

RECEIVED

Web Ex  
Site # 2553SE

Store#	2553SE
Report Type Code:	GWM
Description:	4Q GW Sampling
Date:	1/23/02
TOSCO CORPORATION	

DATE January 23, 2002

**GROUNDWATER MONITORING REPORT**

Site No 5353 Address 600 Westlake Avenue North, Seattle, Washington  
 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) [Fourth - 2001]**

- Monitored 18, purged and sampled 16 groundwater monitoring wells

**WORK PROPOSED FOR NEXT QUARTER [First - 2002]:**

- Monitor, purge and sample 11 groundwater monitoring wells

**SUMMARY:**

Frequency of Sampling Events	<u>Quarterly</u>	(Quarterly, etc )
Approximate Depth to Groundwater	<u>8 to 12 feet</u>	(Measured Feet)
Groundwater Gradient	<u>Not Determined</u>	(Direction)
	<u>Not Determined</u>	(Magnitude)
Maximum TPH-G/Benzene Concentrations	<u>141,000/5,360</u>	(ppb)
Measurable Free Product Detected	<u>Yes - MW37</u>	(Yes - ID well(s)/No)
Free Product Recovered This Quarter	<u>Unknown</u>	(gallons)
Cumulative Free Product Recovered to Date	<u>Unknown</u>	(gallons)
Bulk Soil Removed This Quarter	<u>None</u>	(cubic yards)
Water Wells or Surface Waters w/in 2000'	<u>Lake Union, 400 Feet</u>	(Distance &
Radius and Respective Direction	<u>North</u>	Direction)
Current Remedial Action	<u>VES/EFRT</u>	(SVE/AS/P&T etc )
Permits for Discharge	<u>PSAPCA No 4397</u>	(NPDES, POTW, etc )

**DISCUSSION**

- 14 of 16 wells sampled contained hydrocarbon concentrations exceeding the MTCA Method A Cleanup Levels
- MW37 contained LPH with thickness of 0.20 feet

**ATTACHMENTS:**

- Plate 1 Groundwater Sample Analysis Map - 12/28/01
- Table 1 Groundwater Analytical Results
- Laboratory Reports and Chain of Custody Records
- Field Data Records

Prepared By

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Environmental Technician

Reviewed By

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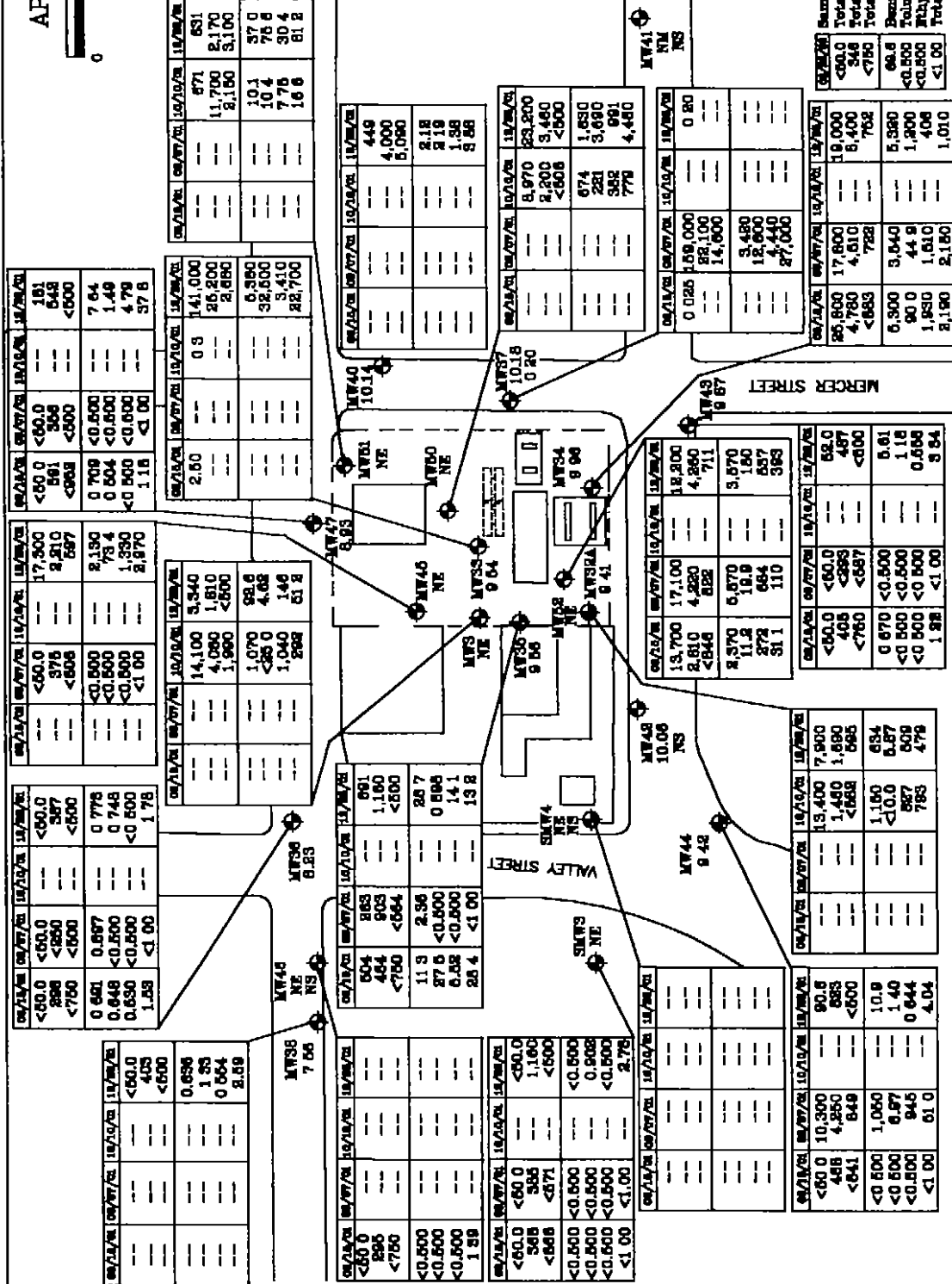
cc Ecology, NW Region  
Dave Cook, GeoEngineers

APPROXIMATE SCALE



TERRY AVENUE NORTH

WESTLAKE AVENUE NORTH



Laboratory Results in u/L (ppb)

Sample Date	Total Petroleum Hydrocarbons as Gasoline	Total Petroleum Hydrocarbons as Diesel	Total Petroleum Hydrocarbons as Oil	Benzene	Numbers in Red Exceed
<90.0	<90.0	19,000	84.8	<0.500	MTCMA Method A Cleanup Levels
348	5,400	<0.500	<0.500	<0.500	Phenylamines
<750	702	1,950	<1.000	<1.000	Total Xylenes < 00 = Less than the Stated
		1,010			Laboratory Reporting Limit

RESULTS Modified and provided by  
Tosco Corporation

PN 3119007E

PROJECT NO.  
31020

PLATE  
1  
YN 01/19/08

EXPLANATION

MW37	Groundwater Monitoring Well
9 70	Groundwater Elevation
0 01	Free Product Thickness in Feet
NM	Not Measured
NE	Not Established
NS	Not Sampled

**GROUNDWATER SAMPLE ANALYSIS MAP - 12/28/01**  
TOSCO SITE NO. 6353  
600 Westlake Avenue North  
Seattle, Washington



TABLE 1  
GROUNDWATER ANALYTICAL RESULTS  
Tosco Site No. 5353  
600 Westlake Avenue North  
Seattle, Washington  
Page 1 of 6

Well Name	Sample Date	DTW	LP-H	GW Elev	TPH-G	TPH-D	TPH-O	B	T	E	X
SMW3 NE	03/06/95	10.25	0.00	-	<50	<250	<750	<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
	09/07/96	10.89	0.00	-	<50	330	<750	<0.5	<0.5	<0.5	<1.0
	12/08/95	10.36	0.00	-	<50	330	<750	<0.5	<0.5	<0.5	<1.0
	04/01/96	10.07	0.00	-	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	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	10.14	0.00	-	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	09/08/97	10.85	0.00	-	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	12/19/97	9.67	0.00	-	<50.0	521	<750	<0.500	<0.500	<0.500	<1.00
	03/16/98	9.28	0.00	-	50.1	<250	<750	<0.500	<0.500	<0.500	<1.00
	06/26/98	8.87	0.00	-	<50.0	500	<750	<0.500	<0.500	<0.500	<1.00
	09/23/98	9.88	0.00	-	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	12/17/98	9.22	0.00	-	<50.0	293	<750	<0.500	<0.500	<0.500	<1.00
	03/31/99	9.01	0.00	-	<50.0	360	<750	<0.500	<0.500	0.526	4.97
	06/30/99	9.55	0.00	-	<50.0	639	<750	<0.500	0.609	<0.500	1.32
	12/08/99	8.75	0.00	-	<50.0	<484	<1,450	<0.500	<0.500	<0.500	<1.00
	06/22/00	8.89	0.00	-	<50.0	<250	<750	<0.500	0.885	<0.500	1.86
	12/19/00	NM	-	-	-	-	-	-	-	-	-
06/15/01	7.23	0.00	-	<50.0	366	<666	<0.500	<0.500	<0.500	<1.00	
06/26/01	NM	-	-	-	-	-	-	-	-	-	
09/07/01	9.19	0.00	-	<50.0	385	<571	<0.500	<0.500	<0.500	<1.00	
10/10/01	NM	-	-	-	-	-	-	-	-	-	
12/28/01	8.89	0.00	-	<50.0	<250	<500	<0.500	0.902	<0.500	2.78	
SMW4 NE	03/06/95	8.14	0.00	-	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	06/06/95	8.90	0.00	-	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	09/07/96	8.69	0.00	-	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	12/08/95	7.56	0.00	-	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	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	-	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	09/27/96	8.62	0.00	-	<50	<250	<750	<0.5	<0.500	<0.500	<1.00
	03/28/97	8.20	0.00	-	<50	<250	<750	<0.5	<0.500	<0.500	<1.00
	06/30/97	8.06	0.00	-	<50	<250	<750	<0.5	<0.500	<0.500	<1.00
	09/08/97	9.00	0.00	-	<50	<250	<750	<0.5	<0.500	<0.500	<1.00
	12/19/97	9.41	0.00	-	<50	<250	<750	<0.5	<0.500	<0.500	<1.00
	03/16/98	9.09	0.00	-	<50	<250	<750	<0.5	<0.500	<0.500	<1.00
	06/26/98	8.78	0.00	-	<50	<250	<750	<0.5	<0.500	<0.500	<1.00
	09/23/98	9.96	0.00	-	<50	<250	<750	<0.5	<0.500	<0.500	<1.00
	12/17/98	10.22	0.00	-	<50	<250	<750	<0.5	<0.500	<0.500	<1.00
	03/31/99	8.70	0.00	-	<50	<250	<750	<0.5	<0.500	<0.500	<1.00
	06/30/99	8.20	0.00	-	<50	<250	<750	<0.5	<0.500	<0.500	<1.00
	12/08/99	Not Accessible	-	-	-	-	-	-	-	-	-
	06/20/00	Not Accessible	-	-	-	-	-	-	-	-	-
12/18/00	Not Accessible	-	-	-	-	-	-	-	-	-	
06/15/01	Not Accessible	-	-	-	-	-	-	-	-	-	
06/26/01	NM	-	-	-	-	-	-	-	-	-	
09/07/01	Not Accessible	-	-	-	-	-	-	-	-	-	
10/10/01	NM	-	-	-	-	-	-	-	-	-	
12/28/01	Not Accessible	-	-	-	-	-	-	-	-	-	
MW3 NE	10/10/01	10.11	0.00	-	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	12/28/01	9.61	0.00	-	<50	<250	<750	<0.5	4.62	<0.5	<1.0
MWJ2A 2070	03/06/95	11.29	0.00	9.09	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	06/06/95	-	-	-	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	09/07/96	11.27	-	9.43	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	12/08/95	10.61	-	10.08	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	04/01/96	10.90	-	9.80	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	06/25/96	10.98	-	9.72	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	09/27/96	11.37	-	9.81	<50	<250	<750	<0.5	37.4	<0.5	<1.0
	03/28/97	11.26	-	9.72	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	06/30/97	10.89	-	-	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	09/08/97	11.67	0.00	9.31	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	12/19/97	11.42	0.00	9.26	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	03/16/98	11.30	0.00	9.40	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	06/26/98	11.29	0.00	9.41	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	09/23/98	11.37	0.00	8.73	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	12/17/98	11.09	0.00	9.61	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	03/31/99	10.47	0.00	10.23	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	06/30/99	9.60	0.00	11.10	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	12/08/99	11.07	0.00	9.63	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	06/20/00	11.40	0.00	9.30	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	12/19/00	10.90	0.00	9.80	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
06/15/01	11.31	0.00	9.39	<50	<250	<646	<0.5	11.2	<0.5	<1.0	
06/26/01	11.85	0.00	8.85	<50	<250	<750	<0.5	<0.5	<0.5	<1.0	
09/07/01	10.81	0.00	9.89	<50	<250	<750	<0.5	19.9	<0.5	<1.0	
10/10/01	NM	-	-	-	-	-	-	-	-	-	
12/28/01	11.29	0.00	9.41	<50	<250	<750	<0.5	<0.5	<0.5	<1.0	

MTCA Method A Cleanup Level  
Continued on Page 2

1,000<sup>u</sup> 5 40 30 20

TABLE 1  
GROUNDWATER ANALYTICAL RESULTS  
Tosco Site No. 5353  
600 Westlake Avenue North  
Seattle, Washington  
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Well Name	Sample Date	DTW	LPH	GW Elev	TPH-G	TPH-D	TPH-O	B	T	E	X	
MW33 2075	03/08/95	11.16	0.00	9.73					<25			
	06/06/95	--	--	--								
	09/07/95	11.20	0.00	9.55								
	12/08/95	--	--	--								
	04/01/96	11.00	0.00	9.75			<750		33			
	06/25/96	11.05	0.00	9.70			<750		24.6			
	09/27/96	11.13	0.00	9.78			<750					
	03/28/97	11.19	0.00	9.70								
	06/30/97	10.66	0.00	10.23								
	09/08/97	10.49	0.00	10.41								
	12/15/97	--	--	--								
	03/16/98	--	--	--								
	06/26/98	11.18	0.00	9.57								
	09/23/98	11.00	0.00	8.95								
	12/17/98	11.03	0.00	9.72								
	03/31/99	10.38	0.00	10.37								
	06/30/99	9.52	0.00	11.23								
	12/08/99	10.37	0.00	9.76								
	06/20/00	11.33	0.00	9.42								
	12/18/00	Not Accessible										
06/15/01	12.72	0.00	10.16									
09/26/01	NM	--	--									
09/07/01	NM	--	--									
10/10/01	NM	--	--									
12/28/01	11.21	0.00	9.54									
MW34 2142	03/08/95	11.62	0.00	10.08								
	06/06/95	11.73	0.00	9.97			<750					
	09/07/95	11.57	0.00	9.85								
	12/08/95	10.92	0.00	10.50								
	04/01/96	11.21	0.00	10.21			<750					
	06/25/96	11.19	0.00	10.23			<750					
	09/27/96	11.58	0.00	10.23			<750					
	03/28/97	11.47	0.00	10.23								
	06/30/97	11.19	0.00	10.51			<750		15.7			
	09/08/97	11.74	0.00	9.96			<750					
	12/15/97	NM	--	--								
	03/16/98	NM	--	--								
	06/26/98	11.42	0.00	10.00			<750					
	09/23/98	12.23	0.00	9.19								
	12/17/98	11.35	0.00	10.07								
	03/31/99	10.85	0.00	10.57			<750					
	06/30/99	10.18	0.00	11.24								
	12/08/99	11.33	0.00	10.09			<1360					
	06/20/00	11.68	0.00	9.74			<250	<750				
	12/18/00	NM	--	--								
06/15/01	11.65	0.00	9.57			<883						
06/26/01	NM	--	--									
09/07/01	11.86	0.00	9.56									
10/10/01	NM	--	--									
12/28/01	11.46	0.00	9.96									
MW35 2010	03/08/95	10.67	0.00	9.60					<25			
	06/06/95	10.67	0.00	9.60					14		27	
	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			<750		1.11	26.7	17.6	
	09/27/96	10.84	0.00	9.63			<750		0.890	10.4	6.18	
	03/28/97	11.28	0.00	8.99			<750		2.36		10.7	
	03/28/97	11.26	0.00	8.99			<250	<750	2.62		8.04	
	06/30/97	10.19	0.00	10.38			<250	<750	<2.50		7.31	
	09/08/97	10.86	0.00	9.41			<250	<750	1.62			
	12/15/97	NM	--	--								
	03/16/98	10.64	0.00	9.48			<750		4.24	<2.50	<5.00	
	06/26/98	10.65	0.00	9.45			<750		<10.0		<20.0	
	09/23/98	11.38	0.00	8.72			<750		<2.50	<2.50	<5.00	
	12/17/98	10.49	0.00	9.61			<750		<2.50	10.8	9.99	
	03/31/99	Constructed by vehicle										
	06/30/99	Constructed by vehicle										
	12/08/99	Constructed by vehicle										
	06/20/00	Constructed by vehicle										
12/19/00	Constructed by vehicle											
06/15/01	NM	--	--									
06/26/01	10.60	0.00	8.50	504	464	<750		27.5	5.52			
09/04/01	10.54	0.00	9.56			<564	2.36	<500	<500	<1.00		
10/10/01	NM	--	--									
12/28/01	10.54	0.00	9.56			<500		0.898	14.1	13.2		
MCA Method A Cleanup Level:					1,000*		5	40	30	20		

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TABLE 1  
GROUNDWATER ANALYTICAL RESULTS

Tesco Site No. 5353  
600 Westlake Avenue North  
Seattle, Washington  
Page 3 of 6

Well Name	Sample Date	D*W	PH	GW Elev	TPH-G	TPH-D	TPH-O	B	-	E	X
MW36 17 SC	03/08/95	9.07	0.90	8.97	<50			2.6	<0.6	<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	8.00	0.00	8.80	<50			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	8.21	0.00	8.85	<50.0	<250	<750	0.810	<0.500	<0.500	<1.00
	06/30/97 <sup>HP</sup>	6.88	0.00	11.16	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	09/08/97 <sup>HP</sup>	9.21	0.00	8.83	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	12/19/97 <sup>HP</sup>	13.09	0.00	7.71	<50.0	<250	<750	0.606	<0.500	<0.500	<1.00
	03/16/98 <sup>HP</sup>	9.29	0.00	8.51	56.6	287	<750	<0.500	<0.500	<0.500	<1.00
	06/26/98 <sup>HP</sup>	8.47	0.00	9.33	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	09/23/98 <sup>HP</sup>	9.89	0.00	7.91	<50.0	<250	<750	0.737	<0.500	<0.500	<1.00
	12/17/98 <sup>HP</sup>	10.00	0.00	7.60	<50.0	288	<750	0.533	<0.500	<0.500	<1.00
	03/31/99 <sup>HP</sup>	8.66	0.00	8.84	<50.0	321	<750	0.759	<0.500	<0.500	<1.00
	06/30/99 <sup>HP</sup>	8.44	0.00	9.36	<50.0	<250	<750	1.29	<0.500	<0.500	<1.00
	12/08/99 <sup>HP</sup>	10.05	0.00	7.75	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00
	06/20/00 <sup>HP</sup>	8.47	0.00	9.33	172	<250	<750	<0.500	0.583	1.76	11.1
	12/19/00 <sup>HP</sup>	8.50	0.00	8.30	106	<250	<750	0.529	1.51	1.08	7.14
06/15/01 <sup>HP</sup>	8.00	0.00	9.90	<50.0	298	<750	0.691	0.648	0.530	1.53	
06/26/01	NM	-	-	-	-	-	-	-	-	-	-
09/07/01 <sup>HP</sup>	8.70	0.00	9.10	<50.0	<250	<500	0.897	<0.500	<0.500	<1.00	
10/10/01	NM	-	-	-	-	-	-	-	-	-	-
12/28/01	9.57	0.00	8.23	<50.0	387	<500	0.773	0.748	<0.500	1.78	
MW37 21 01	03/08/95	11.94	0.00	9.24							
	06/06/95	11.76		9.43							
	06/08/95	11.76		9.43	90						
	09/07/95	11.17	0.00	9.84							
	12/08/95	10.22	0.00	10.79							
	04/01/96	10.79		10.22							
	06/25/96	10.82		10.19							
	06/27/96	11.47		9.76							
	03/28/97 <sup>HP</sup>	11.14		10.40							
	03/28/97	11.14		10.40							
	06/30/97	10.83		10.23							
	09/08/97	11.41		9.77							
	12/19/97	11.28		9.75							
	03/16/98	11.11		9.91							
	06/26/98	11.32		9.70							
	09/23/98	12.01		9.03							
	12/17/98	11.00		10.01							
	03/31/99	-		-							
	06/30/99	Dry		-							
	12/08/99	11.11		9.80							
06/20/00	11.50		9.51								
12/19/00	11.50		9.84								
06/15/01 <sup>HP</sup>	11.35		9.88								
06/26/01	NM		-								
09/07/01 <sup>HP</sup>	11.43	0.00	9.58								
10/10/01	NM		-								
12/28/01 <sup>HP</sup>	11.00		10.18								
MW38 16 52	03/08/95	-	-	-	-	-	-	-	-	-	-
	06/06/95	-	-	-	-	-	-	-	-	-	-
	09/07/95	-	-	-	-	-	-	-	-	-	-
	12/08/95	-	-	-	-	-	-	-	-	-	-
	04/01/96	-	-	-	-	-	-	-	-	-	-
	06/25/96	-	-	-	-	-	-	-	-	-	-
	06/27/96	-	-	-	-	-	-	-	-	-	-
	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	NM	-	-	-	-	-	-	-	-	-
	03/16/98	NM	-	-	-	-	-	-	-	-	-
	06/26/98	NM	-	-	-	-	-	-	-	-	-
	09/23/98	NM	-	-	-	-	-	-	-	-	-
	12/17/98	NM	-	-	-	-	-	-	-	-	-
	03/31/99	NM	-	-	-	-	-	-	-	-	-
	06/30/99	NM	-	-	-	-	-	-	-	-	-
	12/08/99	NM	-	-	-	-	-	-	-	-	-
	06/20/00	NM	-	-	-	-	-	-	-	-	-
	12/19/00	NM	-	-	-	-	-	-	-	-	-
06/15/01	NM	-	-	-	-	-	-	-	-	-	
06/26/01	NM	-	-	-	-	-	-	-	-	-	
09/07/01	NM	-	-	-	-	-	-	-	-	-	
10/10/01	NM	-	-	-	-	-	-	-	-	-	
12/28/01	8.66	0.00	7.56	<50.0	403	<500	0.638	1.33	0.654	2.59	

MTCR Method A Cleanup Level  
Continued on page 4

1,000<sup>g</sup> 5 40 30 20

TABLE 1  
GROUNDWATER ANALYTICAL RESULTS  
Tesco Site No. 5353  
600 Westlake Avenue North  
Seattle, Washington  
Page 4 of 8

Well Name	Sample Date	DTW	LPH	GW Elev	TPH-G	TPH-D	TPH-O	B	T	E	X
MW40 20 8a	03/08/95	10 98	0 00	10 14					<0.5	11	<1.0
	06/06/95	11 18	0 00	9 34					4.3	4.1	21
	09/07/95	11 08	0 00	9 81					0.91	0.57	<1.0
	12/08/95	10 30	0 00	10 59				2.7	J	<0.5	<1.0
	04/01/96	10 56	0 00	10 33				1.2	<0.5	0.55	<1.0
	06/25/96	10 69	0 00	10 29				<0.500	9.82	<0.500	<1.00
	09/27/96	10 85	0 00	10 17				0.604	0.525	0.525	<1.0
	03/28/97	10 92	0 00	10 23							
	06/30/97										
	09/08/97										
	12/19/97	11 11	0 00	9 79				<0.500	0.504	0.663	2.44
	03/16/98	NM									
	06/26/98	NM									
	09/23/98	NM									
	12/17/98	10 8b	0 00	10 05				<0.500	<0.500	<0.500	<1.00
	03/31/99	NM									
	06/30/99	NM									
	12/08/99	NM									
	06/20/00	NM									
	12/09/00	NM									
	12/19/00	NM									
	06/15/01	NM									
	06/26/01	NM									
09/07/01	NM										
10/10/01	NM										
12/28/01	10 75	0 00	10 14				2.12	2.19	1.38	3.88	
MW41 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 16	<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	<0.6	<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 52							
	06/30/97										
	09/08/97										
	12/19/97	NM									
	03/16/98	NM									
	06/26/98	NM									
	09/23/98	NM									
	12/17/98	NM									
	03/31/99	NM									
	06/30/99	NM									
	12/08/99	NM									
	06/20/00	NM									
	12/19/00	NM									
	06/15/01	NM									
	06/26/01	NM									
	09/07/01	NM									
10/10/01	NM										
12/28/01	NM										
MW42 20 34	03/08/95	9 45	0 00	10 91					<2.5	<2.5	<5.0
	06/06/95	9 37	0 00	10 89					<0.56	<0.5	<1.0
	09/07/95	9 50	0 00	10 84					4.1		
	12/08/95	8 95	0 00	11 39					<2.0	<2.0	<4.0
	04/01/96	9 03	0 00	11 31	180	650	<750		0.52	<0.5	<1.0
	06/25/96	9 07	0 00	11 27	150	720	<750		<0.500	<0.500	<1.00
	09/27/96	9 12	0 00	11 24	<250	534	<750		<2.50	<2.50	<5.00
	03/28/97	9 06	0 00	11 27							
	06/30/97	8 92	0 00	11 44							
	09/08/97	8 57	0 00	10 76							
	12/19/97	NM									
	03/16/98	9 53	0 00	10 61							
	06/26/98	8 51	0 00	10 63							
	09/23/98	9 96	0 00	10 59							
	12/17/98	9 10	0 00	11 24							
	03/31/99	9 00	0 00	11 34							
	06/30/99	8 60	0 00	11 74							
	12/08/99	8 00	0 00	12 34							
	06/20/00	NM									
	12/19/00	NM									
	06/15/01	9 41	0 00	10 95							
	06/26/01	NM									
	09/07/01	8 66	0 00	10 68							
10/10/01	NM										
12/28/01	10 28	0 00	10 08								

MTCAL Method A Cleanup Level  
Continued on page 5

\*.000\* 5 40 30 20

TABLE 1  
GROUNDWATER ANALYTICAL RESULTS

Tosco Site No. 5353  
630 Westlake Avenue North  
Seattle, Washington  
Page 5 of 6

Well Name	Sample Date	D <sub>1</sub> W	LP4	GW Ele.	TPH-G	TPH-D	TPH-O	B	T	E	X
MW43 2104	030895	11.35	0.00	9.54	<50				<0.5	<0.5	<1.0
	060695	11.45	0.00	9.94	<50				<0.5	<0.5	<1.0
	090795	11.14	0.00	9.90	<50	<250	850		<0.5	<0.5	<1.0
	120895	10.85	0.00	10.19	<50				<0.6	<0.5	<1.0
	040196	10.88	0.00	10.06	<50	300	<750	4.5	<0.5	<0.5	<1.0
	062596	11.06	0.00	9.99	<50	370	<750	2.57	<0.500	<0.500	<1.00
	092796	11.35	0.00	9.96	<50	339	<750	4.40	<0.5	<0.500	<1.00
	032897	11.13	0.00	9.99	<50	<250	<750		0.884	<0.500	2.47
	063097 <sup>ND</sup>	7.08	0.00	14.21	<50	<250	<750		<0.500	<0.500	<1.00
	090897 <sup>ND</sup>	11.46	0.00	9.93	63	<250	<750		<0.500	2.10	3.08
	121997	NM	-	-	-	-	-	-	-	-	-
	031698 <sup>ND</sup>	11.09	0.00	9.95	76.3	408	<750		<0.500	<0.500	<1.00
	062698 <sup>ND</sup>	11.26	0	9.78	<50	346	<750		<0.500	<0.500	<1.00
	092398 <sup>ND</sup>	11.75	0.00	9.29	<50	267	<750		<0.500	<0.500	<1.00
	121798 <sup>ND</sup>	11.07	0.00	9.97	<50	<250	<750		<0.500	<0.500	<1.00
	030399 <sup>ND</sup>	10.87	0.00	10.07	<50	267	<750		<0.500	0.782	2.47
	063099 <sup>ND</sup>	9.97	0.00	11.07	146	253	<750		7.47	2.95	17.5
	122899	11.09	0.00	9.98	<50	<250	<750		<0.500	<0.500	<1.00
	062000 <sup>ND</sup>	11.40	0.00	9.64	<50	<250	<750	3.78	<0.500	<0.500	<1.00
	121900 <sup>ND</sup>	11.40	0.00	9.54	55.8	253	<749	2.97	0.948	0.730	4.76
061501 <sup>ND</sup>	11.30	0.00	9.72	<50	405	<750	0.670	<0.500	<0.500	1.22	
062601	NM	-	-	-	-	-	-	-	-	-	
090701 <sup>ND</sup>	11.46	0.00	9.88	<50	<293	<587	<0.500	<0.500	<0.500	<1.00	
101001	NM	-	-	-	-	-	-	-	-	-	
122801	11.17	0.00	9.87	52.0	487	<500		1.18	0.558	3.34	
MW44 1873	030895	9.44	0.00	10.46	<50			<0.5	<0.5	<0.5	<1.0
	060695	8.28	0.00	10.62	<50	<250	820	<0.5	<0.5	<0.5	1.6
	090795	7.64	0.00	10.79	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	120895	8.09	0.00	10.64	<50			<0.5	<0.5	<0.5	<1.0
	040196	7.98	0.00	10.75	<50	<250	<750	<0.5	<0.5	<0.5	<1.0
	062596	7.90	0.00	10.93	<50	<250	<750	<0.500	<0.500	<0.500	<1.00
	092796	8.28	0.00	10.59	<50	<250	<750	<0.500	<0.500	<0.500	<1.00
	032897	8.77	0.00	11.83	<50	<250	<750	<0.500	<0.500	<0.500	<1.00
	063097 <sup>ND</sup>	7.84	0.00	11.06	<50	<250	<750	<0.500	<0.500	<0.500	<1.00
	090897 <sup>ND</sup>	9.65	0.00	10.25	<50	<250	<750	<0.500	<0.500	<0.500	<1.00
	121997 <sup>ND</sup>	9.51	0.00	10.22	<50	<250	<750	<0.500	<0.500	<0.500	<1.00
	031698 <sup>ND</sup>	8.43	0.00	10.30	60.0	310	<760	<0.500	<0.500	<0.500	<1.00
	062698 <sup>ND</sup>	9.37	0.00	10.36	<50	<250	<750	<0.500	<0.500	<0.500	<1.00
	092398 <sup>ND</sup>	9.30	0.00	9.43	<50	343	<750	<0.500	<0.500	<0.500	<1.00
	121798 <sup>ND</sup>	8.10	0.00	10.63	<50	271	<750	<0.500	<0.500	<0.500	<1.00
	033199 <sup>ND</sup>	8.18	0.00	10.55	<50	<250	<750	<0.500	<0.500	<0.500	<1.00
	063099 <sup>ND</sup>	8.03	0.00	10.70	<50	393	<750	<0.500	0.619	<0.500	1.21
	120899 <sup>ND</sup>	8.52	0.00	10.21	<50	281	<750	<0.500	<0.500	<0.500	<1.00
	062000 <sup>ND</sup>	9.53	0.00	9.20	<50	<250	<750	<0.500	<0.500	<0.500	<1.00
	121900 <sup>ND</sup>	9.20	0.00	9.53	301	330	<750	<0.500	1.64	2.78	
061501 <sup>ND</sup>	8.44	0.00	10.29	<50	466	<841	<0.500	<0.500	<0.500	<1.00	
062601	NM	-	-	-	-	-	-	-	-	-	
090701 <sup>ND</sup>	9.48	0.00	9.25					6.97			
101001	NM	-	-	-	-	-	-	-	-	-	
122801	9.31	0.00	9.42	90.6	823	<500		1.40	0.644	4.04	
MW45 NE	090701 <sup>ND</sup>	9.80	0.00	-	<50	375	<606	<0.500	<0.500	<0.500	<1.00
	101001	NM	-	-	-	-	-	-	-	-	
122801	9.03	0.00	-								
MW46 1691	030895	8.00	0.00	8.91	<50			<0.5	<0.5	<0.5	<1.0
	060695	7.30	0.00	10.01	<50	<250		<0.6	<0.6	<0.5	<1.0
	090796	7.60	0.00	8.93	<50			<0.5	<0.5	<0.5	<1.0
	120896	8.32	0.00	8.59	<50			<0.5	<0.5	<0.5	<1.0
	040196	7.04	0.00	9.87	<50	<400		<0.5	<0.5	<0.5	<1.0
	062596	7.85	0.00	9.06	<50			<0.500	<0.500	<0.500	<1.00
	092796	7.57	0.00	9.74	<50	267	<750	0.518	<0.500	<0.500	<1.00
	032897	7.25	0.00	10.06	<50	<250	<750	<0.500	1.25	<0.500	2.06
	063097	7.12	0.00	10.19	-	-	-	-	-	-	-
	090897	8.82	0.00	8.49	-	-	-	-	-	-	-
	121997 <sup>ND</sup>	9.40	0.00	7.51	<50	<250	<750	<0.500	<0.500	<0.500	<1.00
	031698	NM	-	-	-	-	-	-	-	-	-
	062698	NM	-	-	-	-	-	-	-	-	-
	092398	NM	-	-	-	-	-	-	-	-	-
	121798 <sup>ND</sup>	9.20	0.00	7.71	<50	354	<750	<0.500	<0.500	<0.500	<1.00
	033196	NM	-	-	-	-	-	-	-	-	-
	063099	NM	-	-	-	-	-	-	-	-	-
	120899	NM	-	-	-	-	-	-	-	-	-
	062000	NM	-	-	-	-	-	-	-	-	-
	121900	12.70	0.00	4.21	226	277	<750	<0.500	2.18	2.53	18.0
061501 <sup>ND</sup>	7.19	0.00	9.72	<50	265	<750	<0.500	<0.500	<0.500	1.39	
062601	NM	-	-	-	-	-	-	-	-	-	
090701	NM	-	-	-	-	-	-	-	-	-	
101001	NM	-	-	-	-	-	-	-	-	-	
122801	Covered by Asphalt	-	-	-	-	-	-	-	-	-	

TABLE 1  
GROUNDWATER ANALYTICAL RESULTS  
Tosco Site No. 5353  
600 Westlake Avenue North  
Seattle, Washington  
Page 6 of 6

Well Name	Sample Date	DTW	LPH	GW Elev	TPH-G	TPH-D	TPH-O	B	T	E	X
MW47	03/08/95	10.89	0.00	9.16	<50				<0.5	<0.5	<1.0
13-83	06/06/95	10.91	0.00	9.13					0.59	<0.5	2.3
	06/07/95	10.76	0.00	9.07	<50	260	<750	1.7	<0.5	<0.5	<1.0
	12/09/95	10.40	0.00	9.43				<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		<0.500	<0.500	<1.00
	08/27/96	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		<0.500	<0.500	1.57
	03/28/97	10.92	0.00	9.12	177	<250	<750		<0.500	<0.500	<1.00
	06/30/97	-	-	-	-	-	-	-	-	-	-
	09/08/97	-	-	-	-	-	-	-	-	-	-
	12/19/97	-	-	-	-	-	-	-	-	-	-
	03/16/98	-	-	-	-	-	-	-	-	-	-
	06/20/98 <sup>NP</sup>	10.76	0.00	9.05	<50.0	356	<750	3.72	<0.500	<0.500	<1.00
09/23/98	-	-	-	-	-	-	-	-	-	-	
12/17/98 <sup>NP</sup>	10.61	0.00	9.22	<50.0	<250	<750	3.34	<0.500	<0.500	1.12	
03/31/99	9.65	0.00	10.16	-	-	-	-	-	-	-	
06/30/99	-	0.00	-	-	-	-	-	-	-	-	
12/08/99	-	-	-	-	-	-	-	-	-	-	
06/20/00 <sup>NP</sup>	10.94	0.00	8.86	<50.0	<250	<750	<1.30	<0.500	<0.500	<1.00	
12/15/00 <sup>NP</sup>	11.20	0.00	8.63			<750	<0.500	6.10	10.6		
06/15/01	10.98	0.00	8.95	<50.0	591	<962	0.709	0.504	<0.500	1.18	
06/26/01	NM	-	-	-	-	-	-	-	-	-	
06/27/01 <sup>NP</sup>	11.14	0.00	9.69	<50.0	356	<500	<0.600	<0.500	<0.500	<1.00	
10/10/01	NM	-	-	-	-	-	-	-	-	-	
12/29/01	10.90	0.00	8.93	181	542	<500	7.33	1.49	4.79		
MW50	10/10/01	11.11	0.00	-			<606				
NE	12/28/01	10.45	0.00	-			<500				
MW51	10/10/01	11.68	0.00	-				10.4	7.75	18.6	
NE	12/28/01	11.20	0.00	-							
MW52	10/10/01	10.79	0.00	-			<582		<10.0		
NE	12/28/01	10.22	0.00	-				5.87			
MTCO Method A Cleanup Level					1,000*	5	40	30	20		

MTCO Method A Cleanup Level

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 0.65

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

TPH-D and TPH-O = Total petroleum hydrocarbons as diesel and as oil (respectively) by Ecology Method NWTPH-Dx

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

BTEX = Aromatic compounds by EPA Method 8021B

< = Less than the stated laboratory reporting limit

NE = Not established NM = Not measured -- = Not analyzed \*\* = sampled

<sup>NP</sup> = Not purged

\* Total Petroleum Hydrocarbons

Shaded values equal or exceed MTCO Method A Cleanup Levels

Data collected before 12/19/97 are taken from prior consultant's

\*MW46 identified as MW9 on chain of custody and official laboratory report

\*\*MW3 identified as SMM2 on chain of custody and official laboratory report





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11 January 2002

John Meyer  
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RE: TOSCO #5353

Enclosed are the results of analyses for samples received by the laboratory on 12/28/01 14 15. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Amar Gill  
Project Manager



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ERI 815 Industry Dr Tukwila WA/USA, 98188	Project: TOSCO #5353 Project Number: 1020 Project Manager: John Meyer	Reported 01/11/02 10 32
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**ANALYTICAL REPORT FOR SAMPLES**

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW3	B1L0650-01	Water	12/28/01 12 00	12/28/01 14 15
SMW3	B1L0650-02	Water	12/28/01 12 00	12/28/01 14 15
MW32A	B1L0650-03	Water	12/28/01 12 00	12/28/01 14 15
MW33	B1L0650-04	Water	12/28/01 12 00	12/28/01 14 15
MW34	B1L0650-05	Water	12/28/01 12 00	12/28/01 14 15
MW35	B1L0650-06	Water	12/28/01 12 00	12/28/01 14 15
MW36	B1L0650-07	Water	12/28/01 12 00	12/28/01 14 15
MW38	B1L0650-08	Water	12/28/01 12 00	12/28/01 14 15
MW40	B1L0650-09	Water	12/28/01 05.50	12/28/01 14 15
MW43	B1L0650-10	Water	12/28/01 12 00	12/28/01 14 15
MW44	B1L0650-11	Water	12/28/01 12:00	12/28/01 14 15
MW45	B1L0650-12	Water	12/28/01 12 00	12/28/01 14 15
MW47	B1L0650-13	Water	12/28/01 12 00	12/28/01 14 15
MW50	B1L0650-14	Water	12/28/01 12 00	12/28/01 14 15
MW51	B1L0650-15	Water	12/28/01 12 00	12/28/01 14 15
MW52	B1L0650-16	Water	12/28/01 12 45	12/28/01 14 15

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ERI 815 Industry Dr Tukwila WA/USA, 98188	Project: TOSCO #5353 Project Number: 1020 Project Manager: John Meyer	Reported 01/11/02 10 32
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**Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B  
 North Creek Analytical - Bothell**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								

**MW3 (B1L0650-01) Water Sampled: 12/28/01 12:00 Received: 12/28/01 14:15**

Gasoline Range Hydrocarbons	3340	250		ug/l	5	2A07009	01/07/02	01/07/02	NWTPH-Gx/8021B	
Benzene	92.6	2.50		"	"	"	"	"	"	
Toluene	4.62	2.50		"	"	"	"	"	"	1-06
Ethylbenzene	146	2.50		"	"	"	"	"	"	
Xylenes (total)	51.2	5.00		"	"	"	"	"	"	
Surrogate 4-BFB (FID)	119 %	62-139		"	"	"	"	"	"	
Surrogate 4-BFB (PID)	118 %	62-125		"	"	"	"	"	"	

**SMW3 (B1L0650-02) Water Sampled 12/28/01 12:00 Received: 12/28/01 14:15**

Gasoline Range Hydrocarbons	ND	50.0		ug/l	1	2A07009	01/07/02	01/07/02	NWTPH-Gx/8021B	
Benzene	ND	0.500		"	"	"	"	"	"	
Toluene	0.902	0.500		"	"	"	"	"	"	
Ethylbenzene	ND	0.500		"	"	"	"	"	"	
Xylenes (total)	2.78	1.00		"	"	"	"	"	"	
Surrogate 4-BFB (FID)	88.3 %	62-139		"	"	"	"	"	"	
Surrogate 4-BFB (PID)	95.2 %	62-125		"	"	"	"	"	"	

**MW32A (B1L0650-03) Water Sampled: 12/28/01 12:00 Received: 12/28/01 14:15**

Gasoline Range Hydrocarbons	12200	2500		ug/l	50	2A07009	01/07/02	01/07/02	NWTPH-Gx/8021B	
Benzene	3570	25.0		"	"	"	"	"	"	
Toluene	180	25.0		"	"	"	"	"	"	
Ethylbenzene	537	25.0		"	"	"	"	"	"	
Xylenes (total)	393	50.0		"	"	"	"	"	"	
Surrogate 4-BFB (FID)	93.8 %	62-139		"	"	"	"	"	"	
Surrogate 4-BFB (PID)	96.7 %	62-125		"	"	"	"	"	"	

North Creek Analytical - Bothell

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ERI 815 Industry Dr Tukwila WA/USA, 98188	Project: TOSCO #5353 Project Number: 1020 Project Manager: John Meyer	Reported: 01/11/02 10:32
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**Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>MW33 (B1L0650-04) Water</b> Sampled: 12/28/01 12:00 Received: 12/28/01 14:15										
Gasoline Range Hydrocarbons	141000	50000		ug/l	1000	2A08011	01/08/02	01/09/02	NWTPH-Gx/8021B	
Benzene	5360	500		"	"	"	"	"	"	
Toluene	32500	500		"	"	"	"	"	"	
Ethylbenzene	3410	500		"	"	"	"	"	"	
Xylenes (total)	22700	1000		"	"	"	"	"	"	
Surrogate 4-BFB (FID)	89.8 %	62-139				"	"	"	"	
Surrogate 4-BFB (PID)	91.5 %	62-125				"	"	"	"	
<b>MW34 (B1L0650-05) Water</b> Sampled 12/28/01 12:00 Received 12/28/01 14:15										
Gasoline Range Hydrocarbons	19000	5000		ug/l	100	2A08011	01/08/02	01/09/02	NWTPH-Gx/8021B	
Benzene	5320	50.0		"	"	"	"	"	"	
Toluene	1200	50.0		"	"	"	"	"	"	
Ethylbenzene	406	50.0		"	"	"	"	"	"	
Xylenes (total)	1010	100		"	"	"	"	"	"	
Surrogate 4-BFB (FID)	93.1 %	62-139				"	"	"	"	
Surrogate 4-BFB (PID)	91.7 %	62-125				"	"	"	"	
<b>MW35 (B1L0650-06) Water</b> Sampled 12/28/01 12:00 Received: 12/28/01 14:15										
Gasoline Range Hydrocarbons	691	50.0		ug/l	1	2A08011	01/08/02	01/09/02	NWTPH-Gx/8021B	
Benzene	28.7	0.500		"	"	"	"	"	"	
Toluene	0.898	0.500		"	"	"	"	"	"	
Ethylbenzene	14.1	0.500		"	"	"	"	"	"	
Xylenes (total)	13.2	1.00		"	"	"	"	"	"	
Surrogate 4-BFB (FID)	142 %	62-139				"	"	"	"	S-04
Surrogate 4-BFB (PID)	110 %	62-125				"	"	"	"	

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ERI 815 Industry Dr Tukwila WA/USA, 98188	Project: TOSCO #5353 Project Number: 1020 Project Manager: John Meyer	Reported: 01/11/02 10 32
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**Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B  
 North Creek Analytical - Bothell**

Analyte	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit							
<b>MW36 (B1L0650-07) Water</b> Sampled 12/28/01 12:00 Received: 12/28/01 14:15									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	2A08011	01/08/02	01/09/02	NWTPH-Gx/8021B	
Benzene	0.773	0.500	"	"	"	"	"	"	
Toluene	0.748	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	1.78	1.00	"	"	"	"	"	"	
Surrogate 4-BFB (FID)	88.8 %	62-139			"	"	"	"	
Surrogate 4-BFB (PID)	92.9 %	62-125			"	"	"	"	
<b>MW38 (B1L0650-08) Water</b> Sampled 12/28/01 12:00 Received: 12/28/01 14:15									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	2A08011	01/08/02	01/09/02	NWTPH-Gx/8021B	
Benzene	0.636	0.500	"	"	"	"	"	"	
Toluene	1.33	0.500	"	"	"	"	"	"	
Ethylbenzene	0.554	0.500	"	"	"	"	"	"	
Xylenes (total)	2.59	1.00	"	"	"	"	"	"	
Surrogate 4-BFB (FID)	90.4 %	62-139			"	"	"	"	
Surrogate 4-BFB (PID)	93.8 %	62-125			"	"	"	"	
<b>MW40 (B1L0650-09) Water</b> Sampled 12/28/01 05:50 Received: 12/28/01 14:15									
Gasoline Range Hydrocarbons	4.49	50.0	ug/l	1	2A08011	01/08/02	01/09/02	NWTPH-Gx/8021B	
Benzene	2.12	0.500	"	"	"	"	"	"	
Toluene	2.19	0.500	"	"	"	"	"	"	
Ethylbenzene	1.38	0.500	"	"	"	"	"	"	I-06
Xylenes (total)	3.88	1.00	"	"	"	"	"	"	I-06
Surrogate 4-BFB (FID)	145 %	62-139			"	"	"	"	S-04
Surrogate 4-BFB (PID)	116 %	62-125			"	"	"	"	

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**Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B  
 North Creek Analytical - Bothell**

Analyte	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
	Result	Limit							
<b>MW43 (B1L0650-10) Water Sampled 12/28/01 12:00 Received: 12/28/01 14:15</b>									
Gasoline Range Hydrocarbons	52.0	50.0	ug/l	1	2A08011	01/08/02	01/09/02	NWTPH-Gx/8021B	
Benzene	5.61	0.500	"	"	"	"	"	"	
Toluene	1.18	0.500	"	"	"	"	"	"	
Ethylbenzene	0.558	0.500	"	"	"	"	"	"	
Xylenes (total)	3.34	1.00	"	"	"	"	"	"	
Surrogate 4-BFB (FID)	89.4 %	62-139			"	"	"	"	
Surrogate 4-BFB (PID)	92.9 %	62-125			"	"	"	"	
<b>MW44 (B1L0650-11) Water Sampled: 12/28/01 12:00 Received 12/28/01 14:15</b>									
Gasoline Range Hydrocarbons	90.6	50.0	ug/l	1	2A08011	01/08/02	01/09/02	NWTPH-Gx/8021B	
Benzene	10.9	0.500	"	"	"	"	"	"	
Toluene	1.40	0.500	"	"	"	"	"	"	
Ethylbenzene	0.644	0.500	"	"	"	"	"	"	
Xylenes (total)	4.04	1.00	"	"	"	"	"	"	
Surrogate 4-BFB (FID)	87.1 %	62-139			"	"	"	"	
Surrogate 4-BFB (PID)	91.9 %	62-125			"	"	"	"	
<b>MW45 (B1L0650-12) Water Sampled 12/28/01 12:00 Received: 12/28/01 14:15</b>									
Gasoline Range Hydrocarbons	17300	2500	ug/l	50	2A08011	01/08/02	01/09/02	NWTPH-Gx/8021B	
Benzene	2130	25.0	"	"	"	"	"	"	
Toluene	73.4	25.0	"	"	"	"	"	"	
Ethylbenzene	1330	25.0	"	"	"	"	"	"	
Xylenes (total)	2970	50.0	"	"	"	"	"	"	
Surrogate 4-BFB (FID)	92.3 %	62-139			"	"	"	"	
Surrogate 4-BFB (PID)	96.2 %	62-125			"	"	"	"	

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**Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B  
 North Creek Analytical - Bothell**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
<b>MW47 (B1L0650-13) Water</b> Sampled: 12/28/01 12:00 Received: 12/28/01 14:15										
Gasoline Range Hydrocarbons	181	50.0		ug/l	1	2A08011	01/08/02	01/09/02	NWTPH-Gx/8021B	
Benzene	7.64	0.500		"	"	"	"	"	"	
Toluene	1.49	0.500		"	"	"	"	"	"	
Ethylbenzene	4.79	0.500		"	"	"	"	"	"	
Xylenes (total)	37.8	1.00		"	"	"	"	"	"	
Surrogate 4-BFB (FID)	89.2 %	62-139				"	"	"	"	
Surrogate 4-BFB (PID)	94.4 %	62-125				"	"	"	"	
<b>MW50 (B1L0650-14) Water</b> Sampled: 12/28/01 12:00 Received: 12/28/01 14:15										
Gasoline Range Hydrocarbons	23200	5000		ug/l	100	2A08011	01/08/02	01/09/02	NWTPH-Gx/8021B	
Benzene	1630	50.0		"	"	"	"	"	"	
Toluene	3690	50.0		"	"	"	"	"	"	
Ethylbenzene	991	50.0		"	"	"	"	"	"	
Xylenes (total)	4480	100		"	"	"	"	"	"	
Surrogate 4-BFB (FID)	87.1 %	62-139				"	"	"	"	
Surrogate 4-BFB (PID)	95.0 %	62-125				"	"	"	"	
<b>MW51 (B1L0650-15) Water</b> Sampled: 12/28/01 12:00 Received: 12/28/01 14:15										
Gasoline Range Hydrocarbons	631	100		ug/l	2	2A08011	01/08/02	01/09/02	NWTPH-Gx/8021B	
Benzene	37.0	1.00		"	"	"	"	"	"	
Toluene	75.6	1.00		"	"	"	"	"	"	
Ethylbenzene	30.4	1.00		"	"	"	"	"	"	
Xylenes (total)	81.2	2.00		"	"	"	"	"	"	
Surrogate 4-BFB (FID)	87.9 %	62-139				"	"	"	"	
Surrogate 4-BFB (PID)	112 %	62-125				"	"	"	"	

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**Volatile Petroleum Products and BTEX by NWTPH-Gx and EPA 8021B  
 North Creek Analytical - Bothell**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
MW52 (B1L0650-16) Water Sampled 12/28/01 12:45 Received 12/28/01 14:15										
Gasoline Range Hydrocarbons	7900	500		ug/l	10	2A08011	01/08/02	01/09/02	NWTPH-Gx/8021B	
Benzene	634	5.00		"	"	"	"	"	"	
Toluene	5.87	5.00		"	"	"	"	"	"	
Ethylbenzene	509	5.00		"	"	"	"	"	"	
Xylenes (total)	479	10.0		"	"	"	"	"	"	
Surrogate 4-BFB (FID)	120 %	62-139								
Surrogate 4-BFB (PID)	112 %	62-125								

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**Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)  
 North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW3 (B1L0650-01) Water Sampled 12/28/01 12:00 Received 12/28/01 14:15</b>									
Diesel Range Hydrocarbons	1.81	0.250	mg/l	1	2A04004	01/04/02	01/05/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate 2-FBP	97.1 %	50-121			"	"	"	"	
Surrogate Octacosane	92.4 %	56-123			"	"	"	"	
<b>SMW3 (B1L0650-02) Water Sampled: 12/28/01 12:00 Received: 12/28/01 14:15</b>									
Diesel Range Hydrocarbons	1.16	0.250	mg/l	1	2A04004	01/04/02	01/05/02	NWTPH-Dx	D-03
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate 2-FBP	87.5 %	50-121			"	"	"	"	
Surrogate Octacosane	94.3 %	56-123			"	"	"	"	
<b>MW32A (B1L0650-03) Water Sampled 12/28/01 12:00 Received 12/28/01 14:15</b>									
Diesel Range Hydrocarbons	4.26	0.250	mg/l	1	2A04004	01/04/02	01/05/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	0.711	0.500	"	"	"	"	"	"	
Surrogate 2-FBP	116 %	50-121			"	"	"	"	
Surrogate Octacosane	90.2 %	56-123			"	"	"	"	
<b>MW33 (B1L0650-04) Water Sampled: 12/28/01 12:00 Received 12/28/01 14:15</b>									
Diesel Range Hydrocarbons	25.2	2.50	mg/l	10	2A04004	01/04/02	01/06/02	NWTPH-Dx	D-08
Lube Oil Range Hydrocarbons	2.68	0.500	"	1	"	"	01/05/02	"	
Surrogate 2-FBP	89.5 %	50-121			"	"	01/06/02	"	
Surrogate Octacosane	90.5 %	56-123			"	"	01/05/02	"	
<b>MW34 (B1L0650-05) Water Sampled 12/28/01 12:00 Received: 12/28/01 14:15</b>									
Diesel Range Hydrocarbons	8.40	0.250	mg/l	1	2A04004	01/04/02	01/05/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	0.752	0.500	"	"	"	"	"	"	
Surrogate 2-FBP	100 %	50-121			"	"	"	"	
Surrogate Octacosane	96.8 %	56-123			"	"	"	"	

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ERI 815 Industry Dr Tukwila WA/USA, 98188	Project: TOSCO #5353 Project Number: 1020 Project Manager: John Meyer	Reported 01/11/02 10 32
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**Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW35 (B1L0650-06) Water</b> Sampled: 12/28/01 12:00 Received: 12/28/01 14:15									
Diesel Range Hydrocarbons	1.16	0.250	mg/l	1	2A04004	01/04/02	01/05/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate 2-FBP	88.6 %	50-121			"	"	"	"	
Surrogate Octacosane	88.3 %	56-123			"	"	"	"	
<b>MW36 (B1L0650-07) Water</b> Sampled: 12/28/01 12:00 Received: 12/28/01 14:15									
Diesel Range Hydrocarbons	0.387	0.250	mg/l	1	2A04004	01/04/02	01/05/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate 2-FBP	84.5 %	50-121			"	"	"	"	
Surrogate Octacosane	88.5 %	56-123			"	"	"	"	
<b>MW38 (B1L0650-08) Water</b> Sampled: 12/28/01 12:00 Received: 12/28/01 14:15									
Diesel Range Hydrocarbons	0.403	0.250	mg/l	1	2A04004	01/04/02	01/05/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate 2-FBP	81.1 %	50-121			"	"	"	"	
Surrogate Octacosane	89.9 %	56-123			"	"	"	"	
<b>MW40 (B1L0650-09) Water</b> Sampled: 12/28/01 05:50 Received: 12/28/01 14:15									
Diesel Range Hydrocarbons	4.00	0.250	mg/l	1	2A04004	01/04/02	01/05/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	5.09	0.500	"	"	"	"	"	"	
Surrogate 2-FBP	98.0 %	50-121			"	"	"	"	
Surrogate Octacosane	92.9 %	56-123			"	"	"	"	
<b>MW43 (B1L0650-10) Water</b> Sampled: 12/28/01 12:00 Received: 12/28/01 14:15									
Diesel Range Hydrocarbons	0.487	0.250	mg/l	1	2A04004	01/04/02	01/05/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate 2-FBP	77.8 %	50-121			"	"	"	"	
Surrogate Octacosane	86.4 %	56-123			"	"	"	"	

North Creek Analytical - Bothell

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ERI 815 Industry Dr Tukwila WA/USA, 98188	Project: TOSCO #5353 Project Number: 1020 Project Manager: John Meyer	Reported 01/11/02 10 32
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**Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
<b>MW44 (B1L0650-11) Water</b> Sampled: 12/28/01 12:00 Received: 12/28/01 14:15									
Diesel Range Hydrocarbons	0.823	0.250	mg/l	1	2A04004	01/04/02	01/05/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate 2-FBP	85.0 %	50-121			"	"	"	"	
Surrogate Octacosane	89.8 %	56-123			"	"	"	"	
<b>MW45 (B1L0650-12) Water</b> Sampled: 12/28/01 12:00 Received: 12/28/01 14:15									
Diesel Range Hydrocarbons	2.21	0.250	mg/l	1	2A04004	01/04/02	01/05/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	0.597	0.500	"	"	"	"	"	"	
Surrogate 2-FBP	85.7 %	50-121			"	"	"	"	
Surrogate Octacosane	92.2 %	56-123			"	"	"	"	
<b>MW47 (B1L0650-13) Water</b> Sampled: 12/28/01 12:00 Received: 12/28/01 14:15									
Diesel Range Hydrocarbons	0.542	0.250	mg/l	1	2A04004	01/04/02	01/05/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate 2-FBP	88.2 %	50-121			"	"	"	"	
Surrogate Octacosane	90.9 %	56-123			"	"	"	"	
<b>MW50 (B1L0650-14) Water</b> Sampled: 12/28/01 12:00 Received: 12/28/01 14:15									
Diesel Range Hydrocarbons	3.46	0.250	mg/l	1	2A04004	01/04/02	01/06/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate 2-FBP	109 %	50-121			"	"	"	"	
Surrogate Octacosane	94.4 %	56-123			"	"	"	"	
<b>MW51 (B1L0650-15) Water</b> Sampled: 12/28/01 12:00 Received: 12/28/01 14:15									
Diesel Range Hydrocarbons	2.17	0.250	mg/l	1	2A04007	01/04/02	01/06/02	NWTPH-Dx	D-09
Lube Oil Range Hydrocarbons	3.10	0.500	"	"	"	"	"	"	
Surrogate 2-FBP	58.8 %	50-121			"	"	"	"	
Surrogate Octacosane	78.2 %	56-123			"	"	"	"	

North Creek Analytical - Bothell

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ERI 815 Industry Dr Tukwila WA/USA, 98188	Project: TOSCO #5353 Project Number: 1020 Project Manager: John Meyer	Reported: 01/11/02 10 32
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**Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up)**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting		Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
		Limit								
MW52 (B1L0650-16) Water Sampled 12/28/01 12:45 Received. 12/28/01 14:15										
Diesel Range Hydrocarbons	1.69	0.250		mg/l	1	2A04007	01/04/02	01/06/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	0.595	0.500		"	"	"	"	"	"	
Surrogate 2-FBP	77.2 %	50-121				"	"	"	"	
Surrogate Octacosane	74.7 %	56-123				"	"	"	"	

North Creek Analytical - Bothell

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ERI 815 Industry Dr Tukwila WA/USA, 98188	Project: TOSCO #5353 Project Number 1020 Project Manager John Meyer	Reported: 01/11/02 10 32
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**Volatile Petroleum Products and BTEX by NWTPH-Gx 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
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**Batch 2A07009: Prepared 01/07/02 Using EPA 5030B (P/T)**

**Blank (2A07009-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)	40.0		"	48.0		83.3	62-139			
Surrogate 4-BFB (PID)	45.4		"	48.0		94.6	62-125			

**LCS (2A07009-BS1)**

Gasoline Range Hydrocarbons	453	50.0	ug/l	500		90.6	80-120			
Benzene	5.95	0.500	"	6.01		99.0	80-120			
Toluene	30.7	0.500	"	35.8		85.8	80-120			
Ethylbenzene	8.16	0.500	"	8.37		97.5	80-120			
Xylenes (total)	38.9	1.00	"	41.4		94.0	80-120			
Surrogate 4-BFB (FID)	46.9		"	48.0		97.7	62-139			
Surrogate 4-BFB (PID)	45.1		"	48.0		94.0	62-125			

**LCS Dup (2A07009-BS1)**

Gasoline Range Hydrocarbons	498	50.0	ug/l	500		99.6	80-120	9.46	25	
Benzene	5.94	0.500	"	6.01		98.8	80-120	0.168	40	
Toluene	32.2	0.500	"	35.8		89.9	80-120	4.77	40	
Ethylbenzene	8.40	0.500	"	8.37		100	80-120	2.90	40	
Xylenes (total)	40.3	1.00	"	41.4		97.3	80-120	3.54	40	
Surrogate 4-BFB (FID)	47.0		"	48.0		97.9	62-139			
Surrogate 4-BFB (PID)	47.0		"	48.0		97.9	62-125			

**Matrix Spike (2A07009-MS1)**

Source: B1L0668-01

Gasoline Range Hydrocarbons	475	50.0	ug/l	500	ND	95.0	70-130			
Benzene	6.45	0.500	"	6.01	ND	104	80-120			
Toluene	32.4	0.500	"	35.8	ND	90.0	75-117			
Ethylbenzene	8.49	0.500	"	8.37	ND	101	80-120			
Xylenes (total)	40.4	1.00	"	41.4	ND	97.6	80-120			
Surrogate 4-BFB (FID)	46.8		"	48.0		97.5	62-139			
Surrogate 4-BFB (PID)	44.6		"	48.0		92.9	62-125			

North Creek Analytical - Bothell

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ERI 815 Industry Dr Tukwila WA/USA, 98188	Project TOSCO #5353 Project Number 1020 Project Manager John Meyer	Reported 01/11/02 10 32
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**Volatile Petroleum Products and BTEX by NWTPH-Gx 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
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**Batch 2A07009: Prepared 01/07/02 Using EPA 5030B (P/T)**

**Matrix Spike Dup (2A07009-MSD1)**

Source B1L0668-01

Gasoline Range Hydrocarbons	450	50.0	ug/l	500	ND	90.0	70-130	5.41	25	
Benzene	6.50	0.500	"	6.01	ND	105	80-120	0.772	40	
Toluene	32.5	0.500	"	35.8	ND	90.3	75-117	0.308	40	
Ethylbenzene	8.46	0.500	"	8.37	ND	101	80-120	0.354	40	
Xylenes (total)	39.8	1.00	"	41.4	ND	96.1	80-120	1.50	40	
Surrogate 4-BFB (FID)	45.7		"	48.0		95.2	62-139			
Surrogate 4-BFB (PID)	44.5		"	48.0		92.7	62-125			

**Batch 2A08011: Prepared 01/08/02 Using EPA 5030B (P/T)**

**Blank (2A08011-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)	43.9		"	48.0		91.5	62-139			
Surrogate 4-BFB (PID)	44.5		"	48.0		92.7	62-125			

**LCS (2A08011-BS1)**

Gasoline Range Hydrocarbons	479	50.0	ug/l	500		95.8	80-120			
Benzene	5.48	0.500	"	6.01		91.2	80-120			
Toluene	29.6	0.500	"	35.8		82.7	80-120			
Ethylbenzene	8.04	0.500	"	8.37		96.1	80-120			
Xylenes (total)	37.2	1.00	"	41.4		89.9	80-120			
Surrogate 4-BFB (FID)	48.1		"	48.0		100	62-139			
Surrogate 4-BFB (PID)	42.8		"	48.0		89.2	62-125			

North Creek Analytical - Bothell

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ERI Project TOSCO #5353  
 815 Industry Dr Project Number 1020 Reported:  
 Tukwila WA/USA, 98188 Project Manager John Meyer 01/11/02 10.32

**Volatile Petroleum Products and BTEX by NWTPH-Gx 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
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**Batch 2A08011: Prepared 01/08/02 Using EPA 5030B (P/T)**

**LCS Dup (2A08011-BSD1)**

Gasoline Range Hydrocarbons	477	50.0	ug/l	500		95.4	80-120	0.418	25	
Benzene	5.72	0.500	"	6.01		95.2	80-120	4.29	40	
Toluene	31.0	0.500	"	35.8		86.6	80-120	4.62	40	
Ethylbenzene	8.35	0.500	"	8.37		99.8	80-120	3.78	40	
Xylenes (total)	38.9	1.00	"	41.4		94.0	80-120	4.47	40	
Surrogate 4-BFB (FID)	47.6		"	48.0		99.2	62-139			
Surrogate 4-BFB (PID)	44.5		"	48.0		92.7	62-125			

**Matrix Spike (2A08011-MS1)**

Source: B1L0650-07

Gasoline Range Hydrocarbons	465	50.0	ug/l	500	ND	89.0	70-130			
Benzene	6.83	0.500	"	6.01	0.773	101	80-120			
Toluene	32.0	0.500	"	35.8	0.748	87.3	75-117			
Ethylbenzene	8.67	0.500	"	8.37	ND	99.3	80-120			
Xylenes (total)	40.5	1.00	"	41.4	1.78	93.5	80-120			
Surrogate 4-BFB (FID)	45.4		"	48.0		94.6	62-139			
Surrogate 4-BFB (PID)	43.2		"	48.0		90.0	62-125			

**Matrix Spike Dup (2A08011-MSD1)**

Source: B1L0650-07

Gasoline Range Hydrocarbons	483	50.0	ug/l	500	ND	92.6	70-130	3.80	25	
Benzene	7.07	0.500	"	6.01	0.773	105	80-120	3.45	40	
Toluene	31.4	0.500	"	35.8	0.748	85.6	75-117	1.89	40	
Ethylbenzene	8.46	0.500	"	8.37	ND	96.8	80-120	2.45	40	
Xylenes (total)	39.4	1.00	"	41.4	1.78	90.9	80-120	2.75	40	
Surrogate 4-BFB (FID)	46.6		"	48.0		97.1	62-139			
Surrogate 4-BFB (PID)	42.6		"	48.0		88.8	62-125			

North Creek Analytical - Bothell

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ERI 815 Industry Dr Tukwila WA/USA, 98188	Project: TOSCO #5353 Project Number: 1020 Project Manager: John Meyer	Reported: 01/11/02 10:32
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**Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up) - Quality Control**  
**North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2A04004: Prepared 01/04/02 Using EPA 3520C**

**Blank (2A04004-BLK1)**

Diesel Range Hydrocarbons	ND	0.250	mg/l						
Lube Oil Range Hydrocarbons	ND	0.500	"						
Surrogate 2-FBP	0.269		"	0.320		84.1	50-121		
Surrogate Octacosane	0.271		"	0.320		84.7	56-123		

**LCS (2A04004-BS1)**

Diesel Range Hydrocarbons	1.71	0.250	mg/l	2.00		85.5	62-122		
Surrogate 2-FBP	0.276		"	0.320		86.2	50-121		

**LCS Dup (2A04004-BSD1)**

Diesel Range Hydrocarbons	1.68	0.250	mg/l	2.00		84.0	62-122	1.77	40
Surrogate 2-FBP	0.288		"	0.320		90.0	50-121		

**Duplicate (2A04004-DUP1)**

Source: B1L0643-03

Diesel Range Hydrocarbons	1.58	0.250	mg/l		1.23			24.9	40
Lube Oil Range Hydrocarbons	0.854	0.500	"		1.16			30.4	40
Surrogate 2-FBP	0.254		"	0.296		85.8	50-121		
Surrogate Octacosane	0.286		"	0.296		96.6	56-123		

**Batch 2A04007: Prepared 01/04/02 Using EPA 3510C**

**Blank (2A04007-BLK1)**

Diesel Range Hydrocarbons	ND	0.250	mg/l						
Lube Oil Range Hydrocarbons	ND	0.500	"						
Surrogate 2-FBP	0.175		"	0.320		54.7	50-121		
Surrogate Octacosane	0.253		"	0.320		79.1	56-123		

North Creek Analytical - Bothell

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North Creek Analytical, Inc  
 Environmental Laboratory Network





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ERI 815 Industry Dr Tukwila WA/USA, 98188	Project: TOSCO #5353 Project Number: 1020 Project Manager: John Meyer	Reported 01/11/02 10:32
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**Semivolatile Petroleum Products by NWTPH-Dx (w/o Acid/Silica Gel Clean-up) - Quality Control  
 North Creek Analytical - Bothell**

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
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**Batch 2A04007: Prepared 01/04/02 Using EPA 3510C**

**LCS (2A04007-BS1)**

Diesel Range Hydrocarbons	1.42	0.250	mg/l	2.00		71.0	62-122			
Surrogate 2-FBP	0.236		"	0.320		73.8	50-121			

**LCS Dup (2A04007-BSD1)**

Diesel Range Hydrocarbons	1.37	0.250	mg/l	2.00		68.5	62-122	3.58	40	
Surrogate 2-FBP	0.211		"	0.320		65.9	50-121			

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ERI 815 Industry Dr Tukwila WA/USA, 98188	Project: TOSCO #5353 Project Number 1020 Project Manager John Meyer	Reported: 01/11/02 10 32
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**Notes and Definitions**

- D-03 The hydrocarbon concentration result in this sample is partially due to one or more individual peaks eluting in the diesel/heavy oil range. Quantitation by EPA method 8270 is recommended.
- D-08 Results in the diesel organics range are primarily due to overlap from a gasoline range product.
- D-09 Results in the diesel organics range are primarily due to overlap from a heavy oil range product.
- I-06 The analyte concentration may be artificially elevated due to coeluting compounds or components.
- S-04 The surrogate recovery for this sample is outside of established control limits due to a sample matrix effect.
- 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

*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



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# TOSCO CHAIN OF CUSTODY REPORT

6110650

**CONSULTANT INFORMATION**

Firm: ELF Project#: 1020

Address: 835 Industry Dr  
Tekula, WA 98188

Phone: (206) 575-6220 Fax: X 6923

Project Manager: Jane Matthews E-mail: \_\_\_\_\_

Sample Collection by: Roy House/AL

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**CLIENT INFORMATION**

Facility Number: 3333

Site Address: 600 WEST LAKE AVE N

City State, ZIP: SEATTLE WA

Project/AWO Code: \_\_\_\_\_

Tosco Manager: Tia Johnson

FACILITY TYPE (check one):  BP/B  Terminal/Bulk Plant

Brown Bear  Former 76 Site  Other

**QUALITY ASSURANCE DATA LEVEL**

A. Standard Summary  
 B. Standard + Chromatograms

**LABORATORY TURNAROUND DAYS**

5  3  2  1  
 10 Day - Standard

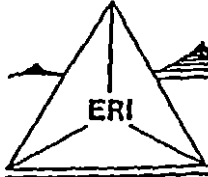
SAMPLE IDENTIFICATION	SAMPLING DATE / TIME	MATRIX (W,S,O)	# OF CON-TAINERS	ANALYSIS												NCA SAMPLE NUMBER								
				TPH-HCD	TPH-Gas	BTEX	EPA 8021 Mod	TPH-Gas + BTEX	TPH-Diesel	TPH-Diesel-Ext	Extended	TPH-Diesel-Ext	w/SG Cleanup	Halogen Volatiles	EPA 8021		Pesticides/PCBs or PCBs Only	GC/MS Volatiles EPA 8260	GC/MS SemiVols EPA 8270	PAH's 8270 SIM or 8310	Lead	Total or Dissolved TCLP or RCRA	Metals (8)	
1 MW3	12/28/01	W	3	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	01
2 SMW3				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	02
3 MW32A				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	03
4 MW33				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	04
5 MW34				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	05
6 MW35				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	06
7 MW36				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	07
8 MW38				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	08
9 MW40	5:05 AM			X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	09
10 MW33				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	10

**Relinquished by:** Roy House/AL **Date & Time:** 12/28/01

**Received by:** NCA **Date & Time:** 12/28/01

Comments: No S.O.





GROUNDWATER SAMPLING - FIELD LOG

Client Name: IOSCO 5353  
 Location: LOIS/CAL/HR  
 Field Crew: RAJ/AL

ERI Job No. 1020  
 Field Cleaning Performed:  
 Analysis:

Date: 12/28/01 Page 1 of 1

\* - Case Volume =  $(d_{case} - d_{casing})^2 \times L \times F$  where F =  
 0.163 for a 2" inside diameter well casing  
 0.652 for a 4" inside diameter well casing  
 1.667 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. (µS/cm) (X1000)	Temp. (Deg F)	pH	TURB. NTU	PI0 PPH	Comments	
37		11.00		2									
38		10.75	18.40	2	1.5	4.5							
39		10.90	19.04	2	1.5	4							
40		9.57	11.30	2	1.5	1.5							
41		PAVED OVER - BY ASPHALT											
42		8.76	20.00	2	2.0	6							
43		8.89	35.00	2	4	18							
44		11.17	21.40	2	1.5	4.5							
45		9.31	44.11	2	9.6	17							
46		Blotched											
47		10.82	17.45	2	1.0	3							
48		11.29	21.38	2	1.6	5							
49		11.86	21.40	2	1.5	4.5							
50		11.21	24.57	2	2	6							
51		10.54	22.80	2	3	10							
52		9.61	13.11	2	1.5	1.5							
53		9.07	19.30	2	1.5	4.5							
54		10.45	17.26	2	1.5	4.5							
55		11.20	15.00	2	1.5	1.5							
56		10.24	14.00	2	1.5	1.5							