



October 28, 2002

Ms. ~~Eva~~ ^{AG} Chu
Hazardous Materials Specialist
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

5710
744
No 494
K. K. W. W.
10/30/02
AG

Re: **Quarterly Groundwater Monitoring Report
Second Quarter 2002**
ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California
URS Project # 38465919

Dear Ms. Chu:

On behalf of ARCO (affiliated to Group Environmental Management Company), URS Corporation (URS) is pleased to submit the Quarterly Groundwater Monitoring Report. This report presents the results of the second quarter 2002 groundwater monitoring program at ARCO Service Station No. 2111 located at 1156 Davis Street San Leandro, California. The monitoring program complies with the Contra Costa Hazardous Materials Program (CCHMP) requirements regarding Underground Storage Tank (UST) investigations.

Please call us at 510-893-3600 if you have questions.

Sincerely,

URS CORPORATION

Barbara Jakub for
Scott Robinson
Project Manager



Amy Breckenridge, P.E.
Portfolio Manager

Attachment: Quarterly Groundwater Monitoring Report, Second Quarter 2002

cc: Mr. Paul Supple, ARCO, PO Box 6549, Moraga, California 94570

URS Corporation
500 12th Street, Suite 200
Oakland, CA 94607-4014
Tel: 510.893.3600
Fax: 510.874.3268

Quarterly Groundwater Monitoring Report

Second Quarter 2002

**ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California
URS Project # 38465919**

Prepared For:

Mr. Paul Supple
ARCO

October 28, 2002

Prepared By:

URS Corporation.
500 12th Street, Suite 200
Oakland, CA 94607-4014

ARCO QUARTERLY GROUNDWATER MONITORING REPORT

Station No.:	2111	Address:	1156 Davis Street, San Leandro, CA
	ARCO Environmental Engineer		<u>Paul Supple</u>
	Consulting Co./Contact Person		URS Corporation / Scott Robinson
	Consultant Project No.:		38465919
	Primary Agency/Regulatory ID No.		Alameda County Health Care Services Agency

WORK PERFORMED THIS QUARTER

1. Performed quarterly groundwater monitoring and sampling for second quarter 2002
2. Prepared and submitted first quarter 2002 groundwater monitoring report.

WORK PROPOSED FOR NEXT QUARTER

1. Perform quarterly groundwater monitoring and sampling for third quarter 2002.
2. Prepare and submit second quarter 2002 groundwater monitoring report.
3. Delta will produce a report summarizing the January 2002 high vacuum dual phase extraction testing at site.

QUARTERLY MONITORING:

Current Phase of Project	<u>Quarterly groundwater monitoring</u>
Frequency of Groundwater Sampling:	<u>Quarterly: MW-1 through MW-7</u>
Frequency of Groundwater Monitoring:	<u>Quarterly (groundwater)</u>
Is Free Product (FP) Present On-Site:	<u>No</u>
FP Recovered this Quarter:	<u>0</u>
Cumulative FP Recovered to Date:	<u>Approximately 1.98 gallons</u>
Bulk Soil Removed This Quarter:	<u>None</u>
Bulk Soil Removed to Date:	<u>Unknown</u>
Current Remediation Techniques:	<u>Bailing free product as needed</u>
Approximate Depth to Groundwater:	<u>13.88</u>
Groundwater Gradient:	<u>0.006 feet/foot West</u>

DISCUSSION:

- MTBE was detected in all of the wells sampled at concentrations ranging from 3 ppb in well MW-6 to 67,000 ppb in well MW-7.
- TPH-g was detected in well MW-2 at a concentration of 9,000 ppb.
- Benzene was detected in wells MW-4, MW-2, and MW-7 at concentrations of 3 ppb, 220 ppb, and 530 ppb, respectively.

ATTACHMENTS:

- Disclaimer Statement - Groundwater Monitoring Report
- Table 1 Summary of Groundwater Elevation and Analytical Data
- Table 2 Groundwater Flow Direction and Gradient Table
- Figure 1 Groundwater Analytical Summary Map
- Figure 2 Groundwater Elevation Contour Map
- Attachment A Groundwater Sampling Procedures
- Attachment B Historical Data Tables (Source: IT Corporation)
- Attachment C Certified Analytical Reports and Chain-of-Custody
- Attachment D Field Data Sheets
- Attachment E EDCC Report, EDF and Geowell Submittal Confirmation Number Page

**URS QUARTERLY MONITORING REPORT
DISCLAIMER
GROUP ENVIRONMENTAL MANAGEMENT COMPANY SITES**

This report is based on data, site conditions, and other information that are generally applicable as of the date of the report, and the conclusions and recommendations herein are therefore applicable only to that time frame.

Background information, including but not limited to previous field measurements, analytical results, site plans, and other data has been furnished to URS by Group Environmental Management Company, its previous consultants, and/or third parties that URS has used in preparing this report. URS has relied on this information as furnished. URS is not responsible for nor has it confirmed the accuracy of this information.

The analytical data provided by the laboratory approved by Group Environmental Management Company have been reviewed and verified by that laboratory. URS has not performed an independent review of the data and is neither responsible for nor has confirmed the accuracy of these data. Field measurements have been supplied by a groundwater sampling subcontractor. URS has not performed an independent review of the field sampling data and is neither responsible for nor has confirmed the accuracy of these data.

TABLE 1

SUMMARY OF GROUNDWATER ELEVATION AND ANALYTICAL DATA

ARCO Service Station No. 2111
1156 Davis Street
San Leandro, California

Well Number	Date Sampled	Top of Riser Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH as Gasoline (µg/L)	MTBE (8020) (µg/L)	MTBE (8260) (µg/L)
MW-1	06/26/00	39.60	16.46	23.14	NA	NA	NA	NA	NA	NA	NA
	07/20/00		16.89	22.71	110	<0.5	<0.5	2.7	360	2,100	NA
	09/19/00		17.62	21.98	76	<0.5	<0.5	2.3	290	1,500	NA
	12/21/00		17.39	22.21	64	2.89	1.31	4.57	257	1,080	1,060
	03/13/01		15.7	23.9	52.5	<5.0	<5.0	<5.0	<500	1,430	1,370
	09/18/01		18.24	21.36	64	7.3	<5.0	52	<500	810	1,100
	12/28/01		15.95	23.65	<5.0	<5.0	5.00	22	<500	1,200	1,100
	03/14/02		16.01	23.59	<0.5	<0.5	<0.5	<0.5	<50	34	40
	04/23/02		15.43	24.17	<0.5	<0.5	<0.5	<0.5	<50	30	NA
MW-2	06/26/00	37.99	14.60	23.39 ^a	NA	NA	NA	NA	NA	NA	NA
	07/20/00		15.14	22.85	2,300	18,000	2,500	19,000	95,000	13,000	NA
	09/19/00		15.95	22.04	1,200	6,300	2,000	14,000	63,000	19,000	NA
	12/21/00		15.60	22.39		2,130	1,160	9,460	45,900	22,400	24,700
	12/21/00 ^b		NM	NC	360	189	213	626	5,010	54,300	89,200
	03/13/01		13.77	23.9	98.1	<5.0	<5.0	6.42	3,650	3,590	3,260
	3/13/2001 ^b		NM	NC	525	466	408	1,460	<20,000	91,700	76,000
	9/18/2001 ^a		16.86	21.13	NS	NS	NS	NS	NS	NS	NS
	12/28/01		14.28	23.71	1,500	3,800	1,300	4,800	31,000	9,300	8,800
	03/14/02		14.15	23.84	25	43	43	270	1,800	990	960
04/23/02	13.60	24.39	220	110	470	2,500	9,000	8,500	NA		
MW-3	06/26/00	39.32	15.96	23.36	NA	NA	NA	NA	NA	NA	NA
	07/20/00		16.42	22.90	<0.5	<0.5	<0.5	<1.0	<50	130	NA
	09/19/00		17.18	22.14	17	<0.5	1.4	2.4	190	160	NA
	12/21/00		16.97	22.35	17.8	<0.5	2.47	2.5	187	143	125
	03/13/01		15.17	24.15	2.83	<0.5	<0.5	<0.5	72.4	126	122
	09/18/01		17.81	21.51	6.4	<0.5	3.5	1.6	140	110	75
	12/28/01		15.44	23.88	5.9	<0.5	0.99	0.55	130	90	63
	03/14/02		15.50	23.82	<0.5	<0.5	<0.5	<0.5	<50	100	88
	04/23/02		14.96	24.36	<0.5	<0.5	<0.5	<0.5	<50	77	NA

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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 (8020) (µg/L)	MTBE (8260) (µg/L)
MW-4	06/26/00	38.10	14.59	23.51	NA	NA	NA	NA	NA	NA	NA
	07/20/00		15.04	23.06	7.9	<0.5	<0.5	1.1	97	51	NA
	09/19/00		15.83	22.27	7.0	<0.5	<0.5	<1.0	110	60	NA
	12/21/00		15.59	22.51	5.6	<0.5	1.72	<0.5	120	46.3	48.6
	03/13/01		13.73	24.37	0.796	<0.5	<0.5	<0.5	76	53.7	50.0
	09/18/01		16.50	21.59	<0.5	<0.5	<0.5	<0.5	<50	25	26.0
	12/28/01		14.03	24.07	<0.5	<0.5	<0.5	<0.5	<50	15	11.0
	03/14/02		14.10	24.00	<0.5	<0.5	<0.5	<0.5	<50	31	28
	04/23/02		13.57	24.53	2.8	<0.5	<0.5	<0.5	<50	42	NA
MW-5	06/26/00	37.21	14.27	22.94	NA	NA	NA	NA	NA	NA	NA
	07/20/00		14.69	22.52	<0.5	<0.5	<0.5	<1.0	55	14,000	NA
	09/19/00		15.36	21.85	<0.5	<0.5	<0.5	<1.0	54	13,000	NA
	12/21/00		15.15	22.06	2.51	<0.5	<0.5	0.961	72.9	19,200	21,200
	03/13/01		13.5	23.71	<5	<5	<5	<5	<500	15,900	20,000
	09/18/01		15.94	21.27	<100	<100	<100	<1,000	<10,000	22,000	20,000
	12/28/01		13.45	23.76	<100	<100	<100	<100	<10,000	10,000	10,000
	03/14/02		13.82	23.39	<50	<50	<50	<50	<5,000	7,100	7,700
	04/23/02		13.25	23.96	<50	<50	<50	<50	<5,000	8,900	NA
MW-6	06/26/00	37.11	13.46	23.65	NA	NA	NA	NA	NA	NA	NA
	07/20/00		13.94	23.17	<0.5	<0.5	<0.5	<1.0	<50	<3.0	NA
	09/19/00		14.41	22.70	<0.5	<0.5	<0.5	<1.0	<50	<3.0	NA
	12/21/00		14.53	22.58	<0.5	<0.5	<0.5	<0.5	<50	<2.5	NA
	03/13/01		12.67	24.44	<0.5	<0.5	<0.5	<0.5	<50	<2.5	NA
	09/18/01		15.42	21.69	<0.5	<0.5	<0.5	<0.5	<50	<2.5	<2.0
	12/28/01		12.96	24.15	<0.5	<0.5	<0.5	<0.5	<50	12	<0.5
	03/14/02		12.98	24.13	<0.5	<0.5	<0.5	<0.5	<50	<2.5	NA
	04/23/02		12.44	24.67	<0.5	<0.5	<0.5	<0.5	<50	3.1	NA

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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 (8020) (µg/L)	MTBE (8260) (µg/L)
MW-7	06/26/00	38.68	14.34	24.34	NA	NA	NA	NA	NA	NA	NA
	07/20/00		15.26	23.42	5.4	<0.5	2.8	5.9	14,000	71,000	NA
	09/19/00		15.70	22.98	420	38	470	220	8,400	5,600	NA
	12/21/00		16.02	22.66	NS ^a	NS ^a	NS ^a	NS ^a	NS ^a	NS ^a	NS ^a
	03/13/01		14.18	24.50	154	63	46.3	127	<2,000	175,000	160,000
	09/18/01		17.02	21.66	1,900	<1,000	<1,000	2,800	<100,000	190,000	370,000
	12/28/01		14.81	23.87	<200	<200	<200	<200	<20,000	84,000	72,000
	03/14/02		14.60	24.08	<500	<500	<500	<500	<50,000	85,000	85,000
	04/23/02		13.94	24.74	530	200	220	800	<20,000	67,000	NA

^a Product sheen noted

^b Well was sampled after batch extraction event.

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

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

TABLE 2

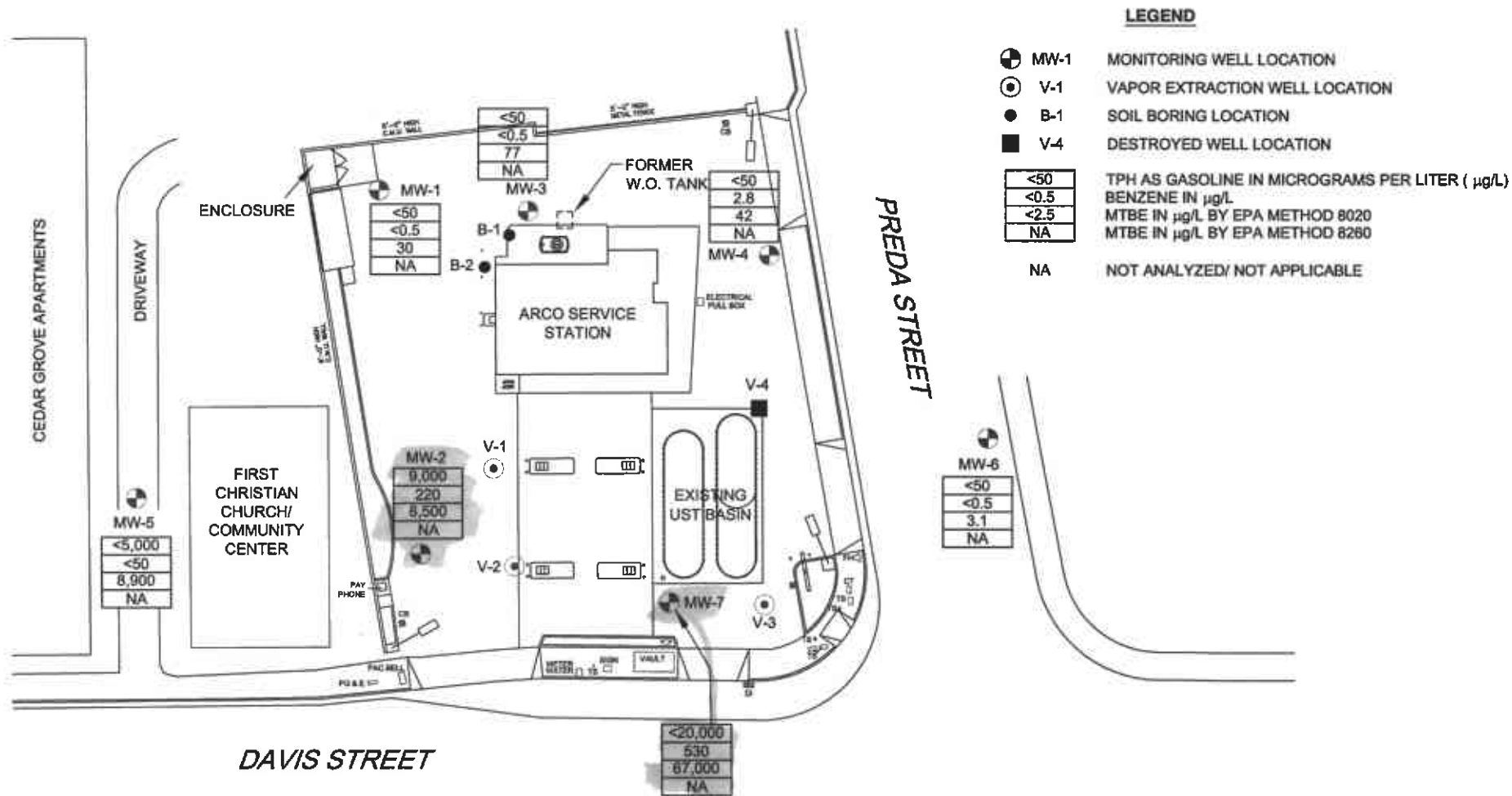
GROUNDWATER FLOW DIRECTION AND GRADIENT

ARCO Service Station No. 2111
 1156 Davis Street
 San Leandro, California

Date Measured	Average Flow Direction	Average Hydraulic Gradient
07/20/00	West-Northwest	0.006
09/19/00	West-Northwest	0.004
12/21/00	West-Northwest	0.004
03/13/01	West-Northwest	0.005
05/30/01	West-Northwest	0.004
09/18/01	West-Northwest	0.003
12/28/01	West-Northwest	0.003
03/14/02	West	0.004
04/23/02	West	0.006

VIAT

Note: Please refer to Attachment 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.



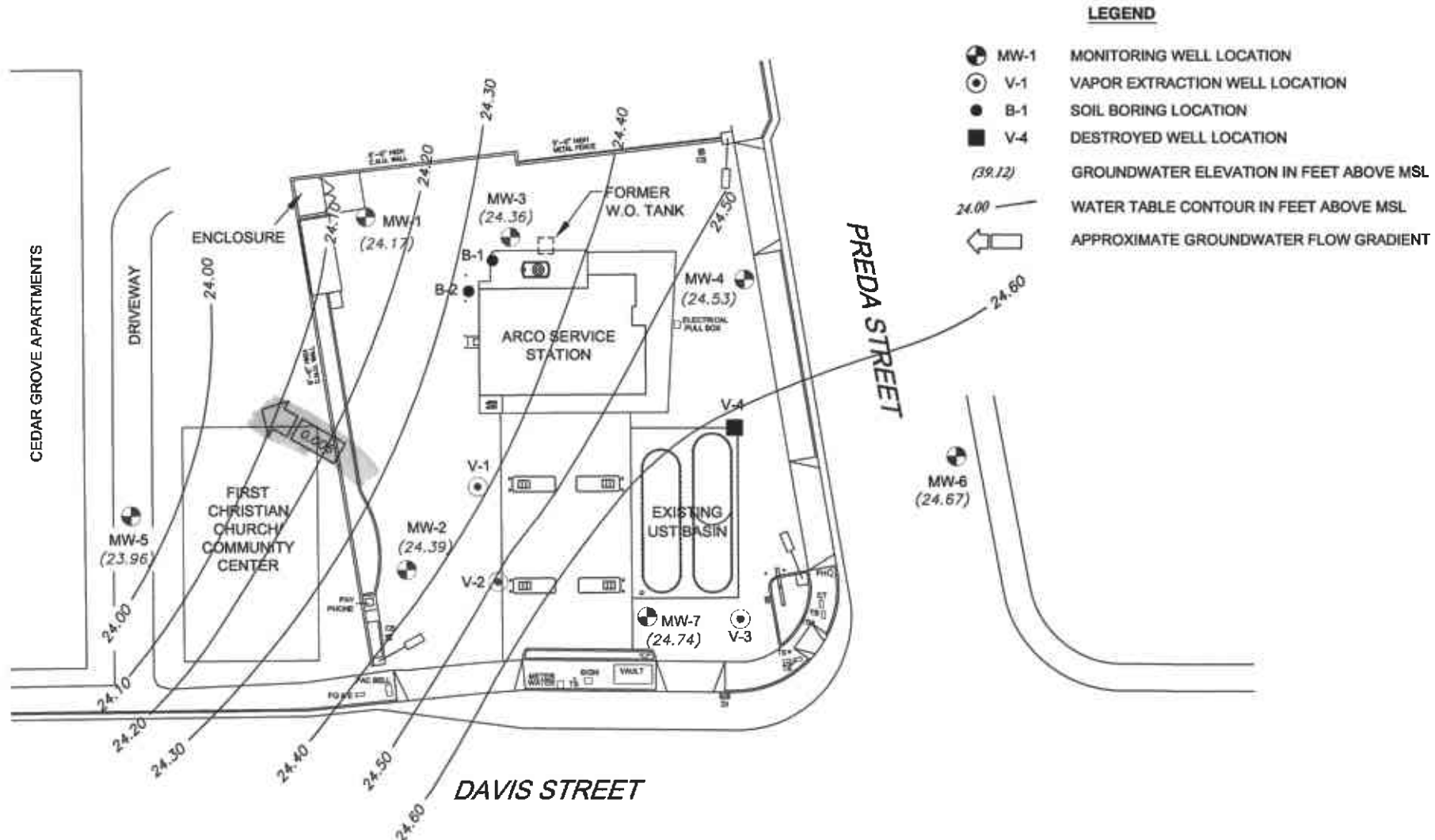
NORTH

0 40 80



SCALE IN FEET

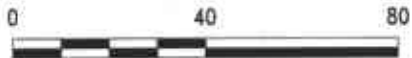
URS	Project No. 38465919	GROUNDWATER ANALYTICAL SUMMARY Second Quarter 2002 (June 21, 2002)	FIGURE 1
	Arco Service Station 2111 1156 Davis Street San Leandro, California		



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



NORTH



SCALE IN FEET

URS	Project No. 38465919	GROUNDWATER ELEVATION CONTOUR MAP Second Quarter 2002 (June 21, 2002)	FIGURE 2
	Arco Service Station 2111 1156 Davis Street San Leandro, California		

ATTACHMENT A

GROUNDWATER SAMPLING PROCEDURES

**BLAINE TECH SERVICES, INC.
METHODS AND PROCEDURES
FOR THE ROUTINE MONITORING OF
GROUNDWATER WELLS AT BP/ARCO SITES**

Blaine Tech Services, Inc. performs environmental sampling and documentation as an independent third party. We specialize in groundwater monitoring assignments and intentionally limit the scope of our services to those centered on the generation of objective information.

To avoid conflicts of interest, Blaine Tech Services, Inc. personnel do not evaluate or interpret the information we collect. As a state licensed contractor (C-57 well drilling –water – 746684) performing strictly technical services, we do not make any professional recommendations and perform no consulting of any kind.

SAMPLING PROCEDURES OVERVIEW

SAFETY

All groundwater monitoring assignments performed for BP/ARCO comply with BP/ARCO's safety guidelines, 29 CFR 1910.120 and SB-198 Injury and Illness Prevention Program (IIPP). All Field Technicians hold valid BP/ARCO Safety Passport and 40-hour 29CFR 1910.120 OSHA SARA HAZWOPER training certificates in addition to receiving medical clearance and on-the-job training prior to commencing any work on any BP/ARCO site.

INSPECTION AND GAUGING

Wells are inspected prior to evacuation and sampling. The condition of the wellhead is checked and noted according to a wellhead inspection checklist.

Standard measurements include the depth to water (DTW) and the total well depth (TD) obtained with industry standard electronic water level indicators that are graduated in increments of hundredths of a foot.

The water in each well is inspected for the presence of immiscibles or sheen and when free product is suspected, it is confirmed using an electronic interface probe (e.g. MMC). No samples are collected from a well containing over two-hundredths of a foot (0.02') of product.

PURGED WELLS - EVACUATION

Depth to water measurements are collected by our personnel prior to purging and minimum

purge volumes are calculated anew for each well based on the height of the water column and the diameter of the well. Expected purge volumes are never less than three case volumes and are set at no less than four case volumes in some jurisdictions.

Well purging devices are selected on the basis of the well diameter and the total volume to be evacuated. In most cases the well will be purged using an electric submersible pump (i.e. Grundfos) suspended near (but not touching) the bottom of the well. Small volumes of purgewater are often removed by hand bailing with a disposable bailer.

PURGED WELLS - PARAMETER STABILIZATION

Well purging completion standards include minimum purge volumes, but additionally require stabilization of specific groundwater parameters prior to sample collection. Typical groundwater parameters used to measure stability are electrical conductivity, pH, and temperature. Instrument readings are obtained at regular intervals during the evacuation process (no less than once per case volume).

Stabilization standards for routine quarterly monitoring of fuel sites include the following: Temperature is considered to have stabilized when successive readings do not fluctuate more than +/- 1 degree Celsius. Electrical conductivity is considered stable when successive readings are within 10%. pH is considered to be stable when successive readings remain constant or vary no more than 0.2 pH.

These groundwater parameters are collected using a Myron-L Ultrameter 6P. During the evacuation process, water is collected and placed into the cup of the meter for parameter collection. The meter is calibrated daily or as needed according to manufacturers specifications.

PURGED WELLS - DEWATERED WELLS

Normal evacuation removes no less than three case volumes of water from the well. However, less water may be removed in cases where the well dewateres and does not immediately recharge. Wells that dewater will be sampled once they have recharged to 80% of their original static water level or when we are prepared to leave the site, whichever occurs first.

NO PURGE WELLS

Wells that qualify are sampled without purging. A set of water quality parameters and a Dissolved Oxygen measurement are collected. The well is sampled with a disposable bailer.

PURGEWATER CONTAINMENT

All non-hazardous purgewater evacuated from each groundwater monitoring well is captured and contained in on-board storage tanks on the Sampling Vehicle and/or special water hauling trailers. Effluent from the decontamination of reusable apparatus (sounders, electric pumps and

hoses etc.), consisting of groundwater combined with deionized water and non-phosphate soap, is also captured and pumped into effluent tanks.

Non-hazardous purgewater is transported under standard Bill of Lading documentation to a Blaine Tech Services, Inc. facility before being transported to a BP/ARCO approved disposal facility.

DISSOLVED OXYGEN READINGS

A pre-sample Dissolved Oxygen reading is collected at all sampled wells. The measurement is collected using an electronic meter (YSI Model 51, 58, 95 or equivalent). Water is drawn from the well, placed in a clean cup with the meter probe and the measurement collected.

The probe is decontaminated between wells. The meter is calibrated between wells as per the instructions in the operating manual.

SAMPLE COLLECTION

All samples are collected using disposable bailers. The bailer is gently lowered into the well to minimize agitation or aeration of the water. Bailers and their associated cord are used once and then discarded.

SAMPLE CONTAINERS

Sample material is decanted directly from the sampling bailer into sample containers provided by the laboratory that will analyze the samples. The transfer of sample material from the bailer to the sample container conforms to specifications contained in the USEPA T.E.G.D. The type of sample container, material of construction, method of closure and filling requirements are specific to the intended analysis. Chemicals needed to preserve the sample material are commonly placed inside the sample containers by the laboratory or glassware vendor prior to delivery of the bottle to our personnel. The laboratory sets the number of replicate containers.

TRIP BLANKS

Upon request, a Trip Blank is carried to each site and is kept inside the cooler for the duration of the sampling event. It is turned over to the laboratory for analysis with the samples from that site.

SAMPLE STORAGE

All sample containers are promptly placed in food grade ice chests for storage in the field and transport (direct or via our facility) to the analytical laboratory that will perform the intended analytical procedures. These ice chests contain quantities of restaurant grade ice as a refrigerant material. The samples are maintained in either an ice chest or a refrigerator until relinquished into the custody of the laboratory or laboratory courier.

DOCUMENTATION CONVENTIONS

Each and every sample container has a label affixed to it. In most cases these labels are generated by our office personnel and are partially preprinted. Labels can also be hand written by our field personnel. The site is identified with the store number and site address, as is the particular groundwater well from which the sample is drawn (e.g. MW-1, MW-2, S-1 etc.). The time at which the sample was collected and the initials of the person collecting the sample are handwritten onto the label.

Chain of Custody records are created using client specific preprinted forms following USEPA specifications.

Bill of Lading records are contemporaneous records created in the field at the site where the non-hazardous purgewater is generated. Field Technicians use preprinted Bill of Lading forms.

DECONTAMINATION

All equipment is brought to the site in serviceable condition and is cleaned thoroughly before initial use and before subsequent use in any other well. Equipment is decontaminated before leaving the site.

The primary decontamination device is a commercial steam cleaner. The steam cleaner is detuned to function as a hot pressure washer that is then operated with high quality deionized water that is produced at our facility and stored onboard our sampling vehicle. Cleaning is facilitated by the use of proprietary fixtures and devices included in the patented workstation (U.S. Patent 5,535,775) that is incorporated in each sampling vehicle. The steam cleaner is used to decon reels, pumps and bailers.

Any sensitive equipment or parts (i.e. Dissolved Oxygen sensor membrane, sounder etc.) that cannot be washed using the hot high pressure water, will be sprayed with a non-phosphate soap and deionized water solution and rinsed with deionized water.

EXAMPLE: The water level indicator is cleaned between wells using the non-phosphate soap and deionized water solution followed by deionized water rinses. The water level indicator is then washed with the steam cleaner between sites or as necessitated by use in a particularly contaminated well.

OXYIDATON REDUCTION POTENTIAL READINGS

ORP readings, as requested, are obtained with a Myron-L Ultrameter 6P. The meter is cleaned between wells as described above. The meter is calibrated at the start of each day according to the instruction manual. In use the probe is placed in a cup of freshly obtained monitoring well water and allowed to stabilize.

ATTACHMENT B

HISTORICAL DATA TABLES
(Source: IT Corporation)

Table 1
Historical Groundwater Elevation and Analytical Data
Petroleum Hydrocarbons and Their Constituents

ARCO Service Station 2111
1156 Davis Street, San Leandro, California

Well Designation	Water Level Field Date	Top of Casing Elevation ft-MSL	Depth to Water feet	Free Product Thickness feet	Groundwater Elevation ft-MSL	Water Sample Field Date	TPHG LUFT Method µg/L	Benzene EPA 8021B* µg/L	Toluene EPA 8021B* µg/L	Ethylbenzene EPA 8021B* µg/L	Total Xylenes EPA 8021B* µg/L	MTBE EPA 8021B* µg/L	MTBE EPA 8260 µg/L	TRPH EPA 418.1 µg/L	TPHD LUFT Method µg/L	Dissolved Oxygen mg/L	Purged/ Not Purged P/NP
MW-1	08-01-95	39.60	17.45	ND	22.15	08-01-95	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--		
MW-1	12-14-95	39.60	17.09	ND	22.51	12-14-95	<50	<0.5	<0.5	<0.5	<0.5	△	--	--	--		
MW-1	03-21-96	39.60	14.72	ND	24.88	03-21-96	<50	<0.5	<0.5	<0.5	<0.5	△	--	--	--		
MW-1	05-24-96	39.60	15.94	ND	23.66	05-24-96	<50	<0.5	<0.5	<0.5	<0.5	△	--	--	--		
MW-1	08-09-96	39.60	17.89	ND	21.71	08-09-96	<50	<0.5	<0.5	<0.5	<0.5	△	--	--	--		
MW-1	11-06-96	39.60	18.66	ND	20.94	11-06-96	<50	<0.5	<0.5	<0.5	<0.5	△	--	--	--		
MW-1	03-24-97	39.60	16.13	ND	23.47	03-24-97	<50	<0.5	<0.5	<0.5	<0.5	△	--	--	--		
MW-1	05-27-97	39.60	17.23	ND	22.37	05-28-97	<50	<0.5	<0.5	<0.5	<0.5	△	--	--	--		
MW-1	08-07-97	39.60	18.68	ND	20.92	08-07-97	<50	<0.5	<0.5	<0.5	<0.5	△	--	--	--		
MW-1	11-10-97	39.60	19.19	ND	20.41	11-10-97	<50	<0.5	<0.5	<0.5	<0.5	△	--	--	--		
MW-1	02-16-98	39.60	12.61	ND	26.99	02-16-98	<50	<0.5	<0.5	<0.5	<0.5	△	--	--	--		
MW-1	04-15-98	39.60	14.30	ND	25.30	04-15-98	<50	<0.5	<0.5	<0.5	<0.5	△	--	--	--		
MW-1	07-24-98	39.60	16.40	ND	23.20	07-24-98	<50	<0.5	<0.5	<0.5	<0.5	△	--	--	--		
MW-1	10-19-98	39.60	17.90	ND	21.70	10-19-98	<50	<0.5	<0.5	<0.5	<0.5	△	--	--	--		
MW-1	01-28-99	39.60	16.85	ND	22.75	01-28-99	<20,000	580	<200	<200	320	14,000	--	--	--		
MW-1	06-25-99	39.60	17.35	ND	22.25	06-25-99	730	140	5	3	2	7,700	--	--	--	0.79	NP
MW-1	08-25-99	39.60	18.20	ND	21.40	08-25-99	390	66	8.5	<2.5	8.6	3,700	--	--	--	1.56	NP
MW-1	11-10-99	39.60	17.77	ND	21.83	11-10-99	360	70	13	2.2	13	980	--	--	--	0.30	NP
MW-1	02-09-00	39.60	16.25	ND	23.35	02-09-00	190	4.5	0.9	<0.5	12	3,500	--	--	--	0.53	NP
MW-2	08-01-95	37.99	15.67	ND	22.32	08-01-95	23,000	1,300	310	500	3,500	--	--	--	--		
MW-2	12-14-95	37.99	15.36	ND	22.63	12-14-95	7,300	900	25	180	1,000	<200	--	--	--		
MW-2	03-21-96	37.99	12.84	ND	25.15	03-21-96	9,600	850	30	280	1,400	250	--	--	--		
MW-2	05-24-96	37.99	14.03	ND	23.96	05-24-96	2,300	300	<5	73	310	<25	--	--	--		
MW-2	08-09-96	37.99	16.10	ND	21.89	08-09-96	2,800	290	6	75	320	50	--	--	--		

Table 1
Historical Groundwater Elevation and Analytical Data
Petroleum Hydrocarbons and Their Constituents

ARCO Service Station 2111
1156 Davis Street, San Leandro, California

Well Designation	Water Level Field Date	Top of Casing Elevation ft-MSL	Depth to Water feet	Free Product Thickness feet	Groundwater Elevation ft-MSL	Water Sample Field Date	TPHG LUFT Method µg/L	Benzene EPA 8021B* µg/L	Toluene EPA 8021B* µg/L	Ethylbenzene EPA 8021B* µg/L	Total Xylenes EPA 8021B* µg/L	MTBE EPA 8021B* µg/L	MTBE EPA 8260 µg/L	TRPH EPA 418.1 µg/L	TPHD LUFT Method µg/L	Dissolved Oxygen mg/L	Purged/ Not Purged P/NP
MW-2	11-06-96	37.99	16.98	ND	21.01	11-06-96	750	76	<1	15	51	110	--	--	--		
MW-2	03-24-97	37.99	14.22	ND	23.77	03-24-97	790	18	<1	2	6	280	--	--	--		
MW-2	05-27-97	37.99	15.42	ND	22.57	05-28-97	750	14	<1	<1	10	150	--	--	--		
MW-2	08-07-97	37.99	16.92	ND	21.07	08-07-97	360	31	<2.5	<2.5	15	260	--	--	--		
MW-2	11-10-97	37.99	17.52	ND	20.47	11-10-97	1,300	82	<5	14	49	550	--	--	--		
MW-2	02-16-98	37.99	12.04	ND	25.95	02-16-98	<2,500	<25	<25	<25	<25	4,200	--	--	--		
MW-2	04-15-98	37.99	12.34	ND	25.65	04-15-98	<10,000	<100	<100	<100	<100	7,300	--	--	--		
MW-2	07-24-98	37.99	14.45	ND	23.54	07-24-98	<2,500	<25	<25	<25	<25	1,500	--	--	--		
MW-2	10-19-98	37.99	16.08	ND	21.91	10-19-98	<1,000	18	<10	<10	<10	1,100	--	--	--		
MW-2	01-28-99	37.99	15.59	0.02	22.41 [1]	01-28-99	160,000	3,000	24,000	4,400	31,000	23,000	--	--	--		
MW-2	06-25-99	37.99	19.20	3.73[4]	21.51 [1]	06-25-99	120,000	6,900	21,000	2,600	19,000	18,000	17,000[3]	--	--	0.49	NP
MW-2	08-25-99	37.99	16.49	0.02	21.51 [1]	08-25-99	92,000	2,200	16,000	3,200	19,000	11,000	9,400[3]	--	--	0.84	NP
MW-2	11-10-99	37.99	16.08	ND	21.91	11-10-99	56,000	2,400	5,900	1,500	10,000	17,000	21,000[3]	--	--	0.41	NP
MW-2	02-09-00	37.99	14.85	ND	23.14	02-09-00	1,700	270	14	17	21	70,000	55,000[3]	--	--	0.97	NP
MW-3	08-01-95	39.32	17.00	ND	22.32	08-01-95	<50	<0.5	<0.5	<0.5	<0.5	--	--	600	76[2]		
MW-3	12-14-95	39.32	16.70	ND	22.62	12-14-95	<50	<0.5	<0.5	<0.5	<0.5	<5	--	<500	<50		
MW-3	03-21-96	39.32	14.17	ND	25.15	03-21-96	<50	<0.5	<0.5	<0.5	<0.5	<5	--	<500	<50		
MW-3	05-24-96	39.32	15.30	ND	24.02	05-24-96	<50	<0.5	<0.5	<0.5	<0.5	<5	--	<500	<50		
MW-3	08-09-96	39.32	17.58	ND	21.74	08-09-96	<50	<0.5	<0.5	<0.5	<0.5	<5	--	<500	--		
MW-3	11-06-96	39.32	18.33	ND	20.99	11-06-96	<50	<0.5	<0.5	<0.5	<0.5	<5	--	--	--		
MW-3	03-24-97	39.32	15.44	ND	23.88	03-24-97	<50	<0.5	<0.5	<0.5	<0.5	<5	--	--	--		
MW-3	05-27-97	39.32	16.75	ND	22.57	05-28-97	<50	<0.5	<0.5	<0.5	<0.5	<5	--	--	--		
MW-3	08-07-97	39.32	18.35	ND	20.97	08-07-97	<50	<0.5	<0.5	<0.5	<0.5	<5	--	--	--		
MW-3	11-10-97	39.32	18.83	ND	20.49	11-10-97	<50	<0.5	<0.5	<0.5	<0.5	<5	--	--	--		

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ARCO Service Station 2111
1156 Davis Street, San Leandro, California

Well Designation	Water Level Field Date	Top of Casing Elevation ft-MSL	Depth to Water feet	Free Product Thickness feet	Groundwater Elevation ft-MSL	Water Sample Field Date	TPHG LUFT Method µg/L	Benzene EPA 8021B* µg/L	Toluene EPA 8021B* µg/L	Ethylbenzene EPA 8021B* µg/L	Total Xylenes EPA 8021B* µg/L	MTBE EPA 8021B* µg/L	MTBE EPA 8260 µg/L	TRPH EPA 418.1 µg/L	TPHD LUFT Method µg/L	Dissolved Oxygen mg/L	Purged/ Not Purged P/NP
MW-3	02-16-98	39.32	11.99	ND	27.33	02-16-98	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-3	04-15-98	39.32	13.75	ND	25.57	04-15-98	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-3	07-24-98	39.32	15.90	ND	23.42	07-24-98	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-3	10-19-98	39.32	17.45	ND	21.87	10-19-98	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-3	01-28-99	39.32	16.40	ND	22.92	01-28-99	<100	14	4	<1	6	100	--	--	--		
MW-3	06-25-99	39.32	17.92	ND	21.40	06-25-99	83	9.0	1.4	<0.5	2.5	220	--	--	--	1.11	NP
MW-3	08-25-99	39.32	17.79	ND	21.53	08-25-99	240	41	12	3.7	9.9	160	--	--	--	1.13	NP
MW-3	11-10-99	39.32	17.37	ND	21.95	11-10-99	620	100	9.7	4.1	21	150	--	--	--	0.24	NP
MW-3	02-09-00	39.32	15.77	ND	23.55	02-09-00	<50	<0.5	0.7	<0.5	<1	180	--	--	--	0.62	NP
MW-4	08-01-95	38.10	15.65	ND	22.45	08-01-95	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--		
MW-4	12-14-95	38.10	15.35	ND	22.75	12-14-95	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-4	03-21-96	38.10	12.74	ND	25.36	03-21-96	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-4	05-24-96	38.10	14.03	ND	24.07	05-24-96	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-4	08-09-96	38.10	16.10	ND	22.00	08-09-96	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-4	11-06-96	38.10	17.00	ND	21.10	11-06-96	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-4	03-24-97	38.10	14.21	ND	23.89	03-24-97	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-4	05-27-97	38.10	15.38	ND	22.72	05-28-97	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-4	08-07-97	38.10	16.95	ND	21.15	08-07-97	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-4	11-10-97	38.10	17.53	ND	20.57	11-10-97	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-4	02-16-98	38.10	10.65	ND	27.45	02-16-98	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-4	04-15-98	38.10	12.20	ND	25.90	04-15-98	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-4	07-24-98	38.10	14.47	ND	23.63	07-24-98	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-4	10-19-98	38.10	16.20	ND	21.90	10-19-98	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-4	01-28-99	38.10	15.02	ND	23.08	01-28-99	340	52	5.5	<0.5	74	31	--	--	--		

Table 1
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Petroleum Hydrocarbons and Their Constituents

ARCO Service Station 2111
1156 Davis Street, San Leandro, California

Well Designation	Water Level Field Date	Top of Casing Elevation ft-MSL	Depth to Water feet	Free Product Thickness feet	Groundwater Elevation ft-MSL	Water Sample Field Date	TPHG LUFT Method µg/L	Benzene EPA 8021B* µg/L	Toluene EPA 8021B* µg/L	Ethylbenzene EPA 8021B* µg/L	Total Xylenes EPA 8021B* µg/L	MTBE EPA 8021B* µg/L	MTBE EPA 8260 µg/L	TRPH EPA 418.1 µg/L	TPHD LUFT Method µg/L	Dissolved Oxygen mg/L	Purged/ Not Purged P/NP
MW-4	06-25-99	38.10	15.57	ND	22.53	06-25-99	510	78	4.1	0.5	18	94	--	--	--	0.90	NP
MW-4	08-25-99	38.10	16.43	ND	21.67	08-25-99	660	130	21	6.4	39	110	--	--	--	1.01	NP
MW-4	11-10-99	38.10	16.02	ND	22.08	11-10-99	510	98	5.1	3.1	15	69	--	--	--	0.28	NP
MW-4	02-09-00	38.10	14.30	ND	23.80	02-09-00	<50	<0.5	0.9	<0.5	<1	55	--	--	--	0.67	NP
MW-5	03-21-96	37.21	12.60	ND	24.61	03-22-96	<50	<0.5	<0.5	<0.5	<0.5	82	--	--	--		
MW-5	05-24-96	37.21	13.71	ND	23.50	05-24-96	<50	<0.5	<0.5	<0.5	<0.5	7	--	--	--		
MW-5	08-09-96	37.21	15.60	ND	21.61	08-09-96	<50	<0.5	<0.5	<0.5	<0.5	8	--	--	--		
MW-5	11-06-96	37.21	16.36	ND	20.85	11-06-96	<50	<0.5	<0.5	<0.5	<0.5	100	--	--	--		
MW-5	03-24-97	37.21	13.87	ND	23.34	03-24-97	<50	<0.5	<0.5	<0.5	<0.5	460	--	--	--		
MW-5	05-27-97	37.21	14.71	ND	22.50	05-28-97	<100	<1	<1	<1	<1	120	--	--	--		
MW-5	08-07-97	37.21	16.90	ND	20.31	08-07-97	<250	<2.5	<2.5	<2.5	<2.5	250	--	--	--		
MW-5	11-10-97	37.21	16.88	ND	20.33	11-10-97	<1,000	<10	<10	<10	<10	770	--	--	--		
MW-5	02-16-98	37.21	10.56	ND	26.65	02-16-98	<200	<2	<2	<2	<2	230	--	--	--		
MW-5	04-15-98	37.21	12.20	ND	25.01	04-15-98	<500	<5	<5	<5	<5	900	--	--	--		
MW-5	07-24-98	37.21	14.20	ND	23.01	07-24-98	<500	<5	<5	<5	<5	570	--	--	--		
MW-5	10-19-98	37.21	15.74	ND	21.47	10-19-98	<250	<2.5	<2.5	<2.5	<2.5	300	--	--	--		
MW-5	01-28-99	37.21	14.60	ND	22.61	01-28-99	<500	8	<5	<5	<5	290	--	--	--		
MW-5	06-25-99	37.21	15.10	ND	22.11	06-25-99	<50	<0.5	<0.5	<0.5	<0.5	1,300	--	--	--	0.76	NP
MW-5	08-25-99	37.21	15.91	ND	21.30	08-25-99	<50	<0.5	<0.5	<0.5	<0.5	6,700	--	--	--	0.98	NP
MW-5	11-10-99	37.21	15.52	ND	21.69	11-10-99	130	2.0	7.0	1.3	21	5,000	--	--	--	0.21	NP
MW-5	02-09-00	37.21	14.03	ND	23.18	02-09-00	92	<0.5	0.8	<0.5	1.0	7,900	--	--	--	0.51	NP
MW-6	03-21-96	37.11	11.55	ND	25.56	03-22-96	<50	<0.5	1.9	<0.5	<0.5	<3	--	--	--		
MW-6	05-24-96	37.11	12.80	ND	24.31	05-24-96	<50	<0.5	<0.5	<0.5	<0.5	6	--	--	--		

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1156 Davis Street, San Leandro, California

Well Designation	Water Level Field Date	Top of Casing Elevation ft-MSL	Depth to Water feet	Free Product Thickness feet	Groundwater Elevation ft-MSL	Water Sample Field Date	TPHC LUFT Method µg/L	Benzene EPA 8021B* µg/L	Toluene EPA 8021B* µg/L	Ethylbenzene EPA 8021B* µg/L	Total Xylenes EPA 8021B* µg/L	MTBE EPA 8021B* µg/L	MTBE EPA 8260 µg/L	TRPH EPA 418.1 µg/L	TPHD LUFT Method µg/L	Dissolved Oxygen mg/L	Purged/ Not Purged P/NP
MW-6	08-09-96	37.11	Not surveyed			08-09-96	Not sampled: Car parked on well										
MW-6	11-06-96	37.11	Not surveyed			11-06-96	Not sampled: Car parked on well										
MW-6	03-24-97	37.11	13.06	ND	24.05	03-24-97	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-6	05-27-97	37.11	14.30	ND	22.81	05-28-97	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-6	08-07-97	37.11	16.40	ND	20.71	08-07-97	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-6	11-10-97	37.11	16.53	ND	20.58	11-10-97	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-6	02-16-98	37.11	Not surveyed			02-16-98	Not sampled: Car parked on well										
MW-6	04-15-98	37.11	10.95	ND	26.16	04-15-98	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-6	07-24-98	37.11	13.30	ND	23.81	07-24-98	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-6	10-19-98	37.11	Not surveyed			10-19-98	Not sampled: Car parked on well										
MW-6	01-28-99	37.11	13.92	ND	23.19	01-28-99	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--		
MW-6	06-25-99	37.11	15.47	ND	21.64	06-25-99	<50	<0.5	<0.5	<0.5	<0.5	∅	--	--	--	0.74	NP
MW-6	08-25-99	37.11	15.39	ND	21.72	08-25-99	<50	<0.5	3.4	0.6	3.7	∅	--	--	--	0.92	NP
MW-6	11-10-99	37.11	14.92	ND	22.19	11-10-99	<50	<0.5	<0.5	<0.5	<1	∅	--	--	--	0.31	NP
MW-6	02-09-00	37.11	13.30	ND	23.81	02-09-00	<50	<0.5	0.9	<0.5	1.3	∅	--	--	--	0.79	NP
MW-7	03-21-96	38.68	13.32	ND	25.36	03-22-96	32,000	870	450	970	4,900	280	--	--	--		
MW-7	05-24-96	38.68	14.58	ND	24.10	05-24-96	22,000	570	40	42	1,900	<200[2]	--	--	--		
MW-7	08-09-96	38.68	15.33	ND	23.35	08-09-96	14,000	390	<10	180	470	<200[2]	--	--	--		
MW-7	11-06-96	38.68	16.95	ND	21.73	11-06-96	9,500	440	<10	210	150	<100[2]	--	--	--		
MW-7	03-24-97	38.68	14.65	ND	24.03	03-24-97	6,400	420	<10	260	13	480	--	--	--		
MW-7	05-27-97	38.68	15.58	ND	23.10	05-28-97	5,000	420	<5	230	10	460	--	--	--		
MW-7	08-07-97	38.68	17.10	ND	21.58	08-07-97	3,900	350	<5	200	10	330	--	--	--		
MW-7	11-10-97	38.68	18.05	ND	20.63	11-10-97	5,600	590	10	370	43	540	--	--	--		
MW-7	02-16-98	38.68	12.03	ND	26.65	02-16-98	<5,000	390	<50	<50	61	4,300	--	--	--		

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Well Designation	Water Level Field Date	Top of Casing Elevation ft-MSL	Depth to Water feet	Free Product Thickness feet	Groundwater Elevation ft-MSL	Water Sample Field Date	TPHG LUFT Method µg/L	Benzene EPA 8021B* µg/L	Toluene EPA 8021B* µg/L	Ethylbenzene EPA 8021B* µg/L	Total Xylenes EPA 8021B* µg/L	MTBE EPA 8021B* µg/L	MTBE EPA 8260 µg/L	TRPH EPA 418.1 µg/L	TPHD LUFT Method µg/L	Dissolved Oxygen mg/L	Purged/ Not Purged P/NP
MW-7	04-15-98	38.68	13.02	ND	25.66	04-15-98	<10,000	<100	<100	<100	<100	8,900	--	--	--		
MW-7	07-24-98	38.68	14.18	ND	24.50	07-24-98	5,800	180	<50	74	<50	4,200	--	--	--		
MW-7	10-19-98	38.68	15.99	ND	22.69	10-19-98	<2,500	54	<25	72	<25	3,000	--	--	--		
MW-7	01-28-99	38.68	15.69	ND	22.99	01-28-99	4,500	560	250	<50	94	6,200	--	--	--		
MW-7	06-25-99	38.68	15.36	ND	23.32	06-25-99	3,900	520	160	46	100	45,000	63,000[3]	--	--	0.56	NP
MW-7	08-25-99	38.68	16.71	ND	21.97	08-25-99	3,400	730	77	51	110	62,000	76,000[3]	--	--	0.90	NP
MW-7	11-10-99	38.68	16.76	ND	21.92	11-10-99	15,000	340	19	13	20	55,000	91,000[3]	--	--	0.37	NP
MW-7	02-09-00	38.68	14.45	0.03	24.25 [1]	02-09-00	Not sampled: free product present										

ft-MSL: elevation in feet, relative to mean sea level
TPHG: total petroleum hydrocarbons as gasoline, California DHS LUFT Method
MTBE: Methyl tert-butyl ether
TRPH: total recoverable petroleum hydrocarbons
TPHD: total petroleum hydrocarbons as diesel, California DHS LUFT Method
*: EPA method 8020 prior to 11/10/99
EPA: United States Environmental Protection Agency
µg/L: micrograms per liter
mg/L: milligrams per liter
ND: none detected
--: not available or not analyzed
<: less than laboratory detection limit stated to the right
[1]: [corrected elevation (Z')] = Z + (h * 0.73) where: Z = measured elevation, h = floating product thickness, 0.73 = density ratio of oil to water
[2]: chromatogram fingerprint is not characteristic of diesel
[3]: also analyzed for fuel oxygenates
[4]: this value is suspected to be erroneous based on subsequent check by bailer (following day). See discussion

Table 2
Groundwater Flow Direction and Gradient

ARCO Service Station 2111
1156 Davis Street, San Leandro, California

Date Measured	Average Flow Direction	Average Hydraulic Gradient
08-01-95	NR	NR
12-14-95	West	0.002
03-21-96	West-Southwest	0.005
05-24-96	West	0.003
08-09-96	West-Northwest	0.01
11-06-96	West-Northwest	0.007
03-24-97	West	0.005
05-27-97	North-Northwest	0.006
08-07-97	West	0.009
11-10-97	West	0.002
02-16-98	South-Southwest	0.013
04-15-98	West-Southwest	0.014
07-24-98	Northwest	0.01
10-19-98	West	0.008
01-28-99	Southwest	0.01
06-25-99	North-Northwest	0.017
08-25-99	West-Northwest	0.005
11-10-99	West-Southwest	0.002
02-09-00	West-Northwest	0.015

NR: not recorded

ATTACHMENT C
CERTIFIED ANALYTICAL REPORTS
AND
CHAIN-OF-CUSTODY



8 May, 2002

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

RE: ARCO 2111, San Leandro, CA
Sequoia Report: S204395

Enclosed are the results of analyses for samples received by the laboratory on 04/24/02 12:00. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Lito Diaz
Laboratory Director

CA ELAP Certificate #1624



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

Project: ARCO 2111, San Leandro, CA
Project Number: 2111, San Leandro, CA
Project Manager: Steven Meeks

Reported:
05/08/02 15:13

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1	S204395-01	Water	04/23/02 07:16	04/24/02 12:00
MW-2	S204395-02	Water	04/23/02 07:10	04/24/02 12:00
MW-3	S204395-03	Water	04/23/02 07:24	04/24/02 12:00
MW-4	S204395-04	Water	04/23/02 07:34	04/24/02 12:00
MW-5	S204395-05	Water	04/23/02 06:42	04/24/02 12:00
MW-6	S204395-06	Water	04/23/02 06:35	04/24/02 12:00
MW-7	S204395-07	Water	04/23/02 06:58	04/24/02 12:00
TB	S204395-08	Water	04/23/02 06:00	04/24/02 12:00

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.



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

Project: ARCO 2111, San Leandro, CA
 Project Number: 2111, San Leandro, CA
 Project Manager: Steven Meeks

Reported:
 05/08/02 15:13

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 (S204395-01) Water Sampled: 04/23/02 07:16 Received: 04/24/02 12:00									
Purgeable Hydrocarbons	ND	50	ug/l	1	2050034	05/02/02	05/02/02	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	30	2.5	"	"	"	"	"	"	C-07
<i>Surrogate: a,a,a-Trifluorotoluene</i>		91 %	60-140		"	"	"	"	
MW-2 (S204395-02) Water Sampled: 04/23/02 07:10 Received: 04/24/02 12:00									
Purgeable Hydrocarbons	9000	5000	ug/l	100	2050070	05/06/02	05/06/02	DHS LUFT	
Benzene	220	50	"	"	"	"	"	"	
Toluene	110	50	"	"	"	"	"	"	
Ethylbenzene	470	50	"	"	"	"	"	"	
Xylenes (total)	2500	50	"	"	"	"	"	"	
Methyl tert-butyl ether	8500	250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		102 %	60-140		"	"	"	"	
MW-3 (S204395-03) Water Sampled: 04/23/02 07:24 Received: 04/24/02 12:00									
Purgeable Hydrocarbons	ND	50	ug/l	1	2050034	05/02/02	05/03/02	DHS LUFT	C-07
Benzene	ND	0.50	"	"	"	"	"	"	C-07
Toluene	ND	0.50	"	"	"	"	"	"	C-07
Ethylbenzene	ND	0.50	"	"	"	"	"	"	C-07
Xylenes (total)	ND	0.50	"	"	"	"	"	"	C-07
Methyl tert-butyl ether	77	2.5	"	"	"	"	"	"	C-07
<i>Surrogate: a,a,a-Trifluorotoluene</i>		87 %	60-140		"	"	"	"	



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

Project: ARCO 2111, San Leandro, CA
 Project Number: 2111, San Leandro, CA
 Project Manager: Steven Meeks

Reported:
 05/08/02 15:13

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-4 (S204395-04) Water Sampled: 04/23/02 07:34 Received: 04/24/02 12:00									
Purgeable Hydrocarbons	ND	50	ug/l	1	2050040	05/03/02	05/03/02	DHS LUFT	
Benzene	2.8	0.50	"	"	"	"	"	"	C-07
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	42	2.5	"	"	"	"	"	"	C-07
<i>Surrogate: a,a,a-Trifluorotoluene</i>		107 %	60-140	"	"	"	"	"	
MW-5 (S204395-05) Water Sampled: 04/23/02 06:42 Received: 04/24/02 12:00									
Purgeable Hydrocarbons	ND	5000	ug/l	100	2050072	05/06/02	05/06/02	DHS LUFT	
Benzene	ND	50	"	"	"	"	"	"	
Toluene	ND	50	"	"	"	"	"	"	
Ethylbenzene	ND	50	"	"	"	"	"	"	
Xylenes (total)	ND	50	"	"	"	"	"	"	
Methyl tert-butyl ether	8900	250	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		107 %	60-140	"	"	"	"	"	
MW-6 (S204395-06) Water Sampled: 04/23/02 06:35 Received: 04/24/02 12:00									
Purgeable Hydrocarbons	ND	50	ug/l	1	2050040	05/03/02	05/03/02	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	ND	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	ND	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	3.1	2.5	"	"	"	"	"	"	C-07
<i>Surrogate: a,a,a-Trifluorotoluene</i>		105 %	60-140	"	"	"	"	"	



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

Project: ARCO 2111, San Leandro, CA
Project Number: 2111, San Leandro, CA
Project Manager: Steven Meeks

Reported:
05/08/02 15:13

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-7 (S204395-07) Water Sampled: 04/23/02 06:58 Received: 04/24/02 12:00									
Purgeable Hydrocarbons	ND	20000	ug/l	400	2050072	05/06/02	05/06/02	DHS LUFT	
Benzene	530	200	"	"	"	"	"	"	
Toluene	200	200	"	"	"	"	"	"	
Ethylbenzene	220	200	"	"	"	"	"	"	
Xylenes (total)	800	200	"	"	"	"	"	"	
Methyl tert-butyl ether	67000	1000	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		105 %	60-140	"	"	"	"	"	
TB (S204395-08) Water Sampled: 04/23/02 06:00 Received: 04/24/02 12:00									
Purgeable Hydrocarbons	ND	50	ug/l	1	2050040	05/03/02	05/03/02	DHS LUFT	
Benzene	ND	0.50	"	"	"	"	"	"	
Toluene	1.7	0.50	"	"	"	"	"	"	
Ethylbenzene	ND	0.50	"	"	"	"	"	"	
Xylenes (total)	0.83	0.50	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.5	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		111 %	60-140	"	"	"	"	"	

Delta Environmental Consultants (Rancho Cordova 3164 Gold Camp Drive Ste. 200 Rancho Cordova CA, 95670	Project: ARCO 2111, San Leandro, CA Project Number: 2111, San Leandro, CA Project Manager: Steven Meeks	Reported: 05/08/02 15:13
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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 2050034 - EPA 5030B (P/T)
Blank (2050034-BLK1)

Prepared & Analyzed: 05/02/02

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>	<i>10.0</i>		<i>"</i>	<i>10.0</i>		<i>100</i>	<i>60-140</i>			

LCS (2050034-BS1)

Prepared & Analyzed: 05/02/02

Benzene	10.6	0.50	ug/l	10.0		106	70-130			
Toluene	9.58	0.50	"	10.0		96	70-130			
Ethylbenzene	9.80	0.50	"	10.0		98	70-130			
Xylenes (total)	30.4	0.50	"	30.0		101	70-130			
Methyl tert-butyl ether	12.7	2.5	"	10.0		127	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>10.8</i>		<i>"</i>	<i>10.0</i>		<i>108</i>	<i>60-140</i>			

Matrix Spike (2050034-MS1)

Source: S204383-07

Prepared & Analyzed: 05/02/02

Benzene	10.1	0.50	ug/l	10.0	ND	101	60-140			
Toluene	9.59	0.50	"	10.0	ND	96	60-140			
Ethylbenzene	9.61	0.50	"	10.0	ND	96	60-140			
Xylenes (total)	30.6	0.50	"	30.0	ND	102	60-140			
Methyl tert-butyl ether	9.92	2.5	"	10.0	ND	99	60-140			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>9.91</i>		<i>"</i>	<i>10.0</i>		<i>99</i>	<i>60-140</i>			

Matrix Spike Dup (2050034-MSD1)

Source: S204383-07

Prepared & Analyzed: 05/02/02

Benzene	11.0	0.50	ug/l	10.0	ND	110	60-140	9	25	
Toluene	10.2	0.50	"	10.0	ND	102	60-140	6	25	
Ethylbenzene	10.2	0.50	"	10.0	ND	102	60-140	6	25	
Xylenes (total)	32.9	0.50	"	30.0	ND	110	60-140	7	25	
Methyl tert-butyl ether	13.7	2.5	"	10.0	ND	137	60-140	32	25	QR-02
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>10.8</i>		<i>"</i>	<i>10.0</i>		<i>108</i>	<i>60-140</i>			



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

Project: ARCO 2111, San Leandro, CA
Project Number: 2111, San Leandro, CA
Project Manager: Steven Meeks

Reported:
05/08/02 15:13

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 2050040 - EPA 5030B (P/T)

Blank (2050040-BLK1)

Prepared & Analyzed: 05/03/02

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>	<i>9.87</i>		<i>"</i>	<i>10.0</i>		<i>99</i>	<i>60-140</i>			

LCS (2050040-BS1)

Prepared & Analyzed: 05/03/02

Benzene	10.3	0.50	ug/l	10.0		103	70-130			
Toluene	10.2	0.50	"	10.0		102	70-130			
Ethylbenzene	9.99	0.50	"	10.0		100	70-130			
Xylenes (total)	30.7	0.50	"	30.0		102	70-130			
Methyl tert-butyl ether	10.6	2.5	"	10.0		106	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>10.6</i>		<i>"</i>	<i>10.0</i>		<i>106</i>	<i>60-140</i>			

Matrix Spike (2050040-MS1)

Source: S204396-03

Prepared & Analyzed: 05/03/02

Benzene	10.8	0.50	ug/l	10.0	ND	108	60-140			
Toluene	10.5	0.50	"	10.0	ND	105	60-140			
Ethylbenzene	10.2	0.50	"	10.0	ND	102	60-140			
Xylenes (total)	30.9	0.50	"	30.0	ND	103	60-140			
Methyl tert-butyl ether	11.7	2.5	"	10.0	ND	110	60-140			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>10.7</i>		<i>"</i>	<i>10.0</i>		<i>107</i>	<i>60-140</i>			

Matrix Spike Dup (2050040-MSD1)

Source: S204396-03

Prepared & Analyzed: 05/03/02

Benzene	11.5	0.50	ug/l	10.0	ND	115	60-140	6	25	
Toluene	11.2	0.50	"	10.0	ND	112	60-140	6	25	
Ethylbenzene	11.0	0.50	"	10.0	ND	110	60-140	8	25	
Xylenes (total)	32.4	0.50	"	30.0	ND	108	60-140	5	25	
Methyl tert-butyl ether	12.3	2.5	"	10.0	ND	116	60-140	5	25	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	<i>10.8</i>		<i>"</i>	<i>10.0</i>		<i>108</i>	<i>60-140</i>			



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

Project: ARCO 2111, San Leandro, CA
Project Number: 2111, San Leandro, CA
Project Manager: Steven Meeks

Reported:
05/08/02 15:13

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 2050070 - EPA 5030B (P/T)

Blank (2050070-BLK1)

Prepared & Analyzed: 05/06/02

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>	10.0		"	10.0		100	60-140			

LCS (2050070-BS1)

Prepared & Analyzed: 05/06/02

Benzene	9.57	0.50	ug/l	10.0		96	70-130			
Toluene	9.70	0.50	"	10.0		97	70-130			
Ethylbenzene	9.88	0.50	"	10.0		99	70-130			
Xylenes (total)	30.7	0.50	"	30.0		102	70-130			
Methyl tert-butyl ether	12.8	2.5	"	10.0		128	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.9		"	10.0		109	60-140			

Matrix Spike (2050070-MS1)

Source: S204396-11

Prepared & Analyzed: 05/06/02

Benzene	8.64	0.50	ug/l	10.0	ND	86	60-140			
Toluene	9.12	0.50	"	10.0	ND	91	60-140			
Ethylbenzene	9.41	0.50	"	10.0	ND	94	60-140			
Xylenes (total)	30.0	0.50	"	30.0	ND	100	60-140			
Methyl tert-butyl ether	53.4	2.5	"	10.0	46	74	60-140			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.0		"	10.0		100	60-140			

Matrix Spike Dup (2050070-MSD1)

Source: S204396-11

Prepared & Analyzed: 05/06/02

Benzene	9.62	0.50	ug/l	10.0	ND	96	60-140	11	25	
Toluene	9.94	0.50	"	10.0	ND	99	60-140	9	25	
Ethylbenzene	10.1	0.50	"	10.0	ND	101	60-140	7	25	
Xylenes (total)	33.1	0.50	"	30.0	ND	110	60-140	10	25	
Methyl tert-butyl ether	55.9	2.5	"	10.0	46	99	60-140	5	25	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.7		"	10.0		107	60-140			



Delta Environmental Consultants (Rancho Cordova) 3164 Gold Camp Drive Ste. 200 Rancho Cordova CA, 95670	Project: ARCO 2111, San Leandro, CA Project Number: 2111, San Leandro, CA Project Manager: Steven Meeks	Reported: 05/08/02 15:13
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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 2050072 - EPA 5030B (P/T)

Blank (2050072-BLK1)

Prepared & Analyzed: 05/06/02

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>	9.88		"	10.0		99	60-140			

LCS (2050072-BS1)

Prepared & Analyzed: 05/06/02

Benzene	11.1	0.50	ug/l	10.0		111	70-130			
Toluene	11.0	0.50	"	10.0		110	70-130			
Ethylbenzene	10.7	0.50	"	10.0		107	70-130			
Xylenes (total)	32.7	0.50	"	30.0		109	70-130			
Methyl tert-butyl ether	11.7	2.5	"	10.0		117	70-130			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.4		"	10.0		104	60-140			

Matrix Spike (2050072-MS1)

Source: S204421-03

Prepared & Analyzed: 05/06/02

Benzene	10.2	0.50	ug/l	10.0	ND	101	60-140			
Toluene	10.2	0.50	"	10.0	ND	102	60-140			
Ethylbenzene	10.1	0.50	"	10.0	ND	101	60-140			
Xylenes (total)	31.4	0.50	"	30.0	ND	105	60-140			
Methyl tert-butyl ether	16.3	2.5	"	10.0	4.4	119	60-140			
<i>Surrogate: a,a,a-Trifluorotoluene</i>	9.17		"	10.0		92	60-140			

Matrix Spike Dup (2050072-MSD1)

Source: S204421-03

Prepared & Analyzed: 05/06/02

Benzene	11.3	0.50	ug/l	10.0	ND	112	60-140	10	25	
Toluene	11.1	0.50	"	10.0	ND	111	60-140	8	25	
Ethylbenzene	10.9	0.50	"	10.0	ND	109	60-140	8	25	
Xylenes (total)	34.0	0.50	"	30.0	ND	113	60-140	8	25	
Methyl tert-butyl ether	17.2	2.5	"	10.0	4.4	128	60-140	5	25	
<i>Surrogate: a,a,a-Trifluorotoluene</i>	10.1		"	10.0		101	60-140			



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

Project: ARCO 2111, San Leandro, CA
Project Number: 2111, San Leandro, CA
Project Manager: Steven Meeks

Reported:
05/08/02 15:13

Notes and Definitions

- C-07 The reported compound(s) have been confirmed by a second (dissimilar) column or detector.
- QR-02 The RPD result exceeded the control limits; however, both percent recoveries were acceptable. Sample results for the QC batch were accepted based on percent recoveries and completeness of QC data.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

ARCO

Work Authorization No.

Chain of Custody

ARCO Facility No.	2111	City (Facility)	San Leandro	Project Manager (Consultant)	Steve Meeks
ARCO engineer	Paul Supple	Telephone no. (ARCO)		Telephone no. (Consultant)	638-2085
Company name (Consultant)	Delta	Address (Consultant)	Rancho Coyava		

Laboratory name Sequoia

Contract number

Sample I.D.	Lab no.	Container no.	Matrix			Preservation		Sampling date	Sampling time	BTEX EPA 801	TPH EPA 801	TPH Method 8015 Gas <input type="checkbox"/> Diesel <input type="checkbox"/>	Oil and Grease 413.1 <input type="checkbox"/> 415.2 <input type="checkbox"/>	TPH EPA 418-1/ASMDDSE	BTEX + MTBE EPA 8260	BTEX + Sulfur Compounds EPA 8260	TCLP Methanol VOCs Sumi VOCs	CAMP EPA 8210-10 TLCO EPA 8210-10	Lead EPA 7230 Cadmium EPA 7230																											
			Sol	Water	Other	Ice	Acid																																							
MW 1	4			X		X	X	4/23/02	716	X																																				
MW 2									710																																					
MW 3									724																																					
MW 4									734																																					
MW 5									642																																					
MW 6									635																																					
MW 7									658																																					
TB	2								600																																					

Method of shipment

Special detection Limit/reporting

Special QA/QC

Remarks

Type of Work

- Dispenser Work
- Line Job
- Routine Sampling
- Site Acquisitions
- Site Assessment
- UST Removal
- UST Replacement
- Other

Lab number

Turnaround time

Priority Rush

1 Business Day

Rush

2 Business Days

Expedited

5 Business Days

Standard

10 Business Days

Condition of sample:				Temperature received: 60c			
Relinquished by sampler	Date	Time	Received by	Date	Time	Received by	
James Bough	4/24/02	1200					
Relinquished by	Date	Time	Received by	Date	Time	Received by	

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: Delta Env
 REC. BY (PRINT) manes
 WORKORDER: 8204395

DATE Received at Lab: 4/24/02
 TIME Received at Lab: 12:00
 LOG IN DATE: 4/24/02

(Drinking water) for regulatory purposes: YES/NO NO
 (Wastewater) for regulatory purposes: YES/NO NO

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	#	CLIENT ID	DESCRIPTION	SAMPLE MATRIX	DATE SAMPLED	CONDITION (ETC.)
1. Custody Seal(s)	Present / <u>Absent</u> Intact / Broken*	8204395	01	mw-1	VOL	W	4/23/02	
2. Chain-of-Custody	<u>Present</u> / Absent*		02	-2				
3. Traffic Reports or Packing List:	Present / <u>Absent</u>		03	-3				
4. Airbill:	Airbill / Slicker Present / <u>Absent</u>		04	-4				
5. Airbill #:			05	-5				
6. Sample Labels:	<u>Present</u> / Absent		06	-6				
7. Sample IDs:	<u>Listed</u> / Not Listed on Chain-of-Custody		07	-7				
8. Sample Condition:	<u>Intact</u> / Broken* / Leaking*		08	TB				
9. Does information on custody reports, traffic reports and sample labels agree?	<u>Yes</u> / No*							
10. Sample received within hold time:	<u>Yes</u> / No*							
11. Proper Preservatives used:	<u>Yes</u> / No*							
12. Temp Rec. at Lab:	<u>6°C</u>							
(Acceptance range for samples requiring thermal pres.: 4±2°C)	Yes / No*							

***If Circled, contact Project Manager and attach record of resolution.**

ATTACHMENT D

FIELD DATA SHEETS



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

Arco Site Address: 1156 Davis Street
San Leandro, California

Arco Site Number: Arco 2111
 Delta Project No.: D000-306

Arco Project Manager: Paul Supple

Delta Project PM: Steve Meeks

Site Sampled By: Stratus (CH)

Date Sampled: 04-23-02

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	Confirm MTBE (8260) VOA	Dissolved Oxygen (mg/L)	Sample Frequency (A, S, Q)	Sample I.D.	Sample Time
MW-1	7:13	15.43	12.5	26.0	<input checked="" type="checkbox"/>		4 inch	2.0			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	2.82	Q/2,5,8,11		
MW-2	7:06	13.60	12.0	26.3	<input checked="" type="checkbox"/>		4 inch	2.0			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1.40	Q/2,5,8,11		
MW-3	7:18	14.96	11.9	26.5	<input checked="" type="checkbox"/>		4 inch	2.0			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0.73	Q/2,5,8,11		
MW-4	7:29	13.57	10.0	21.6	<input checked="" type="checkbox"/>		4 inch	2.0			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	0.74	Q/2,5,8,11		
MW-5	6:40	13.25	9.4	23.6	<input checked="" type="checkbox"/>		2 inch	0.5			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1.92	Q/2,5,8,11		
MW-6	6:30	12:44	10.0	24.8	<input checked="" type="checkbox"/>		2 inch	0.5			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1.45	Q/2,5,8,11		
MW-7	6:53	13.94	12.0	26.9	<input checked="" type="checkbox"/>		4 inch	2.0			<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	1.30	Q/2,5,8,11		
*Use Separate COC for Sample from MW-5					<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"/>				
					<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: Quarterly: MW-6, MW-5, MW-4, MW-3, MW-1, MW-7, MW-2

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

ATTACHMENT E

**COPY OF EDCC REPORT,
EDF AND GEOWELL SUBMITTAL CONFIRMATION NUMBER PAGE**

Error Summary Log

09/13/02

EDF 1.2i All files present in deliverable.

Laboratory:	Sequoia Analytical Laboratories, Inc., Sacramento, CA
Project Name:	ARCO 2111, San Leandro, C
Work Order Number:	S204395
Global ID:	T0600101764
Lab Report Number:	S204395050820021513

Report Summary

Labreport	Sampid	Labsampid	Mtrx	QC	Anmcode	Exmcode	Logdate	Extdate	Anadate	Lablotctl	Run	Sub
S20439505082002	MW-1 1513	S20439501	W	CS	SW8021B	SW5030B	04/23/02	05/02/02	05/02/02	2050034	1	
S20439505082002	MW-2 1513	S20439502	W	CS	SW8021B	SW5030B	04/23/02	05/06/02	05/06/02	2050070	1	
S20439505082002	MW-3 1513	S20439503	W	CS	SW8021B	SW5030B	04/23/02	05/02/02	05/03/02	2050034	1	
S20439505082002	MW-4 1513	S20439504	W	CS	SW8021B	SW5030B	04/23/02	05/03/02	05/03/02	2050040	1	
S20439505082002	MW-5 1513	S20439505	W	CS	SW8021B	SW5030B	04/23/02	05/06/02	05/06/02	2050072	1	
S20439505082002	MW-6 1513	S20439506	W	CS	SW8021B	SW5030B	04/23/02	05/03/02	05/03/02	2050040	1	
S20439505082002	MW-7 1513	S20439507	W	CS	SW8021B	SW5030B	04/23/02	05/06/02	05/06/02	2050072	1	
S20439505082002	TB 1513	S20439508	W	CS	SW8021B	SW5030B	04/23/02	05/03/02	05/03/02	2050040	1	
		S20438307	W	NC	SW8021B	SW5030B	//	05/02/02	05/02/02	2050034	1	
		S20439603	W	NC	SW8021B	SW5030B	//	05/03/02	05/03/02	2050040	1	
		S20439611	W	NC	SW8021B	SW5030B	//	05/06/02	05/06/02	2050070	1	
		S20442103	W	NC	SW8021B	SW5030B	//	05/06/02	05/06/02	2050072	1	
		2050034BS1	WQ	BS1	SW8021B	SW5030B	//	05/02/02	05/02/02	2050034	1	
		2050034BLK1	WQ	LB1	SW8021B	SW5030B	//	05/02/02	05/02/02	2050034	1	
		2050034MS1	W	MS1	SW8021B	SW5030B	//	05/02/02	05/02/02	2050034	1	
		2050034MSD1	W	SD1	SW8021B	SW5030B	//	05/02/02	05/02/02	2050034	1	
		2050040BS1	WQ	BS1	SW8021B	SW5030B	//	05/03/02	05/03/02	2050040	1	
		2050040BLK1	WQ	LB1	SW8021B	SW5030B	//	05/03/02	05/03/02	2050040	1	
		2050040MS1	W	MS1	SW8021B	SW5030B	//	05/03/02	05/03/02	2050040	1	
		2050040MSD1	W	SD1	SW8021B	SW5030B	//	05/03/02	05/03/02	2050040	1	
		2050070BS1	WQ	BS1	SW8021B	SW5030B	//	05/06/02	05/06/02	2050070	1	
		2050070BLK1	WQ	LB1	SW8021B	SW5030B	//	05/06/02	05/06/02	2050070	1	
		2050070MS1	W	MS1	SW8021B	SW5030B	//	05/06/02	05/06/02	2050070	1	
		2050070MSD1	W	SD1	SW8021B	SW5030B	//	05/06/02	05/06/02	2050070	1	
		2050072BS1	WQ	BS1	SW8021B	SW5030B	//	05/06/02	05/06/02	2050072	1	
		2050072BLK1	WQ	LB1	SW8021B	SW5030B	//	05/06/02	05/06/02	2050072	1	
		2050072MS1	W	MS1	SW8021B	SW5030B	//	05/06/02	05/06/02	2050072	1	
		2050072MSD1	W	SD1	SW8021B	SW5030B	//	05/06/02	05/06/02	2050072	1	

EDFSAMP: Error Summary Log

09/13/02

Error type	Logcode	Projname	Npdlwo	Sampid	Matrix
There are no errors in this data file					

EDFTEST: Error Summary Log

09/13/02

Error type	Labsampid	Qccode	Anmcode	Exmcode	Anadate	Run number
There are no errors in this data file					//	0

EDFRES: Error Summary Log

09/13/02

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	2050034MS1	MS1	W	SW8021B	PR	05/02/02	1	AAATFBZME
Warning: extra parameter	2050034MS1	MS1	W	SW8021B	PR	05/02/02	1	MTBE
Warning: extra parameter	2050034MS1	MS1	W	SW8021B	PR	05/02/02	1	XYLENES
Warning: extra parameter	2050034MSD1	SD1	W	SW8021B	PR	05/02/02	1	AAATFBZME
Warning: extra parameter	2050034MSD1	SD1	W	SW8021B	PR	05/02/02	1	MTBE
Warning: extra parameter	2050034MSD1	SD1	W	SW8021B	PR	05/02/02	1	XYLENES
Warning: extra parameter	2050040MS1	MS1	W	SW8021B	PR	05/03/02	1	AAATFBZME
Warning: extra parameter	2050040MS1	MS1	W	SW8021B	PR	05/03/02	1	MTBE
Warning: extra parameter	2050040MS1	MS1	W	SW8021B	PR	05/03/02	1	XYLENES
Warning: extra parameter	2050040MSD1	SD1	W	SW8021B	PR	05/03/02	1	AAATFBZME
Warning: extra parameter	2050040MSD1	SD1	W	SW8021B	PR	05/03/02	1	MTBE
Warning: extra parameter	2050040MSD1	SD1	W	SW8021B	PR	05/03/02	1	XYLENES
Warning: extra parameter	2050070MS1	MS1	W	SW8021B	PR	05/06/02	1	AAATFBZME
Warning: extra parameter	2050070MS1	MS1	W	SW8021B	PR	05/06/02	1	MTBE
Warning: extra parameter	2050070MS1	MS1	W	SW8021B	PR	05/06/02	1	XYLENES
Warning: extra parameter	2050070MSD1	SD1	W	SW8021B	PR	05/06/02	1	AAATFBZME
Warning: extra parameter	2050070MSD1	SD1	W	SW8021B	PR	05/06/02	1	MTBE
Warning: extra parameter	2050070MSD1	SD1	W	SW8021B	PR	05/06/02	1	XYLENES
Warning: extra parameter	2050072MS1	MS1	W	SW8021B	PR	05/06/02	1	AAATFBZME
Warning: extra parameter	2050072MS1	MS1	W	SW8021B	PR	05/06/02	1	MTBE
Warning: extra parameter	2050072MS1	MS1	W	SW8021B	PR	05/06/02	1	XYLENES
Warning: extra parameter	2050072MSD1	SD1	W	SW8021B	PR	05/06/02	1	AAATFBZME
Warning: extra parameter	2050072MSD1	SD1	W	SW8021B	PR	05/06/02	1	MTBE
Warning: extra parameter	2050072MSD1	SD1	W	SW8021B	PR	05/06/02	1	XYLENES
Warning: extra parameter	S20438307	NC	W	SW8021B	PR	05/02/02	1	AAATFBZME

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	S20438307	NC	W	SW8021B	PR	05/02/02	1	MTBE
Warning: extra parameter	S20438307	NC	W	SW8021B	PR	05/02/02	1	XYLENES
Warning: extra parameter	S20439501	CS	W	SW8021B	PR	05/02/02	1	AAATFBZME
Warning: extra parameter	S20439501	CS	W	SW8021B	PR	05/02/02	1	MTBE
Warning: extra parameter	S20439501	CS	W	SW8021B	PR	05/02/02	1	PHCG
Warning: extra parameter	S20439501	CS	W	SW8021B	PR	05/02/02	1	XYLENES
Warning: extra parameter	S20439502	CS	W	SW8021B	PR	05/06/02	1	AAATFBZME
Warning: extra parameter	S20439502	CS	W	SW8021B	PR	05/06/02	1	MTBE
Warning: extra parameter	S20439502	CS	W	SW8021B	PR	05/06/02	1	PHCG
Warning: extra parameter	S20439502	CS	W	SW8021B	PR	05/06/02	1	XYLENES
Warning: extra parameter	S20439503	CS	W	SW8021B	PR	05/03/02	1	AAATFBZME
Warning: extra parameter	S20439503	CS	W	SW8021B	PR	05/03/02	1	MTBE
Warning: extra parameter	S20439503	CS	W	SW8021B	PR	05/03/02	1	PHCG
Warning: extra parameter	S20439503	CS	W	SW8021B	PR	05/03/02	1	XYLENES
Warning: extra parameter	S20439504	CS	W	SW8021B	PR	05/03/02	1	AAATFBZME
Warning: extra parameter	S20439504	CS	W	SW8021B	PR	05/03/02	1	MTBE
Warning: extra parameter	S20439504	CS	W	SW8021B	PR	05/03/02	1	PHCG
Warning: extra parameter	S20439504	CS	W	SW8021B	PR	05/03/02	1	XYLENES
Warning: extra parameter	S20439505	CS	W	SW8021B	PR	05/06/02	1	AAATFBZME
Warning: extra parameter	S20439505	CS	W	SW8021B	PR	05/06/02	1	MTBE
Warning: extra parameter	S20439505	CS	W	SW8021B	PR	05/06/02	1	PHCG
Warning: extra parameter	S20439505	CS	W	SW8021B	PR	05/06/02	1	XYLENES
Warning: extra parameter	S20439506	CS	W	SW8021B	PR	05/03/02	1	AAATFBZME
Warning: extra parameter	S20439506	CS	W	SW8021B	PR	05/03/02	1	MTBE
Warning: extra parameter	S20439506	CS	W	SW8021B	PR	05/03/02	1	PHCG
Warning: extra parameter	S20439506	CS	W	SW8021B	PR	05/03/02	1	XYLENES
Warning: extra parameter	S20439507	CS	W	SW8021B	PR	05/06/02	1	AAATFBZME
Warning: extra parameter	S20439507	CS	W	SW8021B	PR	05/06/02	1	MTBE
Warning: extra parameter	S20439507	CS	W	SW8021B	PR	05/06/02	1	PHCG

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	S20439507	CS	W	SW8021B	PR	05/06/02	1	XYLENES
Warning: extra parameter	S20439508	CS	W	SW8021B	PR	05/03/02	1	AAATFBZME
Warning: extra parameter	S20439508	CS	W	SW8021B	PR	05/03/02	1	MTBE
Warning: extra parameter	S20439508	CS	W	SW8021B	PR	05/03/02	1	PHCG
Warning: extra parameter	S20439508	CS	W	SW8021B	PR	05/03/02	1	XYLENES
Warning: extra parameter	S20439603	NC	W	SW8021B	PR	05/03/02	1	AAATFBZME
Warning: extra parameter	S20439603	NC	W	SW8021B	PR	05/03/02	1	MTBE
Warning: extra parameter	S20439603	NC	W	SW8021B	PR	05/03/02	1	XYLENES
Warning: extra parameter	S20439611	NC	W	SW8021B	PR	05/06/02	1	AAATFBZME
Warning: extra parameter	S20439611	NC	W	SW8021B	PR	05/06/02	1	MTBE
Warning: extra parameter	S20439611	NC	W	SW8021B	PR	05/06/02	1	XYLENES
Warning: extra parameter	S20442103	NC	W	SW8021B	PR	05/06/02	1	AAATFBZME
Warning: extra parameter	S20442103	NC	W	SW8021B	PR	05/06/02	1	MTBE
Warning: extra parameter	S20442103	NC	W	SW8021B	PR	05/06/02	1	XYLENES
Warning: extra parameter	2050034BLK1	LB1	WQ	SW8021B	PR	05/02/02	1	AAATFBZME
Warning: extra parameter	2050034BLK1	LB1	WQ	SW8021B	PR	05/02/02	1	MTBE
Warning: extra parameter	2050034BLK1	LB1	WQ	SW8021B	PR	05/02/02	1	PHCG
Warning: extra parameter	2050034BLK1	LB1	WQ	SW8021B	PR	05/02/02	1	XYLENES
Warning: extra parameter	2050034BS1	BS1	WQ	SW8021B	PR	05/02/02	1	AAATFBZME
Warning: extra parameter	2050034BS1	BS1	WQ	SW8021B	PR	05/02/02	1	MTBE
Warning: extra parameter	2050034BS1	BS1	WQ	SW8021B	PR	05/02/02	1	XYLENES
Warning: extra parameter	2050040BLK1	LB1	WQ	SW8021B	PR	05/03/02	1	AAATFBZME
Warning: extra parameter	2050040BLK1	LB1	WQ	SW8021B	PR	05/03/02	1	MTBE
Warning: extra parameter	2050040BLK1	LB1	WQ	SW8021B	PR	05/03/02	1	PHCG
Warning: extra parameter	2050040BLK1	LB1	WQ	SW8021B	PR	05/03/02	1	XYLENES
Warning: extra parameter	2050040BS1	BS1	WQ	SW8021B	PR	05/03/02	1	AAATFBZME
Warning: extra parameter	2050040BS1	BS1	WQ	SW8021B	PR	05/03/02	1	MTBE
Warning: extra parameter	2050040BS1	BS1	WQ	SW8021B	PR	05/03/02	1	XYLENES
Warning: extra parameter	2050070BLK1	LB1	WQ	SW8021B	PR	05/06/02	1	AAATFBZME

Error type	Labsampid	Qccode	Matrix	Anmcode	Pvccode	Anadate	Run number	Parlabel
Warning: extra parameter	2050070BLK1	LB1	WQ	SW8021B	PR	05/06/02	1	MTBE
Warning: extra parameter	2050070BLK1	LB1	WQ	SW8021B	PR	05/06/02	1	PHCG
Warning: extra parameter	2050070BLK1	LB1	WQ	SW8021B	PR	05/06/02	1	XYLENES
Warning: extra parameter	2050070BS1	BS1	WQ	SW8021B	PR	05/06/02	1	AAATFBZME
Warning: extra parameter	2050070BS1	BS1	WQ	SW8021B	PR	05/06/02	1	MTBE
Warning: extra parameter	2050070BS1	BS1	WQ	SW8021B	PR	05/06/02	1	XYLENES
Warning: extra parameter	2050072BLK1	LB1	WQ	SW8021B	PR	05/06/02	1	AAATFBZME
Warning: extra parameter	2050072BLK1	LB1	WQ	SW8021B	PR	05/06/02	1	MTBE
Warning: extra parameter	2050072BLK1	LB1	WQ	SW8021B	PR	05/06/02	1	PHCG
Warning: extra parameter	2050072BLK1	LB1	WQ	SW8021B	PR	05/06/02	1	XYLENES
Warning: extra parameter	2050072BS1	BS1	WQ	SW8021B	PR	05/06/02	1	AAATFBZME
Warning: extra parameter	2050072BS1	BS1	WQ	SW8021B	PR	05/06/02	1	MTBE
Warning: extra parameter	2050072BS1	BS1	WQ	SW8021B	PR	05/06/02	1	XYLENES

EDFQC: Error Summary Log

09/13/02

Error type	Labiocfl	Anmcode	Parlabel	Qccode	Labqid
There are no errors in this data files					

EDFCL: Error Summary Log

09/13/02

Error type	Cirevdate	Anmcode	Exmcode	Parlabel	Cicode
There are no errors in this data file	//				

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Confirmation Number: 7669917285

Date/Time of Submittal: 10/24/2002 12:16:32 PM

Facility Global ID: T0600101764

Facility Name: ARCO

Submittal Title: edcc report for site 2111

Submittal Type: GW Monitoring Report

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UPLOADING A GEO_WELL FILE

**Processing is complete. No errors were found!
Your file has been successfully submitted!**

Submittal Title: geowell report for site 2111
Submittal Date/Time: 10/24/2002 12:19:44 PM
Confirmation Number: 7185093522

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