

LUST 1975 unocal 5472
Seattle

DATE: February 11, 2002

TOSCO CORPORATION
GROUNDWATER MONITORING REPORT

Site No.: 5472 Address: 3460 1st Avenue South, 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, purged and sampled 7 groundwater monitoring wells.

WORK PROPOSED FOR NEXT QUARTER [First - 2002]:

- Monitor, purge, and sample 9 groundwater monitoring wells.

RECEIVED

MAR 04 2002

DEPT OF ECOLOGY

SUMMARY:

Frequency of Sampling Events:	Quarterly	(Quarterly, etc.)
Approximate Depth to Groundwater:	4 to 7 ft	(Measured Feet)
Groundwater Gradient:	Northerly and Westerly	(Direction)
	0.01 ft/ft	(Magnitude)
Maximum TPH-G/Benzene Concentrations:	146/1.42	(ppb)
Measurable Free Product Detected:	No	(Yes - ID well(s)/No)
Free Product Recovered This Quarter:	Unknown	(gallons)
Cumulative Free Product Recovered to Date:	Unknown	(gallons)
Bulk Soil Removed This Quarter:	None	(cubic yards)
Water Wells or Surface Waters w/in a 2,000'	Unknown	(Distance &
Radius and Respective Direction:	Unknown	Direction)
Current Remedial Action:	SVE/AS	(SVE/AS/P&T etc.)
Permits for Discharge:	PSCAA #8121	(NPDES, POTW, etc.)

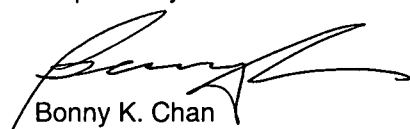
DISCUSSION:

- 3 of 7 wells sampled contained hydrocarbon concentrations exceeding MTCA Method A Cleanup Levels.

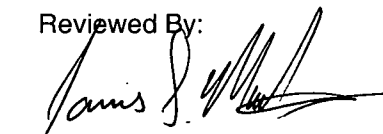
ATTACHMENTS:

Plate 1: Groundwater Sample Analysis Map - 12/26/01
Table 1: Groundwater Analytical Results
Laboratory Reports and Chain of Custody Documentation
Field Data Records

Prepared By:


Bonny K. Chan
Staff Engineer

Reviewed By:

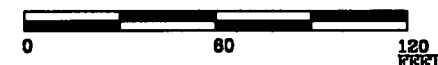

James S. Matthiessen
Senior Staff Scientist

cc: Washington State Department of Ecology, NW Region
Lisa Bona, GeoEngineers
Vasco Properties
D. Buck
S. Shanks



31023GWS

APPROXIMATE SCALE



03/07/01	06/03/01	09/19/01	12/05/01
484	350	247	148
1,410	---	1,990	1,970
<750	---	<577	<500
<0.500	<0.500	<0.500	1.42
<0.500	0.534	<0.500	2.15
<0.500	<0.500	<0.500	0.880
<1.00	1.58	1.60	4.27

MW14
93.28

1ST AVENUE SOUTH

MW13
93.49

03/07/01	06/03/01	09/19/01	12/05/01
151	93.9	97.7	99.2
1,690	281	815	983
<750	<750	<500	<500
<0.500	<0.500	<0.500	<0.500
<0.500	<0.500	<0.500	1.20
<0.500	<0.500	<0.500	<0.500
<1.00	<1.00	1.11	2.79

03/07/01	06/03/01	09/19/01	12/05/01
<50.0	<50.0	<50.0	<50.0
343	588	487	878
<750	1,840	<500	<500
0.522	<0.500	<0.500	0.713
0.524	<0.500	0.558	1.48
0.598	<0.500	1.19	0.522
2.08	<1.00	3.17	2.50

VIKING FIRE SYSTEMS

03/07/01	06/03/01	09/19/01	12/05/01
---	<50.0	<50.0	---
---	<250	284	---
---	<750	<500	---
---	<0.500	<0.500	---
---	<0.500	<0.500	---
---	<0.500	<0.500	---
---	<1.00	1.28	---

03/07/01	06/03/01	09/19/01	12/05/01
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---
---	---	---	---

03/07/01	06/03/01	09/19/01	12/05/01
---	---	---	<50.0
---	---	---	<250
---	---	---	<500
---	---	---	<0.500
---	---	---	0.558
---	---	---	<0.500
---	---	---	<1.00

03/07/01	06/03/01	09/19/01	12/05/01
481	<50.0	<50.0	99.4
8,830	1,180	1,420	4,010
788	1,210	<500	808
<0.500	<0.500	0.894	0.839
<0.500	<0.500	0.580	0.885
<0.500	<0.500	0.552	<0.500
<1.00	<1.00	1.59	1.32

MW8
93.28

MW9
NM
NS

MW7
94.35

MW1
94.38

03/07/01	06/03/01	09/19/01	12/05/01
---	---	---	91.8
---	---	---	4,720
---	---	---	2,280
---	---	---	0.591
---	---	---	0.775
---	---	---	<0.500
---	---	---	1.54

03/07/01	06/03/01	09/19/01	12/05/01
<50.0	<50.0	52.0	---
1,720	1,880	788	---
<750	<835	811	---
1.42	0.702	0.517	---
<0.500	<0.500	<0.500	---
0.782	0.808	<0.500	---
<1.00	<1.00	1.20	---

MW6
94.55

03/07/01	06/03/01	09/19/01	12/05/01
<50.0	<50.0	<50.0	<50.0
384	297	878	487
<750	<750	<500	587
<0.500	<0.500	<0.500	<0.500
<0.500	<0.500	<0.500	<0.500
<0.500	<0.500	<0.500	<0.500
<1.00	<1.00	<1.00	<1.00

SOUTH SPOKANE STREET

MW11

NM
NS

Laboratory Results
in ug/L (ppb)

06/04/02	Sample Data
1,950	Total Petroleum Hydrocarbons as Gasoline
1,340	Total Petroleum Hydrocarbons as Diesel
ND	Total Petroleum Hydrocarbons as Oil
22.8	Benzene
1.83	Toluene
1.05	Ethylbenzene
3.33	Total Xylenes

Numbers in Red Exceed
MTCA Method A Cleanup Levels
-- = Not Analyzed

<1.00 = Less than the State Laboratory Reporting Limit

SOURCE: Modified
from maps provided by
Tosco Corporation

FN 31023CWS



GROUNDWATER SAMPLE ANALYSIS MAP - 12/26/01

TOSCO SITE NO. 5472

3460 1st Avenue South
Seattle, Washington

EXPLANATION

MW1	Groundwater Monitoring Well
93.27	Groundwater Elevation
NM	Not Measured
NS	Not Sampled

PROJECT NO.

31023

PLATE

1

BKC: 02/11/02

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Tosco Site No. 5472
3460 1st Avenue South
Seattle, Washington
Page 1 of 4

Well Name	Sample Date	DTW	GW Elev.	TPH-G	TPH-D	TPH-O	B	T	E	X	Diss. Pb
MW1 99.52	02/25/91	5.43	92.59	LPH Present							
	10/19/92	7.20	92.60	LPH Present							
	08/28/93	7.36	92.27	LPH Present							
	10/13/94	8.23	91.55	LPH Present							
	04/25/95	5.82	93.90	30,000	12,000	9,600	890	<4.0	340	290	-
	07/12/95	NM	-	13,000	4,900	<8,000	1,000	<8.0	360	210	<2.0
	10/12/95	6.15	93.41	LPH Present							
	01/22/96	5.10	94.35	LPH Present							
	04/10/96	5.88	93.76	LPH Present							
	07/29/96	5.83	93.69	1,700	6,210	2,950	763	5.50	159	22.5	-
	10/25/96	6.32	93.37	LPH Present							
	03/05/97	4.96	94.56	2,240	3,860	2,100	116	<2.50	18.7	<5.00	-
	03/05/97 ^{NP}	4.96	94.56	4,150	334	<750	40.7	<2.50	58.9	15.3	-
	06/19/97	5.86	93.87	LPH Present							
	09/18/97	6.58	92.96	LPH Present							
	12/18/97	5.54	93.98	1,060	3,850	1,860	142	1.31	2.65	3.54	-
	03/11/98	5.14	94.38	2,720	5,930	3,890	120	2.77	4.23	5.20	-
	06/24/98	6.25	93.27	1,950	1,340	<750	22.8	1.83	1.05	3.33	-
	09/18/98	6.88	92.66	1,690	<250	<750	12.7	<2.50	<2.50	<5.00	-
	12/14/98	3.70	95.82	2,840	3,850	3,880	52.7	<5.00	11.7	<10.0	-
	03/28/99	4.50	95.02	2,480	4,130	2,280	180	1.87	20.6	8.13	-
	06/23/99	5.99	93.53	962	1,410	845	57.9	<2.50	<2.50	<5.00	-
	09/23/99	6.85	92.67	1,540	1,380	<750	7.29	0.731	2.13	2.07	-
	12/06/99	8.15	90.37	<50.0	525	<750	1.33	0.626	0.937	2.32	-
	03/13/00	5.24	94.28	700	4,340	2,280	188	<5.00	<5.00	<10.0	-
	06/28/00	5.45	94.07	<50.0	2,520	<1,290	<0.500	<0.500	<0.500	<1.00	-
	09/13/00	6.96	92.56	148	651	<750	1.04	<0.500	<0.500	<1.00	-
	03/27/01	Obstructed by vehicle	-	-	-	-	-	-	-	-	-
	06/22/01	NM	-	-	-	-	-	-	-	-	-
	09/19/01	Obstructed by vehicle	-	-	-	-	-	-	-	-	-
	12/28/01	5.14	94.38	91.6	4,720	2,280	0.591	0.775	<0.500	1.54	-
MW6 99.67	02/25/91	5.89	92.50	-	-	-	<1.0	<1.0	<1.0	<1.0	-
	10/19/92	7.84	92.03	<1,000	<250	-	<49.0	<1.0	<1.0	<1.0	-
	08/28/93	6.33	93.34	<100	<250	<750	<0.50	<0.50	<0.50	<0.50	-
	10/13/94	7.90	91.77	<50	450	<750	<0.50	<0.50	<0.50	<1.0	-
	04/25/95	5.83	94.04	<50	330	1,300	<0.50	<0.50	<0.50	<1.0	-
	07/12/95	NM	-	<50	350	1,200	<0.50	<0.50	<0.50	<1.0	-
	10/12/95	6.50	93.17	<50	330	870	<0.50	<0.50	<0.50	<1.0	-
	01/22/96	5.08	94.59	<50	810	<750	<0.50	<0.50	<0.50	<1.0	-
	04/10/96	5.73	93.94	<50	<250	<750	<0.50	<0.50	<0.50	<1.0	-
	07/29/96	5.55	94.12	<5	<250	<750	<0.50	<0.50	<0.50	<1.0	-
	10/25/96	6.25	93.42	<50	<250	<750	<0.50	<0.50	<0.50	<1.0	-
	03/05/97	5.09	94.58	<50	<250	<750	<0.5	<0.5	<0.5	<1.0	-
	03/05/97 ^{NP}	5.52	94.15	<50	<250	<750	<0.5	<0.5	<0.5	<1.0	-
	06/19/97 ^{NP}	5.52	94.15	<50	<250	<750	<0.5	<0.5	<0.5	<1.0	-
	09/18/97 ^{NP}	6.35	93.32	<50	<250	<750	<0.5	<0.5	<0.5	<1.0	-
	12/18/97	5.72	93.95	<50.0	269	<750	<0.500	<0.500	<0.500	<1.00	-
	03/11/98	5.25	94.42	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	-
	06/24/98	6.23	93.44	<50.0	257	<750	<0.500	<0.500	<0.500	1.88	-
	09/18/98	6.44	93.23	<50.0	2,320	1,300	<0.500	<0.500	<0.500	<1.00	-
	12/14/98	4.62	95.05	<50.0	<250	<750	<0.500	<0.500	<0.500	1.08	-
	03/28/99	4.59	95.08	<50.0	<250	775	<0.500	<0.500	<0.500	<1.00	-
	06/23/99	5.88	93.79	<50.0	383	<750	<0.500	<0.500	<0.500	<1.00	-
	09/23/99	6.59	93.08	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	-
	12/06/99	5.39	94.28	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	-
	03/13/00	5.37	94.30	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	-
	06/28/00	6.04	93.63	<50.0	355	<974	<0.500	<0.500	<0.500	<1.00	-
	09/13/00	6.61	93.06	<50.0	<250	<550	<0.500	<0.500	<0.500	<1.00	-
	03/27/01	5.42	94.25	<50.0	364	<750	<0.500	<0.500	<0.500	<1.00	-
	06/22/01	5.52	94.15	<50.0	297	<750	<0.500	<0.500	<0.500	<1.00	-
	09/19/01	5.92	93.75	<50.0	878	<500	<0.500	<0.500	<0.500	<1.00	-
	12/28/01	5.12	94.55	<50.0	467	567	<0.500	<0.500	<0.500	<1.00	-
MW7 98.50	02/25/91	4.33	92.68	-	-	-	<11.0	<1.0	<1.0	<1.0	-
	10/19/92	5.98	92.52	<1,000	620	-	6	<1.0	<1.0	<1.0	-
	08/28/93	6.16	92.34	<100	<250	<750	12	<0.50	<0.50	<0.50	-
	10/13/94	6.56	91.94	<50	540	<750	3.3	<0.50	<0.50	<1.0	-
	04/25/95	4.45	93.06	<50	<250	<750	<0.50	<0.50	<0.50	<1.0	-
	07/12/95	NM	-	<50	2,000	2,100	<0.50	<0.50	<0.50	<1.0	-
	10/12/95	4.90	93.60	<50	<250	950	<0.50	<0.50	<0.50	<1.0	-
	01/22/96	3.89	94.61	<50	520	<750	1.5	<0.50	<0.50	<1.0	-
	04/10/96	4.63	93.87	<50	<250	<750	<0.50	<0.50	<0.50	<1.0	-
	07/29/96	4.55	93.95	<50	<250	<750	<0.50	<0.05	<0.05	<0.10	-
	10/25/96	4.98	93.52	<50	<250	<750	<0.50	<0.50	<0.50	<1.0	-
	03/05/97	3.94	94.58	<50	<250	<750	<0.50	<0.50	<0.50	<1.0	-
	03/05/97 ^{NP}	3.94	94.58	<50	<250	<750	<0.50	<0.50	<0.50	<1.0	-
	06/19/97 ^{NP}	4.57	93.93	<50	<250	<750	<0.50	<0.50	<0.50	<1.0	-
	09/18/97 ^{NP}	5.29	93.21	<50	<250	<750	<0.50	<0.50	<0.50	<1.0	-
	12/18/97	4.43	94.07	<50.0	357	<750	<0.500	<0.500	<0.500	<1.00	-
	03/11/98	4.05	94.45	<50.0	<250	<750	0.875	<0.500	<0.500	<1.00	-
	06/24/98	4.91	93.59	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	-
	09/18/98	5.67	92.83	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	-
	12/14/98	3.57	94.93	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	-
	03/28/99	3.44	95.06	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	-
	06/23/99	4.91	93.59	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	-
	09/23/99	5.76	92.74	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	-
	12/06/99	NM	-	-	-	-	-	-	-	-	-
	03/13/00	4.27	94.23	<50.0	<455	<1,370	<0.500	<0.500	<0.500	<1.00	-
	06/28/00	NM	-	-	-	-	-	-	-	-	-
	09/13/00	5.88	92.64	<50.0	264	<750	<0.500	<0.500	<0.500	<1.00	-
	03/27/01	NM	-	-	-	-	-	-	-	-	-
	06/22/01	NM	-	-	-	-	-	-	-	-	-
	09/19/01	Obstructed by vehicle	-	-	-	-	-	-	-	-	-
	12/28/01	4.15	94.35	<50.0	<250	<500	<0.500	0.558	<0.500	<1.00	-

MTCA Method A Cleanup Level
Continued on Page 2.

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Tosco Site No. 5472
3460 1st Avenue South
Seattle, Washington
Page 2 of 4

Well Name	Sample Date	DTW	GW Elev.	TPH-G	TPH-D	TPH-O	B	T	E	X	Diss. Pb
MW8 98.96	02/25/91	5.44	92.08	-	-	-	14,700	16	29	32	-
	10/19/92	7.17	91.79	4,900	330	-	7,200	32	510	1,500	-
	08/26/93	6.91	92.05	7,500	690	-	16,000	210	800	870	-
	10/13/94	7.40	91.58	2,200	740	1,200	10,000	<40	<40	83	4.8
	04/25/95	5.41	93.55	8,700	1,500	1,200	10,000	200	340	1,000	<2.0
	07/12/95	NM	-	4,800	1,500	1,000	8,700	<8.0	130	690	<2.0
	10/12/95	6.48	92.48	3,500	1,500	1,100	11,000	16	18	59	-
	01/22/96	5.10	94.35	2,500	2,500	1,000	8,500	<20	<20	23	-
	04/10/96	5.83	93.33	2,300	2,000	750	3,400	<20	<20	21	-
	07/29/96	4.22	94.74	3,000	1,000	<750	8,550	<25.0	<25.0	<50.0	-
	10/25/96	6.03	92.93	3,500	<250	<750	3,500	<25.0	<25.0	50.3	-
	03/05/97	4.91	94.05	3,490	398	<750	3,970	<10.0	<10.0	<20.0	-
	03/05/97 ^{sp}	4.91	94.05	7,730	375	<750	830	<5.0	11.5	<10.0	-
	06/19/97 ^{sp}	5.46	93.50	6,220	621	<750	1,870	<12.5	13.1	<25.0	-
	09/16/97 ^{sp}	6.28	92.21	13,110	292	<750	4,380	<10	11.5	<20	-
	12/18/97	5.53	93.43	2,890	1,650	<750	4,890	<25.0	<25.0	<50.0	-
	03/11/98	5.14	93.82	<2,500	1,370	<750	2,640	<25.0	<25.0	<50.0	-
	06/24/98	6.15	92.81	2,850	1,700	<750	2,230	<25.0	<25.0	<50.0	-
	09/18/98	6.58	92.40	1,940	<250	<750	770	<12.5	<12.5	<25.0	-
	12/14/98	Obstructed by surface water			-	-	-	-	-	-	-
	03/26/99	NM	-	1,340	1,300	<750	2,770	<2.50	4.50	<8.50	-
	06/23/99	5.73	93.23	<2,500	1,110	<750	<25.0	<25.0	<25.0	<50.0	-
	09/23/99	6.52	92.44	1,420	1,020	<750	9,970	<2.00	<2.00	<7.00	-
	12/06/99	Obstructed by surface water			-	-	-	-	-	-	-
	03/13/00	5.89	93.07	890	350	<750	30.4	<2.50	<2.50	5.52	-
	06/28/00	5.18	93.78	<250	-	-	2.48	<2.50	<2.50	<5.00	-
	09/13/00	7.29	91.87	428	1,390	1,380	1.42	<0.770	<1.35	<2.84	-
	03/27/01	2.53	96.43	451	6,830	768	<0.500	<0.500	<0.500	<1.00	-
	06/22/01	2.19	96.77	<50.0	1,180	1,210	<0.500	<0.500	<0.500	<1.00	-
	9/18/01 ^{sp}	6.90	92.06	<50.0	1,420	<500	0.994	0.580	0.552	1.59	-
	12/28/01	5.70	93.28	99.4	4,010	602	0.839	0.865	<0.500	1.32	-
MW9 98.66	02/25/91	4.55	92.62	-	-	-	14,100	19,400	1,300	10,320	-
	10/19/92	6.47	92.19	15,800	35,000	-	6,000	150	350	1,500	-
	08/26/93	6.48	92.05	8,800	4,400	<750	7,100	100	630	1,300	-
	10/13/94	7.00	91.66	2,700	4,100	<750	3,000	11	190	140	-
	04/25/95	4.70	93.96	8,300	2,500	1,000	350	3.7	210	310	<2.0
	07/12/95	NM	-	1,600	2,600	1,300	98	<2.0	82	72	<2.0
	10/12/95	5.15	93.51	4,600	8,800	9,000	930	17	240	310	-
	01/22/96	4.06	94.60	4,000	9,200	1,900	110	<2.0	100	100	-
	04/10/96	4.86	93.80	3,800	3,000	1,000	170	<2.0	170	49	-
	07/29/96	4.71	93.95	1,800	990	890	1,060	<12.5	17.0	<25.0	-
	10/25/96	5.22	93.44	2,100	1,910	<750	887	9.31	9.91	<10.0	-
	03/05/97	4.11	94.55	1,030	22,400	2,240	48.4	<0.50	15.6	<1.0	-
	03/05/97 ^{sp}	4.11	94.55	2,120	8,150	1,060	48.4	<1.0	17.9	2.11	-
	06/19/97 ^{sp}	4.78	93.88	710	1,450	<750	104	<2.5	13.6	5.14	-
	09/16/97 ^{sp}	5.59	93.07	772	450	<750	664	6.27	2.27	4.61	-
	12/18/97	4.81	94.05	1,850	28,000	4,010	58.7	2.82	<2.50	<5.00	-
	03/11/98	4.19	94.47	219	2,380	<750	12.5	<0.500	0.781	<1.00	-
	06/24/98	5.04	93.62	383	603	<750	1,155	3.68	<2.50	<5.00	-
	09/18/98	6.02	92.64	443	1,090	<750	1,188	<2.50	<2.50	6.45	-
	12/14/98	3.94	94.72	377	2,670	<750	3.27	0.850	0.812	1.05	-
	03/26/99	3.81	95.05	257	4,150	820	1.68	1.04	<0.800	2.31	-
	06/23/99	5.11	93.55	123	4,040	<750	75.5	0.893	<0.500	<1.00	-
	09/23/99	6.08	92.58	278	785	<750	31.4	1.35	0.548	3.77	-
	12/06/99	3.97	94.69	231	2,230	<750	6.73	1.46	<0.500	<1.00	-
	03/13/00	4.67	93.99	<250	5,030	<750	5.62	<2.50	<2.50	<5.00	-
	06/28/00	5.26	93.40	<50	1,680	<750	29.4	0.770	<0.500	<1.00	-
	09/13/00	6.30	92.36	102	1,270	<750	<1.40	<0.500	<0.500	<1.00	-
	03/27/01	Obstructed by vehicle			-	-	-	-	-	-	-
	06/22/01	NM	-	-	-	-	-	-	-	-	-
	09/19/01	Obstructed by vehicle			-	-	-	-	-	-	-
	12/28/01	Obstructed by vehicle			-	-	-	-	-	-	-
MW10 99.62	02/25/91	NM	-	14,200	<250	-	2,000	9.0	200	1,300	72
	10/19/92	7.52	92.10	1,700	<250	<750	66	3.7	50	97	-
	08/26/93	7.44	92.18	720	280	<750	730	6.1	1.1	150	-
	10/13/94	7.96	91.66	1,000	45	990	2,100	21	47	270	-
	04/25/95	5.79	93.83	1,800	55	<750	2,500	27	<20	290	<2.0
	07/12/95	NM	-	1,800	55	<750	2,500	19	7.8	99	-
	10/12/95	6.85	92.77	2,200	420	<750	2,100	12	23	39	-
	01/22/96	5.82	93.80	1,900	440	<750	1,200	19	15	150	-
	04/10/96	6.08	93.54	1,500	300	<750	920	27.8	<25.0	<50.0	-
	07/29/96	5.24	94.38	<2,500	260	<750	3,880	-	-	-	-
	10/25/96	NM	-	-	-	-	-	-	-	-	-
	03/05/97	NM	-	-	-	-	-	-	-	-	-
	06/19/97 ^{sp}	5.95	93.67	53	<250	<750	691	7.48	<5.0	20.3	-
	09/16/97 ^{sp}	6.80	92.82	736	<250	<750	1,170	9.747	3.11	18.2	-
	12/18/97	NM	-	-	-	-	-	-	-	-	-
	03/11/98	NM	-	-	-	-	-	-	-	-	-
	06/24/98	6.84	92.98	301	378	<750	453	3.33	<2.50	6.74	-
	09/18/98	7.19	92.43	<1,000	292	<750	1,000	<10.0	<10.0	<20.0	-
	12/14/98	5.41	94.21	<1,000	383	<750	477	12.0	<10.0	29.2	-
	03/26/99	5.06	94.56	331	300	<750	291	3.32	<2.50	8.30	-
	06/23/99	6.23	93.39	89.0	289	<750	212	1.28	<0.500	2.26	-
	09/23/99	7.12	92.50	289	386	<750	459	2.68	0.877	7.58	-
	12/06/99	5.62	94.00	268	378	<750	190	2.63	<0.500	4.25	-
	03/13/00	5.73	93.89	139	280	<750	153	1.35	<0.500	4.22	-
	06/28/00	8.20	91.42	<50.0	283	<750	1.10	<0.500	<0.500	<1.00	-
	09/13/00	7.33	92.29	<50.0	3,780	<1,040	2,132	0.591	<0.500	1.62	-
	03/27/01	Flooded			-	-	-	-	-	-	-
	06/22/01	7.57	92.05	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	-
	09/19/01	9.39	90.23	<50.0	284	<500	<0.500	<0.500	<0.500	1.28	-
	12/28/01	Obstructed			-	-	-	-	-	-	-

MTCA Method A Cleanup Level
Continued on Page 3.

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Tosco Site No. 5472
3480 1st Avenue South
Seattle, Washington
Page 3 of 4

Well Name	Sample Date	DTW	GW Elev.	TPH-G	TPH-D	TPH-O	B	T	E	X	Diss. Pb
MW11 99.70	02/25/91	NM	-	-	-	-	-	-	-	-	-
	10/19/92	7.97	91.73	<1,000	<250	-	<0.1	<1.0	<1.0	<1.0	<5
	08/26/93	7.59	92.11	<100	<250	<750	<0.50	<0.50	<0.50	<0.50	<3
	10/13/94	8.20	91.50	<50	<300	<1,100	<0.50	<0.50	<0.50	<1.0	<2.0
	04/25/95	6.00	93.70	<50	<250	<750	<0.50	<0.50	<0.50	<1.0	<2.0
	07/12/95	NM	-	<50	<250	<750	<0.50	<0.50	<0.50	<1.0	<2.0
	10/12/95	7.0	92.70	<50	<250	<750	<0.50	<0.50	<0.50	<1.0	-
	01/22/96	NM	-	-	-	-	-	-	-	-	-
	04/10/96	5.97	93.73	<50	<250	<750	<0.50	<0.50	<0.50	<1.0	-
	07/29/96	5.84	93.86	<50	<250	<750	<0.50	<0.50	<0.50	<0.10	-
	10/25/96	6.55	93.15	<50	<250	<750	<0.50	<0.50	<0.50	<1.0	-
	03/05/97	5.41	94.29	<50	<250	<750	<0.50	<0.50	<0.50	<1.0	-
	03/05/97 ^{sp}	5.41	94.29	<50	<250	<750	<0.50	<0.50	<0.50	<1.0	-
	06/19/97 ^{sp}	5.81	93.89	<50	<250	<750	<0.50	<0.50	<0.50	<1.0	-
	06/19/97 ^{sp}	6.31	93.39	<50	<250	<750	<0.50	<0.50	<0.50	<1.0	-
	12/18/97	6.21	93.49	<50.0	285	<750	<0.500	<0.500	<0.500	<1.00	-
	03/11/98	5.55	94.15	<50.0	297	<750	<0.500	<0.500	<0.500	<1.00	-
	06/24/98	6.32	93.38	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	-
	09/18/98	6.35	93.35	<50.0	<1,380	<750	<0.500	<0.500	<0.500	<1.00	-
	12/14/98	4.90	94.80	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	-
	03/26/99	Obstructed by construction			-	-	-	-	-	-	-
	06/23/99	Obstructed by construction			-	-	-	-	-	-	-
	12/06/99	NM	-	-	-	-	-	-	-	-	-
	03/13/00	NM	-	-	-	-	-	-	-	-	-
	06/28/00	NM	-	-	-	-	-	-	-	-	-
	09/13/00	NM	-	-	-	-	-	-	-	-	-
	03/27/01	NM	-	-	-	-	-	-	-	-	-
	06/22/01	NM	-	-	-	-	-	-	-	-	-
	09/19/01	NM	-	-	-	-	-	-	-	-	-
	12/26/01	NM	-	-	-	-	-	-	-	-	-
MW12 100.32	02/25/91	NM	-	-	-	-	-	-	-	-	-
	10/19/92	8.37	91.95	<5,500	<650	-	<7,500	<1,800	<180	<1,810	<5
	08/26/93	8.11	92.21	-	-	-	-	-	-	-	-
	10/13/94	8.66	91.66	<18,000	<3,000	<750	<3,300	91	<1,100	<360	<2.0
	04/25/95	6.40	93.82	<32,000	<2,600	<2,000	<1,700	41	<470	<1,100	<2.0
	07/12/95	NM	-	<1,000	<8,500	<8,000	<3,500	100	<1,000	<2,100	<2.0
	10/12/95	7.45	92.87	<7,400	<2,800	<1,300	<340	7.5	<310	<740	-
	01/22/96	7.70	92.82	<33,000	<1,700	<1,100	<1,400	250	<1,200	<3,300	-
	04/10/96	6.53	93.79	<20,000	<1,300	<750	<390	7.7	<590	<940	-
	07/29/96	6.24	94.08	<15,100	<1,400	<750	<3,300	<25.0	<535	<1,320	-
	10/25/96	7.08	93.24	<9,900	<290	<750	<2,060	<25.0	<427	<1,040	-
	03/05/97	5.78	94.54	<17,600	<372	<750	<652	<777	15	<1,610	-
	03/05/97 ^{sp}	5.78	94.54	<14,500	<431	<750	<637	<10.0	<646	<968	-
	06/19/97 ^{sp}	6.45	93.67	<14,900	<558	<750	<535	<10.0	<525	<557	-
	06/19/97 ^{sp}	7.30	93.02	<8,450	<558	<750	<565	<10.0	<344	<246	-
	12/18/97	6.48	93.84	<9,950	<1,490	<918	<690	10.8	<382	<565	-
	03/11/98	5.98	94.34	<7,540	<1,360	<808	<625	10.7	<322	<362	-
	06/24/98	7.15	93.17	<2,490	<1,260	<750	<203	3.49	<35.1	<11.4	-
	09/18/98	7.49	92.83	848	<250	<750	<68.3	0.583	22.0	18.5	-
	12/14/98	5.21	95.11	<4,730	<744	<750	<229	5.81	<245	<198	-
	03/26/99	5.31	95.01	<1,980	<709	<750	<73.7	2.68	<87.0	<39.9	-
	06/23/99	6.71	93.61	<2,500	956	<750	<77.6	<25.0	<178.2	<50.0	-
	09/23/99	7.53	92.79	<1,160	<982	<750	<13.2	0.940	1.07	2.54	-
	12/06/99	10.98	89.36	60.9	516	<750	1.00	<0.500	<0.500	<1.00	-
	03/13/00	5.80	94.52	<378	<690	<750	102	5.18	<63.7	<38.9	-
	06/28/00	6.40	93.92	<50.0	748	<750	<10.6	<0.500	<0.500	<1.00	-
	09/13/00	7.40	92.92	246	749	<921	2.93	<0.500	4.81	1.88	-
	03/27/01	5.80	94.52	<50.0	<1,720	<750	1.42	<0.500	0.782	<1.00	-
	06/22/01	4.78	95.54	<50.0	<1,680	<835	0.702	<0.500	0.808	<1.00	-
	09/19/01	6.98	93.34	<52.0	786	<811	0.517	<0.500	<0.500	1.20	-
	12/26/01	Obstructed			-	-	-	-	-	-	-
MW13 100.24	06/24/98	7.80	92.44	<615	<602	<750	<2.50	<2.50	<2.50	<5.00	-
	09/18/98	8.16	92.08	<880	<1,130	<750	<2.25	<1.25	<1.25	3.51	-
	12/14/98	6.75	93.49	<852	<508	<750	1.68	0.640	<0.500	3.43	-
	03/28/99	6.30	93.84	<855	<539	<750	<2.50	1.25	<1.75	4.38	-
	06/23/99	7.38	92.88	<385	<927	<750	0.810	<0.500	0.717	1.98	-
	09/23/99	NM	-	<659	<1,340	<750	<2.00	<1.00	<0.500	<4.00	-
	12/06/99	7.15	93.09	<673	<1,010	<750	<0.500	<2.20	<0.900	<2.80	-
	03/13/00	6.95	93.29	<632	<980	<750	<5.00	<5.00	<5.00	<10.00	-
	06/28/00	7.66	92.58	<250	813	<750	<0.528	<2.50	<2.50	8.18	-
	09/13/00	8.25	91.99	240	888	<750	<0.730	<0.500	<0.500	<1.43	-
	03/27/01	7.35	92.89	<451	<1,690	<750	<0.500	<0.500	<0.500	<1.00	-
	06/22/01	7.48	92.78	93.9	261	<750	<0.500	<0.500	<0.500	<1.00	-
	09/19/01	7.76	92.48	97.7	615	<500	<0.500	<0.500	<0.500	1.11	-
	12/26/01	6.75	93.49	<99.2	<953	<500	<0.500	1.20	<0.500	2.79	-

MTCA Method A Cleanup Level

1,000^g

5

40

30

20

5

Continued on Page 4.

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
Tosco Site No. 5472
3460 1st Avenue South
Seattle, Washington
Page 4 of 4

Well Name	Sample Date	DTW	GW Elev.	TPH-G	TPH-D	TPH-O	B	T	E	X	Diss. Pb
MW14 99.94	06/24/98	7.60	92.34	2,230	503	<750	122	<10.0	<10.0	<20.0	-
	09/18/98	8.03	91.91	1,500	748	<750	75.4	<2.50	<2.50	13.3	-
	12/14/98	6.68	93.26	1,580	397	<750	182	<2.50	<2.50	9.39	-
	03/26/99	6.20	93.74	1,190	752	<750	353	<0.500	<0.900	4.84	-
	06/23/99	7.15	92.78	1,160	464	<750	21.1	<2.50	<2.50	<5.00	-
	09/23/99	7.91	92.03	2,950	512	<750	20.2	<1.00	<2.00	<8.00	-
	12/06/99	6.90	93.04	2,740	823	<750	27.0	0.503	<1.00	5.82	-
	03/13/00	6.74	93.20	1,780	689	<750	105	0.503	1.09	5.04	-
	06/28/00	7.47	92.47	<50.0	780	<750	2.09	<0.500	<0.500	<1.00	-
	09/13/00	8.10	91.84	1,410	1,050	<872	<0.570	<0.500	<0.600	<3.50	-
	03/27/01	7.23	92.71	484	1,410	<750	<0.500	<0.500	<0.500	<1.00	-
	06/22/01	7.41	92.53	350	-	-	<0.500	0.534	<0.500	1.58	-
	09/19/01	7.85	92.09	2,470	1,990	<577	<0.500	<0.500	<0.500	1.60	-
	12/26/01	6.66	93.28	1,460	1,970	<500	1.42	2.15	0.860	4.27	-
MW15 99.29	06/24/98	6.52	92.77	74.0	477	<750	14.1	1.03	0.566	1.72	-
	09/18/98	7.06	92.23	<50.0	846	<750	10.5	0.678	<0.500	2.32	-
	12/14/98	5.78	93.51	<50.0	<250	<750	<0.500	<0.500	<0.500	<1.00	-
	03/26/99	5.42	93.87	59.8	344	<750	2.86	1.90	1.93	3.28	-
	06/23/99	6.15	93.14	<50.0	<250	<750	0.672	<0.500	<0.500	<1.00	-
	09/23/99	6.90	92.39	<50.0	1,240	<750	1.44	<0.500	<0.500	1.57	-
	12/06/99	5.95	93.34	<50.0	<250	<750	0.951	<0.500	<0.500	1.01	-
	03/13/00	5.74	93.55	<50.0	<455	<1,330	5.81	<0.500	1.05	3.77	-
	06/28/00	6.41	92.88	973	<250	<750	1,570	<5.00	2.58	37.0	-
	09/13/00	7.05	92.24	<50.0	633	<750	<0.500	<0.500	<0.500	<1.00	-
	03/27/01	6.30	92.99	<50.0	343	<750	0.522	0.524	0.598	2.08	-
	06/22/01	6.46	92.83	<50.0	588	1,640	<0.500	<0.500	<0.500	<1.00	-
	09/19/01	6.90	92.39	<50.0	497	<500	<0.500	0.558	1.18	3.17	-
	12/26/01	5.68	93.61	<50.0	578	<500	0.713	1.48	0.522	2.50	-

MTCA Method A Cleanup Level

1,000*

5

40

30

20

5

EXPLANATION:

All 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; Corrected for free product where applicable using a specific gravity of 0.75.

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 8021B.

Diss. Pb = Dissolved Lead by EPA Method 7421.

NM= Not measured, - = Not analyzed or sampled.

< = Less than the stated laboratory reporting limit.

* = Sample collected without purging.

* Total Petroleum Hydrocarbons.

Samples collected from MW13, MW14, and MW15 on 06/24/98 identified as MWB, MWA, and MWC, respectively, on laboratory report.

October 1994 results are for total lead.

Shaded values equal or exceed MTCA Method A Cleanup Levels.

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



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

09 January 2002

John Meyer
ERI
815 Industry Dr
Tukwila, WA/USA 98188
RE: TOSCO #5472

Enclosed are the results of analyses for samples received by the laboratory on 12/27/01 12:20. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Amar Gill
Project Manager



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: TOSCO #5472
Project Number: 1023
Project Manager: John Meyer

Reported:
01/09/02 15:14

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW1	B1L0636-01	Water	12/26/01 11:00	12/27/01 12:20
MW6	B1L0636-02	Water	12/26/01 11:00	12/27/01 12:20
MW7	B1L0636-03	Water	12/26/01 12:00	12/27/01 12:20
MW8	B1L0636-04	Water	12/26/01 10:30	12/27/01 12:20
MW13	B1L0636-05	Water	12/26/01 12:00	12/27/01 12:20
MW14	B1L0636-06	Water	12/26/01 23:00	12/27/01 12:20
MW15	B1L0636-07	Water	12/26/01 12:00	12/27/01 12:20

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 1 of 10



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: TOSCO #5472
Project Number: 1023
Project Manager: John Meyer

Reported:
01/09/02 15:14

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
MW1 (B1L0636-01) Water Sampled: 12/26/01 11:00 Received: 12/27/01 12:20									
Gasoline Range Hydrocarbons	91.6	50.0	ug/l	1	2A07007	01/07/02	01/07/02	NWTPH-Gx/8021B	
Benzene	0.591	0.500	"	"	"	"	"	"	
Toluene	0.775	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	1.54	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	105 %	62-139			"	"	"	"	
Surrogate: 4-BFB (PID)	105 %	62-125			"	"	"	"	
MW6 (B1L0636-02) Water Sampled: 12/26/01 11:00 Received: 12/27/01 12:20									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	2A07007	01/07/02	01/07/02	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	ND	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	100 %	62-139			"	"	"	"	
Surrogate: 4-BFB (PID)	100 %	62-125			"	"	"	"	
MW7 (B1L0636-03) Water Sampled: 12/26/01 12:00 Received: 12/27/01 12:20									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	2A07007	01/07/02	01/07/02	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	0.558	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	ND	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	101 %	62-139			"	"	"	"	
Surrogate: 4-BFB (PID)	101 %	62-125			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 2 of 10



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: TOSCO #5472
Project Number: 1023
Project Manager: John Meyer

Reported:
01/09/02 15:14

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
MW8 (B1L0636-04) Water Sampled: 12/26/01 10:30 Received: 12/27/01 12:20									
Gasoline Range Hydrocarbons	99.4	50.0	ug/l	1	2A07007	01/07/02	01/07/02	NWTPH-Gx/8021B	
Benzene	0.839	0.500	"	"	"	"	"	"	I-06
Toluene	0.665	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	1.32	1.00	"	"	"	"	"	"	I-06
Surrogate: 4-BFB (FID)	94.0 %	62-139			"	"	"	"	
Surrogate: 4-BFB (PID)	98.5 %	62-125			"	"	"	"	
MW13 (B1L0636-05) Water Sampled: 12/26/01 12:00 Received: 12/27/01 12:20									
Gasoline Range Hydrocarbons	99.2	50.0	ug/l	1	2A07007	01/07/02	01/07/02	NWTPH-Gx/8021B	
Benzene	ND	0.500	"	"	"	"	"	"	
Toluene	1.20	0.500	"	"	"	"	"	"	
Ethylbenzene	ND	0.500	"	"	"	"	"	"	
Xylenes (total)	2.79	1.00	"	"	"	"	"	"	I-06
Surrogate: 4-BFB (FID)	97.1 %	62-139			"	"	"	"	
Surrogate: 4-BFB (PID)	98.1 %	62-125			"	"	"	"	
MW14 (B1L0636-06) Water Sampled: 12/26/01 23:00 Received: 12/27/01 12:20									
Gasoline Range Hydrocarbons	146	50.0	ug/l	1	2A07007	01/07/02	01/07/02	NWTPH-Gx/8021B	
Benzene	1.42	0.500	"	"	"	"	"	"	
Toluene	2.15	0.500	"	"	"	"	"	"	
Ethylbenzene	0.860	0.500	"	"	"	"	"	"	
Xylenes (total)	4.27	1.00	"	"	"	"	"	"	I-06
Surrogate: 4-BFB (FID)	100 %	62-139			"	"	"	"	
Surrogate: 4-BFB (PID)	101 %	62-125			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 3 of 10



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: TOSCO #5472
Project Number: 1023
Project Manager: John Meyer

Reported:
01/09/02 15:14

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
MW15 (B1L0636-07) Water Sampled: 12/26/01 12:00 Received: 12/27/01 12:20									
Gasoline Range Hydrocarbons	ND	50.0	ug/l	1	2A07007	01/07/02	01/07/02	NWTPH-Gx/8021B	
Benzene	0.713	0.500	"	"	"	"	"	"	
Toluene	1.48	0.500	"	"	"	"	"	"	
Ethylbenzene	0.522	0.500	"	"	"	"	"	"	
Xylenes (total)	2.50	1.00	"	"	"	"	"	"	
Surrogate: 4-BFB (FID)	101 %	62-139			"	"	"	"	
Surrogate: 4-BFB (PID)	101 %	62-125			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 4 of 10



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: TOSCO #5472
Project Number: 1023
Project Manager: John Meyer

Reported:
01/09/02 15:14

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
MW1 (B1L0636-01) Water Sampled: 12/26/01 11:00 Received: 12/27/01 12:20									
Diesel Range Hydrocarbons	4.72	0.250	mg/l	1	1L29001	12/29/01	01/01/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	2.28	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	82.3 %	50-121			"	"	"	"	
Surrogate: Octacosane	80.3 %	56-123			"	"	"	"	
MW6 (B1L0636-02) Water Sampled: 12/26/01 11:00 Received: 12/27/01 12:20									
Diesel Range Hydrocarbons	0.467	0.250	mg/l	1	1L29001	12/29/01	01/01/02	NWTPH-Dx	D-09
Lube Oil Range Hydrocarbons	0.587	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	76.4 %	50-121			"	"	"	"	
Surrogate: Octacosane	83.3 %	56-123			"	"	"	"	
MW7 (B1L0636-03) Water Sampled: 12/26/01 12:00 Received: 12/27/01 12:20									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	1L29001	12/29/01	01/01/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	83.3 %	50-121			"	"	"	"	
Surrogate: Octacosane	83.6 %	56-123			"	"	"	"	
MW8 (B1L0636-04) Water Sampled: 12/26/01 10:30 Received: 12/27/01 12:20									
Diesel Range Hydrocarbons	4.01	0.250	mg/l	1	1L29001	12/29/01	01/01/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	0.602	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	76.7 %	50-121			"	"	"	"	
Surrogate: Octacosane	83.0 %	56-123			"	"	"	"	
MW13 (B1L0636-05) Water Sampled: 12/26/01 12:00 Received: 12/27/01 12:20									
Diesel Range Hydrocarbons	0.983	0.250	mg/l	1	1L29001	12/29/01	01/01/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	80.3 %	50-121			"	"	"	"	
Surrogate: Octacosane	82.0 %	56-123			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 5 of 10



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: TOSCO #5472
Project Number: 1023
Project Manager: John Meyer

Reported:
01/09/02 15:14

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
MW14 (B1L0636-06) Water Sampled: 12/26/01 23:00 Received: 12/27/01 12:20									
Diesel Range Hydrocarbons	1.97	0.250	mg/l	1	1L29001	12/29/01	01/01/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	81.3 %	50-121			"	"	"	"	
Surrogate: Octacosane	86.6 %	56-123			"	"	"	"	
MW15 (B1L0636-07) Water Sampled: 12/26/01 12:00 Received: 12/27/01 12:20									
Diesel Range Hydrocarbons	0.578	0.250	mg/l	1	1L29001	12/29/01	01/01/02	NWTPH-Dx	
Lube Oil Range Hydrocarbons	ND	0.500	"	"	"	"	"	"	
Surrogate: 2-FBP	86.2 %	50-121			"	"	"	"	
Surrogate: Octacosane	85.2 %	56-123			"	"	"	"	

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 6 of 10



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: TOSCO #5472
Project Number: 1023
Project Manager: John Meyer

Reported:
01/09/02 15:14

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 Limits	RPD	RPD Limit	Notes
---------	--------	--------------------	-------	----------------	------------------	----------------	-----	--------------	-------

Batch 2A07007: Prepared 01/07/02 Using EPA 5030B (P/T)

Blank (2A07007-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)	43.0		"	48.0		89.6	62-139		
Surrogate: 4-BFB (PID)	46.6		"	48.0		97.1	62-125		

LCS (2A07007-BS1)

Gasoline Range Hydrocarbons	456	50.0	ug/l	500		91.2	80-120		
Benzene	6.44	0.500	"	6.01		107	80-120		
Toluene	35.2	0.500	"	35.8		98.3	80-120		
Ethylbenzene	9.10	0.500	"	8.37		109	80-120		
Xylenes (total)	44.1	1.00	"	41.4		107	80-120		
Surrogate: 4-BFB (FID)	52.7		"	48.0		110	62-139		
Surrogate: 4-BFB (PID)	48.7		"	48.0		101	62-125		

LCS Dup (2A07007-BSD1)

Gasoline Range Hydrocarbons	465	50.0	ug/l	500		93.0	80-120	1.95	25
Benzene	6.30	0.500	"	6.01		105	80-120	2.20	40
Toluene	34.6	0.500	"	35.8		96.6	80-120	1.72	40
Ethylbenzene	8.88	0.500	"	8.37		106	80-120	2.45	40
Xylenes (total)	43.7	1.00	"	41.4		106	80-120	0.911	40
Surrogate: 4-BFB (FID)	55.5		"	48.0		116	62-139		
Surrogate: 4-BFB (PID)	48.4		"	48.0		101	62-125		

Matrix Spike (2A07007-MS1)

Source: B1L0636-02

Gasoline Range Hydrocarbons	503	50.0	ug/l	500	ND	97.2	70-130		
Benzene	6.50	0.500	"	6.01	ND	104	80-120		
Toluene	34.7	0.500	"	35.8	ND	95.8	75-117		
Ethylbenzene	8.94	0.500	"	8.37	ND	107	80-120		
Xylenes (total)	43.5	1.00	"	41.4	ND	104	80-120		
Surrogate: 4-BFB (FID)	55.9		"	48.0		116	62-139		
Surrogate: 4-BFB (PID)	48.7		"	48.0		101	62-125		

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 7 of 10



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: TOSCO #5472
Project Number: 1023
Project Manager: John Meyer

Reported:
01/09/02 15:14

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 2A07007: Prepared 01/07/02 Using EPA 5030B (P/T)

Matrix Spike Dup (2A07007-MSD1)

Source: B1L0636-02

Gasoline Range Hydrocarbons	490	50.0	ug/l	500	ND	94.6	70-130	2.62	25	
Benzene	6.57	0.500	"	6.01	ND	105	80-120	1.07	40	
Toluene	35.1	0.500	"	35.8	ND	96.9	75-117	1.15	40	
Ethylbenzene	8.98	0.500	"	8.37	ND	107	80-120	0.446	40	
Xylenes (total)	44.0	1.00	"	41.4	ND	105	80-120	1.14	40	
Surrogate: 4-BFB (FID)	55.4		"	48.0		115	62-139			
Surrogate: 4-BFB (PID)	49.0		"	48.0		102	62-125			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 8 of 10



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: TOSCO #5472
Project Number: 1023
Project Manager: John Meyer

Reported:
01/09/02 15:14

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 1L29001: Prepared 12/29/01 Using EPA 3520C										
Blank (1L29001-BLK1)										
Diesel Range Hydrocarbons	ND	0.250	mg/l							
Lube Oil Range Hydrocarbons	ND	0.500	"							
Surrogate: 2-FBP	0.261		"	0.320		81.6	50-121			
Surrogate: Octacosane	0.273		"	0.320		85.3	56-123			
LCS (1L29001-BS1)										
Diesel Range Hydrocarbons	1.78	0.250	mg/l	2.00		89.0	62-122			
Surrogate: 2-FBP	0.315		"	0.320		98.4	50-121			
LCS Dup (1L29001-BSD1)										
Diesel Range Hydrocarbons	1.65	0.250	mg/l	2.00		82.5	62-122	7.58	40	
Surrogate: 2-FBP	0.280		"	0.320		87.5	50-121			

North Creek Analytical - Bothell

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.

Amar Gill, Project Manager

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 9 of 10



Seattle 11720 North Creek Pkwy N, Suite 400, Bothell, WA 98011-8244
425.420.9200 fax 425.420.9210
Spokane East 11115 Montgomery, Suite B, Spokane, WA 99206-4776
509.924.9200 fax 509.924.9290
Portland 9405 SW Nimbus Avenue, Beaverton, OR 97008-7132
503.906.9200 fax 503.906.9210
Bend 20332 Empire Avenue, Suite F-1, Bend, OR 97701-5711
541.383.9310 fax 541.382.7588

ERI
815 Industry Dr
Tukwila WA/USA, 98188

Project: TOSCO #5472
Project Number: 1023
Project Manager: John Meyer

Reported:
01/09/02 15:14

Notes and Definitions

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.
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

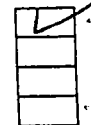
North Creek Analytical - Bothell

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

North Creek Analytical, Inc.
Environmental Laboratory Network

Page 10 of 10



TOSCO CHAIN OF CUSTODY REPORT

BIL0636

TOSCO INFORMATION	
Facility Number:	3472
Site Address:	3420 1st Ave South
City, State, ZIP:	SEATTLE, WA 98108
Project/AWO Code	
Tosco Manager:	
FACILITY TYPE: (check one) ☐ BP/☐ ☐ Terminal/Bulk Plant	
☐ Brown Bear ☒ Former 76 Site ☐ Other	

CONSULTANT INFORMATION	
Firm:	EIT
Project#	1023
Address:	815 INDUSTRY DR TOLKOWLA, WA 98188
Phone:	(206) 515-6220
Fax:	X6423
Project Manager:	JANE MATTHEWS
E-mail:	
Sample Collection by:	ROY MASE / TERRY LUNA

Quality Assurance Data Level:

☒ A ☐ B

A: Standard Summary

B: Standard + Chromatograms

Laboratory Turnaround Days:

☒ 1 ☐ 5 ☐ 3 ☐ 2

10 Day - Standard

SAMPLE IDENTIFICATION	SAMPLING DATE / TIME	MATRIX (W,S,O)	# OF CON-TAINERS
1. MW1	12/26/01	W	3
2. MW6			3
3. MW7	12:00 PM		3
4. MW8			3
5. MW13			3
6. MW14	11:00 PM		3
7. MW15			3
8.			
9.			
10.			

	OR	WA	AK	NW Series	ID
TPH-HCID					
TPH-Gas					
BTEX					
EPA 8021 Mod.					
TPH-Gas + BTEX					
TPH-Diesel					
TPH-Diesel-Ext.					
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

BIL0636 - 01
- 02
- 03
- 04
- 05
- 06
- 07

Relinquished by:	Firm:	Date & Time	Received by:	Firm:	Date & Time
1. Roy T. Allen	EIT	12/26/01	12/27/01	NCA	12/27/01 11:00
2. JH	NCA	12/27/01 12:20	12/27/01	NCA	12/27/01 12:20
3.					

Comments:

Comments:

7.12° W / 11

GROUNDWATER SAMPLING - FIELD LOG

Client Name: 10560 5472

Location: 157 Spokane

Field Crew: RAJ / TL

ERI Job No. 1023

Date: 12/26/01

Page 1 of 1

Field Cleaning Performed:

Analysis:

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

[illegible]

Revised 4/20/96

ENVIRONMENTAL RESOLUTIONS, INC.