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June 29, 2001

JUL 03 2001

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

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

Dear Mr. Supple:

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

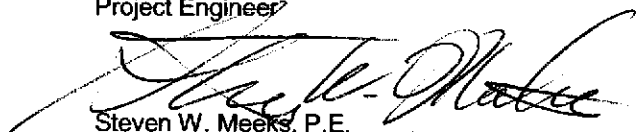
The interpretations contained in this report represent our professional opinions and are based, in part, on information supplied by the client. These opinions are based on currently available information and are arrived at in accordance with currently accepted hydrogeological and engineering practices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

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

Sincerely,

DELTA ENVIRONMENTAL CONSULTANTS, INC.


Trevor L. Atkinson
Project Engineer


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



TLA (Lrp004.310.doc)
Enclosures

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

Providing a Competitive Edge

Date: June 29, 2001

ARCO QUARTERLY GROUNDWATER MONITORING REPORT

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

WORK PERFORMED THIS QUARTER

1. Performed quarterly groundwater monitoring for first quarter 20001

WORK PROPOSED FOR NEXT QUARTER

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

QUARTERLY MONITORING:

Current Phase of Project	<u>Monitoring</u>
Frequency of Groundwater Sampling:	<u>Quarterly: MW-1, MW-2, MW-3, MW-4</u>
Frequency of Groundwater Monitoring:	<u>Quarterly</u>
Is Free Product (FP) Present On-Site:	<u>No</u>
FP Recovered this Quarter:	<u>N/A</u>
Cumulative FP Recovered to Date:	<u>None</u>
Bulk Soil Removed This Quarter:	<u>None</u>
Bulk Soil Removed to Date:	<u>None</u>
Current Remediation Techniques:	<u>Natural Attenuation</u>
Approximate Depth to Groundwater:	<u>7.96 feet</u>
Groundwater Gradient:	<u>0.011 ft/ft toward southwest</u>

DISCUSSION:

- Ethylbenzene was detected in a sample collected from MW-2 at 0.912 µg/L.
- Total petroleum hydrocarbons as gasoline were detected in a sample collected from MW-2 at 351 µg/L.
- MTBE was detected in samples collected from MW-3 and MW-4 at 46.8 µg/L and 3.04 µg/L, respectively.

ATTACHMENTS:

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

TABLE 1
GROUNDWATER ANALYTICAL DATA

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

Well Number	Date Sampled	Top of Riser Elevation (ft)	Depth to Groundwater (ft)	Groundwater Elevation (ft)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	TPH as Gasoline (µg/L)	MTBE (µg/L)
MW-1	6/20/00	31.19	8.33	22.86	<0.5	0.8	<0.5	<1.0	<50	<10
	9/29/00		9.07	22.12	<0.5	<0.5	<0.5	<0.5	<50	<2.5
	12/17/00		8.69	22.50	<0.5	<0.5	<0.5	<0.5	<50	<2.5
	3/23/01		8.19	23.00	<0.5	<0.5	<0.5	<0.5	<50	<2.5
MW-2	6/20/00	30.38	7.38	23.00	NS	NS	NS	NS	NS	NS
	9/29/00		8.08	22.30	<0.5	<0.5	<0.5	<0.5	266	<2.5
	12/17/00		7.80	22.58	<0.5	<0.5	0.659	<0.5	175	<2.5
	3/23/01		7.23	23.15	<0.5	<0.5	0.912	<0.5	351	<2.5
MW-3	6/20/00	30.30	7.75	22.55	NS	NS	NS	NS	NS	NS
	9/29/00		8.46	21.84	<0.5	<0.5	<0.5	<0.5	<50	128
	12/17/00		8.01	22.29	<0.5	<0.5	<0.5	<0.5	<50	46.7
	3/23/01		7.7	22.60	<0.5	<0.5	<0.5	<0.5	<50	26.8
MW-4	6/20/00	30.39	8.87	21.52	NS	NS	NS	NS	NS	NS
	9/29/00		9.61	20.78	1.02	<0.5	<0.5	<0.5	<50	12.2
	12/17/00		9.17	21.22	<0.5	<0.5	<0.5	<0.5	<50	5.81
	3/23/01		8.7	21.69	<0.5	<0.5	<0.5	<0.5	<50	3.04

TPH = Total Petroleum Hydrocarbons

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

µg/L = Micrograms per liter

NS = Not sampled

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

TABLE 2

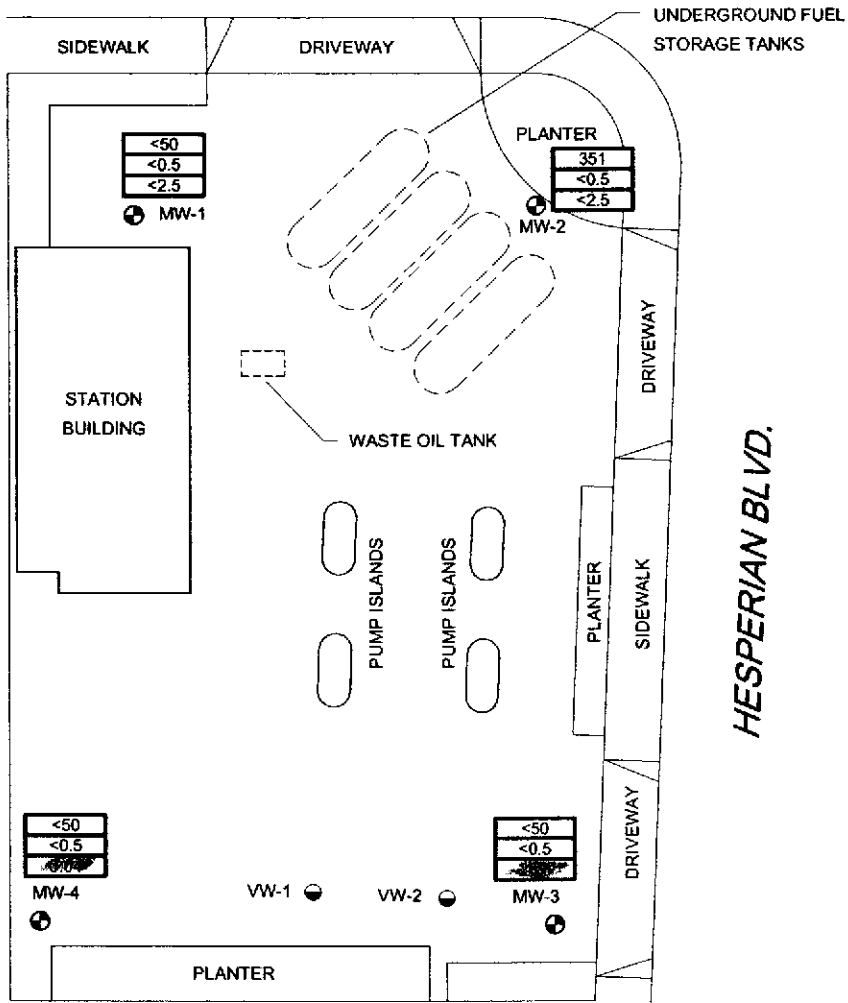
GROUNDWATER FLOW DIRECTION AND GRADIENT

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

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

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

RUTH COURT





HESPERIAN BLVD.



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

LEGEND:

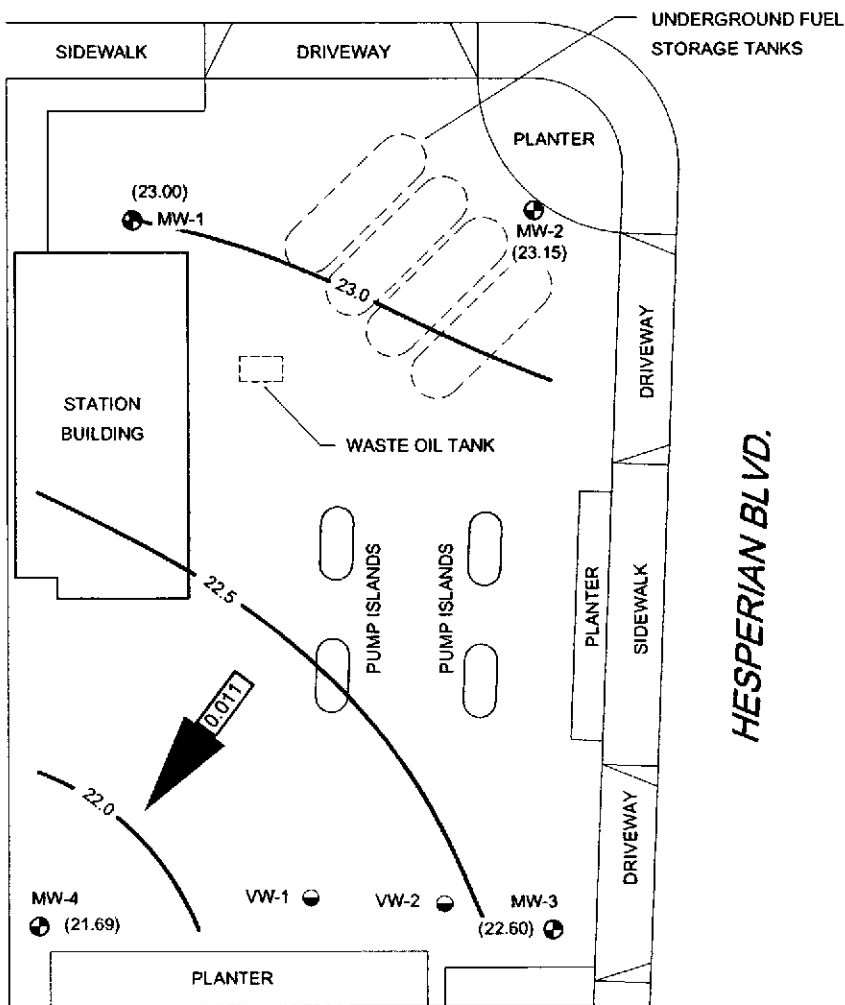
-  MW-1 MONITORING WELL LOCATION
-  VW-1 SOIL VAPOR EXTRACTION WELL LOCATION
- | |
|------|
| <50 |
| <0.5 |
| <2.5 |

 TPH AS GASOLINE IN MICROGRAMS PER LITER
 BENZENE IN MICROGRAMS PER LITER
 TOLUENE IN MICROGRAMS PER LITER
- NS NOT SAMPLED

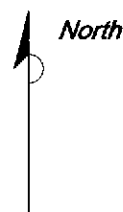
FIGURE 1 GROUND WATER ANALYTICAL SUMMARY FIRST QUARTER 2001 (3/23/01) ARCO STATION NO. 2162 15135 HESPERIAN BOULEVARD SAN LEANDRO, CALIFORNIA	
PROJECT NO. D000-310	DRAWN BY TLA 5/23/01
FILE NO. 2162-1	PREPARED BY TLA
REVISION NO. 1	REVIEWED BY



RUTH COURT



HESPERIAN BLVD.



LEGEND:

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

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

FIGURE 2
GROUND WATER ELEVATION CONTOUR MAP
 FIRST QUARTER 2001 (3/23/01)
 ARCO STATION NO. 2162
 15135 HESPERIAN BOULEVARD
 SAN LEANDRO, CALIFORNIA

PROJECT NO. D000-310	DRAWN BY TLA 5/29/01
FILE NO. 2162-1	PREPARED BY TLA
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FIELD METHODS AND PROCEDURES

1.0 GROUND WATER AND LIQUID-PHASE HYDROCARBON DEPTH ASSESSMENT

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

2.0 SUBJECTIVE ANALYSIS OF GROUND WATER

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

3.0 MONITORING WELL PURGING AND SAMPLING

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

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

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

ARCO Service Station 2162
15135 Hesperian Boulevard, San Leandro, 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)	Xylenes (ppb)	MTBE 8021B* (ppb)	MTBE 8260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)
MW-1	02/26/96	31.19	7.14	24.05	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	
MW-1	05/23/96	31.19	7.70	23.49	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	
MW-1	08/21/96	31.19	8.75	22.44	210	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NA	
MW-1	11/20/96	31.19	8.62	22.57	91	<0.5	<0.5	<0.5	<0.5	2.6	NA	NA	
MW-1	04/01/97	31.19	8.70	22.49	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NA	NP
MW-1	06/10/97	31.19	8.45	22.74	94	<0.5	<0.5	0.68	0.56	6.4	NA	NA	NP
MW-1	09/17/97	31.19	9.20	21.99	<50	<0.5	<0.5	<0.5	<0.5	10	NA	1.0	NP
MW-1	12/12/97	31.19	8.00	23.19	<200	<2	<2	<2	<2	180	NA	2.0	NP
MW-1	03/25/98	31.19	7.00	24.19	<200	<2	<2	3	<2	180	NA	2.0	
MW-1	05/14/98	31.19	7.46	23.73	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	1.17	P
MW-1	07/31/98	31.19	8.10	23.09	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	2.0	NP
MW-1	10/12/98	31.19	8.60	22.59	<50	<0.5	<0.5	<0.5	<0.5	9	NA	2.5	NP
MW-1	02/11/99	31.19	7.32	23.87	<50	<0.5	<0.5	<0.5	<0.5	25	NA	1.0	P
MW-1	06/23/99	31.19	8.40	22.79	55	<0.5	<0.5	<0.5	<0.5	<3	NA	1.36	NP
MW-1	08/23/99	31.19	8.85	22.34	<50	<0.5	0.6	<0.5	<0.5	5	NA	1.42	NP
MW-1	10/27/99	31.19	8.50	22.69	<50	<0.5	<0.5	<0.5	<1	90	NA	0.83	NP
MW-1	02/09/00	31.19	8.11	23.08	<50	<0.5	<0.5	<0.5	<1	9	NA	0.77	NP
MW-2	02/26/96	30.38	6.41	23.97	770	<0.5	<0.5	45	28	NA	NA	NA	
MW-2	05/23/96	30.38	6.80	23.58	590	0.50	<0.5	35	18	NA	NA	NA	
MW-2	08/21/96	30.38	7.80	22.58	170	<0.5	<0.5	21	6.3	<2.5	NA	NA	
MW-2	11/20/96	30.38	7.73	22.65	88	<0.5	<0.5	7.9	1.1	<2.5	NA	NA	
MW-2	04/01/97	30.38	7.83	22.55	66	<0.5	<0.5	3.6	0.56	33	NA	NA	
MW-2	06/10/97	30.38	7.52	22.86	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NA	NP
MW-2	09/17/97	30.38	8.24	22.14	<50	<0.5	<0.5	<0.5	<0.5	<3.0	NA	0.6	NP
MW-2	12/12/97	30.38	7.10	23.28	<50	<0.5	<0.5	<0.5	<0.5	<3.0	NA	1.2	NP
MW-2	03/25/98	30.38	6.27	24.11	<50	<0.5	<0.5	0.7	0.5	55	NA	1.0	
MW-2	05/14/98	30.38	6.54	23.84	210	<0.5	<0.5	3.3	<0.5	42	NA	1.47	P
MW-2	07/31/98	30.38	7.14	23.24	230	<0.5	<0.5	3.9	<0.5	6	NA	1.0	P

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

ARCO Service Station 2162
15135 Hesperian Boulevard, San Leandro, 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)	Xylenes (ppb)	MTBE 8021B* (ppb)	MTBE 8260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)
MW-2	10/12/98	30.38	7.65	22.73	110	<0.5	<0.5	1.5	<0.5	<3	NA	1.0	P
MW-2	02/11/99	30.38	6.55	23.83	660	<0.5	<0.5	6.7	0.7	3	NA	1.0	P
MW-2	06/23/99	30.38	7.48	22.90	270	<0.5	<0.5	2.2	0.8	<3	NA	NM	P
MW-2	08/23/99	30.38	7.89	22.49	200	<0.5	0.9	1.8	<0.5	<3	NA	1.17	P
MW-2	10/27/99	30.38	8.30	22.08	2,100	1.0	2.5	14	3	3	NA	0.75	NP
MW-2	02/09/00	30.38	8.02	22.36	<50	<0.5	<0.5	<0.5	<1	5	NA	0.69	NP
MW-3	02/26/96	30.30	6.72	23.58	120	5.0	<0.5	<0.5	<0.5	NA	NA	NA	
MW-3	05/23/96	30.30	7.18	23.12	140	12	<0.5	<0.5	<0.5	NA	NA	NA	
MW-3	08/21/96	30.30	8.17	22.13	<50	1.1	<0.5	<0.5	<0.5	130	NA	NA	
MW-3	11/20/96	30.30	8.03	22.27	55	<0.5	<0.5	<0.5	<0.5	59	NA	NA	
MW-3	04/01/97	30.30	8.09	22.21	<50	<0.5	<0.5	<0.5	<0.5	180	NA	NA	NP
MW-3	06/10/97	30.30	7.97	22.33	<50	<0.5	<0.5	<0.5	<0.5	1,900	NA	NA	NP
MW-3	09/17/97	30.30	8.54	21.76	<5,000	<50	<50	<50	<50	1,100	860	2.2	NP
MW-3	12/12/97	30.30	7.50	22.80	560	<5.0	<5.0	<5.0	5.0	370	NA	1.4	NP
MW-3	03/25/98	30.30	6.60	23.70	<500	<5	<5	<5	<5	470	NA	1.0	
MW-3	05/14/98	30.30	7.13	23.17	750	<5	<5	<5	<5	630	NA	1.97	P
MW-3	07/31/98	30.30	7.58	22.72	<500	<5	<5	<5	<5	590	NA	1.0	P
MW-3	10/12/98	30.30	8.00	22.30	<500	<5	<5	<5	<5	600	NA	2.0	P
MW-3	02/11/99	30.30	6.90	23.40	<500	<5	<5	<5	<5	280	NA	1.0	P
MW-3	06/23/99	30.30	7.82	22.48	220	<0.5	3.2	<0.5	<0.5	740	NA	1.98	P
MW-3	08/23/99	30.30	8.28	22.02	<50	<0.5	1.1	<0.5	<0.5	230	NA	1.20	P
MW-3	10/27/99	30.30	9.27	21.03	<50	<0.5	<0.5	<0.5	<1	<3	NA	0.81	NP
MW-3	02/09/00	30.30	7.45	22.85	<50	<0.5	<0.5	<0.5	<1	80	NA	0.81	P
MW-4	02/26/96	30.39	7.59	22.80	110	9.9	<0.5	<0.5	<0.5	NA	NA	NA	
MW-4	05/23/96	30.39	8.22	22.17	69	8.0	<0.5	<0.5	<0.5	NA	NA	NA	
MW-4	08/21/96	30.39	9.28	21.11	<50	6.8	<0.5	<0.5	<0.5	<2.5	NA	NA	
MW-4	11/20/96	30.39	9.12	21.27	95	10	0.59	<0.5	0.52	3.8	NA	NA	

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

ARCO Service Station 2162
15135 Hesperian Boulevard, San Leandro, 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)	Xylenes (ppb)	MTBE 8021B* (ppb)	MTBE 8260 (ppb)	Dissolved Oxygen (ppm)	Purged/ Not Purged (P/NP)
MW-4	04/01/97	30.39	8.45	21.94	73	5.7	<0.5	<0.5	<0.5	<2.5	NA	NA	
MW-4	06/10/97	30.39	9.00	21.39	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	NA	NP
MW-4	09/17/97	30.39	9.76	20.63	<50	3.2	<0.5	<0.5	<0.5	8.0	NA	0.2	NP
MW-4	12/12/97	30.39	8.45	21.94	<50	2.9	<0.5	<0.5	<0.5	14	NA	1.0	NP
MW-4	03/25/98	30.39	7.52	22.87	58	2.8	<0.5	<0.5	<0.5	<3	NA	3.0	
MW-4	05/14/98	30.39	8.03	22.36	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	3.24	NP
MW-4	07/31/98	30.39	8.67	21.72	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	2.0	NP
MW-4	10/12/98	30.39	9.15	21.24	<50	<0.5	<0.5	<0.5	<0.5	4	NA	1.5	NP
MW-4	02/11/99	30.39	7.80	22.59	61	2.5	<0.5	<0.5	<0.5	6	NA	1.0	P
MW-4	06/23/99	30.39	9.00	21.39	<50	<0.5	<0.5	<0.5	<0.5	<3	NA	1.42	NP
MW-4	08/23/99	30.39	9.31	21.08	<50	<0.5	<0.5	<0.5	<0.5	6	NA	1.53	NP
MW-4	10/27/99	30.39	9.80	20.59	<50	<0.5	<0.5	<0.5	<0.5	6	NA	0.98	NP
MW-4	02/09/00	30.39	8.63	21.76	<50	<0.5	<0.5	<0.5	<1	7	NA	0.74	NP

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 10/27/99).
MTBE = Methyl tert -Butyl Ether
* = EPA method 8020 prior to 10/27/99
MSL = Mean sea level
TOC = Top of casing
ppb = Parts per billion
ppm = Parts per million
NA = Not analyzed
NM = Not measured
< = Denotes concentration not present above laboratory detection limited stated to the right

**Table 2
Groundwater Flow Direction and Gradient**

**ARCO Service Station 2162
15135 Hesperian Boulevard, San Leandro, California**

Date Measured	Average Flow Direction	Average Hydraulic Gradient
02/26/96	Southwest	0.009
05/23/96	South-Southwest	0.010
08/21/96	South-Southwest	0.01
11/20/96	South-Southwest	0.011
04/01/97	South-Southwest	0.004
06/10/97	South-Southwest	0.010
09/17/97	South-Southwest	0.01
12/12/97	Southwest	0.01
03/25/98	South-Southwest	0.008
05/14/98	Southwest	0.01
07/31/98	Southwest	0.01
10/12/98	Southwest	0.01
02/11/99	Southwest	0.008
06/23/99	Southwest	0.02
08/23/99	Southwest	0.013
10/27/99	South-Southwest	0.02
02/09/00	Southwest	0.01

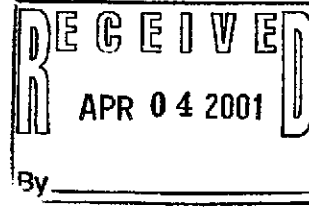
APPENDIX C

Certified Analytical Reports
And
Chain-of-Custody Documentation



Sequoia Analytical

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



March 30, 2001

Steven Meeks
Delta Environmental Consultants(Rancho Cordova)
3164 Gold Camp Drive Ste. 200
Rancho Cordova, CA 95670
RE: ARCO 2162, San Leandro, CA / S103478

Enclosed are the results of analyses for samples received by the laboratory on 03/27/01. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Sandra R. Hanson
for

Ron Chew
Client Services Representative

R. L. Bobel
For

Lito Diaz
Laboratory Director

CA ELAP Certificate Number 1624





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

Project: ARCO 2162, San Leandro, CA
Project Number: N/A
Project Manager: Steven Meeks

Reported:
03/30/01 14:46

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1-8	S103478-01	Water	03/23/01 10:00	03/27/01 07:45
MW-2-7	S103478-02	Water	03/23/01 10:22	03/27/01 07:45
MW-3-7	S103478-03	Water	03/23/01 10:36	03/27/01 07:45
MW-4-8	S103478-04	Water	03/23/01 10:42	03/27/01 07:45
TB	S103478-05	Water	03/23/01 06:00	03/27/01 07:45





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

Project: ARCO 2162, San Leandro, CA
Project Number: N/A
Project Manager: Steven Meeks

Reported:
03/30/01 14:46

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-1-8 (S103478-01) Water Sampled: 03/23/01 10:00 Received: 03/27/01 07:45									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1030402	03/29/01	03/29/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		95.7 %	60-140	"	"	"	"	"	
MW-2-7 (S103478-02) Water Sampled: 03/23/01 10:22 Received: 03/27/01 07:45									
Purgeable Hydrocarbons	351	50.0	ug/l	1	1030402	03/29/01	03/29/01	DHS LUFT	P-04
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	0.912	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		97.0 %	60-140	"	"	"	"	"	
MW-3-7 (S103478-03) Water Sampled: 03/23/01 10:36 Received: 03/27/01 07:45									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1030402	03/29/01	03/29/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	26.8	2.50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		98.1 %	60-140	"	"	"	"	"	





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

Project: ARCO 2162, San Leandro, CA
Project Number: N/A
Project Manager: Steven Meeks

Reported:
03/30/01 14:46

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-4-8 (S103478-04) Water Sampled: 03/23/01 10:42 Received: 03/27/01 07:45									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1030402	03/29/01	03/29/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	3.04	2.50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		100 %	60-140		"	"	"	"	
TB (S103478-05) Water Sampled: 03/23/01 06:00 Received: 03/27/01 07:45									
Purgeable Hydrocarbons	ND	50.0	ug/l	1	1030402	03/29/01	03/29/01	DHS LUFT	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	0.500	"	"	"	"	"	"	
Methyl tert-butyl ether	ND	2.50	"	"	"	"	"	"	
<i>Surrogate: a,a,a-Trifluorotoluene</i>		98.1 %	60-140		"	"	"	"	





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

Project: ARCO 2162, San Leandro, CA
Project Number: N/A
Project Manager: Steven Meeks

Reported:
03/30/01 14:46

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

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes	
Batch 1030402 - EPA 5030B (P/T)										
Blank (1030402-BLK1)					Prepared & Analyzed: 03/29/01					
Purgeable Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	0.500	"							
Methyl tert-butyl ether	ND	2.50	"							
Surrogate: a,a,a-Trifluorotoluene	10.3		"	10.0		103	60-140			
LCS (1030402-BS1)					Prepared & Analyzed: 03/29/01					
Benzene	10.5	0.500	ug/l	10.0		105	70-130			
Toluene	10.5	0.500	"	10.0		105	70-130			
Ethylbenzene	10.5	0.500	"	10.0		105	70-130			
Xylenes (total)	32.3	0.500	"	30.0		108	70-130			
Methyl tert-butyl ether	9.73	2.50	"	10.0		97.3	70-130			
Surrogate: a,a,a-Trifluorotoluene	10.5		"	10.0		105	60-140			
Matrix Spike (1030402-MS1)					Source: S103477-04 Prepared & Analyzed: 03/29/01					
Benzene	7.86	0.500	ug/l	10.0	ND	78.6	60-140			
Toluene	3.55	0.500	"	10.0	ND	35.5	60-140		Q-02	
Ethylbenzene	4.83	0.500	"	10.0	ND	48.3	60-140		Q-02	
Xylenes (total)	12.3	0.500	"	30.0	ND	41.0	60-140		Q-02	
Methyl tert-butyl ether	7.53	2.50	"	10.0	ND	75.3	60-140			
Surrogate: a,a,a-Trifluorotoluene	2.88		"	10.0		28.8	60-140		Q-02	
Matrix Spike Dup (1030402-MSD1)					Source: S103477-04 Prepared & Analyzed: 03/29/01					
Benzene	10.5	0.500	ug/l	10.0	ND	105	60-140	28.8	25	Q-07
Toluene	10.5	0.500	"	10.0	ND	105	60-140	98.9	25	Q-07
Ethylbenzene	10.5	0.500	"	10.0	ND	105	60-140	74.0	25	Q-07
Xylenes (total)	32.5	0.500	"	30.0	ND	108	60-140	90.2	25	Q-07
Methyl tert-butyl ether	11.4	2.50	"	10.0	ND	114	60-140	40.9	25	Q-07
Surrogate: a,a,a-Trifluorotoluene	9.92		"	10.0		99.2	60-140			





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

Project: ARCO 2162, San Leandro, CA
Project Number: N/A
Project Manager: Steven Mecks

Reported:
03/30/01 14:46

Notes and Definitions

- P-04 Chromatogram Pattern: Weathered Gasoline C6-C12 + Unidentified Hydrocarbons C6-C12
- Q-02 The RPD and/or spike recovery for this QC sample is outside of established control limits due to sample matrix interference.
- Q-07 The RPD value for this QC sample is above the established control limit. Review of associated QC indicates the high RPD does not represent an out-of-control condition for the batch.
- 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 Products Company 
Division of AtlanticRichfieldCompany

Task Order No. **2599700**

Chain of Custody

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

Sample I.D.	Lab no.	Container no.	Matrix			Preservation		Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH 4:1:2:6 EPA 146/216/228/8015	TPH Modified 8015 Gas <input type="checkbox"/> Diesel <input type="checkbox"/>	Oil and Grease 413.1 <input type="checkbox"/> 413.2 <input type="checkbox"/>	TPH EPA 418.1/SM503E	EPA 601/6010	EPA 624/6240	EPA 625/6270	TCUP Metals <input type="checkbox"/> VOC <input type="checkbox"/> VOA <input type="checkbox"/>	Semi Metals <input type="checkbox"/> VOC <input type="checkbox"/>	CMA Metals EPA 601/7000 TLC <input type="checkbox"/> STLC <input type="checkbox"/>	Lead Crp./DHS <input type="checkbox"/> Lead EPA 7420/7421 <input type="checkbox"/>					
			Soil	Water	Other	Ice	Acid																			
MW 1-8		2	X			X	X	3-23-01	1000		X														5103478-01	
MW 2-7									1022																	-02
MW 3-7									1036																	-03
MW 4-8									1042																	-04
TB			V	V		V	V		600		V															-05

Method of shipment

Special detection Limit/reporting

Special QA/QC

Remarks

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: **52C**

Relinquished by sampler **Paul Supple** Date **3-27-01** Time **645** Received by **John Yuen**

Relinquished by **John Yuen** Date **3-27-01** Time **0745** Received by **MARICCA JOHNSON**

Relinquished by _____ Date _____ Time _____ Received by laboratory _____ Date _____ Time _____



3184 Gold Camp Drive, Suite 200
 Rancho Cordova, California 95870
 Direct: (916) 638-2085
 Fax: (916) 638-8385

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

Arco Site Number: **Arco 2162**

Delta Project No.: **D000-310**

Arco Project Manager: **Paul Supple**

Delta Project PM: **Steve Meeks**

Site Sampled By: **Doulos**

Date Sampled: **03/23/01**

Site Contact & Phone Number: _____

Water Level Data						Purge Volume Calculations					Sampling Analytes				Sample Record			
Well ID	Time	Depth to Water (feet)	Top of Screen Interval (feet)	Total Depth of Well (feet)	Check if Purge Not Required	Casing Water Column (A)	Well Diameter (inches)	Multiplier Value (B)	Three Casing Volumes (gallons)	Actual Water Purged (gallons)	BTEX (8020) VOA	TPH-g (8015M) VOA	MTBE (8020) VOA	Other	Dissolved Oxygen (mg/L)	Sample Frequency (A, S, Q)	Sample I.D.	Sample Time
MW-1	9:51	8.19	8.0	15.9	<input checked="" type="checkbox"/>	7.66	4 inch	2.0	15.3	NP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1.36	Q/2,5,8,11	MW-1	10:00
MW-2	9:54	7.23	8.0	15.9	<input type="checkbox"/>	8.64	4 inch	2.0	17.3	17.3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.86	Q/2,5,8,11	MW-2	10:22
MW-3	9:44	7.70	9.0	14.8	<input type="checkbox"/>	7.06	4 inch	2.0	14.1	14.2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.44	Q/2,5,8,11	MW-3	10:36
MW-4	9:47	8.70	8.0	17.5	<input checked="" type="checkbox"/>	8.75	4 inch	2.0	17.5	NP	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	0.69	Q/2,5,8,11	MW-4	10:42
					<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"/>				
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					<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-3, MW-4, MW-1, MW-2

Sampling Notes: List depth of Sample on C.O.C. [i.e. MW-1(30)]. Make Sure to Note on C.O.C. "Provide Lowest Reporting Limit Available." Original Copies of Field Sampling Sheets are Located in Project File

If the water level is below the top of the screen, take a grab sample and check box for NO PURGE (NP). If the water level is above the screen, purge as normal.



3164 Gold Camp Drive, Suite 200
 Rancho Cordova, California 95670
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 Fax: (916) 838-8385

Arco Site Address: 15135 Hesperian Blvd
San Leandro, California

Arco Site Number: Arco 2162

Delta Project No.: D000-310

Arco Project Manager: Paul Supple

Delta Project PM: Steve Meeks

Site Sampled By: Doulos

Date Sampled: 03/23/01

Site Contact & Phone Number: _____

Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	
MW-1	No Purge																	
Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	
MW-2	10:04	71.0	7.64	372	5													
	10:08	68.4	7.49	331	10													
	10:12	68.3	7.48	328	15													
Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	
MW-3	10:25	68.2	7.02	398	5													
	10:29	67.1	6.94	376	10													
	10:32	66.9	6.93	331	14													
Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	
MW-4	No Purge																	
Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	
Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	
Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	Well ID	Time	Temp °C	pH Units	Sp. Cond.	Gallons	

Notes: NP = NO PURGE

Original Copies of Field Sampling Sheets are Located in Project File