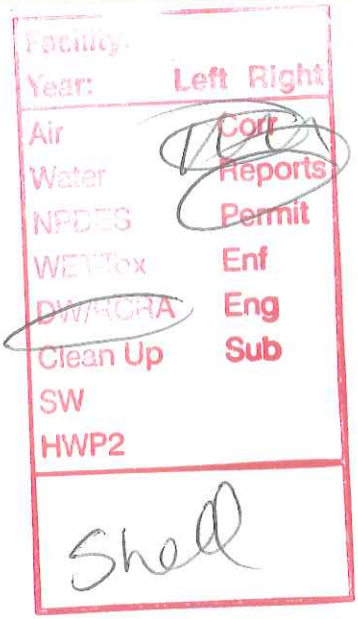


Shell Oil Products US
Puget Sound Refinery
P.O. Box 622
Anacortes, WA 98221
Tel 360.293.0800
Fax 360.293.0808
Email pugetsound@ShellOPUS.com
Web-Plant www.shellpugetsoundrefinery.com
Web-Corporate www.shellus.com

January 5, 2004

Mr. Mark Dirkx
WDOE – Industrial Section
P.O. Box 47600
Olympia, WA 98504-7600

Dear Mr. Dirkx,

Re: Puget Sound Refinery - RCRA Facility Investigation (RFI) and Interim Measures (SWMU 11) - EPA/Ecology ID# WAD 00927 6197

Please find attached, a Groundwater Monitoring and Sampling Report for the 4th quarter of 2004 for Puget Sound Refinery (RCRA Facility Permit Number WAD009276197, SWMU 11).

PSR appreciates Ecology's ongoing assistance regarding the remediation of the site. Questions or comments regarding this matter may be directed to Mr. Brian Rhodes at (360) 293-1761.

Sincerely,

Mark J. Koslicki
Manager – Health, Safety and Environment

BDR/br

cc: Paul Skyllingstad
Dept. of Ecology

Enclosure

storage\2004\rfi\swmu11\1204_Dec_samp

SHELL OIL PRODUCTS US
PUGET SOUND REFINERY

SWMU 11
Fourth Quarter 2004
Groundwater Sampling Report

December 2004

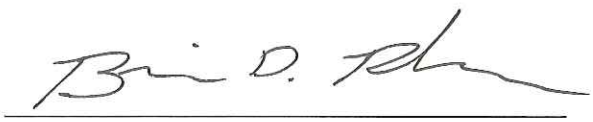
GROUNDWATER MONITORING AND SAMPLING REPORT
FOR THE FOURTH QUARTER OF 2004
PUGET SOUND REFINERY
SWMU 11

Prepared by

Puget Sound Refinery

Anacortes, Washington

December 2004



Written By:

Brian D. Rhodes, WA P.G. #2156

Staff Engineer

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LIST OF FIGURES AND APPENDICES

1.0 INTRODUCTION

This report summarizes remedial activities completed during the Fourth quarter of 2004 at Puget Sound Refinery, RCRA/RFI Solid Waste Management Unit 11. This report includes recent groundwater monitoring and sampling data collected during Oct. of 2004.

Puget Sound Refinery is located near the city of Anacortes in Washington State (Figure 1 -Site Vicinity Map). SWMU 11 is a surface impoundment (the West Impounding Basin) located in the southwest corner of the facility tank farm (Figure 2). During the fall of 1990, hydrocarbons which were thought to be associated with the unit were discovered during RFI investigative procedures (see "RFI Workplan Amendment and Project Update" - June 1991).

During April of 1992, a report entitled "Workplan for Conducting SWMU 11 Phase II RFI Activities" was submitted to EPA. The report provided details of the design and proposed installation of a light non-aqueous phase liquid (LNAPL) recovery system. The installation of the LNAPL/groundwater recovery system was recommended by EPA (EPA/Ecology ID# WAD 00927-6197) in a letter dated May 21, 1992. An "Implementation of Interim Measures Report" was submitted to EPA during February of 1993 that described the installation and start up of the LNAPL/groundwater recovery system at the site. Since the start up of the LNAPL/groundwater recovery system, groundwater monitoring has occurred on a quarterly basis and groundwater sampling has been conducted every six months. More recently, EPA has delegated oversite of the SWMU 11 project to the Department of Ecology.

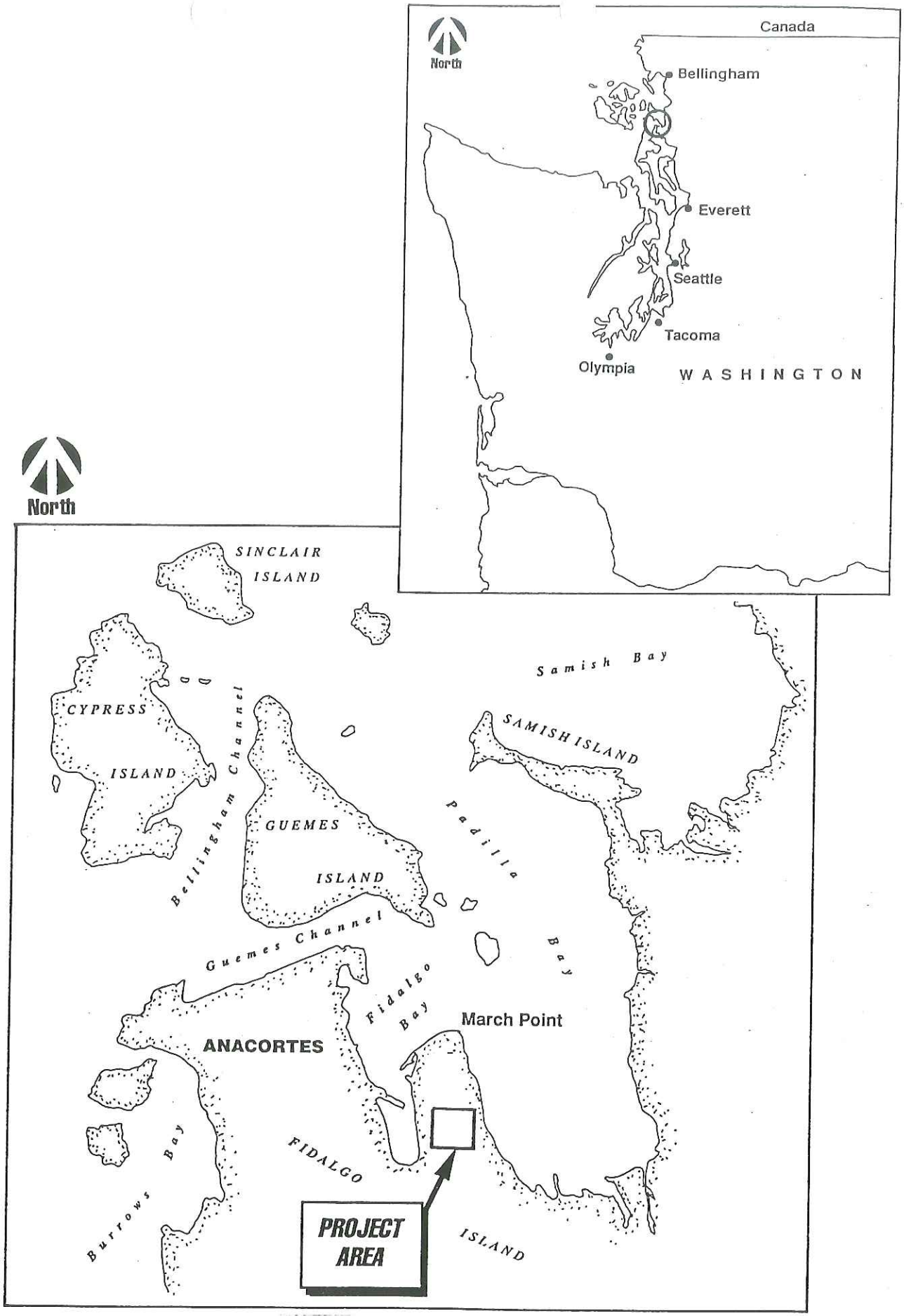
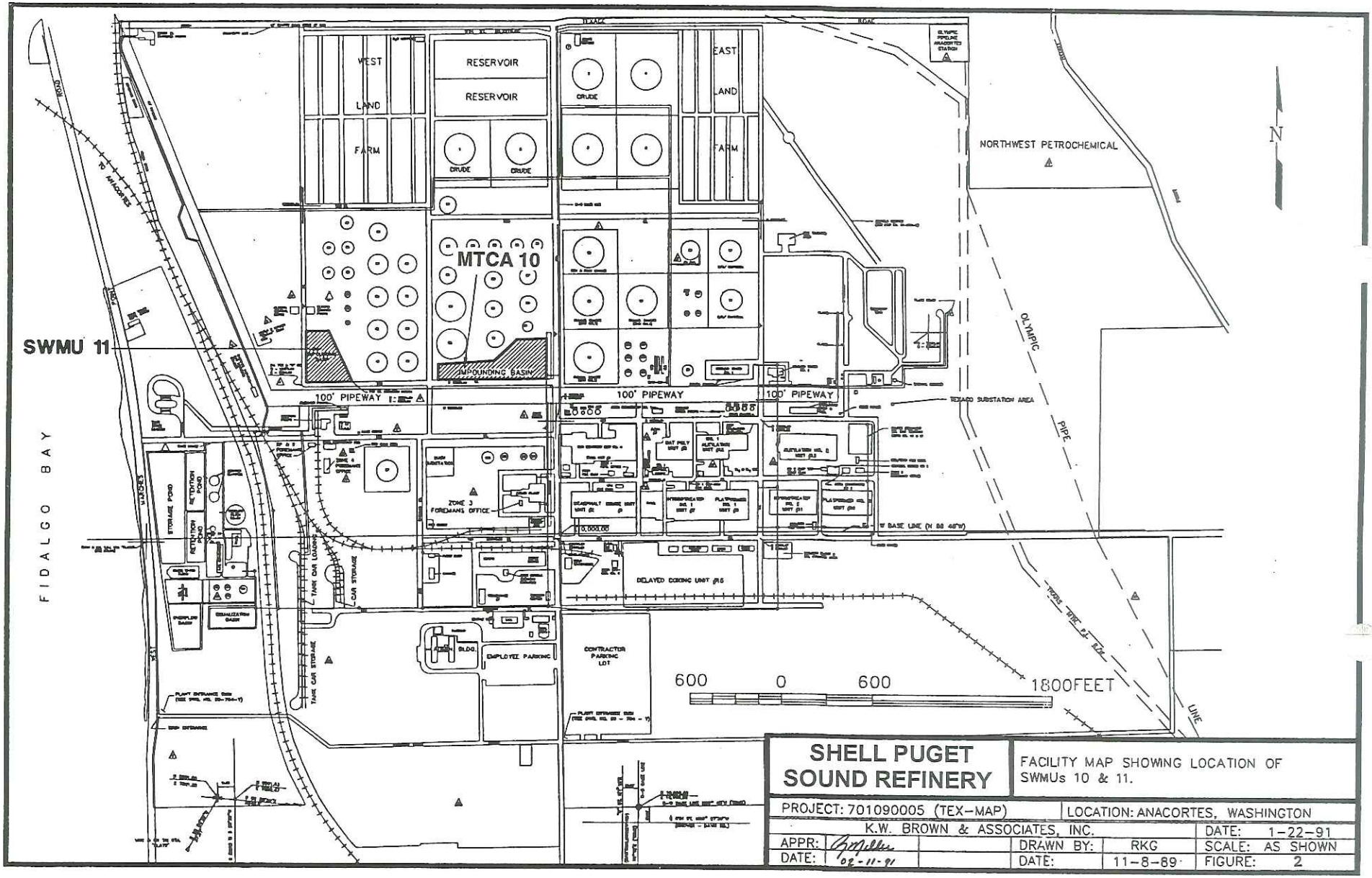


Figure 1. Vicinity map of Shell Puget Sound Refinery



SHELL PUGET SOUND REFINERY			FACILITY MAP SHOWING LOCATION OF SWMUs 10 & 11.	
PROJECT: 701090005 (TEX-MAP)			LOCATION: ANACORTES, WASHINGTON	
K.W. BROWN & ASSOCIATES, INC.				DATE: 1-22-91
APPR:		DRAWN BY:	RKG	SCALE: AS SHOWN
DATE: 02-11-91		DATE:	11-8-89	FIGURE: 2

2.0 FIELD WORK

2.1 GROUNDWATER SURFACE AND FREE PRODUCT MEASUREMENTS

Groundwater surface level measurements were collected from thirteen wells on August 12th, 2004. Well MW-62 and piezometer P21 were dry. Groundwater/product recovery pumps are located in wells MW-59 and MW-64. A summary of field monitoring data is included as Table 1.

Water level surface measurements were conducted using a Solinst Model 101 water level meter with alarm and stainless steel probe. Floating free product thickness measurements were conducted with a Keck Model KIR-89 Oil-Water Interface Meter. In an attempt to minimize the potential for cross-well contamination, the probe and tape for each meter was thoroughly cleaned with alconox (or equivalent) and decontaminated with distilled water following its introduction into each well. Well measurements were generally conducted in sequence from the least to the most contaminated well based on prior sampling data.

2.1.2 GROUNDWATER GRADIENT, DIRECTION AND FLOWRATE

Recent monitoring data indicates that the local groundwater gradient is generally to the west-southwest that is consistent with historic potentiometric surface data (Texaco - "1994 Annual Report").

TABLE 1 - WATER LEVEL/LNAPL FIELD MEASUREMENT DATA - SWMU 11 (08-12-04)

*ALL UNITS IN FEET OR CUBIC FEET UNLESS OTHERWISE LABELLED

WELL No.	DTW (FT)	DEPTH TO PRODUCT	TOT DEPTH (FT)	H20 SURF ELEV.	APP LNAPL THICKNESS	PVC MARK ELEV.	WELL DIA (FT)	WATER VOL IN WELL (Gal.)	BAILER VOL. (Gal.)	No. BAILS For 3 volumes	PURGE H2O VOLUME(Gal.)
MW-59	NS	NS	39.90	N/A	N/A	113.74	0.33	NS	NS	LNAPL	N/A
MW-60	33.68	N/A	54.40	74.29	N/A	107.97	0.33	13.523	1.359	29.86	40.57
MW-61	35.40	N/A	39.42	73.60	N/A	109.00	0.33	2.572	1.359	5.68	7.72
MW-62	Dry	N/A	25.64	DRY	DRY	108.22	0.33	NS	1.359	DRY	DRY
MW-63	32.06	N/A	40.67	77.72	N/A	109.78	0.33	5.509	1.359	LNAPL	16.53
MW-64	NS	NS	43.66	N/A	N/A	111.48	0.33	NS	1.359	LNAPL	NS
MW-65	28.18	N/A	41.37	92.23	N/A	120.41	0.33	8.439	1.359	18.63	25.32
MW-91	23.36	N/A	40.77	98.17	N/A	121.53	0.17	2.956	0.254	34.91	8.87
MW-92	31.80	N/A	36.77	86.60	N/A	118.40	0.17	0.844	0.254	9.97	2.53
MW-93	33.60	N/A	41.27	76.93	N/A	110.53	0.17	1.302	0.254	15.38	3.91
MW-94	37.18	N/A	39.60	71.48	N/A	108.66	0.17	0.411	0.254	4.85	1.23
MW-95	34.10	N/A	40.92	75.64	N/A	109.74	0.17	1.158	0.254	13.68	3.47
MW-96	33.56	N/A	40.41	77.96	N/A	111.52	0.17	1.163	0.254	13.74	3.49
MW-97	28.04	N/A	40.71	86.80	N/A	114.84	0.17	2.151	0.254	25.41	6.45
MW-98	32.62	N/A	35.54	71.48	N/A	104.10	0.17	0.496	0.254	NS	NS
P21	37	33.50	36	77.79	**3.50**	114.79	0.17	N/A	0.254	N/A	N/A
MW-118	32.66	N/A	83	75.36	N/A	108.02	0.17	8.547	0.254	100.95	25.64

2.2 FREE PRODUCT/GROUNDWATER RECOVERY

Table 2 is a compilation of historical floating free product (LNAPL) thickness measurements for wells in which free product has been historically observed (MW-59, MW-63, MW-64 and P-21). Product recovery pump sensors on wells MW-59 and MW-64 are set to remove any LNAPL layer until only a trace remains. In the eighteen months from 5/92 to 7/93, measured LNAPL levels in well MW-59 were reduced from 11.56' to a trace. Since 7/93 the product recovery system continues to remove free product from the recovery wells when it appears. LNAPL was not observed in Well MW-63 during the quarter. Due to the relatively slow apparent velocity of groundwater movement in soils in the vicinity of SWMU 11 (Texaco - 1994 Annual Report), Puget Sound Refinery intends to continue operation of the recovery systems in Wells MW-59 and MW-64 to allow for further slow migration of hydrocarbons into the recovery wells from surrounding soils. No floating free product has been observed to date in any wells around SWMU 11 other than those mentioned above.

The recovery systems pump groundwater and/or product intermittently based on groundwater recharge rates and the presence of free product in recovery wells as determined by sensors in the wells. Quantities of product and groundwater recovered by the systems through August of 2004 are shown in Figures 4 and 5. To date a total of approximately 233,385 Gallons of groundwater and 20,691 gallons of free product have been recovered at the site.

TABLE 2 - SWMU 11

FREE-PRODUCT THICKNESS MEASUREMENTS (FEET)

WELL No. NUMBER	DATE MEASURED	DEPTH TO PRODUCT (FT)	DEPTH TO WATER (FT)	***APPARENT THICKNESS (FT)***
MW-59	5/22/91	30.34	39.27	***8.93***
	12/11/91	28.53	39.27	***10.74***
	5/14/92	28.56	40.12	***11.56***
	10/01/92	31.09	37.81	***6.72***
	10/20/92	31.77	33.28	***1.51****
	07/19/93	ND	32.33***	***TRACE****
	5/16/94	35.56	35.57	***0.01****
	7/22/98	30.30	33.91	***3.61****
	7/30/01	35.30	34.65	***0.65****
MW-63	5/22/91	29.77	29.87	***0.10***
	12/11/91	26.37	26.38	***0.01***
	12/03/92	31.18	31.24	***0.06****
	5/6/93	30.44	30.44	***SHEEN***
	5/16/94	31.83	32.60	***0.77***
	5/3/95	ND	32.02	***ND***
	11/18/96	32.25	32.38	***0.13***
	5/22/97	29.56	29.41	***0.15***
	5/15/98 – 08/12/04	ND	Various	***ND***
MW-64	5/22/91	30.34	31.07	***0.73***
	12/11/91	29.14	29.63	***0.49***
	10/01/92	31.62	32.24	***0.62***
	7/19/93	ND	32.83	***TRACE****
	5/16/94	ND	34.61'	***ND****
	7/22/98	33.96	34.03	***TRACE****
	7/30/01	ND	32.22	***ND****

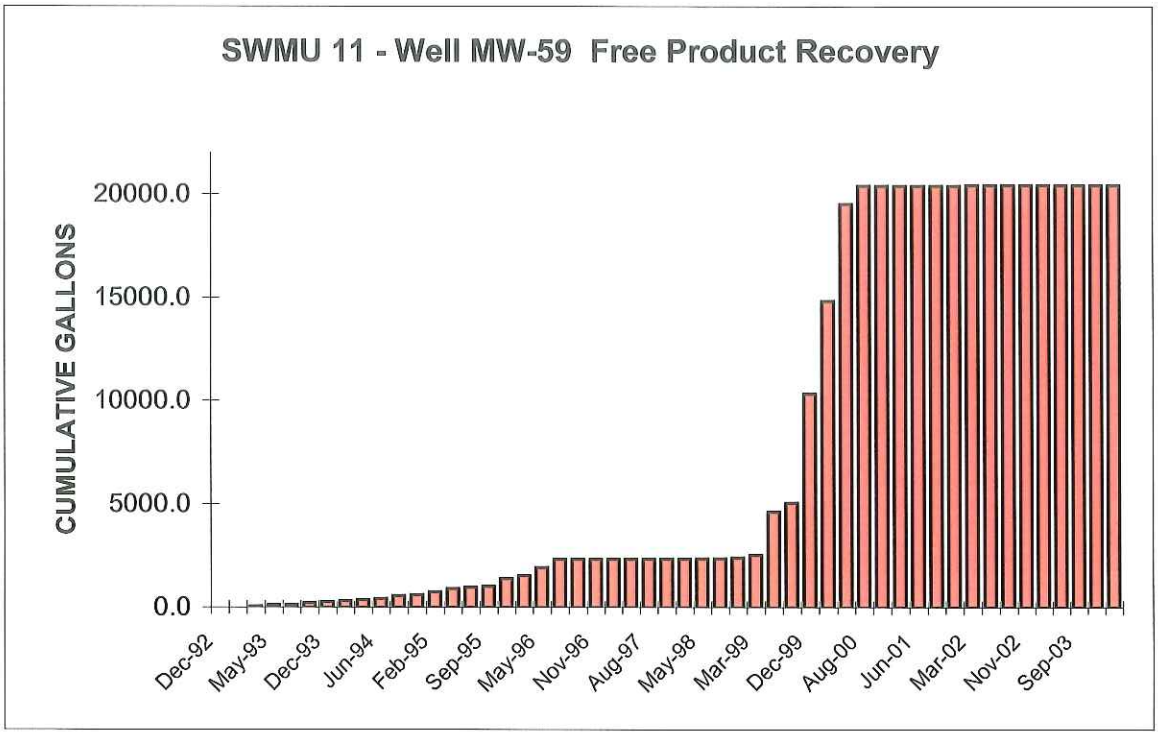
ND = None Detected; * Measured following free product (LNAPL) bailing event on 6-19-92;
** Measured just prior to installation of passive LNAPL recovery system;
*** Measured when pumps were temporarily removed from wells

TABLE 2 Continued - SWMU 11

FREE-PRODUCT THICKNESS MEASUREMENTS (FEET)

	WELL No. NUMBER	DATE MEASURED	DEPTH TO PRODUCT (FT)	DEPTH TO WATER (FT)	***APPARENT THICKNESS (FT)***
	P-21	5/16/94	33.83	34.12	***0.29***
		5/3/95	34.20	34.40	***0.20***
		11/18/96	33.20	36	***2.8***
		5/22/97	30.25	36	***5.75***
		5/15/98	29.98	33.48	***3.5***
		5/5/99	29.66	32.37	***2.71***
		5/8/00	29.92	34.36	***4.44***
		7/6/01	31.74	33.84	***2.10***
		10/22/02	32.50	34.76	***2.26***
		5/12/03	31.31	32.78	***1.47***
		4/8/04	31.20	34.24	***3.04***
		08/12/04	33.70	37.00	***3.30***

FIGURE 4


SWMU 11 - Well MW-59 Free Product Recovery
CUMULATIVE GALLONS
20000.0
15000.0
10000.0
5000.0
0.0
Dec-92
May-93
Dec-93
Jun-94
Feb-95
Sep-95
May-96
Nov-96
Aug-97
May-98
Mar-99
Dec-99
Aug-00
Jun-01
Mar-02
Nov-02
Sep-03

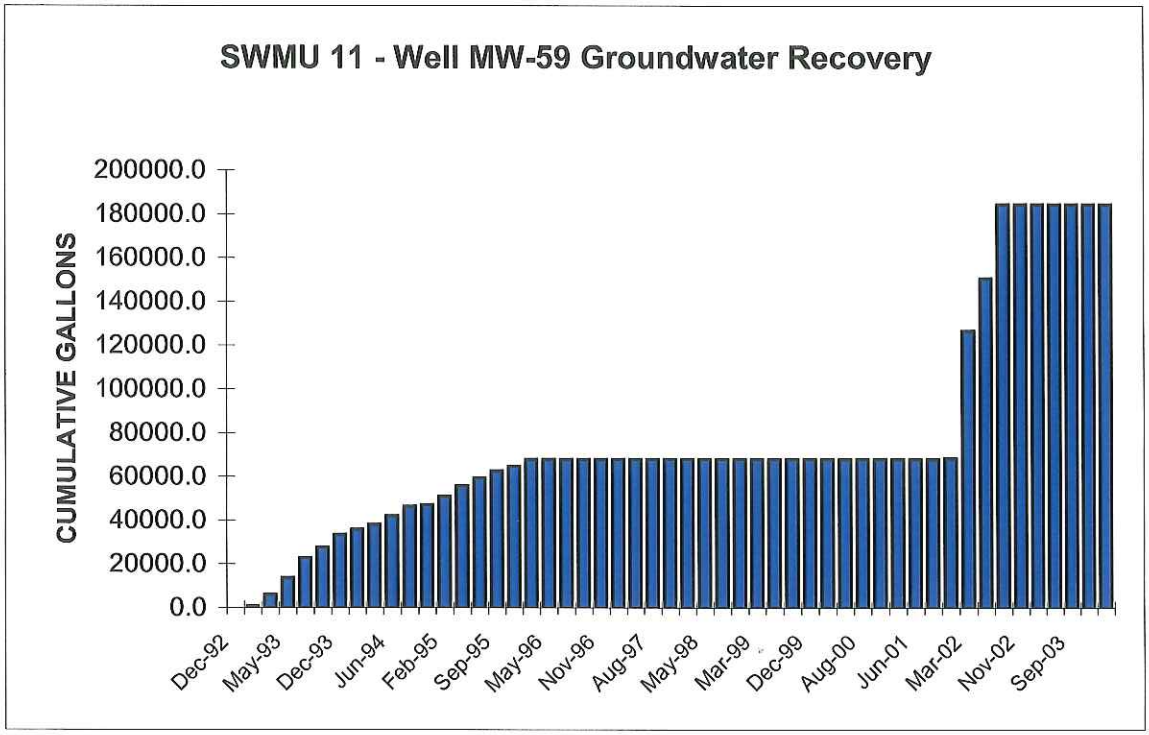
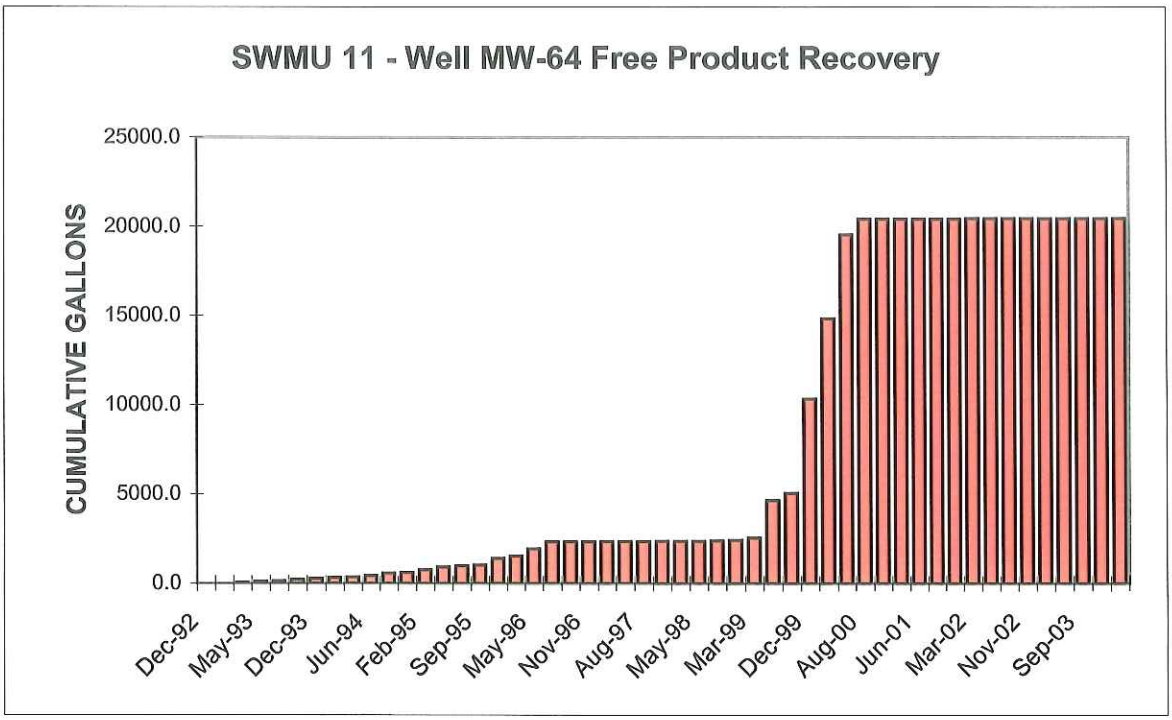
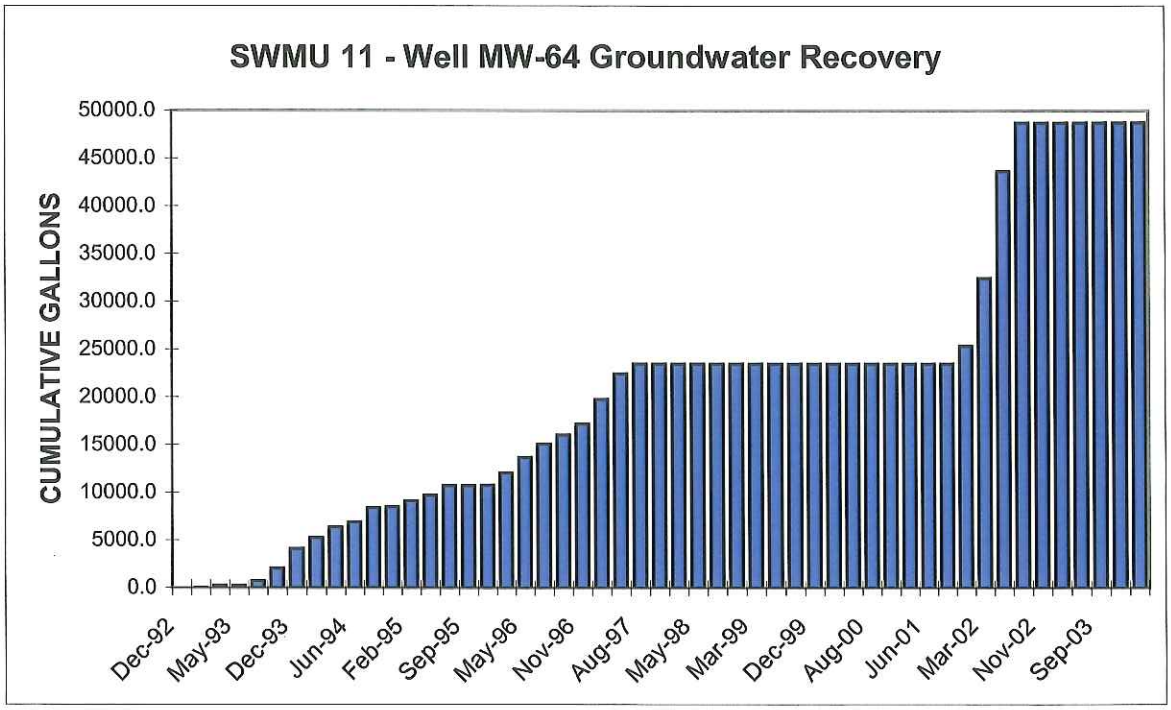

SWMU 11 - Well MW-59 Groundwater Recovery
CUMULATIVE GALLONS
200000.0
180000.0
160000.0
140000.0
120000.0
100000.0
80000.0
60000.0
40000.0
20000.0
0.0
Dec-92
May-93
Dec-93
Jun-94
Feb-95
Sep-95
May-96
Nov-96
Aug-97
May-98
Mar-99
Dec-99
Aug-00
Jun-01
Mar-02
Nov-02
Sep-03

FIGURE 5


SWMU 11 - Well MW-64 Free Product Recovery
CUMULATIVE GALLONS
25000.0
20000.0
15000.0
10000.0
5000.0
0.0
Dec-92
May-93
Dec-93
Jun-94
Feb-95
Sep-95
May-96
Nov-96
Aug-97
May-98
Mar-99
Dec-99
Aug-00
Jun-01
Mar-02
Nov-02
Sep-03


SWMU 11 - Well MW-64 Groundwater Recovery
CUMULATIVE GALLONS
50000.0
45000.0
40000.0
35000.0
30000.0
25000.0
20000.0
15000.0
10000.0
5000.0
0.0
Dec-92
May-93
Dec-93
Jun-94
Feb-95
Sep-95
May-96
Nov-96
Aug-97
May-98
Mar-99
Dec-99
Aug-00
Jun-01
Mar-02
Nov-02
Sep-03

In previous reports, it was noted that neither recovery well had shown any activity during the first half of 2001. As a result, both pumps were pulled from the wells on July 30th, 2001 for maintenance and adjustments relative to the groundwater hydrocarbon surface. Once the pumps were removed from the wells, no free product was discovered in well MW-64 and 0.65 feet of free product was discovered in well MW-59. Both pumps were cleaned and new parts ordered to rebuild the pumps. Following maintenance activities, MW-64 recovered significant quantities of groundwater.

In addition to the automated free product/groundwater recovery system, Puget Sound Refinery has also installed a passive, wick type adsorbent pad in well MW-63. Since no hydrocarbon has been found in MW-63 recently, the wick was not utilized during the quarter.

Historically, free product has been detected in Potentiometric Well P-21. The pumping system at well MW-59 appears to have created a capture zone with drawdown that encompasses well P-21 based on potentiometric surface data gathered in November 2001. Historically, the groundwater gradient and flow direction has not varied significantly.

2.3 SAMPLE COLLECTION

On October 13th, 2004, groundwater samples were collected from eleven (11) wells in the vicinity of SWMU 11 including wells MW-60, MW-61, MW-63, MW-65, and MW-91 through MW-97. In addition, two check samples consisting of a travel blank of distilled water and a duplicate of well MW-60 (labeled MW-100) were prepared and analyzed along with groundwater samples for quality control purposes. Wells MW-62 and MW-98 were dry or had insufficient recharge after purging and therefore could not be sampled. Wells MW-59 and MW-64 were not sampled due to access

limitations as a result of pumping systems in the wells. The original alleged source of hydrocarbons, the shipping basin, was cleaned and lined in early 1992. Each well was purged or bailed dry with a dedicated bailer prior to sampling. The volumes of water contained in each well is shown in Table 1 (Water Level/LNAPL Field Measurement Data). Conductivity and pH measurements were conducted in conjunction with the well purging procedure. Samples were collected using a disposable (VOSS) bailer that was dedicated to each well. Following collection, samples were placed in an ice chest with blue ice and immediately shipped to a State Certified Laboratory.

3.0 ANALYTICAL RESULTS

The groundwater samples from all eleven (11) of the above mentioned wells plus the sample blank and duplicate were analyzed for 'Skinner List' Volatiles, 'Skinner List' Semi -volatiles, 'Skinner List' Metals and Northwest Total Petroleum Hydrocarbons as diesel (NWTPHd). In addition, 2-methylnaphthalene and 1,1,1-trichloroethane were included as analytes since they were the only constituents which are not on the 'Skinner List' which were detected during historic sampling rounds and were not qualified as laboratory contaminants. Table 3 includes a selected list of skinner analytes (with the exception of TPH) that were submitted for analysis during this sampling event. Tables 4 through 7 are a compilation of the findings from the laboratory analyses. Actual laboratory reports and chain of custody are included in Appendix A.

TABLE 3 - SWMU 11 GROUNDWATER SAMPLING ANALYTES

Based on 2/93 Interim Measures Report

(ie: Skinner List + selected analytes in italics)

METALS

Antimony
Arsenic
Barium
Beryllium
Cadmium
Chromium
Cobalt
Lead
Mercury
Nickel
Selenium
Silver
Vanadium
Zinc
Copper

VOLATILE ORGANICS
EPA Method 8240

Benzene
Carbon Disulfide
Chlorobenzene
Chloroform
1,2-Dibromoethane
1,2-Dichloroethane
1,4-Dioxane
Methyl ethyl ketone
Styrene
Ethyl Benzene
Toluene
*1,1,1-trichloroethane**
*trichloroethene**
Xylenes
- M-Xylene
- O&P Xylene

SEMI-VOLATILES ORGANICS
(EPA Method 8270)

Anthracene
Benz(a)anthracene
Benzo(b)fluoranthene
Benzenethiol
Benzo(k)fluoranthene
Benzo(a)pyrene
Bis(2-ethylhexyl) phthalate
Butyl benzyl phthalate
Chrysene
Cresols (methylphenols)
- O-Cresol
- M&P Cresol

Dibenz(a,h)anthracene
2,4-Dimethylphenol
2,4-Dinitrophenol
Di-n-butyl phthalate
Dichlorobenzenes
- O-Dichlorobenzene
- M-Dichlorobenzene
- P-Dichlorobenzene

Diethyl phthalate
7,12-Dimethylbenz(a)anthracene
Dimethyl phthalate
Di-n-octyl phthalate
Fluoranthene
Indene
Methy chrysene
1-Methylnaphthalene
*2-Methylnaphthalene**
Naphthalene
4-Nitrophenol
Phenanthrene
Phenol
Pyrene
Pyridine
Quinoline

*Not from skinner list

SWMU 11 Well Sampling Event																					
Oct-04																					
		pH and Conductivity																			
		Well Numbers																			
Parameter	59	60	61	62	63	64	65	91	92	93	94	95	96	97	98	P-21	SB	100			Comments
pH Mean		7.1	7.2		7.1		7.2	7.1	7.1	7.2	7.2	7.3	7.1	7.3							
Conductivity		1120	940		870		800	790	780	840	810	960	870	840							
(mhos 10-3)																					

SWMU 11 Well Sampling Event																					
Oct-04																					
	Method 8260B - Skinner Volatiles (ug/l)								(TABLE 4)												
		Well Numbers																			
Selected	59	60	61	62	63	64	65	91	92	93	94	95	96	97	98	P-21	SB	Dup 60		Reporting	Comments
Analytes																				Limit	
Benzene		49	95		nd		nd	nd	5	nd	nd	nd	nd	nd			nd	49		1.0 - 10.0	
2-Butanone (MEK)		nd	nd		nd		nd	nd	nd	nd	nd	nd	nd	nd			nd	nd		1.0 - 10.0	
Carbon Disulfide		nd	nd		nd		nd	nd	nd	nd	nd	nd	nd	nd			nd	nd		1.0 - 10.0	
Chlorobenzene		nd	nd		nd		nd	nd	nd	nd	nd	nd	nd	nd			nd	nd		1.0 - 10.0	
Chloroform		nd	nd		nd		nd	nd	nd	nd	nd	nd	nd	nd			nd	nd		1.0 - 10.0	
1,2 Dichloroethane		nd	nd		nd		28	nd	50	nd	nd	nd	nd	nd			nd	nd		1.0 - 10.0	
Ethylbenzene		2	4		21		nd	nd	nd	nd	nd	nd	nd	nd			nd	1		1.0 - 10.0	
Styrene		nd	nd		nd		nd	nd	nd	nd	nd	nd	nd	nd			nd	nd		1.0 - 10.0	
Toluene		nd	1		nd		nd	nd	nd	nd	nd	nd	nd	nd			nd	nd		1.0 - 10.0	
1,1,1 - Trichloroethane		nd	nd		nd		nd	nd	nd	nd	nd	nd	nd	nd			nd	nd		1.0 - 10.0	
Trichloroethene		nd	nd		nd		nd	15	nd	nd	nd	nd	nd	nd			nd	nd		1.0 - 10.0	
Xylenes (total)		nd	nd		24		nd	nd	nd	nd	nd	nd	nd	nd			nd	nd		1.0 - 10.0	

SWMU 11 Well Sampling Event

Oct-04

Method 8270C - Skinner Semi-Volatiles (ug/l) **(TABLE 5)**

Selected Analytes	59	60	61	62	63	64	65	91	92	93	94	95	96	97	98	P-21	SB	Dup 60	Reporting Limit	Comments
		Well Numbers																		
Anthracene		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
Benzenethiol		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
Benzo(a)anthracene		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
Benzo(b)fluoranthene		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
Benzo(k)fluoranthene		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
Benzo(a)pyrene		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
Butyl benzyl phthalate		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
Chrysene		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
Dibenz(a,h)anthracene		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
Di-n-butyl phthalate		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
1,2-Dichlorobenzene		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
1,3-Dichlorobenzene		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
1,4 Dichlorobenzene		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
Diethyl phthalate		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
7,12-Dimethylbenz(a)-anthracene		ND	ND		ND ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
2,4-Dimethylphenol		12	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	12	<10	
Dimethyl phthalate		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
2,4 Dinitrophenol		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
Di-n-octyl phthalate		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
Indene		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
bis(2-ethylhexyl)-phthalate		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
1-Methylnaphthalene		ND	ND		42		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
Fluoranthene		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
2-Methylnaphthalene		ND	ND		37		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
2-Methylphenol		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	

SWMU 11 Well Sampling Event
Oct-04

Method 8270 - Skinner Semi-Volatiles (ug/l) **(TABLE 5 Continued)**

Selected Analytes	59	60	61	62	63	64	65	91	92	93	94	95	96	97	98	P-21	SB	100	Reporting Limit	Comments
	Well Numbers																			
4-Methylphenol		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
Naphthalnene		ND	ND		36		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
4-Nitrophenol		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
Pyridine		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
Quinoline		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
Phenanthrene		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
Phenol		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
Pyrene		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	
Methyl Chrysene		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	<10	

SWMU 11 Well Sampling Event
Oct-04

Total Extractable Hydrocarbons as Diesel (mg/l) **(TABLE 6)**

Analytes	59	60	61	62	63	64	65	91	92	93	94	95	96	97	98	P-21	SB	60 Dup	Reporting Limit	Comments
	Well Numbers																			
NWTPH-Dx		12.9	20.5		32.3		0.3	0.3	0.6	0.4	0.4	ND	ND	ND	Dry		ND	9.4	0.3	

SWMU 11 Well Sampling Event

Oct-04

Skinner Metals (mg/l) (TABLE 7)

Analytes	59	60	61	62	63	64	65	91	92	93	94	95	96	97	98	P-21	SB	60 dup	Reporting Limit	Comments
		Well Numbers																		
Antimony		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	0.001	
Arsenic		0.009	0.016		0.001		0.009	0.002	0.010	0.029	0.004	0.005	0.010	0.002			ND	0.009	0.001	
Barium		0.553	0.032		0.051		0.036	0.043	0.046	ND	0.046	0.014	0.056	0.024			ND	0.588	0.010	
Beryllium		ND	ND		ND		ND	ND	ND	ND	ND	ND	NT	NT			ND	ND	0.001	
Cadmium		0.005	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	0.001	
Chromium		0.002	ND		0.005		ND	ND	ND	ND	0.001	0.002	ND	0.001			ND	0.002	0.001	
Cobalt		ND	ND		ND		ND	ND	ND	0.001	0.002	ND	0.003	ND			ND	ND	0.001	
Copper		0.003	ND		ND		ND	0.002	ND	ND	ND	0.002	ND	0.001			ND	0.002	0.001	
Lead		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	0.001	
Mercury		ND	ND		ND		ND	ND	0.0003	ND	ND	ND	ND	ND			ND	ND	0.0002	
Nickel		0.004	0.005		0.002		0.002	0.005	0.002	0.002	0.011	0.005	0.006	0.005			ND	0.003	0.001	
Selenium		0.005	0.003		0.003		0.005	0.001	0.002	ND	0.001	ND	ND	ND			ND	0.005	0.001	
Silver		ND	ND		ND		ND	ND	ND	ND	ND	ND	ND	ND			ND	ND	0.001	
Vanadium		ND	0.003		0.004		0.010	0.010	ND	ND	0.005	0.006	0.003	0.005			ND	ND	0.001	

3.1 'SKINNER LIST' VOLATILE ORGANICS

No volatile organics were detected in groundwater above reporting limits for wells MW-93 through MW-97 and the sample blank. Table 4 summarizes the levels of selected volatile organics above PQL's found in other wells at the site. Additional full results are also provided in the laboratory analytical reports in Appendix A.

3.2 'SKINNER LIST' SEMI-VOLATILE ORGANICS

2,4-Dimethylphenol was detected in wells MW-60. Historically, Bis(2-ethylhexyl)phthalate has been detected in a number of wells at the site. No Bis(2-ethylhexyl) phthalate has been detected at the site during this sampling round. Bis (2-ethylhexyl) phthalate is a ubiquitous plasticizer and is a common 'ghost' chemical associated with sample contamination from plastics. Historic anomalous appearances of Bis (2-ethylhexyl) indicate that they are likely the result of laboratory contamination. Table 5 summarizes the levels of selected semi-volatile organics, which were detected above Practical Quantitative Limits in the vicinity of SWMU 11.

3.3 TOTAL EXTRACTABLE HYDROCARBONS

During this sampling round, a Total Extractable Hydrocarbon as diesel (WTPH-d) analysis was completed for each well where a sample was collected in addition to the analytes listed on Table 3. For petroleum related sites, TPH is useful as a non-specific screening tool which indicates the general nature and location of a hydrocarbon plume. Table 6 depicts the results of the analytical testing for TPH.

3.4 SKINNER METALS

Skinner metals that were detected in the groundwater at SWMU 11 are summarized in Table 7.

4.0 PLANNED ACTIVITIES

A dual pump hydrocarbon recovery system consisting of a water table depression pump and free product recovery pump (Workplan for Conducting SWMU 11 Phase II RFI Activities - April 1992) has been operating in wells MW-59 and MW-64 since December of 1992. A passive product recovery system has been periodically installed in well MW-63 since the middle of 1992. The operation and monitoring of the LNAPL/groundwater recovery systems will continue through 2005. Data regarding the progress of remedial activities at the site will be collected quarterly or as warranted by significant findings at the site.

APPENDIX A

LABORATORY REPORTS

CHAIN OF CUSTODY FORM

October 13, 2004 SAMPLING ROUND

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30 December 2004

Brian Rhodes
Shell Puget Sound Refinery
8505 South Texas Road
Anacortes, WA 98221

RE: SWMU 11 Sampling

Enclosed are the results of analyses for samples received by the laboratory on 10/15/04 09:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Kortland Orr
PM

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
MW-92	B4J0574-01	Water	10/13/04 12:00	10/15/04 09:50
MW-91	B4J0574-02	Water	10/13/04 12:00	10/15/04 09:50
MW-93	B4J0574-03	Water	10/13/04 12:00	10/15/04 09:50
MW-61	B4J0574-04	Water	10/13/04 12:00	10/15/04 09:50
MW-60	B4J0574-05	Water	10/13/04 12:00	10/15/04 09:50
MW-94	B4J0574-06	Water	10/13/04 12:00	10/15/04 09:50
MW-95	B4J0574-07	Water	10/13/04 12:00	10/15/04 09:50
MW-96	B4J0574-08	Water	10/13/04 12:00	10/15/04 09:50
MW-97	B4J0574-09	Water	10/13/04 12:00	10/15/04 09:50
MW-63	B4J0574-10	Water	10/13/04 12:00	10/15/04 09:50
MW-65	B4J0574-11	Water	10/13/04 12:00	10/15/04 09:50
MW-100	B4J0574-12	Water	10/13/04 12:00	10/15/04 09:50
BLANK	B4J0574-13	Water	10/13/04 12:00	10/15/04 09:50

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.

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

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
MW-92 (B4J0574-01) Water	**Sampled: 10/13/04 12:00**	**Received: 10/15/04 09:50**							
Diesel Range Hydrocarbons	**0.553**	0.250	mg/l	1	4J27012	10/27/04	10/30/04	NWTPH-Dx	
Surrogate: 2-FBP	*118 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*115 %*	*50-150*			"	"	"	"	
MW-91 (B4J0574-02) Water	**Sampled: 10/13/04 12:00**	**Received: 10/15/04 09:50**							
Diesel Range Hydrocarbons	**0.307**	0.250	mg/l	1	4J27012	10/27/04	10/30/04	NWTPH-Dx	
Surrogate: 2-FBP	*112 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*122 %*	*50-150*			"	"	"	"	
MW-93 (B4J0574-03) Water	**Sampled: 10/13/04 12:00**	**Received: 10/15/04 09:50**							
Diesel Range Hydrocarbons	**0.374**	0.250	mg/l	1	4J27012	10/27/04	10/30/04	NWTPH-Dx	
Surrogate: 2-FBP	*107 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*113 %*	*50-150*			"	"	"	"	
MW-61 (B4J0574-04) Water	**Sampled: 10/13/04 12:00**	**Received: 10/15/04 09:50**							
Diesel Range Hydrocarbons	**20.5**	2.50	mg/l	10	4J27012	10/27/04	10/30/04	NWTPH-Dx	
Surrogate: 2-FBP	*92.7 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*121 %*	*50-150*			"	"	"	"	
MW-60 (B4J0574-05) Water	**Sampled: 10/13/04 12:00**	**Received: 10/15/04 09:50**							
Diesel Range Hydrocarbons	**12.9**	1.25	mg/l	5	4J27012	10/27/04	10/30/04	NWTPH-Dx	
Surrogate: 2-FBP	*98.4 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*121 %*	*50-150*			"	"	"	"	
MW-94 (B4J0574-06) Water	**Sampled: 10/13/04 12:00**	**Received: 10/15/04 09:50**							
Diesel Range Hydrocarbons	**0.444**	0.250	mg/l	1	4J22009	10/22/04	10/25/04	NWTPH-Dx	
Surrogate: 2-FBP	*83.5 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*94.9 %*	*50-150*			"	"	"	"	

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

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
MW-95 (B4J0574-07) Water	**Sampled: 10/13/04 12:00**	**Received: 10/15/04 09:50**							
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4J22009	10/22/04	10/25/04	NWTPH-Dx	
Surrogate: 2-FBP	*3.23 %*	*50-150*			"	"	"	"	*X*
Surrogate: Octacosane	*42.2 %*	*50-150*			"	"	"	"	*X*
MW-96 (B4J0574-08) Water	**Sampled: 10/13/04 12:00**	**Received: 10/15/04 09:50**							
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4J22009	10/22/04	10/25/04	NWTPH-Dx	
Surrogate: 2-FBP	*84.3 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*106 %*	*50-150*			"	"	"	"	
MW-97 (B4J0574-09) Water	**Sampled: 10/13/04 12:00**	**Received: 10/15/04 09:50**							
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4J22009	10/22/04	10/25/04	NWTPH-Dx	
Surrogate: 2-FBP	*82.8 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*131 %*	*50-150*			"	"	"	"	
MW-63 (B4J0574-10) Water	**Sampled: 10/13/04 12:00**	**Received: 10/15/04 09:50**							
Diesel Range Hydrocarbons	**32.3**	2.50	mg/l	10	4J22009	10/22/04	10/26/04	NWTPH-Dx	
Surrogate: 2-FBP	*115 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*104 %*	*50-150*			"	"	*10/25/04*	"	
MW-65 (B4J0574-11) Water	**Sampled: 10/13/04 12:00**	**Received: 10/15/04 09:50**							
Diesel Range Hydrocarbons	**0.311**	0.250	mg/l	1	4J22009	10/22/04	10/25/04	NWTPH-Dx	
Surrogate: 2-FBP	*85.1 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*128 %*	*50-150*			"	"	"	"	
MW-100 (B4J0574-12) Water	**Sampled: 10/13/04 12:00**	**Received: 10/15/04 09:50**							
Diesel Range Hydrocarbons	**9.43**	1.25	mg/l	5	4J22009	10/22/04	10/25/04	NWTPH-Dx	
Surrogate: 2-FBP	*84.0 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*90.3 %*	*50-150*			"	"	"	"	

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

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
BLANK (B4J0574-13) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Diesel Range Hydrocarbons	ND	0.250	mg/l	1	4J22009	10/22/04	10/25/04	NWTPH-Dx	
Surrogate: 2-FBP	*81.6 %*	*50-150*			"	"	"	"	
Surrogate: Octacosane	*126 %*	*50-150*			"	"	"	"	

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Dissolved Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-92 (B4J0574-01) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Silver	ND	0.00100	mg/l	1	4J20033	10/20/04	10/27/04	EPA 6020	
Arsenic	**0.0104**	0.00100	"	"	"	"	10/22/04	"	
Barium	**0.0463**	0.0100	"	"	"	"	"	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Cobalt	ND	0.00100	"	"	"	"	"	"	
Chromium	ND	0.00100	"	"	"	"	"	"	
Copper	ND	0.00100	"	"	"	"	"	"	
Mercury	**0.000264**	0.000200	"	"	4J20034	10/20/04	10/22/04	EPA 7470A	
Nickel	**0.00187**	0.00100	"	"	4J20033	10/20/04	10/22/04	EPA 6020	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	10/26/04	"	
Selenium	**0.00191**	0.00100	"	"	"	"	"	"	
Vanadium	ND	0.00100	"	"	"	"	10/22/04	"	
MW-91 (B4J0574-02) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Silver	ND	0.00100	mg/l	1	4J20033	10/20/04	10/27/04	EPA 6020	
Arsenic	**0.00208**	0.00100	"	"	"	"	10/22/04	"	
Barium	**0.0432**	0.0100	"	"	"	"	"	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Cobalt	ND	0.00100	"	"	"	"	"	"	
Chromium	**0.00291**	0.00100	"	"	"	"	"	"	
Copper	**0.00168**	0.00100	"	"	"	"	"	"	
Mercury	ND	0.000200	"	"	4J20034	10/20/04	10/22/04	EPA 7470A	
Nickel	**0.00450**	0.00100	"	"	4J20033	10/20/04	10/22/04	EPA 6020	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	10/26/04	"	
Selenium	**0.00111**	0.00100	"	"	"	"	"	"	
Vanadium	**0.0104**	0.00100	"	"	"	"	10/22/04	"	

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.

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Dissolved Metals by EPA 6000/7000 Series Methods

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-93 (B4J0574-03) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Silver	ND	0.00100	mg/l	1	4J20033	10/20/04	10/27/04	EPA 6020	
Arsenic	**0.0290**	0.00100	"	"	"	"	10/22/04	"	
Barium	ND	0.0100	"	"	"	"	"	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Cobalt	**0.00104**	0.00100	"	"	"	"	"	"	
Chromium	ND	0.00100	"	"	"	"	"	"	
Copper	ND	0.00100	"	"	"	"	"	"	
Mercury	ND	0.000200	"	"	4J20034	10/20/04	10/22/04	EPA 7470A	
Nickel	**0.00209**	0.00100	"	"	4J20033	10/20/04	10/22/04	EPA 6020	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	10/26/04	"	
Selenium	ND	0.00100	"	"	"	"	"	"	
Vanadium	ND	0.00100	"	"	"	"	10/22/04	"	
MW-61 (B4J0574-04) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Silver	ND	0.00100	mg/l	1	4J20033	10/20/04	10/27/04	EPA 6020	
Arsenic	**0.0158**	0.00100	"	"	"	"	10/22/04	"	
Barium	**0.0324**	0.0100	"	"	"	"	"	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Cobalt	ND	0.00100	"	"	"	"	"	"	
Chromium	ND	0.00100	"	"	"	"	"	"	
Copper	ND	0.00100	"	"	"	"	"	"	
Mercury	ND	0.000200	"	"	4J20034	10/20/04	10/22/04	EPA 7470A	
Nickel	**0.00510**	0.00100	"	"	4J20033	10/20/04	10/22/04	EPA 6020	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	10/26/04	"	
Selenium	**0.00335**	0.00100	"	"	"	"	"	"	
Vanadium	**0.00307**	0.00100	"	"	"	"	10/22/04	"	

North Creek Analytical - Bothell

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Dissolved Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-60 (B4J0574-05) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Silver	ND	0.00100	mg/l	1	4J20033	10/20/04	10/27/04	EPA 6020	
Arsenic	**0.00880**	0.00100	"	"	"	"	10/22/04	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	**0.00452**	0.00100	"	"	"	"	"	"	
Cobalt	ND	0.00100	"	"	"	"	"	"	
Chromium	**0.00206**	0.00100	"	"	"	"	"	"	
Copper	**0.00293**	0.00100	"	"	"	"	"	"	
Mercury	ND	0.000200	"	"	4J20034	10/20/04	10/22/04	EPA 7470A	
Nickel	**0.00401**	0.00100	"	"	4J20033	10/20/04	10/22/04	EPA 6020	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	10/26/04	"	
Selenium	**0.00473**	0.00100	"	"	"	"	"	"	
Vanadium	ND	0.00100	"	"	"	"	10/22/04	"	
MW-60 (B4J0574-05RE1) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Barium	**0.553**	0.0200	mg/l	2	4J20033	10/20/04	10/26/04	EPA 6020	
MW-94 (B4J0574-06) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Silver	ND	0.00100	mg/l	1	4J20033	10/20/04	10/26/04	EPA 6020	
Arsenic	**0.00378**	0.00100	"	"	"	"	10/22/04	"	
Barium	**0.0457**	0.0100	"	"	"	"	"	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Cobalt	**0.00170**	0.00100	"	"	"	"	"	"	
Chromium	**0.00120**	0.00100	"	"	"	"	"	"	
Copper	ND	0.00100	"	"	"	"	"	"	
Mercury	ND	0.000200	"	"	4J20034	10/20/04	10/22/04	EPA 7470A	
Nickel	**0.0114**	0.00100	"	"	4J20033	10/20/04	10/22/04	EPA 6020	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	10/26/04	"	
Selenium	**0.00100**	0.00100	"	"	"	"	"	"	
Vanadium	**0.00489**	0.00100	"	"	"	"	10/22/04	"	

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Dissolved Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-95 (B4J0574-07) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Silver	ND	0.00100	mg/l	1	4J20033	10/20/04	10/26/04	EPA 6020	
Arsenic	**0.00462**	0.00100	"	"	"	"	10/22/04	"	
Barium	**0.0139**	0.0100	"	"	"	"	"	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Cobalt	ND	0.00100	"	"	"	"	"	"	
Chromium	**0.00200**	0.00100	"	"	"	"	"	"	
Copper	**0.00150**	0.00100	"	"	"	"	"	"	
Mercury	ND	0.000200	"	"	4J20034	10/20/04	10/22/04	EPA 7470A	
Nickel	**0.00517**	0.00100	"	"	4J20033	10/20/04	10/22/04	EPA 6020	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	10/26/04	"	
Selenium	ND	0.00100	"	"	"	"	"	"	
Vanadium	**0.00596**	0.00100	"	"	"	"	10/22/04	"	
MW-96 (B4J0574-08) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Silver	ND	0.00100	mg/l	1	4J20033	10/20/04	10/26/04	EPA 6020	
Arsenic	**0.00951**	0.00100	"	"	"	"	10/22/04	"	
Barium	**0.0562**	0.0100	"	"	"	"	"	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Cobalt	**0.00282**	0.00100	"	"	"	"	"	"	
Chromium	ND	0.00100	"	"	"	"	"	"	
Copper	ND	0.00100	"	"	"	"	"	"	
Mercury	ND	0.000200	"	"	4J20034	10/20/04	10/22/04	EPA 7470A	
Nickel	**0.00583**	0.00100	"	"	4J20033	10/20/04	10/22/04	EPA 6020	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	10/26/04	"	
Selenium	ND	0.00100	"	"	"	"	"	"	
Vanadium	**0.00266**	0.00100	"	"	"	"	10/22/04	"	

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Dissolved Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-97 (B4J0574-09) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Silver	ND	0.00100	mg/l	1	4J20033	10/20/04	10/26/04	EPA 6020	
Arsenic	**0.00161**	0.00100	"	"	"	"	10/22/04	"	
Barium	**0.0244**	0.0100	"	"	"	"	"	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Cobalt	ND	0.00100	"	"	"	"	"	"	
Chromium	**0.00114**	0.00100	"	"	"	"	"	"	
Copper	**0.00105**	0.00100	"	"	"	"	"	"	
Mercury	ND	0.000200	"	"	4J20034	10/20/04	10/22/04	EPA 7470A	
Nickel	**0.00510**	0.00100	"	"	4J20033	10/20/04	10/22/04	EPA 6020	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	10/26/04	"	
Selenium	ND	0.00100	"	"	"	"	"	"	
Vanadium	**0.00523**	0.00100	"	"	"	"	10/22/04	"	
MW-63 (B4J0574-10) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Silver	ND	0.00100	mg/l	1	4J20033	10/20/04	10/26/04	EPA 6020	
Arsenic	**0.00136**	0.00100	"	"	"	"	10/22/04	"	
Barium	**0.0511**	0.0100	"	"	"	"	"	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Cobalt	ND	0.00100	"	"	"	"	"	"	
Chromium	**0.00484**	0.00100	"	"	"	"	"	"	
Copper	ND	0.00100	"	"	"	"	"	"	
Mercury	ND	0.000200	"	"	4J20034	10/20/04	10/22/04	EPA 7470A	
Nickel	**0.00195**	0.00100	"	"	4J20033	10/20/04	10/22/04	EPA 6020	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	10/26/04	"	
Selenium	**0.00333**	0.00100	"	"	"	"	"	"	
Vanadium	**0.00388**	0.00100	"	"	"	"	10/22/04	"	

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Dissolved Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-65 (B4J0574-11) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Silver	ND	0.00100	mg/l	1	4J20033	10/20/04	10/26/04	EPA 6020	
Arsenic	**0.00662**	0.00100	"	"	"	"	10/22/04	"	
Barium	**0.0357**	0.0100	"	"	"	"	"	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Cobalt	ND	0.00100	"	"	"	"	"	"	
Chromium	ND	0.00100	"	"	"	"	"	"	
Copper	ND	0.00100	"	"	"	"	"	"	
Mercury	ND	0.000200	"	"	4J20034	10/20/04	10/22/04	EPA 7470A	
Nickel	**0.00221**	0.00100	"	"	4J20033	10/20/04	10/22/04	EPA 6020	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	10/26/04	"	
Selenium	**0.00457**	0.00100	"	"	"	"	"	"	
Vanadium	**0.00974**	0.00100	"	"	"	"	10/22/04	"	
MW-100 (B4J0574-12) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Silver	ND	0.00100	mg/l	1	4J20033	10/20/04	10/26/04	EPA 6020	
Arsenic	**0.00939**	0.00100	"	"	"	"	10/22/04	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Cobalt	ND	0.00100	"	"	"	"	"	"	
Chromium	**0.00221**	0.00100	"	"	"	"	"	"	
Copper	**0.00158**	0.00100	"	"	"	"	"	"	
Mercury	ND	0.000200	"	"	4J20034	10/20/04	10/22/04	EPA 7470A	
Nickel	**0.00259**	0.00100	"	"	4J20033	10/20/04	10/22/04	EPA 6020	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	10/26/04	"	
Selenium	**0.00483**	0.00100	"	"	"	"	"	"	
Vanadium	ND	0.00100	"	"	"	"	10/22/04	"	

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Dissolved Metals by EPA 6000/7000 Series Methods
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-100 (B4J0574-12RE1) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Barium	**0.588**	0.0200	mg/l	2	4J20033	10/20/04	10/26/04	EPA 6020	
BLANK (B4J0574-13) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Silver	ND	0.00100	mg/l	1	4J20033	10/20/04	10/26/04	EPA 6020	
Arsenic	ND	0.00100	"	"	"	"	10/22/04	"	
Barium	ND	0.0100	"	"	"	"	"	"	
Beryllium	ND	0.00100	"	"	"	"	"	"	
Cadmium	ND	0.00100	"	"	"	"	"	"	
Cobalt	ND	0.00100	"	"	"	"	"	"	
Chromium	ND	0.00100	"	"	"	"	"	"	
Copper	ND	0.00100	"	"	"	"	"	"	
Mercury	ND	0.000200	"	"	4J20034	10/20/04	10/22/04	EPA 7470A	
Nickel	ND	0.00100	"	"	4J20033	10/20/04	10/22/04	EPA 6020	
Lead	ND	0.00100	"	"	"	"	"	"	
Antimony	ND	0.00300	"	"	"	"	10/26/04	"	
Selenium	ND	0.00100	"	"	"	"	"	"	
Vanadium	ND	0.00100	"	"	"	"	10/22/04	"	

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Volatile Organic Compounds (Modified Skinner List) by EPA Method 8260B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-92 (B4J0574-01) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Acetone	ND	25.0	ug/l	1	4J27020	10/26/04	10/26/04	EPA 8260B	
Benzene	**4.93**	1.00	"	"	"	"	"	"	
2-Butanone	ND	10.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon disulfide	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.00	"	"	"	"	"	"	
Ethylbenzene	ND	1.00	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"	
n-Propylbenzene	ND	1.00	"	"	"	"	"	"	
Styrene	ND	1.00	"	"	"	"	"	"	
Toluene	ND	1.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"	
Trichloroethene	ND	1.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
o-Xylene	ND	1.00	"	"	"	"	"	"	
m,p-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*105 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*97.5 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*97.0 %*	*70-130*			"	"	"	"	
MW-91 (B4J0574-02) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Acetone	ND	25.0	ug/l	1	4J27020	10/26/04	10/26/04	EPA 8260B	
Benzene	ND	1.00	"	"	"	"	"	"	
2-Butanone	ND	10.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon disulfide	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.00	"	"	"	"	"	"	
Ethylbenzene	ND	1.00	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"	
n-Propylbenzene	ND	1.00	"	"	"	"	"	"	
Styrene	ND	1.00	"	"	"	"	"	"	

North Creek Analytical - Bothell

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Volatile Organic Compounds (Modified Skinner List) by EPA Method 8260B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-91 (B4J0574-02) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Toluene	ND	1.00	ug/l	1	4J27020	10/26/04	10/26/04	EPA 8260B	
1,1,1-Trichloroethane	**15.4**	1.00	"	"	"	"	"	"	
Trichloroethene	ND	1.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
o-Xylene	ND	1.00	"	"	"	"	"	"	
m,p-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*102 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*96.5 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*97.5 %*	*70-130*			"	"	"	"	
MW-93 (B4J0574-03) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Acetone	ND	25.0	ug/l	1	4J27020	10/26/04	10/26/04	EPA 8260B	
Benzene	ND	1.00	"	"	"	"	"	"	
2-Butanone	ND	10.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon disulfide	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.00	"	"	"	"	"	"	
Ethylbenzene	ND	1.00	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"	
n-Propylbenzene	ND	1.00	"	"	"	"	"	"	
Styrene	ND	1.00	"	"	"	"	"	"	
Toluene	ND	1.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"	
Trichloroethene	ND	1.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
o-Xylene	ND	1.00	"	"	"	"	"	"	
m,p-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*102 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*99.0 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*104 %*	*70-130*			"	"	"	"	

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907.563.9200 fax 907.563.9210

Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Volatile Organic Compounds (Modified Skinner List) by EPA Method 8260B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-61 (B4J0574-04) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Acetone	ND	25.0	ug/l	1	4J27020	10/26/04	10/26/04	EPA 8260B	
Benzene	**94.6**	1.00	"	"	"	"	"	"	E
2-Butanone	ND	10.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon disulfide	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.00	"	"	"	"	"	"	
Ethylbenzene	**3.62**	1.00	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"	
n-Propylbenzene	**3.36**	1.00	"	"	"	"	"	"	
Styrene	ND	1.00	"	"	"	"	"	"	
Toluene	ND	1.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"	
Trichloroethene	ND	1.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**1.05**	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
o-Xylene	ND	1.00	"	"	"	"	"	"	
m,p-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*106 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*98.0 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*100 %*	*70-130*			"	"	"	"	
MW-61 (B4J0574-04RE1) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Acetone	ND	125	ug/l	5	4J27052	10/27/04	10/27/04	EPA 8260B	
Benzene	**99.6**	5.00	"	"	"	"	"	"	
2-Butanone	ND	50.0	"	"	"	"	"	"	
n-Butylbenzene	ND	5.00	"	"	"	"	"	"	
Carbon disulfide	ND	5.00	"	"	"	"	"	"	
Chlorobenzene	ND	5.00	"	"	"	"	"	"	
Chloroform	ND	5.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	5.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	5.00	"	"	"	"	"	"	
Ethylbenzene	ND	5.00	"	"	"	"	"	"	
p-Isopropyltoluene	ND	5.00	"	"	"	"	"	"	
n-Propylbenzene	ND	5.00	"	"	"	"	"	"	
Styrene	ND	5.00	"	"	"	"	"	"	

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Volatile Organic Compounds (Modified Skinner List) by EPA Method 8260B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-61 (B4J0574-04RE1) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Toluene	ND	5.00	ug/l	5	4J27052	10/27/04	10/27/04	EPA 8260B	
1,1,1-Trichloroethane	ND	5.00	"	"	"	"	"	"	
Trichloroethene	ND	5.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	5.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	5.00	"	"	"	"	"	"	
o-Xylene	ND	5.00	"	"	"	"	"	"	
m,p-Xylene	ND	10.0	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*100 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*98.5 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*98.0 %*	*70-130*			"	"	"	"	
MW-60 (B4J0574-05) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Acetone	ND	25.0	ug/l	1	4J27020	10/26/04	10/26/04	EPA 8260B	
Benzene	**48.8**	1.00	"	"	"	"	"	"	
2-Butanone	ND	10.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon disulfide	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.00	"	"	"	"	"	"	
Ethylbenzene	**1.56**	1.00	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"	
n-Propylbenzene	ND	1.00	"	"	"	"	"	"	
Styrene	ND	1.00	"	"	"	"	"	"	
Toluene	ND	1.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"	
Trichloroethene	ND	1.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
o-Xylene	ND	1.00	"	"	"	"	"	"	
m,p-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*106 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*98.0 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*101 %*	*70-130*			"	"	"	"	

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Volatile Organic Compounds (Modified Skinner List) by EPA Method 8260B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-94 (B4J0574-06) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Acetone	ND	25.0	ug/l	1	4J27020	10/26/04	10/27/04	EPA 8260B	
Benzene	ND	1.00	"	"	"	"	"	"	
2-Butanone	ND	10.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon disulfide	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.00	"	"	"	"	"	"	
Ethylbenzene	ND	1.00	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"	
n-Propylbenzene	ND	1.00	"	"	"	"	"	"	
Styrene	ND	1.00	"	"	"	"	"	"	
Toluene	ND	1.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"	
Trichloroethene	ND	1.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
o-Xylene	ND	1.00	"	"	"	"	"	"	
m,p-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*103 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*99.5 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*100 %*	*70-130*			"	"	"	"	
MW-95 (B4J0574-07) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Acetone	ND	25.0	ug/l	1	4J27020	10/26/04	10/27/04	EPA 8260B	
Benzene	ND	1.00	"	"	"	"	"	"	
2-Butanone	ND	10.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon disulfide	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.00	"	"	"	"	"	"	
Ethylbenzene	ND	1.00	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"	
n-Propylbenzene	ND	1.00	"	"	"	"	"	"	
Styrene	ND	1.00	"	"	"	"	"	"	

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Volatile Organic Compounds (Modified Skinner List) by EPA Method 8260B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-95 (B4J0574-07) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Toluene	ND	1.00	ug/l	1	4J27020	10/26/04	10/27/04	EPA 8260B	
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"	
Trichloroethene	ND	1.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
o-Xylene	ND	1.00	"	"	"	"	"	"	
m,p-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*101 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*98.5 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*102 %*	*70-130*			"	"	"	"	
MW-96 (B4J0574-08) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Acetone	ND	25.0	ug/l	1	4J27020	10/26/04	10/27/04	EPA 8260B	
Benzene	ND	1.00	"	"	"	"	"	"	
2-Butanone	ND	10.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon disulfide	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.00	"	"	"	"	"	"	
Ethylbenzene	ND	1.00	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"	
n-Propylbenzene	ND	1.00	"	"	"	"	"	"	
Styrene	ND	1.00	"	"	"	"	"	"	
Toluene	ND	1.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"	
Trichloroethene	ND	1.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
o-Xylene	ND	1.00	"	"	"	"	"	"	
m,p-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*102 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*98.0 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*101 %*	*70-130*			"	"	"	"	

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Volatile Organic Compounds (Modified Skinner List) by EPA Method 8260B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-97 (B4J0574-09) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Acetone	ND	25.0	ug/l	1	4J27020	10/26/04	10/27/04	EPA 8260B	
Benzene	ND	1.00	"	"	"	"	"	"	
2-Butanone	ND	10.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon disulfide	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.00	"	"	"	"	"	"	
Ethylbenzene	ND	1.00	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"	
n-Propylbenzene	ND	1.00	"	"	"	"	"	"	
Styrene	ND	1.00	"	"	"	"	"	"	
Toluene	ND	1.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"	
Trichloroethene	ND	1.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
o-Xylene	ND	1.00	"	"	"	"	"	"	
m,p-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*104 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*98.5 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*98.0 %*	*70-130*			"	"	"	"	
MW-63 (B4J0574-10) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Acetone	ND	25.0	ug/l	1	4J27020	10/26/04	10/27/04	EPA 8260B	
Benzene	ND	1.00	"	"	"	"	"	"	
2-Butanone	ND	10.0	"	"	"	"	"	"	
n-Butylbenzene	**13.4**	1.00	"	"	"	"	"	"	
Carbon disulfide	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.00	"	"	"	"	"	"	
Ethylbenzene	**20.5**	1.00	"	"	"	"	"	"	
p-Isopropyltoluene	**4.20**	1.00	"	"	"	"	"	"	
n-Propylbenzene	**17.4**	1.00	"	"	"	"	"	"	
Styrene	ND	1.00	"	"	"	"	"	"	

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Volatile Organic Compounds (Modified Skinner List) by EPA Method 8260B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-63 (B4J0574-10) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Toluene	ND	1.00	ug/l	1	4J27020	10/26/04	10/27/04	EPA 8260B	
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"	
Trichloroethene	ND	1.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**191**	1.00	"	"	"	"	"	"	E
1,3,5-Trimethylbenzene	**24.0**	1.00	"	"	"	"	"	"	
o-Xylene	**5.26**	1.00	"	"	"	"	"	"	
m,p-Xylene	**19.0**	2.00	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*103 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*98.0 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*112 %*	*70-130*			"	"	"	"	
MW-63 (B4J0574-10RE1) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Acetone	ND	250	ug/l	10	4J27052	10/27/04	10/27/04	EPA 8260B	
Benzene	ND	10.0	"	"	"	"	"	"	
2-Butanone	ND	100	"	"	"	"	"	"	
n-Butylbenzene	ND	10.0	"	"	"	"	"	"	
Carbon disulfide	ND	10.0	"	"	"	"	"	"	
Chlorobenzene	ND	10.0	"	"	"	"	"	"	
Chloroform	ND	10.0	"	"	"	"	"	"	
1,2-Dibromoethane	ND	10.0	"	"	"	"	"	"	
1,2-Dichloroethane	ND	10.0	"	"	"	"	"	"	
Ethylbenzene	**17.5**	10.0	"	"	"	"	"	"	
p-Isopropyltoluene	ND	10.0	"	"	"	"	"	"	
n-Propylbenzene	**13.3**	10.0	"	"	"	"	"	"	
Styrene	ND	10.0	"	"	"	"	"	"	
Toluene	ND	10.0	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	10.0	"	"	"	"	"	"	
Trichloroethene	ND	10.0	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	**241**	10.0	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	**16.2**	10.0	"	"	"	"	"	"	
o-Xylene	ND	10.0	"	"	"	"	"	"	
m,p-Xylene	ND	20.0	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*102 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*99.5 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*98.5 %*	*70-130*			"	"	"	"	

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Volatile Organic Compounds (Modified Skinner List) by EPA Method 8260B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-65 (B4J0574-11) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Acetone	ND	25.0	ug/l	1	4J27052	10/27/04	10/27/04	EPA 8260B	
Benzene	ND	1.00	"	"	"	"	"	"	
2-Butanone	ND	10.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon disulfide	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane	**27.6**	1.00	"	"	"	"	"	"	
Ethylbenzene	ND	1.00	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"	
n-Propylbenzene	ND	1.00	"	"	"	"	"	"	
Styrene	ND	1.00	"	"	"	"	"	"	
Toluene	ND	1.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"	
Trichloroethene	ND	1.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
o-Xylene	ND	1.00	"	"	"	"	"	"	
m,p-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*98.5 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*98.5 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*100 %*	*70-130*			"	"	"	"	
MW-100 (B4J0574-12) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Acetone	ND	25.0	ug/l	1	4J27052	10/27/04	10/27/04	EPA 8260B	
Benzene	**48.6**	1.00	"	"	"	"	"	"	
2-Butanone	ND	10.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon disulfide	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.00	"	"	"	"	"	"	
Ethylbenzene	**1.22**	1.00	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"	
n-Propylbenzene	ND	1.00	"	"	"	"	"	"	
Styrene	ND	1.00	"	"	"	"	"	"	

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Volatile Organic Compounds (Modified Skinner List) by EPA Method 8260B
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
MW-100 (B4J0574-12) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Toluene	ND	1.00	ug/l	1	4J27052	10/27/04	10/27/04	EPA 8260B	
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"	
Trichloroethene	ND	1.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
o-Xylene	ND	1.00	"	"	"	"	"	"	
m,p-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*100 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*99.5 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*102 %*	*70-130*			"	"	"	"	
BLANK (B4J0574-13) Water Sampled: 10/13/04 12:00 Received: 10/15/04 09:50									
Acetone	ND	25.0	ug/l	1	4J24010	10/24/04	10/24/04	EPA 8260B	
Benzene	ND	1.00	"	"	"	"	"	"	
2-Butanone	ND	10.0	"	"	"	"	"	"	
n-Butylbenzene	ND	1.00	"	"	"	"	"	"	
Carbon disulfide	ND	1.00	"	"	"	"	"	"	
Chlorobenzene	ND	1.00	"	"	"	"	"	"	
Chloroform	ND	1.00	"	"	"	"	"	"	
1,2-Dibromoethane	ND	1.00	"	"	"	"	"	"	
1,2-Dichloroethane	ND	1.00	"	"	"	"	"	"	
Ethylbenzene	ND	1.00	"	"	"	"	"	"	
p-Isopropyltoluene	ND	1.00	"	"	"	"	"	"	
n-Propylbenzene	ND	1.00	"	"	"	"	"	"	
Styrene	ND	1.00	"	"	"	"	"	"	
Toluene	ND	1.00	"	"	"	"	"	"	
1,1,1-Trichloroethane	ND	1.00	"	"	"	"	"	"	
Trichloroethene	ND	1.00	"	"	"	"	"	"	
1,2,4-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
1,3,5-Trimethylbenzene	ND	1.00	"	"	"	"	"	"	
o-Xylene	ND	1.00	"	"	"	"	"	"	
m,p-Xylene	ND	2.00	"	"	"	"	"	"	
Surrogate: 1,2-DCA-d4	*106 %*	*70-130*			"	"	"	"	
Surrogate: Toluene-d8	*90.5 %*	*70-130*			"	"	"	"	
Surrogate: 4-BFB	*89.0 %*	*70-130*			"	"	"	"	

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

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 4J22009: Prepared 10/22/04 Using EPA 3520C										
Blank (4J22009-BLK1)										
Diesel Range Hydrocarbons	ND	0.250	mg/l							
Lube Oil Range Hydrocarbons	ND	0.500	"							
Surrogate: 2-FBP	*0.169*		"	*0.210*		*80.5*	*70-130*			
Surrogate: Octacosane	*0.237*		"	*0.200*		*118*	*70-130*			
LCS (4J22009-BS1)										
Diesel Range Hydrocarbons	1.53	0.250	mg/l	1.87		81.8	65-135			
Surrogate: 2-FBP	*0.172*		"	*0.210*		*81.9*	*70-130*			
LCS Dup (4J22009-BSD1)										
Diesel Range Hydrocarbons	1.62	0.250	mg/l	1.87		86.6	65-135	5.71	30	
Surrogate: 2-FBP	*0.177*		"	*0.210*		*84.3*	*70-130*			
Batch 4J27012: Prepared 10/27/04 Using EPA 3520C										
Blank (4J27012-BLK1)										
Diesel Range Hydrocarbons	ND	0.250	mg/l							
Lube Oil Range Hydrocarbons	ND	0.500	"							
Surrogate: 2-FBP	*0.280*		"	*0.250*		*112*	*50-150*			
Surrogate: Octacosane	*0.280*		"	*0.240*		*117*	*50-150*			
LCS (4J27012-BS1)										
Diesel Range Hydrocarbons	1.68	0.250	mg/l	1.87		89.8	58-125			
Surrogate: 2-FBP	*0.240*		"	*0.250*		*96.0*	*50-150*			
LCS Dup (4J27012-BSD1)										
Diesel Range Hydrocarbons	1.78	0.250	mg/l	1.87		95.2	58-125	5.78	40	
Surrogate: 2-FBP	*0.247*		"	*0.250*		*98.8*	*50-150*			

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4J20033: Prepared 10/20/04 Using EPA 3005A										
Blank (4J20033-BLK1)										
Silver	ND	0.00100	mg/l							
Arsenic	ND	0.00100	"							
Barium	ND	0.0100	"							
Beryllium	ND	0.00100	"							
Cadmium	ND	0.00100	"							
Cobalt	ND	0.00100	"							
Chromium	ND	0.00100	"							
Copper	ND	0.00100	"							
Nickel	ND	0.00100	"							
Lead	ND	0.00100	"							
Antimony	ND	0.00300	"							
Selenium	ND	0.00100	"							
Vanadium	ND	0.00100	"							
LCS (4J20033-BS1)										
Silver	0.203	0.00100	mg/l	0.200		102	80-120			
Arsenic	0.198	0.00100	"	0.200		99.0	80-120			
Barium	0.198	0.0100	"	0.200		99.0	80-120			
Beryllium	0.191	0.00100	"	0.200		95.5	80-120			
Cadmium	0.195	0.00100	"	0.200		97.5	80-120			
Cobalt	0.197	0.00100	"	0.200		98.5	80-120			
Chromium	0.198	0.00100	"	0.200		99.0	80-120			
Copper	0.198	0.00100	"	0.200		99.0	80-120			
Nickel	0.198	0.00100	"	0.200		99.0	80-120			
Lead	0.196	0.00100	"	0.200		98.0	80-120			
Antimony	0.0475	0.00300	"	0.0500		95.0	80-120			
Selenium	0.195	0.00100	"	0.200		97.5	80-120			
Vanadium	0.196	0.00100	"	0.200		98.0	80-120			

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4J20033: Prepared 10/20/04 Using EPA 3005A										
LCS Dup (4J20033-BSD1)										
Silver	0.203	0.00100	mg/l	0.200		102	80-120	0.00	20	
Arsenic	0.201	0.00100	"	0.200		100	80-120	1.50	20	
Barium	0.201	0.0100	"	0.200		100	80-120	1.50	20	
Beryllium	0.193	0.00100	"	0.200		96.5	80-120	1.04	20	
Cadmium	0.197	0.00100	"	0.200		98.5	80-120	1.02	20	
Cobalt	0.200	0.00100	"	0.200		100	80-120	1.51	20	
Chromium	0.201	0.00100	"	0.200		100	80-120	1.50	20	
Copper	0.200	0.00100	"	0.200		100	80-120	1.01	20	
Nickel	0.201	0.00100	"	0.200		100	80-120	1.50	20	
Lead	0.198	0.00100	"	0.200		99.0	80-120	1.02	20	
Antimony	0.0479	0.00300	"	0.0500		95.8	80-120	0.839	20	
Selenium	0.194	0.00100	"	0.200		97.0	80-120	0.514	20	
Vanadium	0.199	0.00100	"	0.200		99.5	80-120	1.52	20	
Matrix Spike (4J20033-MS1)					**Source: B4J0574-01**					
Silver	0.0558	0.00100	mg/l	0.100	0.000490	55.3	43-124			
Arsenic	0.122	0.00100	"	0.100	0.0104	112	70-138			
Barium	0.150	0.0100	"	0.0995	0.0463	104	71-126			
Beryllium	0.103	0.00100	"	0.100	ND	103	80-125			
Cadmium	0.0997	0.00100	"	0.100	ND	99.7	80-125			
Cobalt	0.0963	0.00100	"	0.0995	0.000500	96.3	73-125			
Chromium	0.102	0.00100	"	0.100	0.000300	102	76-125			
Copper	0.0980	0.00100	"	0.101	0.000520	96.5	71-125			
Nickel	0.0987	0.00100	"	0.0995	0.00187	97.3	73-125			
Lead	0.0981	0.00100	"	0.0995	0.000400	98.2	78-125			
Antimony	0.0389	0.00300	"	0.0500	0.00147	74.9	63-126			
Selenium	0.102	0.00100	"	0.100	0.00191	100	61-156			
Vanadium	0.103	0.00100	"	0.100	0.000890	102	75-125			

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4J20033: Prepared 10/20/04 Using EPA 3005A										
Matrix Spike Dup (4J20033-MSD1)					**Source: B4J0574-01**					
Silver	0.0561	0.00100	mg/l	0.100	0.000490	55.6	43-124	0.536	50	
Arsenic	0.120	0.00100	"	0.100	0.0104	110	70-138	1.65	20	
Barium	0.148	0.0100	"	0.0995	0.0463	102	71-126	1.34	20	
Beryllium	0.101	0.00100	"	0.100	ND	101	80-125	1.96	20	
Cadmium	0.0992	0.00100	"	0.100	ND	99.2	80-125	0.503	20	
Cobalt	0.0964	0.00100	"	0.0995	0.000500	96.4	73-125	0.104	20	
Chromium	0.102	0.00100	"	0.100	0.000300	102	76-125	0.00	20	
Copper	0.0975	0.00100	"	0.101	0.000520	96.0	71-125	0.512	20	
Nickel	0.0982	0.00100	"	0.0995	0.00187	96.8	73-125	0.508	20	
Lead	0.0974	0.00100	"	0.0995	0.000400	97.5	78-125	0.716	20	
Antimony	0.0409	0.00300	"	0.0500	0.00147	78.9	63-126	5.01	20	
Selenium	0.104	0.00100	"	0.100	0.00191	102	61-156	1.94	20	
Vanadium	0.103	0.00100	"	0.100	0.000890	102	75-125	0.00	20	
Batch 4J20034: Prepared 10/20/04 Using EPA 7470A										
Blank (4J20034-BLK1)										
Mercury	ND	0.000200	mg/l							
LCS (4J20034-BS1)										
Mercury	0.00502	0.000200	mg/l	0.00500		100	80-120			
LCS Dup (4J20034-BSD1)										
Mercury	0.00560	0.000200	mg/l	0.00500		112	80-120	10.9	20	
Matrix Spike (4J20034-MS1)					**Source: B4J0574-01**					
Mercury	0.00501	0.000200	mg/l	0.00500	0.000264	94.9	70-130			

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Dissolved Metals by EPA 6000/7000 Series Methods - Quality Control
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4J20034: Prepared 10/20/04 Using EPA 7470A										
Matrix Spike Dup (4J20034-MSD1)					**Source: B4J0574-01**					
Mercury	0.00519	0.000200	mg/l	0.00500	0.000264	98.5	70-130	3.53	20	

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Volatile Organic Compounds (Modified Skinner List) 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 4J24010: Prepared 10/24/04 Using EPA 5030B										
Blank (4J24010-BLK1)										
Acetone	ND	25.0	ug/l							
Benzene	ND	1.00	"							
2-Butanone	ND	10.0	"							
n-Butylbenzene	ND	1.00	"							
Carbon disulfide	ND	1.00	"							
Chlorobenzene	ND	1.00	"							
Chloroform	ND	1.00	"							
1,2-Dibromoethane	ND	1.00	"							
1,2-Dichloroethane	ND	1.00	"							
Ethylbenzene	ND	1.00	"							
p-Isopropyltoluene	ND	1.00	"							
n-Propylbenzene	ND	1.00	"							
Styrene	ND	1.00	"							
Toluene	ND	1.00	"							
1,1,1-Trichloroethane	ND	1.00	"							
Trichloroethene	ND	1.00	"							
1,2,4-Trimethylbenzene	ND	1.00	"							
1,3,5-Trimethylbenzene	ND	1.00	"							
o-Xylene	ND	1.00	"							
m,p-Xylene	ND	2.00	"							
Surrogate: 1,2-DCA-d4	*22.0*		"	*20.0*		*110*	*70-130*			
Surrogate: Toluene-d8	*18.1*		"	*20.0*		*90.5*	*70-130*			
Surrogate: 4-BFB	*18.0*		"	*20.0*		*90.0*	*70-130*			
LCS (4J24010-BS1)										
Benzene	17.6	1.00	ug/l	20.0		88.0	80-120			
Chlorobenzene	20.0	1.00	"	20.0		100	77-120			
Toluene	16.0	1.00	"	20.0		80.0	80-120			
Surrogate: 1,2-DCA-d4	*20.2*		"	*20.0*		*101*	*70-130*			
Surrogate: Toluene-d8	*18.4*		"	*20.0*		*92.0*	*70-130*			
Surrogate: 4-BFB	*18.4*		"	*20.0*		*92.0*	*70-130*			

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Volatile Organic Compounds (Modified Skinner List) 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 4J24010: Prepared 10/24/04 Using EPA 5030B										
LCS Dup (4J24010-BSD1)										
Benzene	18.6	1.00	ug/l	20.0		93.0	80-120	5.52	20	
Chlorobenzene	20.8	1.00	"	20.0		104	77-120	3.92	20	
Toluene	17.2	1.00	"	20.0		86.0	80-120	7.23	20	
Surrogate: 1,2-DCA-d4	*20.2*		"	*20.0*		*101*	*70-130*			
Surrogate: Toluene-d8	*18.2*		"	*20.0*		*91.0*	*70-130*			
Surrogate: 4-BFB	*18.2*		"	*20.0*		*91.0*	*70-130*			
Batch 4J27020: Prepared 10/26/04 Using EPA 5030B										
Blank (4J27020-BLK1)										
Acetone	ND	25.0	ug/l							
Benzene	ND	1.00	"							
2-Butanone	ND	10.0	"							
n-Butylbenzene	ND	1.00	"							
Carbon disulfide	ND	1.00	"							
Chlorobenzene	ND	1.00	"							
Chloroform	ND	1.00	"							
1,2-Dibromoethane	ND	1.00	"							
1,2-Dichloroethane	ND	1.00	"							
Ethylbenzene	ND	1.00	"							
p-Isopropyltoluene	ND	1.00	"							
n-Propylbenzene	ND	1.00	"							
Styrene	ND	1.00	"							
Toluene	ND	1.00	"							
1,1,1-Trichloroethane	ND	1.00	"							
Trichloroethene	ND	1.00	"							
1,2,4-Trimethylbenzene	ND	1.00	"							
1,3,5-Trimethylbenzene	ND	1.00	"							
o-Xylene	ND	1.00	"							
m,p-Xylene	ND	2.00	"							
Surrogate: 1,2-DCA-d4	*20.4*		"	*20.0*		*102*	*70-130*			
Surrogate: Toluene-d8	*19.0*		"	*20.0*		*95.0*	*70-130*			
Surrogate: 4-BFB	*19.7*		"	*20.0*		*98.5*	*70-130*			

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Volatile Organic Compounds (Modified Skinner List) 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 4J27020: Prepared 10/26/04 Using EPA 5030B										
LCS (4J27020-BS1)										
Benzene	18.7	1.00	ug/l	20.0		93.5	80-120			
Chlorobenzene	18.7	1.00	"	20.0		93.5	77-120			
Toluene	19.7	1.00	"	20.0		98.5	80-120			
Surrogate: 1,2-DCA-d4	*20.2*		*"*	*20.0*		*101*	*70-130*			
Surrogate: Toluene-d8	*20.8*		*"*	*20.0*		*104*	*70-130*			
Surrogate: 4-BFB	*21.0*		*"*	*20.0*		*105*	*70-130*			
LCS Dup (4J27020-BSD1)										
Benzene	18.0	1.00	ug/l	20.0		90.0	80-120	3.81	20	
Chlorobenzene	17.3	1.00	"	20.0		86.5	77-120	7.78	20	
Toluene	18.2	1.00	"	20.0		91.0	80-120	7.92	20	
Surrogate: 1,2-DCA-d4	*20.1*		*"*	*20.0*		*100*	*70-130*			
Surrogate: Toluene-d8	*20.1*		*"*	*20.0*		*100*	*70-130*			
Surrogate: 4-BFB	*22.3*		*"*	*20.0*		*112*	*70-130*			
Batch 4J27052: Prepared 10/27/04 Using EPA 5030B										
Blank (4J27052-BLK1)										
Acetone	ND	25.0	ug/l							
Benzene	ND	1.00	"							
2-Butanone	ND	10.0	"							
n-Butylbenzene	ND	1.00	"							
Carbon disulfide	ND	1.00	"							
Chlorobenzene	ND	1.00	"							
Chloroform	ND	1.00	"							
1,2-Dibromoethane	ND	1.00	"							
1,2-Dichloroethane	ND	1.00	"							
Ethylbenzene	ND	1.00	"							
p-Isopropyltoluene	ND	1.00	"							
n-Propylbenzene	ND	1.00	"							
Styrene	ND	1.00	"							
Toluene	ND	1.00	"							
1,1,1-Trichloroethane	ND	1.00	"							
Trichloroethene	ND	1.00	"							
1,2,4-Trimethylbenzene	ND	1.00	"							
1,3,5-Trimethylbenzene	ND	1.00	"							

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Volatile Organic Compounds (Modified Skinner List) 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 4J27052: Prepared 10/27/04 Using EPA 5030B										
Blank (4J27052-BLK1)										
o-Xylene	ND	1.00	ug/l							
m,p-Xylene	ND	2.00	"							
Surrogate: 1,2-DCA-d4	*20.6*		"	*20.0*		*103*	*70-130*			
Surrogate: Toluene-d8	*20.3*		"	*20.0*		*102*	*70-130*			
Surrogate: 4-BFB	*19.7*		"	*20.0*		*98.5*	*70-130*			
LCS (4J27052-BS1)										
Benzene	18.9	1.00	ug/l	20.0		94.5	80-120			
Chlorobenzene	18.9	1.00	"	20.0		94.5	77-120			
Toluene	19.6	1.00	"	20.0		98.0	80-120			
Surrogate: 1,2-DCA-d4	*19.9*		"	*20.0*		*99.5*	*70-130*			
Surrogate: Toluene-d8	*19.7*		"	*20.0*		*98.5*	*70-130*			
Surrogate: 4-BFB	*20.3*		"	*20.0*		*102*	*70-130*			
LCS Dup (4J27052-BSD1)										
Benzene	18.3	1.00	ug/l	20.0		91.5	80-120	3.23	20	
Chlorobenzene	19.0	1.00	"	20.0		95.0	77-120	0.528	20	
Toluene	19.4	1.00	"	20.0		97.0	80-120	1.03	20	
Surrogate: 1,2-DCA-d4	*19.9*		"	*20.0*		*99.5*	*70-130*			
Surrogate: Toluene-d8	*20.3*		"	*20.0*		*102*	*70-130*			
Surrogate: 4-BFB	*20.0*		"	*20.0*		*100*	*70-130*			

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:52

Notes and Definitions

E	Estimated value. The reported value exceeds the calibration range of the analysis.
X	See case narrative.
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

30 December 2004

Brian Rhodes
Shell Puget Sound Refinery
8505 South Texas Road
Anacortes, WA 98221

RE: SWMU 11 Sampling

Enclosed are the results of analyses for samples received by the laboratory on 10/15/04 09:50. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

DRAFT REPORT
DATA SUBJECT TO CHANGE

Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:54

ANALYTICAL REPORT FOR SAMPLES

Sample ID	Laboratory ID	Matrix	Date Sampled	Date Received
DRAFT: MW-92	B4J0574-01	Water	10/13/04 12:00	10/15/04 09:50
DRAFT: MW-91	B4J0574-02	Water	10/13/04 12:00	10/15/04 09:50
DRAFT: MW-93	B4J0574-03	Water	10/13/04 12:00	10/15/04 09:50
DRAFT: MW-61	B4J0574-04	Water	10/13/04 12:00	10/15/04 09:50
DRAFT: MW-60	B4J0574-05	Water	10/13/04 12:00	10/15/04 09:50
DRAFT: MW-94	B4J0574-06	Water	10/13/04 12:00	10/15/04 09:50
DRAFT: MW-95	B4J0574-07	Water	10/13/04 12:00	10/15/04 09:50
DRAFT: MW-96	B4J0574-08	Water	10/13/04 12:00	10/15/04 09:50
DRAFT: MW-97	B4J0574-09	Water	10/13/04 12:00	10/15/04 09:50
DRAFT: MW-63	B4J0574-10	Water	10/13/04 12:00	10/15/04 09:50
DRAFT: MW-65	B4J0574-11	Water	10/13/04 12:00	10/15/04 09:50
DRAFT: MW-100	B4J0574-12	Water	10/13/04 12:00	10/15/04 09:50
DRAFT: BLANK	B4J0574-13	Water	10/13/04 12:00	10/15/04 09:50

Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:54

DRAFT: Semivolatile Organic Compounds (Modified Skinner List) by EPA Method 8270C
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DRAFT: MW-92 (B4J0574-01) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Acenaphthylene	ND	10.0	ug/l	1	4J20009	10/20/04	11/21/04	EPA 8270C	
Anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10.0	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (ghi) perylene	ND	10.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10.0	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10.0	"	"	"	"	"	"	
Chrysene	ND	10.0	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10.0	"	"	"	"	"	"	
Dibenz (a,h) acridine	ND	10.0	"	"	"	"	"	"	A-01
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
Diethyl phthalate	ND	10.0	"	"	"	"	"	"	
7,12-Dimethylbenz (a) anthracene	ND	10.0	"	"	"	"	"	"	A-01
2,4-Dimethylphenol	ND	10.0	"	"	"	"	"	"	
Dimethyl phthalate	ND	10.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10.0	"	"	"	"	"	"	
Fluoranthene	ND	10.0	"	"	"	"	"	"	
Fluorene	ND	10.0	"	"	"	"	"	"	
Indene	ND	10.0	"	"	"	"	"	"	A-01
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
6-Methyl chrysene	ND	10.0	"	"	"	"	"	"	
1-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	A-01
2-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	
2-Methylphenol	ND	10.0	"	"	"	"	"	"	
3 & 4-Methylphenol	ND	10.0	"	"	"	"	"	"	
Naphthalene	ND	10.0	"	"	"	"	"	"	
4-Nitrophenol	ND	10.0	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10.0	"	"	"	"	"	"	
Phenanthrene	ND	10.0	"	"	"	"	"	"	
Phenol	ND	10.0	"	"	"	"	"	"	

Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:54

DRAFT: Semivolatile Organic Compounds (Modified Skinner List) by EPA Method 8270C
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DRAFT: MW-92 (B4J0574-01) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Pyrene	ND	10.0	ug/l	1	4J20009	10/20/04	11/21/04	"	
Pyridine	ND	10.0	"	"	"	"	"	"	
Quinoline	ND	10.0	"	"	"	"	"	"	
Thiophenol	ND	10.0	"	"	"	"	"	"	
Surrogate: 2-FBP	*42.6 %*	*41-129*			"	"	"	"	
Surrogate: 2-FP	*7.92 %*	*18-124*			"	"	"	"	*A-02, J*
Surrogate: Nitrobenzene-d5	*31.4 %*	*44-124*			"	"	"	"	*A-02*
Surrogate: Phenol-d6	*3.64 %*	*25-122*			"	"	"	"	*A-02, J*
Surrogate: p-Terphenyl-d14	*53.2 %*	*10-132*			"	"	"	"	
Surrogate: 2,4,6-TBP	*42.0 %*	*19-132*			"	"	"	"	
DRAFT: MW-91 (B4J0574-02) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Acenaphthylene	ND	10.0	ug/l	1	4J20009	10/20/04	11/21/04	EPA 8270C	
Anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10.0	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (ghi) perylene	ND	10.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10.0	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10.0	"	"	"	"	"	"	
Chrysene	ND	10.0	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10.0	"	"	"	"	"	"	
Dibenz (a,h) acridine	ND	10.0	"	"	"	"	"	"	A-01
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
Diethyl phthalate	ND	10.0	"	"	"	"	"	"	
7,12-Dimethylbenz (a) anthracene	ND	10.0	"	"	"	"	"	"	A-01
2,4-Dimethylphenol	ND	10.0	"	"	"	"	"	"	
Dimethyl phthalate	ND	10.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10.0	"	"	"	"	"	"	
Fluoranthene	ND	10.0	"	"	"	"	"	"	
Fluorene	ND	10.0	"	"	"	"	"	"	

Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:54

DRAFT: Semivolatile Organic Compounds (Modified Skinner List) by EPA Method 8270C
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DRAFT: MW-91 (B4J0574-02) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Indene	ND	10.0	ug/l	1	4J20009	10/20/04	11/21/04	"	A-01
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
6-Methyl chrysene	ND	10.0	"	"	"	"	"	"	
1-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	A-01
2-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	
2-Methylphenol	ND	10.0	"	"	"	"	"	"	
3 & 4-Methylphenol	ND	10.0	"	"	"	"	"	"	
Naphthalene	ND	10.0	"	"	"	"	"	"	
4-Nitrophenol	ND	10.0	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10.0	"	"	"	"	"	"	
Phenanthrene	ND	10.0	"	"	"	"	"	"	
Phenol	ND	10.0	"	"	"	"	"	"	
Pyrene	ND	10.0	"	"	"	"	"	"	
Pyridine	ND	10.0	"	"	"	"	"	"	
Quinoline	ND	10.0	"	"	"	"	"	"	
Thiophenol	ND	10.0	"	"	"	"	"	"	
Surrogate: 2-FBP	*39.6 %*	*41-129*			"	"	"	"	*A-02*
Surrogate: 2-FP	*8.16 %*	*18-124*			"	"	"	"	*A-02, J*
Surrogate: Nitrobenzene-d5	*28.8 %*	*44-124*			"	"	"	"	*A-02*
Surrogate: Phenol-d6	*3.88 %*	*25-122*			"	"	"	"	*A-02, J*
Surrogate: p-Terphenyl-d14	*38.2 %*	*10-132*			"	"	"	"	
Surrogate: 2,4,6-TBP	*28.2 %*	*19-132*			"	"	"	"	
DRAFT: MW-93 (B4J0574-03) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Acenaphthylene	ND	10.0	ug/l	1	4J20009	10/20/04	11/24/04	EPA 8270C	
Anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10.0	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (ghi) perylene	ND	10.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10.0	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10.0	"	"	"	"	"	"	
Chrysene	ND	10.0	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10.0	"	"	"	"	"	"	

DRAFT REPORT

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:54

DRAFT: Semivolatile Organic Compounds (Modified Skinner List) by EPA Method 8270C
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DRAFT: MW-93 (B4J0574-03) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Dibenz (a,h) acridine	ND	10.0	ug/l	1	4J20009	10/20/04	11/24/04	"	A-01a
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
Diethyl phthalate	ND	10.0	"	"	"	"	"	"	
7,12-Dimethylbenz (a) anthracene	ND	10.0	"	"	"	"	"	"	A-01a
2,4-Dimethylphenol	ND	10.0	"	"	"	"	"	"	
Dimethyl phthalate	ND	10.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10.0	"	"	"	"	"	"	
Fluoranthene	ND	10.0	"	"	"	"	"	"	
Fluorene	ND	10.0	"	"	"	"	"	"	
Indene	ND	10.0	"	"	"	"	"	"	A-01a
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
6-Methyl chrysene	ND	10.0	"	"	"	"	"	"	A-01a
1-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	A-01a
2-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	
2-Methylphenol	ND	10.0	"	"	"	"	"	"	
3 & 4-Methylphenol	ND	10.0	"	"	"	"	"	"	
Naphthalene	ND	10.0	"	"	"	"	"	"	
4-Nitrophenol	ND	10.0	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10.0	"	"	"	"	"	"	
Phenanthrene	ND	10.0	"	"	"	"	"	"	
Phenol	ND	10.0	"	"	"	"	"	"	
Pyrene	ND	10.0	"	"	"	"	"	"	
Pyridine	ND	10.0	"	"	"	"	"	"	
Quinoline	ND	10.0	"	"	"	"	"	"	A-01a
Thiophenol	ND	10.0	"	"	"	"	"	"	A-01a
Surrogate: 2-FBP	*31.8 %*	*41-129*			"	"	"	"	*A-02*
Surrogate: 2-FP	*4.59 %*	*18-124*			"	"	"	"	*A-02, J*
Surrogate: Nitrobenzene-d5	*35.1 %*	*44-124*			"	"	"	"	*A-02*
Surrogate: Phenol-d6	*2.12 %*	*25-122*			"	"	"	"	*A-02, J*
Surrogate: p-Terphenyl-d14	*37.4 %*	*10-132*			"	"	"	"	
Surrogate: 2,4,6-TBP	*39.7 %*	*19-132*			"	"	"	"	

DRAFT REPORT

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:54

DRAFT: Semivolatile Organic Compounds (Modified Skinner List) by EPA Method 8270C
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DRAFT: MW-61 (B4J0574-04) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Acenaphthylene	ND	10.0	ug/l	1	4J20009	10/20/04	11/24/04	EPA 8270C	
Anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10.0	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (ghi) perylene	ND	10.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10.0	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10.0	"	"	"	"	"	"	
Chrysene	ND	10.0	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10.0	"	"	"	"	"	"	
Dibenz (a,h) acridine	ND	10.0	"	"	"	"	"	"	A-01a
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
Diethyl phthalate	ND	10.0	"	"	"	"	"	"	
7,12-Dimethylbenz (a) anthracene	ND	10.0	"	"	"	"	"	"	A-01a
2,4-Dimethylphenol	ND	10.0	"	"	"	"	"	"	
Dimethyl phthalate	ND	10.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10.0	"	"	"	"	"	"	
Fluoranthene	ND	10.0	"	"	"	"	"	"	
Fluorene	ND	10.0	"	"	"	"	"	"	
Indene	ND	10.0	"	"	"	"	"	"	A-01a
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
6-Methyl chrysene	ND	10.0	"	"	"	"	"	"	A-01a
1-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	A-01a
2-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	
2-Methylphenol	ND	10.0	"	"	"	"	"	"	
3 & 4-Methylphenol	ND	10.0	"	"	"	"	"	"	
Naphthalene	ND	10.0	"	"	"	"	"	"	
4-Nitrophenol	ND	10.0	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10.0	"	"	"	"	"	"	
Phenanthrene	ND	10.0	"	"	"	"	"	"	
Phenol	ND	10.0	"	"	"	"	"	"	

DRAFT REPORT

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:54

DRAFT: Semivolatile Organic Compounds (Modified Skinner List) by EPA Method 8270C
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DRAFT: MW-61 (B4J0574-04) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Pyrene	ND	10.0	ug/l	1	4J20009	10/20/04	11/24/04	"	
Pyridine	ND	10.0	"	"	"	"	"	"	
Quinoline	ND	10.0	"	"	"	"	"	"	A-01a
Thiophenol	ND	10.0	"	"	"	"	"	"	A-01a
Surrogate: 2-FBP	*19.7 %*	*41-129*			"	"	"	"	*A-02*
Surrogate: 2-FP	*4.20 %*	*18-124*			"	"	"	"	*A-02*
Surrogate: Nitrobenzene-d5	*23.8 %*	*44-124*			"	"	"	"	*A-02*
Surrogate: Phenol-d6	*1.56 %*	*25-122*			"	"	"	"	*A-02, J*
Surrogate: p-Terphenyl-d14	*24.2 %*	*10-132*			"	"	"	"	
Surrogate: 2,4,6-TBP	*27.5 %*	*19-132*			"	"	"	"	
DRAFT: MW-60 (B4J0574-05) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Acenaphthylene	ND	10.0	ug/l	1	4J20009	10/20/04	11/24/04	EPA 8270C	
Anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10.0	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (ghi) perylene	ND	10.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10.0	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10.0	"	"	"	"	"	"	
Chrysene	ND	10.0	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10.0	"	"	"	"	"	"	
Dibenz (a,h) acridine	ND	10.0	"	"	"	"	"	"	A-01a
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
Diethyl phthalate	ND	10.0	"	"	"	"	"	"	
7,12-Dimethylbenz (a) anthracene	ND	10.0	"	"	"	"	"	"	A-01a
2,4-Dimethylphenol	**12.0**	10.0	"	"	"	"	"	"	
Dimethyl phthalate	ND	10.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10.0	"	"	"	"	"	"	
Fluoranthene	ND	10.0	"	"	"	"	"	"	
Fluorene	ND	10.0	"	"	"	"	"	"	

Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:54

DRAFT: Semivolatile Organic Compounds (Modified Skinner List) by EPA Method 8270C
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DRAFT: MW-60 (B4J0574-05) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Indene	ND	10.0	ug/l	1	4J20009	10/20/04	11/24/04	"	A-01a
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
6-Methyl chrysene	ND	10.0	"	"	"	"	"	"	A-01a
1-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	A-01a
2-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	
2-Methylphenol	ND	10.0	"	"	"	"	"	"	
3 & 4-Methylphenol	ND	10.0	"	"	"	"	"	"	
Naphthalene	ND	10.0	"	"	"	"	"	"	
4-Nitrophenol	ND	10.0	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10.0	"	"	"	"	"	"	
Phenanthrene	ND	10.0	"	"	"	"	"	"	
Phenol	ND	10.0	"	"	"	"	"	"	
Pyrene	ND	10.0	"	"	"	"	"	"	
Pyridine	ND	10.0	"	"	"	"	"	"	
Quinoline	ND	10.0	"	"	"	"	"	"	A-01a
Thiophenol	ND	10.0	"	"	"	"	"	"	A-01a
Surrogate: 2-FBP	*27.8 %*	*41-129*			"	"	"	"	*A-02*
Surrogate: 2-FP	*9.76 %*	*18-124*			"	"	"	"	*A-02, J*
Surrogate: Nitrobenzene-d5	*32.9 %*	*44-124*			"	"	"	"	*A-02*
Surrogate: Phenol-d6	*3.96 %*	*25-122*			"	"	"	"	*A-02, J*
Surrogate: p-Terphenyl-d14	*32.9 %*	*10-132*			"	"	"	"	
Surrogate: 2,4,6-TBP	*40.0 %*	*19-132*			"	"	"	"	
DRAFT: MW-94 (B4J0574-06) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Acenaphthylene	ND	10.0	ug/l	1	4J20009	10/20/04	11/24/04	EPA 8270C	
Anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10.0	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (ghi) perylene	ND	10.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10.0	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10.0	"	"	"	"	"	"	
Chrysene	ND	10.0	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10.0	"	"	"	"	"	"	

DRAFT REPORT

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:54

DRAFT: Semivolatile Organic Compounds (Modified Skinner List) by EPA Method 8270C
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DRAFT: MW-94 (B4J0574-06) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Dibenz (a,h) acridine	ND	10.0	ug/l	1	4J20009	10/20/04	11/24/04	"	A-01a
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
Diethyl phthalate	ND	10.0	"	"	"	"	"	"	
7,12-Dimethylbenz (a) anthracene	ND	10.0	"	"	"	"	"	"	A-01a
2,4-Dimethylphenol	ND	10.0	"	"	"	"	"	"	
Dimethyl phthalate	ND	10.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10.0	"	"	"	"	"	"	
Fluoranthene	ND	10.0	"	"	"	"	"	"	
Fluorene	ND	10.0	"	"	"	"	"	"	
Indene	ND	10.0	"	"	"	"	"	"	A-01a
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
6-Methyl chrysene	ND	10.0	"	"	"	"	"	"	A-01a
1-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	A-01a
2-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	
2-Methylphenol	ND	10.0	"	"	"	"	"	"	
3 & 4-Methylphenol	ND	10.0	"	"	"	"	"	"	
Naphthalene	ND	10.0	"	"	"	"	"	"	
4-Nitrophenol	ND	10.0	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10.0	"	"	"	"	"	"	
Phenanthrene	ND	10.0	"	"	"	"	"	"	
Phenol	ND	10.0	"	"	"	"	"	"	
Pyrene	ND	10.0	"	"	"	"	"	"	
Pyridine	ND	10.0	"	"	"	"	"	"	
Quinoline	ND	10.0	"	"	"	"	"	"	A-01a
Thiophenol	ND	10.0	"	"	"	"	"	"	A-01a
Surrogate: 2-FBP	*26.3 %*	*41-129*			"	"	"	"	*A-02*
Surrogate: 2-FP	*5.49 %*	*18-124*			"	"	"	"	*A-02, J*
Surrogate: Nitrobenzene-d5	*29.0 %*	*44-124*			"	"	"	"	*A-02*
Surrogate: Phenol-d6	*2.49 %*	*25-122*			"	"	"	"	*A-02, J*
Surrogate: p-Terphenyl-d14	*30.6 %*	*10-132*			"	"	"	"	
Surrogate: 2,4,6-TBP	*32.9 %*	*19-132*			"	"	"	"	

DRAFT REPORT

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:54

DRAFT: Semivolatile Organic Compounds (Modified Skinner List) by EPA Method 8270C
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DRAFT: MW-95 (B4J0574-07) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Acenaphthylene	ND	10.0	ug/l	1	4J20009	10/20/04	11/24/04	EPA 8270C	
Anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10.0	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (ghi) perylene	ND	10.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10.0	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10.0	"	"	"	"	"	"	
Chrysene	ND	10.0	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10.0	"	"	"	"	"	"	
Dibenz (a,h) acridine	ND	10.0	"	"	"	"	"	"	A-01a
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
Diethyl phthalate	ND	10.0	"	"	"	"	"	"	
7,12-Dimethylbenz (a) anthracene	ND	10.0	"	"	"	"	"	"	A-01a
2,4-Dimethylphenol	ND	10.0	"	"	"	"	"	"	
Dimethyl phthalate	ND	10.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10.0	"	"	"	"	"	"	
Fluoranthene	ND	10.0	"	"	"	"	"	"	
Fluorene	ND	10.0	"	"	"	"	"	"	
Indene	ND	10.0	"	"	"	"	"	"	A-01a
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
6-Methyl chrysene	ND	10.0	"	"	"	"	"	"	A-01a
1-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	A-01a
2-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	
2-Methylphenol	ND	10.0	"	"	"	"	"	"	
3 & 4-Methylphenol	ND	10.0	"	"	"	"	"	"	
Naphthalene	ND	10.0	"	"	"	"	"	"	
4-Nitrophenol	ND	10.0	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10.0	"	"	"	"	"	"	
Phenanthrene	ND	10.0	"	"	"	"	"	"	
Phenol	ND	10.0	"	"	"	"	"	"	

Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:54

DRAFT: Semivolatile Organic Compounds (Modified Skinner List) by EPA Method 8270C
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DRAFT: MW-95 (B4J0574-07) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Pyrene	ND	10.0	ug/l	1	4J20009	10/20/04	11/24/04	"	
Pyridine	ND	10.0	"	"	"	"	"	"	
Quinoline	ND	10.0	"	"	"	"	"	"	A-01a
Thiophenol	ND	10.0	"	"	"	"	"	"	A-01a
Surrogate: 2-FBP	*48.3 %*	*41-129*			"	"	"	"	
Surrogate: 2-FP	*7.45 %*	*18-124*			"	"	"	"	*A-02, J*
Surrogate: Nitrobenzene-d5	*54.5 %*	*44-124*			"	"	"	"	
Surrogate: Phenol-d6	*3.01 %*	*25-122*			"	"	"	"	*A-02, J*
Surrogate: p-Terphenyl-d14	*53.1 %*	*10-132*			"	"	"	"	
Surrogate: 2,4,6-TBP	*56.8 %*	*19-132*			"	"	"	"	
DRAFT: MW-96 (B4J0574-08) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Acenaphthylene	ND	10.0	ug/l	1	4J20009	10/20/04	11/24/04	EPA 8270C	
Anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10.0	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (ghi) perylene	ND	10.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10.0	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10.0	"	"	"	"	"	"	
Chrysene	ND	10.0	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10.0	"	"	"	"	"	"	
Dibenz (a,h) acridine	ND	10.0	"	"	"	"	"	"	A-01a
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
Diethyl phthalate	ND	10.0	"	"	"	"	"	"	
7,12-Dimethylbenz (a) anthracene	ND	10.0	"	"	"	"	"	"	A-01a
2,4-Dimethylphenol	ND	10.0	"	"	"	"	"	"	
Dimethyl phthalate	ND	10.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10.0	"	"	"	"	"	"	
Fluoranthene	ND	10.0	"	"	"	"	"	"	
Fluorene	ND	10.0	"	"	"	"	"	"	

DRAFT REPORT

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:54

DRAFT: Semivolatile Organic Compounds (Modified Skinner List) by EPA Method 8270C
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DRAFT: MW-96 (B4J0574-08) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Indene	ND	10.0	ug/l	1	4J20009	10/20/04	11/24/04	"	A-01a
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
6-Methyl chrysene	ND	10.0	"	"	"	"	"	"	A-01a
1-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	A-01a
2-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	
2-Methylphenol	ND	10.0	"	"	"	"	"	"	
3 & 4-Methylphenol	ND	10.0	"	"	"	"	"	"	
Naphthalene	ND	10.0	"	"	"	"	"	"	
4-Nitrophenol	ND	10.0	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10.0	"	"	"	"	"	"	
Phenanthrene	ND	10.0	"	"	"	"	"	"	
Phenol	ND	10.0	"	"	"	"	"	"	
Pyrene	ND	10.0	"	"	"	"	"	"	
Pyridine	ND	10.0	"	"	"	"	"	"	
Quinoline	ND	10.0	"	"	"	"	"	"	A-01a
Thiophenol	ND	10.0	"	"	"	"	"	"	A-01a
Surrogate: 2-FBP	*26.9 %*	*41-129*			"	"	"	"	*A-02*
Surrogate: 2-FP	*5.04 %*	*18-124*			"	"	"	"	*A-02, J*
Surrogate: Nitrobenzene-d5	*28.8 %*	*44-124*			"	"	"	"	*A-02*
Surrogate: Phenol-d6	*2.35 %*	*25-122*			"	"	"	"	*A-02, J*
Surrogate: p-Terphenyl-d14	*45.5 %*	*10-132*			"	"	"	"	
Surrogate: 2,4,6-TBP	*40.8 %*	*19-132*			"	"	"	"	
DRAFT: MW-97 (B4J0574-09) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Acenaphthylene	ND	10.0	ug/l	1	4J20009	10/20/04	11/24/04	EPA 8270C	
Anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10.0	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (ghi) perylene	ND	10.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10.0	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10.0	"	"	"	"	"	"	
Chrysene	ND	10.0	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10.0	"	"	"	"	"	"	

DRAFT REPORT

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:54

DRAFT: Semivolatile Organic Compounds (Modified Skinner List) by EPA Method 8270C
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DRAFT: MW-97 (B4J0574-09) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Dibenz (a,h) acridine	ND	10.0	ug/l	1	4J20009	10/20/04	11/24/04	"	A-01a
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
Diethyl phthalate	ND	10.0	"	"	"	"	"	"	
7,12-Dimethylbenz (a) anthracene	ND	10.0	"	"	"	"	"	"	A-01a
2,4-Dimethylphenol	ND	10.0	"	"	"	"	"	"	
Dimethyl phthalate	ND	10.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10.0	"	"	"	"	"	"	
Fluoranthene	ND	10.0	"	"	"	"	"	"	
Fluorene	ND	10.0	"	"	"	"	"	"	
Indene	ND	10.0	"	"	"	"	"	"	A-01a
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
6-Methyl chrysene	ND	10.0	"	"	"	"	"	"	A-01a
1-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	A-01a
2-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	
2-Methylphenol	ND	10.0	"	"	"	"	"	"	
3 & 4-Methylphenol	ND	10.0	"	"	"	"	"	"	
Naphthalene	ND	10.0	"	"	"	"	"	"	
4-Nitrophenol	ND	10.0	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10.0	"	"	"	"	"	"	
Phenanthrene	ND	10.0	"	"	"	"	"	"	
Phenol	ND	10.0	"	"	"	"	"	"	
Pyrene	ND	10.0	"	"	"	"	"	"	
Pyridine	ND	10.0	"	"	"	"	"	"	
Quinoline	ND	10.0	"	"	"	"	"	"	A-01a
Thiophenol	ND	10.0	"	"	"	"	"	"	A-01a
Surrogate: 2-FBP	*149 %*	*41-129*			"	"	"	"	*A-02*
Surrogate: 2-FP	*12.2 %*	*18-124*			"	"	"	"	*A-02, J*
Surrogate: Nitrobenzene-d5	*166 %*	*44-124*			"	"	"	"	*A-02*
Surrogate: Phenol-d6	*5.64 %*	*25-122*			"	"	"	"	*A-02, J*
Surrogate: p-Terphenyl-d14	*162 %*	*10-132*			"	"	"	"	*A-02*
Surrogate: 2,4,6-TBP	*121 %*	*19-132*			"	"	"	"	

DRAFT REPORT

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:54

DRAFT: Semivolatile Organic Compounds (Modified Skinner List) by EPA Method 8270C
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DRAFT: MW-63 (B4J0574-10) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Acenaphthylene	ND	10.0	ug/l	1	4J20009	10/20/04	11/24/04	EPA 8270C	
Anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10.0	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (ghi) perylene	ND	10.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10.0	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10.0	"	"	"	"	"	"	
Chrysene	ND	10.0	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10.0	"	"	"	"	"	"	
Dibenz (a,h) acridine	ND	10.0	"	"	"	"	"	"	A-01a
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
Diethyl phthalate	ND	10.0	"	"	"	"	"	"	
7,12-Dimethylbenz (a) anthracene	ND	10.0	"	"	"	"	"	"	A-01a
2,4-Dimethylphenol	ND	10.0	"	"	"	"	"	"	
Dimethyl phthalate	ND	10.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10.0	"	"	"	"	"	"	
Fluoranthene	ND	10.0	"	"	"	"	"	"	
Fluorene	ND	10.0	"	"	"	"	"	"	
Indene	ND	16.5	"	"	"	"	"	"	R-03, A-01a
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
6-Methyl chrysene	ND	10.0	"	"	"	"	"	"	A-01a
1-Methylnaphthalene	**42.0**	10.0	"	"	"	"	"	"	A-01a
2-Methylnaphthalene	**36.5**	10.0	"	"	"	"	"	"	
2-Methylphenol	ND	10.0	"	"	"	"	"	"	
3 & 4-Methylphenol	ND	10.0	"	"	"	"	"	"	
Naphthalene	**36.0**	10.0	"	"	"	"	"	"	
4-Nitrophenol	ND	10.0	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10.0	"	"	"	"	"	"	
Phenanthrene	ND	10.0	"	"	"	"	"	"	
Phenol	ND	10.0	"	"	"	"	"	"	

Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:54

DRAFT: Semivolatile Organic Compounds (Modified Skinner List) by EPA Method 8270C
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DRAFT: MW-63 (B4J0574-10) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Pyrene	ND	10.0	ug/l	1	4J20009	10/20/04	11/24/04	"	
Pyridine	ND	10.0	"	"	"	"	"	"	
Quinoline	ND	10.0	"	"	"	"	"	"	A-01a
Thiophenol	ND	10.0	"	"	"	"	"	"	A-01a
Surrogate: 2-FBP	*55.7 %*	*41-129*			"	"	"	"	
Surrogate: 2-FP	*11.4 %*	*18-124*			"	"	"	"	*A-02, J*
Surrogate: Nitrobenzene-d5	*57.3 %*	*44-124*			"	"	"	"	
Surrogate: Phenol-d6	*5.53 %*	*25-122*			"	"	"	"	*A-02, J*
Surrogate: p-Terphenyl-d14	*60.8 %*	*10-132*			"	"	"	"	
Surrogate: 2,4,6-TBP	*76.1 %*	*19-132*			"	"	"	"	
DRAFT: MW-65 (B4J0574-11) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Acenaphthylene	ND	10.0	ug/l	1	4J20009	10/20/04	11/24/04	EPA 8270C	
Anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10.0	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (ghi) perylene	ND	10.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10.0	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10.0	"	"	"	"	"	"	
Chrysene	ND	10.0	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10.0	"	"	"	"	"	"	
Dibenz (a,h) acridine	ND	10.0	"	"	"	"	"	"	A-01a
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
Diethyl phthalate	ND	10.0	"	"	"	"	"	"	
7,12-Dimethylbenz (a) anthracene	ND	10.0	"	"	"	"	"	"	A-01a
2,4-Dimethylphenol	ND	10.0	"	"	"	"	"	"	
Dimethyl phthalate	ND	10.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10.0	"	"	"	"	"	"	
Fluoranthene	ND	10.0	"	"	"	"	"	"	
Fluorene	ND	10.0	"	"	"	"	"	"	

Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:54

DRAFT: Semivolatile Organic Compounds (Modified Skinner List) by EPA Method 8270C
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DRAFT: MW-65 (B4J0574-11) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Indene	ND	10.0	ug/l	1	4J20009	10/20/04	11/24/04	"	A-01a
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
6-Methyl chrysene	ND	10.0	"	"	"	"	"	"	A-01a
1-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	A-01a
2-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	
2-Methylphenol	ND	10.0	"	"	"	"	"	"	
3 & 4-Methylphenol	ND	10.0	"	"	"	"	"	"	
Naphthalene	ND	10.0	"	"	"	"	"	"	
4-Nitrophenol	ND	10.0	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10.0	"	"	"	"	"	"	
Phenanthrene	ND	10.0	"	"	"	"	"	"	
Phenol	ND	10.0	"	"	"	"	"	"	
Pyrene	ND	10.0	"	"	"	"	"	"	
Pyridine	ND	10.0	"	"	"	"	"	"	
Quinoline	ND	10.0	"	"	"	"	"	"	A-01a
Thiophenol	ND	10.0	"	"	"	"	"	"	A-01a
Surrogate: 2-FBP	*62.8 %*	*41-129*			"	"	"	"	
Surrogate: 2-FP	*13.3 %*	*18-124*			"	"	"	"	*A-02, J*
Surrogate: Nitrobenzene-d5	*65.6 %*	*44-124*			"	"	"	"	
Surrogate: Phenol-d6	*5.68 %*	*25-122*			"	"	"	"	*A-02, J*
Surrogate: p-Terphenyl-d14	*64.8 %*	*10-132*			"	"	"	"	
Surrogate: 2,4,6-TBP	*73.6 %*	*19-132*			"	"	"	"	
DRAFT: MW-100 (B4J0574-12) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Acenaphthylene	ND	10.0	ug/l	1	4J20009	10/20/04	11/24/04	EPA 8270C	
Anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10.0	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (ghi) perylene	ND	10.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10.0	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10.0	"	"	"	"	"	"	
Chrysene	ND	10.0	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10.0	"	"	"	"	"	"	

Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:54

DRAFT: Semivolatile Organic Compounds (Modified Skinner List) by EPA Method 8270C
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DRAFT: MW-100 (B4J0574-12) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Dibenz (a,h) acridine	ND	10.0	ug/l	1	4J20009	10/20/04	11/24/04	"	A-01a
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
Diethyl phthalate	ND	10.0	"	"	"	"	"	"	
7,12-Dimethylbenz (a) anthracene	ND	10.0	"	"	"	"	"	"	A-01a
2,4-Dimethylphenol	**11.6**	10.0	"	"	"	"	"	"	
Dimethyl phthalate	ND	10.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10.0	"	"	"	"	"	"	
Fluoranthene	ND	10.0	"	"	"	"	"	"	
Fluorene	ND	10.0	"	"	"	"	"	"	
Indene	ND	10.0	"	"	"	"	"	"	A-01a
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
6-Methyl chrysene	ND	10.0	"	"	"	"	"	"	A-01a
1-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	A-01a
2-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	
2-Methylphenol	ND	10.0	"	"	"	"	"	"	
3 & 4-Methylphenol	ND	10.0	"	"	"	"	"	"	
Naphthalene	ND	10.0	"	"	"	"	"	"	
4-Nitrophenol	ND	10.0	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10.0	"	"	"	"	"	"	
Phenanthrene	ND	10.0	"	"	"	"	"	"	
Phenol	ND	10.0	"	"	"	"	"	"	
Pyrene	ND	10.0	"	"	"	"	"	"	
Pyridine	ND	10.0	"	"	"	"	"	"	
Quinoline	ND	10.0	"	"	"	"	"	"	A-01a
Thiophenol	ND	10.0	"	"	"	"	"	"	A-01a
Surrogate: 2-FBP	*32.3 %*	*41-129*			"	"	"	"	*A-02*
Surrogate: 2-FP	*5.92 %*	*18-124*			"	"	"	"	*A-02, J*
Surrogate: Nitrobenzene-d5	*37.8 %*	*44-124*			"	"	"	"	*A-02*
Surrogate: Phenol-d6	*2.44 %*	*25-122*			"	"	"	"	*A-02, J*
Surrogate: p-Terphenyl-d14	*36.2 %*	*10-132*			"	"	"	"	
Surrogate: 2,4,6-TBP	*44.4 %*	*19-132*			"	"	"	"	

DRAFT REPORT

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.

Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:54

DRAFT: Semivolatile Organic Compounds (Modified Skinner List) by EPA Method 8270C
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DRAFT: BLANK (B4J0574-13) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Acenaphthylene	ND	10.0	ug/l	1	4J20009	10/20/04	11/25/04	EPA 8270C	
Anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) anthracene	ND	10.0	"	"	"	"	"	"	
Benzo (a) pyrene	ND	10.0	"	"	"	"	"	"	
Benzo (b) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (k) fluoranthene	ND	10.0	"	"	"	"	"	"	
Benzo (ghi) perylene	ND	10.0	"	"	"	"	"	"	
Bis(2-ethylhexyl)phthalate	ND	10.0	"	"	"	"	"	"	
Butyl benzyl phthalate	ND	10.0	"	"	"	"	"	"	
Chrysene	ND	10.0	"	"	"	"	"	"	
Di-n-butyl phthalate	ND	10.0	"	"	"	"	"	"	
Dibenz (a,h) acridine	ND	10.0	"	"	"	"	"	"	A-01a
Dibenz (a,h) anthracene	ND	10.0	"	"	"	"	"	"	
1,2-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,3-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
1,4-Dichlorobenzene	ND	10.0	"	"	"	"	"	"	
Diethyl phthalate	ND	10.0	"	"	"	"	"	"	
7,12-Dimethylbenz (a) anthracene	ND	10.0	"	"	"	"	"	"	A-01a
2,4-Dimethylphenol	ND	10.0	"	"	"	"	"	"	
Dimethyl phthalate	ND	10.0	"	"	"	"	"	"	
2,4-Dinitrophenol	ND	10.0	"	"	"	"	"	"	
Fluoranthene	ND	10.0	"	"	"	"	"	"	
Fluorene	ND	10.0	"	"	"	"	"	"	
Indene	ND	10.0	"	"	"	"	"	"	A-01a
Indeno (1,2,3-cd) pyrene	ND	10.0	"	"	"	"	"	"	
6-Methyl chrysene	ND	10.0	"	"	"	"	"	"	A-01a
1-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	A-01a
2-Methylnaphthalene	ND	10.0	"	"	"	"	"	"	
2-Methylphenol	ND	10.0	"	"	"	"	"	"	
3 & 4-Methylphenol	ND	10.0	"	"	"	"	"	"	
Naphthalene	ND	10.0	"	"	"	"	"	"	
4-Nitrophenol	ND	10.0	"	"	"	"	"	"	
Di-n-octyl phthalate	ND	10.0	"	"	"	"	"	"	
Phenanthrene	ND	10.0	"	"	"	"	"	"	
Phenol	ND	10.0	"	"	"	"	"	"	

DRAFT REPORT

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Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:54

DRAFT: Semivolatile Organic Compounds (Modified Skinner List) by EPA Method 8270C
North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Dilution	Batch	Prepared	Analyzed	Method	Notes
DRAFT: BLANK (B4J0574-13) Water	**Sampled: 10/13/04 12:00**		**Received: 10/15/04 09:50**						**A-01b, AF-X**
Pyrene	ND	10.0	ug/l	1	4J20009	10/20/04	11/25/04	"	
Pyridine	ND	10.0	"	"	"	"	"	"	
Quinoline	ND	10.0	"	"	"	"	"	"	A-01a
Thiophenol	ND	10.0	"	"	"	"	"	"	A-01a
Surrogate: 2-FBP	*66.4 %*	*41-129*			"	"	"	"	
Surrogate: 2-FP	*11.7 %*	*18-124*			"	"	"	"	*A-02, J*
Surrogate: Nitrobenzene-d5	*70.9 %*	*44-124*			"	"	"	"	
Surrogate: Phenol-d6	*4.93 %*	*25-122*			"	"	"	"	*A-02, J*
Surrogate: p-Terphenyl-d14	*75.7 %*	*10-132*			"	"	"	"	
Surrogate: 2,4,6-TBP	*86.2 %*	*19-132*			"	"	"	"	

DRAFT: Semivolatile Organic Compounds (Modified Skinner List) by EPA Method 8270C - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4J20009: Prepared 10/20/04 Using EPA 3510C										
Blank (4J20009-BLK1)										**A-01b, AF-X**
Acenaphthylene	ND	10.0	ug/l							
Anthracene	ND	10.0	"							
Benzo (a) anthracene	ND	10.0	"							
Benzo (a) pyrene	ND	10.0	"							
Benzo (b) fluoranthene	ND	10.0	"							
Benzo (k) fluoranthene	ND	10.0	"							
Benzo (ghi) perylene	ND	10.0	"							
Bis(2-ethylhexyl)phthalate	ND	10.0	"							
Butyl benzyl phthalate	ND	10.0	"							
Chrysene	ND	10.0	"							
Di-n-butyl phthalate	ND	10.0	"							
Dibenz (a,h) acridine	ND	10.0	"							A-01
Dibenz (a,h) anthracene	ND	10.0	"							
1,2-Dichlorobenzene	ND	10.0	"							
1,3-Dichlorobenzene	ND	10.0	"							
1,4-Dichlorobenzene	ND	10.0	"							
Diethyl phthalate	ND	10.0	"							
7,12-Dimethylbenz (a) anthracene	ND	10.0	"							A-01
2,4-Dimethylphenol	ND	10.0	"							
Dimethyl phthalate	ND	10.0	"							
2,4-Dinitrophenol	ND	10.0	"							
Fluoranthene	ND	10.0	"							
Fluorene	ND	10.0	"							
Indene	ND	10.0	"							A-01
Indeno (1,2,3-cd) pyrene	ND	10.0	"							
6-Methyl chrysene	ND	10.0	"							
1-Methylnaphthalene	ND	10.0	"							A-01
2-Methylnaphthalene	ND	10.0	"							
2-Methylphenol	ND	10.0	"							
3 & 4-Methylphenol	ND	10.0	"							
Naphthalene	ND	10.0	"							

DRAFT: Semivolatile Organic Compounds (Modified Skinner List) by EPA Method 8270C - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4J20009: Prepared 10/20/04 Using EPA 3510C										
Blank (4J20009-BLK1)										**A-01b, AF-X**
4-Nitrophenol	ND	10.0	ug/l							
Di-n-octyl phthalate	ND	10.0	"							
Phenanthrene	ND	10.0	"							
Phenol	ND	10.0	"							
Pyrene	ND	10.0	"							
Pyridine	ND	10.0	"							
Quinoline	ND	10.0	"							
Thiophenol	ND	10.0	"							
Surrogate: 2-FBP	*15.0*		"	*50.0*		*30.0*	*41-129*			*A-02a*
Surrogate: 2-FP	*3.22*		"	*50.0*		*6.44*	*18-124*			*A-02a, J*
Surrogate: Nitrobenzene-d5	*10.5*		"	*50.0*		*21.0*	*44-124*			*A-02a*
Surrogate: Phenol-d6	*1.34*		"	*50.0*		*2.68*	*25-122*			*A-02a, J*
Surrogate: p-Terphenyl-d14	*21.7*		"	*50.0*		*43.4*	*10-132*			
Surrogate: 2,4,6-TBP	*11.6*		"	*50.0*		*23.2*	*19-132*			
LCS (4J20009-BS1)										**A-01b, AF-X**
1,4-Dichlorobenzene	56.5	10.0	ug/l	100		56.5	43-122			
4-Nitrophenol	9.84	10.0	"	100		9.84	12-153			A-02, J
Phenol	8.28	10.0	"	100		8.28	20-124			A-02, J
Pyrene	64.8	10.0	"	100		64.8	59-134			
Surrogate: 2-FBP	*41.4*		"	*50.0*		*82.8*	*41-129*			
Surrogate: 2-FP	*8.44*		"	*50.0*		*16.9*	*18-124*			*A-02, J*
Surrogate: Nitrobenzene-d5	*34.4*		"	*50.0*		*68.8*	*44-124*			
Surrogate: Phenol-d6	*3.84*		"	*50.0*		*7.68*	*25-122*			*A-02, J*
Surrogate: p-Terphenyl-d14	*34.0*		"	*50.0*		*68.0*	*10-132*			
Surrogate: 2,4,6-TBP	*38.1*		"	*50.0*		*76.2*	*19-132*			
LCS Dup (4J20009-BSD1)										**A-01b, AF-X**
1,4-Dichlorobenzene	35.5	10.0	ug/l	100		35.5	43-122	45.7	26	A-02
4-Nitrophenol	7.74	10.0	"	100		7.74	12-153	23.9	37	A-02, J
Phenol	7.06	10.0	"	100		7.06	20-124	15.9	53	A-02, J
Pyrene	63.3	10.0	"	100		63.3	59-134	2.34	50	

Shell Puget Sound Refinery	Project: SWMU 11 Sampling	
8505 South Texas Road	Project Number: PO# 4550237616	**Reported:**
Anacortes, WA 98221	Project Manager: Brian Rhodes	12/30/04 16:54

DRAFT: Semivolatile Organic Compounds (Modified Skinner List) by EPA Method 8270C - Quality Control

North Creek Analytical - Bothell

Analyte	Result	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit	Notes
Batch 4J20009: Prepared 10/20/04 Using EPA 3510C										
LCS Dup (4J20009-BSD1)										**A-01b, AF-X**
Surrogate: 2-FBP	*33.1*		*ug/l*	*50.0*		*66.2*	*41-129*			
Surrogate: 2-FP	*6.60*		*"*	*50.0*		*13.2*	*18-124*			*A-02, J*
Surrogate: Nitrobenzene-d5	*26.4*		*"*	*50.0*		*52.8*	*44-124*			
Surrogate: Phenol-d6	*3.14*		*"*	*50.0*		*6.28*	*25-122*			*A-02, J*
Surrogate: p-Terphenyl-d14	*33.1*		*"*	*50.0*		*66.2*	*10-132*			
Surrogate: 2,4,6-TBP	*32.3*		*"*	*50.0*		*64.6*	*19-132*			

Notes and Definitions

A-01	Modified 8270C/No valid curve.
A-01a	Results calculated from single-point calibration using continuing calibration response factors from daily CCV.
A-01b	See Nonconformance Report; data integrity has been impacted.
A-02	Outside of acceptance criteria.
A-02a	Surrogate recovery outside acceptance limit.
AF-X	Internal standards out of control. See Nonconformance Report.
J	Estimated value.
R-03	The reporting limit for this analyte has been raised to account for interference from coeluting organic compounds present in the sample.
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

Items for Project Manager Review

LabNumber	Analysis	Analyte	Exception
B4J0574-04	8270C Texaco Skinner	6-Methyl chrysene	A-01a
B4J0574-01	8270C Texaco Skinner	Phenol-d6	A-02
B4J0574-01	8270C Texaco Skinner	Nitrobenzene-d5	A-02
B4J0574-01	8270C Texaco Skinner	Indene	A-01
B4J0574-01	8270C Texaco Skinner	Dibenz (a,h) acridine	A-01
B4J0574-01	8270C Texaco Skinner	7,12-Dimethylbenz (a) anthracene	A-01
B4J0574-01	8270C Texaco Skinner	2-FP	A-02
B4J0574-01	8270C Texaco Skinner	1-Methylnaphthalene	A-01
B4J0574-01	8270C Texaco Skinner		AF-X
B4J0574-01	8270C Texaco Skinner		A-01b
B4J0574-04	8270C Texaco Skinner	Phenol-d6	A-02
B4J0574-04	8270C Texaco Skinner	Nitrobenzene-d5	A-02
B4J0574-04	8270C Texaco Skinner	Indene	A-01a
B4J0574-06	8270C Texaco Skinner		AF-X
B4J0574-04	8270C Texaco Skinner	7,12-Dimethylbenz (a) anthracene	A-01a
B4J0574-02	8270C Texaco Skinner	1-Methylnaphthalene	A-01
B4J0574-04	8270C Texaco Skinner	2-FP	A-02
B4J0574-04	8270C Texaco Skinner	2-FBP	A-02
B4J0574-04	8270C Texaco Skinner	1-Methylnaphthalene	A-01a
B4J0574-04	8270C Texaco Skinner		AF-X
B4J0574-04	8270C Texaco Skinner		A-01b
B4J0574-03	8270C Texaco Skinner	Thiophenol	A-01a
B4J0574-03	8270C Texaco Skinner	Quinoline	A-01a
B4J0574-03	8270C Texaco Skinner	Phenol-d6	A-02
B4J0574-03	8270C Texaco Skinner	Nitrobenzene-d5	A-02
B4J0574-03	8270C Texaco Skinner	Indene	A-01a
B4J0574-03	8270C Texaco Skinner	Dibenz (a,h) acridine	A-01a
B4J0574-03	8270C Texaco Skinner	7,12-Dimethylbenz (a) anthracene	A-01a
B4J0574-04	8270C Texaco Skinner	Dibenz (a,h) acridine	A-01a
B4J0574-04	8270C Texaco Skinner	Thiophenol	A-01a
			Default Report (not modified)
B4J0574-05	8270C Texaco Skinner	Thiophenol	A-01a
B4J0574-05	8270C Texaco Skinner	Quinoline	A-01a
B4J0574-05	8270C Texaco Skinner	Phenol-d6	A-02
B4J0574-05	8270C Texaco Skinner	Nitrobenzene-d5	A-02
B4J0574-05	8270C Texaco Skinner	Indene	A-01a
B4J0574-05	8270C Texaco Skinner	Dibenz (a,h) acridine	A-01a
B4J0574-05	8270C Texaco Skinner	7,12-Dimethylbenz (a) anthracene	A-01a
B4J0574-05	8270C Texaco Skinner	6-Methyl chrysene	A-01a
B4J0574-05	8270C Texaco Skinner	2-FP	A-02
B4J0574-05	8270C Texaco Skinner	2-FBP	A-02
B4J0574-05	8270C Texaco Skinner	1-Methylnaphthalene	A-01a
B4J0574-02	8270C Texaco Skinner		A-01b
B4J0574-05	8270C Texaco Skinner		A-01b

Items for Project Manager Review

LabNumber	Analysis	Analyte	Exception
B4J0574-02	8270C Texaco Skinner		AF-X
B4J0574-04	8270C Texaco Skinner	Quinoline	A-01a
B4J0574-03	8270C Texaco Skinner	2-FBP	A-02
B4J0574-03	8270C Texaco Skinner	1-Methylnaphthalene	A-01a
B4J0574-03	8270C Texaco Skinner		AF-X
B4J0574-03	8270C Texaco Skinner		A-01b
B4J0574-02	8270C Texaco Skinner	Phenol-d6	A-02
B4J0574-02	8270C Texaco Skinner	Nitrobenzene-d5	A-02
B4J0574-02	8270C Texaco Skinner	Indene	A-01
B4J0574-02	8270C Texaco Skinner	Dibenz (a,h) acridine	A-01
B4J0574-02	8270C Texaco Skinner	7,12-Dimethylbenz (a) anthracene	A-01
B4J0574-02	8270C Texaco Skinner	2-FP	A-02
B4J0574-02	8270C Texaco Skinner	2-FBP	A-02
4J20009-BSD1	8270C Texaco Skinner	1,4-Dichlorobenzene	Exceeds RPD limit
B4J0574-05	8270C Texaco Skinner		AF-X
B4J0574-05	8270C Texaco Skinner	2-FBP	Exceeds lower control limit
B4J0574-03	8270C Texaco Skinner	6-Methyl chrysene	A-01a
B4J0574-08	8270C Texaco Skinner	Phenol-d6	Exceeds lower control limit
B4J0574-08	8270C Texaco Skinner	2-FBP	Exceeds lower control limit
B4J0574-07	8270C Texaco Skinner	Phenol-d6	Exceeds lower control limit
B4J0574-06	8270C Texaco Skinner	Nitrobenzene-d5	Exceeds lower control limit
B4J0574-06	8270C Texaco Skinner	2-FP	Exceeds lower control limit
B4J0574-07	8270C Texaco Skinner	2-FP	Exceeds lower control limit
B4J0574-06	8270C Texaco Skinner	Phenol-d6	Exceeds lower control limit
B4J0574-06	8270C Texaco Skinner	2-FBP	Exceeds lower control limit
B4J0574-05	8270C Texaco Skinner	Phenol-d6	Exceeds lower control limit
B4J0574-05	8270C Texaco Skinner	Nitrobenzene-d5	Exceeds lower control limit
B4J0574-04	8270C Texaco Skinner	Nitrobenzene-d5	Exceeds lower control limit
B4J0574-08	8270C Texaco Skinner	Nitrobenzene-d5	Exceeds lower control limit
B4J0574-05	8270C Texaco Skinner	2-FP	Exceeds lower control limit
B4J0574-09	8270C Texaco Skinner	2-FP	Exceeds lower control limit
B4J0574-04	8270C Texaco Skinner	Phenol-d6	Exceeds lower control limit
B4J0574-04	8270C Texaco Skinner	2-FBP	Exceeds lower control limit
B4J0574-03	8270C Texaco Skinner	Phenol-d6	Exceeds lower control limit
B4J0574-03	8270C Texaco Skinner	Nitrobenzene-d5	Exceeds lower control limit
B4J0574-02	8270C Texaco Skinner	Nitrobenzene-d5	Exceeds lower control limit
B4J0574-02	8270C Texaco Skinner	2-FBP	Exceeds lower control limit
B4J0574-03	8270C Texaco Skinner	2-FP	Exceeds lower control limit
B4J0574-03	8270C Texaco Skinner	2-FBP	Exceeds lower control limit
B4J0574-02	8270C Texaco Skinner	Phenol-d6	Exceeds lower control limit
B4J0574-02	8270C Texaco Skinner	2-FP	Exceeds lower control limit
B4J0574-01	8270C Texaco Skinner	Phenol-d6	Exceeds lower control limit
B4J0574-01	8270C Texaco Skinner	Nitrobenzene-d5	Exceeds lower control limit
B4J0574-01	8270C Texaco Skinner	2-FP	Exceeds lower control limit
B4J0574-04	8270C Texaco Skinner	2-FP	Exceeds lower control limit

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LabNumber	Analysis	Analyte	Exception
B4J0574-09	8270C Texaco Skinner	2-FBP	Exceeds upper control limit
B4J0574-06	8270C Texaco Skinner	1-Methylnaphthalene	A-01a
4J20009-BSD1	8270C Texaco Skinner	Phenol-d6	Exceeds lower control limit
4J20009-BSD1	8270C Texaco Skinner	Phenol	Exceeds lower control limit
4J20009-BSD1	8270C Texaco Skinner	2-FP	Exceeds lower control limit
4J20009-BSD1	8270C Texaco Skinner	1,4-Dichlorobenzene	Exceeds lower control limit
4J20009-BS1	8270C Texaco Skinner	4-Nitrophenol	Exceeds lower control limit
4J20009-BS1	8270C Texaco Skinner	2-FP	Exceeds lower control limit
4J20009-BSD1	8270C Texaco Skinner	4-Nitrophenol	Exceeds lower control limit
4J20009-BS1	8270C Texaco Skinner	Phenol-d6	Exceeds lower control limit
4J20009-BS1	8270C Texaco Skinner	Phenol	Exceeds lower control limit
4J20009-BLK1	8270C Texaco Skinner	2-FP	Exceeds lower control limit
4J20009-BLK1	8270C Texaco Skinner	2-FBP	Exceeds lower control limit
B4J0574-08	8270C Texaco Skinner	2-FP	Exceeds lower control limit
4J20009-BLK1	8270C Texaco Skinner	Nitrobenzene-d5	Exceeds lower control limit
B4J0574-03	8270C Texaco Skinner	2-FP	A-02
B4J0574-09	8270C Texaco Skinner	p-Terphenyl-d14	Exceeds upper control limit
B4J0574-09	8270C Texaco Skinner	Nitrobenzene-d5	Exceeds upper control limit
B4J0574-13	8270C Texaco Skinner	Phenol-d6	Exceeds lower control limit
B4J0574-12	8270C Texaco Skinner	Nitrobenzene-d5	Exceeds lower control limit
B4J0574-13	8270C Texaco Skinner	2-FP	Exceeds lower control limit
B4J0574-12	8270C Texaco Skinner	Phenol-d6	Exceeds lower control limit
B4J0574-12	8270C Texaco Skinner	2-FP	Exceeds lower control limit
B4J0574-12	8270C Texaco Skinner	2-FBP	Exceeds lower control limit
B4J0574-11	8270C Texaco Skinner	Phenol-d6	Exceeds lower control limit
B4J0574-11	8270C Texaco Skinner	2-FP	Exceeds lower control limit
B4J0574-10	8270C Texaco Skinner	Phenol-d6	Exceeds lower control limit
B4J0574-10	8270C Texaco Skinner	2-FP	Exceeds lower control limit
B4J0574-09	8270C Texaco Skinner	Phenol-d6	Exceeds lower control limit
4J20009-BLK1	8270C Texaco Skinner	Phenol-d6	Exceeds lower control limit
4J20009-BS1	8270C Texaco Skinner	Phenol	A-02
B4J0574-08	8270C Texaco Skinner	Thiophenol	A-01a
B4J0574-08	8270C Texaco Skinner	Quinoline	A-01a
B4J0574-08	8270C Texaco Skinner	Phenol-d6	A-02
B4J0574-08	8270C Texaco Skinner	Nitrobenzene-d5	A-02
B4J0574-08	8270C Texaco Skinner	Indene	A-01a
B4J0574-08	8270C Texaco Skinner	Dibenz (a,h) acridine	A-01a
4J20009-BSD1	8270C Texaco Skinner	Phenol-d6	A-02
4J20009-BSD1	8270C Texaco Skinner	Phenol	A-02
4J20009-BSD1	8270C Texaco Skinner	4-Nitrophenol	A-02
4J20009-BSD1	8270C Texaco Skinner	2-FP	A-02
4J20009-BSD1	8270C Texaco Skinner	1,4-Dichlorobenzene	A-02
4J20009-BSD1	8270C Texaco Skinner		AF-X
B4J0574-06	8270C Texaco Skinner		A-01b
4J20009-BS1	8270C Texaco Skinner	Phenol-d6	A-02

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LabNumber	Analysis	Analyte	Exception
B4J0574-09	8270C Texaco Skinner	1-Methylnaphthalene	A-01a
4J20009-BS1	8270C Texaco Skinner	4-Nitrophenol	A-02
4J20009-BS1	8270C Texaco Skinner	2-FP	A-02
4J20009-BS1	8270C Texaco Skinner		AF-X
4J20009-BS1	8270C Texaco Skinner		A-01b
4J20009-BLK1	8270C Texaco Skinner	Phenol-d6	A-02a
4J20009-BLK1	8270C Texaco Skinner	Nitrobenzene-d5	A-02a
4J20009-BLK1	8270C Texaco Skinner	Indene	A-01
4J20009-BLK1	8270C Texaco Skinner	Dibenz (a,h) acridine	A-01
4J20009-BLK1	8270C Texaco Skinner	7,12-Dimethylbenz (a) anthracene	A-01
4J20009-BLK1	8270C Texaco Skinner	2-FP	A-02a
4J20009-BLK1	8270C Texaco Skinner	2-FBP	A-02a
4J20009-BLK1	8270C Texaco Skinner	1-Methylnaphthalene	A-01
4J20009-BSD1	8270C Texaco Skinner		A-01b
B4J0574-11	8270C Texaco Skinner	Indene	A-01a
B4J0574-13	8270C Texaco Skinner	Dibenz (a,h) acridine	A-01a
B4J0574-13	8270C Texaco Skinner	7,12-Dimethylbenz (a) anthracene	A-01a
B4J0574-13	8270C Texaco Skinner	6-Methyl chrysene	A-01a
B4J0574-13	8270C Texaco Skinner	2-FP	A-02
B4J0574-13	8270C Texaco Skinner	1-Methylnaphthalene	A-01a
B4J0574-13	8270C Texaco Skinner		AF-X
B4J0574-13	8270C Texaco Skinner		A-01b
B4J0574-12	8270C Texaco Skinner	Thiophenol	A-01a
B4J0574-12	8270C Texaco Skinner	1-Methylnaphthalene	A-01a
B4J0574-12	8270C Texaco Skinner		AF-X
B4J0574-12	8270C Texaco Skinner		A-01b
B4J0574-11	8270C Texaco Skinner	Thiophenol	A-01a
B4J0574-09	8270C Texaco Skinner		A-01b
B4J0574-11	8270C Texaco Skinner	Phenol-d6	A-02
B4J0574-09	8270C Texaco Skinner		AF-X
B4J0574-11	8270C Texaco Skinner	Dibenz (a,h) acridine	A-01a
B4J0574-11	8270C Texaco Skinner	7,12-Dimethylbenz (a) anthracene	A-01a
B4J0574-10	8270C Texaco Skinner	Indene	A-01a
B4J0574-10	8270C Texaco Skinner	Dibenz (a,h) acridine	A-01a
B4J0574-10	8270C Texaco Skinner	7,12-Dimethylbenz (a) anthracene	A-01a
B4J0574-10	8270C Texaco Skinner	6-Methyl chrysene	A-01a
B4J0574-10	8270C Texaco Skinner	2-FP	A-02
B4J0574-10	8270C Texaco Skinner	1-Methylnaphthalene	A-01a
B4J0574-10	8270C Texaco Skinner		AF-X
B4J0574-10	8270C Texaco Skinner		A-01b
B4J0574-09	8270C Texaco Skinner	Thiophenol	A-01a
B4J0574-09	8270C Texaco Skinner	2-FBP	A-02
B4J0574-13	8270C Texaco Skinner	Thiophenol	A-01a
B4J0574-11	8270C Texaco Skinner	Quinoline	A-01a
B4J0574-07	8270C Texaco Skinner	2-FP	A-02

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LabNumber	Analysis	Analyte	Exception
4J20009-BLK1	8270C Texaco Skinner		AF-X
B4J0574-08	8270C Texaco Skinner	6-Methyl chrysene	A-01a
B4J0574-08	8270C Texaco Skinner	2-FP	A-02
B4J0574-08	8270C Texaco Skinner	2-FBP	A-02
B4J0574-08	8270C Texaco Skinner	1-Methylnaphthalene	A-01a
B4J0574-08	8270C Texaco Skinner		AF-X
B4J0574-08	8270C Texaco Skinner		A-01b
B4J0574-07	8270C Texaco Skinner	Thiophenol	A-01a
B4J0574-07	8270C Texaco Skinner	Quinoline	A-01a
B4J0574-07	8270C Texaco Skinner	Phenol-d6	A-02
B4J0574-07	8270C Texaco Skinner	Indene	A-01a
B4J0574-07	8270C Texaco Skinner	Dibenz (a,h) acridine	A-01a
B4J0574-09	8270C Texaco Skinner	2-FP	A-02
B4J0574-07	8270C Texaco Skinner	6-Methyl chrysene	A-01a
B4J0574-09	8270C Texaco Skinner	6-Methyl chrysene	A-01a
B4J0574-07	8270C Texaco Skinner	1-Methylnaphthalene	A-01a
B4J0574-07	8270C Texaco Skinner		AF-X
B4J0574-07	8270C Texaco Skinner		A-01b
B4J0574-06	8270C Texaco Skinner	Thiophenol	A-01a
B4J0574-06	8270C Texaco Skinner	Quinoline	A-01a
B4J0574-06	8270C Texaco Skinner	Phenol-d6	A-02
B4J0574-06	8270C Texaco Skinner	Nitrobenzene-d5	A-02
B4J0574-06	8270C Texaco Skinner	Indene	A-01a
B4J0574-06	8270C Texaco Skinner	Dibenz (a,h) acridine	A-01a
B4J0574-06	8270C Texaco Skinner	7,12-Dimethylbenz (a) anthracene	A-01a
B4J0574-06	8270C Texaco Skinner	6-Methyl chrysene	A-01a
B4J0574-06	8270C Texaco Skinner	2-FP	A-02
B4J0574-06	8270C Texaco Skinner	2-FBP	A-02
B4J0574-07	8270C Texaco Skinner	7,12-Dimethylbenz (a) anthracene	A-01a
B4J0574-11	8270C Texaco Skinner	1-Methylnaphthalene	A-01a
B4J0574-13	8270C Texaco Skinner	Indene	A-01a
B4J0574-13	8270C Texaco Skinner	Quinoline	A-01a
B4J0574-13	8270C Texaco Skinner	Phenol-d6	A-02
B4J0574-12	8270C Texaco Skinner	Quinoline	A-01a
B4J0574-12	8270C Texaco Skinner	Phenol-d6	A-02
B4J0574-12	8270C Texaco Skinner	Nitrobenzene-d5	A-02
B4J0574-12	8270C Texaco Skinner	Indene	A-01a
B4J0574-12	8270C Texaco Skinner	Dibenz (a,h) acridine	A-01a
B4J0574-12	8270C Texaco Skinner	7,12-Dimethylbenz (a) anthracene	A-01a
B4J0574-12	8270C Texaco Skinner	6-Methyl chrysene	A-01a
B4J0574-12	8270C Texaco Skinner	2-FP	A-02
B4J0574-12	8270C Texaco Skinner	2-FBP	A-02
B4J0574-08	8270C Texaco Skinner	7,12-Dimethylbenz (a) anthracene	A-01a
B4J0574-11	8270C Texaco Skinner	2-FP	A-02
4J20009-BLK1	8270C Texaco Skinner		A-01b

Items for Project Manager Review

LabNumber	Analysis	Analyte	Exception
B4J0574-11	8270C Texaco Skinner		AF-X
B4J0574-11	8270C Texaco Skinner		A-01b
B4J0574-10	8270C Texaco Skinner	Thiophenol	A-01a
B4J0574-10	8270C Texaco Skinner	Quinoline	A-01a
B4J0574-10	8270C Texaco Skinner	Phenol-d6	A-02
B4J0574-10	8270C Texaco Skinner	Indene	R-03
B4J0574-09	8270C Texaco Skinner	Quinoline	A-01a
B4J0574-09	8270C Texaco Skinner	Phenol-d6	A-02
B4J0574-09	8270C Texaco Skinner	p-Terphenyl-d14	A-02
B4J0574-09	8270C Texaco Skinner	Nitrobenzene-d5	A-02
B4J0574-09	8270C Texaco Skinner	Indene	A-01a
B4J0574-09	8270C Texaco Skinner	Dibenz (a,h) acridine	A-01a
B4J0574-09	8270C Texaco Skinner	7,12-Dimethylbenz (a) anthracene	A-01a
B4J0574-11	8270C Texaco Skinner	6-Methyl chrysene	A-01a