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June 14, 2002

JUN 24 2002

Mr. Paul Supple
Atlantic Richfield Company
P.O. Box 6549
Moraga, CA 94570

Subject: *Quarterly Groundwater Monitoring Report, First Quarter 2002*
ARCO Service Station No. 374
6407 Telegraph Avenue
Oakland, California
Delta Project No. D000-302

Dear Mr. Supple:

Delta Environmental Consultants, Inc. is submitting the attached report that presents the results of the first quarter 2002 groundwater monitoring program at ARCO Service Station No. 374, located at 6407 Telegraph Avenue, Oakland, California. The monitoring program complies with the California Regional Water Quality Control Board requirements regarding underground tank investigations.

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

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

Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.

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



TLA (LRP006.302.doc)
Enclosures

cc: Ms. Susan Hugo -- Alameda County Health Care Services
Mr. Chuck Headlee -- California Regional Water Quality Control Board, San Francisco Bay Region

Date: June 14, 2002

ARCO QUARTERLY GROUNDWATER MONITORING REPORT

Station No.: 374 Address: 6407 Telegraph Avenue, Oakland, CA
Atlantic Richfield Company Environmental Paul Supple 925-299-8891
Engineer/Phone No.: _____
Consulting Co./Contact Person Delta Environmental Consultants, Inc.
Steven W. Meeks, P.E.
Consultant Project No.: D000-302
Primary Agency/Regulatory ID No. California Regional Water Quality Control Board
San Francisco Bay Region

WORK PERFORMED THIS QUARTER

1. Performed quarterly groundwater monitoring for the first quarter 2002.
2. Prepared and submitted quarterly groundwater monitoring report for fourth quarter 2001.

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WORK PROPOSED FOR NEXT QUARTER

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

QUARTERLY MONITORING:

Current Phase of Project	Monitoring
Frequency of Groundwater Sampling:	Annual (2 nd Quarter): MW-1, MW-2, MW-6 Semi-annual (2 nd /4 th Quarter): MW-3, MW-4 Quarterly: MW-5
Frequency of Groundwater Monitoring:	Quarterly
Is Free Product (FP) Present On-Site:	No
FP Recovered this Quarter:	None
Cumulative FP Recovered to Date:	None
Bulk Soil Removed This Quarter:	None
Bulk Soil Removed to Date:	None
Current Remediation Techniques:	Intrinsic Bioremediation
Approximate Depth to Groundwater:	4.84 feet
Groundwater Gradient:	0.038 ft/ft toward southwest

DISCUSSION:

- Benzene was not detected at or above the laboratory reporting limits in any of the samples collected.
- Total petroleum hydrocarbons as gasoline were not detected at or above the laboratory reporting limits in any of the samples collected.
- Methyl tertiary butyl ether was detected in a sample collected from MW-1, MW-2, MW-5 and MW-6 at concentrations ranging from 3.2 µg/L (MW-5) to 2,000 µg/L (MW-1).

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 Groundwater Elevation Analytical Data Table
Groundwater Flow Direction and Gradient Table
Intrinsic Bioremediation Evaluation and Enhancement Data
- Appendix C Certified Analytical Reports with Chain-of-Custody Documentation
- Appendix D Field Data Sheet

TABLE 1
GROUNDWATER ANALYTICAL DATA

ARCO Service Station 374
6407 Telegraph 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	6/20/2000	158.91	6.86	152.05	NS	NS	NS	NS	NS	NS
	9/28/2000		7.50	151.41	NS	NS	NS	NS	NS	NS
	12/17/2000		7.49	151.42	NS	NS	NS	NS	NS	NS
	3/23/2001		5.90	153.01	<0.5	<0.5	<0.5	<0.5	<50	2,710
	6/21/2001		7.45	151.46	NS	NS	NS	NS	NS	NS
	9/23/2001		8.46	150.45	NS	NS	NS	NS	NS	NS
	12/31/2001		5.50	153.41	NS	NS	NS	NS	NS	NS
	3/21/2002		4.71	154.2	<50	<50	<50	<50	<5,000	2000
MW-2	6/20/2000	157.92	7.67	150.25	NS	NS	NS	NS	NS	NS
	9/28/2000		8.51	149.41	NS	NS	NS	NS	NS	NS
	12/17/2000		8.14	149.78	NS	NS	NS	NS	NS	NS
	3/23/2001		7.21	150.71	<0.5	<0.5	<0.5	<0.5	<50	<2.5
	6/21/2001		7.99	149.93	NS	NS	NS	NS	NS	NS
	9/23/2001		8.52	149.40	NS	NS	NS	NS	NS	NS
	12/31/2001		6.01	151.91	NS	NS	NS	NS	NS	NS
	3/21/2002		5.95	151.97	<0.5	<0.5	<0.5	<0.5	<50	45
MW-3	6/20/2000	153.64	6.42	147.22	<0.5	<0.5	<0.5	<1.0	<50	<10
	9/28/2000		7.31	146.33	NS	NS	NS	NS	NS	NS
	12/17/2000		6.45	147.19	<0.5	<0.5	<0.5	<0.5	<50	<2.5
	3/23/2001		6.01	147.63	NS	NS	NS	NS	NS	NS
	6/21/2001		6.80	146.84	5.5	<0.5	5.4	4.1	110	2.5
	9/23/2001		7.32	146.32	NS	NS	NS	NS	NS	NS
	12/31/2001		4.48	149.16	<0.5	<0.5	<0.5	<0.5	<50	4.9
	3/21/2002		4.36	149.28	NS	NS	NS	NS	NS	NS

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TABLE 1
GROUNDWATER ANALYTICAL DATA

ARCO Service Station 374
6407 Telegraph 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)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	TPH as Gasoline (µg/L)	MTBE (µg/L)
MW-4	6/20/2000	156.53	7.50	149.03	5,100	440	1,000	1,700	20,000	<250
	9/28/2000		8.20	148.33	NS	NS	NS	NS	NS	NS
	12/17/2000		8.11	148.42	1240	<20	27.2	249	4,320	<100
	3/23/2001		6.69	149.84	NS	NS	NS	NS	NS	NS
	6/21/2001		8.01	148.52	470	16	19	160	2,800	130
	9/23/2001		8.91	147.62	NS	NS	NS	NS	NS	NS
	12/31/2001		4.42	152.11	1,500	100	160	210	4,600	160
	3/21/2002		4.98	151.55	NS	NS	NS	NS	NS	NS
MW-5	6/20/2000	151.33	7.84	143.49	<0.5	<0.5	<0.5	<1.0	<50	<10
	9/28/2000		8.37	142.96	<0.5	<0.5	<0.5	<0.5	<50	<2.5
	12/17/2000		8.36	142.97	<0.5	<0.5	<0.5	<0.5	<50	<2.5
	3/23/2001		7.55	143.78	<0.5	<0.5	<0.5	<0.5	<50	<2.5
	6/21/2001		8.20	143.13	<0.5	<0.5	<0.5	<0.5	<50	<2.5
	9/23/2001		8.68	142.65	<0.5	<0.5	<0.5	<0.5	<50	<2.5
	12/31/2001		7.57	143.76	<0.5	<0.5	<0.5	<0.5	<50	<2.5
	3/21/2002		6.12	145.21	<0.5	<0.5	<0.5	<0.5	<50	3.2

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TABLE 1
GROUNDWATER ANALYTICAL DATA

ARCO Service Station 374
6407 Telegraph 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-6	6/20/2000	153.84	4.79	149.05	NS	NS	NS	NS	NS	NS
	9/28/2000		5.39	148.45	NS	NS	NS	NS	NS	NS
	12/17/2000		4.71	149.13	NS	NS	NS	NS	NS	NS
	3/23/2001		4.69	149.15	< 0.5	< 0.5	< 0.5	< 0.5	<50	<2.5
	6/21/2001		5.22	148.62	NS	NS	NS	NS	NS	NS
	9/23/2001		5.40	148.44	NS	NS	NS	NS	NS	NS
	12/31/2001		3.95	149.89	NS	NS	NS	NS	NS	NS
	3/21/2002		2.94	150.9	<0.5	<0.5	<0.5	<0.5	<50	5.2

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

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TABLE 2

GROUNDWATER FLOW DIRECTION AND GRADIENT

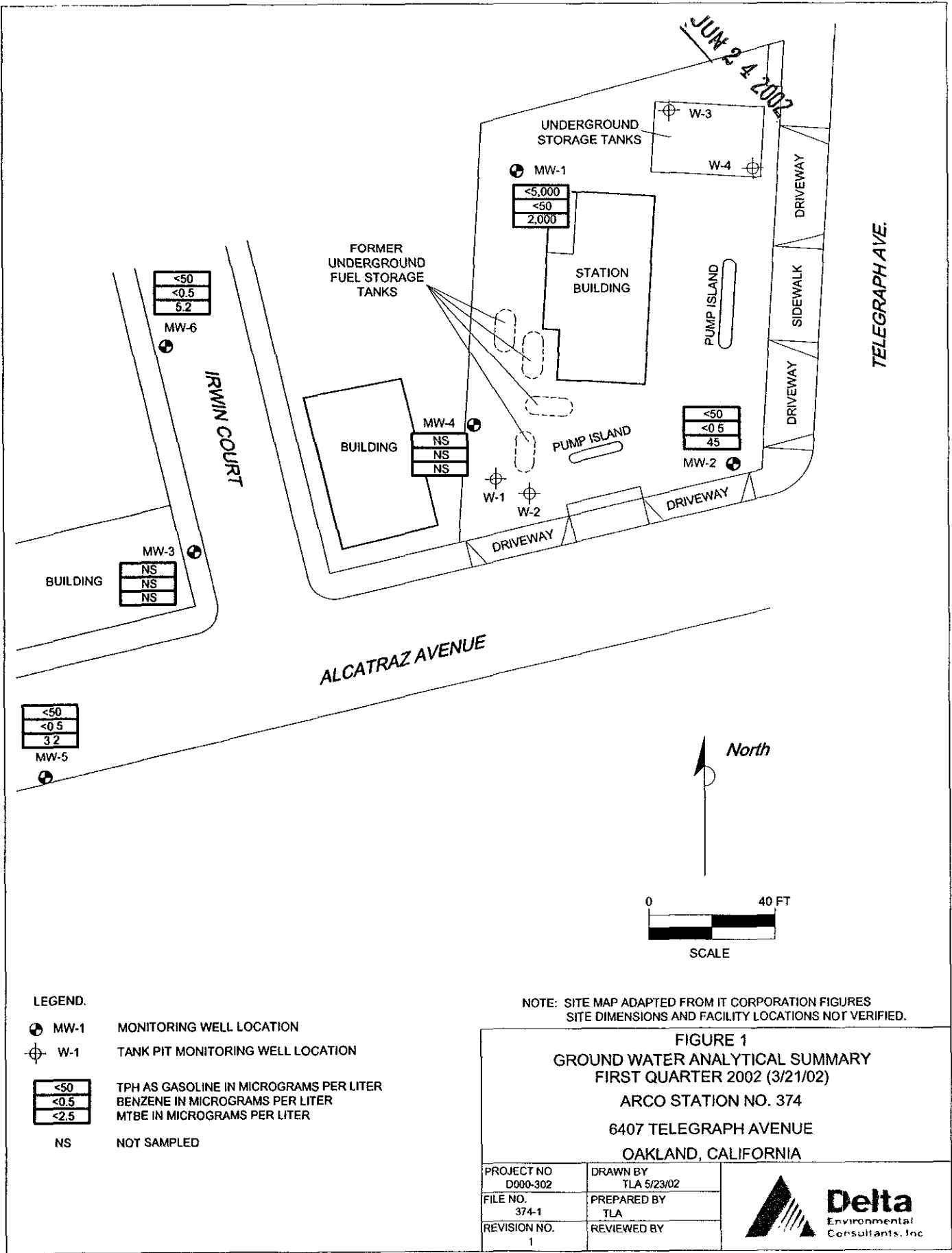
ARCO Service Station No. 374
 6407 Telegraph Avenue
 Oakland, California

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Date Measured	Average Flow Direction	Average Hydraulic Gradient
06/20/00	Southwest	0.035
09/28/00	Southwest	0.034
12/17/00	Southwest	0.032
03/23/01	Southwest	0.034
06/21/01	Southwest	0.032
09/23/01	Southwest	0.029
12/31/01	Southwest	0.043
03/21/02	Southwest	0.038

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

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<50
<0.5
5.2

MW-6

<5,000
<50
2,000

MW-1

NS
NS
NS

MW-4

NS
NS
NS

MW-3

<50
<0.5
3.2

MW-5

<50
<0.5
45

MW-2

LEGEND.

- MW-1 MONITORING WELL LOCATION
- ⊕ W-1 TANK PIT MONITORING WELL LOCATION

<50	TPH AS GASOLINE IN MICROGRAMS PER LITER
<0.5	BENZENE IN MICROGRAMS PER LITER
<2.5	MTBE IN MICROGRAMS PER LITER

NS NOT SAMPLED

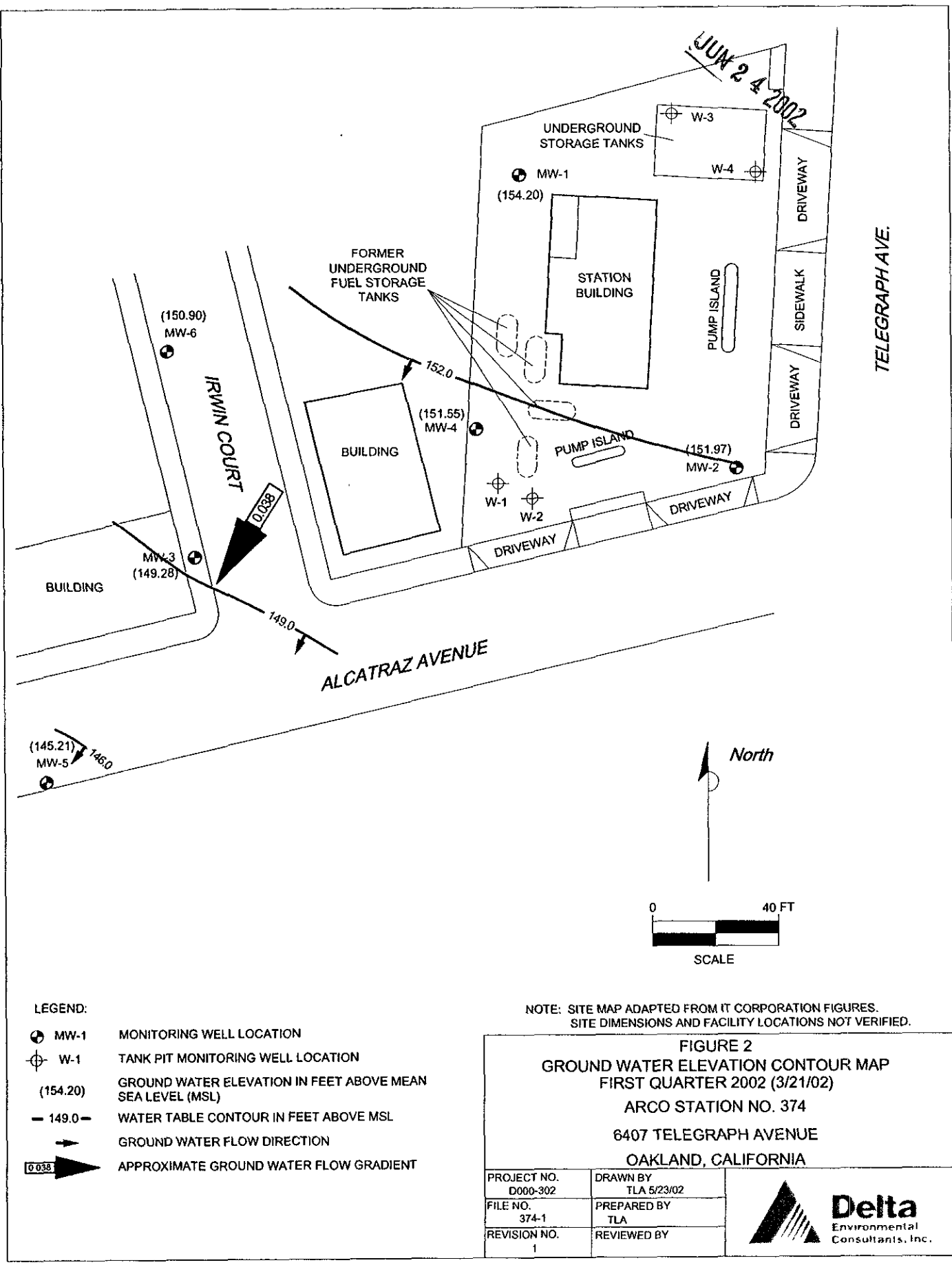
NOTE: SITE MAP ADAPTED FROM IT CORPORATION FIGURES
SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED.

FIGURE 1
GROUND WATER ANALYTICAL SUMMARY
FIRST QUARTER 2002 (3/21/02)
ARCO STATION NO. 374
6407 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA

PROJECT NO D000-302	DRAWN BY TLA 5/23/02
FILE NO. 374-1	PREPARED BY TLA
REVISION NO. 1	REVIEWED BY



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- LEGEND:**
- MW-1 MONITORING WELL LOCATION
 - ⊕ W-1 TANK PIT MONITORING WELL LOCATION
 - (154.20) GROUND WATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (MSL)
 - 149.0 - WATER TABLE CONTOUR IN FEET ABOVE MSL
 - GROUND WATER FLOW DIRECTION
 - 0.038 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
FIRST QUARTER 2002 (3/21/02)
ARCO STATION NO. 374
6407 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA

PROJECT NO. D000-302	DRAWN BY TLA 5/23/02
FILE NO. 374-1	PREPARED BY TLA
REVISION NO. 1	REVIEWED BY



Delta
Environmental
Consultants, Inc.

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APPENDIX A

Sampling and Analysis Procedures

FIELD METHODS AND PROCEDURES

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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.

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APPENDIX B

IT Corporation
Historical Groundwater Elevation and Analytical Data Table
Groundwater Flow Direction and Gradient Table
Intrinsic Bioremediation Evaluation and Enhancement Data

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

ARCO Service Station 0374
6407 Telegraph Avenue, Oakland, California

Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBE (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)
MW-1	01/31/96	158.91	6.34	152.57	Not Sampled: Well Sampled Annually							
MW-1	04/10/96	158.91	5.82	153.09	Not Sampled: Well Sampled Annually							
MW-1	07/16/96	158.91	7.23	151.68	<50	<0.5	<0.5	<0.5	<0.5	340	NM	
MW-1	10/14/96	158.91	8.34	150.57	Not Sampled: Well Sampled Annually							
MW-1	03/27/97	158.91	6.37	152.54	Not Sampled: Well Sampled Annually							
MW-1	05/27/97	158.91	7.30	151.61	Not Sampled: Well Sampled Annually							
MW-1	08/12/97	158.91	8.22	150.69	<50	<0.5	<0.5	<0.5	<0.5	620	NM	
MW-1	11/17/97	158.91	7.98	150.93	Not Sampled: Well Sampled Annually							
MW-1	03/16/98	158.91	4.94	153.97	Not Sampled: Well Sampled Annually							
MW-1	05/12/98	158.91	5.28	153.63	Not Sampled: Well Sampled Annually							
MW-1	07/27/98	158.91	6.84	152.07	<500	<5	<5	<5	<5	580	0.6	P
MW-1	10/15/98	158.91	7.32	151.59	Not Sampled: Well Sampled Annually							
MW-1	02/18/99	158.91	6.28	152.63	Not Sampled: Well Sampled Annually							
MW-1	05/24/99	158.91	6.45	152.46	<50	<0.5	<0.5	<0.5	<0.5	1,300	2.0	NP
MW-1	08/27/99	158.91	7.86	151.05	<50	<0.5	<0.5	<0.5	<0.5	1,500	1.65	NP
MW-1	10/26/99	158.91	8.43	150.48	Not Sampled: Well Sampled Annually							
MW-1	02/03/00	158.91	7.28	151.63	<50	<0.5	<0.5	<0.5	<1	4,000	1.0	NP
MW-2	01/31/96	157.92	6.51	151.41	Not Sampled: Well Sampled Annually							
MW-2	04/10/96	157.92	6.94	150.98	Not Sampled: Well Sampled Annually							
MW-2	07/16/96	157.92	7.73	150.19	<50	1.2	<0.5	<0.5	<0.5	33	NM	
MW-2	10/14/96	157.92	8.35	149.57	Not Sampled: Well Sampled Annually							
MW-2	03/27/97	157.92	7.40	150.52	Not Sampled: Well Sampled Annually							
MW-2	05/27/97	157.92	7.82	150.10	Not Sampled: Well Sampled Annually							
MW-2	08/12/97	157.92	8.29	149.63	<50	<0.5	<0.5	<0.5	<0.5	23	NM	
MW-2	11/17/97	157.92	8.05	149.87	Not Sampled: Well Sampled Annually							
MW-2	03/16/98	157.92	6.45	151.47	Not Sampled: Well Sampled Annually							

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

ARCO Service Station 0374
6407 Telegraph Avenue, Oakland, California

Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBE (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)
MW-2	05/12/98	157.92	6.93	150.99	Not Sampled: Well Sampled Annually							
MW-2	07/27/98	157.92	7.39	150.53	<50	<0.5	<0.5	<0.5	<0.5	<3	0.85	NP
MW-2	10/15/98	157.92	7.67	150.25	Not Sampled: Well Sampled Annually							
MW-2	02/18/99	157.92	6.63	151.29	Not Sampled: Well Sampled Annually							
MW-2	05/24/99	157.92	7.43	150.49	<50	6.3	<0.5	0.7	<0.5	29	3.0	P
MW-2	08/27/99	157.92	8.22	149.70	<50	<0.5	<0.5	<0.5	<0.5	<3	0.95	NP
MW-2	10/26/99	157.92	8.46	149.46	Not Sampled: Well Sampled Annually							
MW-2	02/03/00	157.92	7.75	150.17	<50	<0.5	<0.5	<0.5	<1	<3	1.0	NP
MW-3 *	01/31/96	153.64	7.02	146.62	140	20	0.87	11	14	NA	NM	
MW-3 *	04/10/96	153.64	7.82	145.82	84	2.4	<0.5	1.9	1.1	NA	NM	
MW-3 *	07/16/96	153.64	6.80	146.84	<50	2.2	<0.5	<0.5	<0.5	<2.5	NM	
MW-3 *	10/14/96	153.64	7.67	145.97	<50	1.2	<0.5	<0.5	0.81	2.9	NM	
MW-3 *	03/27/97	153.64	7.62	146.02	<50	0.94	<0.5	0.9	0.63	<2.5	NM	
MW-3 *	05/27/97	153.64	6.72	146.92	Not Sampled: Well Sampled Semiannually							
MW-3 *	08/12/97	153.64	8.20	145.44	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NM	
MW-3 *	11/17/97	153.64	7.64	146.00	Not Sampled: Well Sampled Semiannually							
MW-3 *	03/18/98	153.64	5.14	148.50	<50	<0.5	<0.5	<0.5	<0.5	<3	4.0	P
MW-3 *	05/12/98	153.64	5.53	148.11	Not Sampled: Well Sampled Semiannually							
MW-3 *	07/27/98	153.64	7.63	146.01	74	<0.5	<0.5	<0.5	<0.5	<3	1.7	NP
MW-3 *	10/15/98	153.64	7.46	146.18	Not Sampled: Well Sampled Semiannually							
MW-3 *	02/18/99	153.64	5.85	147.79	Not Sampled							
MW-3 *	05/24/99	153.64	7.00	146.64	<50	<0.5	<0.5	<0.5	<0.5	4	6.0	NP
MW-3 *	08/27/99	153.64	7.16	146.48	<50	<0.5	<0.5	<0.5	<0.5	<3	16.57	NP
MW-3 *	10/26/99	153.64	7.79	145.85	<50	<0.5	<0.5	<0.5	<1	<3	14.86	NP
MW-3 *	02/03/00	153.64	7.11	146.53	<50	<0.5	<0.5	<0.5	<1	<3	1.0	NP

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

ARCO Service Station 0374
6407 Telegraph Avenue, Oakland, California

Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBE (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)
MW-4	01/31/96	156.53	5.64	150.89	230	23	2.2	3.7	32	NA	NM	
MW-4	04/10/96	156.53	6.66	149.87	7,300	1,600	350	350	830	NA	NM	
MW-4	07/16/96	156.53	7.73	148.80	5,600	1,100	160	240	520	150	NM	
MW-4	10/14/96	156.53	8.55	147.98	4,500	860	72	160	340	<62	NM	
MW-4	03/27/97	156.53	7.15	149.38	25,000	5,200	760	850	2,600	<250	NM	
MW-4	05/27/97	156.53	7.75	148.78	Not Sampled: Well Sampled Semiannually							
MW-4	08/12/97	156.53	8.46	148.07	4,800	950	40	140	210	170	NM	
MW-4	11/17/97	156.53	8.24	148.29	Not Sampled: Well Sampled Semiannually							
MW-4	03/16/98	156.53	5.32	151.21	<50	<0.5	<0.5	<0.5	<0.5	<3	1.5	P
MW-4	05/12/98	156.53	6.38	150.15	Not Sampled: Well Sampled Semiannually							
MW-4	07/27/98	156.53	7.36	149.17	21,000	6,100	390	810	1,600	<300	0.5	NP
MW-4 *	10/15/98	156.53	8.30	148.23	Not Sampled: Well Sampled Semiannually							
MW-4 *	02/18/99	156.53	4.39	152.14	Not Sampled							
MW-4 *	05/24/99	156.53	7.45	149.08	18,000	5,600	350	410	1,300	<300	1.0	NP
MW-4 *	08/27/99	156.53	8.07	148.46	12,000	3,200	170	490	810	65	1.32	NP
MW-4 *	10/26/99	156.53	8.72	147.81	12,000	3,100	130	450	680	12	1.39	NP
MW-4 *	02/03/00	156.53	7.41	149.12	9,300	2,800	96	330	400	73	1.0	NP
MW-5	01/31/96	151.33	8.64	142.69	<50	<0.5	<0.5	<0.5	<0.5	NA	NM	
MW-5	04/10/96	151.33	N/A	--	<50	<0.5	<0.5	<0.5	<0.5	NA	NM	
MW-5	07/16/96	151.33	8.15	143.18	<50	0.79	1.3	<0.5	<0.5	>2.5	NM	
MW-5	10/14/96	151.33	7.92	143.41	<50	<0.5	>0.5	<0.5	<0.5	>2.5	NM	
MW-5	03/27/97	151.33	7.75	143.58	<50	<0.5	>0.5	<0.5	<0.5	>2.5	NM	
MW-5	05/27/97	151.33	8.16	143.17	<50	<0.5	>0.5	<0.5	<0.5	>2.5	NM	
MW-5	08/12/97	151.33	----- Well Inaccessible -----									
MW-5	11/17/97	151.33	8.75	142.58	<50	<0.5	<0.5	<0.5	<0.5	<2.5	4.0	NP
MW-5	03/16/98	151.33	6.90	144.43	<50	<0.5	<0.5	<0.5	<0.5	<3	1.5	P

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

ARCO Service Station 0374
6407 Telegraph Avenue, Oakland, California

Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBE (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)
MW-5	05/12/98	151.33	7.24	144.09	<50	<0.5	<0.5	<0.5	<0.5	<3	2.2	P
MW-5	07/27/98	151.33	7.91	143.42	<50	<0.5	<0.5	<0.5	<0.5	<3	1.3	P
MW-5	10/15/98	151.33	8.31	143.02	<50	<0.5	<0.5	<0.5	0.6	<3	3.0	P
MW-5	02/18/99	151.33	7.25	144.08	<50	<0.5	<0.5	<0.5	<0.5	<3	2.0	P
MW-5	05/24/99	151.33	7.52	143.81	<50	<0.5	<0.5	<0.5	<0.5	<3	2.0	NP
MW-5	08/27/99	151.33	8.31	143.02	<50	<0.5	<0.5	<0.5	<0.5	<3	2.28	P
MW-5	10/26/99	151.33	8.61	142.72	<50	<0.5	<0.5	<0.5	<1	<3	1.99	P
MW-5	02/03/00	151.33	10.09	141.24	<50	<0.5	<0.5	<0.5	<1	<3	1.0	NP
MW-6	01/31/96	153.84	5.15	148.69	Not Sampled: Well Sampled Annually							
MW-6	04/10/96	153.84	4.58	149.26	Not Sampled: Well Sampled Annually							
MW-6	07/16/96	153.84	4.96	148.88	<50	<0.5	<0.5	<0.5	<0.5	150	NM	
MW-6	10/14/96	153.84	6.15	147.69	Not Sampled: Well Sampled Annually							
MW-6	03/27/97	153.84	4.40	149.44	Not Sampled: Well Sampled Annually							
MW-6	05/27/97	153.84	4.90	148.94	Not Sampled: Well Sampled Annually							
MW-6	08/12/97	153.84	5.43	148.41	<50	<0.5	<0.5	<0.5	<0.5	39	NM	
MW-6	11/17/97	153.84	5.87	147.97	Not Sampled: Well Sampled Annually							
MW-6	03/16/98	153.84	4.52	149.32	Not Sampled: Well Sampled Annually							
MW-6	05/12/98	153.84	4.42	149.42	Not Sampled: Well Sampled Annually							
MW-6	07/27/98	153.84	4.75	149.09	<50	<0.5	<0.5	<0.5	<0.5	18	0.9	P
MW-6	10/15/98	153.84	5.75	148.09	Not Sampled: Well Sampled Annually							
MW-6	02/18/99	153.84	3.93	149.91	Not Sampled: Well Sampled Annually							
MW-6	05/24/99	153.84	4.32	149.52	<50	<0.5	<0.5	<0.5	<0.5	6	2.0	NP
MW-6	08/27/99	153.84	5.72	148.12	<50	<0.5	<0.5	<0.5	<0.5	8	1.02	NP
MW-6	10/26/99	153.84	5.94	147.90	Not Sampled: Well Sampled Annually							
MW-6	02/03/00	153.84	5.44	148.40	<50	<0.5	<0.5	<0.5	<1	<3	1.0	NP

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

ARCO Service Station 0374
6407 Telegraph Avenue, Oakland, California

Well Number	Date Gauged/ Sampled	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl- benzene (ppb)	Total Xylenes (ppb)	MTBE (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)
<p>MSL = Mean sea level. TOC = Top of casing. TPPH = Total purgeable 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 by EPA method 8021B. (EPA method 8020 prior to 10/26/99). ppb = Parts per billion. ppm = Parts per million. < = Less than laboratory detection limit stated to the right. NA = Not analyzed. NM = Not measured. N/A = Not available. * = ORCs installed in well MW-3 beginning 11/14/95 and in well MW-4 beginning 09/29/98. Please refer to Appendix D for details.</p>												

JUN 24 2002

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OAKS:\ARCO\0374\QTRLY\0374q100.xls:wh:1
 Recreated from electronic data provided by IT Corporation.

IT CORPORATION

Date	Measured	Average
01-31-96	Southwest	0.04
04-10-96	Southwest	0.04
07-16-96	Southwest	0.03
10-14-96	Southwest	0.03
03-27-97	Southwest	0.04
05-27-97	Southwest	0.03
08-12-97	Southwest	0.04
11-17-97	Southwest	0.03
03-16-98	Southwest	0.03
05-12-98	Southwest	0.04
07-27-98	Southwest	0.04
10-15-98	Southwest	0.02
02-18-99	Southwest	0.05
05-24-99	Southwest	0.03
08-27-99	Southwest	0.03
10-26-99	Southwest	0.03
02-03-00	Southwest	0.047

Table 2
 Groundwater Flow Direction and Gradient
 ARCO Service Station 0374
 6407 Telegraph Avenue, Oakland, California

Table D-1
Intrinsic Bioremediation Evaluation and Enhancement Data

ARCO Service Station 0374
6407 Telegraph Avenue, Oakland, California

Well	Date Sampled	Field Analyses					Laboratory Analyses									
		Groundwater Temperature (deg F)	pH (units)	Conductivity (µmhos)	D.O. (mg/L)	Ferrous Iron (mg/L)	Total Alkalinity (mg CaCO3/L)	B.O.D. (mg/L)	Carbon Dioxide (mg/L)	C.O.D. (mg/L)	Methane (%)	Nitrate as Nitrate (mg/L)	Nitrite as Nitrite (mg/L)	Sulfate (mg/L)	TPH as Gasoline (µg/L)	Total BTEX (µg/L)
MW-3	11/14/95	** 65.5*	6.76*	508*	7.17	N/A	NS	NS	NS	NS	NS	6.6	<1.0	NS	140	46
MW-3	06/06/96	** 66.2	7.38	700	12.28	N/A	NS	NS	NS	NS	NS	NS	NS	NS	84†	5.4†
MW-3	07/16/96	67.8	7.08	1,010	8.73	0.0	280	1.8	270	44	<0.020	<1.0	NS	78	<50	2.2
MW-3	01/21/97	** 59	N/A	N/A	11.15	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-3	08/12/97	** 74.4	6.65	600	6.7	1.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-3	11/17/97	N/A	N/A	N/A	12.0	0.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
MW-3	03/16/98	68.5	7.75	806	4.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND
MW-3	05/12/98	NM	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-3	07/27/98	68.1	6.81	904	1.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	74	ND
MW-3	09/29/98	** ORC installed														
MW-3	10/15/98	NM	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-3	02/18/99	NM	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-3	05/24/99	66.2	7.24	799	6.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND
MW-3	07/26/99	** ORC installed														
MW-3	08/27/99	69.0	7.97	782	16.57	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND
MW-3	10/26/99	66.5	5.93	794	14.86	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND
MW-3	02/03/00	62.0	7.42	7,877	1.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND
MW-4	07/16/96	69.5	6.72	1,370	3.20	4.20	420	NS	470	NS	0.11	<1.0	NS	18	5,600	2,020
MW-4	03/16/98	66.2	6.89	1,411	1.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND
MW-4	05/12/98	NM	NM	NM	NM	N/A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	07/27/98	70.5	6.34	1,434	0.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	21,000	8,900
MW-4	09/29/98	** ORC installed														
MW-4	10/15/98	NM	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	02/18/99	NM	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	05/24/99	67.6	6.72	1,509	1.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	18,000	7,660
MW-4	07/26/99	** ORC installed														

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Table D-1
Intrinsic Bioremediation Evaluation and Enhancement Data

ARCO Service Station 0374
6407 Telegraph Avenue, Oakland, California

Well	Date Sampled	Field Analyses					Laboratory Analyses									
		Groundwater Temperature (deg F)	pH (units)	Conductivity (µmhos)	D.O. (mg/L)	Ferrous Iron (mg/L)	Total Alkalinity (mg CaCO ₃ /L)	B.O.D. (mg/L)	Carbon Dioxide (mg/L)	C.O.D. (mg/L)	Methane (%)	Nitrate as Nitrate (mg/L)	Nitrite as Nitrite (mg/L)	Sulfate (mg/L)	TPH as Gasoline (µg/L)	Total BTEX (µg/L)
MW-4	08/27/99	70.5	7.09	1,469	1.32	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12,000	4,670
MW-4	10/26/99	66.8	7.05	1,565	1.39	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	12,000	4,360
MW-4	02/03/00	64.1	7.27	1,506	1.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9,300	3,626
MW-5	07/16/96	70.4	6.85	690	6.80	0.0	170	NS	180	NS	<0.020	<1.0	NS	35	<50	1.1
MW-5	03/16/98	69.5	7.19	584	1.5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND
MW-5	05/12/98	65.9	7.04	619	2.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND
MW-5	07/27/98	73.6	7.39	569	1.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND
MW-5	10/15/98	65.8	6.88	626	3.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	0.6
MW-5	02/18/99	63.4	6.98	616	2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND
MW-5	05/24/99	66.7	6.70	591	2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND
MW-5	08/27/99	72.6	7.10	624	2.28	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND
MW-5	10/26/99	70.4	5.95	601	1.99	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND
MW-5	02/03/00	62.1	7.31	6,072	1.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND
MW-6	06/06/96	N/A	N/A	N/A	3.47	N/A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-6	03/16/98	N/A	N/A	N/A	N/A	N/A	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-6	05/12/98	NM	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-6	07/27/98	70.3	6.67	638	0.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND
MW-6	10/15/98	NM	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-6	02/18/99	NM	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-6	05/24/99	65.5	6.62	713	2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND
MW-6	08/27/99	73.0	7.12	589	1.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND
MW-6	10/26/99	NM	NM	NM	2.51	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-6	02/03/00	61.7	7.32	5,091	1.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	ND	ND

JUN 24 2002

Table D-1
Intrinsic Bioremediation Evaluation and Enhancement Data

ARCO Service Station 0374
6407 Telegraph Avenue, Oakland, California

		<u>Field Analyses</u>					<u>Laboratory Analyses</u>									
Well	Date Sampled	Groundwater		Conductivity (μ mhos)	D.O. (mg/L)	Ferrous Iron (mg/L)	Total Alkalinity (mg CaCO ₃ /L)	Carbon B.O.D. (mg/L)	Carbon Dioxide (mg/L)	C.O.D. (mg/L)	Methane (%)	Nitrate	Nitrite	Sulfate (mg/L)	TPH as Gasoline (μ g/L)	Total BTEX (μ g/L)
		Temperature (deg F)	pH (units)									as Nitrate (mg/L)	as Nitrite (mg/L)			
D.O.		= Dissolved oxygen				μ g/L	= Micrograms per liter									
B.O.D.		= Biochemical oxygen demand				NM	= not measured									
C.O.D.		= Chemical oxygen demand				NS	= Not sampled									
TPPH		= Total purgeable petroleum hydrocarbons				ND	= Not detected									
BTEX		= Benzene, toluene, ethylbenzene, and xylenes				N/A	= Not available									
deg F		= Degrees Fahrenheit				*	Field measurements collected on November 2, 1995.									
μ mhos		= Micromhos				**	ORC installed									
mg/L		= Milligrams per liter				†	From April 10, 1996 groundwater monitoring event.									

APPENDIX C

Certified Analytical Reports
And
Chain-of-Custody Documentation

JUN 24 2002



**Sequoia
Analytical**

819 Striker Avenue, Suite 8
Sacramento, CA 95834
(916) 921-9600
FAX (916) 921-0100
www.sequoialabs.com

8 April, 2002

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

JUN 24 2002

RE: ARCO 374, Oakland, CA
Sequoia Report: S203437

Enclosed are the results of analyses for samples received by the laboratory on 03/26/02 09:40. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Ron Chew
Client Services Representative

Lito Diaz
Laboratory Director

CA ELAP Certificate #1624



**Sequoia
Analytical**

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

Project: ARCO 374, Oakland, CA
Project Number: 374, Oakland, CA
Project Manager: Steven Meeks

Reported:
04/08/02 15:29

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	S203437-01	Water	03/21/02 08:50	03/26/02 09:40
MW-2	S203437-02	Water	03/21/02 08:15	03/26/02 09:40
MW-5	S203437-03	Water	03/21/02 09:30	03/26/02 09:40
MW-6	S203437-04	Water	03/21/02 07:55	03/26/02 09:40
TB	S203437-05	Water	03/21/02 06:00	03/26/02 09:40

JUN 24 2002

Sequoia Analytical - Sacramento

Ron Chew, Client Services Representative

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

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JUN 24 2002

Delta Environmental Consultants (Rancho Cordova) 3164 Gold Camp Drive Ste. 200 Rancho Cordova CA, 95670	Project: ARCO 374, Oakland, CA Project Number: 374, Oakland, CA Project Manager: Steven Meeks	Reported: 04/08/02 15:29
---	---	-----------------------------

Total Purgeable Hydrocarbon, BTEX and MTBE by DHS LUFT
Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1 (S203437-01) Water Sampled: 03/21/02 08:50 Received: 03/26/02 09:40									
Purgeable Hydrocarbons	ND	5000	ug/l	100	2040082	04/04/02	04/04/02	DHS LUFT	
Benzene	ND	50	"	"	"	"	"	"	
Toluene	ND	50	"	"	"	"	"	"	
Ethylbenzene	ND	50	"	"	"	"	"	"	
Xylenes (total)	ND	50	"	"	"	"	"	"	
Methyl tert-butyl ether	2000	250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		98.2 %	60-140	"	"	"	"	"	
MW-2 (S203437-02) Water Sampled: 03/21/02 08:15 Received: 03/26/02 09:40									
Purgeable Hydrocarbons	ND	50	ug/l	1	2040057	04/03/02	04/03/02	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	45	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		101 %	60-140	"	"	"	"	"	
MW-5 (S203437-03) Water Sampled: 03/21/02 09:30 Received: 03/26/02 09:40									
Purgeable Hydrocarbons	ND	50	ug/l	1	2040057	04/03/02	04/03/02	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	3.2	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		100 %	60-140	"	"	"	"	"	



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JUN 24 2002

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

Project: ARCO 374, Oakland, CA
 Project Number: 374, Oakland, CA
 Project Manager: Steven Meeks

Reported:
 04/08/02 15:29

Total Purgeable Hydrocarbon, BTEX and MTBE by DHS LUFT
Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-6 (S203437-04) Water Sampled: 03/21/02 07:55 Received: 03/26/02 09:40									
Purgeable Hydrocarbons	ND	50	ug/l	1	2040057	04/03/02	04/03/02	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	5.2	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		108 %	60-140		"	"	"	"	
TB (S203437-05) Water Sampled: 03/21/02 06:00 Received: 03/26/02 09:40									
Purgeable Hydrocarbons	ND	50	ug/l	1	2040057	04/03/02	04/04/02	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	3.3	2.5	"	"	"	"	"	"	
Surrogate: a,a,a-Trifluorotoluene		2.21 %	60-140		"	"	"	"	A-01



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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2040057 - EPA 5030B (P/T)

Blank (2040057-BLK1)		Prepared & Analyzed: 04/03/02								
Purgeable Hydrocarbons	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.8		"	10.0		108	60-140			

LCS (2040057-BS1)		Prepared & Analyzed: 04/03/02								
Benzene	7.76	0.50	ug/l	10.0		77.6	70-130			
Toluene	8.49	0.50	"	10.0		84.9	70-130			
Ethylbenzene	9.34	0.50	"	10.0		93.4	70-130			
Xylenes (total)	28.7	0.50	"	30.0		95.7	70-130			
Methyl tert-butyl ether	9.34	2.5	"	10.0		93.4	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.9		"	10.0		109	60-140			

Matrix Spike (2040057-MS1)		Source: S203449-05		Prepared & Analyzed: 04/03/02						
Benzene	8.28	0.50	ug/l	10.0	ND	81.3	60-140			
Toluene	10.5	0.50	"	10.0	1.8	87.0	60-140			
Ethylbenzene	9.91	0.50	"	10.0	ND	96.0	60-140			
Xylenes (total)	32.0	0.50	"	30.0	2.0	100	60-140			
Methyl tert-butyl ether	10.6	2.5	"	10.0	ND	99.1	60-140			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.77		"	10.0		97.7	60-140			

Matrix Spike Dup (2040057-MSD1)		Source: S203449-05		Prepared & Analyzed: 04/03/02						
Benzene	8.38	0.50	ug/l	10.0	ND	82.3	60-140	1.20	25	
Toluene	10.6	0.50	"	10.0	1.8	88.0	60-140	0.948	25	
Ethylbenzene	10.0	0.50	"	10.0	ND	96.9	60-140	0.904	25	
Xylenes (total)	32.3	0.50	"	30.0	2.0	101	60-140	0.933	25	
Methyl tert-butyl ether	10.8	2.5	"	10.0	ND	101	60-140	1.87	25	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.3		"	10.0		103	60-140			



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Sequoia Analytical - Sacramento

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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Batch 2040082 - EPA 5030B (P/T)

Blank (2040082-BLK1)

Prepared & Analyzed: 04/04/02

Purgeable Hydrocarbons	ND	50	ug/l							
Benzene	ND	0.50	"							
Toluene	ND	0.50	"							
Ethylbenzene	ND	0.50	"							
Xylenes (total)	ND	0.50	"							
Methyl tert-butyl ether	ND	2.5	"							

Surrogate: a,a,a-Trifluorotoluene 9.77 " 10.0 97.7 60-140

LCS (2040082-BS1)

Prepared & Analyzed: 04/04/02

Benzene	7.81	0.50	ug/l	10.0		78.1	70-130			
Toluene	8.61	0.50	"	10.0		86.1	70-130			
Ethylbenzene	9.46	0.50	"	10.0		94.6	70-130			
Xylenes (total)	29.4	0.50	"	30.0		98.0	70-130			
Methyl tert-butyl ether	10.0	2.5	"	10.0		100	70-130			

Surrogate: a,a,a-Trifluorotoluene 10.9 " 10.0 109 60-140

Matrix Spike (2040082-MS1)

Source: S204016-08

Prepared & Analyzed: 04/04/02

Benzene	7.94	0.50	ug/l	10.0	ND	79.4	60-140			
Toluene	8.84	0.50	"	10.0	ND	88.4	60-140			
Ethylbenzene	9.75	0.50	"	10.0	ND	97.5	60-140			
Xylenes (total)	30.9	0.50	"	30.0	ND	103	60-140			
Methyl tert-butyl ether	10.9	2.5	"	10.0	ND	104	60-140			

Surrogate: a,a,a-Trifluorotoluene 10.3 " 10.0 103 60-140

Matrix Spike Dup (2040082-MSD1)

Source: S204016-08

Prepared & Analyzed: 04/04/02

Benzene	8.28	0.50	ug/l	10.0	ND	82.8	60-140	4.19	25	
Toluene	9.11	0.50	"	10.0	ND	91.1	60-140	3.01	25	
Ethylbenzene	10.0	0.50	"	10.0	ND	100	60-140	2.53	25	
Xylenes (total)	31.2	0.50	"	30.0	ND	104	60-140	0.966	25	
Methyl tert-butyl ether	11.5	2.5	"	10.0	ND	110	60-140	5.36	25	

Surrogate: a,a,a-Trifluorotoluene 10.9 " 10.0 109 60-140

Sequoia Analytical - Sacramento

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



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Notes and Definitions

A-01 Surrogate inadvertently left out of this sample.
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

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APPENDIX D
Field Data Sheets