

DATE: November 3, 1998

**TOSCO MARKETING COMPANY  
GROUNDWATER MONITORING REPORT**

Site No.: 5353 Address: 600 Westlake Avenue North, Seattle, WA  
Tosco Project Manager: Timothy D. Johnson  
Consultant /Contact Person: Environmental Resolutions, Inc./John Meyer  
Primary Agency/Regulatory ID No.: Washington State Department of Ecology

**WORK PERFORMED THIS QUARTER(S) [Third - 1998]:**

- Monitored 11 groundwater monitoring wells, and sampled 6 wells without purging

**WORK PROPOSED FOR NEXT QUARTER [Fourth - 1998]:**

- Monitor 14 groundwater monitoring wells, and sample 11 without purging

**SUMMARY:**

Frequency of Sampling Events:	<u>Quarterly</u>	(Quarterly, etc.)
Approximate Depth to Groundwater:	<u>9 to 12 ft</u>	(Measured Feet)
Groundwater Gradient:	<u>Easterly</u>	(Direction)
	<u>0.007 ft/ft</u>	(Magnitude)
Maximum TPH-G/Benzene Concentrations:	<u>9,040/3,540</u>	(ppb)
Measurable Free Product Detected:	<u>Yes - SMW-4 and MW-37</u>	(Yes - ID wells(s)/No)
Free Product Recovered This Quarter:	<u>None</u>	(gallons)
Cumulative Free Product Recovered to Date:	<u>46,632</u>	(gallons)
Bulk Soil Removed This Quarter:	<u>None</u>	(cubic yards)
Water Wells or Surface Waters w/in a 2000'	<u>Lake Union</u>	(Distance &
Radius and Respective Direction:	<u>400 feet North</u>	Direction)
Current Remedial Action:	<u>VES</u>	(SVE/AS/P&T etc.)
Permits for Discharge:	<u>PSAPCA No. 4397</u>	(NPDES, POTW, etc.)

**DISCUSSION:**

- 3 of 6 wells sampled contained hydrocarbon concentrations exceeding MTCA Method A Cleanup Levels
- LPH detected in SMW-4 (0.05 ft) and MW-37 (0.03 ft)

**ATTACHMENTS:**

Plate P-1 - Groundwater Sample Analyses Map, 9/23/98  
Table 1 - Groundwater Analytical Results  
Laboratory Reports and Chain of Custody Records  
Field Data Records

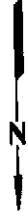
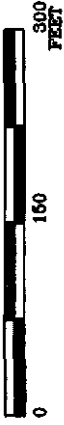
Prepared By:



John K. Meyer, R.G.  
Environmental Resolutions, Inc.

cc: Ecology NW Region  
GeoEngineers

APPROXIMATE SCALE



12/19/97	3/19/98	9/29/98	9/29/98	9/29/98
ND	ND	ND	366	ND
ND	287	ND	ND	ND
ND	ND	ND	27.3	ND
0.608	ND	ND	ND	ND
ND	ND	0.797	ND	ND
ND	ND	ND	ND	1.13
ND	ND	ND	ND	ND

12/19/97	3/19/98	9/29/98	9/29/98	9/29/98
ND	56.6	ND	ND	ND
ND	287	ND	ND	ND
ND	ND	ND	ND	ND
0.608	ND	ND	0.797	ND
ND	ND	ND	ND	1.13
ND	ND	ND	ND	ND
ND	ND	ND	ND	ND

12/19/97	3/19/98	9/29/98	9/29/98	9/29/98
ND	305	1,300	695	ND
ND	341	682	658	ND
ND	ND	ND	ND	ND
ND	410	600	243	ND
ND	4.24	ND	45.1	ND
ND	ND	ND	ND	ND
ND	ND	ND	ND	ND

12/19/97	3/19/98	9/29/98	9/29/98	9/29/98
326	ND	ND	ND	ND
3,280	0.604	ND	ND	ND
12,900	0.683	ND	ND	ND
ND	2.44	ND	ND	ND

12/19/97	3/19/98	9/29/98	9/29/98
0.02	0.01	0.01	0.03
ND	ND	ND	ND
ND	ND	ND	ND
ND	ND	ND	ND

12/19/97	3/19/98	9/29/98	9/29/98
76,900	9,040	ND	ND
3,090	3,060	ND	ND
ND	789	ND	ND
13,400	3,540	11,100	243
ND	ND	2,310	686
9,080	1,650	ND	ND

12/19/97	3/19/98	9/29/98	9/29/98
76.3	ND	267	ND
408	346	267	ND
ND	ND	ND	ND
26.5	69.6	9.05	ND
ND	ND	ND	ND
ND	ND	ND	ND
ND	ND	ND	ND

12/19/97	3/19/98	9/29/98	9/29/98
0.04	Trace	0.06	ND
ND	ND	ND	ND
ND	ND	ND	ND
ND	ND	ND	ND
ND	ND	ND	ND

12/19/97	3/19/98	9/29/98	9/29/98
ND	ND	ND	ND
ND	ND	ND	ND
ND	ND	ND	ND
ND	ND	ND	ND
ND	ND	ND	ND

12/19/97	3/19/98	9/29/98	9/29/98
50.1	ND	ND	ND
521	500	ND	ND
ND	ND	ND	ND
ND	ND	ND	ND
ND	ND	ND	ND

12/19/97	3/19/98	9/29/98	9/29/98
ND	ND	ND	ND
ND	ND	ND	ND
ND	ND	ND	ND
ND	ND	ND	ND
ND	ND	ND	ND

12/19/97	3/19/98	9/29/98	9/29/98
60.0	ND	ND	ND
310	ND	843	ND
ND	ND	ND	ND
ND	ND	ND	ND
ND	ND	ND	ND

12/19/97	3/19/98	9/29/98	9/29/98
0.04	Trace	0.06	ND
ND	ND	ND	ND
ND	ND	ND	ND
ND	ND	ND	ND
ND	ND	ND	ND

Laboratory Results  
in ug/L (ppb)

Sample Date	Total Petroleum Hydrocarbons as Gasoline	Total Petroleum Hydrocarbons as Diesel	Total Petroleum Hydrocarbons as Oil	Benzene	Toluene	Ethylbenzene	Total Xylenes
9/29/98	ND	346	ND	69.6	ND	ND	ND
9/29/98	ND	ND	ND	ND	ND	ND	ND

SOURCE: Modified from maps provided by Toseco Marketing Company

FN 5353

PROJECT NO. 31020  
PLATE P-1  
DATE: 11/4/98

EXPLANATION  
 MW-37 Groundwater Monitoring Well  
 9.70 Groundwater Elevation  
 0.01 Free Product Thickness in Feet  
 NM Not Measured  
 NS Not Sampled

**GROUNDWATER SAMPLE ANALYSES MAP - 9/23/98**  
 TOSCO FACILITY 5353  
 600 Westlake Avenue North  
 Seattle, Washington

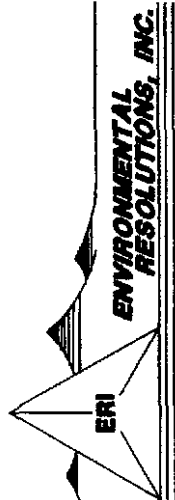


TABLE 1  
GROUNDWATER ANALYTICAL RESULTS  
Tosco Facility 5353  
600 Westlake Avenue North  
Seattle, Washington  
Page 1 of 5

Well Name	Sample Date	DTW	LPH	GW Elev.	TPH-G	TPH-D	TPH-O	B	T	E	X
SMW-3 --	03/08/95	10.25	0.00	--	<50	400	2,500	<0.5	<0.5	<0.5	<1.0
	06/06/95	10.23	0.00	--	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	09/07/95	10.89	0.00	--	<50	300	<750	<0.5	<0.5	<0.5	<1.0
	12/08/95	10.36	0.00	--	<50	300	<750	<0.5	<0.5	<0.5	<1.0
	04/01/96	10.07	0.00	--	34,000	4,000	2,300	6,400	42	2,100	3,000
	06/25/96	10.19	0.00	--	<50.0	320	<750	<0.500	<0.500	<0.500	<1.00
	09/27/96	11.12	0.00	--	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	03/28/97	10.19	0.00	--	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	06/30/97 <sup>NP</sup>	10.14	0.00	--	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	09/08/97 <sup>NP</sup>	10.85	0.00	--	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	12/19/97 <sup>NP</sup>	9.67	0.00	--	<50.0	521	<750	<0.500	<0.500	<0.500	<1.00
	3/16/98 <sup>NP</sup>	9.28	0.00	--	50.1	<250	<750	<0.500	<0.500	<0.500	<1.00
	6/26/98 <sup>NP</sup>	8.87	0.00	--	<50.0	500	<750	<0.500	<0.500	<0.500	<1.00
	9/23/98 <sup>NP</sup>	9.88	0.00	--	<50.0	<500	<750	<0.500	<0.500	<0.500	<1.00
	SMW-4 --	03/08/95	8.14	0.00	--	39,000	4,100	5,100	13,000	<250	2,400
06/06/95		8.90	0.00	--	41,000	5,500	<750	9,400	44	2,700	4,900
09/07/95		8.99	0.00	--	--	--	--	--	--	--	--
12/08/95		7.56	0.00	--	40,000	1,500	920	8,100	57	2,500	3,600
04/01/96		8.13	0.00	--	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
06/25/96		8.20	0.00	--	28,100	2,690	530	3,900	81.4	1,710	1,710
09/27/96		8.62	0.00	--	28,500	2,450	<750	6,090	<0.500	2,060	1,730
03/28/97		8.20	0.00	--	--	--	--	--	--	--	--
06/30/97		8.06	0.00	--	--	--	--	--	--	--	--
09/08/97		9.00	0.00	--	--	--	--	--	--	--	--
12/19/97		9.41	0.04	--	--	--	--	--	--	--	--
3/16/98		9.09	0.00	--	--	--	--	--	--	--	--
6/26/98	8.76	Trace	--	--	--	--	--	--	--	--	
9/23/98	9.96	0.05	--	--	--	--	--	--	--	--	
MW-32A 20.70	03/08/95	11.29	0.00	9.69	21,000	2,300	2,300	5,800	1,700	990	2,900
	06/06/95	--	--	--	--	--	--	--	--	--	--
	09/07/95	11.27	--	9.43	20,000	2,500	1,600	4,200	470	730	2,000
	12/08/95	10.61	--	10.06	11,000	1,200	<750	1,600	86	420	910
	04/01/96	10.90	--	9.80	7,900	1,400	1,000	2,200	58	300	490
	06/25/96	10.98	--	9.72	7,500	1,250	<750	1,200	60.4	217	435
	09/27/96	11.37	--	9.61	7,050	1,040	<750	1,570	37.4	254	416
	03/28/97	11.26	--	9.72	--	--	--	--	--	--	--
	06/30/97	10.89	--	--	--	--	--	--	--	--	--
	09/08/97	11.67	0.00	9.31	--	--	--	--	--	--	--
	12/19/97	11.42	0.00	9.28	--	--	--	--	--	--	--
	3/16/98	11.30	0.00	9.40	--	--	--	--	--	--	--
	6/26/98	11.29	0.00	9.41	--	--	--	--	--	--	--
9/23/98	11.97	0.00	8.73	--	--	--	--	--	--	--	
MW-33 20.75	03/08/95	11.16	0.00	9.73	4,900	1,400	2,000	650	<25	320	420
	06/06/95	--	--	--	--	--	--	--	--	--	--
	09/07/95	11.20	0.00	9.55	9,700	1,400	820	550	140	230	620
	12/08/95	--	--	--	13,000	1,900	1,800	800	240	280	760
	04/01/96	11.00	0.00	9.75	5,200	950	<750	630	33	130	270
	06/25/96	11.05	0.00	9.70	2,700	1,030	<750	230	24.6	45.5	61.1
	09/27/96	11.13	0.00	9.76	5,150	1,190	<750	1,190	237	85.3	272
	03/28/97	11.19	0.00	9.70	--	--	--	--	--	--	--
	06/30/97	10.66	0.00	10.23	--	--	--	--	--	--	--
	09/08/97	10.48	0.00	10.41	--	--	--	--	--	--	--
	12/19/97	--	--	--	--	--	--	--	--	--	--
	3/16/98	--	--	--	--	--	--	--	--	--	--
	6/26/98	11.18	0.00	9.57	--	--	--	--	--	--	--
	9/23/98	11.90	0.00	8.85	--	--	--	--	--	--	--
MTCA Method A Cleanup Level					1,000*			5	40	30	20

Continued on Page 2.

TABLE 1  
GROUNDWATER ANALYTICAL RESULTS  
Tosco Facility 5353  
600 Westlake Avenue North  
Seattle, Washington  
Page 2 of 5

Well Name	Sample Date	DTW	LPH	GW Elev.	TPH-G	TPH-D	TPH-O	B	T	E	X
MW-34 21.42	03/08/95	11.62	0.00	10.08	8,200	1,100	480	2,400	1,500	250	1,300
	06/06/95	11.73	0.00	9.97	9,100	2,300	<750	4,200	1,000	330	1,200
	09/07/95	11.57	0.00	9.85	18,000	1,800	930	4,800	2,300	660	2,000
	12/08/95	10.92	0.00	10.50	68,000	2,900	1,600	12,000	9,200	1,200	5,600
	04/01/96	11.21	0.00	10.21	10,000	1,900	<750	6,600	680	520	1,200
	06/25/96	11.19	0.00	10.23	13,700	1,160	<750	4,190	1,110	393	1,740
	09/27/96	11.58	0.00	10.12	16,300	1,030	<750	6,010	2,620	641	1,310
	03/28/97	11.47	0.00	10.23	--	--	--	--	--	--	--
	06/30/97 <sup>NP</sup>	11.19	0.00	10.51	2,970	311	<750	1,930	15.7	271	531
	09/08/97 <sup>NP</sup>	11.74	0.00	9.96	8,390	455	<750	3,920	645	667	1,270
	12/19/97	--	--	--	--	--	--	--	--	--	--
	3/16/98	--	--	--	--	--	--	--	--	--	--
	6/26/98 <sup>NP</sup>	11.42	0.00	10.00	76,900	3,090	<750	13,400	11,100	2,310	9,080
	9/23/98 <sup>NP</sup>	12.23	0.00	9.19	9,040	3,000	799	3,640	243	636	1,660
MW-35 20.10	03/08/95	10.67	0.00	9.60	2,600	1,200	1,300	400	<25	120	83
	06/06/95	10.67	0.00	9.60	810	1,000	930	62	1.4	27	36
	09/07/95	10.87	0.00	9.43	--	--	--	--	--	--	--
	12/08/95	0.00	--	--	--	--	--	--	--	--	--
	04/01/96	--	--	--	--	--	--	--	--	--	--
	06/25/96	11.11	0.00	8.99	1,620	860	<750	68.2	1.11	26.7	17.6
	09/27/96	10.64	0.00	9.63	959	624	<750	38.8	0.990	10.4	6.18
	03/28/97 <sup>NP</sup>	11.28	0.00	8.99	1,370	333	<750	161	2.36	31.9	10.7
	03/28/97	11.28	0.00	8.99	1,800	<250	<750	260	2.62	49.1	8.04
	06/30/97 <sup>NP</sup>	10.19	0.00	10.08	1,900	<250	<750	348	<2.50	85.0	7.31
	09/08/97 <sup>NP</sup>	10.86	0.00	9.41	4,200	<250	<750	1,460	16.2	231	69.2
	12/19/97	--	--	--	--	--	--	--	--	--	--
	3/16/98 <sup>NP</sup>	10.64	0.00	9.46	906	361	<750	410	4.24	<2.50	<5.00
	6/26/98 <sup>NP</sup>	10.65	0.00	9.45	1,300	682	<750	600	<10.0	46.1	<20.0
9/23/98 <sup>NP</sup>	11.38	0.00	8.72	655	659	<750	243	<2.50	<2.50	<5.00	
MW-36 17.80	03/08/95	9.07	0.00	8.97	<50	660	1,200	2.6	<0.5	<0.5	<1.0
	06/06/95	7.92	0.00	10.12	<50	<250	<750	1.0	<0.5	<0.5	<1.0
	09/07/95	8.11	0.00	9.69	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	12/08/95	9.00	0.00	8.80	<50	610	1,200	1.1	<0.5	<0.5	<1.0
	04/01/96	9.00	0.00	8.80	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	06/25/96	8.97	0.00	--	<50.0	<250	<750	0.580	0.500	<0.500	<1.00
	09/27/96	7.53	0.00	10.51	<50.0	<250	<750	1.18	<0.500	<0.500	<1.00
	03/28/97	9.21	0.00	8.83	<50.0	<250	<750	0.810	<0.500	<0.500	<1.00
	06/30/97 <sup>NP</sup>	6.88	0.00	11.16	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	09/08/97 <sup>NP</sup>	9.21	0.00	8.83	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	12/19/97 <sup>NP</sup>	10.09	0.00	7.71	<50.0	<250	<750	0.606	<0.500	<0.500	<1.00
	3/16/98 <sup>NP</sup>	9.29	0.00	8.51	56.6	287	<750	<0.500	<0.500	<0.500	<1.00
	6/26/98 <sup>NP</sup>	8.47	0.00	9.33	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	9/23/98 <sup>NP</sup>	9.89	0.00	7.91	<50.0	<250	<750	0.737	<0.500	<0.500	1.13
MW-37 21.01	03/08/95	11.94	0.00	9.24	34	3,200	1,400	3,100	2,400	1,200	6,700
	06/06/95	11.76	0.01	9.43	45	4,600	2,600	3,700	2,400	1,300	7,900
	06/06/95	11.76	0.01	9.43	90	--	--	5,100	6,000	2,400	14,000
	09/07/95	11.17	0.00	9.84	--	--	--	--	--	--	--
	12/08/95	10.22	0.00	10.79	--	--	--	--	--	--	--
	04/01/96	10.79	0.02	10.22	--	--	--	--	--	--	--
	06/25/96	10.82	0.20	10.19	--	--	--	--	--	--	--
	09/27/96	11.47	0.05	9.75	--	--	--	--	--	--	--
	03/28/97 <sup>NP</sup>	11.14	0.25	10.40	60,100	7,570	789	1,530	2,180	1,650	7,440
	03/28/97	11.14	0.25	10.40	297,000	46,100	<8,250	6,670	13,200	4,930	22,900
	06/30/97	10.80	0.02	10.23	--	--	--	--	--	--	--
	09/08/97	11.41	0.23	9.77	--	--	--	--	--	--	--
	12/19/97	11.28	0.02	9.75	--	--	--	--	--	--	--
	3/16/98	11.11	0.01	8.90	--	--	--	--	--	--	--
6/26/98	11.32	0.01	9.70	--	--	--	--	--	--	--	
9/23/98	12.01	0.03	9.03	--	--	--	--	--	--	--	
MTCA Method A Cleanup Level					1,000 <sup>a</sup>		5	40	30	20	

Continued on Page 3.

TABLE 1  
GROUNDWATER ANALYTICAL RESULTS  
Tosco Facility 5353  
600 Westlake Avenue North  
Seattle, Washington  
Page 3 of 5

Well Name	Sample Date	DTW	LPH	GW Elev.	TPH-G	TPH-D	TPH-O	B	T	E	X
MW-38 16.52	03/08/95	--	--	--	--	--	--	--	--	--	--
	06/06/96	--	--	--	--	--	--	--	--	--	--
	09/07/95	--	--	--	--	--	--	--	--	--	--
	12/08/95	--	--	--	--	--	--	--	--	--	--
	04/01/96	--	--	--	--	--	--	--	--	--	--
	06/25/96	--	--	--	--	--	--	--	--	--	--
	09/27/96	--	--	--	--	--	--	--	--	--	--
	03/28/97	9.23	0.00	7.60	<50	<250	<750	<0.500	<0.500	<0.500	<1.00
	06/30/97	--	--	--	--	--	--	--	--	--	--
	09/08/97	--	--	--	--	--	--	--	--	--	--
	12/19/97	--	--	--	--	--	--	--	--	--	--
	3/16/98	--	--	--	--	--	--	--	--	--	--
	6/26/98	--	--	--	--	--	--	--	--	--	--
	9/23/98	--	--	--	--	--	--	--	--	--	--
MW-40 20.89	03/08/95	10.98	0.00	10.14	960	2,600	2,600	11	<0.5	11	<1.0
	06/06/95	11.18	0.00	9.94	1,800	2,300	1,600	6.8	4.3	4.1	21
	09/07/95	11.08	0.00	9.81	650	13,000	66,000	11	0.91	0.57	<1.0
	12/08/95	10.30	0.00	10.59	600	1,400	4,800	2.7	3	<0.5	<1.0
	04/01/96	10.56	0.00	10.33	620	3,200	13,000	1.2	<0.5	0.55	<1.0
	06/25/96	10.69	0.00	10.20	600	2,700	8,460	<0.500	9.82	<0.500	<1.00
	09/27/96	10.95	0.00	10.17	602	3,660	9,860	0.604	41.1	0.525	<1.0
	03/28/97	10.92	0.00	10.20	--	--	--	--	--	--	--
	06/30/97	--	--	--	--	--	--	--	--	--	--
	09/08/97	--	--	--	--	--	--	--	--	--	--
	12/19/97 <sup>NP</sup>	11.11	0.00	9.78	326	3,260	12,600	<0.500	0.504	0.663	2.44
	3/16/98	--	--	--	--	--	--	--	--	--	--
	6/26/98	--	--	--	--	--	--	--	--	--	--
	9/23/98	--	--	--	--	--	--	--	--	--	--
MW-41 27.00	03/08/95	14.72	--	12.48	<50	<250	<750	1.6	<0.5	<0.5	<1.0
	06/06/95	15.02	--	12.18	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	09/07/95	15.00	--	12.00	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	12/08/95	16.30	--	10.70	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	04/01/96	15.02	--	11.98	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	06/25/96	15.07	--	11.93	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	09/27/96	15.42	0.00	11.78	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	03/28/97	15.27	0.00	11.93	--	--	--	--	--	--	--
	06/30/97	--	--	--	--	--	--	--	--	--	--
	09/08/97	--	--	--	--	--	--	--	--	--	--
	12/19/97	--	--	--	--	--	--	--	--	--	--
	3/16/98	--	--	--	--	--	--	--	--	--	--
	6/26/98	--	--	--	--	--	--	--	--	--	--
	9/23/98	--	--	--	--	--	--	--	--	--	--
MW-42 20.34	03/08/95	9.45	0.00	10.91	130	670	1,200	790	<25	<25	<50
	06/06/95	9.37	0.00	10.89	120	920	1,600	600	<0.56	<0.5	<1.0
	09/07/95	9.50	0.00	10.84	3,000	780	1,200	210	4.1	42	230
	12/08/95	8.95	0.00	11.39	200	1,300	1,900	380	<2.0	<2.0	<4.0
	04/01/96	9.03	0.00	11.31	180	650	<750	280	0.52	<0.5	<1.0
	06/25/96	9.07	0.00	11.27	150	720	<750	160	<0.500	<0.500	<1.00
	09/27/96	9.12	0.00	11.24	<250	534	<750	228	<2.50	<2.50	<5.00
	03/28/97	9.09	0.00	11.27	--	--	--	--	--	--	--
	06/30/97	8.92	0.00	11.44	--	--	--	--	--	--	--
	09/08/97	9.57	0.00	10.79	--	--	--	--	--	--	--
	12/19/97	--	--	--	--	--	--	--	--	--	--
	3/16/98	9.53	0.00	10.81	--	--	--	--	--	--	--
	6/26/98	9.51	0.00	10.83	--	--	--	--	--	--	--
	9/23/98	9.96	0.00	10.38	--	--	--	--	--	--	--
MTCA Method A Cleanup Level					1,000 <sup>a</sup>			5	40	30	20

Continued on Page 4.

TABLE 1  
GROUNDWATER ANALYTICAL RESULTS  
Tosco Facility 5353  
600 Westlake Avenue North  
Seattle, Washington  
Page 4 of 5

Well Name	Sample Date	DTW	LPH	GW Elev.	TPH-G	TPH-D	TPH-O	B	T	E	X
MW-43	03/08/95	11.35	0.00	9.94	<50	660	2,400	25	<0.5	<0.5	<1.0
21.04	06/06/95	11.45	0.00	9.84	<50	690	1,500	8.2	<0.5	<0.5	<1.0
	09/07/95	11.14	0.00	9.90	<50	<250	850	10	<0.5	<0.5	<1.0
	12/08/95	10.85	0.00	10.19	<50	960	3,100	37	<0.5	<0.5	<1.0
	04/01/96	10.98	0.00	10.06	<50	300	<750	4.5	<0.5	<0.5	<1.0
	06/25/96	11.06	0.00	9.98	<50.0	370	<750	2.57	<0.500	<0.500	<1.00
	09/27/96	11.33	0.00	9.96	<50.0	339	<750	4.40	<0.5	<0.500	<1.00
	03/28/97	11.13	0.00	9.98	<50.0	<250	<750	5.89	0.884	<0.500	2.47
	06/30/97 <sup>NP</sup>	7.08	0.00	14.21	<50.0	<250	<750	59.2	<0.500	<0.500	<1.00
	09/08/97 <sup>NP</sup>	11.46	0.00	9.83	83	<250	<750	35.6	<0.500	2.10	3.08
	12/19/97	--	--	--	--	--	--	--	--	--	--
	3/16/98 <sup>NP</sup>	11.09	0.00	9.95	76.3	408	<750	26.6	<0.500	<0.500	<1.00
	6/26/98 <sup>NP</sup>	11.26	0.00	9.78	<50.0	346	<750	69.6	<0.500	<0.500	<1.00
	9/23/98 <sup>NP</sup>	11.75	0.00	9.29	<50.0	267	<750	9.06	<0.500	<0.500	<1.00
	MW-44	03/08/95	9.44	0.00	10.46	<50	290	940	<0.5	<0.5	<0.5
18.73	06/06/95	8.28	0.00	10.62	<50	<250	820	<0.5	<0.5	<0.5	1.6
	09/07/95	7.94	0.00	10.79	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	12/08/95	8.09	0.00	10.64	<50	520	2,500	<0.5	<0.5	<0.5	<1.0
	04/01/96	7.98	0.00	10.75	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	06/25/96	7.90	0.00	10.83	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	09/27/96	8.28	0.00	10.59	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	03/28/97	8.07	0.00	10.83	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	06/30/97 <sup>NP</sup>	7.84	0.00	11.06	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	09/08/97 <sup>NP</sup>	8.65	0.00	10.25	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	12/19/97 <sup>NP</sup>	8.51	0.00	10.22	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	3/16/98 <sup>NP</sup>	8.43	0.00	10.30	60.0	310	<750	<0.500	<0.500	<0.500	<1.00
	6/26/98 <sup>NP</sup>	8.37	0.00	10.36	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	9/23/98 <sup>NP</sup>	9.30	0.00	9.43	<50.0	343	<750	<0.500	<0.500	<0.500	<1.00
	MW-46	03/08/95	8.00	0.00	8.91	<50	720	3,800	<0.5	<0.5	<0.5
16.91	06/06/95	7.30	0.00	10.01	<50	<250	1,400	<0.5	<0.5	<0.5	<1.0
	09/07/95	7.80	0.00	8.93	<50	710	5,600	<0.5	<0.5	<0.5	<1.0
	12/08/95	8.32	0.00	8.59	<50	1,400	14,000	<0.5	<0.5	<0.5	<1.0
	04/01/96	7.04	0.00	9.87	<50	<400	2,800	<0.5	<0.5	<0.5	<1.0
	06/25/96	7.85	0.00	9.06	<50.0	440	2,090	<0.500	<0.500	<0.500	<1.00
	09/27/96	7.57	0.00	9.74	<50.0	267	<750	0.518	<0.500	<0.500	<1.00
	03/28/97	7.25	0.00	10.06	<50.0	<250	<750	<0.500	1.25	<0.500	2.06
	06/30/97	7.12	0.00	10.19	--	--	--	--	--	--	--
	09/08/97	8.82	0.00	8.49	--	--	--	--	--	--	--
	12/19/97 <sup>NP</sup>	9.40	0.00	7.51	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	3/16/98	--	--	--	--	--	--	--	--	--	--
	6/26/98	--	--	--	--	--	--	--	--	--	--
	9/23/98	--	--	--	--	--	--	--	--	--	--
	MW-47	03/08/95	10.88	0.00	9.16	<50	330	1,600	5.3	<0.5	<0.5
19.83	06/06/95	10.91	0.00	9.13	70	380	780	15	0.59	<0.5	2.3
	09/07/95	10.76	0.00	9.07	<50	260	<750	1.7	<0.5	<0.5	<1.0
	12/08/95	10.40	0.00	9.43	740	680	2,000	<0.5	<0.5	<0.5	<1.0
	04/01/96	10.67	0.00	9.16	<50	<250	<750	4.4	<0.5	<0.5	<1.0
	06/25/96	10.71	0.00	9.12	110	400	<750	14.4	<0.500	<0.500	<1.00
	09/27/96	10.85	0.00	9.19	<50.0	<250	<750	4.34	<0.500	<0.500	<1.00
	03/28/97 <sup>NP</sup>	10.92	0.00	9.12	64.5	<250	<750	7.61	<0.500	<0.500	1.57
	03/28/97	10.92	0.00	9.12	177	<250	<750	52.6	<0.500	<0.500	<1.00
	06/30/97	--	--	--	--	--	--	--	--	--	--
	09/08/97	--	--	--	--	--	--	--	--	--	--
	12/19/97	--	--	--	--	--	--	--	--	--	--
	3/16/98	--	--	--	--	--	--	--	--	--	--
	6/26/98 <sup>NP</sup>	10.78	0.00	9.05	<50.0	356	<750	27.3	<0.500	<0.500	<1.00
	9/23/98	--	--	--	--	--	--	--	--	--	--
	MTCA Method A Cleanup Level						1,000 <sup>a</sup>	5	40	30	20

Continued on Page 5.

TABLE 1  
GROUNDWATER ANALYTICAL RESULTS  
Tosco Facility 5353  
600 Westlake Avenue North  
Seattle, Washington  
Page 5 of 5

Well Name	Sample Date	DTW	LPH	GW Elev.	TPH-G	TPH-D	TPH-O	B	T	E	X
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**EXPLANATION:**

Concentrations in ug/l. (ppb).

Wellhead elevations taken from prior consultant's reports.

DTW = Depth to water in feet below top of casing except where noted in prior reports.

LPH = Liquid-phase petroleum hydrocarbon thickness in feet.

GW Elev. = Groundwater elevation relative to DTW data; corrected for LPH where applicable using a specific gravity of 0.85.

TPH-G = Total Petroleum Hydrocarbons as Gasoline by Ecology Method WTPH-G.

TPH-D and TPH-O = Total petroleum hydrocarbons as diesel and as oil (respectively) by Ecology Method WTPH-D (Extended).

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

BTEX = Aromatic compounds by EPA Method 8020.

<sup>NP</sup> = Well not purged prior to sampling.

< = Less than the stated laboratory reporting limit.

-- = Not analyzed or no data.

Shaded values equal or exceed MTCA Method A Cleanup Levels.

<sup>a</sup> Total Petroleum Hydrocarbons

Data collected before 12/18/97 are taken from prior consultants.



# NORTH CREEK ANALYTICAL

Environmental Laboratory Services

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ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: TOSCO #5353 Project Number: 31020 Project Manager: John Meyer	Sampled: 9/23/98 Received: 9/24/98 Reported: 10/9/98 06:14
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### Summary Report\*

(Please refer to the Analytical Report for a thorough review of the complete data set.)

Method	Analyte	Units	SMW-3	MW-34	MW-35	MW-36	MW-43
			Water 9/23/98 B809641-01	Water 9/23/98 B809641-02	Water 9/23/98 B809641-03	Water 9/23/98 B809641-04	Water 9/23/98 B809641-05
WTPH-G/8021	Gasoline Range Hydrocarbons	ug/l	<50.0	9040	665	<50.0	<50.0
"	Benzene	"	<0.500	3540	243	0.737	9.05
"	Toluene	"	<0.500	243	<2.50	<0.500	<0.500
"	Ethylbenzene	"	<0.500	636	<2.50	<0.500	<0.500
"	Xylenes (total)	"	<1.00	1650	<5.00	1.13	<1.00
WTPH-D	Diesel Range Hydrocarbons	mg/l	<0.500	3.00	0.659	<0.250	0.267
"	Heavy Oil Range Hydrocarbons	"	<0.750	0.799	<0.750	<0.750	<0.750

Method	Analyte	Units	MW-44
			Water 9/23/98 B809641-06
WTPH-G/8021	Gasoline Range Hydrocarbons	ug/l	<50.0
"	Benzene	"	<0.500
"	Toluene	"	<0.500
"	Ethylbenzene	"	<0.500
"	Xylenes (total)	"	<1.00
WTPH-D	Diesel Range Hydrocarbons	mg/l	0.343
"	Heavy Oil Range Hydrocarbons	"	<0.750





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ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: TOSCO #5353 Project Number: 31020 Project Manager: John Meyer	Sampled: 9/23/98 Received: 9/24/98 Reported: 10/9/98 06:14
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## ANALYTICAL REPORT FOR SAMPLES:

Sample Description	Laboratory Sample Number	Sample Matrix	Date Sampled
SMW-3	B809641-01	Water	9/23/98
MW-34	B809641-02	Water	9/23/98
MW-35	B809641-03	Water	9/23/98
MW-36	B809641-04	Water	9/23/98
MW-43	B809641-05	Water	9/23/98
MW-44	B809641-06	Water	9/23/98



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ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: TOSCO #5353 Project Number: 31020 Project Manager: John Meyer	Sampled: 9/23/98 Received: 9/24/98 Reported: 10/9/98 06:14
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## Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8021B North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
				<b><u>B809641-01</u></b>				
							<b><u>Water</u></b>	
Gasoline Range Hydrocarbons	1080192	10/6/98	10/6/98		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		109	%	
Surrogate: 4-BFB (PID)	"	"	"	50.0-150		104	"	
				<b><u>B809641-02</u></b>				
							<b><u>Water</u></b>	
Gasoline Range Hydrocarbons	1080192	10/6/98	10/6/98		5000	9040	ug/l	
Benzene	"	"	"		50.0	3540	"	
Toluene	"	"	"		50.0	243	"	
Ethylbenzene	"	"	"		50.0	636	"	
Xylenes (total)	"	"	"		100	1650	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		103	%	
Surrogate: 4-BFB (PID)	"	"	"	50.0-150		104	"	
				<b><u>B809641-03</u></b>				
							<b><u>Water</u></b>	
Gasoline Range Hydrocarbons	1080192	10/6/98	10/7/98		250	665	ug/l	
Benzene	"	"	"		2.50	243	"	
Toluene	"	"	"		2.50	ND	"	
Ethylbenzene	"	"	"		2.50	ND	"	
Xylenes (total)	"	"	"		5.00	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		105	%	
Surrogate: 4-BFB (PID)	"	"	"	50.0-150		95.0	"	
				<b><u>B809641-04</u></b>				
							<b><u>Water</u></b>	
Gasoline Range Hydrocarbons	1080192	10/6/98	10/7/98		50.0	ND	ug/l	
Benzene	"	"	"		0.500	0.737	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	1.13	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		109	%	
Surrogate: 4-BFB (PID)	"	"	"	50.0-150		107	"	
				<b><u>B809641-05</u></b>				
							<b><u>Water</u></b>	
Gasoline Range Hydrocarbons	1080192	10/6/98	10/6/98		50.0	ND	ug/l	
Benzene	"	"	"		0.500	9.05	"	

North Creek Analytical - Bothell

\*Refer to end of report for text of notes and definitions.

  
 Matthew Essig, Project Manager

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# NORTH CREEK ANALYTICAL


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ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: TOSCO #5353 Project Number: 31020 Project Manager: John Meyer	Sampled: 9/23/98 Received: 9/24/98 Reported: 10/9/98 06:14
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## Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8021B North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
<b>MW-43 (continued)</b>				<b>B809641-05</b>			<b>Water</b>	
Toluene	1080192	10/6/98	10/6/98		0.500	ND	ug/l	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		104	%	
Surrogate: 4-BFB (PID)	"	"	"	50.0-150		102	"	
<b>MW-44</b>				<b>B809641-06</b>			<b>Water</b>	
Gasoline Range Hydrocarbons	1080192	10/6/98	10/7/98		50.0	ND	ug/l	
Benzene	"	"	"		0.500	ND	"	
Toluene	"	"	"		0.500	ND	"	
Ethylbenzene	"	"	"		0.500	ND	"	
Xylenes (total)	"	"	"		1.00	ND	"	
Surrogate: 4-BFB (FID)	"	"	"	50.0-150		108	%	
Surrogate: 4-BFB (PID)	"	"	"	50.0-150		105	"	

  
 Matthew Essig, Project Manager



# NORTH CREEK ANALYTICAL

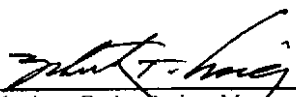
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ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: TOSCO #5353 Project Number: 31020 Project Manager: John Meyer	Sampled: 9/23/98 Received: 9/24/98 Reported: 10/9/98 06:14
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## Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended) North Creek Analytical - Bothell

Analyte	Batch Number	Date Prepared	Date Analyzed	Surrogate Limits	Reporting Limit	Result	Units	Notes*
				<b>B809641-01</b>				
<b>SMW-3</b> Diesel Range Hydrocarbons	0981002	9/30/98	10/1/98		0.500	ND	mg/l	1
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		79.5	%	
				<b>B809641-02</b>				
<b>MW-34</b> Diesel Range Hydrocarbons	0981002	9/30/98	10/1/98		0.250	3.00	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	0.799	"	
Surrogate: 2-FBP	"	"	"	50.0-150		95.0	%	
				<b>B809641-03</b>				
<b>MW-35</b> Diesel Range Hydrocarbons	0981002	9/30/98	10/1/98		0.250	0.659	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		84.4	%	
				<b>B809641-04</b>				
<b>MW-36</b> Diesel Range Hydrocarbons	0981002	9/30/98	10/1/98		0.250	ND	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		69.2	%	
				<b>B809641-05</b>				
<b>MW-43</b> Diesel Range Hydrocarbons	0981002	9/30/98	10/1/98		0.250	0.267	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		74.2	%	
				<b>B809641-06</b>				
<b>MW-44</b> Diesel Range Hydrocarbons	0981002	9/30/98	10/1/98		0.250	0.343	mg/l	
Heavy Oil Range Hydrocarbons	"	"	"		0.750	ND	"	
Surrogate: 2-FBP	"	"	"	50.0-150		80.5	%	

  
 Matthew Essig, Project Manager



# NORTH CREEK ANALYTICAL

Environmental Laboratory Services

BOTHELL ■ (425) 420-9200 ■ FAX 420-9210  
 SPOKANE ■ (509) 924-9200 ■ FAX 924-9290  
 PORTLAND ■ (503) 906-9200 ■ FAX 906-9210

ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: TOSCO #5353 Project Number: 31020 Project Manager: John Meyer	Sampled: 9/23/98 Received: 9/24/98 Reported: 10/9/98 06:14
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## Gasoline Hydrocarbons (Toluene to Dodecane) and BTEX by WTPH-G and EPA 8021B/Quality Control North Creek Analytical - Bothell

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>Batch: 1080192</b>			<b>Date Prepared: 10/6/98</b>			<b>Extraction Method: EPA 5030B (MeOH)</b>				
<b>Blank</b>			<b>1080192-BLK1</b>							
Gasoline Range Hydrocarbons	10/6/98			ND	ug/l	50.0				
Benzene	"			ND	"	0.500				
Toluene	"			ND	"	0.500				
Ethylbenzene	"			ND	"	0.500				
Xylenes (total)	"			ND	"	1.00				
Surrogate: 4-BFB (FID)	"	48.0		50.1	"	50.0-150	104			
Surrogate: 4-BFB (PID)	"	48.0		49.9	"	50.0-150	104			
<b>LCS</b>			<b>1080192-BS1</b>							
Gasoline Range Hydrocarbons	10/7/98	500		468	ug/l	70.0-130	93.6			
Surrogate: 4-BFB (FID)	"	48.0		51.6	"	50.0-150	107			
<b>Duplicate</b>			<b>1080192-DUP1</b>		<b>B809641-02</b>					
Gasoline Range Hydrocarbons	10/6/98		9040	9500	ug/l			25.0	4.96	
Surrogate: 4-BFB (FID)	"	48.0		53.7	"	50.0-150	112			
<b>Duplicate</b>			<b>1080192-DUP2</b>		<b>B810026-05</b>					
Gasoline Range Hydrocarbons	10/6/98		6890	7740	ug/l			25.0	11.6	
Surrogate: 4-BFB (FID)	"	48.0		60.3	"	50.0-150	126			
<b>Matrix Spike</b>			<b>1080192-MS1</b>		<b>B810026-02</b>					
Benzene	10/7/98	10.0	ND	9.77	ug/l	70.0-130	97.7			
Toluene	"	10.0	ND	9.23	"	70.0-130	92.3			
Ethylbenzene	"	10.0	ND	9.15	"	70.0-130	91.5			
Xylenes (total)	"	30.0	ND	27.4	"	70.0-130	91.3			
Surrogate: 4-BFB (PID)	"	48.0		51.4	"	50.0-150	107			
<b>Matrix Spike Dup</b>			<b>1080192-MSD1</b>		<b>B810026-02</b>					
Benzene	10/7/98	10.0	ND	10.4	ug/l	70.0-130	104	15.0	6.25	
Toluene	"	10.0	ND	9.63	"	70.0-130	96.3	15.0	4.24	
Ethylbenzene	"	10.0	ND	9.60	"	70.0-130	96.0	15.0	4.80	
Xylenes (total)	"	30.0	ND	28.9	"	70.0-130	96.3	15.0	5.33	
Surrogate: 4-BFB (PID)	"	48.0		51.2	"	50.0-150	107			

  
 Matthew Essig, Project Manager



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ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: TOSCO #5353 Project Number: 31020 Project Manager: John Meyer	Sampled: 9/23/98 Received: 9/24/98 Reported: 10/9/98 06:14
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**Diesel Hydrocarbons (C12-C24) and Heavy Oil (C24-C40) by WTPH-D (extended)/Quality Control  
 North Creek Analytical - Bothell**

Analyte	Date Analyzed	Spike Level	Sample Result	QC Result	Units	Reporting Limit Recov. Limits	Recov. %	RPD Limit	RPD %	Notes*
<b>Batch: 0981002</b>			<b>Date Prepared: 9/30/98</b>			<b>Extraction Method: EPA 3520C/600 Series</b>				
<b>Blank</b>			<b>0981002-BLK1</b>							
Diesel Range Hydrocarbons	10/1/98			ND	mg/l	0.250				
Heavy Oil Range Hydrocarbons	"			ND	"	0.750				
Surrogate: 2-FBP	"	0.320		0.248	"	50.0-150	77.5			
<b>LCS</b>			<b>0981002-BS1</b>							
Diesel Range Hydrocarbons	10/1/98	2.00		2.13	mg/l	60.0-140	107			
Surrogate: 2-FBP	"	0.320		0.282	"	50.0-150	88.1			
<b>Duplicate</b>			<b>0981002-DUP1 B809641-01</b>							
Diesel Range Hydrocarbons	10/1/98		ND	0.338	mg/l				44.0	
Heavy Oil Range Hydrocarbons	"		ND	ND	"				44.0	
Surrogate: 2-FBP	"	0.605		0.456	"	50.0-150	75.4			
<b>Duplicate</b>			<b>0981002-DUP2 B809645-01</b>							
Diesel Range Hydrocarbons	10/1/98		0.879	0.955	mg/l				44.0	8.29
Heavy Oil Range Hydrocarbons	"		ND	ND	"				44.0	
Surrogate: 2-FBP	"	0.641		0.517	"	50.0-150	80.7			

  
 Matthew Essig, Project Manager



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PORTLAND ■ (503) 906-9200 ■ FAX 906-9210

ERI 1921 Edmonds Drive SE Renton, WA 98055	Project: TOSCO #5353 Project Number: 31020 Project Manager: John Meyer	Sampled: 9/23/98 Received: 9/24/98 Reported: 10/9/98 06:14
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## Notes and Definitions

#	Note
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- 1 The reporting limit for this sample was raised due to insufficient sample volume.
- 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
- Recov. Recovery
- RPD Relative Percent Difference

GROUNDWATER SAMPLING - FIELD LOG

Client Name: Terna 5353 ERI Job No. 3020 Date: 9/23/98 Page 1 of 1  
 Location: 600 Hwy Field Cleaning Performed: Analysis:  
 Field Crew: [Signature]

\* - Case Volume = (d<sub>well</sub><sup>2</sup> - d<sub>case</sub><sup>2</sup>) / 4 X F where F =  
 0.163 for a 2" inside diameter well casing  
 0.652 for a 4" inside diameter well casing  
 1.457 for a 6" inside diameter well casing

Well No.	Time	Depth Water (ft.)	Depth Well (ft.)	Case Dia. (in)	Case Vol* gal	Purge Vol. (gal)	Conduct. #S/CM (X1000)	Temp. Deg F	PH	TURB. NTU	PID PPH	Comments
43		11.25										NP
44		9.20										
2		9.88										
26		9.89										
34		12.23										
35		11.38										NP
33		11.90										
37		12.01				FD = 0.03						Lid Missing! FP=0.03
33A		11.97										
42		9.96										
4		9.96				FD = 0.05						FD 0.05
												2 caps



# TOSCO CHAIN OF CUSTODY REPORT

3809641

**TOSCO INFORMATION**

Facility Number: 5393 WENTHROP  
Site Address: 600 WENTHROP AVE N  
City, State, ZIP: SEATTLE WA  
Site Release Number: A999/77533254/509630  
846/1000/255353  
Tosco Manager: TIM DELMORAN  
CERT INFO: (check one)  Evaluation  Remediation  Demolition  Closure  Miscellaneous

**CONSULTANT INFORMATION**

Firm: ERI  
Address: 1921 EDWARDS DR SE  
LANTA, GA 30855  
Phone: (405) 227-0280 Fax: 102225  
Project Manager: JOHN MEYER  
Sample Collection by: JOHN MEYER

Chain of Custody Record #:

Qualify Assurance Data Level:  
 A  B

A: Standard Summary  
B: Standard + Chromatograms

Laboratory Turnaround Days:  
 10  5  3  2  1

SAMPLE IDENTIFICATION	SAMPLING DATE/TIME	MATRIX (AW, SO)	# OF CONTAINERS
1. MW-3	9/22/98	CU	3
2. MW-34			
3. MW-35			
4. MW-36			
5. MW-43			
6. MW-44			
7.			
8.			
9.			
10.			

OR	WA	AK	NW Series	TPH-HCID	TPH-Gas	BTEX	EPA 8021 Med.	TPH-Gas + BTEX	TPH-Diesel	TPH-Diesel-Ext.	w/5% Cleanup	Halogen Volatiles	EPA 8021	Pesticides/PCBs or PCBs Only	GC/MS Volatiles	EPA 8260	GC/MS Semivol.	EPA 8270	PAHs	8270 SIM or 8310	Lead	Total or Dissolved TCLP or RCRA	Metals (8)	
					X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X

NCA SAMPLE NUMBER  
B809641-01  
02  
03  
04  
05  
06

Relinquished by: [Signature] Date & Time: 9/24/98  
Received by: S. WILDEAN NCA 9/24/98  
Date & Time: 9/24/98 12:00  
Comments: ERI 9/24/98  
S. WILDEAN NCA 9/24/98 12:00  
K. BLANDIN NCA 9/24 12:00  
W/A  
G.A.

Final Report Approval: [Signature] Date: \_\_\_\_\_  
Were all requested results provided? [yes] [no] Define  
Were results within requested turnaround? [yes] [no] "No" on back  
Final Approval Signature: \_\_\_\_\_ Date: \_\_\_\_\_