

ARCO GROUND WATER MONITORING REPORT
First and Second Quarters of 2000
June 17, 2000

LUST # 1642
ARCO # 5207
Renton



1200-112th Avenue N.E.
Suite C-146
Bellevue, Washington 98004-3769
425/450-7726
FAX: 425/450-8837

Facility No.: 5207 Address: 401 Park Avenue North, Renton, WA 98055
ARCO Environmental Engineer: Chuck Hutchens
Consulting Co./Contact Person: Delta Environmental Consultants, Inc. \ Markham C. Hurd *MCH*
Consultant Project Number: M098-532
Primary Agency/Regulatory ID No.: Washington State Department of Ecology

WORK PERFORMED DURING THE FIRST AND SECOND QUARTERS OF 1999:

- Delta conducted ground water monitoring and sampling on March 2, 2000.
- Delta prepared this semi-annual ground water monitoring report.

WORK SCHEDULED FOR THE THIRD AND FOURTH QUARTERS OF 2000:

- Delta will conduct semi-annual ground water monitoring and sampling in the third quarter.
- Delta will prepare a semi-annual ground water monitoring report.

Current Phase of Project:	Monitoring	(Phase I, Addtl Assmnt RAP/CAP, Remed., etc)
Frequency of Ground Water Monitoring and Sampling:	Semi-annual	(Quarterly, etc)
Are LPH Present On-Site:	No	(Yes/No)
LPH Recovered this Reporting Period:	None	(Gallons)
Cumulative LPH Recovered to Date:	None	(Gallons)
Amount of Soil Removed to Date:	Unknown	(Cubic yards/tons)
Current Remediation Techniques:	Natural Attenuation	(SVES/Sparge/Pump and Treat)
Approximate Depth to Ground Water:	8.00 to 10.01	(Feet)
Ground Water Gradient:	Southeast	(Direction)
	<0.01 ft/linear ft	(Magnitude)

Attachments:

- Table 1 - Summary of Ground Water Data
- Table 2 - Summary of Historical Ground Water Data
- Figure 1 - Site Location Map
- Figure 2 - Inferred Water Table Contour Map - 3/2/00
- Attachment A - North Creek Analytical Lab Reports

RECEIVED
AUG 17 2000
DEPT. OF ECOLOGY

DEPARTMENT OF ECOLOGY
NWRO/TCP TANKS UNIT

INTERIM CLEANUP REPORT ☒
 SITE CHARACTERIZATION ☐
 FINAL CLEANUP REPORT ☐
 OTHER ☐
 AFFECTED MEDIA: SOIL ☒
 OTHER ☐ GW ☒
 INSPECTOR (INIT.) SB DATE 10/10/00

LUST # 1642 UST # _____ Site Name ARCO # 5207

Change in Status of Release & Date (Awaiting Cleanup) (Cleanup Started) (Monitoring)
 (Reported Cleaned Up) (No Further Action) (Unknown) Date _____

Cause of Release (Overfill) (Piping Failure) (Spill) (Tank Failure) (Unknown)
 Remediation Technologies Used Natural attenuation

Report Title GW Monitoring for 1st & 2nd Qtrs 2000 Report Date 6/17/00

Report Type (Interim) (Monitoring) (Final) (Site Characterization) (Unknown)

Date Received 8/17/00 Contractor Delta

Comments Depth to gw 8.00-10.01' ; flows SE.
MW-4 exceeds MTA A. MWS 2, 3, and 5 not
sampled.

Fund Source (LUST Trust Fund) (PLIA) (Responsible Party) (State Fund)

VCP/IRAP Status (Requested) (Not Requested) (Complete) Reviewed by Bremer
 Date 9/29/00

Nov. 4, 1999 (GG)

TABLE 1
SUMMARY OF GROUND WATER DATA
ARCO FACILITY NO. 5207
401 PARK AVENUE NORTH
RENTON, WASHINGTON
DELTA PROJECT NO. M098-532

MONITORING WELL	DATE SAMPLED	DISSOLVED OXYGEN (mg/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL-BENZENE (ug/L)	XYLENES (ug/L)	GASOLINE-RANGE HYDROCARBONS (ug/L)	LEAD (ug/L)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION (feet)	TOC (feet)
MW-1	03/02/00 np	0.40	<0.500	<0.500	<0.500	<1.00	80.8	NA	9.43	22.15	31.58
MW-2	03/02/00 np	1.21	NS	NS	NS	NS	NS	NA	9.31	22.18	31.49
MW-3	03/02/00 np	1.29	NS	NS	NS	NS	NS	NA	10.01	22.42	32.43
MW-4	03/02/00 np	0.52	<22.8	<14.8	28.1	<13.4	4,270	NA	9.97	22.22	32.19
MW-5	03/02/00 np	NM	NS	NS	NS	NS	NS	NA	NM	NM	31.93
MW-6	03/02/00 np	0.65	<0.500	<0.500	<0.500	<1.00	<50.0	NA	9.67	22.06	31.73
MW-7	03/02/00 np	1.18	<0.500	<0.500	<0.500	<0.500	<50.0	NA	9.80	22.04	31.84
MW-8	Well Abandoned										
MW-9	03/02/00 np	0.75	<2.30	<1.05	<0.500	3.75	402	NA	8.00	22.23	30.23
MW-10	03/02/00 np	0.62	<0.500	<0.500	<0.500	<0.500	<50.0	NA	9.18	22.06	31.24
Laboratory Methods			8021B	8021B	8021B	8021B	WTPH-G	6020			
MTCA Method A Cleanup Levels			5.0	40.0	30.0	20.0	1000*	5.0			

8021B = EPA method for volatile aromatic hydrocarbons.

WTPH-G = Washington State method for gasoline-range hydrocarbons.

6020 = EPA method for lead (T = total and D = dissolved).

<1.0 = Concentrations were not detected above the laboratory reporting limit.

TOC = Top of Casing Elevation referenced to mean sea level.

mg/L = Milligrams per liter.

ug/L = Micrograms per liter.

np = Non-purge sampling methods used

* = The sum of gasoline-range, diesel-range and heavy oil-range hydrocarbons must not exceed 1,000 ug/L.

REV.06/17/00.JT
PROJECTS\ARCO\98532\TABLES\2000\1-2QGW\00.XLS

TABLE 2
SUMMARY OF HISTORICAL GROUND WATER DATA
ARCO FACILITY NO. 5207
401 PARK AVENUE NORTH
RENTON, WASHINGTON
DELTA PROJECT NO. M098-532

MONITORING WELL	DATE SAMPLED	DISSOLVED OXYGEN (mg/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL-BENZENE (ug/L)	XYLENES (ug/L)	GASOLINE-RANGE HYDROCARBONS (ug/L)	LEAD (ug/L)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION (feet)	TOC (feet)
MW-1	05/08/91 p	NM	170	9.5	21	9.8	3,600	NA	9.74	21.84	31.58
	05/14/92 p	NM	3.8	4.1	8	5.9	1,900	150.00 (T)	10.72	20.86	
	12/30/92 p	NM	1.8	1.7	4	3.5	3,100	2.70 (T)	10.53	21.05	
	03/16/93 p	NM	5.6	ND	ND	ND	1,300	8.90 (T)	11.21	20.37	
	06/17/93 p	NM	450	120	ND	4.3	1,600	ND (T)	10.25	21.33	
	08/24/93 p	NM	4.3	17	2.2	15	670	2.20 (T)	11.70	19.88	
	11/24/93 p	NM	ND	ND	0.52	ND	200	6.40 (T)	12.17	19.41	
	02/22/94 p	NM	ND	0.64	0.93	ND	270	3.00 (T)	11.49	20.09	
	05/25/94 p	NM	ND	ND	1.3	1.1	210	NA	12.07	19.51	
	08/24/94 p	NM	0.59	2.1	4.2	2.7	1,200	NA	12.72	18.86	
	11/16/94 p	NM	ND	0.65	0.63	ND	180	NA	11.32	20.26	
	02/23/95 p	NM	ND	ND	ND	0.7	ND	NA	8.90	22.68	
	05/18/95 p	NM	ND	ND	ND	ND	ND	NA	11.40	20.18	
	08/24/95 p	NM	ND	ND	ND	ND	75	NA	11.96	19.62	
	11/07/95 p	NM	ND	0.75	2.5	1.3	2,200	NA	11.59	19.99	
	02/08/96 p	NM	ND	ND	ND	ND	77	NA	8.83	22.75	
	05/06/96 p	NM	ND	ND	ND	ND	59.4	NA	9.82	21.76	
	08/20/96 p	NM	ND	ND	1.24	ND	1,130	NA	12.50	19.08	
	11/06/96 p	NM	ND	ND	ND	ND	ND	NA	10.70	20.88	
	03/17/97 np	NM	ND	ND	ND	ND	ND	NA	8.58	23.00	
	06/02/97 np	NM	ND	ND	ND	ND	ND	NA	9.50	22.08	
	09/09/97 np	NM	1.92	0.681	ND	1.6	125	NA	11.63	19.95	
	12/01/97 np	NM	ND	ND	ND	ND	ND	NA	10.80	20.78	
	03/30/98 np	0.6	<0.5	<0.5	<0.5	<1.0	122	<1.0 (D)	10.58	21.00	
	06/27/98 np	0.4	<0.5	<0.5	<0.5	<1.0	109	<1.0 (D)	11.39	20.19	
	09/22/98	0.3	NS	NS	NS	NS	NS	NS	13.12	18.46	
	12/30/98 np	0.5	<0.5	<0.5	<0.5	<1.0	<50	<1.0 (D)	9.09	22.49	
	03/23/99 np	1.1	<0.500	<0.500	<0.500	<1.00	97.8	<1.00 (D)	9.70	21.88	
	05/21/99 np	0.3	<0.500	<0.500	<0.500	<1.20	118	<1.00 (D)	11.25	20.33	
	09/14/99 np	0.3	NS	NS	NS	NS	NS	NS	11.50	20.08	
	11/23/99 np	1.0	<0.500	<0.500	<0.500	<1.00	106	NA	10.20	21.38	
	03/02/00 np	0.40	<0.500	<0.500	<0.500	<1.00	80.8	NA	9.43	22.15	

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MONITORING WELL	DATE SAMPLED	DISSOLVED OXYGEN (mg/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL- BENZENE (ug/L)	XYLENES (ug/L)	GASOLINE-RANGE HYDROCARBONS (ug/L)	LEAD (ug/L)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION (feet)	TOC (feet)
MW-2	05/08/91 p	NM	ND	0.58	0.64	0.66	90	NA	9.62	21.87	31.49
	05/14/92 p	NM	ND	ND	ND	ND	67	19.00 (T)	10.62	20.87	
	12/30/92 p	NM	ND	ND	ND	ND	ND	6.40 (T)	10.42	21.07	
	03/16/93 p	NM	ND	ND	ND	ND	ND	5.40 (T)	11.10	20.39	
	06/17/93 p	NM	ND	ND	ND	ND	ND	ND (T)	10.12	21.37	
	08/24/93 p	NM	ND	ND	ND	ND	ND	ND (T)	11.61	19.88	
	11/24/93 p	NM	ND	ND	ND	ND	ND	ND (T)	12.08	19.41	
	02/22/94 p	NM	ND	ND	ND	ND	ND	ND (T)	11.38	20.11	
	05/23/94	NM	NS	NS	NS	NS	NS	NS	11.98	19.51	
	08/24/94 p	NM	ND	ND	ND	ND	ND	NA	12.64	18.85	
	11/16/94	NM	NS	NS	NS	NS	NS	NS	11.21	20.28	
	02/23/95 p	NM	ND	ND	ND	ND	ND	NA	8.79	22.70	
	05/18/95 p	NM	ND	ND	ND	ND	ND	NA	11.27	20.22	
	08/24/95 p	NM	ND	ND	ND	1.0	78	NA	11.83	19.66	
	11/07/95 p	NM	ND	ND	ND	ND	ND	NA	11.46	20.03	
	02/08/96 p	NM	ND	ND	ND	ND	ND	NA	8.16	23.33	
	05/06/96 p	NM	ND	ND	ND	ND	ND	NA	9.65	21.84	
	08/20/96 p	NM	ND	ND	ND	ND	ND	NA	12.33	19.16	
	11/06/96 p	NM	ND	0.549	ND	ND	ND	NA	10.85	20.64	
	03/17/97 ap	NM	ND	ND	ND	ND	ND	NA	8.75	22.74	
	06/02/97 ap	NM	ND	ND	ND	ND	ND	NA	9.45	22.04	
	09/09/97 ap	NM	ND	0.516	0.755	2.61	95.5	NA	11.52	19.97	
	12/01/97 ap	NM	ND	ND	ND	ND	ND	NA	10.65	20.84	
	03/30/98 ap	0.5	<0.5	<0.5	<0.5	<1.0	<50	<1.0 (D)	10.48	21.01	
	06/27/98 ap	1.9	<0.5	<0.5	<0.5	<1.0	<50	<1.0 (D)	11.26	20.23	
	09/22/98	0.5	NS	NS	NS	NS	NS	NS	13.00	18.49	
	12/30/98	0.7	NS	NS	NS	NS	NS	NS	8.95	22.54	
	03/23/99	0.4	NS	NS	NS	NS	NS	NS	9.55	21.94	
	05/21/99	0.8	NS	NS	NS	NS	NS	NS	10.88	20.61	
	09/14/99 ap	0.1	NS	NS	NS	NS	NS	NS	11.30	20.19	
	11/23/99 ap	2.4	<0.500	<0.500	<0.500	<1.00	<50.0	NA	10.09	21.40	
	03/02/00 ap	1.21	NS	NS	NS	NS	NS	NA	9.31	22.18	

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MW-3	05/08/91 p	NM	140	8.2	64	17	3,400	NA	10.62	21.81	32.43
	05/14/92 p	NM	18	4.9	11	8.9	2,600	63.00 (T)	11.59	20.84	
	12/30/92 p	NM	37	3.1	9.2	3.3	1,300	ND (T)	11.37	21.03	
	03/16/93 p	NM	6.5	1.6	3	1.9	570	7.10 (T)	12.06	20.37	
	06/17/93	NM	NS	NS	NS	NS	NS	NS	-	-	
	08/24/93 p	NM	20	1.3	5.7	2.2	1,000	ND (T)	12.30	20.13	
	11/24/93 p	NM	3.0	1.3	1.8	2.1	1,100	ND (T)	12.76	19.67	
	02/22/94 p	NM	3.0	0.66	1.1	ND	280	ND (T)	12.05	20.38	
	05/25/94 p	NM	1.5	0.88	1.2	ND	650	NA	12.70	19.73	
	08/24/94 p	NM	1.2	1.9	2.1	1.9	510	NA	13.43	19.00	
	11/16/94 p	NM	ND	1.7	1.7	1.5	440	NA	11.88	20.55	
	02/23/95 p	NM	3.6	ND	4.4	3.0	360	NA	9.47	22.96	
	05/18/95 p	NM	0.92	ND	ND	ND	57	NA	11.98	20.45	
	08/24/95 p	NM	ND	0.73	0.61	ND	280	NA	12.54	19.89	
	11/07/95 p	NM	ND	0.8	ND	ND	260	NA	12.17	20.26	
	02/08/96 p	NM	1.8	0.65	5.1	ND	450	NA	8.70	23.73	
	05/06/96 p	NM	ND	ND	ND	ND	130	NA	10.39	22.04	
	08/20/96 p	NM	ND	1.64	2.07	1.95	911	NA	13.07	19.36	
	11/06/96 p	NM	ND	ND	ND	ND	ND	NA	11.55	20.88	
	03/17/97 np	NM	ND	ND	ND	ND	ND	NA	9.22	23.21	
	06/02/97 np	NM	ND	ND	ND	ND	ND	NA	10.15	22.28	
	09/09/97 np	NM	ND	0.551	0.566	1.75	198	NA	12.23	20.20	
	12/01/97 np	NM	ND	ND	ND	ND	59.1	NA	11.35	21.08	
	03/30/98 np	0.6	<2.0	<0.5	<2.0	<4.0	430	<1.0 (D)	11.17	21.26	
	06/27/98 np	0.6	1.25	<1.0	<0.5	<1.0	252	<1.0 (D)	11.98	20.45	
	09/22/98 np	0.3	1.82	<1.0	<1.0	<4.0	491	<1.0 (D)	13.74	18.69	
	12/30/98 np	0.2	<0.5	<0.5	<1.0	<1.0	<50	<1.0 (D)	9.64	22.79	
	03/23/99	0.3	NS	NS	NS	NS	NS	NS	10.27	22.16	
	05/21/99	0.5	NS	NS	NS	NS	NS	NS	11.82	20.61	
	09/14/99 np	0.8	NS	NS	NS	NS	NS	NS	12.10	20.33	
	11/23/99 np	2.8	<1.00	<1.50	<1.00	<2.50	258	NA	10.80	21.63	
	03/02/00 np	1.29	NS	NS	NS	NS	NS	NA	10.01	22.42	

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MW-4	05/08/91 p	NM	83	13	110	75	5,800	NA	10.36	21.83	32.19
	05/14/92 p	NM	130	65	140	94	10,000	82.00 (T)	11.35	20.84	
	12/30/92 p	NM	68	19	130	86	10,000	4.20 (T)	11.16	21.03	
	03/16/93 p	NM	67	19	110	64	7,000	19.00 (T)	11.83	20.36	
	06/17/93 p	NM	51	ND	130	57	6,500	13.00 (T)	10.59	21.60	
	08/24/93 p	NM	50	18	110	83	7,800	ND (T)	12.19	20.00	
	11/24/93 p	NM	63	14	130	62	5,900	ND (T)	12.64	19.55	
	02/22/94 p	NM	22	4.9	47	22	3,600	ND (T)	12.03	20.16	
	05/25/94 p	NM	44	15	130	68	7,600	NA	12.53	19.66	
	08/24/94 p	NM	37	14	100	60	6,200	NA	13.20	18.99	
	11/16/94 p	NM	75	16	160	58	5,000	NA	11.86	20.33	
	02/23/95 p	NM	21	24	88	35	3,900	NA	9.36	22.83	
	05/18/95 p	NM	31	7.9	130	42	6,000	NA	11.88	20.31	
	08/24/95	NM	NS	NS	NS	NS	NS	NS	NS	NS	
	11/07/95 p	NM	24	6.6	100	38	9,400	NA	12.07	20.12	
	02/08/96 p	NM	14	2.1	31	15	3,700	NA	8.41	23.78	
	05/06/96 p	NM	21.9	6.6	82.3	32.9	6,160	NA	10.30	21.89	
	08/20/96 p	NM	ND	6.72	54	28.3	6,030	NA	12.98	19.21	
	11/06/96 p	NM	17.6	3.51	79	33.4	5,640	NA	11.45	20.74	
	03/17/97 np	NM	41.4	6.22	92.9	41.8	4,510	NA	9.08	23.11	
	06/02/97 np	NM	54.9	6.77	121	54.8	4,000	NA	9.92	22.27	
	09/09/97 np	NM	115	36.9	130	60.8	11,700	NA	11.94	20.25	
	12/01/97 np	NM	23.8	11	51.8	34.8	6,050	NA	11.27	20.92	
	03/30/98 np	0.6	<16.0	<8.0	<8.0	<8.0	1800	<1.0 (D)	11.09	21.10	
	06/27/98 np	0.3	<45.0	<15.0	59.2	29.0	5180	1.57 (D)	11.88	20.31	
	09/22/98 np	0.2	45.0	<15.0	52.1	<35.0	5,300	1.32 (D)	13.62	18.57	
	12/30/98 np	0.6	8.98	<5.0	5.95	<5.0	2,250	<1.0 (D)	9.52	22.67	
	03/23/99 np	0.4	22.5	7.48	11.5	12.1	2,790	<1.00 (D)	10.18	22.01	
	05/21/99 np	0.3	25.9	<10.0	13.1	<13.0	2,900	<1.00 (D)	11.72	20.47	
	09/14/99 np	0.7	22.9	<50.0	17.3	9.38	3,130	4.24 (D)	11.90	20.29	
	11/23/99 np	1.5	NS	NS	NS	NS	NS	NS	10.71	21.48	
	03/02/00 np	0.52	<22.8	<14.8	28.1	<13.4	4,270	NA	9.97	22.22	

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MW-5	05/08/91 P	NM	ND	ND	ND	ND	76	NA	10.10	21.83	31.93
	05/15/92 P	NM	ND	ND	ND	ND	ND	32.00 (T)	11.10	20.83	
	12/30/92 P	NM	ND	ND	ND	ND	ND	ND (T)	10.90	21.03	
	03/16/93 P	NM	ND	ND	ND	ND	ND	8.10 (T)	11.56	20.37	
	06/17/93 P	NM	ND	ND	ND	ND	ND	ND (T)	10.62	21.31	
	08/24/93 P	NM	ND	ND	ND	ND	ND	ND (T)	12.10	19.83	
	11/24/93 P	NM	ND	ND	ND	ND	ND	ND (T)	12.53	19.40	
	02/22/94 P	NM	ND	ND	ND	ND	ND	ND (T)	11.85	20.08	
	05/25/94	NM	NS	NS	NS	NS	NS	NS	12.48	19.45	
	08/24/94 P	NM	ND	ND	ND	ND	ND	NA	13.11	18.82	
	11/16/94	NM	NS	NS	NS	NS	NS	NS	11.68	20.25	
	02/23/95 P	NM	ND	ND	ND	ND	ND	NA	9.21	22.72	
	05/18/95 P	NM	ND	ND	ND	ND	ND	NA	11.77	20.16	
	08/24/95 P	NM	ND	ND	ND	ND	ND	NA	12.33	19.60	
	11/07/95 P	NM	ND	ND	ND	ND	ND	NA	11.96	19.97	
	02/08/96 P	NM	ND	ND	ND	ND	ND	NA	8.56	23.37	
	05/06/96 P	NM	ND	ND	ND	ND	ND	NA	10.15	21.78	
	08/20/96 P	NM	ND	ND	ND	ND	ND	NA	12.83	19.10	
	11/06/96 P	NM	ND	ND	ND	ND	ND	NA	11.30	20.63	
	03/17/97 P	NM	ND	ND	ND	ND	ND	NA	8.96	22.97	
	06/02/97 P	NM	ND	ND	ND	ND	ND	NA	9.95	21.98	
	09/09/97 P	NM	ND	ND	ND	ND	ND	NA	11.95	19.98	
	12/01/97 P	NM	ND	ND	ND	ND	ND	NA	11.20	20.73	
	03/30/98 P	0.6	<0.5	<0.5	<0.5	<1.0	<50	<1.0 (D)	10.96	20.97	
	06/27/98 P	0.3	<0.5	<0.5	<0.5	<1.0	<50	<1.0 (D)	11.76	20.17	
	09/22/98	0.3	NS	NS	NS	NS	NS	NS	13.56	18.37	
	12/30/98	0.5	NS	NS	NS	NS	NS	NS	9.56	22.37	
	03/23/99	0.4	NS	NS	NS	NS	NS	NS	10.11	21.82	
	05/21/99	0.4	NS	NS	NS	NS	NS	NS	11.65	20.28	
	09/14/99 P	0.1	NS	NS	NS	NS	NS	NS	11.85	20.08	
	11/23/99 P	1.2	<0.500	<0.500	<0.500	<1.00	<50.0	NA	10.56	21.37	
	03/02/00 P	NM	NS	NS	NS	NS	NS	NA	NM	NM	

TABLE 2
SUMMARY OF HISTORICAL GROUND WATER DATA
ARCO FACILITY NO. 5207
401 PARK AVENUE NORTH
RENTON, WASHINGTON
DELTA PROJECT NO. M098-532

MONITORING WELL	DATE SAMPLED	DISSOLVED OXYGEN (mg/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL- BENZENE (ug/L)	XYLENES (ug/L)	GASOLINE-RANGE HYDROCARBONS (ug/L)	LEAD (ug/L)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION (feet)	TOC (feet)
MW-6	05/08/91 p	NM	680	40	560	240	9,800	NA	9.91	21.82	31.73
	05/15/92 p	NM	160	33	510	150	7,200	110.00 (T)	10.90	20.83	
	12/30/92 p	NM	120	14	280	64	6,500	2.90 (T)	10.71	21.02	
	03/16/93 p	NM	140	19	380	85	5,400	64.00 (T)	11.37	20.36	
	06/17/93 p	NM	71	ND	230	53	6,600	2.50 (T)	10.42	21.31	
	08/24/93 p	NM	85	9.1	330	22	10,000	2.20 (T)	11.83	19.90	
	11/24/93 p	NM	2.9	ND	8.9	1.3	630	7.60 (T)	12.27	19.46	
	02/22/94 p	NM	2.0	ND	3.3	2.8	460	ND (T)	11.05	20.68	
	05/25/94 p	NM	ND	0.62	3.4	2.2	2,300	ND (T)	12.32	19.41	
	08/24/94 p	NM	4.4	1.2	9.7	2.3	2,100	NA	12.89	18.84	
	11/16/94 p	NM	2.2	1.1	1.3	ND	1,100	NA	11.48	20.25	
	02/23/95 p	NM	1.2	ND	1.2	0.97	600	NA	9.19	22.54	
	05/18/95 p	NM	3.1	ND	3.4	1.1	2,000	NA	11.67	20.06	
	08/24/95 p	NM	2.1	0.82	4.3	ND	2,000	NA	12.23	19.50	
	11/07/95 p	NM	0.81	0.92	0.83	ND	760	NA	11.86	19.87	
	02/08/96 p	NM	0.69	ND	ND	ND	330	NA	8.14	23.59	
	05/06/96 p	NM	1.05	ND	ND	ND	653	NA	10.23	21.50	
	08/20/96 p	NM	1.15	0.872	ND	1.66	1,230	NA	12.91	18.82	
	11/06/96 p	NM	ND	ND	ND	ND	462	NA	11.15	20.58	
	03/17/97 ap	NM	ND	ND	ND	1.83	130	NA	8.84	22.89	
	06/02/97 ap	NM	2.28	0.594	0.543	ND	445	NA	9.77	21.96	
	09/09/97 ap	NM	2.97	1.58	0.816	1.4	407	NA	11.82	19.91	
	12/01/97 ap	NM	ND	ND	ND	ND	62.8	NA	11.00	20.73	
	03/30/98 ap	0.5	<0.5	<0.5	<0.5	<1.0	<50	<1.0 (D)	10.77	20.96	
	06/27/98 ap	0.3	<0.5	<0.5	<0.5	<1.0	111	<1.0 (D)	11.58	20.15	
	09/22/98 ap	0.6	<5.0	<0.5	<0.5	<1.0	<50	<1.0 (D)	13.41	18.32	
	12/30/98 ap	0.4	<0.5	<0.5	<0.5	<1.0	<50	<1.0 (D)	9.36	22.37	
	03/23/99 ap	0.6	<0.500	<0.500	<0.500	<1.00	<50.0	<1.00 (D)	9.96	21.77	
	05/21/99 ap	0.3	<0.500	<0.500	<0.500	<1.00	<50.0	<1.00 (D)	11.50	20.23	
	09/14/99 ap	0.3	<0.500	<0.500	<0.500	<1.00	88.5	<1.00 (D)	11.70	20.03	
	11/23/99 ap	0.7	1.75	<2.50	<0.500	<2.00	343	NA	10.40	21.33	
	03/02/00 ap	0.65	<0.500	<0.500	<0.500	<1.00	<50.0	NA	9.67	22.06	

TABLE 2
SUMMARY OF HISTORICAL GROUND WATER DATA
ARCO FACILITY NO. 5207
401 PARK AVENUE NORTH
RENTON, WASHINGTON
DELTA PROJECT NO. M098-532

MONITORING WELL	DATE SAMPLED	DISSOLVED OXYGEN (mg/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL-BENZENE (ug/L)	XYLENES (ug/L)	GASOLINE-RANGE HYDROCARBONS (ug/L)	LEAD (ug/L)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION (feet)	TOC (feet)
MW-7	05/08/91 p	NM	44	24	500	120	14,000	NA	10.98	20.86	31.84
	05/15/92 p	NM	ND	6.4	67	7	3,200	22.00 (T)	10.98	20.86	
	12/30/92 p	NM	ND	4.8	49	10	3,900	4.60 (T)	10.80	21.04	
	03/16/93 p	NM	9.1	5.3	83	10	3,300	5.30 (T)	11.45	20.39	
	06/17/93 p	NM	10	9.9	31	37	2,600	ND (T)	10.59	21.29	
	08/24/93 p	NM	11	ND	75	12	5,100	ND (T)	12.00	19.84	
	11/24/93 p	NM	7.7	4.7	59	11	3,300	ND (T)	12.44	19.40	
	02/22/94 p	NM	5.3	3.0	27	6.0	2,600	ND (T)	11.74	20.10	
	05/25/94 p	NM	1.1	2.3	22	3.6	2,300	ND (T)	12.44	19.40	
	08/24/94 p	NM	22	28	51	33	2,900	NA	13.03	18.81	
	11/16/94 p	NM	13	5.7	46	11	3,300	NA	11.57	20.27	
	02/23/95 p	NM	ND	ND	ND	ND	ND	NA	9.19	22.65	
	05/18/95 p	NM	3.7	1.6	47	6.1	1,700	NA	11.74	20.10	
	08/24/95 p	NM	9.6	3.4	43	11	3,500	NA	12.30	19.54	
	11/07/95 p	NM	5.0	2.3	19	3.7	2,400	NA	11.93	19.91	
	02/08/96 p	NM	ND	ND	ND	ND	ND	NA	8.27	23.57	
	05/06/96 p	NM	ND	ND	ND	ND	57.6	NA	10.25	21.59	
	08/20/96 p	NM	ND	ND	23.3	ND	2,200	NA	12.93	18.91	
	11/06/96 p	NM	ND	ND	ND	ND	96.2	NA	11.25	20.59	
	03/17/97 np	NM	ND	ND	ND	ND	ND	NA	8.90	22.94	
	06/02/97 np	NM	ND	ND	ND	ND	ND	NA	9.85	21.99	
	09/09/97 np	NM	3.34	1.77	0.632	2.57	414	NA	11.95	19.89	
	12/01/97 np	NM	2.1	ND	ND	ND	426	NA	11.03	20.81	
	03/30/98 np	0.6	<1.0	<1.0	<0.5	<1.0	192	<1.0 (D)	10.90	20.94	
	06/27/98 np	0.2	<2.5	<2.5	<2.5	<2.5	580	<1.0 (D)	11.65	20.19	
	09/22/98 np	0.4	<1.1	<0.5	<1.0	<1.0	178	<1.0 (D)	13.50	18.34	
	12/30/98 np	0.4	<0.5	<0.5	<0.5	<1.0	<50	<1.0 (D)	9.37	22.47	
	03/23/99 np	0.4	<0.500	<0.500	<0.500	<1.00	<50.0	<1.00 (D)	10.00	21.84	
	05/21/99 np	0.4	2.26	<1.30	<0.500	<1.60	275	<1.00 (D)	11.52	20.32	
	09/14/99 np	0.5	NS	NS	NS	NS	NS	NS	11.65	20.19	
	11/23/99 np	NM	NS	NS	NS	NS	NS	NS	NM	NM	
	03/02/00 np	1.18	<0.500	<0.500	<0.500	<0.500	<50.0	NA	9.80	22.04	

TABLE 2
SUMMARY OF HISTORICAL GROUND WATER DATA
ARCO FACILITY NO. 5207
401 PARK AVENUE NORTH
RENTON, WASHINGTON
DELTA PROJECT NO. M098-532

MONITORING WELL	DATE SAMPLED	DISSOLVED OXYGEN (mg/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL-BENZENE (ug/L)	XYLENES (ug/L)	GASOLINE-RANGE HYDROCARBONS (ug/L)	LEAD (ug/L)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION (feet)	TOC (feet)
MW-8	05/15/92 p	NM	ND	ND	ND	ND	ND	33.00 (T)	11.02	20.88	31.90
	03/16/93 p	NM	ND	ND	ND	ND	ND	19.00 (T)	11.50	20.40	
	06/17/93 p	NM	ND	ND	ND	ND	ND	ND (T)	10.53	21.37	
	08/24/93 p	NM	ND	ND	ND	ND	ND	ND (T)	12.00	19.90	
	11/24/93 p	NM	ND	ND	ND	ND	ND	12.00 (T)	12.45	19.45	
	02/22/94 p	NM	ND	ND	ND	ND	ND	4.00 (T)	11.76	20.14	
	05/25/94	NM	NS	NS	NS	NS	NS	NS	12.39	19.51	
	08/24/94 p	NM	ND	0.58	ND	ND	ND	NA	13.00	18.90	
	11/16/94 p	NM	-	-	-	-	-	-	-	-	
	Abandoned										
MW-9	05/15/92 p	NM	12	3.3	6.3	20	1,700	62.00 (T)	9.46	20.77	30.23
	03/16/93 p	NM	12	ND	ND	3	1,100	ND (T)	9.92	20.31	
	06/17/93 p	NM	22	6.5	2.2	19	1,400	2.10 (T)	8.97	21.26	
	08/24/93 p	NM	58	8.1	ND	13	1,900	ND (T)	10.46	19.77	
	11/24/93 p	NM	48	6.1	3.0	11	1,600	ND (T)	10.95	19.28	
	02/22/94 p	NM	64	4.9	2.1	11	2,500	ND (T)	10.22	20.01	
	05/25/94 p	NM	42	4.2	ND	11	2,200	NA	10.79	19.44	
	08/24/94 p	NM	3.8	2.3	1.2	4.5	1,600	NA	11.41	18.82	
	11/16/94 p	NM	ND	1.0	0.52	1.7	610	NA	10.05	20.18	
	02/23/95 p	NM	ND	ND	1.6	4.0	610	NA	7.55	22.68	
	05/18/95 p	NM	ND	0.63	ND	1.3	980	NA	10.16	20.07	
	08/24/95 p	NM	1.3	1.1	1.0	2.0	1,200	NA	10.72	19.51	
	11/07/95 p	NM	ND	1.5	1.1	1.4	1,400	NA	10.35	19.88	
	02/08/96 p	NM	ND	0.635	ND	ND	305	NA	8.70	21.53	
	05/06/96 p	NM	ND	0.703	0.597	1.2	454	NA	8.42	21.81	
	08/20/96 p	NM	ND	ND	ND	ND	257	NA	11.10	19.13	
	11/06/96 p	NM	ND	ND	ND	ND	257	NA	9.60	20.63	
	03/17/97 np	NM	2.6	0.874	ND	2.69	536	NA	7.30	22.93	
	06/02/97 np	NM	2.99	0.513	0.618	ND	278	NA	8.26	21.97	
	09/09/97 np	NM	1.65	0.77	ND	2.06	263	NA	10.85	19.38	
MW-10	12/01/97 np	NM	ND	1.19	ND	<2.0	269	<1.0 (D)	9.50	20.73	
	03/30/98 np	NM	<2.0	<0.5	<0.5	<1.5	252	<1.0 (D)	9.23	21.00	
	06/27/98 np	NM	2.37	<1.5	<0.5	<1.5	252	<1.0 (D)	10.12	20.11	
	09/22/98	NM	NS	NS	NS	NS	NS	NS	NM	NM	
	12/30/98	NM	NS	NS	NS	NS	NS	NS	NM	NM	
	03/23/99	NM	NS	NS	NS	NS	NS	NS	8.38	21.85	
	05/21/99 np	0.4	3.28	<1.70	<0.700	3.35	302	<1.00 (D)	9.86	20.37	
	09/14/99 np	1.1	<2.00	0.684	<0.500	2.05	287	<1.00 (D)	10.15	20.08	
	11/23/99 np	2.6	2.52	<2.00	<0.500	2.74	360	NA	8.75	21.48	
	03/02/00 np	0.75	<2.30	<1.05	<0.500	3.75	402	NA	8.00	22.23	

TABLE 2
SUMMARY OF HISTORICAL GROUND WATER DATA
ARCO FACILITY NO. 5207
401 PARK AVENUE NORTH
RENTON, WASHINGTON
DELTA PROJECT NO. M098-532

MONITORING WELL	DATE SAMPLED	DISSOLVED OXYGEN (mg/L)	BENZENE (ug/L)	TOLUENE (ug/L)	ETHYL-BENZENE (ug/L)	XYLENES (ug/L)	GASOLINE-RANGE HYDROCARBONS (ug/L)	LEAD (ug/L)	DEPTH TO WATER (feet)	GROUND WATER ELEVATION (feet)	TOC (feet)
MW-10	05/15/92 p	NM	2.0	0.59	ND	ND	ND	60.00 (T)	10.42	20.82	31.24
	03/16/93 p	NM	9.1	5.3	83	10	3,300	5.30 (T)	10.85	20.39	
	06/17/93 p	NM	ND	ND	ND	ND	ND	ND (T)	9.93	21.31	
	08/24/93 p	NM	ND	ND	ND	ND	ND	110.00 (T)	11.43	19.81	
	11/24/93 p	NM	ND	ND	ND	ND	ND	ND (T)	11.86	19.38	
	02/22/94 p	NM	ND	ND	ND	ND	ND	ND (T)	11.18	20.06	
	05/25/94	NM	NS	NS	NS	NS	NS	NS	11.78	19.46	
	08/24/94 p	NM	ND	ND	ND	ND	ND	NA	12.44	18.80	
	11/16/94	NM	NS	NS	NS	NS	NS	NS	11.01	20.23	
	02/23/95 p	NM	ND	ND	ND	ND	ND	NA	8.48	22.76	
	05/18/95 p	NM	ND	ND	ND	ND	ND	NA	11.10	20.14	
	08/24/95 p	NM	ND	ND	ND	ND	ND	NA	11.66	19.58	
	11/07/95 p	NM	ND	ND	ND	ND	ND	NA	11.29	19.95	
	02/08/96 p	NM	ND	ND	ND	ND	ND	NA	7.91	23.33	
	05/06/96 p	NM	ND	ND	ND	ND	ND	NA	10.45	20.79	
	08/20/96 p	NM	ND	ND	ND	ND	ND	NA	13.13	18.11	
	11/06/96 p	NM	ND	ND	ND	ND	ND	NA	10.55	20.69	
	03/17/97 np	NM	ND	ND	ND	ND	ND	NA	8.25	22.99	
	06/02/97 np	NM	6.86	15.1	1.29	34.7	157	NA	9.25	21.99	
	09/09/97 np	NM	ND	ND	ND	ND	ND	NA	11.30	19.94	
	12/01/97	NM	NS	NS	NS	NS	NS	NS	NM	-	
	03/30/98 np	0.7	<0.5	<0.5	<0.5	<1.0	<50	<1.0 (D)	10.22	21.02	
	06/27/98 np	0.6	<0.5	<0.5	<0.5	<1.0	<50	<1.0 (D)	11.04	20.20	
	09/22/98	0.7	NS	NS	NS	NS	NS	NS	12.89	18.35	
	12/30/98 np	0.6	<0.5	<0.5	<0.5	<1.0	<50	<1.0 (D)	8.89	22.35	
	03/23/99	0.6	NS	NS	NS	NS	NS	NS	9.47	21.77	
	05/21/99	0.5	NS	NS	NS	NS	NS	NS	11.02	20.22	
	09/14/99 np	0.6	<0.500	<0.500	<0.500	<1.00	<50.0	<1.0 (D)	10.95	20.29	
	11/23/99 np	3.2	NS	NS	NS	NS	NS	NS	9.85	21.39	
	03/02/00 np	0.62	<0.500	<0.500	<0.500	<0.500	<50.0	NA	9.18	22.06	
Laboratory Methods			8021B	8021B	8021B	8021B	WTPH-G	6020			
MICA Method A Cleanup Levels			5.0	40.0	30.0	20.0	1000*	5.0			

8021B = EPA method for volatile aromatic hydrocarbons. Analysis prior to 03/30/98 utilized EPA method 8020A.

WTPH-G = Washington State method for gasoline-range hydrocarbons.

6020 = EPA method for lead (T = Total, D = Dissolved). Analysis prior to 09/12/98 utilized EPA method 7421.

<1.0 = Concentrations were not detected above the laboratory reporting limit.

TOC = Top of Casing Elevation referenced to mean sea level.

mg/L = Milligrams per liter.

NS = Not sampled.

NM = Not measured.

ug/L = Micrograms per liter.

NA = Not analyzed.

ND = Not detected.

p = Purge sampling methods used

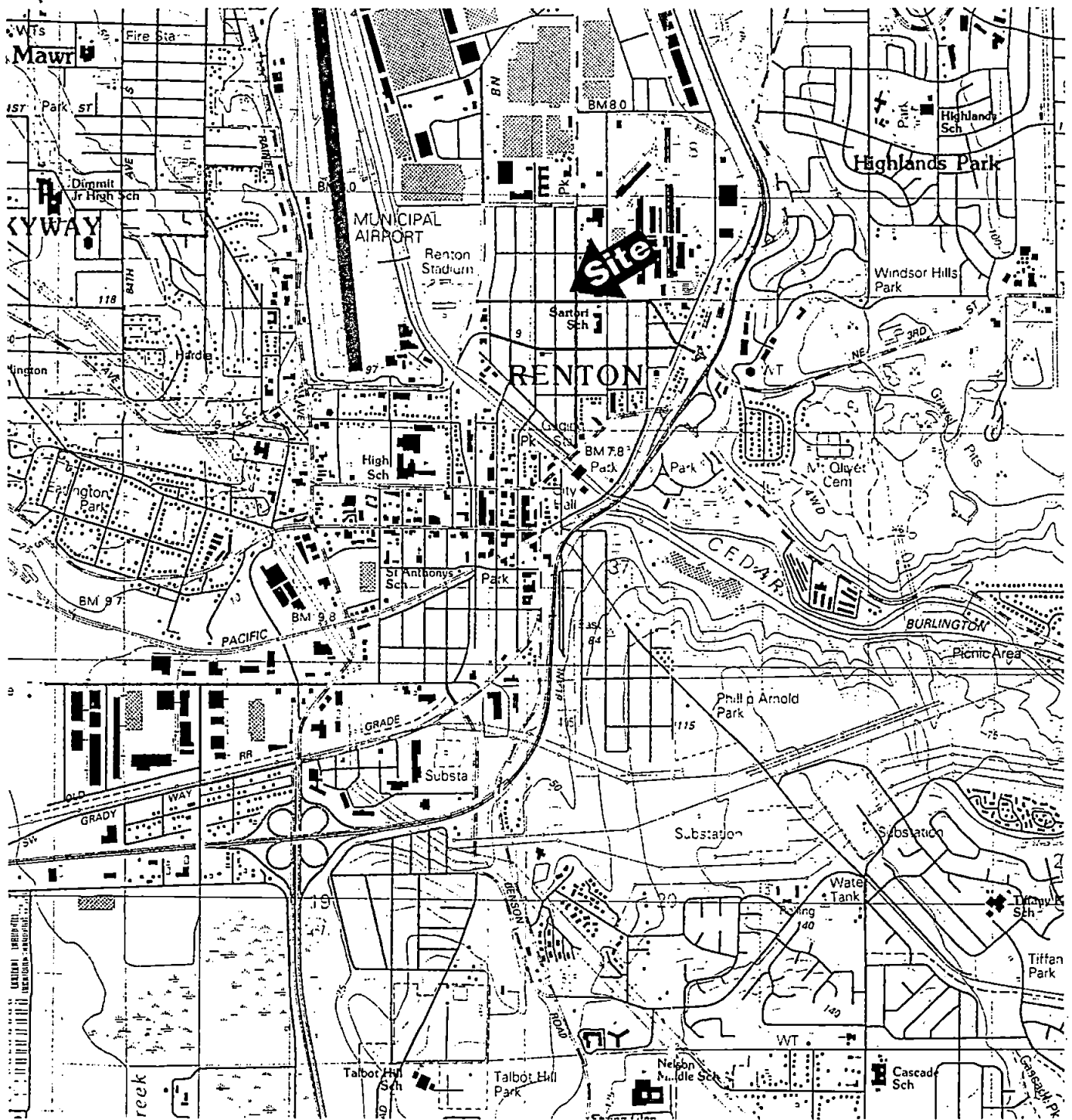
np = Non-purge sampling methods used

* = The sum of gasoline-range, diesel-range and heavy oil-range hydrocarbons must not exceed 1,000 ug/L.

Note: Ground water data prior to 3/30/98 was provided by Pacific Environmental Group, Inc.

REV.06/17/00JT

PROJECTS\ARCO\98532\TABLES\20001-3\QOWD00.XLS



GENERAL NOTES:
 BASE MAP FROM U.S.G.S.
 RENTON, WA
 7.5 x 15 MINUTE TOPOGRAPHIC
 PHOTOREVISED 1983



QUADRANGLE LOCATION



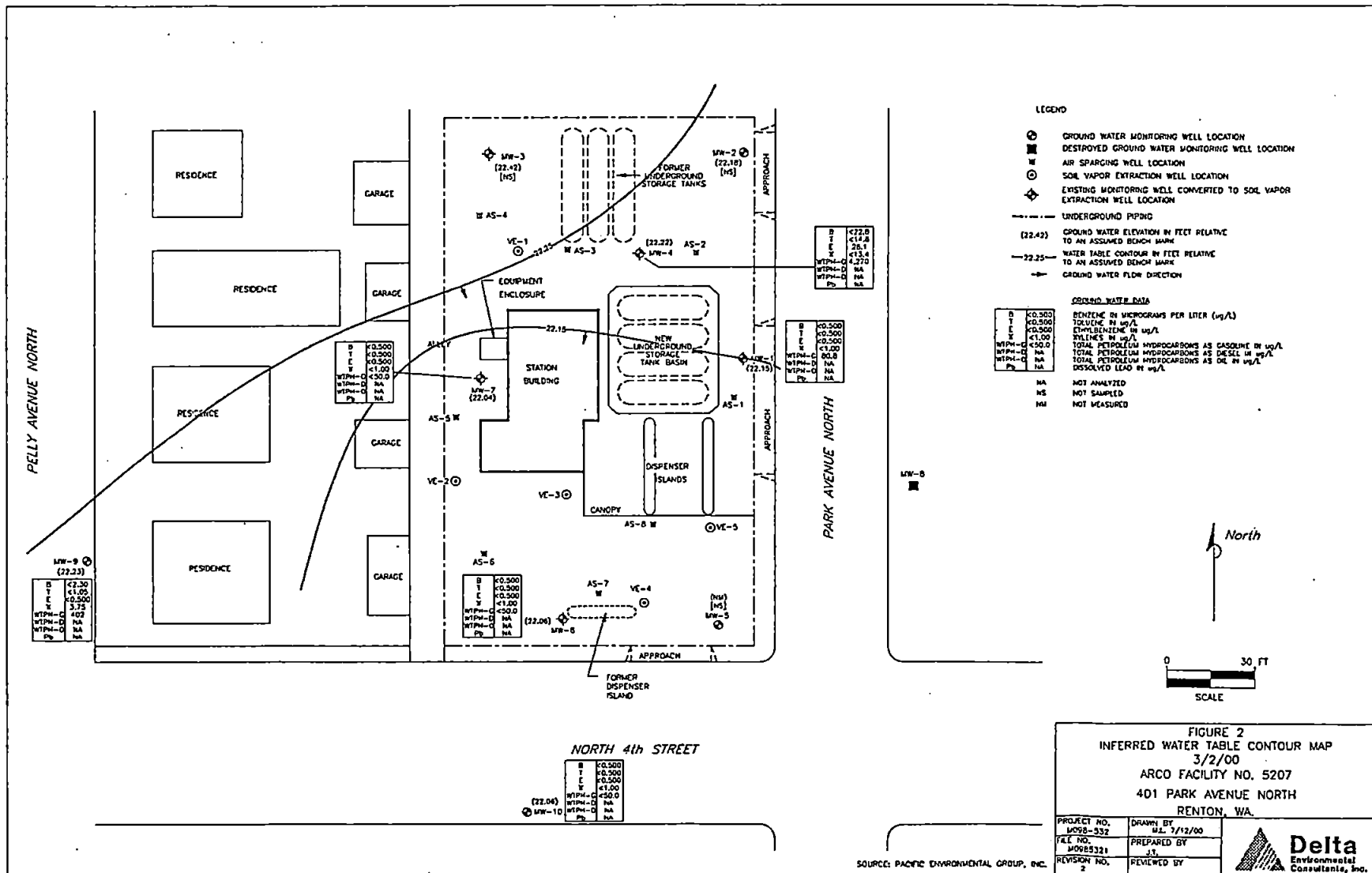
SCALE 1:25,000

FIGURE 1
 SITE LOCATION MAP

ARCO FACILITY NO. 5207
 401 PARK AVENUE NORTH
 RENTON, WA

PROJECT NO. M098-532	DRAWN BY M.L. 9/29/98
FILE NO. --	PREPARED BY J.T.
REVISION NO. 1	REVIEWED BY





ATTACHMENT A

North Creek Analytical Lab Report



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

Delta Environmental
1200 112th NE Ave. NE C146
Bellevue WA, 98004

Project: ARCO #05207
Project Number: M098-532
Project Manager: Markham C Hurd

Reported:
03/15/00 10:44

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW1-9.43	B0C0057-01	Water	03/02/00 11:30	03/02/00 14:25
MW4-9.97	B0C0057-02	Water	03/02/00 11:05	03/02/00 14:25
MW6-9.67	B0C0057-03	Water	03/02/00 10:45	03/02/00 14:25
MW7-9.80	B0C0057-04	Water	03/02/00 10:20	03/02/00 14:25
MW9-8.00	B0C0057-05	Water	03/02/00 12:30	03/02/00 14:25
MW10-9.18	B0C0057-06	Water	03/02/00 11:50	03/02/00 14:25

North Creek Analytical - Bothell

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.

Steve Davis, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 1 of 5



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

Delta Environmental
1200 112th NE Ave. NE C146
Bellevue WA, 98004

Project: ARCO #05207
Project Number: M098-532
Project Manager: Markham C Hurd

Reported:
03/15/00 10:44

Gasoline Range Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8021B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW1-9.43 (B0C0057-01) Water Sampled: 03/02/00 11:30 Received: 03/02/00 14:25									
Gasoline Range Hydrocarbons	80.8	50.0	ug/l	1	0C07004	03/07/00	03/07/00	WTPH-G/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	109 %	50-150			"	"	"	"	
Surrogate: 4-BFB (PID)	94.0 %	50-150			"	"	"	"	
MW4-9.97 (B0C0057-02) Water Sampled: 03/02/00 11:05 Received: 03/02/00 14:25									
Gasoline Range Hydrocarbons	4270	100	ug/l	2	0C07004	03/07/00	03/09/00	WTPH-G/8021B	
Benzene	ND	22.8	"	"	"	"	"	"	O-05R-03
Toluene	ND	14.8	"	"	"	"	"	"	R-03
Ethylbenzene	28.1	1.00	"	"	"	"	"	"	
Xylenes (total)	ND	13.4	"	"	"	"	"	"	R-03
Surrogate: 4-BFB (FID)	176 %	50-150			"	"	"	"	S-02
Surrogate: 4-BFB (PID)	118 %	50-150			"	"	"	"	
MW6-9.67 (B0C0057-03) Water Sampled: 03/02/00 10:45 Received: 03/02/00 14:25									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	0C07004	03/07/00	03/07/00	WTPH-G/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	96.0 %	50-150			"	"	"	"	
Surrogate: 4-BFB (PID)	92.7 %	50-150			"	"	"	"	

North Creek Analytical - Bothell

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Steve Davis, Project Manager

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Environmental Laboratory Network

Page 2 of 5



Seattle 18939 120th Avenue NE, Suite 101, Bothell, WA 98011-9508
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

Delta Environmental
1200 112th NE Ave. NE C146
Bellevue WA, 98004

Project: ARCO #05207
Project Number: M098-532
Project Manager: Markham C Hurd

Reported:
03/15/00 10:44

Gasoline Range Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8021B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW7-9.80 (B0C0057-04) Water Sampled: 03/02/00 10:20 Received: 03/02/00 14:25									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	0C07004	03/07/00	03/07/00	WTPH-G/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	97.1 %	50-150			"	"	"	"	
Surrogate: 4-BFB (PID)	93.1 %	50-150			"	"	"	"	
MW9-8.00 (B0C0057-05) Water Sampled: 03/02/00 12:30 Received: 03/02/00 14:25									
Gasoline Range Hydrocarbons	402	50.0	ug/l	1	0C07004	03/07/00	03/07/00	WTPH-G/8021B	R-03
Benzene	ND	2.30	"	"	"	"	"	"	R-03
Toluene	ND	1.05	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	3.75	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	118 %	50-150			"	"	"	"	
Surrogate: 4-BFB (PID)	100 %	50-150			"	"	"	"	
MW10-9.18 (B0C0057-06) Water Sampled: 03/02/00 11:50 Received: 03/02/00 14:25									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	0C07004	03/07/00	03/07/00	WTPH-G/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	97.1 %	50-150			"	"	"	"	
Surrogate: 4-BFB (PID)	95.4 %	50-150			"	"	"	"	

North Creek Analytical - Bothell

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425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
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Delta Environmental
1200 112th NE Ave. NE C146
Bellevue WA, 98004

Project: ARCO #05207
Project Number: M098-532
Project Manager: Markham C Hurd

Reported:
03/15/00 10:44

Gasoline Range Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8021B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 0C07004: Prepared 03/07/00 Using EPA 5030B (P/T)										
Blank (0C07004-BLK1)										
Gasoline Range Hydrocarbons	ND	50.0	ug/l							
Benzene	ND	0.500	"							
Toluene	ND	0.500	"							
Ethylbenzene	ND	0.500	"							
Xylenes (total)	ND	1.00	"							
Surrogate: 4-BFB (FID)	48.5		"	48.0		101	50-150			
Surrogate: 4-BFB (PID)	45.0		"	48.0		93.8	50-150			
LCS (0C07004-BS1)										
Gasoline Range Hydrocarbons	489	50.0	ug/l	500		97.8	70-130			
Surrogate: 4-BFB (FID)	53.1		"	48.0		111	50-150			
Duplicate (0C07004-DUP1) Source: B0C0075-06										
Gasoline Range Hydrocarbons	2780	50.0	ug/l		2940			5.59	25	
Surrogate: 4-BFB (FID)	71.1		"	48.0		148	50-150			
Duplicate (0C07004-DUP2) Source: B0C0075-03										
Gasoline Range Hydrocarbons	3790	1000	ug/l		4710			21.6	25	
Surrogate: 4-BFB (FID)	47.9		"	48.0		99.8	50-150			
Matrix Spike (0C07004-MS1) Source: B0C0057-04										
Benzene	10.6	0.500	ug/l	10.0	ND	106	70-130			
Toluene	10.6	0.500	"	10.0	ND	106	70-130			
Ethylbenzene	10.6	0.500	"	10.0	ND	106	70-130			
Xylenes (total)	30.9	1.00	"	30.0	ND	103	70-130			
Surrogate: 4-BFB (PID)	46.3		"	48.0		96.5	50-150			
Matrix Spike Dup (0C07004-MSD1) Source: B0C0057-04										
Benzene	10.9	0.500	ug/l	10.0	ND	109	70-130	2.79	15	
Toluene	11.0	0.500	"	10.0	ND	110	70-130	3.70	15	
Ethylbenzene	11.0	0.500	"	10.0	ND	110	70-130	3.70	15	
Xylenes (total)	31.7	1.00	"	30.0	ND	106	70-130	2.56	15	
Surrogate: 4-BFB (PID)	46.0		"	48.0		95.8	50-150			

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1200 112th NE Ave. NE C146
Bellevue WA, 98004

Project: ARCO #05207
Project Number: M098-532
Project Manager: Markham C Hurd

Reported:
03/15/00 10:44

Notes and Definitions

- O-05 Reanalysis by an alternate column or method has confirmed the identification and/or concentration of this result.
- R-03 The reporting limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
- S-02 The surrogate recovery for this sample cannot be accurately quantified due to interference from coeluting organic compounds present in the sample.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

North Creek Analytical - Bothell

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North Creek Analytical, Inc.
Environmental Laboratory Network

Page 5 of 5

ARCO Products Company				Work Authorization No. 25651 00				Chain of Custody				Page ___ of ___	
ARCO Facility No. 05207		City, State (Facility) RENTON, WA		Project Manager (Consultant) Markham Hurd		Project No. (Consultant) M098-532		Laboratory Name North Creek Analytical					
ARCO Engineer Hutchens, Chuck		ARCO Telephone No. (425) 485-8792		Telephone No. (Consultant) (425) 450-7726		Fax No. (Consultant) (425) 653-2677		Method of Shipment Bocouster					
Consultant Company Delta Environmental Consultants, Inc.				Consultant Address 1200 112th Ave. NE, Suite C-146, Bellevue, WA									
Sample I.D.	Lab Sample No.	No. of Containers	Matrix				Prsv.		Sampling Date	Sampling Time	WTPHC / BTEX	HOLD (see remarks) Turn Around Time (business days)	Special Detection Limit/Reporting
			Soil	Water	Air	Other	Yes	No					
MW1-9.43		2	X			X		3/2/2000	1130	X		1500 COS # - 01 10	Special QA/QC
MW4-9.97		2	X			X			1105	X		- 02 10	Sub'd COC Atch'd:
MW6-9.67		2	X			X			1045	X		- 03 10	
MW7-9.80		2	X			X			1020	X		- 04 10	
MW9-8.00		2	X			X		✓	1230	X		- 05 10	RAT Team #7
MW10-9.18		2	X			X		3/2/2000	1150	X		- 06 10	
													S K R A M E R
Sample Received Intact: (Yes) No				Temperature received: 15.0 Ice (No Ice)				w/o					
Relinq. by sampler (Sign & Print Name) Alan E. Starr KHM				Date Time 3/2/2000 1425		Received by (Sign & Print Name) GRANDY TONTU				Lab Work No.			
Relinquished by				Date Time		Received by Grandy Tontu							
Relinquished by				Date Time		Received by laboratory NCA				Date Time 3/2/00 1425			
Rev. 11/29/95													