ARCO 5363
Federal Way
LUST 591899

Atlantic Richfield Company

David White
Environmental Business Manager

4 Centerpointe Dr.
La Palma, CA 90623-1066
Phone: 714-228-6782
Fax: 714-228-6749
E-mail: whitedr2@bp.com

July 16, 2008

Ms. Gayle Garbush
Ecology NW Regional Office
3190 – 160th Avenue SE
Bellevue, WA 98008

Re: ARCO Facility No. 5363
27202 Pacific Highway South, Federal Way, WA

Ms. Garbush:

The following correspondence prepared by Delta Consultants is attached for your review:

- Ground Water Monitoring Report – July 9, 2008

Please contact me if you have additional questions or require additional information regarding the above referenced site.

Sincerely,

David White

Cc: Markham Hurd, Delta Consultants
Derek Tornow, Delta Consultants

GROUND WATER MONITORING REPORT
Atlantic Richfield Company
First and Second Quarters of 2008
July 9, 2008

DELTA

ARCO Facility No.:	5363
Address:	27202 Pacific Highway South, Federal Way, Washington
Atlantic Richfield Environmental Business Manager:	David White
Consulting Co./Contact Person:	Delta Consultants/Bryan Taylor
Consultant Project Number:	G0BKJ
Primary Agency/Regulatory ID No.:	Washington State Department of Ecology/97531

WORK PERFORMED DURING THE FIRST AND SECOND QUARTERS OF 2008:

- SAIC conducted semi-annual ground water monitoring and sampling on March 14, 2008.
- Delta prepared this semi-annual ground water monitoring report.

WORK SCHEDULED FOR THE THIRD AND FOURTH QUARTERS OF 2008:

- SAIC will conduct semi-annual ground water monitoring and sampling.
- Delta will prepare a semi-annual ground water monitoring report.

Current Phase of Project:	Monitoring	**(Phase I, Addt'l Assmnt RAP/CAP, Remed., etc)**
Frequency of Ground Water Sampling and Monitoring:	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:	4.56 tons (drill cuttings)	**(Cubic yards/tons)**
Current Remediation Techniques:	Natural Attenuation	**(SVES/Sparge/Pump and Treat)**
Approximate Depth to Ground Water:	4.89 to 14.13	**(Feet)**
Ground Water Gradient:	East	**(Direction)**
	0.11 ft./ linear ft.	**(Magnitude)**

The recommendations contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Delta's client and the Department of Ecology. Delta will not and cannot be liable for unauthorized reliance by any other party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

Bryan Taylor
Project Manager

Attachments:
- Table 1 – Summary of Ground Water Data
- Figure 1 – Site Location Map
- Figure 2 – Site Aerial Map
- Figure 3 – Inferred Water Table Contour Map – 3/14/08
- Figure 4 – MW-2 Hydrocarbon Concentrations and Water Elevations vs. Time
- Figure 5 – MW-4 Hydrocarbon Concentrations and Water Elevations vs. Time
- Test America Analytical Lab Report
- Field Data Sheets

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TABLE 1
SUMMARY OF GROUND WATER DATA
ARCO FACILITY NO. 5363
27202 PACIFIC HIGHWAY SOUTH
FEDERAL WAY, WASHINGTON

Well	TOC (feet)	Date Sampled	Depth to Water (feet)	LPH Thickness (feet)	GW Elevation (feet)	Dissolved Oxygen (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	1,2 Dibromo ethane (µg/L)	1,2 Dichloro ethane (µg/L)	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Total Lead (µg/L)	Dissolved Lead (µg/L)	Comments
MW-1	98.23	06/11/04	19.93	0.00	78.30	2.9	<0.500	<0.500	<0.500	<1.00	<5.00	<0.010	<1.00	<50.0	NA	NA	<1.00	<1.00	P
MW-1	98.23	12/07/04	20.78	0.00	77.45	2.0	<0.200	<0.500	<0.500	<1.00	<2.00	NA	NA	<80.0	NA	NA	<1.00	<1.00	P
MW-1	98.23	02/21/05	15.75	0.00	82.48	2.7	<0.200	<0.500	<0.500	<1.00	<2.00	NA	NA	<80.0	NA	NA	<1.00	<1.00	P
MW-1	98.23	05/16/05	13.81	0.00	84.42	6.5	<0.200	<0.500	<0.500	<1.00	<2.00	<0.010	<0.500	<80.0	NA	NA	<1.00	<1.00	P
MW-1	98.23	08/02/05	18.01	0.00	80.22	2.5	<0.500	<0.500	<0.500	<1.00	<1.00	<0.010	<1.00	<50.0	NA	NA	1.8	<1.00	P
MW-1	98.23	10/21/05	18.73	0.00	79.50	2.2	<0.300	<0.500	<0.500	<3.00	<1.00	<0.010	<1.00	<50.0	NA	NA	<1.00	NA	P
MW-1	98.23	01/11/06	8.31	0.00	89.92	2.8	<0.500	<0.500	<0.500	<1.00	<1.00	<0.010	<1.00	<50.0	NA	NA	<1.00	NA	NP
MW-1	98.23	04/11/06	16.67	0.00	81.56	2.9	<0.500	<0.500	<0.500	<1.00	<1.00	<0.010	<1.00	<50.0	NA	NA	<1.00	<1.00	NP
MW-1	98.23	07/11/06	15.55	0.00	82.68	2.7	<0.500	<0.500	<0.500	<1.00	<1.00	NA	NA	<80.0	NA	NA	<1.00	<1.00	NP
MW-1	98.23	02/22/07	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-1	98.23	07/10/07	17.20	0.00	81.03	3.09	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-1	98.23	03/14/08	14.13	0.00	84.10	1.85	<0.500	<0.500	<0.500	<3.00	NA	NA	NA	<50.0	NA	NA	NA	NA	NP
MW-2	100.72	06/11/04	5.72	0.00	95.00	1.0	1,590	6,020	880	4,960	<5.00	0.047	<1.00	42,100	NA	NA	23.7	18.8	P
MW-2	100.72	12/07/04	9.50	0.00	91.22	1.8	3,820	11,400	1,180	6,180	<200	NA	NA	48,200	NA	NA	8.58	6.45	P
MW-2	100.72	02/21/05	5.73	0.02	95.01	NM	1520	7630	1310	6700	<100	NA	NA	44800	NA	NA	24.5	17.5	P (a)
MW-2	100.72	05/16/05	4.44	0.05	96.32	NM	99.5	3680	1280	7320	<100	<0.010	<25.0	57900	NA	NA	28.6	23.7	P
MW-2	100.72	08/02/05	6.18	0.00	94.54	NM	56.8	2590	912	3010	<2.00	<0.010	<1.00	27700	NA	NA	<1.00	30.4	P
MW-2	100.72	10/21/05	7.57	0.00	93.15	3.3	258	4,790	1170	6340	<1.00	<0.010	<1.00	43,800	NA	NA	19.6	13.9	P
MW-2	100.72	01/11/06	2.40	0.00	98.32	0.9	66.1	752	142	1,700	<1.00	<0.010	<1.00	12,800	NA	NA	5.90	NA	NP
MW-2	100.72	04/11/06	3.90	0.00	96.82	0.9	18.9	189	182	893	<5.00	<0.010	<5.00	13,200	NA	NA	5.67	1.7	NP
MW-2	100.72	07/11/06	5.05	0.00	95.67	1.3	1.70	22.0	34.3	115	<1.00	NA	NA	2,540	NA	NA	12.6	9.17	NP
MW-2	100.72	02/22/07	3.83	0.00	96.89	1.12	245	2,730	1,280	4,050	NA	NA	NA	36,200	NA	NA	NA	NA	NP
MW-2	100.72	07/10/07	5.18	0.00	95.54	1.10	49.7	1,250	1,240	3,230	NA	NA	NA	32,100	NA	NA	NA	NA	NP
MW-2	100.72	03/14/08	4.89	0.00	95.83	1.89	192	2,630	1,180	4,160	NA	NA	NA	46,400	NA	NA	NA	NA	NP
MW-3	100.08	06/11/04	6.81	0.00	93.27	2.4	1	1.45	18.4	23.0	<5.00	<0.010	<1.00	1,120	NA	NA	<1.00	<1.00	P
MW-3	100.08	12/07/04	8.80	0.00	91.28	2.2	2	1.91	50.2	26.4	<2.00	NA	NA	1,430	NA	NA	<1.00	<1.00	P
MW-3	100.08	02/21/05	5.82	0.00	94.26	2.3	1.39	3.52	11.4	44.5	<2.00	NA	NA	2690	NA	NA	<1.00	<1.00	P
MW-3	100.08	02/21/05	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-3	100.08	05/16/05	6.01	0.00	94.07	4.8	0.610	2.06	15.0	27.0	<2.00	<0.010	<0.500	2870	NA	NA	<1.00	<1.00	P
MW-3	100.08	08/02/05	6.17	0.00	93.91	2.9	1.22	2.32	13.6	34.4	<2.00	<0.010	<1.00	2870	NA	NA	24.6	<1.00	P
MW-3	100.08	10/21/05	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS, (b)
MW-3	100.08	01/11/06	4.11	0.00	95.97	NM	1.2	3.67	67.0	59.8	<1.00	<0.010	<1.00	6,260	NA	NA	<1.00	NA	NP
MW-3	100.08	04/11/06	6.72	0.00	93.36	2.7	1.36	3.11	69.5	60.5	<1.00	<0.010	<1.00	6,550	NA	NA	<1.00	<1.00	NP
MW-3	100.08	07/11/06	5.89	0.00	94.19	2.5	0.520	2.83	23.5	33.4	<1.00	NA	NA	2,730	NA	NA	<1.00	<1.00	NP
MW-3	100.08	02/22/07	4.70	0.00	95.38	1.43	3.46	5.03	64.9	63.8	NA	NA	NA	5,420	NA	NA	NA	NA	NP
MW-3	100.08	07/10/07	4.65	0.00	95.43	1.38	0.53	3.95	33.3	44.7	NA	NA	NA	4,800	NA	NA	NA	NA	NP
MW-3	100.08	03/14/08	5.94	0.00	94.14	1.50	1.07	5.09	68.2	80.2	NA	NA	NA	6,290	NA	NA	NA	NA	NP
MW-4	99.38	06/11/04	5.71	0.00	93.67	1.1	63	453	194	1,390	<5.00	0.184	<1.00	10,400	NA	NA	1.38	<1.00	P
MW-4	99.38	12/07/04	7.37	0.00	92.01	1.8	296	182	19.5	860	<4.00	NA	NA	3,170	NA	NA	<1.00	<1.00	P
MW-4	99.38	02/21/05	6.54	0.00	92.84	2.2	4380	5510	1280	7540	<100	NA	NA	29500	NA	NA	<1.00	<1.00	P

TABLE 1
SUMMARY OF GROUND WATER DATA
ARCO FACILITY NO. 5363
27202 PACIFIC HIGHWAY SOUTH
FEDERAL WAY, WASHINGTON

Well	TOC (feet)	Date Sampled	Depth to Water (feet)	LPH Thickness (feet)	GW Elevation (feet)	Dissolved Oxygen (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	1,2 Dibromo ethane (µg/L)	1,2 Dichloro ethane (µg/L)	TPH-G (µg/L)	TPH-D (µg/L)	TPH-O (µg/L)	Total Lead (µg/L)	Dissolved Lead (µg/L)	Comments
MW-4	99.38	05/16/05	5.13	0.00	94.25	5.6	<0.200	<0.500	<0.500	<1.00	<2.00	<0.010	<0.500	<80.0	NA	NA	<1.00	<1.00	P
MW-4	99.38	08/02/05	6.04	0.00	93.34	2.0	<0.500	<0.500	<0.500	<1.00	<1.00	<0.010	<1.00	<50.0	NA	NA	<1.00	<1.00	P
MW-4	99.38	10/21/05	7.22	0.00	92.16	3.8	<0.300	<0.500	<0.500	0.540	<1.00	<0.010	<1.00	<50.0	NA	NA	<1.00	NA	P
MW-4	99.38	01/11/06	5.00	0.00	94.38	2.0	1,100	1,190	542	2,660	3.94	0.028	<1.00	14,000	NA	NA	<1.00	NA	NP
MW-4	99.38	04/11/06	6.68	0.00	92.70	3.2	33.9	37.3	46.0	153	<1.00	<0.010	<1.00	2,980	NA	NA	<1.00	<1.00	NP
MW-4	99.38	07/11/06	5.50	0.00	93.88	1.9	<0.500	<0.500	<0.500	1.48	<1.00	NA	NA	<80.0	NA	NA	<1.00	<1.00	NP
MW-4	99.38	02/22/07	NM	NM	NM	NM	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	99.38	07/10/07	5.72	0.00	93.66	3.58	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS	NS
MW-4	99.38	03/14/08	6.81	0.00	92.57	1.76	<0.500	<0.500	<0.500	<3.00	NA	NA	NA	<50.0	NA	NA	NA	NA	NP

Notes: Benzene, toluene, ethylbenzene, total xylenes, and methyl tert-butyl ether (MTBE) analyzed by EPA Method 8021B or 8260B. Samples with MTBE detections above the laboratory method reporting limit using 8021B were re-analyzed using 8260B to confirm the MTBE concentration.

TPH-G = Gasoline-range hydrocarbons analyzed by the Northwest method NWTPH-Gx.

TPH-D = Diesel-range hydrocarbons analyzed by the Northwest method NWTPH-Dx.

TPH-O = Oil-range hydrocarbons analyzed by the Northwest method NWTPH-Dx.

1,2-Dibromoethane (EDB) analyzed by EPA Method 8011.

1,2-Dichloroethane (EDC) analyzed by EPA Method 8260B.

Total and dissolved lead analyzed by EPA Method 6020.

TOC = Top of casing elevations and ground water elevations referenced to a site specific benchmark, assigned an elevation of 100.00 feet.

ug/L = Micrograms per liter.

mg/L = Milligrams per liter.

<1.00 = Concentrations were not detected above the stated laboratory reporting limit.

NM = Not measured.

P = Purge sampling methods were utilized.

NA = Not analyzed.

LPH = Liquid Phase Hydrocarbons.

NS = Not Sampled

a = LPH was measured visually.

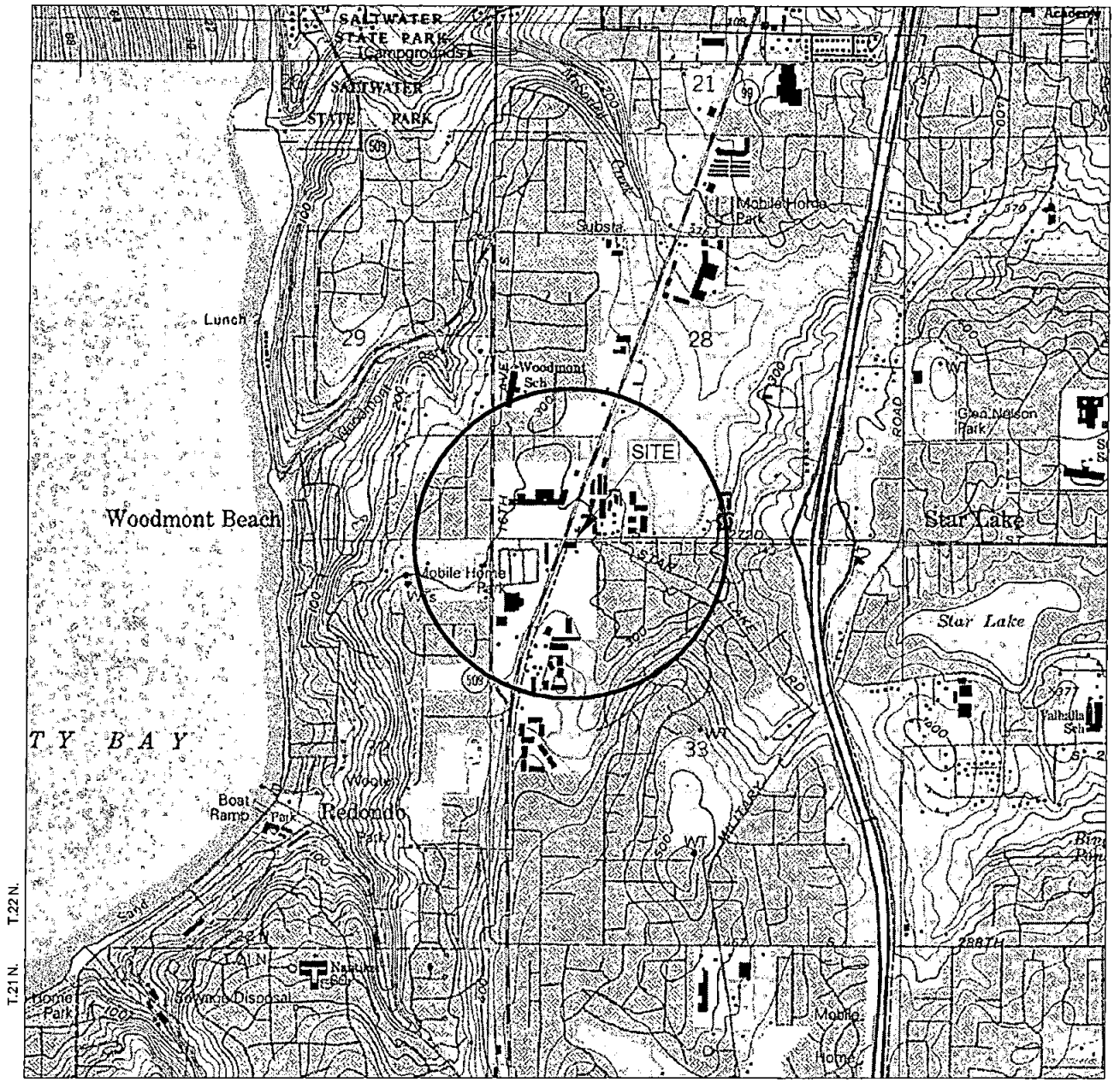
b = car parked over well

GW elevation = Ground Water elevation as calculated by TOC elevation - depth to water + (0.8 x LPH thickness).

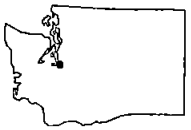
Sampling Frequency:

1Q 2008: MW-1, MW-2, MW-3, MW-4

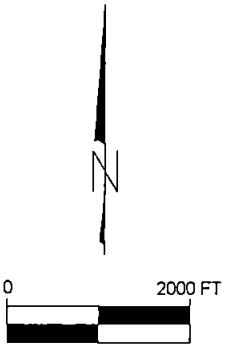
3Q 2007: MW-1, MW-2, MW-3, MW-4



GENERAL NOTES:
BASE MAP FROM U.S.G.S.
POVERTY BAY, WA.
7.5 MINUTE TOPOGRAPHIC
REVISED 1994



QUADRANGLE LOCATION



SCALE 1:24,000

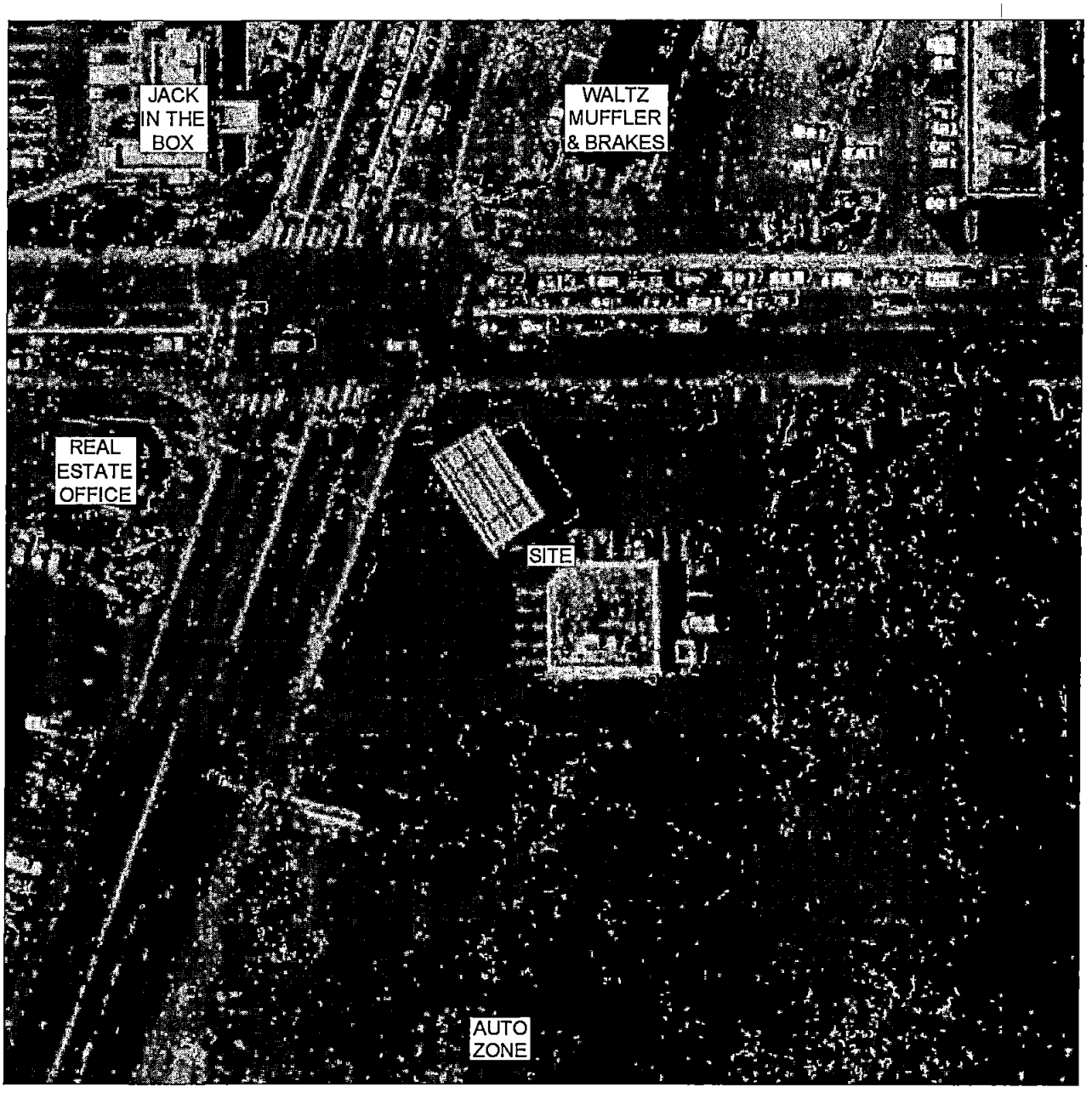
FIGURE 1

SITE LOCATION MAP

ARCO FACILITY NO. 5363
27202 PACIFIC HIGHWAY SOUTH
FEDERAL WAY, WA.

PROJECT NO. AM00-506	DRAWN BY M.L. 8/4/04
FILE NO. AM00506A	PREPARED BY BAB
REVISION NO. 1	REVIEWED BY

DELTA



GENERAL NOTES:
AERIAL PHOTOGRAPH
DATED 6/13/02

N

0 150 FT

SCALE

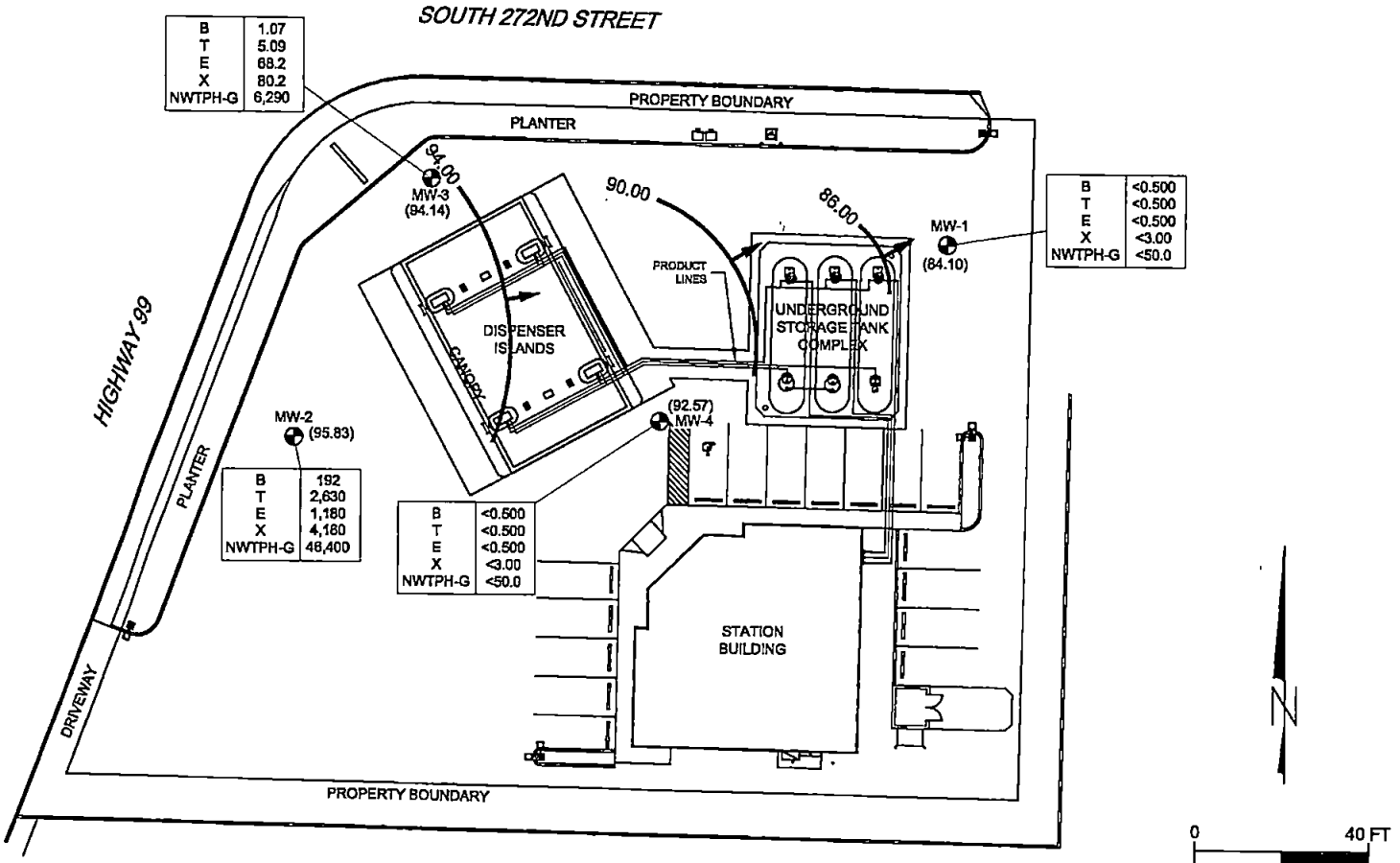
FIGURE 2

SITE AERIAL MAP

ARCO FACILITY NO. 5363
27202 PACIFIC HIGHWAY SOUTH
FEDERAL WAY, WA.

PROJECT NO. -	DRAWN BY M.L. 5/18/05
FILE NO. AM85972D	PREPARED BY SBM
REVISION NO. 1	REVIEWED BY

DELTA



LEGEND:

MW-4	MONITORING WELL LOCATION
(95.83)	GROUND WATER ELEVATION IN FEET REFERENCED TO A SITE SPECIFIC BENCHMARK
— 94.00 —	INFERRED WATER TABLE CONTOUR IN FEET REFERENCED TO A SITE SPECIFIC BENCHMARK (CONTOUR INTERVAL: 4.00 FT)
←	INFERRED GROUND WATER FLOW DIRECTION (GROUNDWATER GRADIENT: 0.11 FT/LINEAR FT)

GROUND WATER DATA

B	<0.500	BENZENE IN MICROGRAMS PER LITER (ug/L)
T	<0.500	TOLUENE IN ug/L
E	<0.500	ETHYLBENZENE IN ug/L
X	<3.00	XYLENES IN ug/L
NWTPH-G	<50.0	GASOLINE-RANGE HYDROCARBONS IN ug/L

FIGURE 3
INFERRED WATER TABLE CONTOUR MAP
3/14/08
ARCO FACILITY NO. 5363
27202 PACIFIC HIGHWAY SOUTH
FEDERAL WAY, WA.

PROJECT NO. G0BKJ	DRAWN BY KYM 6/18/08
FILE NO. AR-5363 -1Q08	PREPARED BY SBM
REVISION NO. 1	REVIEWED BY

DELTA

Figure 4
MW-2 Hydrocarbon Concentrations and Water Elevations vs. Time
ARCO Facility No. 5363

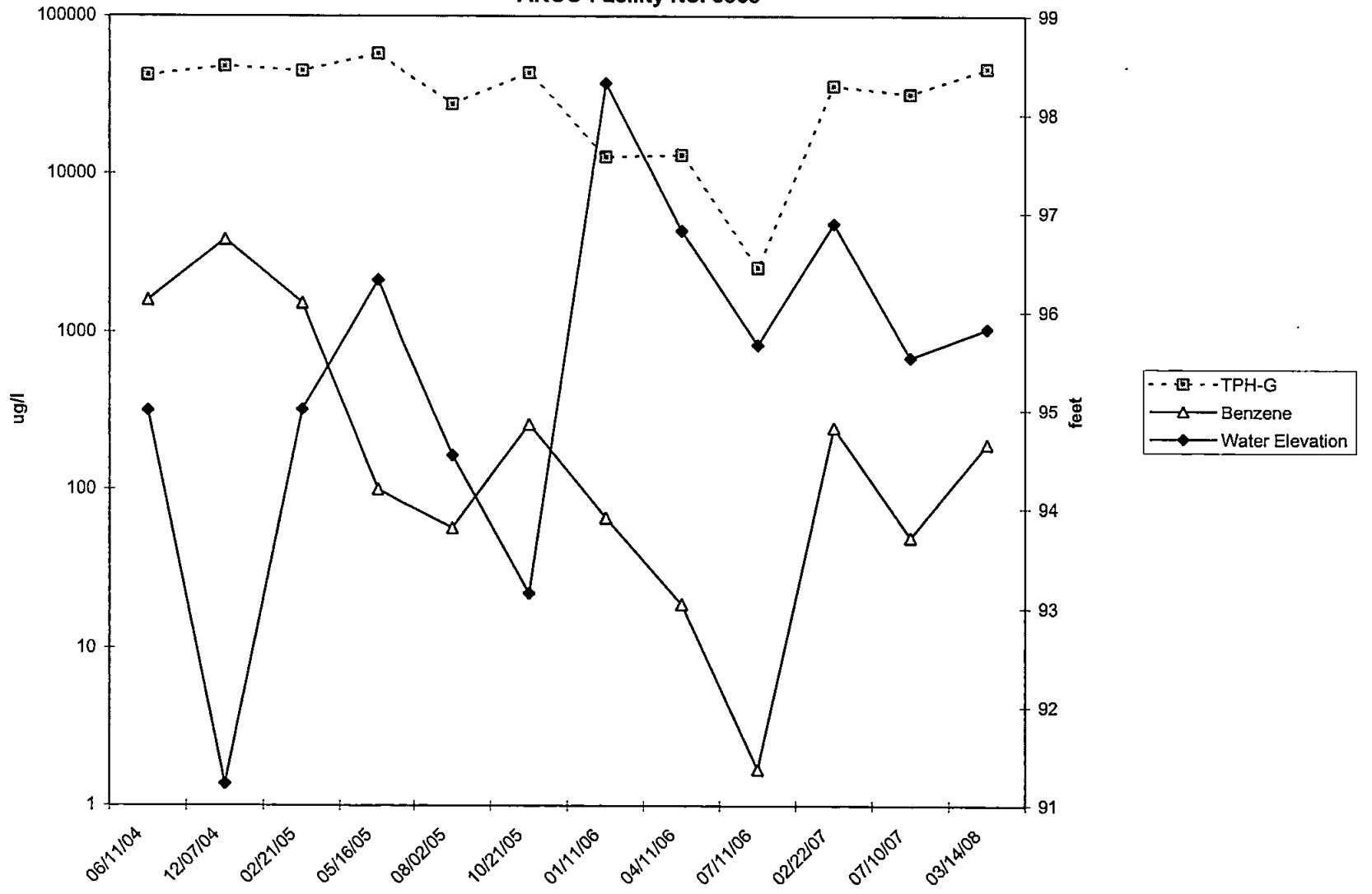
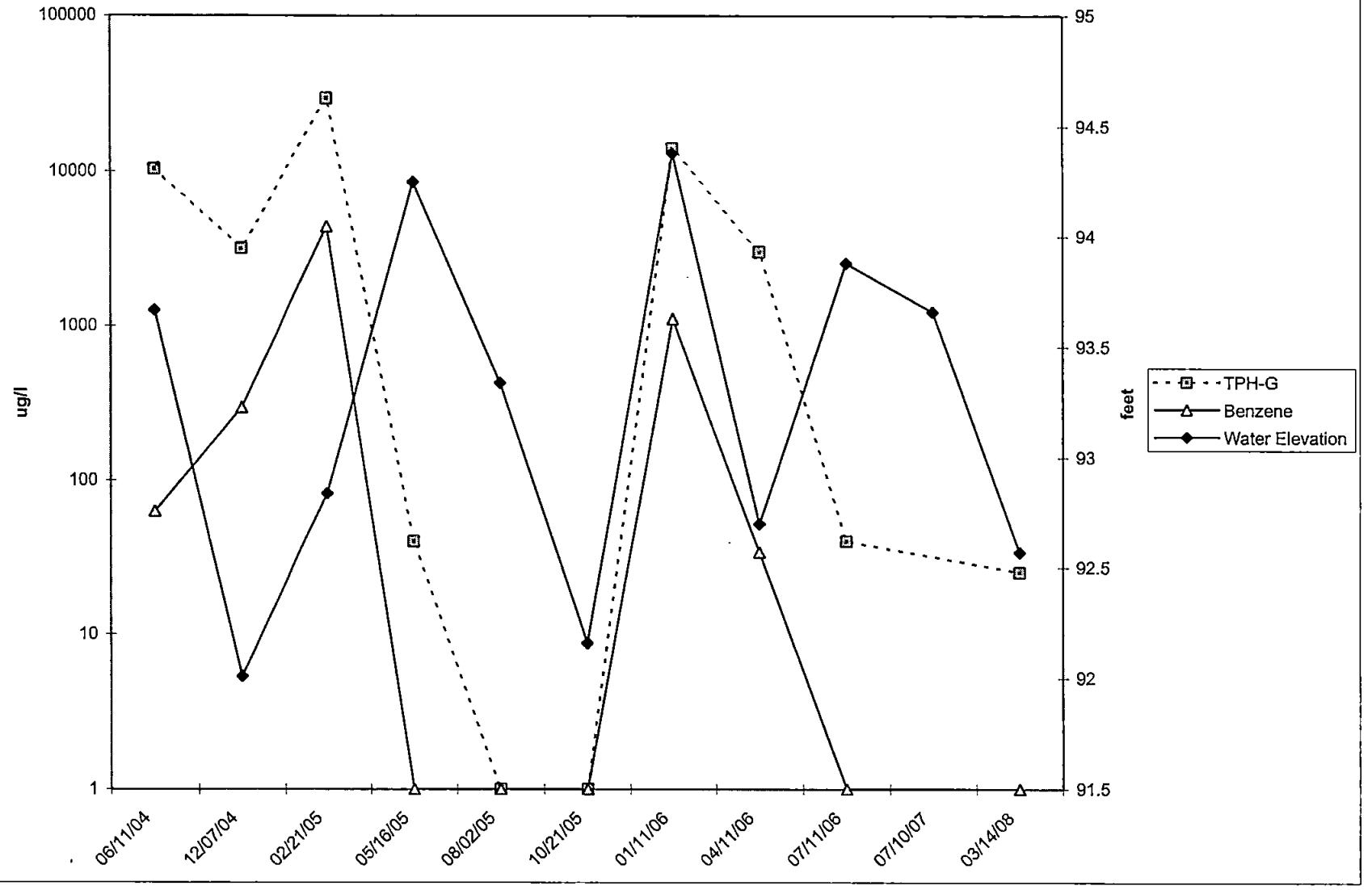


Figure 5
MW-4 Hydrocarbon Concentrations and Water Elevations vs. Time
ARCO Facility No. 5363



TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

March 28, 2008

Mike Lange
SAIC - Bothell
18912 North Creek Parkway South, Suite 101
Bothell, WA/USA 98011

RE: ARCO #5363 - 27202 Pacific Hwy. Federal Way

Enclosed are the results of analyses for samples received by the laboratory on 03/14/08 12:40. The following list is a summary of the Work Orders contained in this report, generated on 03/28/08 11:24.

If you have any questions concerning this report, please feel free to contact me.

Work Order	Project	ProjectNumber
BRC0229	ARCO #5363 - 27202 Pacific	G0BKJ-0012

TestAmerica Seattle

Curtis D. Armstrong For Sandra Yakamavich, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

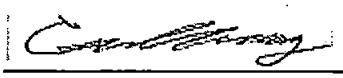
SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

SAIC - Bothell	Project Name:	**ARCO #5363 - 27202 Pacific Hwy. Federal Way**	
18912 North Creek Parkway South, Suite 101	Project Number:	G0BKJ-0012	Report Created:
Bothell, WA/USA 98011	Project Manager:	Mike Lange	03/28/08 11:24

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-1-14.13	BRC0229-01	Water	03/14/08 10:35	03/14/08 12:40
MW-2-4.89	BRC0229-02	Water	03/14/08 10:50	03/14/08 12:40
MW-3-5.94	BRC0229-03	Water	03/14/08 10:20	03/14/08 12:40
MW-4-6.81	BRC0229-04	Water	03/14/08 10:00	03/14/08 12:40
TB-1-08002008	BRC0229-05	Water	03/14/08 08:00	03/14/08 12:40

TestAmerica Seattle



Curtis D. Armstrong For Sandra Yakamavich, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

SAIC - Bothell	Project Name:	**ARCO #5363 - 27202 Pacific Hwy. Federal Way**	
18912 North Creek Parkway South, Suite 101	Project Number:	G0BKJ-0012	Report Created:
Bothell, WA/USA 98011	Project Manager:	Mike Lange	03/28/08 11:24

Volatile Petroleum Products by NWTPH-Gx

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRC0229-01 (MW-1-14.13)			Water			Sampled: 03/14/08 10:35				
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	-----	50.0	ug/l	1x	8C17021	03/17/08 10:28	03/18/08 01:35	
Surrogate(s): 4-BFB (FID)			*92.2%*		*58 - 144 %*	"			"	
BRC0229-02 (MW-2-4.89)			Water			Sampled: 03/14/08 10:50				
Gasoline Range Hydrocarbons	NWTPH-Gx	**46400**	-----	5000	ug/l	100x	8C17021	03/17/08 10:28	03/18/08 03:11	
Surrogate(s): 4-BFB (FID)			*93.5%*		*58 - 144 %*	*1x*			"	
BRC0229-03 (MW-3-5.94)			Water			Sampled: 03/14/08 10:20				
Gasoline Range Hydrocarbons	NWTPH-Gx	**6290**	-----	250	ug/l	5x	8C17021	03/17/08 10:28	03/18/08 08:29	
Surrogate(s): 4-BFB (FID)			*112%*		*58 - 144 %*	*1x*			"	
BRC0229-04 (MW-4-6.81)			Water			Sampled: 03/14/08 10:00				
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	-----	50.0	ug/l	1x	8C17021	03/17/08 10:28	03/18/08 07:57	
Surrogate(s): 4-BFB (FID)			*93.3%*		*58 - 144 %*	"			"	
BRC0229-05 (TB-1-08002008)			Water			Sampled: 03/14/08 08:00				
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	-----	50.0	ug/l	1x	8C17021	03/17/08 10:28	03/18/08 01:04	
Surrogate(s): 4-BFB (FID)			*91.8%*		*58 - 144 %*	"			"	

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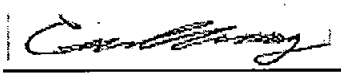

Curtis D. Armstrong For Sandra Yakamavich, Project Manager

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SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

SAIC - Bothell	Project Name:	**ARCO #5363 - 27202 Pacific Hwy. Federal Way**	
18912 North Creek Parkway South, Suite 101	Project Number:	G0BKJ-0012	Report Created:
Bothell, WA/USA 98011	Project Manager:	Mike Lange	03/28/08 11:24

Volatile Organic Compounds by EPA Method 8260B

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRC0229-01 (MW-1-14.13)		Water			Sampled: 03/14/08 10:35					
Benzene	EPA 8260B	ND	-----	0.500	ug/l	1x	8C25028	03/25/08 12:22	03/25/08 21:53	
Ethylbenzene	"	ND	-----	0.500	"	"	"	"	"	
Toluene	"	ND	-----	0.500	"	"	"	"	"	
Total Xylenes	"	ND	-----	3.00	"	"	"	"	"	
Surrogate(s): 1,2-DCA-d4		*110%*		*70 - 130 %*	"				"	
Toluene-d8		*99.2%*		*75 - 125 %*	"				"	
4-BFB		*100%*		*75 - 125 %*	"				"	
BRC0229-02RE1 (MW-2-4.89)		Water			Sampled: 03/14/08 10:50					
Benzene	EPA 8260B	**192**	-----	5.00	ug/l	10x	8C26004	03/25/08 14:22	03/26/08 13:06	
Surrogate(s): 1,2-DCA-d4		*124%*		*70 - 130 %*	*1x*				"	
Toluene-d8		*102%*		*75 - 125 %*	"				"	
4-BFB		*103%*		*75 - 125 %*	"				"	
BRC0229-02RE2 (MW-2-4.89)		Water			Sampled: 03/14/08 10:50					
Ethylbenzene	EPA 8260B	**1180**	-----	250	ug/l	500x	8C26004	03/25/08 14:22	03/26/08 12:03	
Toluene	"	**2630**	-----	250	"	"	"	"	"	
Total Xylenes	"	**4160**	-----	1500	"	"	"	"	"	
Surrogate(s): 1,2-DCA-d4		*113%*		*70 - 130 %*	*1x*				"	
Toluene-d8		*102%*		*75 - 125 %*	"				"	
4-BFB		*100%*		*75 - 125 %*	"				"	
BRC0229-03 (MW-3-5.94)		Water			Sampled: 03/14/08 10:20					
Benzene	EPA 8260B	**1.07**	-----	0.500	ug/l	1x	8C25028	03/25/08 12:22	03/25/08 22:47	
Ethylbenzene	"	**68.2**	-----	0.500	"	"	"	"	"	
Toluene	"	**5.09**	-----	0.500	"	"	"	"	"	
Total Xylenes	"	**80.2**	-----	3.00	"	"	"	"	"	
Surrogate(s): 1,2-DCA-d4		*124%*		*70 - 130 %*	"				"	
Toluene-d8		*104%*		*75 - 125 %*	"				"	
4-BFB		*102%*		*75 - 125 %*	"				"	

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SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

SAIC - Bothell	Project Name:	**ARCO #5363 - 27202 Pacific Hwy. Federal Way**	
18912 North Creek Parkway South, Suite 101	Project Number:	G0BKJ-0012	Report Created:
Bothell, WA/USA 98011	Project Manager:	Mike Lange	03/28/08 11:24

Volatile Organic Compounds by EPA Method 8260B

TestAmerica Seattle

Analyte	Method	Result	MDL*	MRL	Units	Dil	Batch	Prepared	Analyzed	Notes
BRC0229-04 (MW-4-6.81)		**Water**			**Sampled: 03/14/08 10:00**					
Benzene	EPA 8260B	ND	-----	0.500	ug/l	1x	8C26004	03/26/08 08:02	03/26/08 12:32	
Ethylbenzene	"	ND	-----	0.500	"	"	"	"	"	
Toluene	"	ND	-----	0.500	"	"	"	"	"	
Total Xylenes	"	ND	-----	3.00	"	"	"	"	"	
Surrogate(s): 1,2-DCA-d4			*110%*		*70 - 130 %*	"			"	
Toluene-d8			*101%*		*75 - 125 %*	"			"	
4-BFB			*104%*		*75 - 125 %*	"			"	
BRC0229-05 (TB-1-08002008)		**Water**			**Sampled: 03/14/08 08:00**					
Benzene	EPA 8260B	ND	-----	0.500	ug/l	1x	8C25028	03/25/08 12:22	03/25/08 15:09	
Ethylbenzene	"	ND	-----	0.500	"	"	"	"	"	
Toluene	"	ND	-----	0.500	"	"	"	"	"	
Total Xylenes	"	ND	-----	3.00	"	"	"	"	"	
Surrogate(s): 1,2-DCA-d4			*109%*		*70 - 130 %*	"			"	
Toluene-d8			*103%*		*75 - 125 %*	"			"	
4-BFB			*102%*		*75 - 125 %*	"			"	

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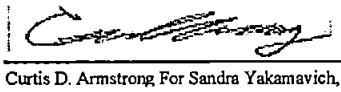

Curtis D. Armstrong For Sandra Yakamavich, Project Manager

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SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

SAIC - Bothell	Project Name:	**ARCO #5363 - 27202 Pacific Hwy. Federal Way**	
18912 North Creek Parkway South, Suite 101	Project Number:	G0BKJ-0012	Report Created:
Bothell, WA/USA 98011	Project Manager:	Mike Lange	03/28/08 11:24

Volatile Petroleum Products by NWTPH-Gx - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 8C17021 **Water Preparation Method: EPA 5030B (P/T)**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8C17021-BLK1)								Extracted: 03/17/08 10:28						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	---	50.0	ug/l	1x	--	--	--	--	--	--	03/17/08 13:21	
Surrogate(s): 4-BFB (FID)		*Recovery: 90.9%*			*Limits: 58-144%*	"							*03/17/08 13:21*	
LCS (8C17021-BS1)								Extracted: 03/17/08 10:28						
Gasoline Range Hydrocarbons	NWTPH-Gx	1030	---	50.0	ug/l	1x	--	1000	103%	(80-120)	--	--	03/17/08 13:53	
Surrogate(s): 4-BFB (FID)		*Recovery: 95.3%*			*Limits: 58-144%*	"							*03/17/08 13:53*	
Duplicate (8C17021-DUP1)					QC Source: BRC0226-01			Extracted: 03/17/08 10:28						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	---	50.0	ug/l	1x	ND	--	--	--	NR	(25)	03/17/08 14:57	
Surrogate(s): 4-BFB (FID)		*Recovery: 90.7%*			*Limits: 58-144%*	"							*03/17/08 14:57*	
Duplicate (8C17021-DUP2)					QC Source: BRC0226-02			Extracted: 03/17/08 10:28						
Gasoline Range Hydrocarbons	NWTPH-Gx	ND	---	50.0	ug/l	1x	ND	--	--	--	NR	(25)	03/17/08 16:01	
Surrogate(s): 4-BFB (FID)		*Recovery: 90.4%*			*Limits: 58-144%*	"							*03/17/08 16:01*	
Matrix Spike (8C17021-MS1)					QC Source: BRC0226-01			Extracted: 03/17/08 10:28						
Gasoline Range Hydrocarbons	NWTPH-Gx	1070	---	50.0	ug/l	1x	ND	1000	107%	(75-131)	--	--	03/17/08 17:37	
Surrogate(s): 4-BFB (FID)		*Recovery: 96.6%*			*Limits: 58-144%*	"							*03/17/08 17:37*	
Matrix Spike Dup (8C17021-MSD1)					QC Source: BRC0226-01			Extracted: 03/17/08 10:28						
Gasoline Range Hydrocarbons	NWTPH-Gx	1040	---	50.0	ug/l	1x	ND	1000	104%	(75-131)	2.66%	(25)	03/17/08 18:09	
Surrogate(s): 4-BFB (FID)		*Recovery: 96.5%*			*Limits: 58-144%*	"							*03/17/08 18:09*	

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Curtis D. Armstrong For Sandra Yakamavich, Project Manager

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SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

SAIC - Bothell	Project Name:	ARCO #5363 - 27202 Pacific Hwy. Federal Way
18912 North Creek Parkway South, Suite 101	Project Number:	G0BKJ-0012
Bothell, WA/USA 98011	Project Manager:	Mike Lange
		Report Created: 03/28/08 11:24

Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 8C25028 Water Preparation Method: EPA 5030B

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8C25028-BLK1)								Extracted: 03/25/08 12:22						
Benzene	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	03/25/08 14:05	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Total Xylenes	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 1,2-DCA-d4		*Recovery:*	*112%*		*Limits:*	*70-130%*	"						*03/25/08 14:05*	
Toluene-d8			*101%*			*75-125%*	"						"	
4-BFB			*105%*			*75-125%*	"						"	
LCS (8C25028-BS1)								Extracted: 03/25/08 12:22						
Benzene	EPA 8260B	35.8	---	0.500	ug/l	1x	--	40.0	89.6%	(80-120)	--	--	03/25/08 13:10	
Ethylbenzene	"	38.6	---	0.500	"	"	--	"	96.5%	(75-125)	--	--	"	
Toluene	"	38.3	---	0.500	"	"	--	"	95.8%	"	--	--	"	
Total Xylenes	"	122	---	3.00	"	"	--	120	101%	"	--	--	"	
Surrogate(s): 1,2-DCA-d4		*Recovery:*	*107%*		*Limits:*	*70-130%*	"						*03/25/08 13:10*	
Toluene-d8			*99.6%*			*75-125%*	"						"	
4-BFB			*101%*			*75-125%*	"						"	
LCS Dup (8C25028-BSD1)								Extracted: 03/25/08 12:22						
Benzene	EPA 8260B	34.7	---	0.500	ug/l	1x	--	40.0	86.8%	(80-120)	3.20%	(20)	03/25/08 13:37	
Ethylbenzene	"	38.4	---	0.500	"	"	--	"	96.0%	(75-125)	0.546%	"	"	
Toluene	"	38.1	---	0.500	"	"	--	"	95.3%	"	0.523%	"	"	
Total Xylenes	"	120	---	3.00	"	"	--	120	99.8%	"	1.69%	"	"	
Surrogate(s): 1,2-DCA-d4		*Recovery:*	*109%*		*Limits:*	*70-130%*	"						*03/25/08 13:37*	
Toluene-d8			*101%*			*75-125%*	"						"	
4-BFB			*102%*			*75-125%*	"						"	
Matrix Spike (8C25028-MS1)					QC Source: BRC0229-01			Extracted: 03/25/08 12:22						
Benzene	EPA 8260B	20.2	---	0.500	ug/l	1x	ND	20.0	101%	(80-124)	--	--	03/25/08 16:03	
Ethylbenzene	"	20.6	---	0.500	"	"	ND	"	103%	(62-151)	--	--	"	
Toluene	"	20.6	---	0.500	"	"	ND	"	103%	(75-125)	--	--	"	
Total Xylenes	"	63.0	---	3.00	"	"	ND	60.0	105%	"	--	--	"	
Surrogate(s): 1,2-DCA-d4		*Recovery:*	*98.6%*		*Limits:*	*70-130%*	"						*03/25/08 16:03*	
Toluene-d8			*97.8%*			*75-125%*	"						"	
4-BFB			*97.7%*			*75-125%*	"						"	

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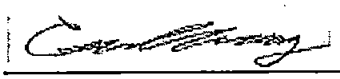

Curtis D. Armstrong For Sandra Yakamavich, Project Manager

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SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

SAIC - Bothell	Project Name:	ARCO #5363 - 27202 Pacific Hwy. Federal Way	
18912 North Creek Parkway South, Suite 101	Project Number:	G0BKJ-0012	Report Created:
Bothell, WA/USA 98011	Project Manager:	Mike Lange	03/28/08 11:24

Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 8C25028 **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike Dup (8C25028-MSD1)				QC Source: BRC0229-01				Extracted: 03/25/08 12:22						
Benzene	EPA 8260B	20.2	---	0.500	ug/l	1x	ND	20.0	101%	(80-124)	0.347%	(30)	03/25/08 16:30	
Ethylbenzene	"	20.3	---	0.500	"	"	ND	"	102%	(62-151)	1.42%	"	"	
Toluene	"	20.9	---	0.500	"	"	ND	"	104%	(75-125)	1.25%	"	"	
Total Xylenes	"	62.4	---	3.00	"	"	ND	60.0	104%	"	0.942%	"	"	
Surrogate(s): 1,2-DCA-d4		*Recovery: 100%*			*Limits: 70-130%*	"							*03/25/08 16:30*	
Toluene-d8		*99.8%*			*75-125%*	"							"	
4-BFB		*95.4%*			*75-125%*	"							"	

QC Batch: 8C26004 **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Blank (8C26004-BLK1)								Extracted: 03/26/08 08:02						
Benzene	EPA 8260B	ND	---	0.500	ug/l	1x	--	--	--	--	--	--	03/26/08 09:42	
Ethylbenzene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Toluene	"	ND	---	0.500	"	"	--	--	--	--	--	--	"	
Total Xylenes	"	ND	---	3.00	"	"	--	--	--	--	--	--	"	
Surrogate(s): 1,2-DCA-d4		*Recovery: 103%*			*Limits: 70-130%*	"							*03/26/08 09:42*	
Toluene-d8		*101%*			*75-125%*	"							"	
4-BFB		*100%*			*75-125%*	"							"	
LCS (8C26004-BS1)								Extracted: 03/26/08 08:02						
Benzene	EPA 8260B	36.7	---	0.500	ug/l	1x	--	40.0	91.8%	(80-120)	--	--	03/26/08 08:38	
Ethylbenzene	"	38.9	---	0.500	"	"	--	"	97.3%	(75-125)	--	--	"	
Toluene	"	38.9	---	0.500	"	"	--	"	97.4%	"	--	--	"	
Total Xylenes	"	121	---	3.00	"	"	--	120	101%	"	--	--	"	
Surrogate(s): 1,2-DCA-d4		*Recovery: 109%*			*Limits: 70-130%*	"							*03/26/08 08:38*	
Toluene-d8		*101%*			*75-125%*	"							"	
4-BFB		*99.4%*			*75-125%*	"							"	
LCS Dup (8C26004-BSD1)								Extracted: 03/26/08 08:02						
Benzene	EPA 8260B	37.8	---	0.500	ug/l	1x	--	40.0	94.5%	(80-120)	2.90%	(20)	03/26/08 09:05	
Ethylbenzene	"	39.4	---	0.500	"	"	--	"	98.5%	(75-125)	1.25%	"	"	
Toluene	"	39.4	---	0.500	"	"	--	"	98.5%	"	1.15%	"	"	
Total Xylenes	"	121	---	3.00	"	"	--	120	101%	"	0.166%	"	"	
Surrogate(s): 1,2-DCA-d4		*Recovery: 109%*			*Limits: 70-130%*	"							*03/26/08 09:05*	
Toluene-d8		*101%*			*75-125%*	"							"	
4-BFB		*104%*			*75-125%*	"							"	

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Curtis D. Armstrong For Sandra Yakamavich, Project Manager

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SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

SAIC - Bothell	Project Name:	**ARCO #5363 - 27202 Pacific Hwy. Federal Way**	
18912 North Creek Parkway South, Suite 101	Project Number:	G0BKJ-0012	Report Created:
Bothell, WA/USA 98011	Project Manager:	Mike Lange	03/28/08 11:24

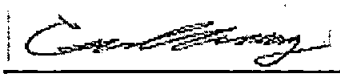
Volatile Organic Compounds by EPA Method 8260B - Laboratory Quality Control Results

TestAmerica Seattle

QC Batch: 8C26004 **Water Preparation Method: EPA 5030B**

Analyte	Method	Result	MDL*	MRL	Units	Dil	Source Result	Spike Amt	% REC	(Limits)	% RPD	(Limits)	Analyzed	Notes
Matrix Spike (8C26004-MS1)				QC Source: BRC0273-01				Extracted: 03/26/08 08:02						
Benzene	EPA 8260B	20.3	---	0.500	ug/l	1x	ND	20.0	101%	(80-124)	--	--	03/26/08 18:35	
Ethylbenzene	"	21.2	---	0.500	"	"	ND	"	106%	(62-151)	--	--	"	
Toluene	"	21.5	---	0.500	"	"	ND	"	108%	(75-125)	--	--	"	
Total Xylenes	"	66.4	---	3.00	"	"	ND	60.0	111%	"	--	--	"	
Surrogate(s): 1,2-DCA-d4		*Recovery: 102%*			*Limits: 70-130%*	"							*03/26/08 18:35*	
Toluene-d8		*102%*			*75-125%*	"							"	
4-BFB		*100%*			*75-125%*	"							"	
Matrix Spike Dup (8C26004-MSD1)				QC Source: BRC0273-01				Extracted: 03/26/08 08:02						
Benzene	EPA 8260B	20.1	---	0.500	ug/l	1x	ND	20.0	100%	(80-124)	0.892%	(30)	03/26/08 19:01	
Ethylbenzene	"	21.9	---	0.500	"	"	ND	"	110%	(62-151)	3.01%	"	"	
Toluene	"	21.8	---	0.500	"	"	ND	"	109%	(75-125)	0.970%	"	"	
Total Xylenes	"	69.2	---	3.00	"	"	ND	60.0	115%	"	4.04%	"	"	
Surrogate(s): 1,2-DCA-d4		*Recovery: 108%*			*Limits: 70-130%*	"							*03/26/08 19:01*	
Toluene-d8		*102%*			*75-125%*	"							"	
4-BFB		*102%*			*75-125%*	"							"	

TestAmerica Seattle



Curtis D. Armstrong For Sandra Yakamavich, Project Manager

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

SEATTLE, WA 11720 NORTH CREEK PKWY N, SUITE 400
BOTHELL, WA 98011-8244
PH: (425) 420.9200 FAX: (425) 420.9210

SAIC - Bothell	Project Name:	**ARCO #5363 - 27202 Pacific Hwy. Federal Way**	
18912 North Creek Parkway South, Suite 101	Project Number:	G0BKJ-0012	Report Created:
Bothell, WA/USA 98011	Project Manager:	Mike Lange	03/28/08 11:24

Notes and Definitions

Report Specific Notes:

None

Laboratory Reporting Conventions:

DET	-	Analyte DETECTED at or above the Reporting Limit. Qualitative Analyses only.
ND	-	Analyte NOT DETECTED at or above the reporting limit (MDL or MRL, as appropriate).
NR/NA	-	Not Reported / Not Available
dry	-	Sample results reported on a Dry Weight Basis. Results and Reporting Limits have been corrected for Percent Dry Weight.
wet	-	Sample results and reporting limits reported on a Wet Weight Basis (as received). Results with neither 'wet' nor 'dry' are reported on a Wet Weight Basis.
RPD	-	RELATIVE PERCENT DIFFERENCE (RPDs calculated using Results, not Percent Recoveries).
MRL	-	METHOD REPORTING LIMIT. Reporting Level at, or above, the lowest level standard of the Calibration Table.
MDL*	-	METHOD DETECTION LIMIT. Reporting Level at, or above, the statistically derived limit based on 40CFR, Part 136, Appendix B. *MDLs are listed on the report only if the data has been evaluated below the MRL. Results between the MDL and MRL are reported as Estimated Results.
Dil	-	Dilutions are calculated based on deviations from the standard dilution performed for an analysis, and may not represent the dilution found on the analytical raw data.
Reporting Limits	-	Reporting limits (MDLs and MRLs) are adjusted based on variations in sample preparation amounts, analytical dilutions and percent solids, where applicable.
Electronic Signature	-	Electronic Signature added in accordance with TestAmerica's *Electronic Reporting and Electronic Signatures Policy.* Application of electronic signature indicates that the report has been reviewed and approved for release by the laboratory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Curtis D. Armstrong For Sandra Yakamavich, Project Manager

BRC0229

Atlantic Richfield Company
bp
A BP affiliated company

Chain of Custody Record

Project Name: ARCO #5363
BP BU/AR Region/Enfos Segment: Washington Portfolio
State or Lead Regulatory Agency: Washington Dept. of Ecology
Requested Due Date (mm/dd/yy): Standard TAT

On-site Time:	0900	Temp:	42°F
Off-site Time:	1130	Temp:	40°F
Sky Conditions:	Rainy/Cloudy		
Meteorological Events:	Rain		
Wind Speed:	<5 mph	Direction:	N

Lab Name: Test America	BP/AR Facility No.: 5363	Consultant/Contractor: SAIC
Address: 11720 North Creek Parkway N, Suite 400	BP/AR Facility Address: 27202 Pacific Hwy S, Federal Way, WA	Address: 18912 North Creek Parkway, Ste 101
Bothell, Washington 98011-8244	Site Lat/Long: (blank)	Bothell, Washington 98011
Lab PM: Sandra Yakamavich	California Global ID No.: N/A	Consultant/Contractor Project No.: 06-6384-00-6195-970
Tele/Fax: (425) 420-9200/(425) 420-9210	Enfos Project No.: G0BKJ-0012	Consultant/Contractor PM: Michael Lange
BP/AR PM Contact: Dave White	Provision or OOC (circle one)	Tele/Fax: (425) 482-3319 / 425-485-5566
Address: 4 Centerpointe Dr.	Phase/WBS: 04 -Monitoring Only	Report Type & QC Level: Level 1
La Palma, CA. 90623	Sub Phase/Task: 03 - Analytical	E-mail EDD To: langem@saic.com
Tele/Fax: (714) 228-6782 / (858) 776-1035) / (714) 228-6749	Cost Element: 05 -Subcontracted Cost	Invoice to: Consultant or BP or Atlantic Richfield Co. (circle one)

Lab Bottle Order No:

Item No.	Sample Description	Time	Date	Matrix: Soil/Solid	Water/Liquid	Air	Laboratory No.	No. of Containers	Preservative: Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	Requested Analysis: NWTPH-Gx	BTEX(8260)	BTEX+MTBE(8021 B)*	EDC(8260B)	EDB(8011B)	(NWTPH-Dx)	(NWTPH-Oil)	Total Lead	Dissolved Lead	Sample Point Lat/Long and Comments
1	MW-1- 14.13	1035	3/14/08		X			6				X		X	X								BTEX/G -01
2	MW-2- 6.81 4.84 HL	1150			X			6				X		X	X								BTEX/G -02
3	MW-3- 5.94	1020			X			6				X		X	X								BTEX/G -03
4	MW-4- 4.89 6.81 HL	1000			X			6				X		X	X								BTEX/G -04
5	TB-1- 0800 2008	0800			X			2				X		X	X								BTEX/G -05
6																							
7																							
8																							
9																							
10																							

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: S. Dunham + H. Lee						
Sampler's Company: SAIC		3/14/08	1248	Cathy Gamble	3/14/08	12:40
Shipment Date:						
Shipment Method:						
Shipment Tracking No:						

Special Instructions: If NWTPH-Dx is requested, use Silica Gel Cleanup
If MTBE is detected by 8021, confirm by 8260

Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: 5.7 °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

BP COC Rev. 5 10/11/2006

Sample IDs for -02 + -04 revised per Heather @ SAIC 3

BP/ARCO Groundwater Sampling Form

Facility Location:	27202 Pacific Hwy S Federal Way, WA		
Station #:	5363	Field Technician:	S. Dunham + H. Lee
Well Identification:	MW-1	Date:	03142008
Well Diameter (in):	(2) 3 4 6 8 ___	Depth to Water (DTW) (ft bgs):	14.13
Thickness of SPH (ft):	—	Depth to SPH (ft bgs):	—
Water Column Height(ft):	15.78	Total Depth of Well (ft bgs):	29.91

Purging Info and Calculations:

Purge Method: ~~Bailer~~ Disposable Bailer / Electric Submersible / Extraction Pump / Other: ___ — NP

Sample Method: ~~Bailer~~ (Disposable Bailer) / Extraction Port / Other: ___

Top pf Screen: NP — If well is listed as a no-purge @XX feet, confirm that weter level is below the top of screen. Otherwise, the well must be purged.

Casing Volume (gal): ___ X Specified Volumes: ___ = Calculated Purge (gal): ___

Start Time: 1023 Stop Time:

~~Conversion Factors (gal/ft): 2" = 0.17 3" = 0.38 4" = 0.66 6" = 1.5 8" = 2.6~~ Other = radius^2 * 0.163 BL

Purge:

Time	Temp (oC)	pH	Conductivity (mS)	Volume Removed (gal)	Turbidity	DO
1030	12.0	4.63	0.893	0	12	1.85
NP						

D.O. (if req'd):	Pre-purge:	1.85 mg/L	Post-purge:	—	mg/L
O.R.P. (if req'd):	Pre-purge:	— mV	Post-purge:	—	mV

Did Well dewater? Yes (No) — Actual Purge volume (gal): 0

Other Comments: Marked, not secure, casing filled w/H2O

Sample Info:

Sample ID:	MW-1-14.13	Sample Date and Time:	3/14/08 1035
Sample Containers and Selected Analysis:	6 VOAs, BTEX/g		

Purge Water Stored/Disposed of Where/How: 55 gal drum on site

Signature: [signature] Date: 3/14/08

QA Signature: [signature] Date: 3/14/08

BP/ARCO Groundwater Sampling Form

Facility Location:	27202 Pacific Hwy S. Federal Way, WA		
Station #:	5363	Field Technician:	S. Dunham + H. Lee
Well Identification:	MW-2	Date:	03142008
Well Diameter (in):	(2) 3 4 6 8 ___	Depth to Water (DTW) (ft bgs):	4.89
Thickness of SPH (ft):	—	Depth to SPH (ft bgs):	—
Water Column Height(ft):	25.11	Total Depth of Well (ft bgs):	30.00

Purging Info and Calculations:

Purge Method: Bailer / Disposable Bailer / Electric Submersible / Extraction Pump / Other:_____ NP NP

Sample Method: Bailer / ~~Disposable Bailer~~ / Extraction Port / Other:_____

Top pf Screen:_____ If well is listed as a no-purge @XX feet, confirm that weter level is below the top of screen. Otherwise, the well must be purged.

Casing Volume (gal):_____ X Specified Volumes:_____ = Calculated Purge (gal): _____

Start Time: 0945 Stop Time:

~~Conversion Factors (gal/ft): 2" = 0.17 3" = 0.38 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius² * 0.163~~

Purge:

Time	Temp (oC)	pH	Conductivity (mS)	Volume Removed (gal)	Turbidity	DO
0958	11.1	4.50	.632	0	62	1.89

D.O. (if req'd):	Pre-purge:	1.89	mg/L	Post-purge:	—	mg/L
O.R.P. (if req'd):	Pre-purge:	—	mV	Post-purge:	—	mV

Did Well dewater? Yes (No) Actual Purge volume (gal): 0

Other Comments: Slight sheen observed on sample containers

Sample Info:

Sample ID:	MW-2-4.89	Sample Date and Time:	03142008 1000
Sample Containers and Selected Analysis:	6 VOAs BTEX 8260		

Purge Water Stored/Disposed of Where/How: 55 gal drum on site

Signature: _____ Date: 3/14/08

QA Signature: _____ Date: 3/19/08

BP/ARCO Groundwater Sampling Form

Facility Location:	27202 Pacific Hwy S. Federal Way WA		
Station #:	5363	Field Technician:	S. Dunham + H. Lee
Well Identification:	MW-3	Date:	03142008
Well Diameter (in):	(2) 3 4 6 8 ___	Depth to Water (DTW) (ft bgs):	~~5.96~~ 1st 5.94
Thickness of SPH (ft):	✓	Depth to SPH (ft bgs):	—
Water Column Height(ft):	23.82	Total Depth of Well (ft bgs):	29.76

Purging Info and Calculations:

Purge Method: Bailer / Disposable Bailer / Electric Submersible / Extraction Pump / Other: NP

Sample Method: ~~Bailer~~ / (Disposable Bailer) / Extraction Port / Other: _____

Top pf Screen: NP — If well is listed as a no-purge @XX feet, confirm that weter level is below the top of screen. Otherwise, the well must be purged.

Casing Volume (gal): _____ X Specified Volumes: _____ = Calculated Purge (gal): _____

Start Time: 1010 Stop Time:

Conversion Factors (gal/ft): ~~2" = 0.17 3" = 0.38 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius² * 0.163~~ HL

Purge:

Time	Temp (oC)	pH	Conductivity (mS)	Volume Removed (gal)	Turbidity	DO
1015	10.6	4.61	.667	0	11	1.50

HL

D.O. (if req'd):	Pre-purge:	1.50	mg/L	Post-purge:	—	mg/L
O.R.P. (if req'd):	Pre-purge:	—	mV	Post-purge:	—	mV

Did Well dewater? Yes (No) — Actual Purge volume (gal): 0

Other Comments: See field log

Sample Info:

Sample ID:	MW-3-594	Sample Date and Time:	03142008 1020
Sample Containers and Selected Analysis:	6 VOAs BTEX/g		

Purge Water Stored/Disposed of Where/How: 55 gal drum on site

Signature: HL Date: 3/14/08

QA Signature: [signature] Date: 3/14/08

BP/ARCO Groundwater Sampling Form

Facility Location:	27202 Pacific Hwy S. Federal Way, WA		
Station #:	5363	Field Technician:	S. Dunham + H. Lee
Well Identification:	MW-4	Date:	03142008
Well Diameter (in):	(2) 3 4 6 8 ___	Depth to Water (DTW) (ft bgs):	6.81
Thickness of SPH (ft):	___	Depth to SPH (ft bgs):	___
Water Column Height(ft):	17.93	Total Depth of Well (ft bgs):	24.74

Purging Info and Calculations:

Purge Method: Bailer / Disposable Bailer / Electric Submersible / Extraction Pump / Other: ___ — NP

Sample Method: Bailer / Disposable Bailer / Extraction Port / Other: ___

Top pf Screen: ___ If well is listed as a no-purge @XX feet, confirm that weter level is below the top of screen. Otherwise, the well must be purged.

Casing Volume (gal): ___ X Specified Volumes: ___ = Calculated Purge (gal): ___

Start Time: 1040 Stop Time:

Conversion Factors (gal/ft): 2" = 0.17 3" = 0.38 4" = 0.66 6" = 1.5 8" = 2.6 Other = radius^2 * 0.163

Purge:

Time	Temp (oC)	pH	Conductivity (mS)	Volume Removed (gal)	Turbidity	DO
1045	10.9	4.75	0.602	0	10	1.76
	NP					

D.O. (if req'd):	Pre-purge:	1.76 mg/L	Post-purge:	—	mg/L
O.R.P. (if req'd):	Pre-purge:	— mV	Post-purge:	—	mV
Did Well dewater? Yes (No)			Actual Purge volume (gal):	0	
Other Comments:	marked, not secure, 2" enviroCap, casing filled w/ water				

Sample Info:

Sample ID:	MW-4-6.81	Sample Date and Time:	3/14/08 1050
Sample Containers and Selected Analysis:	6 VOAs. BTEX/g		
Purge Water Stored/Disposed of Where/How:	55 gal drum on site		
Signature:		Date:	3/14/08
QA Signature:	JME	Date:	3/19/08

SUBJECTIVE WELLHEAD EVALUATION

Site Name/Number: 5303 Address: 27202 Pacific Hwy S. Federal Way, WA Date 08142008

Project Number: 060-6384-00-6195-970 Field Tech(s): S Dunham & H Lee

Calibration Record

TIME	INSTRUMENT I.D.	CAL GAS TYPE & CONCENTRATION	PRE-CAL READING	RE-ZERO Y/N	POST-CAL READING	BACKGROUND READING	REMARKS	FIELD TECH
0800	Horiba	Auto Cal Solution	4.08	-	3.99	-	none	H. Lee
0930	OVM	100ppm Isobutylene	—	—	max = 1097	0.7	—	S Dunham

	Well ID	MW-2	MW-3	MW-1	MW-4		Note:
Exterior	Well Perimeter Seal Condition	G	G	G	F		
	Well Structure Drainage	P	P	P	P		
	Properly Secured	Y	Y	Y	N		
	Type of Well Vault	-	-	-	-		
	Well Marked "MONITORING WELL"	Y	Y	Y	Y		
Interior	Well Casing Condition	G	G	G	G		
	Locking Cap Condition	G	G	G	G		
	Rubber Seal Condition	G	G	F	F		
	Lock on Well	Enviro	enviro	enviro	enviro		
	Liquid Present in Well Vault	Y	Y	Y	Y	OF	
Action	No Corrective Action Required	N/A	NA	NA	NA	NF	
	Well-box Components Cleaned	Y	Y	Y	Y		
	Cap Replaced	N	N	N	N		
	Lock Replaced	N	N	N	N		
	Other Action Taken: explain	N/A	NA	NA	NA		
	Repair Order Submitted	N/A	NA	NA	NA		
Measurements	Casing Diameter (in)	2	2	2	2		
	Depth to Water (ft)	4.89	5.94	14.13	6.81		
	Depth to Bottom (ft)	30.00	29.76	29.91	24.74		
	Depth to Floating Product (ft)	—	—	—	—		
	Floating Product Thickness (ft)	—	—	—	—		
	Dissolved Oxygen	1.89	1.50	1.85	1.76		
	Temperature (°C or °F)	11.1	10.6	12.0	10.9		
	pH	4.50	4.61	4.63	4.75		
	Conductivity (mS)	0.1032	0.0607	0.393	0.0602		
	Turbidity	62	11	12	16		

Notes: _____

3/9/06