

LUST 1855 UNOCAL #5028
Blaine

DATE: December 4, 2001

TOSCO CORPORATION
GROUNDWATER MONITORING REPORT

Site No.: 5028 Address: 247 D Street, Blaine, 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 3 and sampled 2 groundwater monitoring wells without purging

WORK PROPOSED FOR NEXT QUARTER [First- 2002]:

- Monitor and sample 3 wells without purging

RECEIVED
JAN 28 2002
DEPT OF ECOLOGY

SUMMARY:

Frequency of Sampling Events:	<u>Quarterly</u>	(Quarterly, etc.)
Approximate Depth to Groundwater:	<u>4 to 5 ft</u>	(Measured Feet)
Groundwater Gradient:	<u>Not Determined</u>	(Direction)
	<u>Not Determined</u>	(Magnitude)
		(ppb)
Maximum TPH-G/Benzene Concentrations:	<u>29,000/5,180</u>	
Measurable Free Product Detected:	<u>No</u>	(Yes - ID wells(s)/No)
Free Product Recovered This Quarter:	<u>None</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 a 2000'	<u>Unknown</u>	(Distance and)
Radius and Respective Direction:	<u>Unknown</u>	Direction)
Current Remedial Action:	<u>ORC</u>	(SVE/AS/P&T etc.)
Permits for Discharge:	<u>None</u>	(NPDES, POTW, etc.)

DISCUSSION:

- All 2 wells sampled contained hydrocarbon concentrations exceeding MTCA Method A Cleanup Levels.

ATTACHMENTS:

Plate 1 - Groundwater Sample Analysis Map, 11/01/01
Table 1 - Groundwater Analytical Results
Laboratory Reports and Chain of Custody Records
Field Data Records

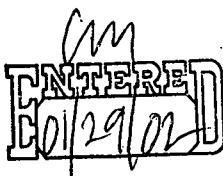
Prepared By:

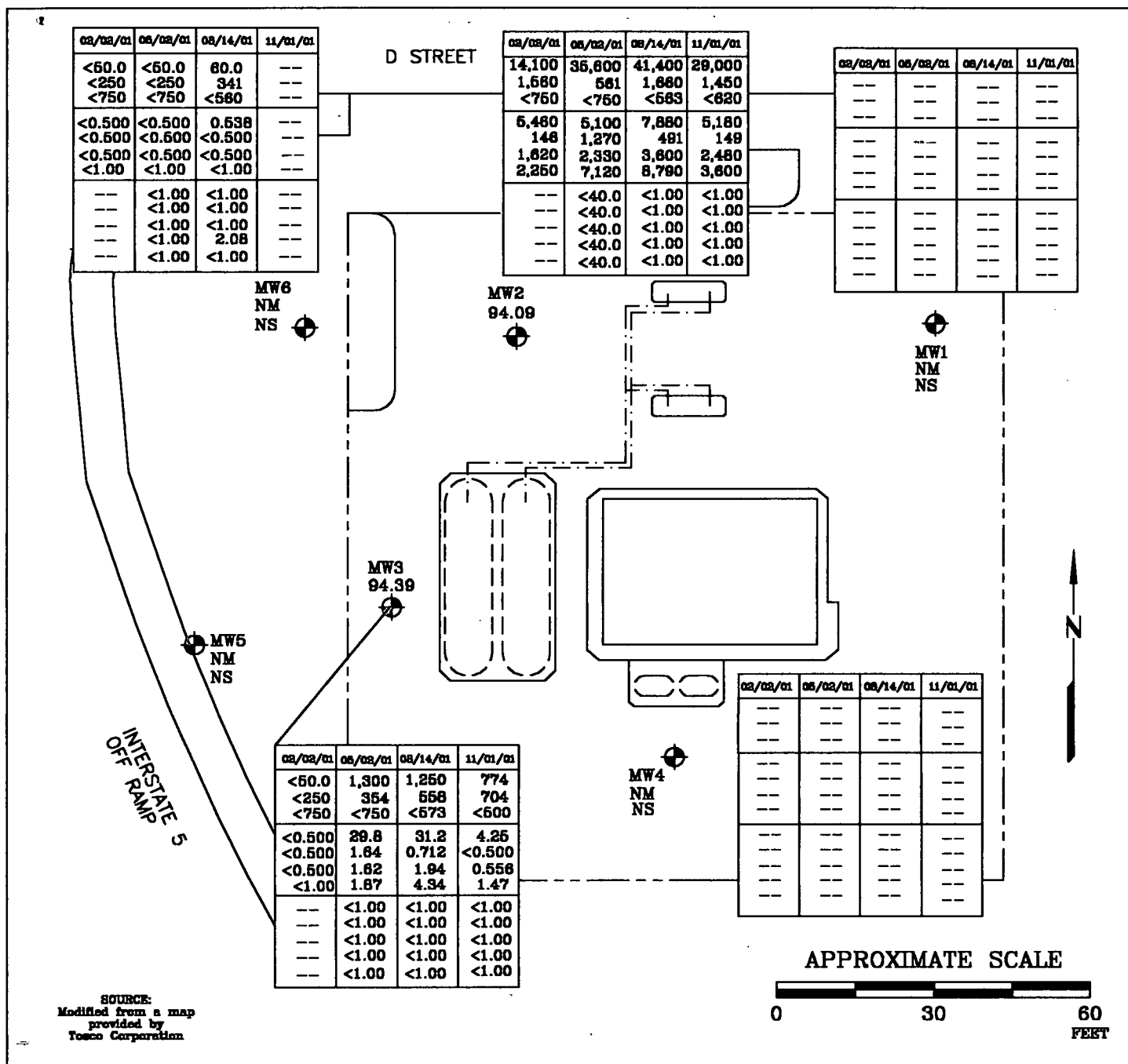

Yukiko Noguchi
Environmental Technician

Reviewed By:


James S. Matthiessen
Staff Scientist

cc: Washington State Department of Ecology, NW Region
GeoEngineers





FN 31017GWS

EXPLANATION

- MW3 Groundwater Monitoring Well
 93.28 Groundwater Elevation
 NM Not Measured
 NS Not Sampled

Laboratory Results in ug/L (ppb)

8/17/98	Sample Date
2,890	Total Petroleum Hydrocarbons as Gasoline
<250	Total Petroleum Hydrocarbons as Diesel
<750	Total Petroleum Hydrocarbons as Oil
68.4	Benzene
3.29	Toluene
3.57	Ethylbenzene
ND	Total Xylenes
1.51	1,2-Dichloroethane
<1.00	Chloroethane
<1.00	1,1-Dichloroethane
<1.00	1,2-Dichloroethane
30.6	Vinyl Chloride

Numbers in Red Exceed
 MTCA Method A Cleanup Levels
 -- = Not Analyzed
 <1.00 = Less than the Stated
 Laboratory Reporting Limit



GROUNDWATER SAMPLE ANALYSIS MAP - 11/01/01

TOSCO SITE NO. 5028
247 D Street
Blaine, Washington

PROJECT NO.

31017

PLATE

1

YN: 12/04/01

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Tosco Site No. 5028
247 D Street
Blaine, Washington
Page 1 of 4

Well	Sample Date	DTW	GW Elev.	TPH-G	TPH-D	TPH-O	B	T	E	X	1,2-DCE	CA	1,1-DCA	1,2-DCA	VC	O ₂ Lab	O ₂ Meter
MW1 100.42	07/08/93	4.35	98.07	<50	--	--	<0.1	<0.1	<0.1	<1.0	--	--	--	--	--	--	--
	10/11/94	4.60	95.82	<50	<250	<750	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	--
	01/20/95	3.80	98.62	<50	<250	<750	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	--
	04/21/95	3.77	98.65	<50	<250	<750	<0.5	<0.5	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
	07/24/95	5.13	95.29	<50	<250	<750	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	--
	10/25/95	4.28	98.14	<50	<250	<750	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	--
	01/17/96	2.95	97.47	<50	<250	<750	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	--
	04/18/96	3.30	97.12	--	--	--	--	--	--	--	--	--	--	--	--	4	--
	07/25/96	4.13	98.29	<50	<250	<750	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	1.8	1.8
	10/16/96	4.74	95.68	--	<250	<750	--	--	--	--	--	--	--	--	--	3.0	2.2
	02/27/97	4.47	95.95	<50	<250	<750	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	--	1.9
	05/13/97	6.19	94.23	--	--	--	--	--	--	--	--	--	--	--	--	--	6.2
	08/21/97	5.65	94.77	142	387	<750	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	--	8.0
	11/25/97	4.02	98.40	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/13/98	4.01	98.41	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	--	--
	05/19/98	4.31	98.11	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/17/98	4.94	95.48	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	--	--
	11/19/98	4.28	98.14	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/17/99	4.08	98.34	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	--	--
	05/25/99	4.90	95.52	136	<250	<750	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	--	--
	08/12/99	4.94	95.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	12/07/99	NM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/10/00	NM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	05/31/00	4.98	95.48	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	--	--
	08/31/00	5.00	95.42	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	--	--	--	--	--	--	--
	11/01/00	NM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	02/02/01	NM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	05/02/01	NM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	08/14/01	NM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
	11/01/01	NM	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW2 98.49	07/08/93	3.87	94.62	7400	--	--	1100	830	110	110	--	--	--	--	--	--	--
	10/11/94	5.20	93.29	2300	310	<750	1600	37	220	300	--	--	--	--	--	--	--
	01/20/95	4.19	94.30	14000	830	<750	5400	1800	630	2400	<1.0	<1.0	<1.0	<1.0	<1.0	--	--
	04/21/95	4.23	94.28	10000	830	<750	8300	650	210	2800	--	--	--	--	--	--	--
	07/24/95	4.71	93.78	4300	610	<750	3400	61	490	800	--	--	--	--	--	--	--
	10/25/95	4.04	94.45	12000	1000	<750	6300	290	600	2000	--	--	--	--	--	--	--
	01/17/96	3.87	94.82	14000	310	<750	5300	320	640	2200	--	--	--	--	--	--	--
	04/18/96	2.87	95.82	31000	370	<750	5600	1800	1400	3300	--	--	--	--	--	0.6	--
	07/25/96	4.29	94.20	5900	650	<750	7000	160	460	900	--	--	--	--	--	0	1.0
	10/16/96	3.98	94.53	8800	<250	<750	6400	262	466	1120	--	--	--	--	--	0	1.4
	02/27/97	3.87	94.82	10000	260	<750	6700	361	662	2800	--	--	--	--	--	--	0.8
	05/13/97	4.08	94.41	16800	<250	<750	8600	1000	761	2870	--	--	--	--	--	--	4.8
	08/21/97	4.41	94.08	23600	<250	<750	8600	740	612	2220	--	--	--	--	--	--	4.8
	11/25/97	3.48	95.01	21400	393	<750	9070	1550	1040	6070	<20	<20	<20	<20	<20	2.11	--
	02/13/98	3.05	95.44	27400	465	<750	9020	124	1640	4260	<1.00	<1.00	<1.00	<1.00	<1.00	--	--
	05/19/98	3.71	94.78	54800	1300	<750	12400	2620	2430	6130	<10.0	<10.0	<10.0	<10.0	<10.0	--	--
	08/17/98	4.72	93.77	41300	760	<750	12400	624	2460	6700	<10.0	<10.0	<10.0	<10.0	<10.0	--	--
	11/19/98	4.18	94.31	30000	--	--	12400	461	2040	6430	<20.0	<20.0	<20.0	<20.0	<20.0	--	--
	02/17/99	2.66	95.83	24800	589	<750	14450	1681	1640	6070	<20.0	<20.0	<20.0	<20.0	<20.0	--	--
	05/25/99	3.16	95.33	35000	2420	<3,750	1600	560	3400	12000	<10.0	<10.0	<10.0	<10.0	<10.0	--	--
	08/12/99	3.58	94.93	10000	501	<750	10000	1440	5350	13500	<100	<100	<100	<100	<100	--	--
	12/07/99	3.23	95.26	17500	530	<750	9280	503	1750	2230	<10.0	<10.0	<10.0	<10.0	<10.0	--	--
	02/10/00	2.91	95.58	20400	552	<1,490	8540	421	2050	3450	<1.00	<1.00	<1.00	<1.00	<1.00	--	--
	05/31/00	3.60	94.89	24700	637	<750	9650	763	3200	8440	<10.0	<10.0	<10.0	<10.0	<10.0	--	--
	08/31/00	4.65	93.84	35000	1020	<750	10400	110	3420	9260	--	--	--	--	--	--	--
	11/01/00	3.78	94.71	98000	780	<1,330	7430	677	2680	6350	<1.00	<1.00	<1.00	<1.00	<1.00	--	--
	02/02/01	2.94	95.55	14300	1560	<750	3480	143	1420	2230	--	--	--	--	--	--	--
	05/02/01	3.88	94.61	35000	501	<750	3100	1220	2430	7420	<40.0	<40.0	<40.0	<40.0	<40.0	--	--
	08/14/01	4.55	93.94	41400	1030	<583	7330	497	9600	8790	<1.00	<1.00	<1.00	<1.00	<1.00	--	--
	11/01/01	4.40	94.09	22400	1450	<620	5180	140	2480	3600	<1.00	<1.00	<1.00	<1.00	<1.00	--	--
MTCA Method A Cleanup Level				1,000*			5	40	30	20	NA	NA	NA	5	0.2	NA	NA

Continued on Page 2.

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GROUNDWATER ANALYTICAL RESULTS
Tosco Site No. 5028
247 D Street
Blaine, Washington
Page 2 of 4

Well	Sample Date	DTW	GW Elev.	TPH-G	TPH-D	TPH-O	B	T	E	X	1,2-DCE	CA	1,1-DCA	1,2-DCA	VC	O ₂ Lab	O ₂ Meter
MW3 98.57	07/08/93	4.39	94.18	1000	-	-	100	25	100	100	-	-	-	-	-	-	-
	10/11/94	5.54	93.03	21000	1200	<750	100	21	280	640	-	-	-	-	-	-	-
	01/20/95	5.54	93.03	2900	2300	<750	100	13	210	150	4.7	<1.0	<1.0	<2.0	45	-	-
	04/21/95	6.63	91.94	6500	1000	<750	100	11	930	90	3.3	1.2	<1.0	1.9	150	-	-
	07/24/95	6.54	92.03	<50	100	<750	4.6	<0.5	0.69	<1.0	1.7	<1.0	<1.0	1.2	50	-	-
	10/25/95	5.39	93.18	10000	2400	<750	100	5.8	100	100	4.5	<1.0	<1.0	1.5	100	-	-
	01/17/96	6.30	92.27	1000	150	<750	100	3.8	10	16	2.1	1.7	<1.0	1.3	100	-	-
	04/18/96	3.72	94.85	1000	1200	<750	100	5.3	100	100	2.4	1.5	<1.0	1.5	100	0.4	-
	07/25/96	4.74	93.83	1000	100	<750	100	<1.0	100	<10.0	1.21	<1.0	<1.0	1.27	100	1.2	1.0
	10/18/96	5.22	93.35	1000	<250	<750	100	1.85	27.2	5.04	1.04	1.65	<1.00	1.12	100	0.4	1.0
	02/27/97	3.79	94.78	1000	<250	<750	100	<2.50	24.1	6.01	1.47	1.85	<1.00	1.39	100	-	0.9
	05/13/97	4.54	94.03	188	<250	<750	100	<1.00	6.85	2.35	<1.00	1.31	<1.00	<1.00	100	-	5.0
	08/21/97	4.72	93.85	1000	<250	<750	100	1.96	18.3	5.45	<1.00	2.24	<1.00	<1.00	100	-	5.8
	11/25/97	4.19	94.38	1000	100	<750	100	1.80	5.65	3.21	1.07	<1.00	<1.00	<1.00	100	2.49	-
	02/13/98	4.35	94.22	1000	100	<750	100	1.86	4.91	2.99	1.16	1.83	<1.00	<1.00	100	-	-
	05/19/98	4.78	93.79	1000	100	<750	100	<5.00	9.07	<5.00	1.03	<1.00	<1.00	<1.00	100	-	-
	08/17/98	5.29	93.28	1000	<250	<750	100	3.29	3.57	<5.00	1.51	<1.00	<1.00	<1.00	100	-	-
	11/19/98	4.89	93.68	1000	-	-	100	<10.0	2.64	<5.00	1.33	1.05	<1.00	<1.00	100	-	-
	02/17/99	Obstructed - Well could not be accessed															
	05/25/99	4.21	94.36	1000	100	<750	100	10.8	4.72	<2.00	<1.00	<1.00	<1.00	<1.00	100	-	-
	08/12/99	4.40	94.17	1000	100	<750	100	23.2	15.0	4.25	<2.00	<2.00	<2.00	<2.00	100	-	-
	12/07/99	4.85	93.72	1000	100	<750	100	12.0	<5.00	<10.0	1.05	1.76	<1.00	<1.00	100	-	-
	02/10/00	4.76	93.81	1000	<250	<750	100	6.55	3.31	<2.30	1.17	<1.00	<1.00	<1.00	100	-	-
	05/31/00	4.82	93.95	1000	100	<750	100	9.06	22.6	7.03	<1.00	<1.00	<1.00	<1.00	100	-	-
	08/31/00	4.97	93.60	1000	100	<750	100	5.88	9.41	<10.0	-	-	-	-	100	-	-
	11/01/00	4.72	93.85	1000	100	<1,870	100	3.99	<2.05	<3.75	<1.00	<1.00	<1.00	<1.00	100	-	-
	02/02/01	5.85	92.72	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	-	-	-	-	-	-	-
	05/02/01	3.81	94.76	1000	100	<750	100	1.64	1.62	1.87	<1.00	<1.00	<1.00	<1.00	<1.00	-	-
	08/14/01	4.31	94.26	1000	100	<573	100	0.712	1.94	4.34	<1.00	<1.00	<1.00	<1.00	<1.00	-	-
	11/01/01	4.18	94.39	1000	100	<500	4.25	<0.500	0.558	1.47	<1.00	<1.00	<1.00	<1.00	<1.00	-	-
MW4 99.53	07/08/93	4.78	94.75	<50	320	<1,000	<1.0	<1.0	<1.0	<1.0	9.8	<1.0	<1.0	<1.0	<5.0	-	-
	10/11/94	5.50	94.03	<50	290	<750	<0.5	<0.5	<0.5	<1.0	9.8	<1.0	<1.0	<1.0	<1.0	-	-
	01/20/95	6.53	93.00	<50	<250	<750	<0.5	<0.5	<0.5	<1.0	8.9	<1.0	<1.0	<1.0	<1.0	-	-
	04/21/95	6.62	92.91	<50	<250	<750	<0.5	<0.5	<0.5	<1.0	8.8	<1.0	<1.0	<1.0	<1.0	-	-
	07/24/95	6.83	92.70	<50	<250	<750	<0.5	<0.5	<0.5	<1.0	8.6	<1.0	<1.0	<0.5	<1.0	-	-
	10/25/95	6.41	93.12	<50	<250	<750	<0.5	<0.5	<0.5	<1.0	11	<1.0	<1.0	<0.5	<1.0	-	-
	01/17/96	6.25	93.28	<50	<250	<750	<0.5	<0.5	<0.5	<1.0	7.8	<1.0	<1.0	<0.5	<1.0	-	-
	04/18/96	4.13	95.40	-	-	-	-	-	-	-	-	-	-	-	-	8	-
	07/25/96	4.88	94.65	<50	<250	<750	<0.5	<0.5	<0.5	<1.0	5.15	<1.0	<1.0	<0.5	<1.0	2.0	2.7
	10/18/96	6.55	92.98	-	-	-	-	-	-	-	-	-	-	-	-	4.8	2.4
	02/27/97	6.05	93.48	<50	<250	<750	<0.500	<0.500	<0.500	<1.00	8.33	<1.00	<1.00	<1.00	<1.00	-	2.2
	05/13/97	6.26	93.27	-	-	-	-	-	-	-	-	-	-	-	-	-	7.3
	08/21/97	6.04	93.49	<50	<250	<750	<0.500	<0.500	<0.500	<1.00	10.3	<1.00	<1.00	<1.00	<1.00	-	6.5
	11/25/97	4.88	94.65	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	02/13/98	4.89	94.64	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	7.76	<1.00	<1.00	<1.00	<1.00	-	-
	05/19/98	5.11	94.42	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/17/98	5.20	94.33	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	5.38	<1.00	<1.00	<1.00	<1.00	-	-
	11/19/98	4.95	94.58	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	02/17/99	4.72	94.81	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	9.01	<1.00	<1.00	<1.00	<1.00	-	-
	05/25/99	4.68	94.87	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	8.88	<1.00	<1.00	<1.00	<1.00	-	-
	08/12/99	4.98	94.55	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/07/99	NM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	02/10/00	NM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	05/31/00	4.78	94.75	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	6.11	<1.00	<1.00	<1.00	<1.00	-	-
	08/31/00	5.44	94.09	<50.0	<483	<1390	<0.500	<0.500	<0.500	<1.00	-	-	-	-	-	-	-
	11/01/00	NM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	02/02/01	NM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	05/02/01	NM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/14/01	NM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/01/01	NM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MTCA Method A Cleanup Level				1,000*			5	40	30	20	NA	NA	NA	5	0.2	NA	NA

Continued on Page 3.

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Tosco Site No. 5028
247 D Street
Blaine, Washington
Page 3 of 4

Well	Sample Date	DTW	GW Elev.	TPH-G	TPH-D	TPH-O	B	T	E	X	1,2-DCE	CA	1,1-DCA	1,2-DCA	VC	O ₂ Lab	O ₂ Meter
MW5 92.96	10/11/94	5.75	87.21	55	860	<750	2.8	<0.5	<0.5	<1.0	-	-	-	-	-	-	-
	01/20/95	3.04	89.92	<50	<250	<750	<0.5	<0.5	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	-	-
	04/21/95	3.57	89.39	<50	<250	<750	<0.70	<0.5	<0.5	<1.0	-	-	-	-	-	-	-
	07/24/95	4.37	88.59	<50	<250	<750	<0.88	<0.5	<0.5	<1.0	-	-	-	-	-	-	-
	10/25/95	3.87	89.09	<50	<250	<750	4.1	<0.5	<0.5	<1.0	-	-	-	-	-	-	-
	01/17/96	2.86	90.10	<50	<250	<750	<0.5	<0.5	<0.5	<1.0	-	-	-	-	-	-	-
	04/18/96	3.19	89.77	<50	<250	<750	2.9	<0.5	<0.5	<1.0	-	-	-	-	-	4.8	-
	07/25/96	4.08	88.90	<50	<250	<750	1.97	<0.5	<0.5	<1.0	-	-	-	-	-	0.8	1.2
	10/16/96	3.87	89.09	<50	<250	<750	1.02	<0.500	<0.500	<1.00	-	-	-	-	-	2.0	1.6
	02/27/97	3.09	89.87	<50	<250	<750	0.838	<0.500	<0.500	<1.00	-	-	-	-	-	-	2.2
	05/13/97	3.05	89.91	<50	<250	<750	<0.500	<0.500	<0.500	<1.00	-	-	-	-	-	-	5.1
	08/21/97	3.89	89.07	<50	348	<750	<0.500	<0.500	<0.500	<1.00	-	-	-	-	-	-	6.6
	11/25/97	2.53	90.43	<50	286	<750	0.876	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	3.02	-
	02/13/98	3.02	89.94	88.9	<250	<750	<6.00	<0.500	<0.500	<2.00	<1.00	<1.00	<1.00	<1.00	<1.00	-	-
	05/19/98	3.65	89.31	160	<250	<750	<5.00	<1.00	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	-	-
	08/17/98	4.53	88.43	78.8	<250	<750	<3.00	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	-	-
	11/19/98	3.33	89.63	<50.0	-	-	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	-	-
	02/17/99	3.21	89.75	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	-	-
	05/25/99	3.66	89.30	<50.0	<250	<750	0.800	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	-	-
	08/12/99	NM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	12/07/99	NM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	02/10/00	Unable to Locate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	05/31/00	Unable to Locate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/31/00	Unable to Locate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/01/00	Unable to Locate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	02/02/01	Unable to Locate	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	05/02/01	NM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	08/14/01	NM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	11/01/01	NM	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

MTCA Method A Cleanup Level

1,000*

5

40

30

20

NA

NA

NA

5

0.2

NA

NA

Continued on Page 4.

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Tosco Site No. 5028
247 D Street
Blaine, Washington
Page 4 of 4

Well	Sample Date	DTW	GW Elev.	TPH-G	TPH-D	TPH-O	B	T	E	X	1,2-DCE	CA	1,1-DCA	1,2-DCA	VC	O ₂ Lab	O ₂ Meter	
MW6 97.84	10/11/94	5.85	91.99	<50	<250	<750	3.2	<0.5	0.53	<1.0	—	—	—	—	—	—	—	
	01/20/95	2.36	95.48	<50	260	<750	<0.5	<0.5	<0.5	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	—	—	
	04/21/95	3.34	94.50	<50	260	<750	4.5	<0.5	<0.5	<1.0	—	—	—	—	—	—	—	
	07/24/95	5.00	92.84	150	330	<750	2.8	<0.5	2.8	<1.0	—	—	—	—	—	—	—	
	10/25/95	4.97	92.87	290	440	<750	2.1	<0.5	2.1	<1.0	—	—	—	—	—	—	—	
	01/17/96	2.15	95.69	<50	250	<750	1.6	<0.5	<0.5	<1.0	—	—	—	—	—	—	—	
	04/18/96	3.34	94.50	81	250	<750	0.54	<0.5	0.54	<1.0	—	—	—	—	—	8	—	
	07/25/96	4.22	93.62	149	321	<750	3.88	<0.5	3.88	1.92	—	—	—	—	—	2.2	2.8	
	10/16/96	4.24	93.60	68.3	<250	<750	0.760	<0.500	0.760	<1.00	—	—	—	—	—	1.0	2.5	
	02/27/97	4.41	93.43	<50	<250	<750	<0.500	<0.500	<0.500	<1.00	—	—	—	—	—	—	2.6	
	05/13/97	4.32	93.52	<50	<250	<750	<0.500	<0.500	<0.500	<1.00	—	—	—	—	—	—	7.9	
	08/21/97	5.75	92.09	<50	370	<750	<0.500	<0.500	<0.500	<1.00	—	—	—	—	—	—	6.6	
	11/25/97	2.09	95.75	<50	<250	<750	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	4.83	—	
	02/13/98	4.23	93.61	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	—	—	
	05/19/98	4.26	93.58	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	—	—	
	08/17/98	6.46	91.38	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	1.04	<1.00	—	—	
	11/19/98	3.15	94.69	<50.0	—	—	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	—	—	
	02/17/99	3.54	94.30	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	—	—	
	05/25/99	4.86	92.88	<50.0	341	<750	0.601	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	—	—	
	08/12/99	NM	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	12/07/99	3.11	94.73	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	—	—	
	02/10/00	3.60	94.24	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
	05/31/00	4.81	93.23	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	—	—
	08/31/00	6.18	91.66	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	—	—	—	—	—	—	—	—
	11/01/00	5.07	92.77	<50.0	<250	<750	0.688	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	—	—
	02/02/01	4.05	93.79	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	—	—	—	—	—	—	—	—
	05/02/01	4.04	93.80	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	<1.00	—	—
	08/14/01	6.20	91.64	60.0	341	<560	0.538	<0.500	<0.500	<1.00	<1.00	<1.00	<1.00	2.08	<1.00	—	—	—
	11/01/01	Obstructed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
MTCA Method A Cleanup Level				1,000*			5	40	30	20	NA	NA	NA	5	0.2	NA	NA	
EXPLANATION:																		
Concentrations in ug/L (ppb).																		
Wellhead elevations taken from prior consultant's 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.																		
TPH-D and TPH-O = Total Petroleum Hydrocarbons as Diesel and Oil, respectively, by Ecology Method NWTPH-Dx.																		
B = Benzene; T = Toluene; E = Ethylbenzene; X = Total Xylenes.																		
BTEX = Aromatic compounds by EPA Method 8020 or EPA 8021B; refer to official laboratory reports.																		
1,2-DCE = cis-1,2-Dichloroethene; CA = Chloroethane; 1,1-DCA = 1,1-Dichloroethane; 1,2-DCA = 1,2-Dichloroethane; VC = Vinyl chloride.																		
1,2-DCE, DCA, 1,1-DCA, 1,2-DCA; and VC by EPA 8010B (modified) or EPA 8260B; refer to official laboratory reports.																		
< = Less than the stated laboratory reporting limit.																		
NM = Not measured; NA = Not applicable; — = Not analyzed or sampled.																		
Shaded values equal or exceed MTCA Method A Cleanup Levels.																		
* Total Petroleum Hydrocarbons.																		
Data collected before 11/25/97 are taken from prior consultants.																		
O ₂ Lab = Dissolved oxygen by APHA/EPA Methods; results in parts per million (ppm).																		
O ₂ Meter = Dissolved oxygen in parts per million (ppm) measured with field instrumentation.																		



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19 November 2001

John Meyer
ERI
815 Industry Dr
Tukwila, WA/USA 98188
RE: Tosco #5028 Blaine

Enclosed are the results of analyses for samples received by the laboratory on 11/02/01 13:30. 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 #5028 Blaine
Project Number: 1017
Project Manager: John Meyer

Reported:
11/19/01 17:33

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW2	B1K0062-01	Water	11/02/01 14:00	11/02/01 13:30
MW3	B1K0062-02	Water	11/02/01 14:15	11/02/01 13:30

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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ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: Tosco #5028 Blaine
Project Number: 1017
Project Manager: John Meyer

Reported:
11/19/01 17:33

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

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW2 (B1K0062-01) Water Sampled: 11/02/01 14:00 Received: 11/02/01 13:30									
Gasoline Range Hydrocarbons	29000	1000	ug/l	20	1K16006	11/16/01	11/16/01	NWTPH-Gx/8021B	
Benzene	5180	100	"	200	"	"	11/16/01	"	
Toluene	149	10.0	"	20	"	"	11/16/01	"	
Ethylbenzene	2480	100	"	200	"	"	11/16/01	"	
Xylenes (total)	3600	20.0	"	20	"	"	11/16/01	"	
Surrogate: 4-BFB (FID)	115 %	62-139			"	"	"	"	
Surrogate: 4-BFB (PID)	102 %	62-125			"	"	"	"	
MW3 (B1K0062-02) Water Sampled: 11/02/01 14:15 Received: 11/02/01 13:30									
Gasoline Range Hydrocarbons	774	50.0	ug/l	1	1K16006	11/16/01	11/16/01	NWTPH-Gx/8021B	
Benzene	4.25	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	0.556	0.500	"	"	"	"	"	"	
Xylenes (total)	1.47	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	102 %	62-139			"	"	"	"	
Surrogate: 4-BFB (PID)	92.5 %	62-125			"	"	"	"	

North Creek Analytical - Bothell

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Amar Gill, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network



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ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: Tosco #5028 Blaine
Project Number: 1017
Project Manager: John Meyer

Reported:
11/19/01 17:33

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
MW2 (B1K0062-01) Water Sampled: 11/02/01 14:00 Received: 11/02/01 13:30									
Diesel Range Hydrocarbons	1.45	0.310	mg/l	1	1K05002	11/05/01	11/07/01	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.620	"	"	"	"	"	"	
Surrogate: 2-FBP	78.1 %	50-121			"	"	"	"	
Surrogate: Octacosane	82.6 %	56-123			"	"	"	"	
MW3 (B1K0062-02) Water Sampled: 11/02/01 14:15 Received: 11/02/01 13:30									
Diesel Range Hydrocarbons	0.704	0.250	mg/l	1	1K05002	11/05/01	11/08/01	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	76.7 %	50-121			"	"	"	"	
Surrogate: Octacosane	89.6 %	56-123			"	"	"	"	

North Creek Analytical - Bothell

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Amar Gill, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network



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ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: Tosco #5028 Blaine
Project Number: 1017
Project Manager: John Meyer

Reported:
11/19/01 17:33

Volatile Organic Compounds by EPA Method 8260B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW2 (B1K0062-01) Water Sampled: 11/02/01 14:00 Received: 11/02/01 13:30									
Acetone	ND	25.0	ug/l	1	1K13039	11/12/01	11/12/01	EPA 8260B	E
Benzene	758	1.00	"	"	"	"	"	"	
Bromobenzene	ND	1.00	"	"	"	"	"	"	
Bromochloromethane	ND	1.00	"	"	"	"	"	"	
Bromodichloromethane	ND	1.00	"	"	"	"	"	"	
Bromoform	ND	1.00	"	"	"	"	"	"	
Bromomethane	ND	2.00	"	"	"	"	"	"	
2-Butanone	ND	10.0	"	"	"	"	"	"	
n-Butylbenzene	21.6	1.00	"	"	"	"	"	"	
sec-Butylbenzene	ND	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon disulfide	ND	1.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	1.00	"	"	"	"	"	"	
Chloromethane	ND	5.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
Dibromochloromethane	ND	1.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.00	"	"	"	"	"	"	
Dibromomethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.00	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	"	

North Creek Analytical - Bothell

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Amar Gill, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network



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ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: Tosco #5028 Blaine
Project Number: 1017
Project Manager: John Meyer

Reported:
11/19/01 17:33

Volatile Organic Compounds by EPA Method 8260B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW2 (B1K0062-01) Water Sampled: 11/02/01 14:00 Received: 11/02/01 13:30									
Ethylbenzene	351	1.00	ug/l	1	1K13039	11/12/01	11/12/01	EPA 8260B	E
Hexachlorobutadiene	ND	1.00	"	"	"	"	"	"	
2-Hexanone	ND	10.0	"	"	"	"	"	"	E
Isopropylbenzene	99.3	1.00	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"	
Methylene chloride	ND	5.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	10.0	"	"	"	"	"	"	E
Naphthalene	285	1.00	"	"	"	"	"	"	E
n-Propylbenzene	175	1.00	"	"	"	"	"	"	
Styrene	ND	1.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"	
Tetrachloroethene	ND	1.00	"	"	"	"	"	"	E
Toluene	128	1.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.00	"	"	"	"	"	"	
Trichloroethene	ND	1.00	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.00	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.00	"	"	"	"	"	"	E
1,2,4-Trimethylbenzene	471	1.00	"	"	"	"	"	"	E
1,3,5-Trimethylbenzene	65.9	1.00	"	"	"	"	"	"	
Vinyl chloride	ND	1.00	"	"	"	"	"	"	E
m,p-Xylene	437	2.00	"	"	"	"	"	"	E
o-Xylene	165	1.00	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	112 %	73-137			"	"	"	"	
Surrogate: Toluene-d8	100 %	75-124			"	"	"	"	
Surrogate: 4-BFB	83.5 %	77-120			"	"	"	"	

North Creek Analytical - Bothell

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ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: Tosco #5028 Blaine
Project Number: 1017
Project Manager: John Meyer

Reported:
11/19/01 17:33

Volatile Organic Compounds by EPA Method 8260B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW2 (B1K0062-01RE1) Water Sampled: 11/02/01 14:00 Received: 11/02/01 13:30									
Acetone	ND	10000	ug/l	400	1K13035	11/13/01	11/13/01	EPA 8260B	
Benzene	6210	400	"	"	"	"	"	"	
Bromobenzene	ND	400	"	"	"	"	"	"	
Bromochloromethane	ND	400	"	"	"	"	"	"	
Bromodichloromethane	ND	400	"	"	"	"	"	"	
Bromoform	ND	400	"	"	"	"	"	"	
Bromomethane	ND	800	"	"	"	"	"	"	
2-Butanone	ND	4000	"	"	"	"	"	"	
n-Butylbenzene	ND	400	"	"	"	"	"	"	
sec-Butylbenzene	ND	400	"	"	"	"	"	"	
tert-Butylbenzene	ND	400	"	"	"	"	"	"	
Carbon disulfide	ND	400	"	"	"	"	"	"	
Carbon tetrachloride	ND	400	"	"	"	"	"	"	
Chlorobenzene	ND	400	"	"	"	"	"	"	
Chloroethane	ND	400	"	"	"	"	"	"	
Chloroform	ND	400	"	"	"	"	"	"	
Chloromethane	ND	2000	"	"	"	"	"	"	
2-Chlorotoluene	ND	400	"	"	"	"	"	"	
4-Chlorotoluene	ND	400	"	"	"	"	"	"	
Dibromochloromethane	ND	400	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	2000	"	"	"	"	"	"	
1,2-Dibromoethane	ND	400	"	"	"	"	"	"	
Dibromomethane	ND	400	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	400	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	400	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	400	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	400	"	"	"	"	"	"	
1,1-Dichloroethane	ND	400	"	"	"	"	"	"	
1,2-Dichloroethane	ND	400	"	"	"	"	"	"	
1,1-Dichloroethene	ND	400	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	400	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	400	"	"	"	"	"	"	
1,2-Dichloropropane	ND	400	"	"	"	"	"	"	
1,3-Dichloropropane	ND	400	"	"	"	"	"	"	
2,2-Dichloropropane	ND	400	"	"	"	"	"	"	
1,1-Dichloropropene	ND	400	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	400	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	400	"	"	"	"	"	"	

North Creek Analytical - Bothell

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Amar Gill, Project Manager

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Environmental Laboratory Network



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ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: Tosco #5028 Blaine
Project Number: 1017
Project Manager: John Meyer

Reported:
11/19/01 17:33

Volatile Organic Compounds by EPA Method 8260B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW2 (B1K0062-01RE1) Water Sampled: 11/02/01 14:00 Received: 11/02/01 13:30									
Ethylbenzene	2330	400	ug/l	400	1K13035	11/13/01	11/13/01	EPA 8260B	
Hexachlorobutadiene	ND	400	"	"	"	"	"	"	
2-Hexanone	ND	4000	"	"	"	"	"	"	
Isopropylbenzene	ND	400	"	"	"	"	"	"	
p-Isopropyltoluene	ND	400	"	"	"	"	"	"	
Methylene chloride	ND	2000	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	4000	"	"	"	"	"	"	
Naphthalene	ND	400	"	"	"	"	"	"	
n-Propylbenzene	ND	400	"	"	"	"	"	"	
Styrene	ND	400	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	400	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	400	"	"	"	"	"	"	
Tetrachloroethene	ND	400	"	"	"	"	"	"	
Toluene	ND	400	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	400	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	400	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	400	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	400	"	"	"	"	"	"	
Trichloroethene	ND	400	"	"	"	"	"	"	
Trichlorofluoromethane	ND	400	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	400	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	1500	400	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	400	"	"	"	"	"	"	
Vinyl chloride	ND	400	"	"	"	"	"	"	
m,p-Xylene	4030	800	"	"	"	"	"	"	
o-Xylene	ND	400	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	104 %	73-137			"	"	"	"	
Surrogate: Toluene-d8	99.5 %	75-124			"	"	"	"	
Surrogate: 4-BFB	92.5 %	77-120			"	"	"	"	

North Creek Analytical - Bothell

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ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: Tosco #5028 Blaine
Project Number: 1017
Project Manager: John Meyer

Reported:
11/19/01 17:33

Volatile Organic Compounds by EPA Method 8260B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW3 (B1K0062-02) Water Sampled: 11/02/01 14:15 Received: 11/02/01 13:30									
Acetone	ND	25.0	ug/l	1	1K13035	11/13/01	11/13/01	EPA 8260B	
Benzene	4.82	1.00	"	"	"	"	"	"	
Bromobenzene	ND	1.00	"	"	"	"	"	"	
Bromochloromethane	ND	1.00	"	"	"	"	"	"	
Bromodichloromethane	ND	1.00	"	"	"	"	"	"	
Bromoform	ND	1.00	"	"	"	"	"	"	
Bromomethane	ND	2.00	"	"	"	"	"	"	
2-Butanone	ND	10.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
sec-Butylbenzene	5.92	1.00	"	"	"	"	"	"	
tert-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon disulfide	ND	1.00	"	"	"	"	"	"	
Carbon tetrachloride	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroethane	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	1.00	"	"	"	"	"	"	
Chloromethane	ND	5.00	"	"	"	"	"	"	
2-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
4-Chlorotoluene	ND	1.00	"	"	"	"	"	"	
Dibromochloromethane	ND	1.00	"	"	"	"	"	"	
1,2-Dibromo-3-chloropropane	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.00	"	"	"	"	"	"	
Dibromomethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	1.00	"	"	"	"	"	"	
Dichlorodifluoromethane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloroethene	ND	1.00	"	"	"	"	"	"	
cis-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
trans-1,2-Dichloroethene	ND	1.00	"	"	"	"	"	"	
1,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,3-Dichloropropane	ND	1.00	"	"	"	"	"	"	
2,2-Dichloropropane	ND	1.00	"	"	"	"	"	"	
1,1-Dichloropropene	ND	1.00	"	"	"	"	"	"	
cis-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	"	
trans-1,3-Dichloropropene	ND	1.00	"	"	"	"	"	"	

North Creek Analytical - Bothell

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ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: Tosco #5028 Blaine
Project Number: 1017
Project Manager: John Meyer

Reported:
11/19/01 17:33

Volatile Organic Compounds by EPA Method 8260B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW3 (B1K0062-02) Water Sampled: 11/02/01 14:15 Received: 11/02/01 13:30									
Ethylbenzene	ND	1.00	ug/l	1	1K13035	11/13/01	11/13/01	EPA 8260B	
Hexachlorobutadiene	ND	1.00	"	"	"	"	"	"	
2-Hexanone	ND	10.0	"	"	"	"	"	"	
Isopropylbenzene	ND	1.00	"	"	"	"	"	"	
p-Isopropyltoluene	1.43	1.00	"	"	"	"	"	"	
Methylene chloride	ND	5.00	"	"	"	"	"	"	
4-Methyl-2-pentanone	ND	10.0	"	"	"	"	"	"	
Naphthalene	ND	1.00	"	"	"	"	"	"	
n-Propylbenzene	ND	1.00	"	"	"	"	"	"	
Styrene	ND	1.00	"	"	"	"	"	"	
1,1,1,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"	
1,1,2,2-Tetrachloroethane	ND	1.00	"	"	"	"	"	"	
Tetrachloroethene	ND	1.00	"	"	"	"	"	"	
Toluene	ND	1.00	"	"	"	"	"	"	
1,2,3-Trichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,2,4-Trichlorobenzene	ND	1.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"	
1,1,2-Trichloroethane	ND	1.00	"	"	"	"	"	"	
Trichloroethene	ND	1.00	"	"	"	"	"	"	
Trichlorofluoromethane	ND	1.00	"	"	"	"	"	"	
1,2,3-Trichloropropane	ND	1.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
Vinyl chloride	ND	1.00	"	"	"	"	"	"	
m,p-Xylene	ND	2.00	"	"	"	"	"	"	
o-Xylene	ND	1.00	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	106 %	73-137			"	"	"	"	
Surrogate: Toluene-d8	99.0 %	75-124			"	"	"	"	
Surrogate: 4-BFB	94.5 %	77-120			"	"	"	"	

North Creek Analytical - Bothell

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815 Industry Dr
Tukwila WA/USA, 98188

Project: Tosco #5028 Blaine
Project Number: 1017
Project Manager: John Meyer

Reported:
11/19/01 17:33

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
Batch 1K16006: Prepared 11/16/01 Using EPA 5030B (P/T)										
Blank (1K16006-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)	43.5		"	48.0		90.6	62-139			
Surrogate: 4-BFB (PID)	44.7		"	48.0		93.1	62-125			
LCS (1K16006-BS1)										
Gasoline Range Hydrocarbons	500	50.0	ug/l	500		100	80-120			
Benzene	5.75	0.500	"	6.01		95.7	80-120			
Toluene	30.0	0.500	"	35.8		83.8	80-120			
Ethylbenzene	7.88	0.500	"	8.37		94.1	80-120			
Xylenes (total)	37.2	1.00	"	41.4		89.9	80-120			
Surrogate: 4-BFB (FID)	48.0		"	48.0		100	62-139			
Surrogate: 4-BFB (PID)	42.6		"	48.0		88.8	62-125			
LCS Dup (1K16006-BSD1)										
Gasoline Range Hydrocarbons	523	50.0	ug/l	500		105	80-120	4.50	25	
Benzene	5.76	0.500	"	6.01		95.8	80-120	0.174	40	
Toluene	29.8	0.500	"	35.8		83.2	80-120	0.669	40	
Ethylbenzene	7.85	0.500	"	8.37		93.8	80-120	0.381	40	
Xylenes (total)	37.0	1.00	"	41.4		89.4	80-120	0.539	40	
Surrogate: 4-BFB (FID)	47.9		"	48.0		99.8	62-139			
Surrogate: 4-BFB (PID)	42.6		"	48.0		88.8	62-125			
Matrix Spike (1K16006-MS1)										
Gasoline Range Hydrocarbons	482	50.0	ug/l	500	ND	96.4	70-130			
Benzene	5.82	0.500	"	6.01	ND	95.2	80-120			
Toluene	29.2	0.500	"	35.8	ND	81.0	75-117			
Ethylbenzene	7.62	0.500	"	8.37	ND	91.0	80-120			
Xylenes (total)	36.1	1.00	"	41.4	ND	87.2	80-120			
Surrogate: 4-BFB (FID)	48.4		"	48.0		101	62-139			
Surrogate: 4-BFB (PID)	42.7		"	48.0		89.0	62-125			

Source: B1K0085-03

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ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: Tosco #5028 Blaine
Project Number: 1017
Project Manager: John Meyer

Reported:
11/19/01 17:33

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 1K16006: Prepared 11/16/01 Using EPA 5030B (P/T)

Matrix Spike Dup (1K16006-MSD1)

Source: B1K0085-03

Gasoline Range Hydrocarbons	488	50.0	ug/l	500	ND	97.6	70-130	1.24	25	
Benzene	5.77	0.500	"	6.01	ND	94.4	80-120	0.863	40	
Toluene	29.8	0.500	"	35.8	ND	82.7	75-117	2.03	40	
Ethylbenzene	7.82	0.500	"	8.37	ND	93.4	80-120	2.59	40	
Xylenes (total)	37.1	1.00	"	41.4	ND	89.6	80-120	2.73	40	
Surrogate: 4-BFB (FID)	48.3		"	48.0		101	62-139			
Surrogate: 4-BFB (PID)	43.0		"	48.0		89.6	62-125			

North Creek Analytical - Bothell

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Amar Gill, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network



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ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: Tosco #5028 Blaine
Project Number: 1017
Project Manager: John Meyer

Reported:
11/19/01 17:33

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
Batch 1K05002: Prepared 11/05/01 Using EPA 3520C										
Blank (1K05002-BLK1)										
Diesel Range Hydrocarbons	ND	0.250	mg/l							
Lube Oil Range Hydrocarbons	ND	0.500	"							
Surrogate: 2-FBP	0.231		"	0.320		72.2	50-121			
Surrogate: Octacosane	0.262		"	0.320		81.9	56-123			
LCS (1K05002-BS1)										
Diesel Range Hydrocarbons	1.85	0.250	mg/l	2.00		92.5	62-122			
Surrogate: 2-FBP	0.271		"	0.320		84.7	50-121			
LCS Dup (1K05002-BSD1)										
Diesel Range Hydrocarbons	1.78	0.250	mg/l	2.00		89.0	62-122	3.86	40	
Surrogate: 2-FBP	0.250		"	0.320		78.1	50-121			

North Creek Analytical - Bothell

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ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: Tosco #5028 Blaine
Project Number: 1017
Project Manager: John Meyer

Reported:
11/19/01 17:33

Volatile Organic Compounds by EPA Method 8260B - 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 1K13035: Prepared 11/13/01 Using EPA 5030B

Blank (1K13035-BLK1)

Acetone	ND	25.0	ug/l
Benzene	ND	1.00	"
Bromobenzene	ND	1.00	"
Bromochloromethane	ND	1.00	"
Bromodichloromethane	ND	1.00	"
Bromoform	ND	1.00	"
Bromomethane	ND	2.00	"
2-Butanone	ND	10.0	"
n-Butylbenzene	ND	1.00	"
sec-Butylbenzene	ND	1.00	"
tert-Butylbenzene	ND	1.00	"
Carbon disulfide	ND	1.00	"
Carbon tetrachloride	ND	1.00	"
Chlorobenzene	ND	1.00	"
Chloroethane	ND	1.00	"
Chloroform	ND	1.00	"
Chloromethane	ND	5.00	"
2-Chlorotoluene	ND	1.00	"
4-Chlorotoluene	ND	1.00	"
Dibromochloromethane	ND	1.00	"
1,2-Dibromo-3-chloropropane	ND	5.00	"
1,2-Dibromoethane	ND	1.00	"
Dibromomethane	ND	1.00	"
1,2-Dichlorobenzene	ND	1.00	"
1,3-Dichlorobenzene	ND	1.00	"
1,4-Dichlorobenzene	ND	1.00	"
Dichlorodifluoromethane	ND	1.00	"
1,1-Dichloroethane	ND	1.00	"
1,2-Dichloroethane	ND	1.00	"
1,1-Dichloroethene	ND	1.00	"
cis-1,2-Dichloroethene	ND	1.00	"
trans-1,2-Dichloroethene	ND	1.00	"
1,2-Dichloropropane	ND	1.00	"
1,3-Dichloropropane	ND	1.00	"

North Creek Analytical - Bothell

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Amar Gill, Project Manager

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ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: Tosco #5028 Blaine
Project Number: 1017
Project Manager: John Meyer

Reported:
11/19/01 17:33

Volatile Organic Compounds by EPA Method 8260B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 1K13035: Prepared 11/13/01 Using EPA 5030B										
Blank (1K13035-BLK1)										
2,2-Dichloropropane	ND	1.00	ug/l							
1,1-Dichloropropene	ND	1.00	"							
cis-1,3-Dichloropropene	ND	1.00	"							
trans-1,3-Dichloropropene	ND	1.00	"							
Ethylbenzene	ND	1.00	"							
Hexachlorobutadiene	ND	1.00	"							
2-Hexanone	ND	10.0	"							
Isopropylbenzene	ND	1.00	"							
p-Isopropyltoluene	ND	1.00	"							
Methylene chloride	ND	5.00	"							
4-Methyl-2-pentanone	ND	10.0	"							
Naphthalene	ND	1.00	"							
n-Propylbenzene	ND	1.00	"							
Styrene	ND	1.00	"							
1,1,1,2-Tetrachloroethane	ND	1.00	"							
1,1,2,2-Tetrachloroethane	ND	1.00	"							
Tetrachloroethene	ND	1.00	"							
Toluene	ND	1.00	"							
1,2,3-Trichlorobenzene	ND	1.00	"							
1,2,4-Trichlorobenzene	ND	1.00	"							
1,1,1-Trichloroethane	ND	1.00	"							
1,1,2-Trichloroethane	ND	1.00	"							
Trichloroethene	ND	1.00	"							
Trichlorofluoromethane	ND	1.00	"							
1,2,3-Trichloropropane	ND	1.00	"							
1,2,4-Trimethylbenzene	ND	1.00	"							
1,3,5-Trimethylbenzene	ND	1.00	"							
Vinyl chloride	ND	1.00	"							
m,p-Xylene	ND	2.00	"							
o-Xylene	ND	1.00	"							
Surrogate: 1,2-DCA-d4	22.7		"	20.0		114	73-137			
Surrogate: Toluene-d8	20.0		"	20.0		100	75-124			
Surrogate: 4-BFB	21.5		"	20.0		108	77-120			

North Creek Analytical - Bothell

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Amar Gill, Project Manager

North Creek Analytical, Inc.
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ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: Tosco #5028 Blaine
Project Number: 1017
Project Manager: John Meyer

Reported:
11/19/01 17:33

Volatile Organic Compounds by EPA Method 8260B - 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 1K13035: Prepared 11/13/01 Using EPA 5030B

LCS (1K13035-BS1)

Benzene	11.2	1.00	ug/l	10.0		112	80-120			
Chlorobenzene	10.7	1.00	"	10.0		107	77-120			
1,1-Dichloroethene	11.5	1.00	"	10.0		115	80-120			
Toluene	9.03	1.00	"	10.0		90.3	80-120			
Trichloroethene	10.1	1.00	"	10.0		101	80-120			
Surrogate: 1,2-DCA-d4	20.8		"	20.0		104	73-137			
Surrogate: Toluene-d8	19.9		"	20.0		99.5	75-124			
Surrogate: 4-BFB	17.6		"	20.0		88.0	77-120			

LCS Dup (1K13035-BSD1)

Benzene	11.5	1.00	ug/l	10.0		115	80-120	2.64	20	Q-01
Chlorobenzene	11.4	1.00	"	10.0		114	77-120	6.33	20	
1,1-Dichloroethene	12.6	1.00	"	10.0		126	80-120	9.13	20	
Toluene	9.39	1.00	"	10.0		93.9	80-120	3.91	20	
Trichloroethene	10.3	1.00	"	10.0		103	80-120	1.96	20	
Surrogate: 1,2-DCA-d4	20.9		"	20.0		104	73-137			
Surrogate: Toluene-d8	18.5		"	20.0		92.5	75-124			
Surrogate: 4-BFB	21.0		"	20.0		105	77-120			

Batch 1K13039: Prepared 11/12/01 Using EPA 5030B

Blank (1K13039-BLK1)

Acetone	ND	25.0	ug/l							
Benzene	ND	1.00	"							
Bromobenzene	ND	1.00	"							
Bromochloromethane	ND	1.00	"							
Bromodichloromethane	ND	1.00	"							
Bromoform	ND	1.00	"							
Bromomethane	ND	2.00	"							
2-Butanone	ND	10.0	"							
n-Butylbenzene	ND	1.00	"							
sec-Butylbenzene	ND	1.00	"							
tert-Butylbenzene	ND	1.00	"							
Carbon disulfide	ND	1.00	"							
Carbon tetrachloride	ND	1.00	"							
Chlorobenzene	ND	1.00	"							

North Creek Analytical - Bothell

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ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: Tosco #5028 Blaine
Project Number: 1017
Project Manager: John Meyer

Reported:
11/19/01 17:33

Volatile Organic Compounds by EPA Method 8260B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	-----------------	-------	-------------	---------------	------	-------------	-----	-----------	-------

Batch 1K13039: Prepared 11/12/01 Using EPA 5030B

Blank (1K13039-BLK1)

Chloroethane	ND	1.00	ug/l
Chloroform	ND	1.00	"
Chloromethane	ND	5.00	"
2-Chlorotoluene	ND	1.00	"
4-Chlorotoluene	ND	1.00	"
Dibromochloromethane	ND	1.00	"
1,2-Dibromo-3-chloropropane	ND	5.00	"
1,2-Dibromoethane	ND	1.00	"
Dibromomethane	ND	1.00	"
1,2-Dichlorobenzene	ND	1.00	"
1,3-Dichlorobenzene	ND	1.00	"
1,4-Dichlorobenzene	ND	1.00	"
Dichlorodifluoromethane	ND	1.00	"
1,1-Dichloroethane	ND	1.00	"
1,2-Dichloroethane	ND	1.00	"
1,1-Dichloroethene	ND	1.00	"
cis-1,2-Dichloroethene	ND	1.00	"
trans-1,2-Dichloroethene	ND	1.00	"
1,2-Dichloropropane	ND	1.00	"
1,3-Dichloropropane	ND	1.00	"
2,2-Dichloropropane	ND	1.00	"
1,1-Dichloropropene	ND	1.00	"
cis-1,3-Dichloropropene	ND	1.00	"
trans-1,3-Dichloropropene	ND	1.00	"
Ethylbenzene	ND	1.00	"
Hexachlorobutadiene	ND	1.00	"
2-Hexanone	ND	10.0	"
Isopropylbenzene	ND	1.00	"
p-Isopropyltoluene	ND	1.00	"
Methylene chloride	ND	5.00	"
4-Methyl-2-pentanone	ND	10.0	"
Naphthalene	ND	1.00	"
n-Propylbenzene	ND	1.00	"
Styrene	ND	1.00	"

North Creek Analytical - Bothell

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Amar Gill, Project Manager

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ERI
815 Industry Dr
Tukwila, WA/USA, 98188

Project: Tosco #5028 Blaine
Project Number: 1017
Project Manager: John Meyer

Reported:
11/19/01 17:33

Volatile Organic Compounds by EPA Method 8260B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	------	----------------	-----	--------------	-------

Batch 1K13039: Prepared 11/12/01 Using EPA 5030B

Blank (1K13039-BLK1)

1,1,1,2-Tetrachloroethane	ND	1.00	ug/l
1,1,2,2-Tetrachloroethane	ND	1.00	"
Tetrachloroethene	ND	1.00	"
Toluene	ND	1.00	"
1,2,3-Trichlorobenzene	ND	1.00	"
1,2,4-Trichlorobenzene	ND	1.00	"
1,1,1-Trichloroethane	ND	1.00	"
1,1,2-Trichloroethane	ND	1.00	"
Trichloroethene	ND	1.00	"
Trichlorofluoromethane	ND	1.00	"
1,2,3-Trichloropropane	ND	1.00	"
1,2,4-Trimethylbenzene	ND	1.00	"
1,3,5-Trimethylbenzene	ND	1.00	"
Vinyl chloride	ND	1.00	"
m,p-Xylene	ND	2.00	"
o-Xylene	ND	1.00	"

Surrogate: 1,2-DCA-d4	20.9	"	20.0	104	73-137
Surrogate: Toluene-d8	20.3	"	20.0	102	75-124
Surrogate: 4-BFB	19.8	"	20.0	99.0	77-120

LCS (1K13039-BS1)

LCS (1K13039-BS1)						
Benzene	10.9	1.00	ug/l	10.0	109	80-120
Chlorobenzene	10.1	1.00	"	10.0	101	77-120
1,1-Dichloroethene	10.7	1.00	"	10.0	107	80-120
Toluene	9.07	1.00	"	10.0	90.7	80-120
Trichloroethene	10.0	1.00	"	10.0	100	80-120
Surrogate: 1,2-DCA-d4	20.5		"	20.0	102	73-137
Surrogate: Toluene-d8	20.1		"	20.0	100	75-124
Surrogate: 4-BFB	22.3		"	20.0	112	77-120

North Creek Analytical - Bothell

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Amar Gill, Project Manager

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ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: Tosco #5028 Blaine
Project Number: 1017
Project Manager: John Meyer

Reported:
11/19/01 17:33

Volatile Organic Compounds by EPA Method 8260B - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	Limit	RPD	RPD Limit	Notes
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Batch 1K13039: Prepared 11/12/01 Using EPA 5030B

LCS Dup (1K13039-BSD1)

Benzene	11.2	1.00	ug/l	10.0		112	80-120	2.71	20	
Chlorobenzene	10.6	1.00	"	10.0		106	77-120	4.83	20	
1,1-Dichloroethene	11.2	1.00	"	10.0		112	80-120	4.57	20	
Toluene	9.27	1.00	"	10.0		92.7	80-120	2.18	20	
Trichloroethene	10.2	1.00	"	10.0		102	80-120	1.98	20	
Surrogate: 1,2-DCA-d4	20.6		"	20.0		103	73-137			
Surrogate: Toluene-d8	20.2		"	20.0		101	75-124			
Surrogate: 4-BFB	21.0		"	20.0		105	77-120			

Source: B1K0200-03

Matrix Spike (1K13039-MS1)

Benzene	12.5	1.00	ug/l	10.0	ND	125	75-125			
Chlorobenzene	11.9	1.00	"	10.0	ND	119	75-125			
1,1-Dichloroethene	11.5	1.00	"	10.0	ND	115	40-154			
Toluene	9.78	1.00	"	10.0	ND	97.8	72-125			
Trichloroethene	13.7	1.00	"	10.0	2.47	112	73-131			
Surrogate: 1,2-DCA-d4	20.6		"	20.0		103	73-137			
Surrogate: Toluene-d8	20.1		"	20.0		100	75-124			
Surrogate: 4-BFB	22.4		"	20.0		112	77-120			

Source: B1K0200-03

Matrix Spike Dup (1K13039-MSD1)

Benzene	12.2	1.00	ug/l	10.0	ND	122	75-125	2.43	20	
Chlorobenzene	11.8	1.00	"	10.0	ND	118	75-125	0.844	20	
1,1-Dichloroethene	11.0	1.00	"	10.0	ND	110	40-154	4.44	30	
Toluene	9.83	1.00	"	10.0	ND	98.3	72-125	0.510	20	
Trichloroethene	13.0	1.00	"	10.0	2.47	105	73-131	5.24	20	
Surrogate: 1,2-DCA-d4	20.9		"	20.0		104	73-137			
Surrogate: Toluene-d8	20.1		"	20.0		100	75-124			
Surrogate: 4-BFB	20.5		"	20.0		102	77-120			

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ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: Tosco #5028 Blaine
Project Number: 1017
Project Manager: John Meyer

Reported:
11/19/01 17:33

Notes and Definitions

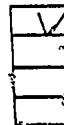
- E Estimated value. The reported value exceeds the calibration range of the analysis.
- Q-01 The spike recovery for this QC sample is outside of established control limits. Review of associated batch QC indicates the recovery for this analyte does not represent an out-of-control condition for the batch.
- DET Analyte DETECTED
- ND Analyte NOT DETECTED at or above the reporting limit
- NR Not Reported
- dry Sample results reported on a dry weight basis
- RPD Relative Percent Difference

North Creek Analytical - Bothell

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North Creek Analytical, Inc.
Environmental Laboratory Network



TOSCO CHAIN OF CUSTODY REPORT B1K0062

TOSCO INFORMATION	
Facility Number:	5028
Site Address:	247 D ST.
City, State, ZIP:	BLAINE, WA
Project/AWO Code	
Tosco Manager:	Tim Johnson
FACILITY TYPE: (check one)	☐ BP/☒ ☐ Terminal/Bulk Plant
☐ Brown Bear ☒ Former 76 Site ☐ Other	

CONSULTANT INFORMATION	
Firm:	ELT
Project#	1017
Address:	815 INDUSTRY DR TUCULA, WA 98188
Phone:	(206) 575-6220
Fax:	X 6423
Project Manager:	JOHN MEYER E-mail:
Sample Collection by:	ROY MORSE

Quality Assurance Data Level:

☒ A ☐ B

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
1. MW2	11/01/01 2:00	W	5
2. MW3	1 2:15	W	5
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

OR	WA	AK	NW Series	ID
TPH-HCID				
TPH-Gas				
BTEX				
EPA 8021 Mod.				
TPH-Gas + BTEX				
TPH-Diesel				
TPH-Diesel Extended				
TPH-Diesel-Ext. w/SG Cleanup				
Halogen. Volatiles				
EPA 8021				
Pesticides/PCBs or PCBs Only				
GC/MS Volatiles				
EPA 8260				
GC/MS Semi Vols.				
EPA 8270				
PAH's:				
8270 SIM or 8310				
Lead:				
Total or Dissolved				
TCLP or RCRA				
Metals (8)				

NCA SAMPLE NUMBER

-01
-02

Relinquished by:	Firm:	Date & Time	Received by:	Firm:	Date & Time
1. Roy Morse	ELT	11/01/01 12:10	John Meyer	NCA	11-02-01 12:10
2. [Signature]	NCA	11-20-01 13:30	[Signature]	NCA	11-20-01 13:30
3.					

Comments:

Comments:

W/O 3.0

GROUNDWATER SAMPLING - FIELD LOG

Client Name: Tosco
Location: 247 D St, BLAINE
Field Crew: POY MORSE

ERI Job No. 1017
Field Cleaning Performed:
Analysis:

Date: 10/01/21

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- Case Volume = $(d_{\text{max}} - d_{\text{min}})_{\text{in}} \times F$ 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 6/20/96

ENVIRONMENTAL RESOLUTIONS, INC.