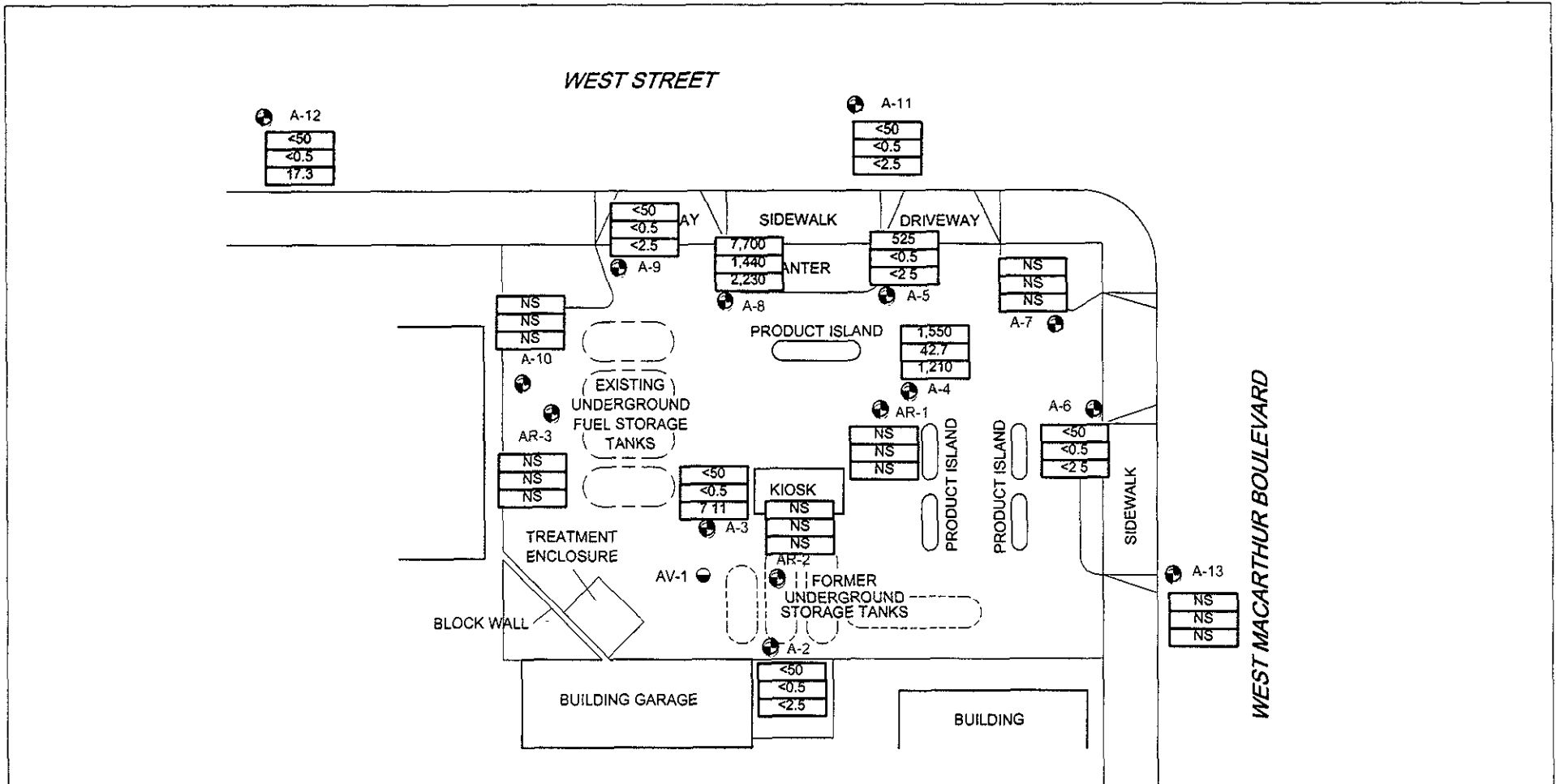
**TABLE 2**

**FLOW DIRECTION AND GRADIENT**

ARCO Service Station No. 4931  
731 West Macarthur Boulevard  
Oakland, California

<u>Date Measured</u>	<u>Average Flow Direction</u>	<u>Average Hydraulic Gradient</u>
06/21/00	West-Southwest	0.031
09/20/00	Southwest	0.013
12/26/00	West	0.028

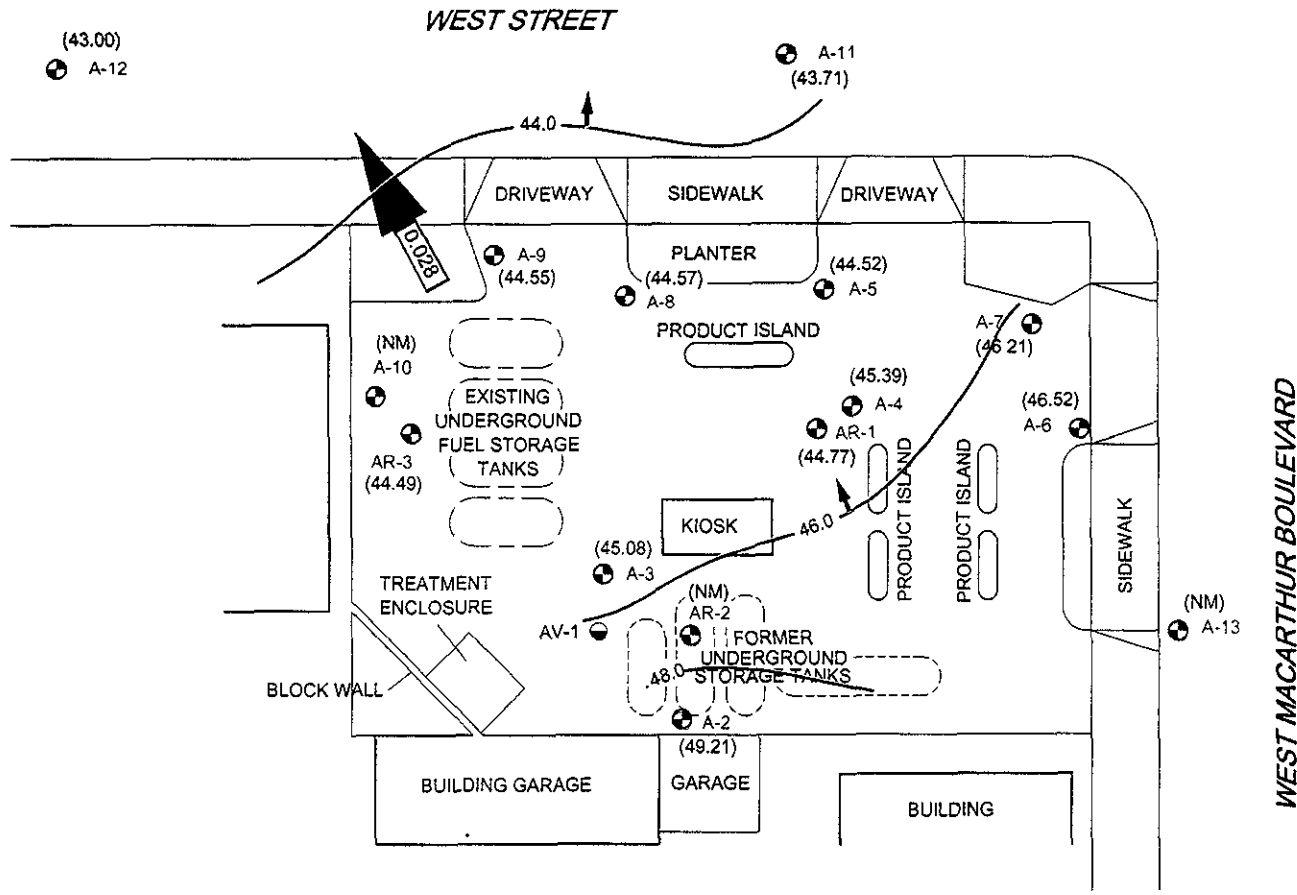
Note: Please refer to Appendix B for Historical Groundwater Elevation and Analytical Data  
Tables developed by IT Corporation



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

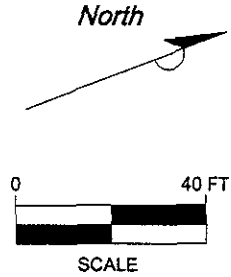
**FIGURE 1**  
**GROUND WATER ANALYTICAL SUMMARY**  
**FOURTH QUARTER 2000 (12/26/00)**  
**ARCO STATION NO. 4931**  
**731 WEST MACARTHUR BOULEVARD**  
**OAKLAND, CALIFORNIA**

PROJECT NO D000-313	DRAWN BY TLA 2/27/01
FILE NO. 4931-1	PREPARED BY TLA
REVISION NO. 1	REVIEWED BY



**LEGEND:**

- A-2 MONITORING WELL LOCATION
- AV-1 SOIL VAPOR EXTRACTION WELL LOCATION
- (49.21) GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (MSL)
- 44.0 - WATER TABLE CONTOUR IN FEET ABOVE MSL
- GROUND WATER FLOW DIRECTION
- APPROXIMATE GROUND WATER FLOW GRADIENT



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

**FIGURE 2**  
**GROUND WATER ELEVATION CONTOUR MAP**  
**FOURTH QUARTER 2000 (12/26/00)**  
**ARCO STATION NO. 4931**  
**731 WEST MACARTHUR BOULEVARD**  
**OAKLAND, CALIFORNIA**

PROJECT NO. D000-313	DRAWN BY TLA 2/27/01
FILE NO. 4931-1	PREPARED BY TLA
REVISION NO. 1	REVIEWED BY





## **APPENDIX A**

### **Sampling and Analysis Procedures**

## **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

**Table 1**  
**Groundwater Elevation and Analytical Data**  
**Total Purgeable Petroleum Hydrocarbons**  
**(TPPH as Gasoline, BTEX Compounds, and MTBE)**

**ARCO Service Station 4931**  
**731 West MacArthur Boulevard, Oakland, California**

Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)	TPH Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBE 8021B* (ppb)	MTBE 8260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)	
A-2	03/26/96	55.48	5.37	50.11	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NM		
A-2	05/22/96	55.48	5.25	50.23	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NM		
A-2	08/22/96	55.48	10.45	45.03	<50	1.1	1.8	<0.5	1.3	<2.5	NA	NM		
A-2	12/19/96	55.48	5.53	49.95	<50	<0.5	<0.5	<0.5	<0.5	2.7	NA	NM		
A-2	04/01/97	55.48	8.77	46.71	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NM		
A-2	05/27/97	55.48	9.87	45.61	<50	<0.5	<0.5	<0.5	<0.5	4.6	NA	NM		
A-2	08/12/97	55.48	11.11	44.37	<50	<0.5	<0.5	<0.5	<0.5	5.6	NA	NM		
A-2	11/14/97	55.48	10.63	44.85	<50	0.9	2.8	<0.5	2.4	27	NA	2.6		
A-2	03/18/98	55.48	3.58	51.90	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	NM		
A-2	05/19/98	55.48	4.82	50.66	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	1.30	P	
A-2	07/29/98	55.48	8.94	46.54	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	1.2	NP	
A-2	10/09/98	55.48	10.82	44.66	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	0.5	NP	
A-2	02/19/99	55.48	4.46	51.02	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	3.0	P	
A-2	06/02/99	55.48	5.59	49.89	<50	<0.5	0.6	<0.5	<0.5	<3	NA	5.35	NP	
A-2	08/26/99	55.48	10.67	44.81	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	0.79	NP	
A-2	10/26/99	55.48	4.61	50.87	<50	<0.5	<0.5	<0.5	<0.5	<1	<3	NA	2.14	P
A-2	02/25/00	55.48	3.10	52.38	<50	<0.5	<0.5	<0.5	<0.5	<1	<3	NA	4.21	NP
A-3	03/26/96	54.66	7.20	47.46	Not Sampled: Well Sampled Semiannually									
A-3	05/22/96	54.66	7.70	46.96	<50	1.2	1.9	0.7	1.3	NA	NA	NM		
A-3	08/22/96	54.66	10.88	43.78	Not Sampled: Well Sampled Semiannually									
A-3	12/19/96	54.66	7.70	46.96	5,900	<25	<25	<25	<25	NA	5,300	NM		
A-3	04/01/97	54.66	9.78	44.88	Not Sampled: Well Sampled Semiannually									
A-3	05/27/97	54.66	10.55	44.11	2,300	<20	<20	<20	<20	3,800	NA	NM		
A-3	08/12/97	54.66	11.12	43.54	Not Sampled: Well Sampled Semiannually									
A-3	11/14/97	54.66	8.24	46.42	<1,000	<10	<10	<10	<10	1,500	NA	3.8		
A-3	03/18/98	54.66	5.05	49.61	Not Sampled: Well Sampled Semiannually									
A-3	05/19/98	54.66	9.00	45.66	<250	<2.5	<2.5	<2.5	<2.5	220	NA	4.60	P	
A-3	07/29/98	54.66	9.86	44.80	Not Sampled: Well Sampled Semiannually									
A-3	10/09/98	54.66	11.36	43.30	<250	<2.5	<2.5	<2.5	<2.5	260	NA	1.0	NP	
A-3	02/19/99	54.66	6.19	48.47	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	2.5	NP	
A-3	06/02/99	54.66	10.82	43.84	120	<1	<1	<1	<1	160	NA	2.78	NP	

**Table 1**  
**Groundwater Elevation and Analytical Data**  
**Total Purgeable Petroleum Hydrocarbons**  
**(TPPH as Gasoline, BTEX Compounds, and MTBE)**

**ARCO Service Station 4931**  
**731 West MacArthur Boulevard, Oakland, California**

Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)	TPH Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBE 8021B* (ppb)	MTBE 8260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)	
A-3	08/26/99	54.66	10.73	43.93	Not Sampled: Well Sampled Semiannually								0.95	
A-3	10/26/99	54.66	6.58	48.08	<50	<0.5	<0.5	<0.5	<1	32	NA	2.06	NP	
A-3	02/25/00	54.66	5.41	49.25	Not Sampled: Well Sampled Semiannually									
A-4	03/26/96	54.73	7.95	46.78	8,900	1,200	21	200	220	NA	NA	NM		
A-4	05/22/96	54.73	8.35	46.38	5,300	700	<10	170	130	NA	NA	NM		
A-4	08/22/96	54.73	11.03	43.70	3,000	480	<5.0	75	26	150	NA	NM		
A-4	12/19/96	54.73	8.67	46.06	<2,000	<20	<20	<20	<20	NA	15,000	NM		
A-4	04/01/97	54.73	11.95	42.78	8,900	1,700	22	310	260	6,900	NA	NM		
A-4	05/27/97	54.73	10.80	43.93	7,100	960	<20	150	74	7,900	NA	NM		
A-4	08/12/97	54.73	11.38	43.35	4,300	670	12	51	27	2,800	NA	NM		
A-4	11/14/97	54.73	7.74	46.99	<20,000	300	500	<200	<200	27,000	NA	2.2		
A-4	03/18/98	54.73	6.80	47.93	4,700	600	<20	99	94	1,200	NA	1.0		
A-4	05/19/98	54.73	9.06	45.67	<2000	<20	<20	<20	720	2,000	NA	1.28	P	
A-4	07/29/98	54.73	10.05	44.68	8,400	1,300	<20	290	130	1,800	NA	0.7	NP	
A-4	10/09/98	54.73	11.20	43.53	3,500	400	<20	54	<20	1,700	NA	1.0	NP	
A-4	02/19/99	54.73	6.85	47.88	<1,000	<10	<10	<10	12	650	NA	0.1	NP	
A-4	06/02/99	54.73	11.00	43.73	6,100	760	16	260	89	2,300	NA	1.12	NP	
A-4	08/26/99	54.73	10.80	43.93	1,100	68	5	8	4	1,400	NA	1.15	NP	
A-4	10/26/99	54.73	10.11	44.62	1,500	39	2.3	9.0	5	1,700	NA	10.12	NP	
A-4	02/25/00	54.73	5.90	48.83	870	53	1.1	4.6	20	600	NA	1.72	NP	
A-5	03/26/96	54.17	7.93	46.24	Not Sampled: Well Sampled Semiannually									
A-5	05/22/96	54.17	8.20	45.97	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NM		
A-5	08/22/96	54.17	10.70	43.47	Not Sampled: Well Sampled Semiannually									
A-5	12/19/96	54.17	8.39	45.78	9,900	1,100	330	230	700	NA	24	NM		
A-5	04/01/97	54.17	10.83	43.34	Not Sampled: Well Sampled Semiannually									
A-5	05/27/97	54.17	10.65	43.52	100	<0.5	<0.5	<0.5	<0.5	120	NA	NM		
A-5	08/12/97	54.17	11.05	43.12	Not Sampled: Well Sampled Semiannually									
A-5	11/14/97	54.17	10.51	43.66	<50	<0.5	<0.5	<0.5	<0.5	41	NA	4.8		
A-5	03/18/98	54.17	8.10	46.07	Not Sampled: Well Sampled Semiannually									
A-5	05/19/98	54.17	9.31	44.86	590	<5	<5	<5	<5	710	NA	2.48	P	

**Table 1**  
**Groundwater Elevation and Analytical Data**  
**Total Purgeable Petroleum Hydrocarbons**  
**(TPPH as Gasoline, BTEX Compounds, and MTBE)**

**ARCO Service Station 4931**  
**731 West MacArthur Boulevard, Oakland, California**

Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)	TPH Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBE 8021B* (ppb)	MTBE 8260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)
A-5	07/29/98	54.17	9.89	44.28	Not Sampled: Well Sampled Semiannually								
A-5	10/09/98	54.17	11.02	43.15	690	<5	<5	<5	<5	710	NA	1.0	NP
A-5	02/19/99	54.17	6.82	47.35	<2,000	<20	<20	<20	<20	2,300	NA	0.6	NP
A-5	06/02/99	54.17	10.82	43.35	1,500	<0.5	2.3	<0.5	<0.5	2,400	NA	2.81	NP
A-5	08/26/99	54.17	10.65	43.52	Not Sampled: Well Sampled Semiannually								
A-5	10/26/99	54.17	10.35	43.82	380	<0.5	<0.5	<0.5	<1	440	NA	1.55	NP
A-5	02/25/00	54.17	6.89	47.28	Not Sampled: Well Sampled Semiannually								
A-6	03/26/96	55.17	7.15	48.02	52	2.7	<0.5	1.1	2.0	NA	NA	NM	
A-6	05/22/96	55.17	7.35	47.82	<50	2.4	<0.5	0.88	1.7	NA	NA	NM	
A-6	08/22/96	55.17	10.12	45.05	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NM	
A-6	12/19/96	55.17	7.43	47.74	<50	1.7	<0.5	0.78	1.5	<2.5	NA	NM	
A-6	04/01/97	55.17	9.97	45.20	<50	4.7	<0.5	1.9	3.2	<2.5	NA	NM	
A-6	05/27/97	55.17	9.66	45.51	<50	0.69	<0.5	<0.5	<0.5	<2.5	NA	NM	
A-6	08/12/97	55.17	10.43	44.74	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NM	
A-6	11/14/97	55.17	9.76	45.41	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	<1.0	
A-6	03/18/98	55.17	7.00	48.17	<50	6.2	0.5	2.3	2.6	<3	NA	3.0	
A-6	05/19/98	55.17	8.27	46.90	<50	<0.5	<0.5	1.3	4.7	<3	NA	2.16	P
A-6	07/29/98	55.17	8.96	46.21	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	0.8	NP
A-6	10/09/98	55.17	10.23	44.94	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	1.0	NP
A-6	02/19/99	55.17	5.79	49.38	<50	<0.5	<0.5	<0.5	<0.5	5	NA	0.4	NP
A-6	06/02/99	55.17	9.71	45.46	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	2.00	NP
A-6	08/26/99	55.17	9.79	45.38	<50	<0.5	<0.5	<0.5	0.7	<3	NA	0.66	NP
A-6	10/26/99	55.17	9.70	45.47	<50	<0.5	<0.5	<0.5	<1	<3	NA	1.66	NP
A-6	02/25/00	55.17	5.68	49.49	<50	<0.5	<0.5	<0.5	<1	<3	NA	1.22	NP
A-7	03/26/96	54.71	6.90	47.81	Not Sampled: Well Sampled Semiannually								
A-7	05/22/96	54.71	8.27	46.44	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NM	
A-7	08/22/96	54.71	9.80	44.91	Not Sampled: Well Sampled Semiannually								
A-7	12/19/96	54.71	7.19	47.52	Not Sampled: Well Sampled Annually								
A-7	04/01/97	54.71	9.63	45.08	Not Sampled: Well Sampled Annually								
A-7	05/27/97	54.71	9.34	45.37	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NM	

**Table 1  
Groundwater Elevation and Analytical Data  
Total Purgeable Petroleum Hydrocarbons  
(TPPH as Gasoline, BTEX Compounds, and MTBE)**

**ARCO Service Station 4931  
731 West MacArthur Boulevard, Oakland, California**

Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)	TPH Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBE 8021B* (ppb)	MTBE 8260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)	
A-7	08/12/97	54.71	10.10	44.61	Not Sampled: Well Sampled Annually									
A-7	11/14/97	54.71	9.35	45.36	Not Sampled: Well Sampled Annually									
A-7	03/18/98	54.71	6.75	47.96	Not Sampled: Well Sampled Annually									
A-7	05/19/98	54.71	8.85	45.86	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	1.82	P	
A-7	07/29/98	54.71	8.84	45.87	Not Sampled: Well Sampled Annually									
A-7	10/09/98	54.71	10.05	44.66	Not Sampled: Well Sampled Annually									
A-7	02/19/99	54.71	5.57	49.14	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	4.7	NP	
A-7	06/02/99	54.71	9.56	45.15	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	2.17	NP	
A-7	08/26/99	54.71	9.66	45.05	Not Sampled: Well Sampled Annually								0.49	
A-7	10/26/99	54.71	9.54	45.17	Not Sampled: Well Sampled Annually								1.26	
A-7	02/25/00	54.71	5.60	49.11	Not Sampled: Well Sampled Annually									
A-8	03/26/96	53.77	7.10	46.67	48,000	2,600	<100	650	1,100	NA	NA	NM		
A-8	05/22/96	53.77	7.20	46.57	14,000	2,800	160	320	190	NA	NA	NM		
A-8	08/22/96	53.77	11.57	42.20	8,000	1,000	76	150	96	4,300	NA	NM		
A-8	12/19/96	53.77	8.04	45.73	12,000	450	110	210	230	<500	NA	NM		
A-8	04/01/97	53.77	9.98	43.79	Not Sampled: Well Sampled Semiannually									
A-8	05/27/97	53.77	11.45	42.32	11,000	1,600	100	220	210	2,300	NA	NM		
A-8	08/12/97	53.77	11.59	42.18	Not Sampled: Well Sampled Semiannually									
A-8	11/14/97	53.77	9.85	43.92	26,000	2,300	<200	400	400	4,100	NA	2.2		
A-8	03/18/98	53.77	7.80	45.97	Not Sampled: Well Sampled Semiannually									
A-8	05/19/98	53.77	8.78	44.99	88,000	4,200	150	640	600	6,700	NA	1.36	P	
A-8	07/29/98	53.77	9.59	44.18	46,000	4,900	160	620	580	13,000	NA	0.5	NP	
A-8	10/09/98	53.77	11.23	42.54	130,000	3,700	110	500	770	7,300	NA	1.0	NP	
A-8	02/19/99	53.77	6.51	47.26	<1,000	39	<10	<10	<10	840	NA	0.2	NP	
A-8	06/02/99	53.77	10.68	43.09	8,500	1,300	32	180	110	6,700	NA	1.31	NP	
A-8	08/26/99	53.77	10.43	43.34	6,200	870	17	64	60	3,700	NA	0.69	NP	
A-8	10/26/99	53.77	10.23	43.54	15,000	2,800	140	370	360	480	NA	0.62	NP	
A-8	02/25/00	53.77	5.93	47.84	2,600	330	6.6	18	26	1,100	NA	1.43	NP	
A-9	03/26/96	53.04	7.05	45.99	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NM		
A-9	05/22/96	53.04	7.20	45.84	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NM		

**Table 1  
Groundwater Elevation and Analytical Data  
Total Purgeable Petroleum Hydrocarbons  
(TPPH as Gasoline, BTEX Compounds, and MTBE)**

**ARCO Service Station 4931  
731 West MacArthur Boulevard, Oakland, California**

Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)	TPH Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBE 8021B* (ppb)	MTBE 8260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)	
A-9	08/22/96	53.04	9.68	43.36	<50	<0.5	<0.5	<0.5	<0.5	8.5	NA	NM		
A-9	12/19/96	53.04	7.43	45.61	<50	<0.5	<0.5	<0.5	<0.5	2.6	NA	NM		
A-9	04/01/97	53.04	9.95	43.09	Not Sampled: Well Sampled Semiannually									
A-9	05/27/97	53.04	9.56	43.48	<50	2.3	<0.5	<0.5	<0.5	45	NA	NM		
A-9	08/12/97	53.04	10.15	42.89	Not Sampled: Well Sampled Semiannually									
A-9	11/14/97	53.04	8.64	44.40	<200	<2.0	<2.0	<2.0	<2.0	190	NA	9.6		
A-9	03/18/98	53.04	6.45	46.59	Not Sampled: Well Sampled Semiannually									
A-9	05/19/98	53.04	8.35	44.69	<50	<0.5	<0.5	<0.5	<0.5	7	NA	1.27	P	
A-9	07/29/98	53.04	8.74	44.30	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	0.99	NP	
A-9	10/09/98	53.04	10.05	42.99	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	1.0	NP	
A-9	02/19/99	53.04	6.91	46.13	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	2.0	NP	
A-9	06/02/99	53.04	9.72	43.32	<50	<0.5	<0.5	<0.5	<0.5	16	NA	2.32	NP	
A-9	08/26/99	53.04	9.48	43.56	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	0.71	NP	
A-9	10/26/99	53.04	9.17	43.87	1,500	6.2	0.7	78	11	91	NA	2.15	NP	
A-9	02/25/00	53.04	5.84	47.20	<50	<0.5	<0.5	<0.5	<1	<3	NA	1.55	NP	
A-10	03/26/96	54.26	8.28	45.98	Not Sampled: Well Removed from Sampling Program									
A-10	05/22/96	54.26	8.60	45.66	Not Sampled: Well Removed from Sampling Program									
A-10	08/22/96	54.26	10.98	43.28	Not Sampled: Well Removed from Sampling Program									
A-10	12/19/96	54.26	8.80	45.46	Not Sampled: Well Removed from Sampling Program									
A-10	04/01/97	54.26	11.15	43.11	Not Sampled: Well Removed from Sampling Program									
A-10	05/27/97	54.26	10.90	43.36	Not Sampled: Well Removed from Sampling Program									
A-10	08/12/97	54.26	11.30	42.96	Not Sampled: Well Removed from Sampling Program									
A-10	11/14/97	54.26	10.80	43.46	Not Sampled: Well Removed from Sampling Program									
A-10	03/18/98				----- Well Removed from Survey Program -----									
A-11	03/26/96	53.74	8.10	45.64	Not Sampled: Well Sampled Semiannually									
A-11	05/22/96	53.74	8.25	45.49	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NM		
A-11	08/22/96	53.74	10.58	43.16	Not Sampled: Well Sampled Semiannually									
A-11	12/19/96	53.74	8.37	45.37	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NM		
A-11	04/01/97	53.74	10.95	42.79	Not Sampled: Well Sampled Semiannually									
A-11	05/27/97	53.74	10.60	43.14	<50	<0.5	<0.5	<0.5	<0.5	3.1	NA	NM		



**Table 1**  
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**Total Purgeable Petroleum Hydrocarbons**  
**(TPPH as Gasoline, BTEX Compounds, and MTBE)**

**ARCO Service Station 4931**  
**731 West MacArthur Boulevard, Oakland, California**

Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)	TPH Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBE 8021B* (ppb)	MTBE 8260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)
A-11	08/12/97	53.74	11.07	42.67	Not Sampled: Well Sampled Semiannually								
A-11	11/14/97	53.74	10.58	43.16	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	1.6	
A-11	03/18/98	53.74	8.14	45.60	Not Sampled: Well Sampled Semiannually								
A-11	05/19/98	53.74	9.40	44.34	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	1.13	P
A-11	07/29/98	53.74	10.32	43.42	Not Sampled: Well Sampled Semiannually								
A-11	10/09/98	53.74	10.91	42.83	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	2.0	NP
A-11	02/19/99	53.74	6.77	46.97	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	1.8	NP
A-11	06/02/99	53.74	10.95	42.79	<50	<0.5	<0.5	<0.5	<0.5	6	NA	1.38	NP
A-11	08/26/99	53.74	11.05	42.69	Not Sampled: Well Sampled Semiannually								
A-11	10/26/99	53.74	10.81	42.93	<50	<0.5	<0.5	<0.5	<1	4	NA	1.27	NP
A-11	02/25/00	53.74	6.70	47.04	Not Sampled: Well Sampled Semiannually								
A-12	03/26/96	52.05	7.83	44.22	Not Sampled: Well Sampled Semiannually								
A-12	05/22/96	52.05	7.80	44.25	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NM	
A-12	08/22/96	52.05	9.97	42.08	Not Sampled: Well Sampled Semiannually								
A-12	12/19/96	52.05	8.18	43.87	85	<0.5	<0.5	<0.5	<0.5	170	NA	NM	
A-12	04/01/97	52.05	10.30	41.75	Not Sampled: Well Sampled Semiannually								
A-12	05/27/97	52.05	10.05	42.00	50	12	<0.5	<0.5	<0.5	96	NA	NM	
A-12	08/12/97	52.05	10.46	41.59	Not Sampled: Well Sampled Semiannually								
A-12	11/14/97	52.05	9.70	42.35	<50	<0.5	<0.5	<0.5	<0.5	75	NA	7.0	
A-12	03/18/98	52.05	8.15	43.90	Not Sampled: Well Sampled Semiannually								
A-12	05/19/98	52.05	9.15	42.90	<50	<0.5	<0.5	<0.5	<0.5	29	NA	1.47	P
A-12	07/29/98	52.05	9.38	42.67	Not Sampled: Well Sampled Semiannually								
A-12	10/09/98	52.05	10.21	41.84	<50	<0.5	<0.5	<0.5	<0.5	7	NA	2.0	NP
A-12	02/19/99	52.05	6.96	45.09	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	5.2	NP
A-12	06/02/99	52.05	10.25	41.80	<50	<0.5	<0.5	<0.5	<0.5	7	NA	1.38	NP
A-12	08/26/99	52.05	9.91	42.14	Not Sampled: Well Sampled Semiannually								
A-12	10/26/99	52.05	9.73	42.32	<50	<0.5	<0.5	<0.5	<1	12	NA	1.09	NP
A-12	02/25/00	52.05	6.97	45.08	Not Sampled: Well Sampled Semiannually								
A-13	03/26/96	55.11			----- Well Inaccessible -----								
A-13	05/22/96	55.11			----- Well Inaccessible -----								

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**ARCO Service Station 4931**  
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Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)	TPH Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBE 8021B* (ppb)	MTBE 8260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)
A-13	08/22/96	55.11		-----									Well Inaccessible -----
A-13	12/19/96	55.11		-----									Well Inaccessible -----
A-13	04/01/97	55.11		-----									Well Inaccessible -----
A-13	05/27/97	55.11		-----									Well Inaccessible -----
A-13	08/12/97	55.11		-----									Well Inaccessible -----
A-13	11/14/97	55.11		-----									Well Inaccessible -----
A-13	03/18/98	55.11		-----									Well Inaccessible -----
A-13	05/19/98	55.11		-----									Well Inaccessible -----
A-13	07/29/98	55.11		-----									Well Inaccessible -----
A-13	10/09/98	55.11		-----									Well Inaccessible -----
A-13	02/19/99	55.11		-----									Well Inaccessible -----
A-13	06/02/99	55.11		-----									Well Inaccessible -----
A-13	08/26/99	55.11		-----									Well Inaccessible -----
A-13	10/26/99	55.11		-----									Well Inaccessible -----
A-13	02/25/00	55.11		-----									Well Inaccessible -----
AR-1	03/26/96	54.72	8.13	46.59	6,200	110	64	38	520	NA	NA		NM
AR-1	05/22/96	54.72	8.57	46.15	NS	NS	NS	NS	NS	NS	NS		NM
AR-1	08/22/96	54.72	10.97	43.75	5,600	100	28	29	310	960	NA		NM
AR-1	12/19/96	54.72	8.93	45.79	Not Sampled: Well Removed from Sampling Program								
AR-1	04/01/97	54.72	11.78	42.94	Not Sampled: Well Removed from Sampling Program								
AR-1	05/27/97	54.72	10.76	43.96	Not Sampled: Well Removed from Sampling Program								
AR-1	08/12/97	54.72	11.40	43.32	Not Sampled: Well Removed from Sampling Program								
AR-1	11/14/97	54.72	10.80	43.92	Not Sampled: Well Removed from Sampling Program								
AR-1	03/18/98	54.72	NM	NM	Not Sampled: Well Removed from Sampling Program								
AR-1	05/19/98	54.72	NM	NM	Not Sampled: Well Removed from Sampling Program								
AR-1	07/29/98	54.72	10.17	44.55	Not Sampled: Well Removed from Sampling Program								
AR-1	10/09/98	54.72	11.25	43.47	Not Sampled: Well Removed from Sampling Program								
AR-1	02/19/99	54.72	7.02	47.70	Not Sampled: Well Removed from Sampling Program								
AR-1	06/02/99	54.72	11.00	43.72	Not Sampled: Well Removed from Sampling Program								
AR-1	08/26/99	54.72	10.96	43.76	Not Sampled: Well Removed from Sampling Program								0.39
AR-1	10/26/99	54.72	10.68	44.04	Not Sampled: Well Removed from Sampling Program								1.39

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**ARCO Service Station 4931**  
**731 West MacArthur Boulevard, Oakland, California**

Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)	TPH Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBE 8021B* (ppb)	MTBE 8260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)	
AR-1	02/25/00	54.72	7.15	47.57	Not Sampled: Well Removed from Sampling Program									
AR-2	03/26/96	54.77	4.93	49.84	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NM		
AR-2	05/22/96	54.77	5.65	49.12	NS	NS	NS	NS	NS	NS	NS	NM		
AR-2	08/22/96	54.77	7.27	47.50	<50	<0.5	<0.5	<0.5	<0.5	200	NA	NM		
AR-2	12/19/96	54.77	7.78	46.99	Not Sampled: Well Removed from Sampling Program									
AR-2	04/01/97	54.77	6.80	47.97	Not Sampled: Well Removed from Sampling Program									
AR-2	05/27/97	54.77	6.32	48.45	Not Sampled: Well Removed from Sampling Program									
AR-2	08/12/97	54.77	7.43	47.34	Not Sampled: Well Removed from Sampling Program									
AR-2	11/14/97	54.77	8.95	45.82	Not Sampled: Well Removed from Sampling Program									
AR-2	03/18/98	54.77	NM	NM	Not Sampled: Well Removed from Sampling Program									
AR-2	05/19/98	54.77	NM	NM	Not Sampled: Well Removed from Sampling Program									
AR-2	07/29/98	54.77	4.47	50.30	Not Sampled: Well Removed from Sampling Program									
AR-2	10/09/98	54.77	6.90	47.87	Not Sampled: Well Removed from Sampling Program									
AR-2	02/19/99	54.77	3.80	50.97	Not Sampled: Well Removed from Sampling Program									
AR-2	06/02/99	54.77	4.61	50.16	Not Sampled: Well Removed from Sampling Program									
AR-2	08/26/99	54.77	5.22	49.55	Not Sampled: Well Removed from Sampling Program								0.44	
AR-2	10/26/99	54.77	3.20	51.57	Not Sampled: Well Removed from Sampling Program								1.79	
AR-2	02/25/00	54.77	2.33	52.44	Not Sampled: Well Removed from Sampling Program									
AR-3	03/26/96	54.19	7.95	46.24	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NM		
AR-3	05/22/96	54.19	8.30	45.89	NS	NS	NS	NS	NS	NS	NS	NM		
AR-3	08/22/96	54.19	10.84	43.35	Not Sampled: Well Removed from Sampling Program									
AR-3	12/19/96	54.19	8.56	45.63	Not Sampled: Well Removed from Sampling Program									
AR-3	04/01/97	54.19	11.24	42.95	Not Sampled: Well Removed from Sampling Program									
AR-3	05/27/97	54.19	10.67	43.52	Not Sampled: Well Removed from Sampling Program									
AR-3	08/12/97	54.19	11.10	43.09	Not Sampled: Well Removed from Sampling Program									
AR-3	11/14/97	54.19	10.60	43.59	Not Sampled: Well Removed from Sampling Program									
AR-3	03/18/98	54.19	NM	NM	Not Sampled: Well Removed from Sampling Program									
AR-3	05/19/98	54.19	NM	NM	Not Sampled: Well Removed from Sampling Program									
AR-3	07/29/98	54.19	9.95	44.24	Not Sampled: Well Removed from Sampling Program									
AR-3	10/09/98	54.19	11.20	42.99	Not Sampled: Well Removed from Sampling Program									

**Table 1  
Groundwater Elevation and Analytical Data  
Total Purgeable Petroleum Hydrocarbons  
(TPPH as Gasoline, BTEX Compounds, and MTBE)**

**ARCO Service Station 4931  
731 West MacArthur Boulevard, Oakland, California**

Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOB)	Groundwater Elevation (feet, MSL)	TPH Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBE 8021B* (ppb)	MTBE 8260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)
AR-3	02/19/99	54.19	6.98	47.21	Not Sampled: Well Removed from Sampling Program								
AR-3	06/02/99	54.19	10.80	43.39	Not Sampled: Well Removed from Sampling Program								
AR-3	08/26/99	54.19	10.69	43.50	Not Sampled: Well Removed from Sampling Program								0.40
AR-3	10/26/99	54.19	NM	NM	Not Sampled: Well Removed from Sampling Program								
AR-3	02/25/00	54.19	7.21	46.98	Not Sampled: Well Removed from Sampling Program								

TPH = Total petroleum hydrocarbons by modified EPA method 8015  
 BTEX = Benzene, toluene, ethylbenzene, total xylenes by EPA method 8021B (EPA method 8020 prior to 10/26/99).  
 MTBE = Methyl tert-butyl ether  
 \* = EPA method 8020 prior to 10/26/99  
 MSL = Mean sea level  
 TOB = Top of box  
 ppb = Parts per billion  
 ppm = Parts per million  
 < = Less than laboratory detection limit stated to the right  
 NA = Not analyzed  
 NM = Not measured  
 NS = Not sampled

**Table 2  
Groundwater Flow Direction and Gradient**

**ARCO Service Station 4931  
731 West MacArthur Boulevard, Oakland, California**

<b>Date Measured</b>	<b>Average Flow Direction</b>	<b>Average Hydraulic Gradient</b>
03/26/96	Southwest	0.03
05/22/96	Southwest	0.04
08/22/96	Southwest	0.02
12/19/96	Southwest	0.03
04/01/97	Southwest	0.03
05/27/97	Southwest	0.04
08/12/97	Southwest	0.02
11/14/97	Southwest	0.02
03/18/98	West	0.03
05/19/98	West-Southwest	0.02
07/29/98	West-Southwest	0.02
10/09/98	Southwest	0.007
02/19/99	Southwest	0.04
06/02/99	West	0.04
08/26/99	West-Southwest	0.02
10/26/99	West-Northwest	0.13
02/25/00	West-Southwest	0.05

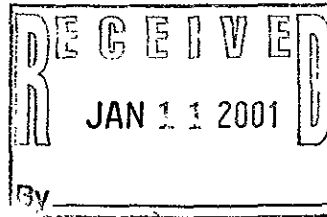
**APPENDIX C**

**Certified Analytical Reports  
And  
Chain-of-Custody Documentation**



January 09 , 2001

Steven Meeks  
Delta Environmental Consultants(Rancho Cordova  
3164 Gold Camp Drive Ste. 200  
Rancho Cordova, CA 95670  
RE: ARCO 4931, Oakland, CA / S012383



Enclosed are the results of analyses for samples received by the laboratory on 12/27/00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Sandra R. Hanson  
Client Services Representative

Lito Diaz  
Laboratory Director

CA ELAP Certificate Number 1624





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

Project: ARCO 4931, Oakland, CA  
Project Number: N/A  
Project Manager: Steven Meeks

Reported:  
01/09/01 14:25

**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
A-2-6	S012383-01	Water	12/26/00 09:03	12/27/00 15:40
A-3-9	S012383-02	Water	12/26/00 09:09	12/27/00 15:40
A-4-9	S012383-03	Water	12/26/00 09:45	12/27/00 15:40
A-5-9	S012383-04	Water	12/26/00 09:29	12/27/00 15:40
A-6-8	S012383-05	Water	12/26/00 08:53	12/27/00 15:40
A-8-9	S012383-06	Water	12/26/00 10:12	12/27/00 15:40
A-9-8	S012383-07	Water	12/26/00 10:00	12/27/00 15:40
A-11-10	S012383-08	Water	12/26/00 08:44	12/27/00 15:40
A-12-9	S012383-09	Water	12/26/00 08:36	12/27/00 15:40







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

Project: ARCO 4931, Oakland, CA  
Project Number: N/A  
Project Manager: Steven Meeks

Reported:  
01/09/01 14:25

**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT  
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>A-2-6 (S012383-01) Water Sampled: 12/26/00 09:03 Received: 12/27/00 15:40</b>									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1010073	01/08/01	01/08/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		105 %	60-140		"	"	"	"	
<b>A-3-9 (S012383-02) Water Sampled: 12/26/00 09:09 Received: 12/27/00 15:40</b>									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1010073	01/08/01	01/08/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	7.11	2.50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		113 %	60-140		"	"	"	"	
<b>A-4-9 (S012383-03) Water Sampled: 12/26/00 09:45 Received: 12/27/00 15:40</b>									
Purgeable Hydrocarbons	1550	500	ug/l	10	1010073	01/08/01	01/08/01	DHS LUFT	P-02
Benzene	42.7	5.00	"	"	"	"	"	"	
Toluene	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	11.0	5.00	"	"	"	"	"	"	
Xylenes (total)	10.9	5.00	"	"	"	"	"	"	
Methyl tert-butyl ether	1210	25.0	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		112 %	60-140		"	"	"	"	





Delta Environmental Consultants(Rancho Cordova 3164 Gold Camp Drive Ste. 200 Rancho Cordova CA, 95670	Project: ARCO 4931, Oakland, CA Project Number: N/A Project Manager: Steven Meeks	Reported: 01/09/01 14:25
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**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT  
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
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**A-5-9 (S012383-04) Water** Sampled: 12/26/00 09:29 Received: 12/27/00 15:40

Purgeable Hydrocarbons	525	50.0	ug/l	1	1010073	01/08/01	01/08/01	DHS LUFT	P-03
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	

Surrogate: a,a,a-Trifluorotoluene 107 % 60-140 " " " "

**A-5-9 (S012383-04RE1) Water** Sampled: 12/26/00 09:29 Received: 12/27/00 15:40

Methyl tert-butyl ether	1200	50.0	ug/l	20	1010073	01/08/01	01/08/01	DHS LUFT	
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Surrogate: a,a,a-Trifluorotoluene 109 % 60-140 " " " "

**A-6-8 (S012383-05) Water** Sampled: 12/26/00 08:53 Received: 12/27/00 15:40

Purgeable Hydrocarbons	ND	50.0	ug/l	1	1010073	01/08/01	01/08/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	

Surrogate: a,a,a-Trifluorotoluene 104 % 60-140 " " " "

**A-8-9 (S012383-06) Water** Sampled: 12/26/00 10:12 Received: 12/27/00 15:40

Purgeable Hydrocarbons	7700	5000	ug/l	100	1010073	01/08/01	01/08/01	DHS LUFT	P-04
Benzene	1440	50.0	"	"	"	"	"	"	
Toluene	ND	50.0	"	"	"	"	"	"	
Ethylbenzene	202	50.0	"	"	"	"	"	"	
Xylenes (total)	106	50.0	"	"	"	"	"	"	
Methyl tert-butyl ether	2230	250	"	"	"	"	"	"	

Surrogate: a,a,a-Trifluorotoluene 113 % 60-140 " " " "





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

Project: ARCO 4931, Oakland, CA  
Project Number: N/A  
Project Manager: Steven Meeks

Reported:  
01/09/01 14:25

**Total Purgeable Hydrocarbons (C6-C12), BTEX and MTBE by DHS LUFT  
Sequoia Analytical - Sacramento**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>A-9-8 (S012383-07) Water Sampled: 12/26/00 10:00 Received: 12/27/00 15:40</b>									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1010073	01/08/01	01/08/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		103 %	60-140		"	"	"	"	
<b>A-11-10 (S012383-08) Water Sampled: 12/26/00 08:44 Received: 12/27/00 15:40</b>									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1010073	01/08/01	01/08/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		103 %	60-140		"	"	"	"	
<b>A-12-9 (S012383-09) Water Sampled: 12/26/00 08:36 Received: 12/27/00 15:40</b>									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1010073	01/08/01	01/08/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	17.3	2.50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		108 %	60-140		"	"	"	"	





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

Project: ARCO 4931, Oakland, CA  
Project Number: N/A  
Project Manager: Steven Meeks

Reported:  
01/09/01 14:25

**Total Purgeable Hydrocarbons (C6-C12), 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
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**Batch 1010073 - EPA 5030B (P/T)**

**Blank (1010073-BLK1)**

Prepared & Analyzed: 01/08/01

Purgeable Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	2.50	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.9		"	10.0		109	60-140			

**LCS (1010073-BS1)**

Prepared & Analyzed: 01/08/01

Benzene	10.6	0.500	ug/l	10.0		106	70-130			
Toluene	11.0	0.500	"	10.0		110	70-130			
Ethylbenzene	11.4	0.500	"	10.0		114	70-130			
Xylenes (total)	30.1	0.500	"	30.0		100	70-130			
Methyl tert-butyl ether	11.1	2.50	"	10.0		111	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	11.2		"	10.0		112	60-140			

**Matrix Spike (1010073-MS1)**

Source: S012392-07

Prepared & Analyzed: 01/08/01

Benzene	10.0	0.500	ug/l	10.0	ND	100	60-140			
Toluene	10.6	0.500	"	10.0	ND	106	60-140			
Ethylbenzene	11.0	0.500	"	10.0	ND	110	60-140			
Xylenes (total)	29.0	0.500	"	30.0	ND	96.7	60-140			
Methyl tert-butyl ether	11.0	2.50	"	10.0	ND	110	60-140			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	11.0		"	10.0		110	60-140			

**Matrix Spike Dup (1010073-MSD1)**

Source: S012392-07

Prepared & Analyzed: 01/08/01

Benzene	10.3	0.500	ug/l	10.0	ND	103	60-140	2.96	25	
Toluene	10.9	0.500	"	10.0	ND	109	60-140	2.79	25	
Ethylbenzene	11.2	0.500	"	10.0	ND	112	60-140	1.80	25	
Xylenes (total)	29.4	0.500	"	30.0	ND	98.0	60-140	1.37	25	
Methyl tert-butyl ether	10.5	2.50	"	10.0	ND	105	60-140	4.65	25	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	11.1		"	10.0		111	60-140			





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

Project: ARCO 4931, Oakland, CA  
Project Number: N/A  
Project Manager: Steven Meeks

Reported:  
01/09/01 14:25

**Notes and Definitions**

P-02      Chromatogram Pattern: Weathered Gasoline C6-C12  
P-03      Chromatogram Pattern: Unidentified Hydrocarbons C6-C12  
P-04      Chromatogram Pattern: Weathered Gasoline C6-C12 + 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





**APPENDIX D**

Remedial System Performance Summary

**ARCO STATION NO. 4931**  
731 West MacArthur Boulevard  
Oakland, California

**REMEDIAL SYSTEM PERFORMANCE SUMMARY**

**GWE System**

Groundwater extraction (GWE) was conducted intermittently between November 10, 1992 and July 5, 1995. The TWE system was comprised of electric GWE pumps in monitoring wells A-9, AR-1, AR-2, AR-3 and in three 1,500-pound granular activated carbon vessels arranged in series. The GWE system was permitted by East Bay Municipal Utility District Permit Account Number 502-62131. Based on Alameda County Health Care Services Agency authorization that GWE at the site was no longer required, the permit was relinquished during the second quarter 1996. Overall, 4.6 million gallons of groundwater were extracted and less than 0.06 gallon of benzene removed. Refer to the IT Corporation *Second Quarter 1997 Groundwater Monitoring Report* for historical GWE system performance and analytical data.

**Intrinsic Bioremediation Evaluation**

At the request of ARCO, intrinsic bioremediation indicator parameters (bioparameters) were monitored during the fourth quarter 1996 groundwater monitoring event. Groundwater samples from monitoring wells A-4, A-8 and A-12 were analyzed for biological oxygen demand (BOD), carbon dioxide (CO<sub>2</sub>), chemical oxygen demand (DOD), methane, nitrate, sulfate, dissolved oxygen (DO) and ferrous iron. Monitoring wells A-4 and A-8 are located within the plume. Monitoring well A-12 is located outside the plume. Based on analysis of the collected data, intrinsic bioremediation was occurring at the site. Refer to the IT Corporation *First Quarter 1997 Groundwater Monitoring Report* for details.

Oxygen release compound (ORC) is currently being used in monitoring wells A-4, A-9 and AR-1 to enhance biodegradation of dissolved oxygen. ORC was scheduled for replacement during the second quarter 2001.



**APPENDIX E**

Field Sample Data



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

Arco Site Address: **731 West MacArthur Blvd**  
**Oakland, California**

Arco Site Number: **Arco 4931**  
 Delta Project No.: **D000-313**  
 Delta Project PM: **Steve Meeks**  
 Arco Project Manager: **Paul Supple**  
 Site Sampled By: **Stratus (CH)**  
 Date Sampled: \_\_\_\_\_

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 Frequency (A, S, Q)	Sample I.D.	Sample Time
A-2	9:00	6.27	5.0	19.0	<input checked="" type="checkbox"/>	12.73	4 inch	2.0	25.5	NP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NM	Q/2,5,8,11	A-2	9:03
A-3	9:06	9.58	5.0	19.3	<input checked="" type="checkbox"/>	9.72	4 inch	2.0	19.4	NP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NM	S/5,11	A-3	9:09
A-4	9:23	9.34	5.0	19.6	<input type="checkbox"/>	10.26	4 inch	2.0	20.5	15	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NM	Q/2,5,8,11	A-4	9:45
A-5	9:25	9.65	3.0	24.0	<input checked="" type="checkbox"/>	14.35	3 inch	1.1	15.8	NP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NM	S/5,11	A-5	9:29
A-6	8:49	8.65	2.0	25.0	<input checked="" type="checkbox"/>	16.35	3 inch	1.1	18.0	NP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NM	Q/2,5,8,11	A-6	8:53
A-7	8:47	8.50	3.0	22.6	<input type="checkbox"/>	14.10	3 inch	1.1	15.5	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NM	A/5		
A-8	10:07	9.20	2.0	20.0	<input checked="" type="checkbox"/>	10.80	3 inch	1.1	11.9	NP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NM	Q/2,5,8,11	A-8	10:12
A-9	9:17	8.49	5.0	38.0	<input checked="" type="checkbox"/>	29.51	6 inch	4.4	129.8	46	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NM	Q/2,5,8,11	A-9	10:00
A-11	8:40	10.03	5.0	28.0	<input checked="" type="checkbox"/>	17.97	3 inch	1.1	19.8	NP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NM	S/5,11	A-11	8:44
A-12	8:32	9.05	5.0	30.0	<input checked="" type="checkbox"/>	20.95	3 inch	1.1	23.0	NP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	NM	S/5,11	A-12	8:36
A-13	NM	NM	10.0	29.5	<input type="checkbox"/>	N/A	3 inch	1.1	N/A	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NM	A/5		
AR-1	9:22	9.95	10.0	31.5	<input type="checkbox"/>	21.55	6 inch	4.4	94.8	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NM	NS		
AR-2	NM	NM	10.0	27.5	<input type="checkbox"/>	N/A	6 inch	4.4	N/A	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NN	NS		
AR-3	9:14	9.70	10.0	27.0	<input type="checkbox"/>	17.30	6 inch	4.4	76.1	N/A	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NM	NS		
					<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
					<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
					<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
					<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
					<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				
					<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>				

(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: Annual: A-7, A-13; Semi-Annual: A-3, A-5, A-11, A-12; Quarterly: A-6, A-8, A-9, A-2, A-4,

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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 Fax: (916) 638-8385

Arco Site Address: 731 West MacArthur Blvd  
Oakland, California

Arco Site Number: Arco 4931  
 Delta Project No.: D000-313

Arco Project Manager: Paul Supple

Delta Project PM: Steve Meeks

Site Contact & Phone Number: \_\_\_\_\_

Site Sampled By: Stratus (CH)

Date Sampled: 12/26/00

Well ID	Time	Temp °F	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °F	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °F	pH Units	Sp. Cond.	Gallons		
A-2	NP	18.3	6.20	561		A-9	NM	19.5	6.90	624	0								
							NM	19.7	6.40	624	20								
							NM	19.8	6.50	624	46								
A-3	NP	18.6	6.20	303		A-11	NP	18.2	6.60	645									
A-4	NM	20.0	6.40	209	0	A-12	NP	16.3	7.10	646									
	NM	19.9	6.50	1,708	15														
A-5	NP	19.2	6.20	777		A-13	Not Sampled												
A-6	NP	18.8	6.70	418		AR-1	Not Sampled												
A-7	Not Sampled					AR-2	Not Sampled												
A-8	NP	19.8	6.60	969		AR-3	Not Sampled												

Notes: NP = NO PURGE

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