

DATE: December 3, 2004

**CONOCOPHILLIPS CORPORATION
GROUNDWATER MONITORING REPORT**

Site No.: 5516 Address: 1800 15th Avenue West, Seattle, Washington
ConocoPhillips Site Manager: Kipp Eckert
Consultant/Contact Person: Environmental Resolutions, Inc./James S. Matthiessen
Primary Agency/Regulatory ID No.: Washington State Department of Ecology

WORK PERFORMED THIS QUARTER(S) [Third - 2004]:

- Monitored, purged and sampled 6 groundwater monitoring wells

*release 4938
car wash ent 15th W
Seattle*

WORK PROPOSED FOR NEXT QUARTER [First - 2005]:

- Monitor, purge, and sample 8 groundwater monitoring wells

SUMMARY:

Frequency of Sampling Events:	<u>Semiannually</u>	(Quarterly, etc.)
Approximate Depth to Groundwater:	<u>6 to 8 ft</u>	(Measured Feet)
Groundwater Gradient:	<u>Southerly and Westerly</u>	(Direction)
	<u>0.01 ft/ft</u>	(Magnitude)
Maximum TPH-G/Benzene Concentrations:	<u>516/45.2</u>	(ppb)
Measurable Free Product Detected:	<u>No</u>	(Yes - ID well(s)/No)
Free Product Recovered This Quarter:	<u>None</u>	(gallons)
Cumulative Free Product Recovered to Date:	<u>None</u>	(gallons)
Bulk Soil Removed This Quarter:	<u>None</u>	(cubic yards)
Water Wells or Surface Waters w/in 2,000 ft:	<u>Puget Sound, 1,000 ft</u>	(Distance &
Radius and Respective Direction:	<u>Southwest</u>	Direction)
Current Remedial Action:	<u>SVE</u>	(SVE/AS/P&T, etc.)
Permits for Discharge:	<u>Metro, PSAPCA, City of Seattle</u>	(NPDES, POTW, etc.)

DISCUSSION:

- 3 of 6 wells sampled contained benzene concentrations exceeding the MTCA Method A Cleanup Level.

ATTACHMENTS:

Plate 1: Groundwater Sample Analysis Map - 09/26/04
Table 1: Groundwater Analytical Results
Laboratory Reports and Chain of Custody Documentation
Field Data Records

Prepared By:

Yukiko Noguchi

Yukiko Noguchi
Staff Scientist



Reviewed By:

John K. Meyer
John K. Meyer, R.G., L.H.G.
Branch Manager

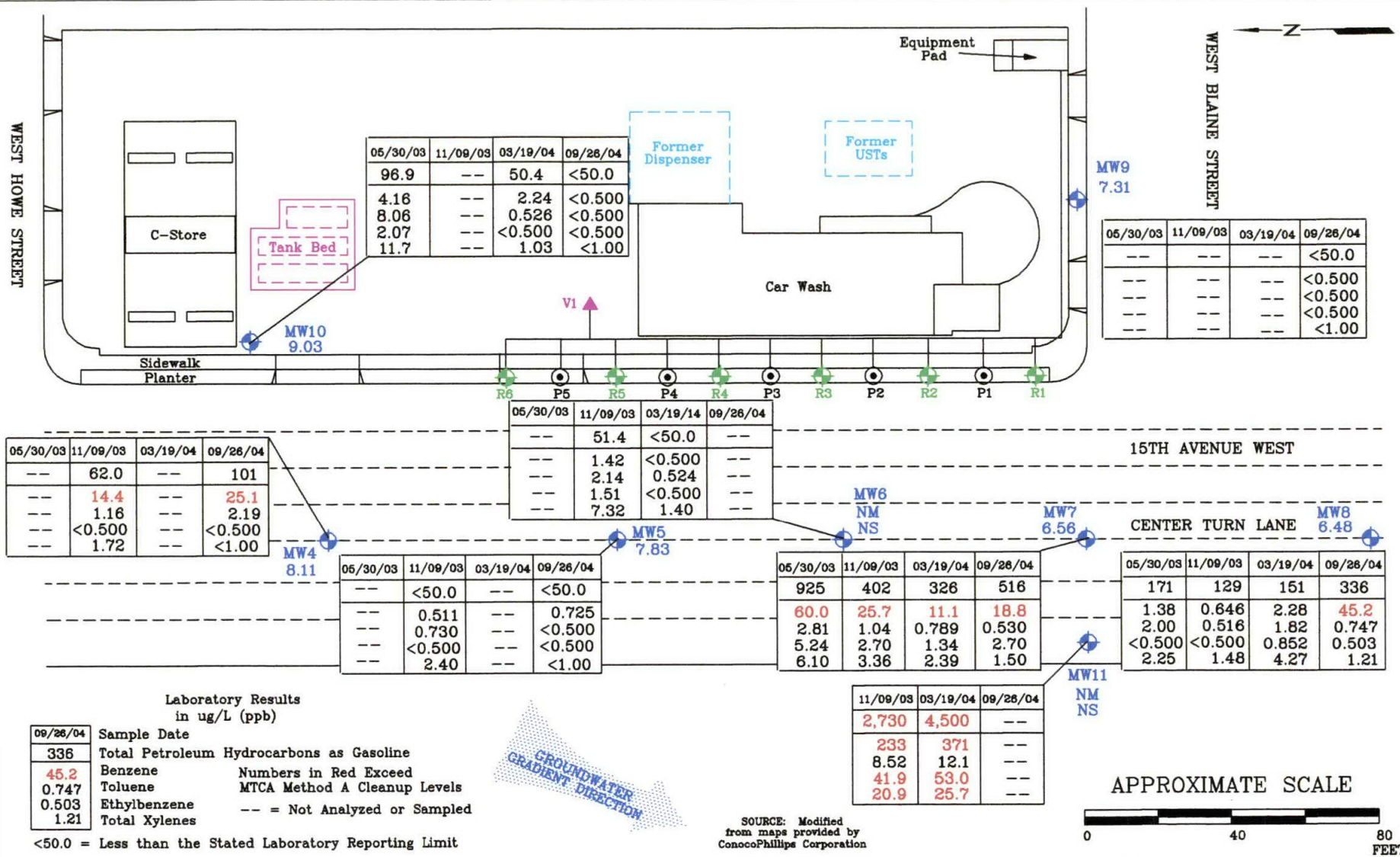
cc: LUST coordinator, Washington State Department of Ecology, Northwest Regional Office
Mr. Thomas C. Morin, Environmental Partners, Inc.

*entered
CP
12-27-04*

RECEIVED
DEC 21 2004
DEPT OF ECOLOGY

WEST HOWE STREET

WEST BLAINE STREET



FN 31144.13



GROUNDWATER SAMPLE ANALYSIS MAPS - 09/26/04

TOSCO SITE NO. 5516
1800 15th Avenue West
Seattle, Washington

EXPLANATION

- MW3 Groundwater Monitoring Well
- NS Not Sampled
- VI Vapor Extraction Well
- R1 Groundwater/Vapor Extraction Well
- P1 Passive Venting Well

PROJECT NO.

31144

PLATE

1

YN: 10/12/04

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Tosco Site No. 5516
1800 15th Avenue West
Seattle, Washington
Page 1 of 4

Well Name	Sample Date	DTW	GW Elev.	TPH-G	B	T	E	X
MW1 13.96	01/07/94	—	—	22,000	2,700	4,300	1,500	7,400
	01/05/95	5.27	8.69	—	—	—	—	—
	01/06/95	—	—	76,000	3,600	6,300	2,700	12,800
	02/07/95	4.88	9.08	—	—	—	—	—
	Destroyed							
MW2	01/07/94	—	—	1,900	190	48	85	241
	Destroyed							
MW3	02/07/95	6.30	—	—	—	—	—	—
	03/01/95	—	—	<50	<1.00	<1.00	<1.00	<50
	Destroyed							
MW4 14.46	01/05/95	5.68	8.78	<300	<1.00	<1.00	<1.00	<1.00
	10/31/95	5.99	8.47	<50	<0.5	<1	<1	<1
	07/25/96	6.11	8.35	—	—	—	—	—
	10/15/96	6.22	8.24	—	—	—	—	—
	12/19/96	5.78	8.68	<50	42.5	<1	<1	<1
	11/03/97	5.75	8.71	<50	1.8	<1	<1	<1
	11/04/98	7.30	7.16	<50	<1	<1	<1	<1
	11/21/99	5.85	8.61	<50	<0.5	<1	<1	<1
	05/21/00	6.18	8.28	—	—	—	—	—
	11/12/00	7.66	6.80	<50	<0.5	<0.5	<0.5	<1
	05/25/01	NM	—	—	—	—	—	—
	11/18/01	Unable to open	—	—	—	—	—	—
	05/29/02	6.19	8.27	260	90.0	3.62	<0.500	2.59
	11/17/02	6.05	8.41	54.2	18.4	0.651	<0.500	<1.00
	05/30/03	Unable to open	—	—	—	—	—	—
	11/09/03	6.34	8.12	62.0	14.4	1.16	<0.500	1.72
	03/19/04	5.18	9.28	—	—	—	—	—
	09/26/04	6.35	8.11	101	25.1	2.19	<0.500	<1.00
MW5 14.33	01/05/95	5.45	8.88	<300	<1.00	<1.00	<1.00	<1.00
	10/31/95	5.75	8.58	<50	1.1	<1	<1	<1
	07/25/96	6.19	8.14	—	—	—	—	—
	10/15/96	6.27	8.06	—	—	—	—	—
	12/19/96	5.75	8.58	<50	<0.5	<1	<1	<1
	11/03/97	5.76	8.57	<50	<0.5	<1	<1	<1
	11/04/98	7.61	6.72	<50	<0.5	<1	<1	<1
	11/21/99	6.04	8.29	<50	<0.5	<1	<1	<1
	05/21/00	6.38	7.95	—	—	—	—	—
	11/12/00	8.18	6.15	<50	<0.5	<1	<1	<1
	05/25/01	Unable to open	—	—	—	—	—	—
	11/18/01	6.15	8.18	<50.0	2.99	3.63	0.891	4.66
	05/29/02	6.37	7.96	—	—	—	—	—
	11/17/02	6.31	8.02	<50.0	<0.500	<0.500	<0.500	<1.00
	05/30/03	Unable to open	—	—	—	—	—	—
	11/09/03	6.40	7.93	<50.0	0.511	0.730	<0.500	2.40
	03/19/04	6.39	7.94	—	—	—	—	—
	09/26/04	6.50	7.83	<50.0	0.725	<0.500	<0.500	<1.00
MTCA Method A Cleanup Levels				1,000*	5	40	30	20

Continued on page 2

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Tosco Site No. 5516
1800 15th Avenue West
Seattle, Washington
Page 2 of 4

Well Name	Sample Date	DTW	GW Elev.	TPH-G	B	T	E	X
MW6 14.16	01/05/95	5.47	8.69	<300	1.2	<1.00	<1.00	<1.00
	10/31/95	5.57	8.59	6,300	3,100	<1	876	1,340
	03/19/96	5.81	8.35	1,250	198	<1	122	9
	06/18/96	6.11	8.05	250	<0.5	<1	26	1
	07/25/96	6.43	7.73	-	-	-	-	-
	09/25/96	6.70	7.46	130	<0.5	<1	26	1
	10/15/96	6.43	7.73	-	-	-	-	-
	12/19/96	5.85	8.31	<50	<0.5	<1	1	<1
	04/21/97	5.43	8.73	<50	<0.5	<1	<1	<1
	08/21/97	7.41	6.75	90	<0.5	<1	<1	<1
	11/03/97	5.86	8.30	110	<0.5	<1	<1	<1
	02/24/98	6.26	7.90	<250	<0.5	<1	<1	<1
	05/15/98	8.19	5.97	55	<0.5	<1	<1	<1
	07/30/98	8.99	5.17	<50	<1	<1	<1	<1
	11/04/98	7.85	6.31	<50	<0.5	<1	<1	<1
	02/02/99	6.20	7.96	<50	<0.5	<1	<1	<1
	11/21/99	6.25	7.91	<50	<0.5	<1	<1	<1
	05/21/00	6.56	7.60	<50	<0.5	0.626	<0.5	1.87
	11/12/00	8.57	5.59	<50	<0.5	<0.5	<0.5	<1
	05/25/01	7.93	6.23	<50.0	2.72	2.35	0.869	3.39
	11/18/01	6.21	7.95	<50.0	<0.500	<0.500	<0.500	<1.00
	05/29/02	Unable to open	-	-	-	-	-	-
	11/17/02	NM	-	-	-	-	-	-
	05/30/03	Unable to open	-	-	-	-	-	-
	11/09/03	6.81	7.35	51.4	1.42	2.14	1.51	7.32
	03/19/04	6.63	7.53	<50.0	<0.500	0.524	<0.500	1.40
	09/26/04	Unable to open	-	-	-	-	-	-
MW7 14.06	01/05/95	5.73	8.33	820	13	2.2	4.7	3.1
	10/31/95	5.50	8.56	1,920	1,990	3	247	42
	03/19/96	6.09	7.97	3,820	970	29	307	67
	06/18/96	6.45	7.61	5,020	733	16	514	150
	07/25/96	6.80	7.26	-	-	-	-	-
	09/25/96	7.03	7.03	4,500	88	<5	420	87
	10/15/96	6.70	7.36	-	-	-	-	-
	12/19/96	6.06	8.00	970	54	2	9	18
	04/21/97	5.70	8.36	2,160	27	<1	114	8
	08/21/97	7.71	6.35	1,630	56	1	44	8
	11/03/97	6.08	7.98	1,550	59	1	23	6
	02/24/98	6.51	7.55	1,200	60	1	11	4
	05/15/98	8.17	5.89	1,500	130	1	17	13
	07/30/98	9.20	4.86	560	48	1	4	3
	11/04/98	8.06	6.00	1,200	410	5	33	9
	02/02/99	6.55	7.51	<50	<0.5	<1	<1	<1
	05/06/99	7.09	6.97	2,500	390	<10	64	20
	08/13/99	6.74	7.32	340	57	2	4	3
	11/21/99	6.27	7.79	1,400	370	10	16	15
	05/21/00	6.62	7.44	1,770	173	8.04	27	65.7
	11/12/00	8.31	5.75	1,230	41	<6.69	8.08	14.8
	05/25/01	7.63	6.43	1,660	95.9	5.75	19.6	17.7
	11/18/01	6.18	7.88	2,890	140	5.85	19.9	17.8
	05/29/02	6.77	7.29	2,100	84.1	4.82	10.4	16.9
	11/17/02	6.83	7.23	1,730	95.8	1.69	10.5	6.80
	05/30/03	6.71	7.35	925	60.0	2.81	5.24	6.10
	11/09/03	6.68	7.38	402	25.7	1.04	2.70	3.36
	03/19/04	6.83	7.23	326	11.1	0.789	1.34	2.39
	09/26/04	7.50	6.56	516	18.8	0.530	2.70	1.50
MTCA Method A Cleanup Levels				1,000 ^a	5	40	30	20

Continued on page 3

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GROUNDWATER ANALYTICAL RESULTS
Tosco Site No. 5516
1800 15th Avenue West
Seattle, Washington
Page 3 of 4

Well Name	Sample Date	DTW	GW Elev.	TPH-G	B	T	E	X
MW8 13.83	01/05/95	6.08	7.75	550	280	2.6	1.9	2.7
	10/31/95	6.00	7.83	330	355	1	2	4
	03/19/96	6.29	7.54	610	1,340	5	2	3
	06/18/96	6.69	7.14	1,160	4,400	42	56	42
	07/25/96	7.05	6.78	—	—	—	—	—
	09/25/96	7.24	6.59	1,440	2,200	13	162	96
	10/15/96	6.90	6.93	—	—	—	—	—
	12/19/96	6.34	7.49	2,040	1,410	3	231	175
	04/21/97	5.95	7.88	1,380	257	<1	81	41
	08/21/97	7.45	6.38	910	39.0	<1	19	13
	11/03/97	6.22	7.61	980	19.3	1	8	9
	02/24/98	6.41	7.42	1,000	2.9	<1	<1	7
	05/15/98	7.57	6.26	640	29.0	1	1	7
	07/30/98	8.60	5.23	420	3.0	<1	<1	5
	11/04/98	8.03	5.8	230	1.8	<1	<1	2
	02/02/99	6.50	7.33	<50	<0.5	<1	<1	<1
	11/21/99	6.19	7.64	170	0.9	<1	<1	<1
	05/21/00	6.74	7.09	58	<0.5	<0.5	<0.5	<1
	11/12/00	8.01	5.82	99	0.7	<0.5	<0.5	<1
	05/25/01	7.48	6.35	137	3.27	2.32	1.14	4.36
	11/18/01	6.29	7.54	138	0.692	0.714	<0.500	1.83
	05/29/02	6.90	6.93	150	1.99	1.70	0.688	5.16
	11/17/02	7.06	6.77	121	<0.500	<0.500	<0.500	<1.00
	05/30/03	6.91	6.92	171	1.38	2.00	<0.500	2.25
	11/09/03	6.65	7.18	129	0.646	0.516	<0.500	1.48
	03/19/04	6.76	7.07	151	2.28	1.82	0.852	4.27
	09/26/04	7.35	6.48	336	45.2	0.747	0.503	1.21
MW9 14.95	01/05/95	5.66	9.29	<300	<1.00	<1.00	<1.00	<1.00
	07/25/96	7.31	7.64	—	—	—	—	—
	10/15/96	6.17	8.78	—	—	—	—	—
	11/21/99	6.11	8.84	<50	<0.5	<1	<1	<1
	05/21/00	6.60	8.35	—	—	—	—	—
	11/12/00	8.68	6.27	<50	<0.5	<0.5	<0.5	2.5
	05/25/01	7.68	7.27	—	—	—	—	—
	11/18/01	6.00	8.95	<50.0	<0.500	<0.500	<0.500	<1.00
	05/29/02	6.69	8.26	—	—	—	—	—
	11/17/02	7.24	7.71	<50.0	<0.500	<0.500	<0.500	<1.00
	05/30/03	6.84	8.11	—	—	—	—	—
	11/09/03	6.97	7.98	—	—	—	—	—
	03/19/04	6.38	8.57	—	—	—	—	—
	09/26/04	7.64	7.31	<50.0	<0.500	<0.500	<0.500	<1.00
MTCA Method A Cleanup Levels				1,000 ^a	5	40	30	20

Continued on page 4

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Tosco Site No. 5516
1800 15th Avenue West
Seattle, Washington
Page 4 of 4

Well Name	Sample Date	DTW	GW Elev.	TPH-G	B	T	E	X
MW10 15.08	07/25/96	5.96	9.12	—	—	—	—	—
	10/15/96	6.17	8.91	—	—	—	—	—
	12/19/96	5.80	9.28	230	366	41	1	3
	04/21/97	4.88	10.20	<50	13.9	<1	<1	<1
	08/21/97	6.08	9.00	50	37.4	2	<1	<1
	11/03/97	5.74	9.34	<50	195.0	<1	1	<1
	02/24/98	6.01	9.07	<250	16.0	<1	<1	<1
	05/15/98	6.63	8.45	<50	10.0	<1	<1	1
	07/30/98	6.51	8.57	<50	430.0	<1	<1	<1
	11/04/98	6.93	8.15	<50	<0.5	<1	<1	<1
	02/02/99	5.65	9.43	<50	6.8	<1	<1	<1
	05/06/99	6.57	8.51	<50	37.0	2	<1	<1
	08/13/99	6.53	8.55	<50	<0.5	<1	<1	<1
	11/21/99	5.72	9.36	<50	0.9	<1	<1	<1
	05/21/00	6.01	9.07	61.3	3.36	1.88	0.664	3.68
	11/12/00	7.07	8.01	<50	0.61	<0.5	<0.5	<1
	05/25/01	6.89	8.19	<50.0	6.72	2.67	1.47	5.56
	11/18/01	6.07	9.01	<50.0	5.21	<0.500	<0.500	<1.00
	05/29/02	5.98	9.10	<50.0	1.61	2.16	0.812	5.63
	11/17/02	5.84	9.24	<50.0	1.49	<0.500	<0.500	<1.00
	05/30/03	5.78	9.30	96.9	4.16	8.06	2.07	11.7
	11/09/03	5.95	9.13	—	—	—	—	—
	03/19/04	5.75	9.33	50.4	2.24	0.526	<0.500	1.03
	09/26/04	6.05	9.03	<50.0	<0.500	<0.500	<0.500	<1.00
MW11 12.21	11/09/03	4.94	7.27	2,730	233	8.52	41.9	20.9
	03/19/04	5.11	7.10	4,500	371	12.1	53.0	25.7
	09/26/04	Obstructed by vehicle						
MTCA Method A Cleanup Levels				1,000 ^a	5	40	30	20

EXPLANATION:

All concentrations are in ug/L (ppb).

Wellhead elevations were taken from prior consultants' reports.

DTW = Depth to water in feet below top of casing

GW Elev. = Groundwater elevation relative to top of casing elevations

TPH-G = Total Petroleum Hydrocarbons as Gasoline by Ecology Method NWTPH-Gx

B = Benzene; T = Toluene; E = Ethylbenzene; X = Total Xylenes

BTEX = Aromatic compounds by EPA Method 8020 or EPA 8021B; refer to official laboratory reports

< = Less than the stated laboratory reporting limit

— = Not Analyzed or Sampled

Shaded values equal or exceed MTCA Method A Cleanup Levels.

^a Total Petroleum Hydrocarbons

The elevation of MW11 installed on 06/16/03 was surveyed on 12/11/03.

Data collected before 05/25/01 were taken from prior consultants.



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
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Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
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541.383.9310 fax 541.382.7588
Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
907.563.9200 fax 907.563.9210

12 October 2004

James Matthiessen
ERI
815 Industry Dr
Tukwila, WA/USA 98188
RE: TOSCO #5516

Enclosed are the results of analyses for samples received by the laboratory on 09/27/04 15:15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Amar Gill
Project Manager



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425.420.9200 fax 425.420.9210
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ERI
815 Industry Dr
Tukwila, WA/USA 98188

Project: TOSCO #5516
Project Number: 2422ERI013
Project Manager: James Matthiessen.

Reported:
10/12/04 13:41

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW7	B4I0792-01	Water	09/26/04 12:00	09/27/04 15:15
MW8	B4I0792-02	Water	09/26/04 12:00	09/27/04 15:15
MW9	B4I0792-03	Water	09/26/04 12:00	09/27/04 15:15
MW10	B4I0792-04	Water	09/26/04 12:00	09/27/04 15:15
MW4	B4I0792-05	Water	09/26/04 12:00	09/27/04 15:15
MW5	B4I0792-06	Water	09/26/04 12:00	09/27/04 15:15

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.

Amar Gill, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 1 of 6



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Anchorage 2000 W International Airport Road, Suite A-10, Anchorage, AK 99502-1119
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ERI
815 Industry Dr
Tukwila, WA/USA 98188

Project: TOSCO #5516
Project Number: 2422ERI013
Project Manager: James Matthiessen

Reported:
10/12/04 13:41

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW7 (B4I0792-01) Water Sampled: 09/26/04 12:00 Received: 09/27/04 15:15									
Gasoline Range Hydrocarbons	516	50.0	ug/l	1	4J07003	10/07/04	10/08/04	NWTPH-Gx/8021B	
Benzene	18.8	0.500	"	"	"	"	"	"	
Toluene	0.530	0.500	"	"	"	"	"	"	
Ethylbenzene	2.70	0.500	"	"	"	"	"	"	
Xylenes (total)	1.50	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	111 %	58-144			"	"	"	"	
Surrogate: 4-BFB (PID)	101 %	68-140			"	"	"	"	
MW8 (B4I0792-02) Water Sampled: 09/26/04 12:00 Received: 09/27/04 15:15									
Gasoline Range Hydrocarbons	336	50.0	ug/l	1	4J07003	10/07/04	10/08/04	NWTPH-Gx/8021B	
Benzene	45.2	0.500	"	"	"	"	"	"	
Toluene	0.747	0.500	"	"	"	"	"	"	
Ethylbenzene	0.503	0.500	"	"	"	"	"	"	
Xylenes (total)	1.21	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	101 %	58-144			"	"	"	"	
Surrogate: 4-BFB (PID)	98.5 %	68-140			"	"	"	"	
MW9 (B4I0792-03) Water Sampled: 09/26/04 12:00 Received: 09/27/04 15:15									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4J07003	10/07/04	10/08/04	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	92.7 %	58-144			"	"	"	"	
Surrogate: 4-BFB (PID)	93.8 %	68-140			"	"	"	"	

North Creek Analytical - Bothell

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Amar Gill, Project Manager

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Environmental Laboratory Network

Page 2 of 6



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ERI
815 Industry Dr
Tukwila, WA/USA 98188

Project: TOSCO #5516
Project Number: 2422ERI013
Project Manager: James Matthiessen

Reported:
10/12/04 13:41

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-G and EPA 8021B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW10 (B4I0792-04) Water Sampled: 09/26/04 12:00 Received: 09/27/04 15:15									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4J07003	10/07/04	10/08/04	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	91.2 %	58-144			"	"	"	"	
Surrogate: 4-BFB (PID)	94.2 %	68-140			"	"	"	"	
MW4 (B4I0792-05) Water Sampled: 09/26/04 12:00 Received: 09/27/04 15:15									
Gasoline Range Hydrocarbons	101	50.0	ug/l	1	4J07003	10/07/04	10/08/04	NWTPH-Gx/8021B	
Benzene	25.1	0.500	"	"	"	"	"	"	
Toluene	2.19	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	92.5 %	58-144			"	"	"	"	
Surrogate: 4-BFB (PID)	95.4 %	68-140			"	"	"	"	
MW5 (B4I0792-06) Water Sampled: 09/26/04 12:00 Received: 09/27/04 15:15									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	4J07003	10/07/04	10/08/04	NWTPH-Gx/8021B	
Benzene	0.725	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	94.2 %	58-144			"	"	"	"	
Surrogate: 4-BFB (PID)	94.2 %	68-140			"	"	"	"	

North Creek Analytical - Bothell

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Page 3 of 6



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ERI
815 Industry Dr
Tukwila, WA/USA 98188

Project: TOSCO #5516
Project Number: 2422ERI013
Project Manager: James Matthiessen

Reported:
10/12/04 13:41

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-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 4J07003: Prepared 10/07/04 Using EPA 5030B (P/T)										
Blank (4J07003-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)	46.9		"	48.0		97.7	58-144			
Surrogate: 4-BFB (PID)	45.5		"	48.0		94.8	68-140			
LCS (4J07003-BS1)										
Gasoline Range Hydrocarbons	517	50.0	ug/l	502		103	80-120			
Benzene	5.69	0.500	"	6.21		91.6	80-120			
Toluene	32.7	0.500	"	34.9		93.7	80-120			
Ethylbenzene	7.87	0.500	"	8.38		93.9	80-120			
Xylenes (total)	39.2	1.00	"	40.6		96.6	80-120			
Surrogate: 4-BFB (FID)	46.5		"	48.0		96.9	58-144			
Surrogate: 4-BFB (PID)	44.8		"	48.0		93.3	68-140			
LCS Dup (4J07003-BSD1)										
Gasoline Range Hydrocarbons	494	50.0	ug/l	502		98.4	80-120	4.55	25	
Benzene	5.77	0.500	"	6.21		92.9	80-120	1.40	25	
Toluene	33.1	0.500	"	34.9		94.8	80-120	1.22	25	
Ethylbenzene	8.01	0.500	"	8.38		95.6	80-120	1.76	25	
Xylenes (total)	39.6	1.00	"	40.6		97.5	80-120	1.02	25	
Surrogate: 4-BFB (FID)	45.7		"	48.0		95.2	58-144			
Surrogate: 4-BFB (PID)	44.7		"	48.0		93.1	68-140			
Matrix Spike (4J07003-MS1)										
Source: B4I0852-02										
Gasoline Range Hydrocarbons	471	50.0	ug/l	502	12.3	91.4	58-129			
Benzene	5.80	0.500	"	6.21	ND	93.4	46-130			
Toluene	33.5	0.500	"	34.9	ND	96.0	60-124			
Ethylbenzene	7.90	0.500	"	8.38	ND	94.3	56-141			
Xylenes (total)	39.5	1.00	"	40.6	ND	97.3	66-132			
Surrogate: 4-BFB (FID)	50.7		"	48.0		106	58-144			
Surrogate: 4-BFB (PID)	44.9		"	48.0		93.5	68-140			

North Creek Analytical - Bothell

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ERI
815 Industry Dr
Tukwila, WA/USA 98188

Project: TOSCO #5516
Project Number: 2422ERI013
Project Manager: James Matthiessen

Reported:
10/12/04 13:41

Gasoline Hydrocarbons (Benzene to Naphthalene) and BTEX by NWTPH-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 4J07003: Prepared 10/07/04 Using EPA 5030B (P/T)										
Matrix Spike Dup (4J07003-MSD1)					Source: B4I0852-02					
Gasoline Range Hydrocarbons	439	50.0	ug/l	502	12.3	85.0	58-129	7.03	25	
Benzene	5.60	0.500	"	6.21	ND	90.2	46-130	3.51	40	
Toluene	32.3	0.500	"	34.9	ND	92.6	60-124	3.65	40	
Ethylbenzene	7.52	0.500	"	8.38	ND	89.7	56-141	4.93	40	
Xylenes (total)	37.7	1.00	"	40.6	ND	92.9	66-132	4.66	40	
Surrogate: 4-BFB (FID)	49.4		"	48.0		103	58-144			
Surrogate: 4-BFB (PID)	44.6		"	48.0		92.9	68-140			

North Creek Analytical - Bothell

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Page 5 of 6



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ERI
815 Industry Dr
Tukwila, WA/USA 98188

Project: TOSCO #5516
Project Number: 2422ERJ013
Project Manager: James Matthiessen

Reported:
10/12/04 13:41

Notes and Definitions

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

Amar Gill, Project Manager

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Page 6 of 6



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(503) 906-9200 FAX 906-9210
(541) 383-9310 FAX 382-7588

CHAIN OF CUSTODY REPORT

Work Order #: **B410792**

CLIENT: Environmental Resolutions, Inc.		INVOICE TO: James Mathiason		TURNAROUND REQUEST in Business Days*			
REPORT TO: 815 Industry Drive				Organic & Inorganic Analyses			
ADDRESS: Tukwila, WA 98188				☒ 1 ☐ 7 ☐ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ <1			
PHONE: Phone: 206-575-6220				STD. Petroleum Hydrocarbon Analyses			
FAX: Fax: 206-575-6423		P.O. NUMBER: 31144 5516		☐ 5 ☐ 4 ☐ 3 ☐ 2 ☐ 1 ☐ <1			
PROJECT NAME: 15th AVE		REQUESTED ANALYSES		STD. Please Specify			
PROJECT NUMBER: 31144 5516				☐ OTHER			
SAMPLED BY: Patrick Meyer / James M				*Turnaround Requests less than standard may incur Rush Charges.			
CLIENT SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	MWPHG BTX		MATRIX (W, S, O)	# OF CONT.	COMMENTS	NCA WO ID
1. MW 7	9/26/04	X		W	3		
2. MW 8		X					
3. MW 9		X					
4. MW 10		X					
5. MW 9		X					
6. MW 5		X					
7.							
8.							
9.							
10.							
11.							
12.							
13.							
14.							
15.							
RELINQUISHED BY: Patrick Meyer		DATE: 9/26/04		RECEIVED BY: SHERMAN Roland		DATE: 12:15	
PRINT NAME: Patrick Meyer		TIME: 9:00		PRINT NAME: SHERMAN Roland		TIME: 9-27-04	
FIRM: ERL				FIRM: NCA			
RELINQUISHED BY: SHERMAN Roland		DATE: 9-27-04		RECEIVED BY: James TINTY		DATE: 9/27/04	
PRINT NAME: SHERMAN Roland		TIME: 15:15		PRINT NAME: James TINTY		TIME: 1515	
FIRM: NCA				FIRM: NCA			
ADDITIONAL REMARKS:							
COC REV 3/99						PAGE OF	

GROUNDWATER SAMPLING - FIELD LOG

Client Name: 55/6

ERI Job No: 3114.4

Date: 9/26/04

Page 1 of 1

Location: 15th AVE

Field Cleaning Performed:

Field Crew: Brock May Jones Math Analysis:

* - Case Volume = $(d_{\text{rod}} - d_{\text{well}})_{\text{in}} \times F$ where $F =$
 0.163 for a 2" inside diameter well casing
 0.652 for a 4" inside diameter well casing
 1.467 for a 6" inside diameter well casing

[illegible]

Revised 4/20/94

ENVIRONMENTAL RESOLUTIONS, INC.